Reforming Internet Governance:

Perspectives from the Working Group on Internet Governance (WGIG)

Edited by
William J. Drake

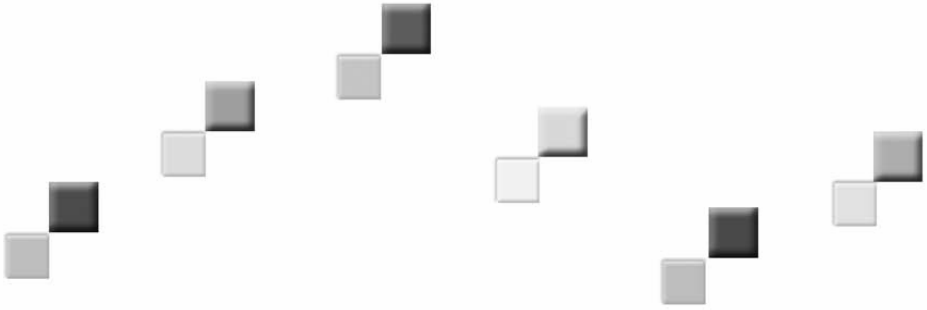

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TABLE OF CONTENTS

PREFACE

Or, more accurately, an afterword on how we got there

Nitin Desai

The Working Group on Internet Governance (WGIG) was an experiment that worked. That much is clear from the compliments heaped on its report by the participants in the Preparatory Committee (PrepCom) of the World Summit on the Information Society (WSIS). How did this unlikely combination of forty individuals from very diverse backgrounds, each with strong views on what needs to be done or not done, end up producing a unanimous report? Now that the exercise is over, as the Chairman of this Group I feel more able to respond, at least partially to this question.

The Group was fortunate in that the Office of the United Nations Secretary-General allowed it to work without interference. It was also very fortunate to have in Markus Kummer an Executive Coordinator who brought to bear his knowledge of the issue, his substantial skills as a diplomat, and his typically Swiss efficiency. All this helped. But I believe a large part of the answer lies in the sequencing of work and the ease with which those who were not in the group could keep track of and contribute to its deliberations.

The first challenge was to ensure a genuine dialogue in the group. When a group with very divergent views converses, the biggest hurdle is to get people to listen rather than just talk. Ideally, one wants a good faith dialogue that each person joins not to convert, but to be converted. The WGIG's discussions did not quite meet this standard. But the conversation definitely moved beyond a dogmatic statement of set views. Everyone made an effort to explain the logic behind their view and put their argument in terms that could convince others. To do that they had to listen and respond to the doubts and questions raised. Instead of talking at one another, the members started talking with one another.

The members of the group were there as individuals. But they had been chosen to reflect a balance across regions and interest groups. There was always a risk that what any person said would be dismissed on *ad hominem* grounds like, "what do you expect from someone who comes from such-and-such country," or "that person is bound to reflect the views of such-and-such vested interest." These sentiments may well have been felt but they were never expressed or allowed to distort the basic protocol of treating every argument on its merits.

The primary credit for this constructive protocol for the dialogue within the group rests with its members. I hope that as a chair I helped it along as I asked questions to educate myself about the intricacies of Internet governance. I believe that a crucial difference was made by the

substantial academic presence in the group, as these members brought to the group the ethic of treating every debater with respect. Of course, this did tend to make every conversation a little longer than it would have been in a more business-like group! But as a chair, I welcomed this because it reinforced the mutual respect between the group members.

The WGIG also decided against getting into the difficult issue of making recommendations too early. In fact members began their work with a thorough exercise in problem definition. This phase was crucial in creating a sense of joint responsibility. More than that, by deconstructing the problem, they shifted the terms of the debate away from rhetoric, slogans and simplifications to very precise organizational, institutional or policy issues. For example, the discussion of root zone file changes looked at all the steps involved and focused on the authorization function. The deconstruction exercise helped greatly in separating public policy functions from operational and technical management issues.

The analysis and deconstruction of the problem was a very collaborative exercise. Group members connected with one another through voluminous e-mail and other means and produced group drafts. The analysis was largely factual, but getting people to agree on a description of how things actually work was often enough to resolve differences about how they should work. More than that, the group members who had put in so much hard work developed a vested interest in the success of the process.

Much of the work done by the WGIG on problem definition and deconstruction is contained in the Background Report rather than in the Main Report of the Group. The Background Report is not an agreed report in the sense that every member of the group has not signed off on everything said therein. But the report is a product of a collaborative exercise, so one may think of it as a report by the group but not of the group. It has been made available so that the raw material that was used by the group in developing its Main Report is widely accessible.

The group had reached this stage of problem definition by February 2005, but it had not yet started any systematic discussion about the recommendations that it would make. This posed a minor problem as the WGIG, which was launched in November 2004, was required to submit a preliminary report to the February 2005 WSIS PrepCom. We did present our assessment of what we saw as the public policy issues, but little or nothing on matters like the definition of Internet governance, roles and responsibilities. My job as the chair was to take the heat from the PrepCom and allow the group to pace its work in a manner that would maximize the chances of a unanimous report.

Throughout the process the WGIG followed a very transparent process for connecting with the wider constituency outside. Every meeting of the group included an open consultation. The

documents that were considered within WGIG were put on-line before these meetings so that all stakeholders could send in their comments, and many did.

These open consultations were part of the original design. They were necessary to meet the concerns of those countries that did not want a small group process, but rather a full intergovernmental meeting. In practice the open consultations proved particularly valuable in affording an opportunity not just to governments but also to other stakeholders to find out where the WGIG was heading and try to push it in the directions they preferred. The scale and level of participation in these open consultations was truly extraordinary. I would particularly note the full and committed participation of the Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Society (ISOC), and other entities involved in Internet management at present. Hopefully, their presence reassured both the governments and the private sector.

The openness helped to maintain the interest of the Internet community and media outside the PrepCom. It gave them material to report and comment on. I believe it also stimulated academic interest in places like the Berkman Center at Harvard University, the Oxford Internet Institute, and the Internet Governance Project at Syracuse University in New York.

The open consultations had the paradoxical effect of reinforcing the WGIG's sense of self-identity. Group members did refer to the views presented at the open consultations. They were influenced by the weight behind different positions as evidenced in these open meetings. But they became increasingly conscious that their job was to write *their* report, not a report on the views expressed in the consultations.

By April 2005 the Group had started talking about recommendations, but the real discussion was to be at the final June meeting. Usually the group met in the United Nations' premises in Geneva. This allowed a certain amount of informal interaction between group members and other stakeholders. However when it came to drafting the final report, a more secluded environment seemed necessary. The WGIG had in any case shared so much with the stakeholders that no surprises were in store. The secretariat arranged to take everyone to a conference centre on the outskirts of Geneva.

Well before the group met in Chateau de Bossey in June 2005, it had developed a camaraderie and team spirit. People knew one another and what they could expect in an argument. There was a real sense of ownership, and a commitment to get an agreed report despite the differences that remained. The atmosphere in the Chateau helped in promoting a certain *bonhomie*. The group members, thrown together not just for the meetings but also for all meals and convivial evenings in the fine garden, became friends who had differences on substantive

matters but who were prepared to find a way through out of a sense of responsibility and friendship.

The discussions at the Chateau were intense and tempers occasionally frayed. My job as the chair was to keep the process moving, cajole people toward compromise, lighten the mood when the going got rough, and once in a while simulate anger! But the Group members rose to the task and practically everyone pitched in contributing some text to the final product.

The most difficult issue was that about institutional arrangements for global public policy oversight. It soon became clear that a single view would not emerge and would in fact be misleading, as it would not reflect the diversity of opinions within the group and in the wider community outside. We correctly decided that we were not a substitute for the political process in the WSIS PrepCom and that our duty was to spell out options clearly rather than to find a compromise. Had we presented just a single option, then all those outside who disagreed with that option might have rejected the rest of the report, which contained valuable suggestions.

In the end the WGIG produced a unanimous report. There was no note of dissent. It was not a report that replaced the need for a broader political process. But it was a report that made it possible for such a process to start further down the road to the ultimate compromise.

The WGIG began with forty experts who were often suspicious of one another. It ended as a group of forty collaborators who were convinced that they had fulfilled their duty and were proud of what they had wrought. The challenge now is to reproduce in the wider community the same sense of engagement, dialogue, understanding and constructive compromise.

INTRODUCTION

Markus Kummer

The aim of this book is to give some insight into an exceptional experience of multi-stakeholder cooperation. It contains personal impressions of a group of people with a wide variety of backgrounds who were either members of the United Nations Working Group on Internet Governance (WGIG) or part of the Secretariat that supported its work. More than half of the WGIG members agreed to contribute to this book on short notice; this bears witness to the fact that they all felt their experience was positive and successful. Their contributions reflect their own views, and not those of the group as a whole.

The WGIG brought together people from different geographic, cultural and professional backgrounds. Individuals gathered with their different outlooks on life, different ideas and different ways of interacting, and in the process became a group with a common purpose. They listened to and learned from each other. During seven months of intense work, from November 2004 to June 2005, they did not necessarily change their opinions, but they did come to understand better where each other was coming from and they engaged in real dialogue. The group included representatives from governments, from the private sector and civil society acting in their personal capacity and participating on an equal footing. Ultimately, their varied backgrounds and positive interactions are also the strength of the group's main output--the WGIG Report. The fact that it was possible to reach a consensus within such a heterogeneous group gives weight to the Report. It also made the WGIG a successful experiment in multi-stakeholder diplomacy at a time when United Nations reform and new forms of global governance are high on the agenda of international cooperation.

In the context of discussions on global governance, Governments have been confronted with other stakeholders requesting to be allowed to participate in decision-making arrangements. The debate on Internet governance, however, followed a different pattern. Here, Governments wanted to obtain a say in the running of the Internet, which has developed outside a classical intergovernmental framework.

Internet governance is an issue that came to the fore at the first phase of the World Summit on the Information Society (WSIS), held in Geneva in December 2003. My personal involvement with Internet governance began in November 2003, when Switzerland, as host country of WSIS, took on the role as mediator to find solutions to some of the outstanding controversial issues, such as human rights, intellectual property, the role of the media, and Internet governance. I was asked by my head of delegation to take charge of some of these issues, among them Internet governance. The debate then was very polarized and, to a large extent, also very abstract. There were misunderstandings on both sides. The discussions focused on

"public policy issues" and the extent to which governments had a role to play therein. However, nobody was willing or able to spell out what was meant by "public policy" in the context of Internet governance. In short, there was no real debate on issues, but a confrontation of two visions of the world, or two schools of thought, and in Geneva it proved impossible to bridge the gap between them.

The WSIS negotiations were tough, and the two sides were firmly entrenched in their positions and not ready to compromise. One salient feature of the negotiations was that the Governments remained in charge and the Internet professionals who run and manage the Internet were locked out. It was not surprising therefore that the summit failed to produce what might be termed "a solution." Before a solution could be found, there would have to be a common understanding that there was a problem that needed to be resolved. On the face of it, it would have been overly optimistic to hope that the final WSIS documents would go much further than being an agreement to disagree on these fundamental positions. In the end, negotiators did agree to continue the dialogue beyond the first phase of the WSIS, and to prepare the ground for the second phase in Tunis. In doing so, they put a new issue on the agenda of international cooperation.

Hence, the negotiations focused on process rather than substance. They reflected the two basic visions---namely private sector leadership versus intergovernmental cooperation. Those who insisted on the importance of private sector leadership wanted to prevent a repetition of the final stages of the WSIS Phase I negotiations, which took place in the absence of Internet professionals. Their main aim was to make sure that the private sector and all the other stakeholders would be part of the process. Those who wanted more intergovernmental cooperation pushed for some form of United Nations involvement. The compromise that was finally reached was a request to the United Nations Secretary-General to set up a Working Group "to investigate and make proposals for action, as appropriate, on the governance of Internet."1 It was hoped that the formula agreed on would give the flexibility required to be inclusive and give all stakeholders equal access to the work of the group.

As soon as WSIS-I was over, discussions started on how to move forward. A wide range of meetings held by intergovernmental and other organizations took up this issue, among them a workshop organized by the International Telecommunication Union (ITU) in Geneva, 26-27 February 2004, and a United Nations Information and Communication Technology Taskforce Global Forum on Internet Governance in New York, 24-25 March 2004. On the latter occasion, I was appointed by the Secretary-General to set up a Secretariat that would advise him in choosing the members of the WGIG and assist the WGIG in its work.

[1] World Summit on the Information Society, "Plan of Action," WSIS-03/GENEVA/DOC/5-E, 12 December 2003, <http://www.itu.int/wsis/docs/geneva/official/poa.html>

At the beginning of the process, it was crucial to find some common understanding on the scope and nature of the work, and on the role and composition of the group. This would be necessary before moving on to the next phase---setting up the group. Informal consultations and discussions took place at many gatherings where Internet professionals and other interested parties met, from the ITU's Telecom Africa in Cairo, Egypt, 4-8 May 2004, and the Internet Society's INET '04 in Barcelona, Spain, 10-14 May 2004, to the ICANN meeting in Kuala Lumpur, Malaysia, 19-23 July 2004. Politically, the most important event was the first session of the WSIS Preparatory Committee (PrepCom-1), held at Hammamet, Tunisia, on 24-26 June 2004. Again, Internet governance proved to be a thorny issue in the WSIS context. Some governments were not comfortable with the approach taken so far to setting up the group and planning its work. Broadly speaking, they had expected the WGIG to be more or less a continuation of the WSIS. However, this would not have been in line with the WSIS documents approved in Geneva. These clearly pointed to a process that needed to be open and inclusive and allow for the participation of all stakeholders on an equal footing.

The Secretariat was established in July 2004. As its first major activity it organized a two-day round of consultations open to all stakeholders to discuss the composition of the WGIG and the scope of its agenda. These consultations, held at the United Nations in Geneva on 20-21 September 2004, were chaired by Nitin Desai, Special Advisor to the Secretary General for the WSIS. They were well attended and the open format, in which members of the civil society and the private sector took the floor without any distinction from government representatives, was accepted by all. This format was to become the hallmark of the WGIG process. After these consultations, the picture became much clearer: there appeared to be an emerging consensus that WGIG should take a broad approach and no potentially relevant issue should be excluded. It also became clear that, in order to be seen as balanced, the group would have to comprise at least forty members. It was an aim right from the beginning to establish a group in which all the major players would feel represented.

This first consultative phase allowed the Secretariat to draw up a shortlist of candidates. On 11 November 2004 the Secretary-General announced the establishment of the WGIG, with forty members from governments, private sector and civil society. Nitin Desai was appointed Chairman of the WGIG.

The WGIG conducted its work between November 2004 and June 2005. It held four meetings at the United Nations in Geneva: 23-25 November 2004, 14-18 February 2005, 18-20 April 2005 and 14-17 June 2005. The final days of the last meeting devoted to the drafting of the Report took place at the Château de Bossey in the countryside near Geneva. On the occasion of its Second Session, the WGIG presented a Preliminary Report to the WSIS PrepCom-2. This Preliminary Report was discussed in a Plenary Session on 24 February. The Report itself was officially released on 14 July 2005.

The process was a key element of the WGIG work. The Geneva Summit, as described above, wanted it to be open, transparent and inclusive and involve not only governments, but also the private sector and civil society. The WGIG took up this challenge and tried to be innovative in this regard. It developed a process that allowed all stakeholders to participate on an equal footing in open consultations held in conjunction with all WGIG meetings, with the WGIG website providing a platform for input from all stakeholders. This worked because Governments recognized that the other stakeholders involved in the discussions on Internet governance had a valid contribution to make---their competence gave them legitimacy.

The WGIG was thus at the centre of a vast process. Throughout the period between the two phases of WSIS, many institutions took up the issue of Internet governance. WGIG members and the Secretariat were asked to report on their work and the progress achieved so far. The WSIS regional and sub-regional meetings and conferences devoted much attention to this issue and provided input into the WGIG's work. These included the South-East and East Asia Conference on Preparations for WSIS II in Bali, Indonesia, 1-3 February 2005; the African WSIS Regional Conference in Accra, Ghana, 2-4 February 2005; the Arab-African WSIS Conference in Cairo, Egypt, 8–10 May 2005; the WSIS Preparatory Conference for the Asia-Pacific Region in Teheran, Islamic Republic of Iran, 31 May–2 June 2005; the WSIS Preparatory Conference for Latin America and the Caribbean in Rio de Janeiro, Brazil, 8–10 June 2005; and the African Ministerial Conference on Internet Governance in Dakar, Senegal, on 5-6 September 2005. ICANN proved particularly interested in interacting with WGIG and set up special sessions devoted to this issue at all its meetings from July 2004 onwards. These included sessions at the ICANN meetings in Kuala Lumpur, Malaysia, 19-23 July 2004; Cape Town, South Africa, 1-5 December 2004; Mar del Plata, Argentina, 4-8 April 2005; and Luxembourg City, Luxembourg, 11-15 July 2005. The WGIG was well represented at all these meetings.

Other professional bodies such as the Internet Society (ISOC) and the Council of European National Top Level Domain Registries (CENTR) also took up the issue and held various contributory sessions to the ongoing debate. Furthermore, the WGIG process generated interest in the academic community: among others, the Berkman Center for Internet and Society at Harvard Law School, the Oxford Internet Institute, and the Internet Governance Project at Syracuse University all devoted much attention to this issue and held special events. In parallel, the Diplo Foundation developed an innovative programme contributing to capacity building in developing countries.

The WGIG's task was first and foremost a fact-finding mission. It was about looking into how the Internet works, taking stock of who does what, and looking into ways of improving the coordination among and between the different actors. The WGIG presented the result of its findings in a concise report, which addresses the questions raised by the Summit, provides

proposals to improve current Internet governance arrangements and sets priorities for future action. Based on an assessment of what works well and what works less well, the Report proposes a further internationalization of Internet governance arrangements and the creation of a global space for dialogue among all stakeholders to address Internet related issues. It also pays much attention to developmental aspects and sets two overarching objectives for all Internet governance arrangements: to ensure the effective and meaningful participation of all stakeholders from developing countries; and to contribute to the building of capacity in developing countries in terms of knowledge and human, financial and technical resources.

The Report addresses three main questions raised by WSIS. Firstly, it contains a working definition of Internet governance, which reinforces the concept of a multi-stakeholder approach and the need for cooperation between governments, private sector and civil society in Internet governance arrangements. Secondly, it discusses the different roles and responsibilities of the various stakeholders, recognizing that these can vary according to the problems that are being addressed. Thirdly, it identifies key public policy issues that are of relevance to Internet governance and sets priorities and makes recommendations for future action in the following areas: the administration of the root zone files and system; the allocation of domain names; IP addressing; interconnection costs; Internet stability, security and cybercrime; spam; data protection and privacy rights; consumer rights; intellectual property rights; freedom of expression; and multilingualism.

The WGIG also produced a Background Report that includes much of the material produced in the course of its work. It is complementary to the Report and reflects the wide range of opinions held within the group as well as comments made by stakeholders throughout the WGIG process.

The main WGIG legacy is that the process it created was innovative and proved to be a successful experiment in multi-stakeholder cooperation. The WGIG succeeded in creating a space for an issue-oriented policy dialogue on Internet governance in a climate of trust and confidence among all stakeholders concerned. It is to be hoped that this legacy can be translated into a more cooperative approach to Internet governance beyond the Tunis phase of WSIS, involving all stakeholders on an equal footing. The WGIG experience revealed a need for an ongoing dialogue and in this sense it was the beginning of a process that will continue in one way or another. However, it was very specific to the Internet, this network of networks, with its long tradition of bottom-up cooperation and multi-stakeholder involvement. It remains to be seen whether the WGIG experience, as has been advocated by some, can be used for reference in other forums outside the ambit of Internet governance.

Section 1

The Dynamics of Multistakeholder Collaboration: WGIG and Beyond

A BRIEF HISTORY OF WGIG

Don MacLean

There are a number of questions future historians might want to ask about the Working Group on Internet Governance (WGIG), such as:

- Did WGIG clarify our understanding of Internet governance?
- Did WGIG contribute to a successful outcome of the World Summit on the Information Society (WSIS)?
- How well did WGIG work as a multistakeholder process?

This chapter, written a few weeks after WGIG completed its work and a few weeks before the third meeting of the WSIS-2 Preparatory Committee (PrepCom), has a much more modest objective. Its principal aim is to summarize what WGIG did between its first meeting in November 2004 and the completion of its Final Report in July 2005, with an emphasis on the decisions that shaped the work of the group, the documents that marked its progress, and the approach that was taken to managing a number of issues throughout the process. This brief history of how WGIG carried out its mandate is intended to complement the account of WGIG's origins provided by Markus Kummer in his Introduction to this volume, and to be the precursor to a more detailed analysis that is planned for the future.

There are at least two ways of looking at the history of WGIG. From one point of view, it can be seen as a series of relatively discrete stages that began with the establishment of the group and progressed in a reasonably logical and orderly fashion towards the completion of the Final Report, with the results of one stage providing the foundations for the next and adding an additional layer of substance to the overall result. From another point of view, it can be seen as a much more free-flowing process in which a number of streams of discourse ran largely in parallel, touching from time to time, before joining together in a common pool at the end of the process.

These views are complementary. Each has its merits and the truth, as is often the case, probably lies somewhere in between. A full account of WGIG's history would require a balanced presentation from both perspectives. This brief summary of WGIG's work, which is written mainly from the first perspective, provides a step-by-step account of WGIG's progress on the basis of the documentary record, as contained in papers published on the WGIG web site and in e-mails exchanged among the members of the group. A concluding section provides some personal views on the principal themes that flowed throughout the WGIG process, the

main factors that shaped the working group's story, and the kinds of lessons that can be learned from the WGIG experience.

The Mandate

The first WGIG meeting took place at the United Nations' Geneva headquarters on 23-25 November 2004, almost one year after the first phase of WSIS (WSIS-I) had asked the United Nations Secretary-General to establish a working group on Internet governance and set out the following terms of reference[1]:

> 13.b) We ask the Secretary General of the United Nations to set up a working group on Internet governance, in an open and inclusive process that ensures a mechanism for the full and active participation of governments, the private sector and civil society from both developing and developed countries, involving relevant intergovernmental and international organizations and forums, to investigate and make proposals for action, as appropriate, on the governance of the Internet by 2005. The group should, inter alia:
>
> i) develop a working definition of Internet governance;
> ii) identify the public policy issues that are relevant to Internet governance;
> iii) develop a common understanding of the respective roles and responsibilities of governments, existing intergovernmental and international organizations and other forums as well as the private sector and civil society from both developing and developed countries;
> iv) prepare a report on the results of this activity to be presented for consideration and appropriate action for the second phase of WSIS in Tunis in 2005.[2]

Following a lengthy consultative process, the United Nations Secretary General had announced the establishment of the group just a few days earlier, on 11 November 2004[3]. However, the WGIG Secretariat had informally notified those who had agreed to join the group of the dates for the first meeting at the beginning of the month so that they could make travel arrangements. In line with the decisions of WSIS-I, the forty members of WGIG who assembled in the Palais des Nations represented government, the private sector and civil

[1] See Markus Kummer, "The Results of the WSIS Negotiations on Internet Governance," in Don MacLean, ed., *Internet Governance: A Grand Collaboration* (New York: United Nations Information and Communication Technologies Task Force, 2004), pp.53-57 for an authoritative account of the origins of WGIG.

[2] World Summit on the Information Society, "Plan of Action," WSIS-03/GENEVA/DOC/5-E, 12 December 2003, pp. 6-7

[3] See <http://www.un.org/News/Press/docs/2004/pi1620.doc.htm> for the press release announcing the establishment of WGIG and listing its members

society from both developing and developed countries in a reasonably balanced fashion, taking into account geographic and demographic factors and making allowance for the gender inequality that currently characterizes the ICT sector. All members of the group had expertise in aspects of Internet governance. Many had also been involved in WSIS-I and previous multi-stakeholder policy processes, such as the Group of Eight's (G-8) Digital Opportunities Task Force and the United Nations Information and Communication Technologies Task Force. Others were new to the game of global, inter-sectoral cooperation.

Getting Organized

The first meeting was devoted to organizing WGIG's work and to setting the ground rules for interaction between WGIG and representatives of the different stakeholder groups mentioned in the WSIS-I Declaration of Principles – governments, the private sector, civil society, intergovernmental organizations, and other international organizations and forums.

The main substantive products of the first meeting were a draft outline of the Final Report, an inventory of public policy issues that the group considered relevant to Internet governance, and a template that could be used to describe these issues; identify the actors, institutions, and mechanisms currently engaged in their governance; and conduct an initial assessment of the adequacy of these arrangements[4].

The WGIG Secretariat had laid the foundations for this work prior to the meeting by developing an first draft outline for the Final Report and circulating a matrix intended to help WGIG members identify Internet governance issues and priorities through an approach that used a simplified version of the Open Systems Interconnection (OSI) model to identify and analyze issues in relation to the infrastructure, transport, applications and content layers of the Internet[5].

Although the first item in WGIG's terms of reference was to develop a working definition of Internet governance, the group agreed that it would be best to approach this task in a bottom-up fashion that would begin by identifying all of the public policy issues that were relevant to Internet governance – thereby fulfilling the second task in the WGIG terms of reference – in order to progressively build a working definition that would capture the essential elements that were common to all these issues.

[4] These documents are available at <http://www.wgig.org/meeting-november.html>.

[5] This approach had found considerable support at the Global Forum on Internet Governance organized by the United Nations Information and Communication Technologies Task Force in New York on March 25-26, 2004.

Instead of using a layered model to organize issues for analysis, the group decided to draw on the WSIS-I Declaration of Principles in order to:

- categorize issues in terms of their relevance to the Internet governance goals set out in the Declaration ("an equitable distribution of resources, facilitate access for all and ensure a stable and secure functioning of the Internet, taking into account multilingualism," as well as other relevant issues); and
- assess the adequacy of existing governance arrangements on an issue-by-issue basis in terms of the criteria set out in the WSIS Declaration of Principles ("the international management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations," as well as the extent to which governance arrangements are coordinated)[6].

The members of the group decided to work as transparently as possible among themselves and with stakeholders during the four meetings that were planned to take place in Geneva, as well as during the intervals between these meetings. To this end, the group decided that structured consultations would be held with stakeholders each time the group met in Geneva, that the products of WGIG's work would be made available for comment on the WGIG web site between meetings, and that information on what had taken place during WGIG working sessions could be made available to interested parties as long as Chatham House rules were respected[7].

In order to maximize the transparency of physical meetings, the group decided to hold two kinds of sessions in addition to open consultations: "plenary sessions", which would be open to observers from all stakeholder groups, but without the right to speak; and "closed sessions" that would be restricted to WGIG members and observers from intergovernmental organizations, who would have the right to speak[8].

In closed sessions, the group adopted the general practice of working in plenary. While recognizing that it would be necessary to break up into smaller groups in order to carry out work between meetings, the group agreed to use e-mail and other web-based tools to share information and to make it available to all members of the group in real time.

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[6] See World Summit on the Information Society, "Declaration of Principles", WSIS-03/GENEVA/DOC/4-E, 12 December, 2003, §48.

[7] Under Chatham House rules, reports of meetings to not attribute statements or positions to individuals in order to preserve the freedom of participants to speak their minds on the subject under discussion.

[8] Only one such plenary session was held, on the first day of the second WGIG meeting. The practice was discontinued since it did not appear to add value to the WGIG process for any of the participants.

Mapping the Terrain

Beginning with a list of twenty four issues relevant to Internet governance that had been identified by WGIG members in response to the Secretariat 's pre-meeting questionnaire and taking into account additional issues that had been identified in a paper for the United Nations ICT Task Force[9], the working group emerged from its first meeting with an "Inventory of Public Policy Issues and Priorities" that contained forty six items sorted into five categories – equitable distribution of resources, access for all, stable and secure functioning of the Internet, multilingualism and content, and other issues for consideration. Because some items appeared in more than one category or were expressed in slightly different terms in different categories, around thirty different issues were actually on the WGIG list.

The Secretariat circulated this list to WGIG members at the end of November along with the evaluation template that had been developed during the meeting, with a request that members indicate the topics on which they would consider either preparing an issue paper or contributing to or commenting on an issue paper. The plan for this stage of the group's work was:

- to finalize the inventory of issues and the template so that these documents could be put on the WGIG web site by mid-December;
- to form working groups on each item in the inventory as quickly as possible with the aim of having draft issue papers ready for review by the group as a whole by mid-January 2005, so that they could be finalized and posted on the WGIG web site by the end of the month, along with an invitation to WGIG stakeholders and other interested parties to comment.

Not surprisingly, the first of these tasks proved much easier to accomplish than the second. The inventory of issues and priorities and the template were posted as planned. However, the process of forming working groups, agreeing on procedures, analyzing issues, and developing consensus within individual working groups and among the members of the group as a whole proved to be a demanding, time-consuming process that was both facilitated and complicated by the very extensive use that was made of e-mail, through the general wgig-discuss mailing list and lists that were set up on specific issues. During this process, the number of issues on the WGIG inventory began to shrink, either as a result of the consolidation of closely-related topics, or because no one was willing or able to develop a paper, or because WGIG members were unable to achieve a sufficient degree of consensus to publish a paper. In order to maintain rough consensus within the group, particularly in relation to controversial topics, it was agreed that every paper would be published as a "draft working paper" and prefaced with a disclaimer

[9] Talal Abu-Ghazaleh, "Internet Governance Without a Governance Body", a Proposal Submitted to the United Nations ICT Task Force Forum on Promoting an Enabling Environment for Digital Development, Berlin, November 19, 2004.

stating that it reflected the preliminary findings of the drafting team, that it had been reviewed by all WGIG members, and that it did not necessarily represent a consensus position or contain language agreed by every member of the group[10].

In spite of the difficulties experienced in carrying out a very ambitious work program in a relatively short period of time, which was interrupted for many WGIG members by an important holiday season, draft working papers on twenty one issues began to be posted on the WGIG web site at the beginning of February.[11] These papers drew comments from seven governments, eight WGIG observers and thirty five other interested parties, and provided the basis for the open consultations with stakeholders that took place on 15-16 February 2005 during the second WGIG meeting[12].

Reporting Progress

With the issues, actors, institutions and mechanisms of the Internet governance terrain mapped in some detail, the working group faced two main challenges during its second meeting:

- to lay the foundations for the next stage of its work, which involved assessing the adequacy of current Internet governance arrangements in greater detail and developing a common understanding of the roles and responsibilities of different stakeholders;
- to prepare a Preliminary Report for the second meeting of the WSIS-II Preparatory Committee (PrepCom-2), which took place in Geneva from 21-25 February 2005.

The February meeting was scheduled to take place over five full days and was the longest of the four WGIG meetings. However, because half this time was allocated to sessions that were open to all stakeholders, the group had relatively little "private time" to progress its work and prepare its report to PrepCom-2. Although the group's public sessions once again took place at the United Nations' Palais des Nations, the closed sessions were held in a quieter environment some distance away, at the headquarters of the International Labour Organization.

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[10] The full text of the disclaimer reads as follows: "This paper is a 'draft working paper' reflecting the preliminary findings of the drafting team. It has been subject to review by all WGIG members, but does not necessarily present a consensus position nor does it contain agreed language accepted by every member. The purpose of this draft is to provide a basis for the ongoing work of the group. It is therefore not to be seen as a chapter in the final WGIG report, but rather as raw material that will be used when drafting the report. This draft working paper has been published on the WGIG web site for public comment, so that it will evolve, taking into account input from governments and stakeholders."

[11] See <http://www.wgig.org/working-papers.html>

[12] See <http://www.wgig.org/Comments-Papers.html> for comments on the WGIG draft working papers and <http://www.wgig.org/docs/Report-February.pdf> for a summary of the open consultations of February 15-16, 2005.

During its closed sessions, the group made some progress in developing a working definition of Internet governance. Between the first and second meetings, there had been some discussion of this topic on the WGIG mailing list and a number of different definitions had been proposed. In general, two views had emerged. One view favoured a normative definition that would be rooted in the WSIS-I Declaration of Principles and prescribe what Internet governance ought to be. Another view favoured a descriptive definition that would be rooted in the literature of social science and would simply say what Internet governance is. The meeting sought to reconcile these two points of view by attempting to develop a two-part definition of Internet governance that would have both descriptive and normative components. Although it was unable to agree on a satisfactory formulation of these two approaches, in the course of its discussions the group reached consensus on the general meaning of the term "governance" as distinct from "government", and on the range of issues, actors, organizations, and activities that would need to be captured in order to have a satisfactory working definition. This progress was duly reported to PrepCom-2[13].

In addition to beginning work on the definition of Internet governance, the group took an important step forward by sorting the issues that had been analyzed in the first round of working papers into four issue areas or clusters, each of which represented a significantly different governance challenge in terms of substance, process and stakeholder roles and responsibilities. WGIG's Preliminary Report to PrepCom-2 described these four clusters in the following terms:

(i) Issues related to infrastructural issues and the management of critical Internet resources, including administration of the domain name system and IP addresses, administration of the root server system, technical standards, peering and interconnection, telecommunications infrastructure including innovative and converged technologies as well as multilingualization. These issues are matters of direct relevance to Internet governance falling within the ambit of existing organizations with responsibility for these matters;

(ii) Issues related to the use of the Internet, including spam, network security, and cybercrime. While these issues are directly related to Internet governance, the nature of global cooperation is not well defined;

(iii) Issues which are relevant to the Internet, but with impact much wider than the Internet, where there are existing organizations responsibly for these issues, such as IPR or international trade. …

[13] See Working Group on Internet Governance, "Preliminary Report of the Working Group on Internet Governance", WSIS-II/PC-2/DOC/5-E, pp.5-6, §30-33.

(iv) Issues related to developmental aspects of Internet governance, in particular capacity building in developing countries.[14]

In addition to these four clusters, the Preliminary Report recognized that WGIG's work should be guided by the key WSIS principles and also recognized the importance of horizontal issues that affect every aspect of Internet governance, such as the economic and social impacts of the Internet, the particular challenges facing developing countries, and the capacity of existing Internet governance arrangements to address governance issues in a coordinated manner[15].

The Preliminary Report was presented to PrepCom-2 on 24 February 2005. In the discussion that followed, the report was very well received by representatives of twenty three developing and developed country governments and the Presidency of the European Union, as well as by representatives of the Internet community, the private sector, civil society, and relevant intergovernmental organizations. The discussion of the Preliminary Report was tantamount to an endorsement of WGIG's work by PrepCom-2. This strengthened the cohesion of the group and its resolve to continue its work as planned[16].

Assessing Current Arrangements

WGIG's Preliminary Report included a work program for the remainder of its mandate. As a next step, the group proposed to assess the adequacy of present Internet governance arrangements and to develop a common understanding of the respective roles and responsibilities of all actors. The report also promised that papers on these issues would be posted no later than 31 March 2005, so that all stakeholders would have a chance to comment on them before the third WGIG meeting on 18-20 April 2005.[17]

During its second meeting, the group had begun the task of using the WSIS criteria to assess the adequacy of current governance arrangements in the first of the four issue areas it had identified – i.e. in the cluster grouping issues related to infrastructure and the management of critical Internet resources. Although it made a good start on this task by developing a matrix that related the specific issues and governance arrangements contained in this cluster to the WSIS criteria, and although it also had begun to spell out what these criteria meant in practical

[14] WGIG, "Preliminary Report," p. 6, § 34.

[15] WGIG, "Preliminary Report," p. 6, § 35.

[16] See <http://http://www.wgig.org/PrepCom-Statements.html> for the statements made at PrepCom-2 in response to WGIG's Preliminary Report.

[17] WGIG, "Preliminary Report," p. 7, § 37-38.

terms[18], the group did not have time during the meeting to develop a comprehensive assessment framework or to agree on a method for carrying out the next stage of its work.

Following the discussion of WGIG's Preliminary Report by PrepCom-2, the Secretariat proposed that the group should aim to produce papers on each of the issue clusters that had been identified in the Preliminary Report. To facilitate this task, it was proposed that the first issue area, which contained many of the issues that had been at the heart of the Internet governance debate during the first phase of WSIS, should be divided into two sub-clusters (1.a and 1.b), with the former grouping issues related to the Internet's physical infrastructure and the latter grouping issues related to its logical infrastructure (i.e. IP addresses and domain names). The Secretariat also suggested that these papers should be short, crisp and clear, that they should identify the strengths and weaknesses of current governance arrangements, and that they should aim to clarify the roles and responsibilities of different stakeholders.

To coordinate this work, the Secretariat proposed to nominate five pairs of co-leads representing different constituencies and regions and requested the members of the group to indicate the papers to which they were willing to contribute, with the aim of having drafts ready by mid-March so that papers could be posted as promised by the end of the month. To facilitate this work, the Secretariat set up e-mail discussion lists for each issue area and enhanced the functionality of the Plone online content management team space that had been used with rather limited success in the previous phase. In addition, building on some work that was initially done with respect to cluster 3 issues, the Secretariat developed a document entitled "Towards a Common Understanding of the Roles and Responsibilities of All Stakeholders in Internet Governance" that was intended to serve as a "chapeau" for the five assessment papers and to provide a general framework for assessing the adequacy of existing governance arrangements in terms of the WSIS criteria[19].

The working methods proposed by the Secretariat, which were accepted by the group's members, drew on lessons that had been learned during the previous phase of WGIG's work in preparing working papers on the inventory of public policy issues related to Internet governance. The principal aim of these proposals was to improve the efficiency of WGIG's work and the overall quality and consistency of its outputs – inherently desirable objectives that were reinforced by the relatively short interval between the presentation of the Preliminary Report at the end of February and the third WGIG meeting in mid-April.

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[18] See the non-paper posted at <http://www.wgig.org/docs/WGIGPaper-Criteria.pdf>

[19] Following discussion and refinement, the chapeau paper, "Towards a Common Understanding of the Roles and Responsibilities of All Stakeholders in Internet Governance" was posted on the WGIG web site on April 3, 2005, in advance of the issue cluster assessment papers.

In spite of these improvements, the WGIG had difficulty meeting its March 31 deadline, as devils began to emerge in the details of different issue areas, most particularly in cluster 1. Once again, the group found it necessary to include a general disclaimer with each paper to the effect that it was a "draft working paper" reflecting the preliminary findings of the drafting team, that had been subject to review by all WGIG members, but that did not necessarily present a consensus position or contain agreed language accepted by every member. With this proviso, the assessment papers were posted in component parts as they were agreed by working group members beginning on 5 April 2005[20]. Over the next ten days, all of the assessment notes for clusters 1, 2 and 3 were posted. Since the third WGIG meeting was scheduled to take place in mid-April, 15 May 2005 was set as the deadline for stakeholder comments. Four governments, twenty-three WSIS observers, and seven other interested parties provided comments[21].

Developing Proposals for Action

The third WGIG meeting, which took place in Geneva from 18-20 April 2005, laid the foundations for the final stage of its work. During the meeting, the group revised the outline for the Final Report in order to begin aligning it more closely with the working group's terms of reference. This done, it directed the Secretariat to prepare a draft introduction for the Final Report which, in addition to summarizing the origin and evolution of WGIG, would set out the general principles that had guided the development of the Internet, as well as the WSIS principles that had guided the working group in carrying out its terms of reference.

Since these principles would be presented in the Introduction to its Final Report, the group concluded that they would not need to be repeated in the chapter dealing with the definition of Internet governance, and that the definition therefore should be descriptive rather than normative. The group reached a rough consensus on the general features that a working definition of Internet governance should have and set up a small working group to draft a chapter for review at the next meeting. This chapter would not only include a proposed definition of Internet governance, but also explain why a definition was needed and what its terms were intended to mean.

The group concluded that the two sets of draft working papers that had been prepared by WGIG members provided most of the raw material that would be needed to draft chapters for the Final Report that would identify issues related to Internet governance, assess the adequacy of existing governance arrangements, and present a common understanding of the roles and

[20] See <http://www.wgig.org/April-Working-Papers.html> for the April 2005 assessment papers.

[21] See <http://www.wgig.org/Comments-April.html> for comments on the April 2005 assessment papers.

responsibilities of different stakeholders. It therefore decided to entrust the Secretariat with the task of consolidating this material according to the outline for the Final Report, and to set up small working groups to draft some additional material in the form of boxes that would provide greater detail on a number of high priority issues, such as interconnection charges and free and open source software.

During its third meeting, the group also spent a considerable amount of time discussing how existing Internet governance mechanisms could be improved and whether new mechanisms were needed. The papers assessing the adequacy of current governance arrangements had demonstrated that stakeholders face significantly different governance challenges in different issue areas. Accordingly, there was general agreement in the group that different kinds of solutions would be required, in terms of policy and process, to address the main governance challenges that had been identified through the cluster analysis.

These challenges included: improving oversight of the management of core Internet resources; responding to new issues related to Internet use in areas where global governance arrangements are currently lacking, such as spam and information and network security; improving coordination between Internet governance and the governance of issues in areas such as trade and intellectual property rights, which are significantly affected by the Internet; and enhancing the capacity of developing countries to coordinate Internet governance at the national level. To facilitate action in response to these current governance challenges and others that arise in the future, there was a general feeling among WGIG members that it would be useful to have a global Internet governance forum where all stakeholders could meet on an equal footing. However, although there was general agreement in the group on the main Internet governance challenges that should be addressed, there was not yet a common view on the action that should be taken.

Following the meeting, in order to help advance this discussion to the point where specific recommendations could be developed, the Secretariat circulated a questionnaire designed to elicit the views of WGIG members on the actions that needed to be taken to improve Internet governance with respect to four "process functions": a forum function; an oversight function; a function to improve coordination of existing international governance mechanisms; and a function to improve coordination of national governance mechanisms. WGIG members were encouraged to use the Plone work space to post their replies to the questionnaire, to keep track of their colleagues' answers, and to continue their discussions. In addition, a separate version of the questionnaire, prefaced by a "chapeau" explaining its purpose, was made available on the public portion of the WGIG web site[22]. A majority of WGIG members representing all points

[22] See <http://www.wgig.org/docs/Questionnaire.09.05.05.pdf> for the public version of the questionnaire and a list of stakeholder replies.

of view responded to the internal version of the questionnaire[23]. In addition, four governments and seven WGIG observers responded to the public questionnaire[24].

Writing the Report

The fourth and final WGIG meeting, which took place from 14-17 June 2005, began with open consultations at the headquarters of the International Telecommunication Union, which are across the street from the Palais des Nations in Geneva. When WGIG members assembled that evening at the Chateau de Bossey, an idyllic retreat outside Geneva owned by the World Council of Churches and operated as an Ecumenical Institute, they had plenty of material to work with and only seventy-two hours to complete their Final Report.

Prior to the meeting, the Secretariat had prepared a sixty five-page document that fleshed out the outline for the Final Report that had been agreed at the third WGIG meeting with material drawn from the Preliminary Report, as well as from the draft working papers on Internet-related public policy issues and existing governance arrangements. In addition, as agreed at the third meeting the document included sections on the general principles that had guided the development of the Internet since its inception and on the WSIS principles that had guided WGIG's work, as well as a draft chapter on the working definition of Internet governance.

In the opening session of the Chateau de Bossey meeting, WGIG members decided to write a short Final Report that would be easily accessible to the high-level policy-makers participating in WSIS-II, and to present the Secretariat document as a Background Report that would be of particular interest to policy analysts and other specialists. To achieve this objective, WGIG departed from its usual practice of working in plenary and set up a number of working groups to draft text and recommendations for the different chapters of the Final Report. However, before breaking up into smaller groups, the working group as a whole approved the introductory chapter and the chapter on the working definition of Internet governance in the Background Report. The Secretariat and some members of the working group were subsequently charged with preparing edited versions of these two texts for inclusion in the Final Report.

During the middle part of the Chateau de Bossey meeting, WGIG members divided into relatively large working groups in order to draft text and recommendations on priority public policy issues, as well as to draft recommendations on the forum function and the oversight function. The working group on the oversight function in turn sub-divided into four ad hoc

[23] See <http://www.wgig.org/docs/IG-questionnaire-response.pdf> for a summary of replies by WGIG members to the questionnaire.

[24] See <http://www.wgig.org/meeting-april.html>

groups, each of which developed one of the four models that appear in the Final Report. In addition, small groups were assigned such tasks as: preparing a chapter on capacity-building in developing countries for the Background Report and drafting recommendations on this subject for the Final Report; drafting a list of the roles and responsibilities of government, private sector and civil society stakeholders for the Final Report; and working on the boxes that were to be included in the Background Report on a number of high priority issues. Throughout this phase of the meeting, the Secretariat worked closely with the different groups to capture the results of their work and update the constantly evolving drafts of the Final Report and the Background Report.

For the final stage of the meeting, WGIG re-assembled in plenary to review the material that had been produced by the different working groups. The draft recommendation on the forum function was readily accepted by the group as a whole, and it was agreed that the four oversight function models developed by the ad hoc groups would be accepted by WGIG without further substantive discussion and presented in the Final Report, in the words of the Chairman, as "four equally beautiful brides". After spending many hours polishing text and fine-tuning recommendations, mainly by using a computer projection system to propose and adopt amendments through a real-time editing process, WGIG members agreed to put the Final Report to bed around one-thirty in the morning of Saturday, 18 June 2005 in a spirit of good cheer, common satisfaction, and considerable relief. This was done on the understanding that purely editorial changes could be made in the next week or so, once everyone had had a chance to read the text and recommendations in hard copy, and that any proposed change that potentially raised an issue of substance could only be made with the unanimous consent of the group as a whole.

Not surprisingly, given the circumstances in which the WGIG Final Report had been written, there were a small number of issues related to the wording of parts of the report that required further discussion. All were satisfactorily resolved, and on 5 July 2005 the Final Report was transmitted to the United Nations Secretary-General, who in turn transmitted it to Ambassador Janis Karklins, the President of the WSIS-II Preparatory Committee, and to Mr. Yoshio Utsumi, the WSIS Secretary-General, on 14 July 2005[25]. With this done, the work of WGIG officially came to an end.

Conclusion

The main aim of this chapter has been to provide a brief, step-by-step account of how WGIG carried out its work on the basis of documentary records that include the papers and reports produced by the working group, which are available on the WGIG web site, and the e-mail

25 See www.wgig.org for the Final Report and the Background Report.

correspondence exchanged among WGIG members during the course of their work, which will become publicly available, as well as the notes taken by the author during WGIG meetings. There are many other documents that could be drawn on in order to write a fuller account of how WGIG did its work. Other important sources of information could include the summaries, real-time captioning of proceedings, and webcasts of WGIG's open consultation sessions; comments on WGIG papers and other contributions submitted by stakeholders and other interested parties to WGIG meetings; the reports of regional conferences and other events organized by various stakeholders throughout the process; notes kept by the Secretariat and other members of the working group; the different versions of papers that track the evolution of WGIG's thinking; papers written by other WGIG members as a contribution to this volume; and the study of WGIG as a multi-stakeholder process that is being conducted at the time of this writing by the Diplo Foundation.

History, of course, is much more than documents. It also includes the memories, perceptions, intentions, reactions, questions, judgments and reflections of participants. From this perspective, the author believes that WGIG was a success as a multi-stakeholder process that enlarged our understanding of Internet governance and contributed to the central goal of WSIS, which is to link the Internet and other ICTs to the global development agenda – a result that will stand no matter what the outcome of WSIS-II.

A number of factors contributed to WGIG's success. These include: the highly complementary knowledge, skills, experience and personalities that WGIG members brought to the group, and the commitment and mutual respect they demonstrated; the strong leadership and effective support provided by the chairman and Secretariat throughout the process, and their unfailing good humour; the transparency with which the group operated internally and in relation to stakeholders; and a series of very good tactical decisions, beginning with the initial decisions to work in a bottom-up fashion and to use the WSIS principles as a touchstone, and the subsequent decisions to simplify the potential complexity of Internet governance and stakeholder roles and responsibilities by clustering issues, and by recognizing that different issue areas presented fundamentally different governance challenges and opportunities.

Above all, WGIG was a success because it was an eminently fair and reasonable process in which all points of view were not only expressed, but also were heard, discussed, and reflected in the products of the group, no matter how rough the resulting consensus. In WGIG the perfect was never allowed to become the enemy of the good.

A more detailed and comprehensive study of WGIG's history would find all of these features reflected in the working group's documentary record. Such a study would also raise questions that have not been touched on in this short account, but which merit investigation. In essence many of these questions relate to the general problem of designing, constituting, managing, and

operating a multi-stakeholder policy process. What kinds of people are needed to make the process a success, as participants and leaders? How should they be selected? What should be their relationship with the constituencies they represent during the process? How should they be organized and managed? What are the most effective working methods and means of communication? How should decisions be made? What are the responsibilities and accountabilities of participants once multi-stakeholder processes are over? The history of WGIG may have as much to say about these kinds of questions as it does about Internet governance.

A REFLECTION FROM THE WGIG FRONTLINE

Frank March

Other contributors to this book outline the history of the Working Group on Internet Governance (WGIG), how and why it was established, and its mandate. This chapter provides a personal perspective of what was for me an intense and stimulating piece of work over six months, which was very different from my "day job." Although I was a member of the Secretariat, and therefore intimately involved in the work of the WGIG, I was not directly a participant in its deliberations. The relatively short period that has elapsed since the WGIG presented its report has provided the opportunity to reflect on the WGIG's work. This brief memoir therefore proposes what is intended as a sympathetic critique of the process and its outcome.

In many respects the group was unique in the history of international affairs in terms of both its composition and its working methods. In this it reflected the character of the Internet itself, as well as the nature of the issues it was called into being to discuss and report on. Therefore, it was understandable that at the outset there would be some uncertainty about the WGIG's direction and capacity to fulfill its mission. Indeed there were many potential difficulties facing the WGIG that it needed to overcome in order to complete its task.

Basic questions about the nature of Internet governance, the type and scope of issues to be included under this rubric, and characterization of the issues themselves, all demanded answers. Some observers expected the group to proceed in what they saw as the most logical way, first to establish a 'working definition' of Internet governance, and then to proceed from this base to determine what issues were relevant. There was some expectation in certain circles that the group should seek answers to these questions early on the process and that the Preliminary Report presented to PrepCom-2 on 24 February 2005[1] should narrow down the scope of the WGIG's work. Instead, the WGIG agreed to keep a wide range of issues open because it was considered that narrowing the focus prematurely might result in exclusion of important areas. In the event, agreement on a 'working definition' was one of the final tasks undertaken, in the light of experience and discussions over the whole life of the WGIG. The Preliminary Report did not enter into a discussion of the issues but outlined the process and working methods adopted by the group. It emphasized a need for an approach that was open and inclusive and which did not narrow the focus of the range of issues too quickly: "It was felt that an iterative

[1] Working Group on Internet Governance, "Preliminary Report", WSIS-II/PC-2/DOC/5, 21 February 2005.

method would be the best way of moving toward an implicit working definition of Internet governance."[2]

Membership of the WGIG was deliberately drawn from the widest possible range of backgrounds, expertise and geographical region, and equally from three principle stakeholder groups: governments, the private sector and civil society. While members of the group were selected as individual experts, there was at times a degree of confusion as to whether members were acting in their own capacity as opposed to acting as representatives of one or more stakeholder groups. In order to achieve such a breadth of representation the group needed to be perhaps larger than prudence would have dictated: forty is a very large number of people to work with.

The tensions during the lead up to the Geneva phase of the World Summit on the Information Society (WSIS) which resulted in the establishment of the WGIG were evident throughout the seven months of its work. Yet it was also apparent from the first time it met on 23 November 2004 that there was a degree of cohesion within the group and a sense of common purpose and goodwill, and this was maintained through to the end of the process. International Telecommunications Union (ITU) Secretary-General Utsumi in his speech at the first meeting envisaged the work of the group as being narrowly focused on issues principally to do with the work of the Internet Corporation for Assigned Names and Numbers (ICANN): "… we should focus on the core activity of the management of Internet resources by ICANN, in particular top-level domains, which is where important issues remain unresolved."[3] By contrast, although introductory remarks by each of the group members highlighted the diversity of their backgrounds, there was an immediate consensus that the issues to be examined were not narrowly focused, and ICANN's work, while important, was not the sole issue and for some not necessarily the principal issue.

It was remarkable that despite the size and diverse nature of the membership much of the group's work was achieved using email between the face-to-face meetings. Email provides great utility and immediacy and, perhaps because of this, it is not uncommon in the heat of online debate for serious misunderstandings to arise. This is especially the case when writers have strongly divergent views on a range of issues, different cultural perspectives, and are often working in a 'second' language. There were indeed one or two instances where misunderstandings did lead to somewhat forceful online exchanges. But overall and throughout the life of the WGIG the email exchanges were generally friendly, courteous and highly productive.

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[2] "Preliminary Report", paragraph 23.

[3] Yoshio Utsumi, presentation at the First Meeting of the Working Group on Internet Governance, November 2004 <http://www.wgig.org/docs/Utsumi.pdf>.

The WGIG agreed at its first meeting to apply to its own process the WSIS principles for management of the Internet, i.e. it should be "multilateral, transparent and democratic, with the full involvement (all stakeholders)."[4] All meetings provided for open-ended consultations open to anyone who wished to attend. Simultaneous translation into all United Nations languages was provided in the open sessions and a number of innovations were introduced, adopted from procedures used to enhance the openness of ICANN's meeting procedures. The third session was webcast and the fourth session audiocast, and both included real-time captioning (live transcripts) of the discussions in English. The live transcripts were available almost instantly on the Internet, which may have caused consternation for some participants who were not used to seeing their Geneva verbal statements made readily accessible to the entire world.

The transparent nature of the process had an unexpected downside. The sharp differences noted above between initial expectations of some external observers and the WGIG itself manifested themselves in reaction to the first round of working papers prepared in advance of the second meeting of the group. Some early comments questioned the range of issues chosen and many were critical of the quality of some of the papers, noting that in most cases there already existed an extensive body of expert literature and that the group appeared to be 'reinventing the wheel'. Such comments overlooked or ignored the purpose of these papers. For the WGIG members, the first round of papers was an opportunity to reach a degree of common agreement on the nature of the issues to be discussed. The draft nature of the working papers was also sometimes overlooked: for the WGIG process to be truly transparent it was important to expose the thinking of the group to external observers at an early stage. This increased the risk that the drafts would be incomplete and that they would include some errors and inconsistencies. The open consultation process was to provide opportunities to correct any such errors and allow feedback on the priority issues. It was noteworthy that comments on the second round of working papers were generally very positive by comparison with those in reaction to the first round.

The papers in the third round were developed as draft text for what was expected to be a 60 to 70 page final report. Complex ideas, analysis and commentary reflecting the diversity of opinions, both within the WGIG itself and drawn from the extensive comments received from external commentaries on the wide range of issues, were condensed, sometimes brutally, into chapters of what is now the Background Report. The WGIG was not expected to act as a negotiating body and it was important that its report reflect, as accurately as possible, the full range of opinions within the WGIG. It was for the WSIS process or, more particularly, PrepCom-3 to work through the identified options. Much of what was hoped to be final text

[4] World Summit on the Information Society, "Declaration of Principles", WSIS-03/GENEVA/DOC/0004, 12 December 2003.

was circulated well in advance of the final WGIG meeting in mid-June, which was expected to focus on a relatively brief 'executive summary' of the long report. However, on the eve of the meeting it was decided, rightly, that the final Report needed to be considerably shorter than the existing text and that simply preparing an 'executive summary' would not meet the requirements.

In the event, the three days and nights of intensive discussion at the Château de Bossey resulted in a document which, remarkably, for the most part represents a consensus of the whole membership of the WGIG, the exception being the few pages outlining four models for possible institutional arrangements principally for the oversight of what are essentially the so-called Internet Assigned Numbers Authority (IANA) functions. The Background Report is to be regarded as a reference document.

It is a reasonable speculation that everyone involved in the WGIG process would see as a successful outcome that the work of the group over seven months or so would stand up to critical examination. So what criteria does the work of the WGIG have to meet to be judged as a success?

One criterion might be the process by which the Report was produced: the degree to which the WSIS principles for management of the Internet were followed by the WGIG in achieving this task. A number of commentators have described the WGIG process as indeed providing a model for openness and transparency and for involvement of all stakeholders. For example, the Civil Society Internet Governance Caucus in a statement to the second WGIG open consultation on 16 February 2005 stated: "We believe the WGIG is becoming a working model for multi-stakeholder collaboration, with all sectors providing expertise and contributions. The governments that agreed to this new global practice should now take positive steps to ensure its full implementation."[5]

A key criterion would be whether the WGIG completed the task set for it by the Geneva phase of the WSIS, which is to produce a report which answers the three questions posed by its terms of reference, which indeed it did. However, judging by the comments received on the Report since its publication[6], opinions of other interested parties about the completeness of the Report are mixed. It receives praise for identifying key values and principles that any successful Internet governance regime needs to meet, especially the need for security and stability, a regard for the 'end-to-end' principle, freedom of expression, and the need to encourage and enhance continuing innovation. The working definition of Internet governance has also been

[5] Civil Society Internet Governance Caucus, <http:// www.wgig.org/docs/CS-Hofmann.rtf>.

[6] World Summit on the Information Society, "Compilation of comments received on the report of the Working Group on Internet Governance", WSIS-II/PC-3/DT-7, 30 August 2005.

well received. These sections of the Report are effectively summaries of much more extensive comment in the Background Report.

However, the need to highlight and focus closely and selectively on what were judged to be the top priority issues, combined with the need for brevity, resulted in much of the work covered in the Background Report being left out of the Report itself. Some comments on the Report express concern about what are perceived to be serious gaps and oversights, such as an over-emphasis on policy as opposed to technical issues and a failure to adequately address the need for policies to enhance access to the Internet. In point of fact, the Background Report discusses these matters in considerable depth.

Finally, perhaps the most important criterion will be the impact of the WGIG Report has on informing the ongoing debate on Internet governance, both in the current phase of the WSIS and beyond. It is, of course, much too early to assess the work of the WGIG on this basis.

It is easy, when involved in a process as focused and intense as the WGIG, to lose sight of a broader picture. The reality of the public impact of the work of the WGIG was driven home for me when in late July, having completed my work on the Secretariat, I embarked on a two week tour of Turkey. No one else in the tour party had heard of the WSIS, let alone the WGIG. The term 'Internet governance' had no meaning for them. But everyone in the party had an email address and every evening, after checking into the hotel, most members of the group were impatient to check email and the news from home and made a beeline for the hotel's Internet facility.

THE WGIG PROCESS: LESSONS LEARNED AND THOUGHTS FOR THE FUTURE

Tarek Cheniti

As I reflect back on my consulting experience with the Secretariat of the Working Group on Internet Governance (WGIG), I realize how much complex a pluralistic approach to a global problem can be. I also realize how fascinating it was to take part in every stage of the lifecycle of this interdisciplinary working group, from its very inception to the presentation of its Report to the World Summit on the Information Society and its preparatory process. I had a unique opportunity to witness what the analysis of a multi-faceted and multi-stakeholder challenge entails in practice. So much that my primary interest spanned---more than the content and language of the final WGIG Report---such procedural questions as, "how will they develop a working definition that incorporates two terms which are, in essence, incompatible?", "how can the relevance of a particular public policy issue to the Internet governance debate be identified and assessed?", and "what steps will the group take in order to structure its work, and how will it make sure all resulting elements can be effectively connected within viable and forward-looking recommendations for action?"

The Process

The WGIG could not be more eclectic; a true melting pot of nationalities, backgrounds, professional deontology and world experiences. Even so, it has successfully fulfilled a task that did not explicitly form part of its mandate and yet was at the heart of its work: to blend all those different perspectives on Internet governance into a single coherent report. To my mind, the WGIG owes this outcome to three main imperatives of any collective exercise:

- *A clear sense of direction*: the group made every effort not to dilute its work in discussing issues that went beyond its specific mandate, and moved along the strict schedule that was defined by its timeline of activities;
- *A consensus-based approach*: since all members joined the group in their personal capacities, they were more prone to engage in an interactive debate rather than enforce their individual stakeholder perspectives.
- *An efficient working method* that was based on regular face-to-face meetings coupled with a constant online discussion process. The online tools included the use of simple and accessible technologies like email and a wiki that allowed the group members to participate on an equal basis, regardless of their geographic location.

The WGIG process benefited from the regular input provided by the different stakeholders. The group's meetings followed a format that typically began with one or two days of open consultations. The range and profile of participants in these meetings reflected the universality

of the Internet governance debate as well as its perceived importance to diverse communities. The consultations attracted, in addition to the traditional diplomatic delegations and representatives of the Internet community, a large number of participants from entities which did not *a priori* have any obvious connection to Internet governance or play any specific role in the way the Internet is organized. These included, *inter alia,* trade facilitation experts, social science research centres, gender and cultural heritage lobbies, and humanitarian organizations.

In addition, the WGIG's website and online content-management platform provided a window to the public that helped collect their views, critiques and suggestions on a regular basis. In particular, they were instructive as regards the results of the questionnaire the WGIG used to collect inputs on the adequacy of current Internet governance arrangements and on the desirability of and options for reform. The WGIG process provided a forum to share thoughts, experiences and perspectives on Internet governance which were well reflected in the final Report, and which could certainly be used as a reference in multilateral approaches to present-day global problems. Such approaches promote international policy harmonization, create synergies and allow different actors with differing levels of experience to take part in the formulation of worldwide policy guidelines that are beneficial to all. They must, nevertheless, be integrated into and supported with ongoing processes of comprehensive dialogue and collective action.

Prospects for the Internet Governance Debate

The WGIG Report could not be exhaustive with regard to the issues covered and recommendations offered, based as it was on a fact-finding exercise conducted within a limited time frame. It nevertheless paved the way for a lively debate with longer-term implications. In particular, questions pertaining to (1) the locus and content of Internet governance and (2) the developmental aspects of Internet governance will need to be explored further.

The WGIG Report begins with a working definition that leaves us with much food for thought as regards the boundaries of Internet governance. It again demonstrates how complex a phenomenon the Internet is. It is complex not only because of the vast and intricate network of networks and humans it entails, but also because its impact on our lives is subject to increasing controversy. In many respects the Internet appears as a large and far-reaching communication channel that makes globalization a reality. Approaching Internet governance as an essentially human-centered issue with uneven socio-economic implications is key to the success of any proposed implementation model. This will indeed help establish a map of the Internet landscape which features those issues on which new or revised forms of governance are needed, bearing in mind their wider implications for governments, industries, and the ever-expanding community of users.

The development potential of the Internet is, in theory at least, huge. In recent years, increased attention has been paid to the importance of technological advances in eradicating poverty and enhancing literacy. It is no surprise then to see that the United Nations Development Programme's (UNDP) annual Human Development Reports now incorporate a Technology Achievement Index as a composite measure of human progress[1]. However, much more effort needs to be paid to identifying ways in which the progress of the Internet can be channeled towards the achievement of the United Nations' Millennium Development Goals. To this end, it is essential to project oneself forward into the years 2020 and beyond, when the take-up of the Internet might surpass the "phenomenon" status to form an essential but standard part of the economic progress of today's developing nations. The scale of governance is also key to understanding the needs of developing nations. Interestingly, the WGIG process revealed that many of the most successful Internet governance arrangements at the local level are now in developing and transitional countries. The Brazilian multi-stakeholder scheme, the Kenyan Country Code Top Level Domain (ccTLD) redelegation experience, and the open UNDP Asia-Pacific Development Information Programme's regional dialogue on Internet governance[2] all offer good examples of sustainable national or regional Internet policy models and discussion forums which could inspire the set-up of Internet governance arrangement elsewhere, including at the global level.

Conclusion

The World Summit on the Information Society (WSIS) has gradually shifted from being an essentially technology-oriented process to a vast socio-economic development forum. The Internet governance debated has proven that issues raised by the information society go beyond technical questions to touch upon policy areas that are of interest to the world community at large. The WGIG Report rightly points out that several Internet-related public policy concerns may arise from issues pertaining to the use, in addition to the technical steering of the Internet. It also emphasizes the role of civil society and the private sector and, in doing so, recognizes the necessity for concerted action in order to ensure a truly inclusive and durable governance process.

This is certainly not the first instance in which technology-related governance reaches out to non-traditional decision-making actors, such as non-governmental organizations. Participatory governance has also been (more or less successfully) solicited in other arenas, such as

[1] See the indicators included in, United Nations Development Programme, Human Development Report 2005---International Cooperation at a Crossroads: Aid, Trade and Security in an Unequal World (New York: UNDP, 2005) <http://hdr.undp.org/reports/global/2005/pdf/HDR05_complete.pdf>.

[2] See, the United Nations Development Programme's Asia Pacific Development Information Programme <http://igov.apdip.net/>.

environment protection, energy security, and civil nuclear programmes. What renders the Internet unique, however, is the width and depth of governance issues, as well as their uncertain trajectories. Topics like spam, cyber-terrorism, coordination across different jurisdictions, and capacity-building, to mention a few, go beyond existing international cooperation mechanisms and require enhanced levels of multilateral governance to be tackled efficiently.

The post-WGIG, post-WSIS phase should therefore be dedicated to furthering our understanding of the specific format and composition of appropriate Internet governance models. There are, however, a number of substantial challenges in integrating the WSIS/WGIG results into a global system of Internet governance. First, multilateral decision-making processes do not necessarily reflect the best possible solutions but the ones that most collectively respond to stakeholders' expectations. The risk here is to end up with fragmented policy directives that may hamper the global development of the Internet. Second, it is very difficult to accommodate national Internet policy systems into a global governance system that invariably reflects the WSIS principles of openness, inclusiveness and transparency. Internet governance model initiatives will need to account for the regional differences in terms of economic, political and social development. And third, regardless of the model opted for, questions of accountability, legitimacy, and enforcement may remain largely unanswered at multiple levels of analysis. The international community will need to pay particular attention to ways in which those challenges are tackled, an exercise that will perhaps be best illustrated in the shape of an informal consultation process involving, *inter alia*, academic research centres.

INTERNET GOVERNANCE: STRIKING THE APPROPRIATE BALANCE BETWEEN ALL STAKEHOLDERS

Willy Jensen

It is increasingly obvious that modern good governance in both the public and private sectors should involve all relevant stakeholders. However, it is less clear what specific functions or roles the different stakeholders should take on concerning governance issues. With that in mind, this chapter reflects on the linkages between governance functions, the roles and responsibilities of the stakeholders involved, and accountability. The chapter stresses the importance of sovereignty and politics in the governance of Internet, and Internet applications as a set of essential global public goods. These issues are addressed from a pragmatic and operational government perspective.

Governance Modes

The classic, but simplified, modes or levels of governance in most areas of public policy are politics, policies and strategy and then operation or administration. Oversight and review or audits fed back to politics are closing the governance circle. Obviously these generic modes of governance must be mapped onto concrete tasks or functions. All stakeholders should be encouraged to participate, but their roles and levels of accountability should differ.

In the case of Internet and its applications it is useful to assume that governments should refrain from involvement in day-to-day operations and administration. The private sector must play the major role here. The actual sets of issues and the various assumed roles of the stakeholders are well described in the Working Group on Internet Governance (WGIG) reports.

The political responsibility for the stable and sound operation and functioning of the Internet as a carrier for public good applications will in the end be with the governments. The recognition of this accountability towards the parliaments is perhaps the main reason for the increased interest and concern from governments in issues concerning Internet, its stability and further development. I have to emphasize here that I choose to consider governments from the European parliamentarian tradition. I recognize that there might be different traditions and structures elsewhere. Democratic governments do, however, have experience – not always successful – for implementing industrialized mechanisms for operations of infrastructure through industrial contracts or some form of outsourcing. The most effective way of oversight of privately run operations of infrastructure that is critical for society, is competition itself. I

believe that the WGIG had insufficient time to discuss competition as an element of well-balanced Internet governance.

Democracy and Sovereignty

Although the Internet is a vehicle for new modes of communication and involvement in societal processes by the population, democracy is not necessarily better implemented through the use of Internet whether in Internet governance or in other elements of society. Democracy depends also on adequate representation, competence, and solid mechanisms for accountability. Structure is essential in democratic processes, and this is also reflected in the complexity we already can observe in the present Internet governance activities, representing a democratic challenge for those constituencies that need capacity building. In some areas, we might even talk about democratic deficiencies in the present structure such as insufficient participation of stakeholders from developing countries, lack of multilingual arenas and the dominant role of academia.

In the present regime of Internet governance, I am particularly concerned with the severe lack of outreach and involvement from large groups of the populations, the not-yet-users of the Internet. The rhetoric of the present regime is wrapped around "the Internet community". But public goods like the Internet certainly concern the whole population!

Where is the participation of industry and civil society of developing countries? Is the participation of industry adequately distributed between the different industrial sectors? Is the European industry content with their influence in the further development of Internet? Are the European academic communities satisfied with their influence when it comes to the design and future operation of e.g. the Object Name System or Digital Object Identifier?

The special role of governments representing the complete population through democratic processes must be appreciated. The political responsibility towards the electorate is well understood and easily implemented. Recognizing that there may well be differences in the way governments operate, I was nevertheless sorry to learn in the WGIG that governments among some members by definition were considered undemocratic. On the other hand I firmly believe that mutual respect between different cultures and views is also a characteristic of democracy, and the understanding of the attitudes towards the government function in itself from other political cultures than the European, was a useful insight. The introduction of good governmental governance is imperative in all circumstances.

The sovereignty and role of governments, nationally and internationally in a global economy concerning Internet is increasingly accepted. Even the US Government has recognized this in its recent policy statement. In cases associated with Internet security and stability, with code of

conduct in the usage and further international development, the need for intergovernmental oversight is also recognized in the WGIG Report.

The popular misconception that Internet governance mainly is about technical matters and therefore should be reserved for private sector and civil society and the users and the academia is no longer accepted. It is my view that all public policy issues regarding Internet governance should be under the authority of governments. The WGIG Report describes well the public policy issues.

Trilateralism is Insufficient

Personally, I was astonished by the surprise and loud appreciation within the Internet community that WGIG included all stakeholders in the process. In my context this is a natural and necessary element of normal good governance**!** The crucial challenge in the coming process of institutionalization and internationalization of Internet governance will be to strike the *right balance* between all relevant stakeholders.

The success of the WGIG cooperative process was not because of the categories of delegates, the number of civil society representatives, and so on. It was a result of good chairmanship and the fact that intellectually mature individuals rapidly established mutual respect and trust in spite of large differences in view. Many of the delegates did also have divers careers so that the rich and cross sector experience eased the mutual understanding between interest groups and different cultures.

While pleased with the success of the multistakeholder exuberance, I would nevertheless warn against the rather narrow participation *within* the three main categories! I would like to see broader industrial participation and broader citizen participation: who speaks for the non-users? Better balanced and broader government participation is needed. And there is always the challenge of hitting the right level of influence and legitimacy within the respective group and within the organization.

However, the final responsibility lies with the people represented by their political, elected authorities.

Some of the major challenges of striking the right balance and diversity in Internet governance could be seen as:

- *The civil society obscurity*. The definition, identification of constituencies and associated accountability will always be a problem when dealing with civil society. We saw it even in the WGIG, when some members suddenly wanted academia and the technical community to be an additional category of stakeholders.

- *Some government officials' obsession with micromanagement*. The major challenge for governments – and we see this in many instances – is to activate the right level among the government delegates. Far too often governments are represented by delegates working at too low, technical level. It is obvious in ICANN's Government Advisory Committee (GAC); it is equally obvious in the various governance forums within the International Telecommunication Union (ITU); I understand the same happens in World Trade Organization circles. This is a real, serious problem that the top management of governments - perhaps even the political level - must sort out. In some cases, however, this technical approach could be deliberate in order to avoid dealing with politically controversial matter.
- *The private sector's lack of outreach*. The wonderful thing with the private sector is that the metrics of success and accountability are so well defined---the bottom line of the accounts! The accountability is in the end ensured by the owners' legitimate interest in return on their investment. For this slightly cynical reason, I am not so happy about the many idealistic, non-profit private sector enterprises that we meet in the Internet communities.
- *The concept of multistakeholder is in itself too narrow*. Within each of these categories there is very unsatisfactory participation. This is mainly true for industry where the participation is very limited and unsatisfactory with regards to geographic distribution and with regards to the various sectors, e.g. manufacturers, operators, Internet service providers, etc. Similarly, governmental participation is certainly inadequate in terms of outreach. It does not matter whether there are 100 participants in the GAC when only half of them on average take part in the physical meetings, and only a fraction of them are substantially active! And for me, broader participation from industry – with respect to sector and geographically – is more important than the level of civil society participation.

The Internet Governance Discussion

The confusing element of the ICANN/ITU battle was relatively early set aside within the WGIG, but in the media we can see that discussions on this issue are still around. Even in the ITU governing body, the Council, there is no clear ambition in the membership that ITU should take over the ICANN role and responsibility. So this is an old, slightly antique exercise that to a large extent is a waste of time and resources.

The reason for the belated and increasing interest among governments in Internet governance is of course the fact that Internet and its applications now are essential for the further functioning of national and international societies. Increasingly, it is clear for politicians and government officials that in case of Internet problems/failures, they will be made accountable to the citizens, i.e. the electorate. Governments have been late in understanding the political importance of the Internet evolution. This is what we now try to remedy with getting a better balanced government influence; not at all do Governments want to be present in the day to day operation of Internet, nor in the technical aspects of operation and development. However, it must be the Governments that decide which issue is of public policy character and which is

not. It cannot be up to ICANN officials, as in the case of the .xxx domain in which the US Government rightly activated its oversight role. This is a brilliant example of what I would like to see internationalized; the US Government should be supported in this and other governments should be given the opportunity to share this responsibility with the US Government.

One should notice, however, the governments' different roles: direct user, policy maker for the Internet infrastructure and policymaker for the various sectors of Internet applications.

Presumably, virtually all high-level representatives from governments today agree that they would like to leave to the private sector as much as possible and exploit the build in accountability in a competitive economy. The ICANN monopoly is a political concern. The fact that the management of Internet resources seems to be modeled just like natural monopolies was hardly discussed in WGIG. This could accentuate the need for stronger public involvement in the governance oversight, so far taken care of by the US Government's Department of Commerce mechanisms.

The WGIG Report has identified a large number of areas where different types of governance functions takes place and where the balance in influence and involvement between the different stakeholder groups must be improved through processes of rebalancing.

It is difficult to explain precisely what the function and role of governments should be. This is why the negative formulation, "*should not interfere with day to day operation,*" sometimes was the best one could achieve. The term "*oversight"* could be useful; similarly and perhaps more precise is "*review or audit and give policy guidance*".

Internationally one must ensure that sovereignty and subsidiarity is preserved. A new mechanism for intergovernmental oversight should include better coordination between already engaged bodies and must be lightweight and policy oriented, and at the same time have sufficient high-level composition in order to win legitimacy and respect. Only then can we expect that its decisions and recommendations will be duly implemented.

Conclusion

The Internet and its applications are now so important for society – both within and between all the countries of the world - that a shared, internationalized new oversight structure should be established. This intergovernmental structure must ensure broad multistakeholder participation, and it must operate in a light, fast and flexible manner. It must ensure better coordination of existing organizations involved in Internet governance and it must have a distinct development perspective. Inappropriate actions concerning control of content must be avoided. A leading role for private sector in the operation and technical evolution of Internet

must be ensured. The new governance structure must address a broad spectre of issues including best practices of usage and code of conducts in order to reduce the burden of spam and similar threats.

The World Summit on the Information Society process after Tunis should become the tool for creating such a structure, already from its inception characterized by international thrust. Efficiency must be ensured, e.g. by organizing a regionally structured process with the full participation of the US Government.

WSIS, WGIG, TECHNOLOGY AND TECHNOLOGISTS

Avri Doria

While the primary focus of the Working Group on Internet Governance (WGIG) was Internet policy, consideration of technology could not be avoided. The confluence of policy with technology brought many contrasts and inconsistencies, and, on occasion, the stress that is typical of the relationship between Internet technology and Internet governance. The World Summit on the Information Society (WSIS), the purpose of which is the bridging of the digital divide, has for the most part avoided discussions of technology with the assumption that the problems could be solved with money and policy alone. But when it came down to some of the major issues explored by the WGIG, completely ignoring technology did not prove possible.

In addition to bringing together members of governments, the private sector and civil society in a multi stakeholder process, WGIG brought members of the international policy community together with members of the Internet technical community. In the discussions within the WGIG, the concerns of the technical community were not specifically included among the concerns of the named stakeholders being discussed, since they are not included in the tripartite stakeholder divisions that had been defined by the WSIS process. Nor were the technical and academic communities assigned any particular roles and responsibilities in Internet governance, though their continuing roles were briefly recognized in the report:

> 33. Furthermore, the WGIG recognized that the contribution to the Internet of the academic community is very valuable and constitutes one of its main sources of inspiration, innovation and creativity. Similarly, the technical community and its organizations are deeply involved in Internet operation, Internet standard-setting and Internet services development. Both of these groups make a permanent and valuable contribution to the stability, security, functioning and evolution of the Internet. They interact extensively with and within all stakeholder groups.

While this paragraph may seem like an afterthought, it was actually the product of extended discussion. The final sentence of the quote is the key point that this chapter will explore---the nature of the interaction of the technical community within each of the defined stakeholder groups and within the WGIG itself, and the recognition that in an undefined sense it is a stakeholder category of its own. The chapter will also briefly explore the relation between technology and policy as understanding this relationship is critical to the success of further development of Internet governance.

Technologists and/as Stakeholders

Technologists work in the government, business, or non-profit or civil society sectors. Technologists have to make a living, even if many would prefer to write code without the trappings and bureaucracy of dealing with an employer. While in the early days most Internet technologists were employed by academia, since the commercialization of the Internet, they increasingly have been employed by equipment vendors and application or service providers. Many technologists also work as independent professionals, and in small and medium enterprises. Within the WSIS stakeholder groups, both companies and business associations like the International Chamber of Commerce participate as stakeholders. While the participating representatives of these companies and business association are most often policy professionals, many started their careers as technologists and maintain their identity as technologists, often being apologetic about not having written any code recently.

In addition to being massively employed by the military in all countries, Internet technologists can be found in all segments of governmental and inter-governmental employment. Often the goals of those who produce technology for the military or other agencies are different from those of other Internet technologists as they are directed to national goals as opposed to sustaining an international Internet. Government technologists also tend to be less free to work on their outside projects and are more constrained by employer mandate when involved in the standards development organizations.

Irrespective of whether and by whom they have been paid for their efforts, the individual technologists who have created the Internet have by and large organized themselves into bottom up organizations for the promotion of the Internet and for the defense of Internet values. For example the Internet Engineering Task Force (IETF) is an assembly of individuals dedicated to producing the protocols on which the Internet is based. Though often employed in the formal stakeholder groups, for many their main identification is to the technology and to the standards organizations that advance the technology. One will often find that those engaged in creating Internet technology have a greater loyalty and sense of belonging to the community of technologists then any company or other organization and will continue their involvement in standards organization despite changing jobs and through periods of unemployment. It is also not unusual, for example, to find employees of the same private sector company arguing with each other in public forums over the 'right thing to do' when creating a protocol, obviously arguing from belief and principle rather then from an externally motivated set of corporate mandates.

While being determined individuals, technologists do manage to come to agreement on protocols, no matter how divergent their initial positions. Organizations like the IETF have developed complex mechanisms for consensus, albeit a concept of rough consensus, and for

democratic and transparent organization. These mechanisms have evolved over time and find their motivation in the bottom up nature of the organizations. If the powers that control the WSIS do accept the WGIG proposal for an Internet Governance Forum, they would do well to study organizations such as the IETF for inspiration. Additionally many technologists devote a great deal of their own time to participating in the Free and Open Software Systems movement that is one of the vectors of innovation in Internet technology.

Regardless of where they work, technologists frequently belong to professional organizations and are represented, both within the industry and civil society by these organizations. There are many organizations formed by, and of, Internet technologists. Two examples of such organizations are the Internet Society (ISOC) and Computer Professionals for Social responsibility (CPSR). ISOC is a professional organization composed of both individual and corporate members that has the stated mission of providing leadership in Internet related standards, education, and policy. CPSR, on the other hand, defines itself as a public-interest alliance of people concerned about the impact of information and communications technology on society. Many members and some of the leadership from each of these organizations participate in the other organization. One organization is a cross-sectoral hybrid while the other considers itself to be part of civil society. With overlapping memberships, it becomes clear that technologists are at the same time, frequently members of more then one of the three prime divisions of WSIS. The very nature of the technological enterprise and the fact that they cannot easily be defined within the existing stakeholder division suggests that they should be regarded as a stakeholder group in their own right.

All this makes it difficult to know where to place technologists in the three standard categories of stakeholders used in WSIS. Is a technologist who is employed by the private sector but who devotes a great deal of her time producing public domain software and volunteers time in civil society organizations a member of the private sector, or of civil society?

While also true of some academics, the cross-sectoral identity of technologists is a hallmark of these stakeholders. If one speaks to most technologists, however, one finds that insofar as they understand the divisions established by WSIS, they do not feel themselves to belong to any of the WSIS primary stakeholder groups, and frequently consider themselves to have been left out of the WSIS equation completely. This exclusion has generated suspicion among many technologists about the entire WSIS process, and has prompted many to discount the entire enterprise as a massive inter-governmental boondoggle at best, and as a threat to the future growth of the Internet at worse.

Tensions between the Technical and Political Realms

It is an often quoted belief in the Internet technical community that political considerations are overcoming technical considerations and that this is a very bad trend. In fact this is seen as a tragedy by many since it means that the 'pure technological' enterprise that many technologists believe in, is being skewed by external political concerns. This is seen as a serious problem because one of the principle tenets of many Internet technologists is that only by the unfettered progress of technology can the Internet thrive and meet its mission of a universal Internet for all. There is also a belief among many that the Internet is a new phenomenon that has grown into the force it has been because of the absence of political influence. This large group argues that to allow politics or politicians any say in the future of the Internet is tantamount to agreeing to the destruction of the Internet; every encroachment by policy makers on the free flow of technology and information weakens the Internet and threatens its future.

On the other hand, many in the political and policy field believe that the Internet is like all technologies that have come before and that the technology must be controlled under the same regimes that have governed all previous communication systems. They hold that allowing an important national and international resource like the Internet to remain outside government control is unthinkable. To allow the Internet to remain a free and open resource beyond national boundaries and international regulation is considered naive and very dangerous. For many countries, regulation and control of the Internet and its resources is considered a sovereignty issue and considered essential for their national security.

Given the frequently diametric opposition of these communities, they tend to remain far apart and have strong prejudices against each other. The technical community at large is well known for condemning political work that could affect the Internet protocol architecture. On the other hand the political community has long avoided and disapproved of the seemingly anarchic tussle that is the hallmark of the Internet's technical community. Many countries have embarked on, sometimes, draconian policies to control the Internet and in the process, often with the willing cooperation of the public sector, have threatened the free and liberating nature of the Internet.

WSIS itself has contributed to this division between the communities. By not being included among the formally defined stakeholders groups, technologists were relegated to the side lines, as outside commentators and as auxiliaries in side events such as the ICT for Development side show. This exclusion has not won many allies for WSIS among Internet technologists, though they do support the ultimate goals, global access to the Internet for all the world's peoples.

Technologists and the WGIG

The WGIG was formed amidst this tension between the technologists and the policy makers. From the moment that Markus Kummer started to plan for the group, the WGIG broke with the tradition of excluding technologists from policy discussions. In the lead-up period to the formation of the WGIG, his efforts to consult with the technical community as well as other constituencies were a departure from WSIS practice and managed to bring Internet technologists into the dialog. By consulting with a wide variety of technical and other groups, he facilitated the United Nations Secretary-General's creation of a group that could begin to bridge the wide gulf between the technical and the policy communities. This openness continued throughout the term of the WGIG.

While this was not the first such encounter ever, it was a first for such a high-level advisory body. United Nations working groups often are composed largely of practitioners of diplomacy and policy, with technical considerations relegated to second level advisory groups if they are considered at all.

While the technical community was not represented by name in the WGIG, several of the members of the working group, including myself, were long time participants in the technical community as well as being members of WSIS named stakeholder groups. This inclusion gave these technologists, as technologists, their first opportunity to participate in the WSIS process.

When the WGIG process first got underway, there was initially evidence of the tension between the diplomats and the technologists. One of the virtues of the WGIG was that each of the participants was free to function as an individual, allowing, for the most part, the branding of our various WSIS stakeholder designations to fall aside and allowing us to work with each other as peers instead of as the dreaded members of another estate.

One thing the members of the group had in common was the commitment to work together. But coming from our different starting positions it was sometimes a challenge to work through the many levels of miscommunication. When we started the meetings, our vocabularies were as different as our frames of reference. With the help of our chair and our tireless Secretariat we eventually found ways to get beyond the foreignness with which the technologist and the diplomat originally greeted each other. We learned each other's jargon, shared knowledge about technical realties and political necessities, accepted each other's behavior patterns, and came to appreciate each other's worldviews. That is not to say that the group was able to agree on all things or subscribe to a unitary approach, as the four oversight models indicate. To expect a full interweaving of such different approaches would have been naively optimistic. To my knowledge, the fact that members of the group could intelligently discuss issues that had both technical and policy aspects was an unprecedented achievement. And the close network that

developed among the various members will hopefully be the seed for much future collaboration between policy workers and technical workers.

Conclusion

WGIG, through the equal participation of policy and technology oriented individuals has shown a way beyond mutual suspicion and exclusion. By acknowledging the necessary interplay between policy and technology, the WGIG has opened a door for cooperation. Instead of only focusing on technology or policy, but rather focusing on techno-policy, WGIG has enabled a dialog that recognizes that technology creates some of the basis for policy and that policy sets some of requirements for technology; the two are in constant interplay and essentially inseparable. It is now up to the WSIS diplomats to take advantage of this opening for dialog and cooperation. And, of course, it is also up to the technical community to remain open to participation in the discourse. A door has been opened, and hopefully it will remain open.

Section 2

The Current Landscape of Internet Governance: Selected Issues

INTERNET NAMES AND NUMBERS IN WGIG AND WSIS: PERILS AND PITFALLS

Alejandro Pisanty

This chapter discusses Internet governance arrangements for domain names, Internet Protocol (IP) address numbers, and protocol parameters, i.e. the centrally-coordinated identifiers of the Internet. Background is provided to describe how these issues became central to the World Summit on the Information Society (WSIS), and the wasted opportunity for humankind that ensued. Some conditions of the Working Group on Internet Governance (WGIG) are recounted to show it was a micro laboratory of the collision between cyberspace and a traditional, possibly obsolete worldview. Finally the history of governance mechanisms for the Internet shows the way to continue building new ones after WSIS. The key is to address specific problems with suitable solutions, instead of creating a new mechanism for all.

The functioning of the domain-name system (DNS) has been described many times elsewhere. In particular, the contractual basis and governance arrangements for Top Level Domains (TLDs) and the root have also been extensively studied. Though in less detail and less frequently, the same applies to the global management of IP numerical addresses and other centrally-coordinated parameters of the Internet. Therefore this section skips these readily available facts and instead offers an update on the discussion of how they have been addressed in WSIS, a description of the constitution and evolution of ICANN--particularly in the light of the WSIS principles for Internet governance---and a qualitative historical view of the evolution of mechanisms for Internet governance that work. In the process some difficulties of semantic origin and their effects are discussed.

How Names and Numbers Became a Target

As has been already described by many, the debate, sometimes raging, about Internet governance has often focused only on the governance of the naming and numbering schemes that underlie the identification of most resources found on the Internet. It is this author's view that in the WSIS this excessive focus, first on Internet governance generally, and then almost exclusively on the names and numbers issues, has made the whole WSIS effort a waste of goodwill, effort, genuine work, and genuine hope to make the information society inclusive, and its development beneficial to all.

The “real action” of the Internet occurs in its higher layers. Most users, businesses, governments, academic institutions, software developers, and civil society organizations the world over have their attention turned to issues of access, content, services, and usage of the

Internet – be it for "positive" uses like education, earning a livelihood, health, banking, the buildup of communities, and the creation of collective knowledge, or the "negative" uses like fraud, crime, un-liked or undesired content, censorship, the promotion of hate, and so on. Big money is made or thought to be possible in e-commerce; huge damage comes from phishing and pharming. Large-scale societal shifts to global democracy depend on access, communication, and freedom of speech. Yet organizations formed by thousands and serving millions may have in their staff one person alone dedicated to naming and numbering operations. It should also be remembered that the other large part of the interest on the Internet applies to traffic and bandwidth, including complex issues like interconnection payments, which are essentially independent of the details of operation and governance of the DNS.

In the WSIS context, the interest in naming and numbering issues grew in the months leading to the meeting of the first phase of the Summit in Geneva in December 2003 for a few parallel reasons:

a. Fundamental disagreements on issues like the inclusion of rights to freedom of speech, access to information, right to organize on line, etc. as well as on financing the expansion of access to the networks of the information society led to focusing on issues like Internet governance in which political discussions can appear more clearly delineated.
b. Competition among organizations for the most relevant, and controlling, role in WSIS and its follow-up. Of particular importance is the role of the International Telecommunications Union (ITU), after its many missed opportunities in the last decades to play a leading role for the Internet.
c. Lack of widespread, in-depth understanding of the Internet among traditional policy makers, which in terms of time alone has meant many months lost in explaining the system.
d. Rejection of the more horizontal, bottom-up, international and transjurisdictional relations that the Internet community worldwide has created – even though it is this, precisely, that has made it so valued to the citizens and businesses that use it. The organizational models of the Internet, including on an equitable footing all relevant stakeholders, challenge the established operation of governments and intergovernmental organizations in ways that some of them are unable to assimilate.
e. The fundamentally asymmetric role the United States government plays in the administration of the DNS – procedural approval of changes to the root zone file – which is little understood. While there is widespread agreement that this role of a single government is not acceptable in the long run, there is no consensus on what to substitute it with, nor how, at this time.
f. The rhetorical trap of calling the organizational innovation of the Internet "the existing arrangements" which created the opportunity for the views opposed to the Internet's innovation power, to appear as the forces of change, and even created the paradoxical situation in which some well-meaning civil society organizations pushed

for an enhanced role of governments in Internet governance, which will end up legitimizing the actions of governments inimical to the causes and actions of those same organizations.

g. The mystifications occurring in WSIS and WGIG-related discourse around the use of "public policy", this often being a codeword for "politics".

How the Internet Organizations Were Built and Continue to Evolve

The Internet has some needs for coordination, which appeared at its very start, and as it has evolved so have the coordination and governance functions. The Internet is a network of interconnected networks; these can be small home or office networks connecting a few computers in a single limited physical space, or large-scale networks of computers belonging to a single organization extended over a whole country or even globally. They are part of the Internet if they have a physical connection to some point of the Internet and communicate with the other networks through procedures ("protocols") which have been rigorously standardized. The standardization is absolutely necessary so that different manufacturers of equipment, or different programmers of software, can do things in different ways, yet make sure that their products will communicate seamlessly with one another over the whole network.

Therefore Internet standards are both absolutely necessary to facilitate the existence, operation, and interoperability of the networks, and are the basis for the rapid innovation that has taken place over the recent decades. The Internet standards are open, available free of cost in a simple format to anyone interested; they are based on the consensus of the people and organizations that create and use the technology, thereby fostering intense competition; and they are based on a layered model that permits to work in one layer while making abstraction of all others, respecting the fundamental end-to-end principle. Standards are not the technology itself; they are ways in which the technology must work in order to keep the Internet functional and open.

Thus, one of the very first needs for coordination on the Internet was the creation and management of technical standards. For this purpose, and given the fluid and rapid process of innovation at the heart of the technology, a unique process for standardization management was created, the Request for Comments (RFC) process. RFCs are documentations of the state of agreement about standards that, once published, allow all makers of equipment and software to use them as specifications. The standards are not enforced by law or governmental intervention; it is their functionality and their ability to deliver something that actually works that make a standard extended or not used at all.

The discussion of emerging technologies and their standardization require a form of governance. This was created through the inception of the Internet Architecture Board (IAB) and the Internet Engineering Task Force (IETF). The organizations of this system are quite

peculiar; for example, the IETF is not actually established as an incorporated legal entity anywhere, having instead chosen the Internet Society (ISOC) as its organizational umbrella. Their operations are optimized to suit the task at hand. Discussions and decision-making take place online as much as in meetings. Debate is intense, vigorous, sometimes heated, and final decisions are very much weighted in favor of an outcome that works, that can be tested and evaluated for function. This principle is known as "rough consensus and running code:" consensus to the point of general agreement of those involved, so that even those initially opposed accept the outcome, and "running code" as the concepts can be demonstrated by working systems and prototypes, desirably by more than one maker. The IETF's constitution, governance, and character are therefore optimally shaped around the function fulfilled.

Further, the IETF has evolved over the years and continues to do so. From a small group of engineers to meetings of thousands, moving to different levels of formalization of its management according to times and needs, the IETF has undergone self-scrutiny and changes in consequence to continue to try to serve to the best extent possible.

ISOC, which is not in charge of governance but does play related roles, in turn was founded for a specific purpose and carried a limited scope and agenda. Basically the hopes around ISOC and its functions have been providing a corporate umbrella for the IETF (doing tasks such as managing intellectual property of the RFCs so they cannot be privatized or hijacked, for example); creating a society for professionals of the Internet, a goal which found a set of setbacks derived from the dot-com bubble burst; promoting the understanding, extension, and use of the Internet, especially in developing countries and including the necessary human capacity building, which is a continuing task with a good track record of achievement; and putting forward policy proposals that favor the growth of the Internet in a healthy, universal way, which has been performed well in cycles, and in cooperation with other organizations as well.

Maybe the most controversial part of this story is the Internet Corporation for Assigned Names and Numbers (ICANN). Initially, the Internet Assigned Names Authority (IANA) was operated single-handedly by one individual, Jon Postel, under grants (which required contracts) from the US Government in an academic institution, the University of Southern California. As the use of domain names became more widespread and was also made for commerce and speculation, Postel saw the need to formalize the administration and draw some lines that would exempt him and his organization from damaging lawsuits over issues like cybersquatting over which they did not have effective authority. The operation of the DNS and IANA would thus stop being the responsibility of a single individual. The Clinton Administration was also keen to transfer responsibility over this function away from the government, keeping a much reduced oversight function while staying exempt from lawsuits.

ICANN was created also in a form-follows-function kind of design, after severe rows among powerful parties acting internationally. The first proposal of the US Government for transfer of the DNS coordination functions away from government entailed privatization within the United States, in the Green Paper, and caused an international uproar. Intense discussions, globally, ensued, and gave rise as a result to the White Paper, which now designed a transfer to an internationally organized private-sector organization.

It must be remembered that the wording "private sector" has been a source of friction and misunderstanding in this process (and can be predicted to remain so for the foreseeable future). People in many countries and cultures, notably Latin America and continental Europe, understand the "private sector" to designate the for-profit part of the economy: business, including industry, commerce, consulting, banking, services, all provided by individuals or firms organized to seek profit, exchanging goods and services for money and operating the best they can under a principle of maximizing profits and/or value to stockholders. In the formulation made in the US, "private sector" is ambivalent, as it sometimes has this same meaning, with little consideration of other parties, and sometimes is meant as "everything that is not the government" and thus including hospitals, churches, charities, academic and research institutions, libraries, civil society organizations, labor unions, and so forth.

Varying usage of the term marks many debates and creates confusion in them. Mindsets that read "business" when they read "private sector" tend to devolve the solution of issues to markets, in the understanding that the freer these are, the better. Mindsets that read "everything not governmental" may consider action and solutions which are not strictly based on free markets; they also consider regulations beyond market regulations, mechanisms to compensate effects of markets in order to put disadvantaged communities, even whole countries, on a more-equal footing with participants in market mechanisms, as well as non-market-driven action such as are, in many societies, education, the promotion of health and of social well-being, research, support for the elderly, weak, marginalized, and otherwise disadvantaged, and the long-term views and purposes of societies.

Once the discussions about ICANN began to settle, around 1998, many social actors started taking part in the Internet's core identifiers coordination and administration, both in the US and other developed countries, and not only in the for-profit sectors of those economies, but also elsewhere. While in the US and in parts of Europe the companies most closely involved with the domain name market and IP address management came if not under the tent at least into the ring, in Latin America, Africa, and Southeast Asia the first significant set of players to come into the debates for the formation of ICANN came largely from academic institutions and civil society organizations. Among them were people who had been trained and educated on the Internet, both for operations and for its social impact, through ISOC's and related

efforts. Developing countries (their citizens and organizations long before their governments) and civil society organizations have had a decisive role in ICANN since its very start.

Besides the commercial interests represented in the domain name registries and registrars' constituencies, and the trademark and anti-counterfeiting interests and business constituencies, a non-commercial constituency started and made important contributions to shaping ICANN initially. The ready availability of talent from developing countries, in which out of necessity a group of people combining technical knowledge and social and political expertise exists since the start of the propagation of the Internet into these nations, helped populate the ICANN leadership with diverse forces. This balanced the potential (and in many cases actual) focus on the US other developed countries, and on business concerns, and facilitated the introduction of principles-based thinking and action to balance the strictly commercial self-regulation and therefore potential cartelization that could have ensued.

ICANN's structure and functioning were designed from the outset to solve outstanding problems in the management of the centrally-coordinated parameters of the Internet. These included domain names, IP addresses and other numbering such as Autonomous System Numbers (ASNs), and protocol parameters, this last function encompassing the upkeep of tables of information such as what port number is assigned to a given protocol in the IP stack, or the coding of characters from alphabets and scripts. The design of the organization encompasses the IANA function and is directed to eliminate as much as possible the opportunities for arbitrary or discretional operations.

The elimination of arbitrariness in the above-mentioned operations required setting policies that can be followed algorithmically, and in turn making the process of developing these policies in a public, transparent, participatory manner. The experience of the IETF was decisive in shaping the policy development processes in a way that runs essentially bottom-up, with online participation from anywhere in the world as well as participation in physical meetings.

A note is needed here on the word "policy", which also has been the cause of significant aggravation and difficulties over the years. It is used in ICANN in the same sense as it is used inside any private or social organization, be this a company or an association: guidelines for making decisions. Policies guide companies as much as they guide civil society organizations in hiring, operating in an environmentally friendly way, complying with legislation and contracts, deciding what kinds of travel tickets members of the organization can purchase, and so on. This stretches from very specific small-range actions like buying pencils to the long-term strategies, policies guide organizations.

The same is true in ICANN. Policies guide the way in which parameters for protocols are assigned; policies guide the size of IP address block allocations and the conditions for making

them combining the principles of parsimony and of block compactness to facilitate routing; policies guide the process to study and act in cases of country-code top-level domain (ccTLD) redelegations; policies guide decisions on how long a domain name has to be kept available to the registrant in case he/she lapses in the payment of a renewal; and so on, up to policies that guide the decision of creating new top-level domains which is one of the main purposes for which ICANN was created.

"Policy", then, becomes both more important and far less threatening than the outcry of 2003-2005 suggests. ICANN's rules, bylaws, unwritten rituals, and its very genome, recognize that there is a difference between this kind of policy and what most of the time and in most of the places is called "public policy", and therefore also sets out where to deal with the not always sharp frontier between technical, administrative, and business matters that determine technical coordination, and public policy writ large.

For public policy input and feedback ICANN has the Government Advisory Committee (GAC). There can be little delusion and scarce confusion: technical decisions may affect social, business, public-policy, and even political areas of concern, and vice versa, many technical decisions are, or need be, shaped by the social environment. Issues that relate to public policy in the technical management and coordination of the Internet uniquely-valued parameters are dealt with through the GAC. The GAC can only be an advisory body in the multistakeholder environment of the Internet, with its complex transjurisdictional issues, the preeminence of private law, the authority through contracts, and so on. When, in the process that reformed ICANN to its present dynamic, an analysis was conducted with numerous specialists and governmental representatives, it became clear that governmental authority, even if shared, in ICANN was undesirable – to governments themselves. The difficulties of creating a representation structure, of sharing decision-making with internationally established private parties and both national and global civil society organizations, and the liabilities that would ensue for governments from the usual conduct of day-to-day activities were identified as an insurmountable obstacle.

Thus it is that in ICANN, form follows function: a large-scale participatory process exists for decision-making, which is globally available and comes close to groups in regions by working online and by holding meetings in all regions of the world on an alternating basis. The process is handled in three separate Supporting Organizations for gTLDs, ccTLDs, and IP addresses; advisory committees, such as the GAC, and others for security and stability, for the operation of root servers of the DNS, and for the interaction with the views and needs of the at-large, broad community of users of the DNS and of the Internet in general. Each of these has a different scope, membership, degree of autonomy, and level of development. The GAC attends to issues which relate to public policy. One of the key guarantees of its functioning is the responsibility each of its members has to his/her own national government and laws to

keep track of issues with such an impact and start acting on them lest the representative become guilty of negligence.

There exist a large number of issues with public policy implications that affect the Internet in major ways; a list of them was identified and prioritized by the WGIG. Essentially none of them, other than those related to technical standards and those in the scope of ICANN, have been handed over to the authority of a single, global governance organization or arrangement – there is no parallel to the IETF or ICANN that similarly deals with spam, cybercrime, access costs, creation of content and services, the challenges to "intellectual property" in the digital era, and so on.

The reason that this does not happen is that the function has yet not been determined well enough for these issues to deduce from them a form---a structure, and together with it the rules for membership, organized decision making procedures, policy development, implementation, follow-up, and enforcement, dispute resolution, and funding. It can be surmised that once a mechanism is found that can effectively deal with spam, for example, in a globally governed way, including all relevant stakeholders in a way that is effective, the funding will come for it, almost spontaneously, from the same sources that today are spending gigantic sums of money and effort to fight spam. If the organization is effective, the cost of building and operating it will be much lower than the present (and growing) cost of combining limited technical, administrative, educational, legal, and other means which have a limited impact on spam. A similar analysis applies to cybercrime and several other of the public-policy interest issues.

This set of considerations takes us back for a glance at governance mechanisms and arrangements that have been proposed or created for these issues. For spam, for example, there is the "OECD toolkit", a combination of proposals for legal, technical, operational, etc. action against spam, slow to uptake and implement in each country, and dependent on enacting legislation of appropriate scope and quality and further, on its enforcement, under authorities which will be first and foremost national, not global. As yet, no global governance arrangement has been proposed that can be on a higher level of effectiveness for dealing with this problem.

Knowledgeable experts have made similar findings in other issues like cybercrime, where the global governance proposals that could have some effect in fighting these scourges have to begin with the recognition that very little crime on the Internet is strictly cybercrime (more of it is common crime committed through different communication means including the Internet). Hence, what can help fighting crime that uses the Internet is more raining lawyers, judges, and law enforcement officials in tasks that can be as basic as properly seizing physical evidence of crimes, establishing specialized prosecutors endowed with appropriate tools and staff, and so on, again mostly under national jurisdictions.

Maybe this is why institutions that perform effective global governance against spam or cybercrime do not exist at present. The purpose of studying why such institutions do not exist, though, should be clear: the global governance arrangements for the Internet that have succeeded have first and foremost been directed to solving specific problems, and they have succeeded when they have advanced the solution of the problem each is charged with, involving all relevant stakeholders in a properly organized fashion.

This brief historic glance would not be complete without mentioning that the institutions that have lived for a longer time and continued to be effective have been resilient and have been able to change, repeatedly, according to changes in the challenges they face, and according to self-assessment mechanisms that guide the change. The IETF, ISOC, or ICANN and their component organizations, have proven to be self-correcting, self-healing organizations, and shown adaptive behaviour enough times in their existence, based on the results of their action and the needs of the communities, that one can trust them to perform more cycles of evolution in the future. The most explicit example is the ICANN Evolution and Reform Process, which corrected some worrisome trends ICANN was developing, among which were being consumed in discussions about process and procedures and therefore bogged down, and a lack of fit of structure to function as well as a mismatch that was more physiological than anatomical, that is to say, not only in the structure but in the way the structure behaved.

ICANN, while never without troubles, has been a successful organization. ICANN itself and the stakeholders who work in collaboration with it have made a huge impact in few years. Under its stewardship competition in the domain-name market has become intense, with dramatic effects in pricing and availability of new services; some of the worst behaviour of players in the field has been reined in; there are ongoing discussion on hot issues such as the relationship between the technical "whois" operation, used to identify persons associated with domain names, and privacy considerations (in which public policy is very much taken into account); a largely successful dispute resolution procedure has been set up for dealing with conflict between domain names and trademarks; new top-level domain names have been introduced and new introductions continue to be analyzed; root servers are being placed in over a hundred sites through "anycast" technology, thus limiting the risks that could accrue from keeping only the thirteen root servers that the basic technology allows; progress is made in the introduction of non-ASCII, i.e. "internationalized" domain names, despite huge technical and organizational challenges; and so on. Such achievements are remarkable for a mechanism that is global, and whose enforcement powers are only based on contracts and other private-law arrangements.

This is not to say that the Internet organizations have no need for change. A more active interaction with governments is evolving in order to balance and eventually redress the asymmetries present today; an increase in participation and global interaction is, though

growing fast, still a focus of attention; defining and executing "internationalization" is an ongoing challenge; and ensuring legitimacy through effectiveness, results, participation, transparency and accountability are all moving targets subject to relentless pursuit.

The WSIS/WGIG Process

Internet governance is a subset of information society governance. It is related to ICT governance, media governance, and several other fields in which societies are giving themselves forms of governance, some of which are innovative. Digital convergence, a trend that has been both factual and subjected to loud hype, creates challenges to media governance since the forms in which telephony, radio, recorded music, film, video, books, magazines, and libraries are governed vary enormously, and veritable collisions occur when they begin to come together.

Also, in the fields mentioned above and more notably for the Internet, the emergence of private governance is seen by many as a novelty. The truth of the matter, especially for the Internet, is that while private parties (not all of them for-profit, and many in fact public-service entities like universities and research laboratories) were building the Internet and creating the needed governance arrangements, in many countries governments, large telecommunications-related corporations, and their alliances (in some cases unholy) were either looking in other directions, ignoring the growth of the Internet and its potential, dismissing it as a toy, or often actively fighting against it through regulation, law-making, and less loyal means like dumping and other forms of anti-competitive behaviour.

Therefore, when the issues of information society governance came up during the Summit, large numbers of governmental representatives were surprised, and could only respond in ways determined by traditional mindsets which are dysfunctional for the task at hand. The 21st century will not see the demise of the nation-state and the institutions inherited from the Westphalia regime, but certainly forms of global co-governance will have to appear if the world is to react constructively to the consequences of a globalization that is essentially irreversible, and in which civil society, individual citizens, and many other organizations which are not part of the traditional state apparatus have taken a place on the international stage that will not be relinquished.

The Internet's Organizations and the WGIG/WSIS Process

Probably the most long-lasting result of WSIS, in the field of Internet governance, will be the principle that effective Internet governance must include the full, effective participation of all stakeholders. The form and extent of this participation will inform the debates of the meeting of the second phase of the Summit in Tunis and, especially if not well solved there, continue to

cause bitter fights for several years into the future. As commonly quoted, the United Nations Secretary-General Kofi Annan has acknowledged civil society as a superpower, and its participation as something that will continue into the future.

"Stakeholder" is one more of the key semantic friction points in the global debate today. It is in the "handle with care" category, and under serious danger of becoming meaningless. A further problem is that it is not easily translated in its full richness to languages other than English due to the plasticity of this language. It represents a person or organization that has something at stake, be it life itself, business, a way of living, honor and reputation, or some other significant interest or principle. The stakeholders of Internet governance are thus varied: the creators and developers of technologies and their standardization, Internet service providers (ISPs), universities, schools, whole national educational systems, all companies active in e-commerce, banks and other financial institutions, businesses, hospitals, individuals who use the Internet, and if the list is extended to everybody that has something to lose, unborn non-users who may see their children benefit from the Internet.

The list above, which seems to encompass all of present and future humankind, becomes a lot tighter when the stakeholders of the governance of domain names, IP addresses and protocol parameters are listed: domain name registries and registrars, businesses with active use of domain names, academic institutions, trademark interests, civil society organizations, address registries, ISPs, a subset of the at-large users of the Internet, and few more. These are the parties that come together in ICANN. They come together in a different way than the very visible and successful multistakeholder partnership of the WGIG: they have to make decisions whose consequences may actually threaten the very existence of companies, the reputation of individuals, and the stability and security of the DNS. There are not only ideas at stake, as there were in WGIG, but money, power, and security of individuals and organizations.

Another substantial difference is that the mandate of WGIG was to create input to a decision-making mechanism. ICANN is a decision-making mechanism and therefore the rules of engagement are much more complex: they entail segmenting, organizing, formal policy development rules, rules for votes, rules for reconsideration and redress of decisions, dispute resolution, an Ombudsman; rules to bring together providers and consumers of certain "goods" and services without infringing competition rules; and so on.

In the work of the WGIG, a large fraction of the time and energy were applied to detailed scrutiny of ICANN. ICANN, notwithstanding problems already enunciated above, emerged in our analysis as the organization that best fits the WSIS criteria: it is democratic, involves all stakeholders, creates unequaled opportunities for their meaningful participation, coordinates with other institutions which are active in the fields recognized by the WSIS Declaration of Principles and those which make a claim for relevance, and situates public-policy authority in

the governments. A further feature of ICANN, surprisingly not considered in the Principles, is that it is effective – it can in fact do what it is meant and charged to do.

Organizations with a Claim to Relevance

No organization which makes a claim to relevance in Internet governance was subjected to anything like the detailed scrutiny applied to ICANN in the WGIG's work. The WGIG report is eloquent in this respect too: for example, it succinctly dismisses the International Telecommunications Union [ITU] as not fulfilling the WSIS principles, conceding only one and then in a most restrained form: "democratic, in the sense of one-country one-vote," and in general goes into far less detailed descriptive and prescriptive wording about all other issues.

Given the above, it is remarkable that in the process leading to PrepCom-3 of the second phase of WSIS and further into the future there is not yet an outcry for reform of the ITU and other, similar and related, organizations in which the full, meaningful participation of all stakeholders is not considered, be it in the existing rules and membership, or in the foreseen evolution of the institutions. That there is not this outcry may be given several explanations, among them:

a. It is a matter of time; as the dust settles, individuals, CSOs, businesses and their associations, and governments will turn their attention to these organizations, scrutinize them, and, if the WSIS Principles are to be sustained in a consistent manner, will start a radical, long-term reform process[1].
b. It is a decision of the members to continue non-compliance.
c. The organization is not really, and should not be at all, involved in Internet governance[2].

[1] As documented among others by Drake and by MacLean, the ITU has already undergone a couple of reforms in its past, adjusting to changes in the global regime of telecommunications governance. The last one was meant to adapt the Union to the change that went from monopoly, large telecommunications companies, either state-owned or with close ties to the state, to a more liberal and competitive regime, a transition that is still underway if at all occurring in many countries. See, William J. Drake, "The Rise and Decline of the International Telecommunications Regime," in, Christopher T. Marsden, ed., *Regulating the Global Information Society* (London: Routledge, 2000) pp. 124-177. <http://www.ceip.org/files/projects/irwp/pdf/draketelecom.pdf>; and, Don MacLean, "Sovereign Right and the Dynamics of Power in the ITU: Lessons in the Quest for Inclusive Global Governance," in, William J. Drake and Ernest M. Wilson III, eds., *Governing Global Electronic Networks: International Perspectives on Policy and Power* (Cambridge, MA: MIT Press, forthcoming, 2006).

[2] The WGIG is witness to considerations of this kind at least as related to the ITU; not only was it expressed that the Union should not go into this field: it was starkly said it does not *do* these things – by a representative of a member state!

Others have already dealt, both in the WGIG and in public commentary, on aspects of Internet governance which are subject to the work of existing organizations like the World Intellectual Property Organization (WIPO), so in honor of space and their expertise I will not delve deeper into the subject.

A different kind of track is possible in some specific issues. Thus, for example, on the matter of multilingualism, by far the largest need is the provision of online content and to facilitate its searching, finding, and usage through search engines, keywords, digital libraries, and so on. A small, specific subset of the problem is that of Internationalized Domain Names (IDNs), meaning, as mentioned above, domain names that can include characters that are not part of the ASCII character set, i.e. Latin characters with diacritics such as are used in many European languages and, more importantly, characters used in other alphabets, like Cyrillic or Greek, Arabic, Hebrew, Kanji, Katakana, Hiragana, and others vital to represent in native form the languages and scripts used by maybe more than half of humankind. This is not a trivial undertaking, both for its significance and for its complexity.

The establishment of technical standards to represent most of the above mentioned character sets (one must distinguish between languages, alphabets, scripts, and character sets, in order to pay attention to facts like the Arabic alphabet is used in languages as distant as Malay) has been largely performed, by the (private) UNICODE consortium; many important languages and alphabets, like Khmer, are still in progress. Further, there exist technical standards that give significant guarantee for translating these codes into domain names in IETF drafts and ICANN recommendations. Significant gaps remain to be filled: for example, establishing definitive tables of characters and codes for each language, preferably by an authoritative, expert, language- or culture-specific body. It is here that the Internet governance angle of organizations like the United Nations Educational, Cultural and Scientific Organization (UNESCO) can come through without, or while waiting for, deep reform of the organization for WSIS-principles compliance. UNESCO can identify and possibly bring together groupings of all significant stakeholders, like Language Academies and other scholarly bodies, to enable them to finish these urgent tasks.

On the "Forum Function," or, "Is there Discussion on the Internet?"

One does not have to be an Internet old-timer (this author's first contacts and uses of what would become The Internet started in 1979) to find it quite amusing that a "Forum Function" is postulated as a pressing need to discuss the future governance of the Internet. The history of the Internet is rife with discussions, discussion forums, discussion listservs, discussion mailing lists, discussion wikis, discussion audio teleconferences, discussion videoconferences, discussion journals, discussion sections in e-publications, discussion books, discussion meetings, meetings that started with discussions, meetings that were convened to follow-up on

discussions, and of course, discussions on procedures for discussions, discussions on set-ups for discussions, discussions on rules for discussions, discussions on the follow-up for discussions, discussions on the consequences of discussions, discussions on the consequences of the lack of discussions, and a lot more – not to speak about "flame wars" and so many other forms of discussion.

Early on, each discussion group on the Internet found its own needs and forms of governance. One of the most outstanding discussion forums of the Internet, the Computational Chemistry List which has been run continuously since 1991 by Prof. Jan Labanowski (initially out of the Ohio Supercomputing Center) is a prime example; from the start we had to find ways of establishing civil discourse, dealing with commercial announcements – and therefore later with spam – and other non-academic participations, establishing rules for confidentiality and for the management of intellectual-property concerns, and for adapting to technological change. As things became more complex, thousands of groups like this developed into global communities of interest, true embodiments of the Castellsian "space of flows". Little if any assistance was found in preexisting legal, accounting, and other rules, while in exchange truly amazing gems of progress were made by linking scientists as well as ordinary citizens and breaking the gaps, walls, and chains that kept them in isolation.

Most matters of interest for the conduct of the business of the Internet writ large – new technology, new applications, new ways of delivering them with the highest impact to the most isolated communities, and the governance of the whole set-up – came to be discussed at the INET meetings organized by ISOC. Though badly hurt in recent years, as much of the meetings industry, by the collapse of the dot-com bubble, the INET meetings have been a veritable cauldron. Initiatives like the Internet Societal Task Force, several crucial meetings in the discussions of the Green and White Papers as well as initial meetings of ICANN and its Supporting Organizations, were held in contact with the INET's because of the level of interest they elicited and the diversity of groupings of stakeholders they brought together internationally.

In more recent years, the number of meetings to address Internet issues, and in particular those in the WGIG list of issues with public policy implications, has multiplied. There is anything but a lack of opportunities to discuss these issues, and, though many would wish for less meetings and a higher concentration of decision-makers in them, one of the reasons for the continued increase in meetings is the evolution of the issues and stakeholders themselves. Many valuable meetings are held on specific issues like spam or cybercrime (not to speak of computer and network security); many are held in order to bring together specific subsets of the stakeholders, like law-enforcement officials, civil society organizations, etc., or communities defined by affinities of geography, language, culture, etc.

One significant aspect of the most fruitful of the discussions and meetings referred to here is that there are many combinations between face to face meetings and purely online discussions that are effective. To date, the most effective way to assure no stakeholders are left out of discussions because of lack of economic means to attend meetings is online discussion. This has limitations of its own (people who depend on weak links to the Internet, for example, are challenged in their participation; discussions held in foreign languages may be hard to follow for non-native speakers – and the language of the discussions may be today's lingua franca, English, as frequently referred, or a number of other languages with widespread use, such as Arabic or Chinese) but still is the bottom-line guarantee for open participation.

Reading from this extensive experience, a few points emerge related to the "Forum Function" being debated in WSIS. Discussions attract participants who are true stakeholders – who have something at stake in the discussion. Companies which have money to win or lose, citizens who may be deprived of their way of living, honor, or opportunities for progress, or their rights, government officials whose personal or political agendas may be under threat, or for whom the matter discussed is vital for the fulfillment of their functions and projects; this are the at-heart participants of discussions, online or face to face. It is true that some participants are not true stakeholders; this category includes people who try to build a career on top of the discussion or its subject, people or organizations which do not have complete enough information about the subject or expectations which maybe cannot be fulfilled, people inexplicably bent in making things difficult, etc. Up to now in most cases the Internet community has been uncannily able to weed out troubles of this kind and continue to work productively in discussion forums.

The "forum function" may more realistically be exerted by an architecture of forums, formed by true stakeholders of the issue at hand, with adequate expertise. Successful forums will even find their funding, in ways similar to one stated previously in this paper, if they truly are able to advance towards a solution for specific problems. In such cases, participation in the forums will be a lesser expense than that which is being incurred by the participants in the efforts already ongoing to solve the problems. This will only happen in a sustainable way if the forums engage all relevant stakeholders with sufficient decision power to affect the outcome, with rules of engagement that both commit the participants to the outcome and leave them a perceived, adequate level of freedom to continue their work, and can be effective for their avowed purpose.

One interesting thought that has been expressed in the discussions about the "forum" imagined to exist following a WSIS mandate is that "it will not be politicized"; this is said even more emphatically when the forum is imagined to exist in one of the United Nations related structures depending on the Secretary General, like the United Nations' Economic and Social Council. One can't but note that even convening the forum will actually be a strongly

politicized event and will require a structure that does have to be decision-making and will in turn be politicized. The reader is invited to make a forecast of how a program committee for the forum would be formed; let's make the *Gedankenexperiment* of organizing a WSIS-derived forum on spam, or a session on spam in a more general forum.

Organizing this forum would necessitate the formation of a program committee. In it, the conveners themselves would request a seat (or more, commensurate with the size of the committee), claiming not their right but their responsibility to make sure the forum's success is guaranteed. They would call for a few experts on spam and a few organizations with relevant experience and/or interests to designate members of the committee. As of this writing, it is imaginable that the OECD, which has produced valuable work on fighting spam, such as the "toolkit" mentioned in the relevant section above, would propose to have a seat. As a reaction, developing countries, which feel (and are!) not members of the OECD will make a claim for a seat or more. "Aha!, this is getting very anti-spam!", and now you have the U.S. Direct Marketing Association claiming for a seat, trying to make sure that the Forum is not predestined to make an antispam statement that is so strong as to impinge on the business of the Association, its members, and their clients. More are coming: the ITU has already held forums on spam and thinks it is entitled to some space in the antispam sphere; the International Chamber of Commerce, with a claim to representing businesses worldwide and officially endowed with a dispute-resolution function, will also consider itself entitled. Whew! And we still don't have the ISP's, network and server operators, the operators and vendors of antispam equipment, software and services. And wait!, nor do we see the users, nor is the presence of real experts yet guaranteed....Similar analyses for the discussion of intellectual property rights online, freedom of speech and organization online, cybercrime, etc. are left as an exercise for the reader.

Now of course some readers may find the above exaggerated, others actually desirable – but the point that is unavoidable is that there is no way that the WSIS-engendered Forum will not be politicized. If the participants of the last stage of WSIS decide to engage in the creation of this forum as a self-standing organization, even if temporary, the politics must be accounted for starting in stage zero of the design, *i.e.* they must be an essential part of the assumptions.

For many in the Internet community the logical consequence is quite different. The stakeholders after WSIS must come together into organizing multiple specialized forums, with care, resources and timing adequate to bring together the real stakeholders, the experts, and the thinking that will be able to find a way forward – for each issue.

A subset of governmental stakeholders has said repeatedly that its members feel excluded from international discussions about Internet governance. One has to acknowledge a concern in this respect. Insufficiencies in funding, expertise, and personnel are making it difficult for

governments, especially in developing countries, to attend the numerous fora, face to face and online, mentioned above. This aspect of the discussion about the WSIS-originated Forum will need deeper study than is allowed in the final stage of WSIS. In part, the insufficiencies mentioned do not necessarily apply to whole national governments, and pertain more to single ministries or offices. Countries that have achieved a broader, more balanced presence have largely done so by involving more parts of the governments, and leading them onto the specific problem areas under their purview.

Thus, for example, spam is more and more treated as a problem for e-commerce, consumer protection, and – in countries where laws exist and are applied for this specific matter – privacy and the protection of personal data, and not in telecommunications ministries. Cybercrime or cybersecurity are again not any more substantial telecommunications matters; they are treated in governmental offices which deal with law enforcement, governmental information systems, consumer protection agencies, and so forth. Further: for any government, participation in international forums is only a small step to enable them to actually go solve something. For the largest part of the Internet governance public-policy issues, problems are defined and solved in-country, with national laws, law enforcement, and other governance arrangements. The attendance of a foreign office representative to a forum on spam will not preclude the need to identify law-breaking originators of spam in-country, prosecuting them, and coordinating with other countries' authorities; this in turn will require in-country training, definition of best practices, and many other actions.

Finally, one severely lamentable form of governmental activity on the Internet, the possible curtailment of basic human rights, is more liable to negatively affect citizens and organizations by virtue of the establishment of the all-encompassing Forum. Examples abound of international discourse, speak not of formal agreements, being used as precedent, legitimizer, and origin of authority for in-country actions. The unnecessary complexity created in some countries, regarding the management of their ccTLD, which emerged from the ITU's "Resolution 102 of the Marrakesh Plenipotentiary" is exemplary. Careful consideration of consequences and careful and prudent action are needed in order to preserve the viability of the innovation atmosphere created by the Internet.

A Clash of World Views

The paragraphs above may tell the reader something about the underpinnings of the work of the WGIG, its successes and its difficulties, as well as the challenges facing further progress in the months and years to come. The WGIG was, in an atmosphere propitious to frank dialogue, a microlaboratory of the collision between cyberspace and what utopians call "meatspace", between the optimism and realities of the Internet and the strongly-held views of tradition in telecommunications and in international relations. With extreme respect to persons, ideas, and

views, the WGIG was surely a lively learning experience to all involved. Each of its members understands much better what are the motives and the principles that guide the others in this field, and can surely point sourly at the divergences.

The collision between the Internet-optimist views of horizontal, global, transjurisdictional, technically sound cooperation (what Vinton Cerf has called "a grand collaboration") and the traditional, telecommunications-centered, top-down governed, treaty-based relations between states will not end soon. It is a collision between the 21st century and the 19th. May it evolve in favour of a more open, educated, free, people-centered, equal global society.

Some of the underlying differences of opinion among WGIG members may be irreconcilable. The dynamics of the group shows that we can live together if we widen the lens, look forward into the future, share the assumption that we are all striving for the common good (on what it is, there are profound differences), believe the arrangements, organizations, and institutions that are created (if any) will only work if they have the inbuilt capacity to evolve dynamically, and continue to create trust among the players. May this be true for the future!

Conclusion

The evolution of Internet governance mechanisms that actually work has been based on solving specific problems with tools that can actually have that effect. There is no evidence in favour of all-encompassing arrangements or new organization to handle all the Internet governance issues. Transfer of these functions to intergovernmental organizations is not warranted, particularly in light of the WGIG's assessment that they do not comply with the WSIS principles. The argument of "no new organization" that is made in the post-WGIG discussions also does not mean that an intergovernmental organization is suited to take over Internet governance arrangements now or in the foreseeable future. The continuing evolution of the Internet and its governance mechanisms may at most support a bare-bones forum function which does not need a home in an intergovernmental organization either. The WGIG has been a microlaboratory of the collision between the worldview of the Internet-enabled societies and the past.

MULTILINGUALISM AND THE DOMAIN NAME SYSTEM[1]

Kangsik Cheon

The Internet was developed from ARPANET in the United States. Since 1990, it has flourished with tremendous speed and is now a critical part of the Information Communication Technologies (ICTs) infrastructure.

The development of the Internet has changed how we live and how we do business. Unprecedented benefits have been derived from its growth. However, the use of English as the primary language for Internet transactions has led to a language barrier for non-English speaking users. This has contributed to a gap in accessibility of information between English and non-English speaking countries. This, in turn, has resulted in an inability to fully leverage the Internet for economic growth in some non-English speaking countries.

It is believed that in addition to reducing the digital divide and the associated economic gap, multilingualization is a useful measure to increase the diversity of culture and to serve special interests of different people.

It is especially important for indigenous peoples for whom the Internet is a potentially valuable tool for preserving traditional languages and knowledge. No one seems to doubt the importance and profound implications of Internet multilingualization to the cultural diversity. This chapter focuses on the multilingualization of the Domain Name System (DNS), one of the areas which should be addressed under the slogan "Internet multilingualization".

The methods for multilingual access to Internet resources currently available are: Internationalized Domain Names (IDNs), Keyword lookup, Keyword search, and Directory services[2].

- IDNs are designed to use the multilingual characters as well as the English alphabet, numerical character and some symbols without any modification to the existing DNS system. However, it presently does not allow the top-level domains (TLD) to use multilingual characters, an area clearly in need of further improvement[3].

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[1] This chapter is largely based on the WGIG's informal issue paper on multilingualism.

[2] Native Name Seminar during APRICOT: Asia Pacific Regional Internet Conference on Operational Technologies) 2005 addressed the related issues methods.

[3] For discussions, see the following ICANN meeting reports: www.icann.org/meetings/kualalumpur/captioning-idn-workshop-21jul04.htm and

- Keyword lookup is a kind of website address that directs users to a desired website when a keyword is typed into the browser's address bar. It is known to be capable of handling the native characters of various languages. From the technical point of view, there are two types of keyword lookup services: one is a client-side-based service, like IDN, which requires users to install a plug-in software on the browser, while the other one is a server-side-based service which may require some modifications to the DNS lookup functions.
- Directory services and Keyword search are services enabled by various search engines. The former utilizes pre-registered databases and the latter utilizes databases that index website contents.

What Works, and What Does Not?

1. Internationalized Domain Names (IDNs)

The first form of multilingualized Internet name is IDN (internationalized Domain Name). It has the structure of "Name in local character" + "." + "English TLD" (e.g., 삼성전자.kr). The name resolution for IDN is based on the distribution of client software. IDN has been commercialized in China, Japan, Korea and other countries. Through the efforts of many in the Internet community, a global technical standard has been established.

The IDN service started ambitiously, but the market reaction has not been as warm as first expected. According to recent statistics from webhosting.info, 74% of IDN registration throughout the world is concentrated in three countries: USA, Korea and Japan. In other words, IDN is not only lopsided, but also its growth is considerably slower than that of English domain names.

The IDN technical standard requires that client software be installed on every individual computer for the necessary function of converting multilingual code to ASCII code. It has become to a certain degree an obstacle for the adoption of the service. To alleviate this problem, many people proposed to have a built-in IDN client software in the browsers which could contribute to the deployment of IDN service. However major browser companies such as Microsoft have not yet set forth a clear schedule for such an update[4].

In addition, the structure of IDN, "Name in local character" + "." + "English TLD" (e.g., www.수원시청.kr) does not appear natural to local people due to the difference of linguistic culture.

www.icann.org/meetings/capetown/captioning-idn-workshop-01dec04.htm; and also, www.minc.org/events/carthage2003.

[4] http://www.icann.org/meetings/capetown/captioning-idn-workshop-01dec04.htm

e.g.,	수원시청	=> natural
	www.수원시청.kr	=> awkward to local people

Another point that should be taken into account is that the current IDN service cannot be considered to be fully internationalized because an English TLD still needs to be added at the end of a domain name. This forces the users to change their input method, which results in another inconvenient aspect of IDN.

It has been reported that, in an effort to mitigate this inconvenience, the Internet community, in some countries, has been pulling together and now sees some gradual success. Particularly in China, the input methods allow people to type out IDNs without shifting input method (press "Spacebar" for Chinese characters and "Enter" for ASCII letters, both "。" and "." are recognized by the Chinese Domain Name system).

Another issue that needs to be addressed is the lack of agreement on who should be entitled to make a policy decision on linguistic issues, such as the table of character equivalences for each script and language. There have been complaints about the legitimacy of some ccTLDs establishing tables for languages used in other countries. The lack of globally agreed character tables might lead to confusion, as domain names which would be equivalent under a certain TLD would not be equivalent under others.

The current policy approach by ICANN until now has been of "laissez-faire", with each country and registry choosing its policies. However, a global policy is necessary, especially in the gTLD field. For example, consumers should not be asked to pay the registration fee many times to reserve all different variants of their names in those languages which employ extended Western scripts. The opportunity of a sunrise period for existing registrants to register the "enhanced" (i.e., with proper accents or other marks) version of their names should be considered[5]. It is likely that, without universal access policies, gTLDs would not add support for "minority" scripts, as commercially it would not be of interest to them. All these issues require a more careful discussion of global policies on IDNs, before it is too late.

2. Keyword Lookup

Another form of multilingualized Internet name is the keyword lookup service which has "Name in local character" (e.g., 삼성전자) format. The name resolution for keyword lookup service is either server-side-based or client-side-based depending on the service provider. Keyword lookup service was first commercialized in Korea in 1999, and shortly thereafter in China and Japan.

[5] For example, the current registrant of "liberte.com" could be given priority over "liberté.com".

The demand for keyword lookup service is growing, and its market acceptance in some countries is quite successful, but the keyword lookup service standard is still at the triggering stage, and an international consensus on the service has not yet been reached. Leading companies in each country are determining their own service concept independently. While there have been some efforts to reach a sort of compromise, a visible outcome is yet to emerge. As a consequence, a technical standard remains an elusive target.

An example of a keyword lookup service, Native Language Internet Address (NLIA), is being provided by Netpia.com Inc. (Korea). They have developed their own version of the server-side technology. JWord in Japan provides client-based service. 3721.com in China employs a technology similar to Jword's.

In the past, a company called RealNames launched a keyword lookup service on a global scale in collaboration with Microsoft. Microsoft included the service as a built-in functionality in its Internet Explorer browser, but the service was suddenly discontinued when the partnership between the two companies broke off. The disruption caused incalculable losses to a number of innocent customers and users. This historical lesson underscores the importance of an accountable international and multilateral organization with regard to the multilingual Internet name services.

Actors and Stakeholders

On IDN Issues

- ICANN: Name policy
- IETF: Technical standardization
- MINC: Service promotion and discussion forum for local players
- I-DNS: Initial technology initiator and service provider
- JPRS, KRNIC, CNNIC, HKNIC: Major steering actors
- * In China, IDN for ccTLD has been tested and applied independently.
- TLD registry: Service registries
- government: active especially in non-English speaking countries

On Keyword Lookup Issues

- Netpia: Korean Keyword Lookup service provider and associated solution provider
- CNNIC: Chinese Keyword Lookup service provider
- 3721 (Yahoo): Chinese/Japanese Keyword Lookup service provider
- ITU: Technical standardization (in initial discussion)
- ISP (Internet Service Provider): providing server-based infrastructure for the keyword lookup by patching multilingual S/W package to their own DNS servers.

– MINC: service promotion and discussion forum

Governance Mechanisms

Status Quo on IDN

IDN fundamentally follows the current DNS governance mechanism. ICANN takes care of the policy, and IETF is responsible for the technical standardization. Under the supervision of the US government, ICANN handles the policies including the confirmation of the language Code table, the decision of supporting multilingual TLDs, the registration policy for script variants, etc. Currently, China, Japan, Korea, Hong Kong and Middle East countries actively participate in such activities.

Status Quo on the Keyword Lookup Service

The keyword lookup service providers in each country define the nature of their own service and decide the service policies independently based on their own definition. For instance, some companies show the search results associated with the meaning of keyword as well as the relevant web pages, while others are focused on the address concept and put 1:1 look-up service as number one priority.

To overcome conflicting issues and problems, there have been many efforts to reach an international consensus through discussions in MINC, APAN and so on[6][7]. However, there has been no noticeable output so far.

Conclusion

The ultimate goal is to reach a genuine Information Society wherein information is available and easily accessible by anyone, anywhere, and anytime. In order to achieve such Internet utopia, a combination of the on-going expansion of ICT carried out in alignment with the United Nations Millennium Development Goals (MDG) and the growing effort to facilitate the localization of the Internet content is insufficient and lacks a critical component to access Internet information efficiently.

In order to fully benefit from the progress enabled by the Internet infrastructure and content, we must make the existing Internet resources realistically accessible in local languages. Without having a multilingual Internet Name component, which acts as the gateway to the Internet, the substance of all other structural or content improvements can potentially be of limited value. It

[6] http://www.iak.ne.kr/new/keyword/fukuoka/minutes.htm

[7] http://www.qgpop.net/2003fukuoka/AB.html#A1

is the missing component to achieve a worldwide balance of the Internet population's demand for accessibility and connectivity.

In an effort to systematically facilitate the promotion of the multilingualization of Internet names through collective input, cooperative participation, and mobilization of synergies, a multilateral organization under the United Nations framework with the full participation of the private sector and civil society would be recommended. Such multilateral organization should operate under the principles of democracy, transparency, openness and efficiency.

INTERNATIONAL INTERNET CONNECTIONS COSTS

Baher Esmat and Juan Fernández

A pivotal issue that has been discussed through all the preparatory process for both phases of the World Summit on the Information Society (WSIS) and in other international forums over the last seven years is international Internet interconnection charges.[1] Since, the perception of the developing countries on the issue is entirely different from that of the developed ones, the problem has yet to be resolved.

This chapter presents an overview of the impact of the current models of International Internet Connectivity (IIC) costs on the developing countries, and of the debate as to whether this issue requires global governance or not. The chapter then presents a brief case study of Egypt, a leading developing nation in the field of information and communication technology (ICT). The case study shows that IIC costs, despite having decreased rapidly over the past few years, are still considered a major component in the pricing of Internet services in Egypt. In the following sections, the chapter then summarizes the International Telecommunication Union's (ITU) efforts to advance solutions and explains why its Recommendation on the matter has never been implemented. Accordingly, the chapter proposes actions to be carried out by international organizations in light of the WSIS Plan of Action and the Working Group on Internet Governance (WGIG) Report, and raises the question of whether IIC should not be covered under the World Trade Organization's (WTO) framework. Finally, the chapter states that the IIC problem needs a grand collaboration among all stakeholders from developing and developed countries in order to attain practical mechanisms that would allow for fair distribution of cost among all Internet providers.

Background

The debate on IIC is not as widely known outside the industry as some other Internet issues as spam and cybersecurity. Nevertheless, a problem exists in ensuring that each provider of connectivity is fairly compensated for handling international traffic. This happens because Internet service providers (ISPs) based in countries remote from Internet backbones, particularly in the developing countries, must pay the full cost of the international circuits.

For example: "When an end user in Kenya sends E-Mail to a correspondent in the USA it is the Kenyan internet service providers (ISP) who is bearing the cost of the International

[1] "International Internet Connectivity - Are Poor Countries Subsidizing the Rich?", *ITU News Magazine, N° 03,* April 2005, www.itu.int/itunews/manager/main.asp?lang=en&iYear=2005&iNumber=03.

connectivity from Kenya to the USA. Conversely when an American end user sends E-Mail to Kenya, it is still the Kenyan ISP who is bearing the cost of the International connectivity, and ultimately the Kenyan end user who bears the brunt by paying higher subscriptions." [2]

This contrasts with the traditional accounting and settlements system in the telecommunication world, under which the operator in the country that originates the call has traditionally made a compensatory payment to the operator in the country that terminates the call.

Significant Impact on Developing Countries

This state of affairs has a significant negative impact on developing countries, where the payments from the settlement mechanisms that applied to international telephony have been a source of revenue that helped to subsidize universal service and/or to finance investment in telecommunications infrastructure. The ITU estimates that, between 1993 and 1998, net flows of telecommunications settlement payments from developed countries to developing ones amounted to some $US40 billion.[3]

As more telecommunication traffic is shifting to the Internet, this revenue is disappearing. According to the World Bank,

> …in 2002, US operators alone paid US$223.9m to African operators for terminating calls onto African networks, and received US$14.6m in return for terminating calls from Africa onto US networks and US $20.4m for transit to third countries. Under protest from US carriers and with changes to the international settlement regime this position has changed, eroding these revenues. In 1998 US carriers paid US$413.8m to African operators, whilst African operators paid US$67.3m to US carriers to terminate on their networks and US$260.5m for transit traffic to third countries. The revenue earned from terminating calls from the US has nearly halved over this period4.

[2] "The Halfway Proposition," "Background Paper on Reverse Subsidy of G8 Countries by African ISPs," Conference of African Ministers of Finance, Planning and Economic Development, Johannesburg, South Africa, October 19, 2002, www.afrispa.org/HalfwayDocs/HalfwayProposition_Draft4.pdf.

[3] See, *Accounting Rate Reform undertaken by ITU-T Study Group 3,* www.itu.int/ITU-T/studygroups/com03/accounting-rate/.

[4] "Identifying Key Regulatory and Policy Issues to Ensure Open Access to Regional Backbone Infrastructure Initiatives in Africa," Global ICT Policy Division, The World Bank, December 9, 2004 http://wbln0018.worldbank.org/ict/resources.nsf/a693f575e01ba5f385256b500062af05/74c4f7dbbc6d184485256f950062c5c9/$FILE/AfricaInfrastructurePolicyandRegulatoryReport.pdf.

Other research estimates that the global benefit derived by United States from inbound transmission and transit costs was US$1.3 billion in 2003, and is expected to rise to US$2.7 billion in 2006.[5]

To Regulate or Not to Regulate

There is an ongoing debate between those who allege inequitable and anti-competitive behavior by the Tier-1 carriers - sometimes referred to as Internet Backbone Providers (IBPs) - at the expense of smaller providers, and those who argue that the market is working and that any government intervention is unnecessary and would risk stifling Internet development. Although this debate is far from being settled[6], there is a growing perception in many quarters, and particularly in the developing countries, that some kind of international regulation is needed.

It has been said that in the complete absence of rules protecting competition, industries that display strong network effects, like IBP market, have a tendency to drift toward monopolization, most probably through the aggressive takeover of rivals. That is why some researchers have suggested that competitive forces could use a hand from governments: "In general, the market outcome cannot be relied upon to generate the greatest benefits for end users. Governments can intervene usefully to improve on the market outcome. This is precisely what the US government did for the early commercial Internet, despite a persistent myth that the Internet developed because of non-intervention by government."[7] For example, in a related area, the European Union recently introduced some regulation "to stimulate the emergence of a competitive leased lines market"[8].

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[5] John Hibbard, et al, "International Internet Connectivity and its Impact on Australia", *Final Report on an Investigation for the Department of Communication Information Technology and the Arts,* (Canberra, Australia, May 31, 2004), www.dcita.gov.au/__data/assets/word_doc/16616/IIC_report_-_web_version.doc.

[6] Daniel Roseman, "The Digital Divide and the Competitive Behaviour of Internet Backbone Providers: A Way Forward," paper presented at a special meeting of the ITU rapporteur's group dealing with international internet connectivity, Brussels, April 2003, www3.sympatico.ca/droseman/RosemanIISPaper.pdf.

[7] Daniel C.H. Mah , "Explaining Internet Connectivity: Voluntary Interconnection Among Commercial Internet Service Providers," paper presented at the 31st Research Conference on Communication, Information and Internet Policy, Arlington, VA, September 20, 2003, web.si.umich.edu/tprc/papers/2003/181/Explaining_Internet_Connectivity_Mar26-03.DOC.pdf.

[8] Commission of the European Union, *Explanatory Memorandum of the Recommendation on the Provision of Leased Lines in the European Union,* C(2005) 103/2, (Brussels, January 1, 2005), <http://europa.eu.int/information_society/policy/ecomm/doc/info_centre/documentation/recomm_guidelines/leased_lines/expl_memo_en.pdf>

Finally some observers are concerned that this issue could affect the stable functioning of the Internet in the long run. As a recent study suggests:

> …without the adoption of a settlement regime that supports some form of cost distribution among Internet providers, there are serious structural problems in supporting a highly diverse and well populated provider industry sector. These problems are exacerbated by the additional observation that the Internet transmission and retail markets both admit significant economies of scale of operation. The combination of these two factors leads to the economic conclusion that the Internet market is not a long term sustainable open competitive market that is capable of supporting a wide diversity of players both large and small.[9]

Conversely, some analysts have said that regulation is not needed because the reduction of the revenues that developing countries receive from international telephony settlements can be compensated by the lower costs of the Internet based telecommunication services. But this savings can occur only in countries where the infrastructure is already in place, and this is not the case for most of the developing countries. And even if lower costs are made available to ISPs in developing countries, the fact remain that the flow of revenue is reversing. As more telephone and fax traffic shifts to the Internet, what will replace the yearly US$7-10 billion developing countries receive from telecommunications settlements?

This has created the paradox that in many developing countries, the use of newer and lower cost technologies, like Voice over Internet Protocol (VoIP), are seen as more as threats than as beneficial. This is because they deprive national carriers of the revenue needed to modernize infrastructure and to deploy widely new technologies such as Internet. This applies regardless of whether a country has a liberalized competitive regime or a traditional monopoly one.

The Case of Egypt

History of Internet in Egypt

The first Internet gateway in Egypt was set up in October 1993 by the Egyptian Universities Network (EUN) via a 9.6 Kbps link to the European Academic and Research Network (EARN). The Egyptian Cabinet Information and Decision Support Center (IDSC) that used to play a major role in introducing the Internet to the Egyptian society, was also connected through the same gateway. Since that date, EUN started offering Internet access to the research and education sector, whereas IDSC providing Internet services to the governmental

[9] Geoff Huston, "Where's the Money? - Internet Interconnection and Financial Settlements," *The ISP Column,* Internet Society (January 2005), <http://ispcolumn.isoc.org/2005-01/interconns.pdf>

sector. In 1994, IDSC leased for the first time in Egypt a digital international Internet connection and invested in another gateway to run parallel to the EUN. In order to encourage the diffusion of Internet services all over the country, the government allowed IDSC to offer free Internet access not only to government entities, but also to private sector, international organizations as well as civil society.

In December 1995, a decision was taken by the government, in coordination with the incumbent carrier Telecom Egypt (TE), to liberalize the Internet market and allow private sector ISPs to step in and offer commercial services to end-users. This was in fact one of the earliest landmarks in the move towards liberalizing telecommunications services in the Egyptian market. The number of ISPs increased from twelve in 1996 to almost forty five in 1999 while the total number of Internet users has grown from few thousands to 200,000 during the same period of time.[10]

Telecommunication Reform and Internet Evolution

Following the establishment of the Ministry of Communications and Information Technology (MCIT) in October 1999, the National Telecommunication Regulatory Authority (NTRA) has developed a new licensing framework regarding Internet service provision in Egypt. According to this new scheme, there are three categories of service providers, classified as Class A, B and C. Both Class A and B can build and own infrastructures, as well as co-locate equipment within TE exchanges. While Class A providers have an agreement with TE to acquire international bandwidth capacity via one of the cable operators, Class B providers have to go via one of their Class A counterparts to get international access. Another difference between Class A and Class B is that the former offer services either to other providers (wholesale) or to end-customers (retail), whereas the latter can only sell to end-customers. Both Class A and B are usually referred to as Network Service Providers (NSPs). On the other hand, Class C ISPs do not have the right to build infrastructures nor do they have direct access to international bandwidth. Instead, they lease ports and capacity from NSPs and provide services to end-customers. It is most likely that Class C providers work as resellers for NSPs in remote areas where the latter do not have a presence. To date there are four Class A providers, five Class B (four of which are currently operational), and around 200 Class C providers.[11]

[10] Mohamed A. El-Nawawy, "Profiling Internet Users in Egypt: Understanding the Primary Deterrent Against Their Growth in Number," *INET 2000 Conference Proceedings,* <http://www.isoc.org/inet2000/cdproceedings/8d/8d_3.htm>

[11] www.ntra.gov.eg/english/DPages_DPagesDetails.asp?ID=128&Menu=3

The number of Internet users in Egypt is now estimated to be around 5 million.[12] The exponential increase in the number of users is a result of regulatory reforms in this sector as well as an unparalleled support offered by the government. The regulatory reforms were partially addressed in the licensing frameworks in which the relation between Telecom Egypt and the NSPs are described and monitored by NTRA. Also, such reforms were mostly reflected in the Telecommunication Act number 10 of year 2003, which defines in eighty seven articles all regulations concerning the provisioning of any telecommunication services in Egypt.

At the same time, the government's support has been articulated through initiatives promoted by the MCIT. Examples here include: "Free Internet," which allows dial-up Internet access with the cost of local phone call (US$0.21 per hour); "PC for every home" and "Laptop for every professional," which provide affordable means for individuals and businesses to acquire computers through monthly installment payment; "IT Clubs" that makes basic computer training and Internet access available in rural and deprived areas; and "Broadband Access," which has brought asynchronous digital subscriber line prices down by fifty percent and promoted broadband wireless services as well.

Telecom Egypt, which is wholly owned by the government, has also developed special pricing schemes for NSPs as regards local and international bandwidth. Over the past five years, a number of discounts have been applied on bandwidth capacity, which cumulatively represents seventy five percent and sixty percent of local and international bandwidth, respectively.

Egypt's International Telecommunications

Due to its privileged geographical location, Egypt is considered an international telecommunication hub. A number of global and regional fiber optic cables have landing points in Egypt, such as SEA-ME-WE 1, 2, 3 and 4 submarine cables that link the country to the outside world across the Mediterranean, South East Asia and Western Europe. Egypt is also linked to the FLAG cable with two landing points in Alexandria and Suez that connect Egypt and the whole Middle East to Europe, as well as to the Far East. In addition, there are a number of regional optical fiber cables that connect Egypt to countries like Italy, Greece, Syria, Lebanon, Jordan and Sudan. Satellite communication has also been used extensively in various applications but has recently become expensive for data and Internet access compared to terrestrial solutions.[13]

Although Telecom Egypt has so far enjoyed a monopoly over international communications, Egypt's commitments under the WTO's basic telecommunications agreement bring this to an

[12] http://www.mcit.gov.eg/publication.asp

[13] International Telecommunication Union, "Internet on the Nile: Egypt Case Study," March 2001, <http://www.itu.int/osg/spu/wtpf/wtpf2001/casestudies/egypt1.pdf>

end as of January 1st 2006. Prices for international bandwidth have experienced a number of successive reductions during the last five years, showing a clear sign of the government's commitment to link the country to the global society. Accordingly, Egypt's international capacity to the Internet has experienced an exponential boost, attaining 3.345 Gbps at present.[14] At the IP level, local NSPs are getting transit services from different global IP carriers such as UUNet, Teleglobe and FLAG.

Furthermore, in July 2000, TE signed an agreement with FLAG for building a local Point of Presence (PoP) in Cairo in order to provide licensed NSPs with managed bandwidth services, as well as IP transit. As demand for bandwidth increases over time, this agreement has resulted in more reduction in prices since FLAG has so far been the only international carrier in Egypt that offers one-stop-shop services (both transmission and IP connectivity) which gives it a competitive edge over the others.

International Internet Connectivity[15]

The cost of IIC comprises two elements: the transmission link from Egypt to the United States, and the IP port. Although it is quite common for an ISP to get the transmission from one carrier and the IP port from another one, most of the Internet connections in Egypt, as well as their IP peering ports, are offered via FLAG for the reasons explained in the above paragraph.

Traditionally, Egyptian NSPs used to lease bandwidth capacities via either FLAG or SEA-ME-WE 3. Four years ago, the leasing price for a 45 Mbps link was US$150,000 per month versus US$230,000 for a 155 Mbps one. Two years later, the prices were reduced by almost 30% to reach US$165,400 per 155 Mbps per month. Today, the leasing price for a 155 Mbps link is around US$100,000 per month.

By early 2003, FLAG and TE reached an agreement with the local NSPs allowing the latter to own the bandwidth instead of leasing it. This model is known everywhere as Indefeasible Right of Use (IRU) which is a long-term lease of a certain bandwidth capacity of an international cable. The IRU contract between the local NSPs, TE and FLAG allows the NSPs to lease the capacity for 15 years. Under this model, the NSP was able to acquire a 155 Mbps for US$3.675 million. With continuous support from the government as well as the rollout of nationwide broadband services, demand for international bandwidth increases, hence prices have rapidly decreased over the past couple of years reaching US$1.25 million, which is the present IRU price for a 155 Mbps link.

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[14] http://www.mcit.gov.eg/publication.asp

[15] The information in this section comes from interviews with carriers and service providers that operate in Egypt.

Although the IRU model puts a lot of burden on the cash flow of the NSPs, which need to pay the full amount up front, it seems to be more economic compared to the leasing model. On the other hand, the IRU model is quite rewarding to FLAG, not only because it collects the whole payment upfront, but also because it retains its customers for quite a long time. So, the model seems tempting for both sides and therefore all Egypt's international Internet bandwidth today has been contracted based on the IRU scheme.

By depreciating the IRU numbers over a fifteen year contract period, it turns out that the monthly charge for a 155 Mbps link is around US$7,000. However, this is a theoretical calculation because the bandwidth value decreases over time so linear depreciation does not work in this case. Therefore, operators either do depreciation over a shorter period of time such as 4 years, or calculate the depreciation value in a descending manner.

In addition, the cost of the IP port for a 155 Mbps link is in the range of US$7,000 to US$10,000 per month based on the negotiations between the local NSP and the IP provider (FLAG in most cases, UUNET and Teleglobe in few cases). As a matter of fact, the NSPs usually negotiate with their IP providers for better peering prices according to the ratio of the inbound versus the outbound traffic. However, in some cases the ratio is around 1.4:1 though the minimum price that an NSP can get for peering is US$7,000 per 155 Mbps per month which is quite a considerable amount.

To calculate the total value paid in US$ by Egyptian NSPs for international Internet bandwidth, the following assumptions are taken into account:

- The current IRU price for a 155 Mbps which is US$1.25 million
- An average price for a 155 Mbps IP port which could be US$8,000 a month
- Depreciating the IRU number over four years

The results are as follows:

- The IRU price per Mbps per month is US$168
- The IP port price per Mbps per month is US$52
- This gives a total of US$220 paid per Mbps per month

Since the international capacity is currently 3.345 Gbps, it turns out that the total amount paid in international bandwidth is US $735,900 per month. Needless to say that this figure is calculated based on a best case scenario in which the minimum prices of the present time are taken into account, while most of the capacities were acquired in the past for much higher prices.

Why are NSPs Paying All This?

Actually, Egyptian NSPs, like any other non-Tier-1 carriers, have no choice but to pay the full amount of the transmission as well as of the peering or precisely the transit. This is because they cannot fulfill any of the Tier-1 carriers' polices for settlement-free interconnection. Such policies are by all means impossible for any of the NSPs to achieve.

As an example of such Tier-1 policies, MCI requires any operator seeking settlement-free interconnection with its network to have coverage in at least fifty percent of the geographical region in which MCI has facilities. The policy also asserts that the ratio of traffic exchange shall not exceed 1.8:1. It further entails certain requirements in the backbone network of the requester such as full redundancy, minimum capacities of 2.4 Gbps for interconnection with MCI-US, 622 Mbps with MCI-Europe and 155 Mbps with MCI-Asia Pacific.[16] Therefore, it comes at no surprise that with the current norms of the Tier-1 carriers, Egyptian NSPs will always be deemed as customers to such carriers and hence bear the whole cost for both the bandwidth as well as the peering.

There are a number of arguments that have been raised over the past few years describing the IIC issue from a business perspective, and putting forward solutions that may help operators from developing countries overcome this problem and in some cases be in a stronger position while negotiating with Tier-1 carriers.

A well-known debate is the lack of national peering in most of the developing nations' networks. The argument here is if operators in such countries manage to build national exchange points and aggregate local traffic, they can save in their international capacities because local traffic will stay local rather than traveling oversees, thus the overall amount paid in international bandwidth will be less. The same argument is used on a regional level, that if a number of countries in a certain region were connected via some regional exchange point, again this will keep regional traffic regional and may as well attract other exchange points of Tier-1's to peer with.

More importantly, building local and regional Internet Exchange Points (IXPs) shall help operators of the developing world to attract content from developed countries to be mirrored and hosted in such IXPs, thus lessen the asymmetry in the traffic exchanged between developed and developing nations. However, building IXPs in itself does not change a fundamental aspect in the current model of IIC, which is the fact that operators from developing countries will keep paying the full amount no matter how much this amount is.

[16] "MCI Policy for Settlement-Free Interconnection with Internet Networks", <http://global.mci.com/uunet/peering/>.

As per the Class A and B licenses in Egypt, local peering is mandatory for all NSPs. However, not all NSPs are connected to the exchange point and even those who are connected do not see much of a benefit. Establishing a peering point in Egypt has never been technically challenging for the NSPs. The challenge comes primarily from the competition between NSPs, agreement on a certain peering criteria as well as the inability to recognize a mutual benefit obtained from such a local connectivity. Nevertheless, it is expected that with the continuous development and increase in local content, NSPs will be more eager to effectively interconnect and hopefully save some of their international bandwidth costs.

On the other hand, regional peering between Egyptian NSPs and other operators from Africa and the Arab World has even been more challenging. There have been some negotiations between more than one NSP and other counterparts from the Arab region, yet nothing has been materialized. According to NSPs, Egypt has a lot more Arabic content than any other neighbor country does, and that's why operators from such countries have expressed interest in peering with them. But those operators want to equally share the peering cost with the NSPs, which does not convince the latter because they have larger customer base as well as more content. So, as with local peering, the problem is not technical, it is rather the lack of a business model that looks appealing and satisfactory for both sides.

Another possible scenario that may help Egyptian NSPs mitigate the burden of their international costs involves having more international cable providers in Egypt, either with their own landing points installed or at least with permission to use TE's landing points. As indicated earlier in this chapter, there are currently FLAG as well as the SEA-ME-WE 3 & 4 international cable systems that pass through Egypt serving most of its current as well as its prospect international telecommunication services. However, the SEA-ME-WE system has so far not been able to compete with FLAG as far as Egypt's Internet international business in concerned. Therefore, the question is what if a new cable system is laid down across the Mediterranean linking Egypt with Europe? Would this create more competition and help the NSPs get better offerings for international bandwidth? Although prices have been falling rapidly following the FLAG agreement with TE to provide NSPs with IRU-based bandwidth, some NSPs do envisage that having an alternative to FLAG would allow them to get more competitive offerings.

The last model is the one led by Australian and Asian operators who have invested in their infrastructures and built PoPs around the world in order to co-locate with Teir-1 carriers, hence be able to negotiate better deals with them. It is not deemed impossible that an Egyptian operator could take the same approach, despite the fact that the size of any of the existing NSPs is yet too small compared with any giant telecom carrier. Also, the number of Internet subscribers in Egypt, five million, is much less than that in many developed countries on the Asian-Pacific side, which consequently reflects on much less traffic volumes as well.

ITU-T Recommendation D.50

In 1998, ITU-T Study Group 3 started discussing the issue of "International Internet Connectivity (IIC)".[17] In October 2000 the ITU World Telecommunications Standards Assembly approved the ITU-T Recommendation D.50 regarding "Peering" or "Transit" arrangements between ISPs and Internet backbone providers.

The purpose of the Recommendation was to set out the *principle* for negotiating agreements to transmit international Internet traffic. The possible need for compensation between the providers carrying the traffic was also recognized in the recommendation. When providers install Internet circuits, they generally have a choice between on one hand the "sender-keeps-all" or peering system of bilateral connections when traffic is more or less balanced, and on the other hand an asymmetrical system whereby the initiating provider pays for the whole connection with the other country (full-circuit cost). The latter is the case today for most of the developing countries. The Recommendation called for arrangements to be negotiated and agreed upon on a commercial basis when direct Internet links are established internationally. It required only that the two providers involved reach a mutual agreement.[18]

Recommendation D.50 also said that the parties involved could take into account the possible need for compensation for elements such as traffic flow, number of routes, geographical coverage and the cost of international transmission when negotiating such commercial arrangements. Although the Recommendation D.50 is voluntary, it has been hotly contested and is not being implemented, most notably by key industrialized countries and elements of the global private sector.

Study Group 3 agreed in June 2001 to pursue further studies on IIC, and established two Rapporteur Groups, one for developing further guidelines to facilitate the implementation of Recommendation D.50, and the other for examining the possibility of using traffic flow as a main factor of negotiation for IIC.

The search for objective, fair and cost-oriented charging rules received an impulse in late 2002 when China submitted a proposal to modify the Recommendation D.50. China proposed to consider bulk traffic flow as a costing element to be taken into account in commercially negotiated connection arrangements. In June 2004, Study Group 3 adopted Amendment 1, on "General considerations for charging criteria and options for international Internet connectivity", which complements Recommendation D.50. However, the study on the traffic

[17] See, ITU-T Study Group 3, <http://www.itu.int/ITU-T/studygroups/com03/index.asp>.

[18] *A Handbook on Internet Protocol (IP)-Based Networks and Related Topics and Issues* (Geneva: ITU, 2005), <http://www.itu.int/ITU-T/special-projects/ip-policy/final/IP%20Policy%20Handbook-FINAL%20VERSION.pdf>.

flow methodology was not concluded and work continues during a new study period 2005-2008.

Recommendations for Future Action

Since the first phase of WSIS many recommendations have been put forward to advance in the solution of this issue. The WSIS has stated:[19]

- "Internet transit and interconnection costs should be oriented towards objective, transparent and non-discriminatory parameters, taking into account ongoing work on this subject."
- "The creation and development of regional ICT backbones and Internet exchange points, to reduce interconnection costs and broaden network access."

The WGIG made the following recommendations on interconnection costs:[20]

- Invite international agencies and the donor community to intensify their studies in this area, in particular to examine alternative solutions, such as the development of regional IP backbones and the establishment of local and regional access points.
- Call on the groups studying Internet governance issues to take note of the WSIS Declaration of Principles, i.e., to be multilateral, transparent and democratic and to have the capacity to address Internet governance in a coordinated manner, based on a multi-stakeholder approach.
- Invite relevant international organizations to report on these matters to whatever forum, body or mechanism(s) that the WSIS will create for issues related to Internet governance and global coordination.
- Encourage donor programs and other developmental financing mechanisms to take note of the need to provide funding for initiatives that advance connectivity, IXPs and local content for developing countries.
- Build on current international agreements, encourage interested parties to continue and intensify work in relevant international organizations on international Internet connectivity issues.

Other recommendations that have been made are in the course of the global debate include the following:

- Promote the establishment of national and regional IXPs and hubs to provide a better utilization of international capacities by keeping local/regional traffic local/regional.[21] This

[19] "WSIS Plan of Action," paragraph C2. 9. (Geneva, December 12, 2003), <http://www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0005!!PDF-E.pdf>.

[20] *Report of the Working Group on Internet Governance,* (Geneva: United Nations, June 2005) www.wgig.org/docs/WGIGREPORT.pdf.

aggregation will also give smaller networks and ISPs in developing countries greater bargaining power when negotiating international interconnection arrangements. Additionally, content providers of developed countries should be encouraged to mirror their content in those regional exchanges.

- Promote the creation of local content in developing countries that can be of interest to Internet users in developed countries. Then the indirect network benefits provided by content providers in developing countries to the backbone operators could be taken into consideration in the interconnection prices offered to developing countries ISPs.
- Encourage national authorities to take steps to open markets to competitive entry and promote increased competition in the market place, to create an enabling environment that encourages investment and/or international infrastructure assistance.
- Include provisions from the ITU-T Recommendation D.50 in a treaty-level instrument, for example the International Telecommunication Regulations, so as to give them binding force. It has also been suggested that there should be a binding international dispute resolution mechanism similar perhaps to what exists in the WTO, to deal with these matters.
- Include Internet services under the WTO agreement on basic telecommunications services because it offers a suitable framework within which access to Internet backbone services would be ensured in cases where these services are supplied by dominating suppliers.
- Encourage developing countries to associate the IIC issue with other issues that might be of interest to developed countries, such as enforcement of intellectual property rights, liberalization of services, etc. That is, much as the developed countries link implementation of the WTO TRIPs provisions to other trade provisions of interest to developing countries, developing countries could, at least in principle, link resolution of the IIC costs issue to ongoing negotiations on other trade liberalization matters.

Conclusions

After seven years of discussion in international forums, publication of research papers and even some limited press coverage[22], the fact remains that the IIC costs issue remains as an important obstacle to the dissemination of Internet access at affordable prices throughout the developing countries.

It is quite evident from the above analysis that the current cost models of IIC are based on market power without considering any public policy objectives related to Internet development. Businesses of the developed world have frequently argued that market competition, local peering and infrastructure expansions shall help developing nations

[21] "Via Africa: Creating local and regional IXPs to save money and bandwidth," Discussion paper prepared for IDRC and ITU for the 2004 Global Symposium for Regulators, (ITU, Geneva, 2005), <http://www.itu.int/ITU-D/treg/publications/AfricaIXPRep.pdf >.

[22] "The Great African Internet Robbery," BBC News, (April 15, 2002), <http://news.bbc.co.uk/1/hi/world/africa/1931120.stm>.

overcome this problem. On the other hand, Egypt's case study has shown that such factors are reasonably achieved in Egypt and yet the cost model of IIC remains unchanged.

This proves the need to seriously contemplate the IIC issue, not only through the forums where it has been discussed for quite a long time, but through some high level international Internet governance mechanisms that needs to be created. The main challenge here is to come up with an innovative solution that on one hand maintains the dynamism and efficiency of the Internet, while on the other hand allow operators in developing nations to provide better, widespread and cost-effective services for all. And this is most likely to entail the concerted political will of governments and the decisive participation of the rest of the stakeholders.

INTELLECTUAL PROPERTY, E-COMMERCE, COMPETITION POLICY, AND INTERNET GOVERNANCE

C. Trevor Clarke

The Working Group on Internet Governance (WGIG) devoted much of its attention to the identification of public policy issues that are potentially relevant to Internet governance, as called for in paragraph 13 (b) of the December 2003 World Summit on the Information Society (WSIS) Plan of Action. It agreed to take a broad approach and not exclude any potentially relevant issue. Based on this fact-finding work, the WGIG established four key public policy areas.

One such public policy area is identified at paragraph 13(c) of the report covers as:

> Issues that are relevant to the Internet but have an impact much wider than the Internet and for which existing organizations are responsible, such as intellectual property rights (IPRs) or international trade.[1]

This chapter seeks to extend the discussion on some of the public policy issues raised in this cluster in the Background Report, as they relate to Internet governance. It is recognized that even this extension of the discussion is not exhaustive. It however aims to widen the dialogue and embrace a more general purpose understanding and interest.

While the report introduces the issues from the view point of being "relevant to the Internet, but with impact much wider than the Internet", the approach here reverses the examination to reflect issues that are, and have been, relevant to the global economy for several years but which impacts Internet governance. This reverse examination is important because competition, trade and intellectual property issues have had a fundamental impact on public policy long before the commercialization of the Internet in the mid-1990's.

As we shall discuss, the later impact of the Internet is not without great significance. Even though the visionary Bill Gates predicted that the Internet would change everything, the evidence is showing that societal fundamentals are essentially remaining intact as corporate governance and the governance of international trade have both taken a quantum leap.

This chapter will argue that public policy shapes globalization, and globalization in turn is shaping governance – first at the corporate level and at the level of international trade and

[1] Report of the Working Group on Internet Governance (Geneva: United Nations, 2005), p. 5. <http://www.wgig.org/docs/WGIGREPORT.pdf>

unavoidably next at the level of the global Internet. These are continuing processes evidenced in law, competition policy and regulation. As technology changes, the scale and nature of competition changes, the notion of globalization will also continue to change and give rise to new public policy issues which will eventually attract further considerations of governance. WSIS has correctly drawn the Internet into the debate in a timely manner.

Public Policy and the Internet

Thomas Dye describes public policy as simply "whatever Governments chooses to do or not to do."[1] Public policy is therefore not only of interest to Governments but also to the public, the private sector and civil society as well. In international relations, Governments also submit to policies negotiated in the multilateral environment. Sometimes such policies come into conflict with strong domestic political preferences, as for example in some areas of World Trade Organization (WTO) trade rules. Nevertheless, international trade has certainly benefited from global governance[2] and there is no reason why the Internet, with similar necessary cooperation and negotiation would not also find benefit from similar public policy interventions coordinated globally.

As a public policy issue Internet governance has therefore become of major importance. With the Internet, public policy issues emerge from the management of infrastructure, core resources, services and content. In infrastructure, privatization, liberalization and competition in telecommunications evolved in response to trends in globalization. There is arguably little competition in the management of the core resources. New services and new ways of handling and distributing existing content material have given rise to public policy concerns in crime and security, taxation, privacy, censorship and freedom of speech among others. Some of these issues may require a different approach to governance in cyberspace or maybe just adaptations of traditional approaches. The adopted approaches must be guided by public debate in the interest of all.

But of course, there are the revolutionaries whose views generally reflect the values of the American male early adopters: that "cyberspace will be recognized … as a sort of independent jurisdiction."[3] This is unlikely to be realized as it seems that cyberspace is evolving as an integral part of the real globalized world with its increasing web of international organizations and international treaties – the result of international collaboration of public policies. As it did

[1] see <http://www.encyclopedia.laborlawtalk.com/public_policy >

[2] The 148 member WTO develops, administers and enforces an increasing range of trade-related rules.

[3] Jurgen Basedow and Toshiyuki Kono, eds., Legal Aspects of Globalization: Conflict of Laws, Internet, Capital Markets and Insolvency in a Global Economy (London: Kluwer Law International, 2000), p. 30.

in domestic and international law, the emerging custom in cyberspace will influence the evolving legal and regulatory framework, but should not be relied upon to become 'the law'. There can be no guarantee that the practices of the early adopters or the Internet community in general will meet the genuine needs of society at large – especially when that society is global.

We have seen that the Internet is an "electronic medium that disregards geographical boundaries and throws the law into disarray by creating entirely new phenomenon that need to become the subject of clear legal rules but that cannot be governed, satisfactorily, by any current territorially-based sovereign." [5] This points to a global solution that provides globally enforced governance rules managed by a global institution – similar to the WTO and its role in international trade. WSIS has drawn attention to the need for a solution that reflects certain key principles: transparency, inclusiveness and democracy.

Globalization

Globalization has been defined as "the process by which markets and production in different countries are becoming increasingly inter-dependent due to the dynamics of trade in goods and services and flows of capital and technology." [6]

Since the end of World War Two, it has progressively become more realistic to view the activities of mankind in a global context. While technologies such as steam engine, railways, ships, airplanes, printing press; and more recently telecommunications and computers have enabled the conditions for globalization to emerge, it is policy decisions at the political and corporate levels that have led to the pursuit of economic activities in ways that reflect the basis for globalization.

The impact of globalization on the world economy generally has been lauded. The benefits to most developing countries especially in Africa, Latin America and the Caribbean, however, have been marginal at best.[4] Most developing countries are takers of technology, with weak economies, inadequate institutions and in some cases unstable political and undeveloped legal environments. Some are therefore exposed to suffer all of the unfortunate consequences of the new global trends.

Because of their vulnerability in a fast changing world economy dominated by multinational corporations, several developing states must rely on the support and protection of the international community. Currently, WTO rules are clearly the most effective protection against any self-interest of industrialized countries and their multinational corporations. Other international organizations are also forging governance rules and guidelines aimed at

[4] United Nations Conference on Trade and Development, *E-Commerce and Development Report 2004,* UNCTAD/SDTE/ECB/2004/12004 (Geneva: UNCTAD, 2004).

maintaining order in the free market system. But John H. Jackson has queried, "whether all these international organizations and treaties are adequate – either in number and subject matter coverage, or in their structure and institutional makeup – to cope with the new and complex problems that have been developing in the context of greater world international economic interdependence."[5]

Jackson also has made the profound observation that:

> The world has become increasingly interdependent. Great wealth has come with that interdependence: goods are produced where their costs are lowest; consumers have more choices; institutions of production are disciplined through competition; producers can realize the advantages of economies of scale. But with interdependence has come vulnerability. National economies do not stand alone: economic forces move rapidly across borders to influence other societies.[6]

There is a view that 'discipline through competition' does not foster disciplined behaviour beyond that assessed to achieve the financial objectives of the corporation. On the contrary, multinationals, transnationals and others operating in developing countries are known for 'breaking all the rules' in order to achieve the 'extra edge'. In that scenario the weak – firms and countries, must be protected from the strong. Tighter global governance rules enforced by global institutions are therefore imperative.

In many ways the Internet is like trade. Governance has not destroyed the flow of trade. Indeed there is much evidence to suggest that international trade rules as administered by the WTO have enhanced the flow of trade. US leadership in trade and global governance as it stands is critical. However, it must be noted that "Globalization is not inevitable. It depends on politics. In today's world it depends above all on US politics." [10] Like global trade, it is inconceivable that Internet governance can ever escape strong US influence.

Competition Policy and Next Generation Networks

From the days of the carrier pigeon and the horseback rider through to the telegraph and the telephone, society's need for remote communication has grown and continues to grow at dramatic rates. Driven by the new information and communication demands that contribute to, as well as results from globalization, the enabling technologies have responded well to the needs of the modern society. Global telecommunication networks and services have benefited

[5] John H. Jackson, *The World Trading System: Law and Policy of International Economic Relations* (Cambridge: MIT Press, 1989) p. 34.

[6] John H. Jackson, *The World Trading System*, 1989, p. 6.

from technical standards and regulatory tools developed and coordinated in the International Telecommunications Union (ITU). Interconnection and interoperability across national boundaries have therefore been facilitated. Now the Internet has taken advantage of this well developed global telecommunication system in which governments have played a key role.

From its humble beginnings in 1969 as a network of computers used by the military and research establishments in the United States, ARPANet[11] expanded rapidly and embraced commercial partners from 1991. About four years later the Internet itself became a fully commercial system with a closely connected network of infrastructure, content and users.

Its growth has been phenomenal. Its application has been profound. It effectively places small firms in the same advantageous competitive position as large firms when it comes to international marketing and distribution of certain products. Today more than 233 million host computers, 51.6 million web sites and an estimated 676 million users in 200 countries worldwide[7] – yet the population of users continue to grow. The WGIG nevertheless recognized that there are over four billion people, mostly in developing countries, still not connected. One of the peculiar features of the Internet, impacting its growth and its governance, lies in the unique self-driven, self-controlled manner in which these users interconnect; and their absolute freedom and insignificant cost of use. It is a credit to its scientists and to its technical management, particularly the Internet Corporation for Assigned Names and Numbers (ICANN) that the Internet has sustained such meteoric growth and yet remained stable and secure.

Also of critical importance to Internet development is the ability of modern electronics to convert every information signal into a digital format thus revolutionizing data transmission systems such that multiple services are able to converge en route through the transmission 'pipes' of Next Generation Networks (NGNs). Consequently, the technical convergence of telecommunications, broadcasting and other information services is stimulating greater commercial, legal and social challenges especially as these services cross national borders uninhibited.

It is this new challenge to competition policy and regulation that this section addresses. The WGIG Issue paper on Telecommunications Infrastructure and NGNs notes that:

From a 'governance' perspective, the managed development of the public switched telephone network since the nineteenth century is nothing less than successful. With a mix of heavy and light regulation from country to country the monopoly business model was encouraged until policy makers considered that the service had reached a level of maturity. Competition was

[7] United Nations Conference on Trade and Development, *E-Commerce and Development Report 2004*.

then introduced (first) in the developed world from the 1980's. Nevertheless, the need for 'flexible or light' regulation has continued to this day, mainly to manage bottlenecks in the absence of effective competition. However, in a market with the correct conditions – competition works.

Competition policy seeks to create an environment in which competition can flourish and deliver the social and economic benefits necessary in the society. However, the transition from monopoly through privatization and liberalization to competition must be managed. For example, the transition in the European Union (EU) telecommunications market was traced over three periods from 1987 to 1999 after which the Commission reduced the number of Directives from twenty to six reflecting "a belief that the European market has substantially completed the process of transition to a competitive market place."[8] The interests of investors large and small, and of users large and small, must be accommodated within a policy framework that allows adequate flexibility both to stimulate innovation as well as to respond to innovation. This managed flexibility is critical in the rapidly developing Internet environment. In other words, underneath that layer of Internet freedom a layer of critical resources must be properly managed.

While efforts to negotiate a competition policy regime in the WTO has not yet been successful, the global cross-border influence of the Internet, satellite and mobile communications, coupled with the critical role that telecommunications play as a facilitator of trade has no doubt encouraged the WTO to develop a telecommunications framework of regulatory and basic competition policy rules as part of the General Agreement on Trade in Services (GATS). The GATS and its Annex on Telecommunication covers issues of transparency, access, technical cooperation and relations with other international organizations such as the ITU. Members then negotiated a Reference Paper on Telecommunications that, among other things, set rules for interconnection with restrictions of anti-competitive behaviour. In the US-Mexico arbitration case on telecommunication services, the panel found that Mexico was in violation of Section 1.1 of the Reference Paper as it relates to anti-competitive practices and also with respect to the Annex on Telecommunications, Mexico was in violation of Sections 5(a) and (b) for denying US carriers operating in Mexico access to certain facilities.

Sauvé and Stern are of the view that, "the Reference Paper [also] reflects a balance between the objectives of both trade liberalization and competition policy and other social or policy

[8] Ian Walden & John Angel, eds., *Telecommunications Law* (Blackstone Press, 2005), pp. 280-281 and 313.

objectives of interest to governments and civil society."[9] It is just this kind of balance that Internet governance requires at this stage.

Arguably, the WTO has not really tackled the Internet and convergence regulatory issues, and probably will not do so for some time. Possibilities for the future may, however, be gleaned from the Europeans who commenced crafting a policy some eight years ago.

The European Commission Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors, and the Implications for Regulation: Towards an Information Society Approach[10] outlined, in Chapter V.1, five principles for future regulatory policy in the sectors affected by convergence as follows:

1. Regulation should be limited to what is strictly necessary to achieve clearly identified objectives.
2. Future regulatory approaches should respond to the needs of users
3. Regulatory decisions should be guided by a need for a clear and predictable framework.
4. Ensuring full participation in a converged environment.
5. Independent and effective regulators will be central to a converging environment.

These principles are still of relevance today and can continue to coexist with competition policy. It was largely because of their internal treaty commitments that the fifteen European nations were able to adapt their public policies not only to manage their collective telecommunication environments from monopoly to competition but also to reform their regulatory philosophy and practice to accommodate convergence on the Internet.

The WGIG infrastructure paper noted that, "Internet governance was inextricably linked to the larger issue of globalization …"[11] The Internet and globalization both facilitate competition. This phenomenon does not easily lend itself to regulation as such but will probably require constant review and upgrading of international policy frameworks.

Whilst there is now more computer generated data than voice on telecommunications networks, it must be recognized that even voice as well as music and video are all now data on the network. So as telecommunication networks are being re-engineered as NGNs to more

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[9] Pierre Sauvé and Robert M. Stern, eds. GATS 2000 New Directions in Services Trade Liberalization (Washington, D.C.: Brookings Institution Press and Center for Business and Government, Harvard University, 2000).

[10] Commission of the European Communities, COM (97)623 December 1997.

[11] Don MacLean, ed, *Internet Governance: A Grand Collaboration* (New York, UNICT Task Force, 2004), p. 345.

efficiently transport these converged services, the need for appropriate regulatory adjustments can be simplified by increased reliance on competition.

E-Commerce, Trade and Internet Governance

Commerce and governance issues have had a very long history of cooperation. In a thesis submitted to the Department of History at Harvard University, Stephen Edward Sachs opposed the widely held view that The Law Merchant, a body of law developed in the Middle Age:

> …was created by the merchant community and expressed their customs, reflecting the unwritten usages of the community rather than the written command of a sovereign legislator. At the same time, it was not the product of any single merchant guild or even a single country, but was the creature of the international merchant community, establishing substantive principles and convenient procedures to govern commerce throughout the world. The result was a new legal order, free from the oppressive control of local laws and local lords. In the words of Levin Goldschmidt, a German lawyer and historian of the mid-nineteenth century, "Out of his own needs and his own views the merchant of the Middle Ages created the Law Merchant.[12]

If correct, it is amazing that such collaboration could be achieved across Europe with the level of communication as it then existed. Now, collaboration is easy, a measure of self-regulation desirable, but only within an established government framework. Nevertheless, "in the era of globalization, the Goldschmidt thesis has taken on new life, as scholars attempt to craft a new means of regulating international commerce (or even regulating the Internet) based on the model of the medieval law merchant."[13]

As populations grew and the demands of societies expanded, trade naturally also grew. As we have seen, technology stimulated the development, production and distribution of goods. We have also seen that technology and the influence of public and corporate policy gave rise to the notion of globalization where the information and communications technologies are playing a most critical role.

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[12] Stephen Edwards Sachs, "The 'Law Merchant' and the Fair Court of St. Ives, 1270-1324." <http://www.stevesachs.com/papers/paper_thesis.html>

[13] Stephen Edwards Sachs, The 'Law Merchant' and the Fair Court of St. Ives, 1270-1324. <http://www.stevesachs.com/papers/paper_thesis.html>

It is said that "the first Trans-Atlantic (telegraph) cable in laid in1866" "was the most important breakthrough of the last 200 years for the capital markets."[14] Subsequently, the telegraph, telephone and fax have made enormous contributions to commerce over the last two centuries. Since 1981, Electronic Data Interchange (EDI) provided direct computer-to-computer commercial transactions thus taking information transfer to another level of efficiency and sophistication. But distance selling has had a long history prior to the introduction of these modern information technologies. The mail-order and catalogue sales business pioneered in the US had to contend with interstate procedures for tax purposes. A Uniform Commercial Code was introduced in the 1940's to regulate these cross-border activities.

The Internet and e-Commerce

By the mid-1990's, the Internet was firmly established as a commercial entity with increasing business applications both at the corporate and consumer levels. EDI-type business-to-business as well as business-to-consumer transactions are now more widely dispersed across multiple jurisdictions using the Internet. But has the fundamental issue of goods and services crossing borders has not really changed?

The WGIG Background Report records that, "the Internet also provides new ways of trading goods and services through e-commerce." In examining the governance implications of the new ways of trading goods and services through e-commerce, UNCTAD has pointed out that here was a misconception that, "business in the Internet would work outside the traditional laws of economics …." Entrepreneurs and investors began to throw money at this new thing and the market responded positively to the new hype and postponed the reality of profits. Alas the Internet bubble burst – demonstrating, according to UNCTAD, that "in reality, the laws of economics have proved rather resilient."[15]

Now that the market has settled and we look to the future, one of the questions raised in the WGIG Background Report is, "whether the rules and practices developed to govern trade in physical goods and services can and should be applied to e-commerce?" Although not fully developed, the work in the WTO may give an indication of the answer to this question.

The World Trade Organization and e-Commerce

In November 2001, the WTO Ministerial Conference at Doha agreed:

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[14] Martin Wolf, "Will Globalization Survive*?"* (Washington DC: Institute for International Economics, April 2005. <http://www.iie.com/publications/papers/wolf0405.pdf>

[15] United Nations Conference on Trade and Development, E-commerce and Development Report 2001 (Geneva: UNCTAD, 2001), p. 16.

> …to continue the Work Programme on Electronic Commerce. The work to date demonstrates that electronic commerce creates new challenges and opportunities for trade for members at all stages of development, and we recognize the importance of creating and maintaining an environment which is favourable to the future development of electronic commerce……. We declare that members will maintain their current practice of not imposing customs duties on electronic transmissions…[16]

This work commenced in September 1998 and agreed that the term electronic commerce meant the production, distribution, marketing, sale or delivery of goods and services by electronic means. Discussions have continued in the General Council, the Council for Trade in Services, the Council for Trade in Goods, the Council for TRIPS, and the Committee on Trade and Development and the work of other inter-governmental organizations are being taken into account.

The work is wide ranging across these five bodies. However, progress has been slow, mainly because members have not been able to agree on a classification for electronically delivered products. The rules governing trade in goods fall under the General Agreement of Tariffs and Trade (GATT) while the rules governing trade in services fall under the GATS. The fact that neither "goods" nor "services" are defined in the GATT and GATS respectively seriously complicates the already complicated matter of the electronically delivered product. The WTO recognizes that it is products previously traded only as physical goods but are now also tradable as digital information that presents the challenges.

Now WTO rules treat goods and services differently. With the exclusion of a few specific "exemptions", GATT rules focus on the binding reduction of tariffs applied to all members. On the other hand, GATS rules do not yet address tariff reduction and are mainly the result of bilateral negotiations where each member can retain considerable flexibility in the way its services are progressively liberalized. Also customs duties are rarely imposed on services.

While the WTO continues to support the avoidance of border taxes on "electronic transmissions" which presumably refers to products 'shipped' electronically. It must be noted that import duties and border taxes are important sources of revenue for most developing countries. Currently, most goods ordered using e-commerce are delivered by traditional means and are therefore accessible for inspection and charging as appropriate. However, a rapidly increasing volume and variety of soft goods: music, movies, books, architectural and engineering drawings etc are being shipped electronically and delivered over the Internet. The physical equivalent of some of these products are already recognized as goods and do have

[16] World Trade Organization, *Doha Declaration, November 2001,* Paragraph 34, http://www.wto.org.

Harmonized System[22] tariff codes identifying the physical characteristics of the media while ignoring its contents.

In 1995 the WTO Committee on Customs Valuation adopted a 1984 Tokyo Round Committee decision which permits members to levy taxes either on the value of the "carrier media" i.e. tape, diskette etc., or on the combined value of the carrier media and its contents i.e. software, movies etc. [23] So electronic ordering and physical delivery does not present a problem. However, it is the electronic delivery that continues to present challenges in the WTO where the means of delivery and the content of the "package" come into conflict. The notion of the 'importation' of the data bits has given rise to the idea of "intangible goods" as a solution! [24]

Also complicating the governance issue is the existence of intellectual property in both goods and services. Consequently, the application of Trade-Related Aspects of Intellectual Property Rights (TRIPS) [25] rules may defy any general solution to e-commerce disciplines in trade.

While continuing to work on this issue, the WTO remains aware of work being done elsewhere. Internet taxation proposals are being developed in the Organization for Economic Cooperation and Development (OECD), the EU and the US for "harmonizing rules in international e-commerce," while UNCTAD has prepared a report on "Tariffs, Taxes and Electronic Commerce: Revenue Implications for Developing Countries" (2000). There is also a 1998 OECD report on "Electronic Commerce Taxation Framework Conditions."

With most of this work taking place without developing country participation it is not surprising that some developing country members in the WTO, arguing in support of a global economy, have signaled that it is "necessary to develop mechanisms to ensure effective developing country participation in the establishment of a global framework for e-commerce."

The WGIG Background Report is conscious of the interplay between e-commerce, trade and Internet governance and recorded that:

> …international regulatory co-operation is necessary if cross-border trade in e-commerce is to grow to potential. Areas as diverse as data privacy; encryption technology; development of secure payments systems; and taxation all raise legitimate public policy questions to which trade officials (as well as others) will need to find answers that meet public policy objectives without restricting trade or preventing the benefits of access and lower costs that flow from it.

The Role of Technology

Just as technology has provided the communications capacity and reliability to meet the demands for rapidly increasing data communication between computers in the 1990's, so it is expected that computer technology and mathematical creativity will contribute to solutions to the current Internet content problems of privacy, crime, security, authentication etc. Technology is already being used with increasing levels of success in these areas. For example, sophisticated software is being used by the music industry to scout the Internet and track down certain kinds of intellectual property violations; while encryption processes are making on-line payments more secure. The continuing success of these initiatives requires that the private sector retains adequate freedom to innovate, invest and earn reasonable returns on that investment. Technical assistance for developing countries and technology transfers are also relevant if global success is to be assured.

"Government jurisdictions are geographic. The Internet knows no boundaries. The clash between the two will reduce what individual countries can do." [26] As in the case of world trade, Internet governance needs a global solution. For e-commerce, the method of delivery should not impact the commercial treatment of the product delivered. The WTO must therefore continue the search for legal clarity and predictability in all goods and services trade.

Intellectual Property Rights

The WGIG Background Report suggests that:

> "(T)he Internet allows the relatively low cost duplication and easier worldwide distribution of works of intellectual property in digital form. The ease of duplication and distribution also makes such works in the digital world highly vulnerable to unauthorized copying and modification. Thus the Internet raises fundamental questions about IPRs."

The law recognizes "creations of the mind" as intellectual property and confers certain exclusive rights on the creators, especially in the areas of copyright and patents for a limited number of years, and in trademarks for an indefinite period.[17] Copyright and patent protection are not new, they both date back to the 18th century while trademark protection followed in the 19th century.

Dramatic changes in technology over the years have attracted a series of gradual changes to copyright laws. For example, the printing press, video recorders, computers and now the

[17] Copyright deals with the protection of literary, artistic, musical and dramatic works. Patents respond to the protection of inventions. Trademarks identify and protect the brand of the owner.

Internet have all given rise to varying degrees of anxiety over the rights of the owners of intellectual property and the public in general. The first technology to revolutionize copying, in the form of printing, came in 1450 with the printing press. The British responded to copyright concerns by enacting the first copyright law in 1710.[18] Several adaptations to Copyright law followed in the UK over the centuries to embrace new technologies such as radio and television in the Copyright Act of 1956 and "specific intellectual property provisions from the mid-1980's"[19]. This series of enactments addressed new concerns, including new technology concerns but nevertheless seem to have retained certain fundamental principles developed through the common law. A more recent example is the Copyright (Computer Programs) Regulations 1992 which extended the 18th century literary principles to computer programs and databases and hence demonstrates how the law progresses traditional common law rules (literary works) to embrace new technology (computer programs).

The Internet, as the current new technology, has presented the greatest challenge to intellectual property protection, - especially to copyright. All information embodied in the bits of a data stream may be protected, as is the software that controls their processing. The convergence of services and the ability of those services, with their protected content, to be routed to any and indeed all parts of the globe simultaneously – and copied perfectly is unprecedented. It has been suggested that, "if the invention of the printing press resulted in a move from an oral to a written tradition at the price of chaining information to the pages of a book, the information revolution frees information in the sense that it may be readily transferred without the need for linkage to paper or any form of storage device."[20]

This demonstrates some of the difficulties governance faces when dealing with the Internet. However, determination to maintain the fundamental principles of the common law does not inhibit the courts from making appropriate adjustments as the technology advances.

In the 2005 case of MGM Studios Inc. vs. Grokster Ltd. et al, the US Supreme Court ruled in favour of the music industry against an Internet peer-to-peer on-line file sharing facilitator. The presiding Justice, David Souter, held that, "we hold that one who distributes a device with the object of promoting its use to infringe copyright ... is liable for the resulting acts of infringement by third parties." This ruling makes it clear that the providers of the technology do bear some liability for the copyright infringement of their on-line customers. In similar cases where older and more limited technology was employed the file sharing operators succeeded since the courts at the time upheld the precedent set in the 1984 ruling with respect to the video recorder.

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[18] Statute of Ann 1710.

[19] Ian J. Lloyd, *Information Technology Law,* Third Edition (Oxford: Oxford University Press, 2004) p. 4.

[20] Ian J. Lloyd, *Information Technology Law,* 2004, p. 4.

In some cases there is need for the clarification of definitions in order to permit certain fundamental legal principles to be applied to new technology. For example, in the UK Copyright, Designs and Patent Act 1988 as amended, some such clarification appears in Section 5 A(1)(b) and 5B(1) explaining that the meaning of "sound (is)…. regardless of the medium on which the recording is made.." and "film means a recording on any medium."

To assist in crafting global solutions to these global problems, a number of treaties have been negotiated through the World Intellectual Property Organization (WIPO), aimed at providing protection for the creators of copyright property under an internationally approved framework.[21] This framework provides protection in the countries which are signatory to these instruments – thus overcoming the jurisdiction problem, provided the instruments are embedded in the national law.

Despite this expanding framework, it has been suggested that, "just as the industrial revolution rendered obsolete aspects of law based on notions of an agrarian society, so a legal system focusing on issues of ownership, control and use of physical objects must reorient itself to suit the requirements of an information society."[22] The principal institutions addressing such reorientation are WIPO and the WTO.

The Institutions

This reorientation process has begun in WIPO where intellectual property protection is being reviewed and adapted. These governance issues generate sharp differences between developed and developing countries, with the former calling for greater protection and the latter resisting increased protection as likely to be inimical to their development interests. For example, work on patent harmonization in the proposed Substantive Patent Law Treaty has met with stiff opposition from developing countries. It is expected that a negotiated result will reflect some balance between the rights holders and the general public so that narrow commercial interests will not dominate general human interests. The challenge to reassess the fundamental principles on which the governance of intellectual property should stand in the 21st century can be seen in a proposal tabled by Argentina and Brazil in October 2004 calling for WIPO to address its role in the United Nations led sustainable development process.[23] Key issues continue to be development, the balance between rights holders and society in general, technology transfer, technical assistance and the wider participation of civil society.

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[21] See the Berne Convention, WIPO Copyright Treaty, and WIPO Treaty on Copyright Performances and Phonograms at www.wipo.org

[22] Ian J. Lloyd *Information Technology Law,* 2004 p. 6.

[23] *WIPO Development Agenda,* WO/GA/31/15, at http://www.wipo.org.

Some argue that the development of the law is too slow in relation to the speed of technology change. But this may be an advantage, as it would most likely avoid the trap of technology sensitive rules. Slowly adapting IPR rules as necessary helps to ensure technology neutral rules and such rules permit a more predictable commercial environment. For this reason WIPO recommends Alternative Dispute Resolution (ADR) procedures such as binding arbitration which is not only quick but is also cheap in settling IPR disputes. Some ADR procedures can be conducted on-line – and are sometimes fully automated. This again reflects the use of digital technology to help solve problems which arise from the use of the same digital technology.

More definitive binding and enforceable settlement of disputes are available in the WTO. While WIPO has the greater IPR technical expertise, the WTO, through interpretation of the TRIPS agreement, embodying the Berne Convention, can use the authority vested in its Dispute Settlement Body, which has the legal muscle to settle a wide range of intellectual property and other disputes. For example, in a year 2000 case brought by the European Union against the United States, the WTO ruled that the exemption provisions in the US Digital Millennium Copyright Act 1998 which excludes certain restaurant businesses using protected musical and performing arts works from copyright liability were a violation. The panel ruled that the US was in violation of Article 13 of the TRIPS agreement that, "confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder." The US is understood to have agreed to amend the legislation.

Intellectual property issues are numerous, complex and heavily legal. Although only a few examples were drawn, it is generally true that much copyright legislation and many court decisions around the world tend to lean towards maintaining the fundamental principles of the common law and adapting them as the technology advances. As the fundamental principles of economics remain resilient in the face e-commerce so too it would seem that so far, the fundamental principles of copyright continue to show some resilience even in the information age.

Conclusion

Despite its very successful past, the Internet is much too important to global peace and prosperity to be left alone. Just as in 1945 a small group of nations saw the need to initiate a global forum to advance world peace and human development in what became the United Nations, the need for a global forum of Internet governance is evident at this time. Despite recent unilateral tendencies, the US has to be trusted to take its global leadership role seriously. These two factors may suggest a continuing leadership role for the US in Internet governance but a role that embraces all other participating nations, and other stakeholders, in accordance

with the WSIS principles of transparency, inclusiveness and democracy – all notions which are already consistent with US philosophy.

Even the most powerful nations are influenced by "popular opinion" and civil society has developed tremendous skill, including the use of the Internet, in galvanizing such public opinion. Indeed, governance in a period of globalization is more likely to succeed if inputs from all sectors of the "global village" are considered in a balanced way. With Internet governance, there are strong views on both sides of the divide: to control or to leave free. Either extreme is likely to be untenable in the long run.

Multinational corporations have very strong influence on public policy. Foreign Direct Investment by these corporations is estimated as having a greater impact on globalization than is international trade. A global system of corporate governance: "the system by which companies are directed and controlled"[24] is therefore critical. We have seen that multilateral trade rules, which bind the behaviour of governments, are also having a measure of influence on the behaviour of multinationals. With agreements covering industrial products, agriculture, services, investment, intellectual property and dispute settlement mainly, all 148 members of the WTO are voluntary participants in the globalization phenomenon.

A greater role for the WTO in Internet governance must therefore be anticipated. Globalization, e-commerce and intellectual property rights protection are all trade related issues that fall within the WTO's mandate. As it has with telecommunications, the very close relationship between the Internet and these issues will eventually dictate that the WTO gets involved with Internet governance.

Most Internet agitators appear to be in the free speech, free entertainment and casual use zone. However, it is the commercial use of the Internet that will determine how and by whom the Internet will be governed in the future. Significant steps have been taken in recent years to tighten corporate governance. It must be clear by now that the private sector cannot be left alone - at home nor abroad. If in doubt see the Sarbanes-Oxley Act of 2002 declared by PriceWaterHouseCoopers as "the single most important piece of legislation affecting corporate governance… since the US Securities laws of the 1930's."[25] They also described the law as a piece of "monumental legislation". Now if the private sector itself needs such tight governance, is it logical that the critical global Internet should be left to the same private sector? It maybe that the same concerns that some have in considering the likely role of governments in Internet governance, some others must have in the current emphasis on the Internet being private

[24] The Cadbury Committee Report on financial aspects of corporate governance, 1992.

[25] PricewaterhouseCoopers http://www.pwc.com.

sector led. Consequently, mutual trust can only be achieved when all relevant parties work together in an appropriately structured forum.

Prime Minister Arthur of Barbados has called for "a radically reformed system of global governance and effective global institutions"; noting that "changes in international economic governance have not kept pace with the growth of global interdependence."[26] The global Internet cannot be excluded from this demand.

Most elements of Internet usage and service content were regulated in some form or fashion – prior to the arrival of the Internet. Although there has been a call by some for the development of a body of Internet-specific, or cyberspace law, similar to the Law of the Sea, information technology is changing much too rapidly for any 'sui' generic body of law to be developed, implemented and maintain its relevance over time. The continuation of gradual adaptations of the tried and tested fundamental legal principles, as we have seen in economics and in intellectual property protection, is likely to be more successful.

As mentioned earlier, the WGIG infrastructure paper noted that, "Internet governance was inextricably linked to the larger issue of globalization"[27] and is therefore unlikely to succeed in the absence of a clearly coordinated multilateral process." Martin Wolf has correctly placed responsibility for the future of globalization squarely in the hands of the United States. In all international organizations the powerful hand of the US is evident. This is part of the current reality. The interdependence of states is also evident in the current reality and can be seen in the work of the international institutions such as the United Nations and its agencies, the World Bank and the WTO in particular. The noted futurist Alvin Toffler predicted in 1990, prior to the commercial Internet, that "clearly we are heading for chaos if new international laws aren't written and new agencies created to enforce them…"[28] Has the Internet rendered this prediction more or less plausible?

The WSIS Declaration of Principles is understood to reflect the will of governments when it was agreed in December 2003 that, "the international management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations."

So let it be!

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[26] Owen S. Arthur, United Nations General Assembly, *Follow-up to the International conference on Financing for Development,* November 2003, Agenda Item 104.

[27] Don MacLean, ed., *Internet Governance: A Grand Collaboration* (New York: United Nations Information and Communication Taskforce, 2004) p. 345.

[28] Alvin Toffler, *Power Shift: Knowledge, Wealth, and Violence at the Edge of the 21st Century* (New York: Bantam Books, 1991), p. 462.

INTERNET GOVERNANCE AND INTERNATIONAL LAW

Jovan Kurbalija

The WGIG's multidisciplinary approach allowed it to address Internet governance issues from technical, policy, economic, institutional, and legal perspectives. Although legal considerations were not the priority of the WGIG, the WGIG process confirmed that all Internet governance issues include important legal aspects. Legal discussions within the WGIG focused on:

- legal issues *per se*, including cybercrime, intellectual property rights, data protection, privacy rights, and consumer rights;
- legal mechanisms for addressing Internet governance issues, including self-regulation, international treaties, and jurisdiction.

After the presentation of the WGIG Report, the WSIS negotiations have mainly dealt with potential Internet governance mechanisms, including institutionalization options. Legal considerations are becoming crucial in exploring the various ways and means of fitting proposed institutional designs for Internet governance within existing national and international legal frameworks. Some of the questions under discussion, not only in the WSIS Preparatory Meetings, but also in the corridors of the Palais des Nations and in online forums include: How to facilitate the participation of various stakeholders within the state-centered international legal system? What would be the most suitable international legal instrument for addressing Internet governance issues? What is the relationship between international public and private law in the field of Internet governance?

The aim of this paper is to contribute to an initial conceptual mapping of the legal aspects of Internet governance. It will reflect on the legal issues discussed so far during the WGIG/WSIS process. However, the main emphasis will be on the legal issues, which are likely to influence Internet governance discussions following the conclusion of the WSIS in Tunisia.

Cyberlaw vs. Real Law

The WSIS/WGIG Internet governance process was instigated almost two years after the Dot-Com Bubble burst (in 2000). A more mature and realistic discussion of the various effects of the Internet on society gradually replaced the early Internet hype of the 1990s. Currently, two paradigms, generally described as "techno-optimism" and "techno-realism," create the underlying conceptual basis for Internet governance discussions. In the legal field, proponents

of "techno-optimism" argue for the development of "cyber-law," while the "techno-realists" argue that the solution for the Internet rests with the use of "real law."

A "cyber-law" approach presumes that the Internet has brought about new types of social interaction in cyberspace. Consequently, new "cyber-laws" for cyberspace need to be developed. In the early days, the proponents of this approach argued that the Internet de-links our social and political interaction from the current territorial organization of the world, which rests on the notion of the sovereign state. This argument is best epitomized by John Barlow's famous message to the governments of the world: "You are not welcome among us. You have no sovereignty where we gather. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear. Cyberspace does not lie within your borders."[1] Presently, this particular argument is of mainly historical relevance. The current proponents of a "cyber-law" approach argue that the sheer speed and volume of Internet cross-border communication hinders the enforcement of existing legal rules and requires the development of new "cyber-laws."[2]

A "real law" approach is based on the assumption that the Internet is not conceptually different from previous telecommunication technologies, from smoke signals to the telephone. Though faster and more far-reaching, the Internet still involves communication over distances between individuals. Consequently, existing legal rules can be applied to the Internet.

Although both approaches contain valid elements, the real law approach is becoming predominant in both theoretical analyses and policies. Notably, the WSIS/WGIG discussions on Internet governance emphasized the need to use existing national and international legal mechanisms for regulating the Internet. For some issues, however, such as trademark protection, real law rules would need to be adapted in order to apply to the Internet. Newly designed rules must regulate other issues, such as spam. It is difficult to envisage any existing rule that might be applied to spam. The closest real world analogy to spam, junk mail, is not illegal.

Does the Internet Require Global Regulation?

One frequently expressed view about Internet governance is that the global nature of the Internet requires global Internet regulation. Proponents of this view support the need for global regulation with examples, such as the lack of effective national measures to combat spam or cybercrime. The typical line of thinking goes like this: any country outside of global

[1] John Perry Barlow, "A Cyberspace Independence Declaration", 1996, Electronic Frontier Foundation, Publication – John Perry Barlow Archive.

[2] David G. Post "Against 'Against Cyberanarchy'" in, Adam Thierer and Clyde Wayne Crews Jr., ed. *Who Rules the Net?* (Washington, D.C.: Cato Institute, 2003), pp. 71-89.

regulation could become a "safe haven" for those intending to defy globally adopted Internet rules. One of the early examples supporting this argument was the initiator of the "I Love You" virus. The hacker, who created this virus, resident in The Philippines, could not be prosecuted for the worldwide damage caused by his virus because no such crime existed in Philippine legislation.

While global regulation may be desirable in many respects, national and regional regulations are assuming greater relevance. The Internet increasingly becomes anchored in geography. New technological developments, such as geo-location software, make it simpler to locate the geographical location of Internet users. Together with geo-location software, powerful filtering tools can limit Internet access based on the user's country of origin. Besides technological devices, increasing legislative pressure in many countries requires ISPs to identify their users and, if requested, to provide necessary information about them to authorities. With such developments, the Internet will become a less anonymous medium. For many governments, the combination of technology and legislation is sufficient to ensure an acceptable level of enforcement of national legislation.[3] The more the Internet is anchored in geography, the less unique its governance will need to be.

The Use of the Variable Geometry Approach in Internet Governance

The "variable geometry" approach has been widely used in international legal practice. Among the proponents of the variable geometry approach one should mention Judge Tanaka of the International Court of Justice, who stated the following in the South West Africa Case: "To treat unequal matters differently according to their inequality is not only permitted but required."[4] Professor Abi Saab finds a conceptual framework for variable geometry in differentiating between the international law of coexistence, based on the principle of sovereign equality, and the international law of co-operation, which includes the equality of participation but the differentiation of tasks and obligations.[5]

The need to accommodate states with different capacities and interests within the same international framework gradually triggered various forms of variable geometry. One of the well-known examples is veto power of five permanent members of the United Nations Security Council. Many international organizations, such as the International Monetary Fund

[3] Enforcement does not mean that prohibited behaviour will become impossible. People with technical skills will still be able to bypass various technological barriers. However, for many governments it is important that the majority of ordinary users remain within parameters specified by legislation.

[4] South West Africa (Diss. Op. Tanaka), Second Phase, Judgment, *ICJ Reports* (1996) 6, at 306.

[5] Georges Abi-Saab, "Whither the International Community?" *European Journal of International Law* 9 (1998).

and the World Bank, rely on variable geometry. Other examples include commodity organizations, such as the International Tropical Timber Agreement, which distinguishes between consumer and producer member states. Voting power is allocated according to the share in the total tropical forest resources. International environmental law has developed the principle of common but differentiated responsibility, which contains two main elements: a) common responsibility of countries for the protection of the environment on local, regional, and global levels; b) differentiated contributions to reducing environmental harm based on criteria such as a particular country's historical contribution to environmental damage and its capacity to prevent and reduce further environmental damage.[6] The principle of common but differentiated responsibility could apply to treatment of "Internet pollution," such as spam and viruses.[7]

Internet governance requires the involvement of a variety of stakeholders who differ in many aspects, including international legal capacity, interest in particular Internet governance issues, and available expertise. Such variety could be accommodated within a single Internet governance framework, through the use of the variable geometry approach. This approach, which reflects stakeholder interests, priorities, and capacities to tackle Internet governance issues, is implied in Article 49 of the WSIS declaration, which specifies the following roles for the main stakeholders:[8]

- States – "policy authority for Internet-related public policy issues" (including international aspects);
- the private sector– "development of the Internet, both in the technical and economic fields";
- civil society–"important role on Internet matters, especially at community level"; intergovernmental organizations – "the coordination of Internet-related public policy issues."
- international organizations – "development of Internet-related technical standards and relevant policies"

[6] The Principle of Common but Differentiated Responsibility was used in the Rio Declaration (1992) and the Framework Convention on Climate Change (1992). The principle of differentiated responsibility is used in various international legal instruments, including the Barcelona Convention from 1976 [Article 11 (3)] and the Preamble of the United Nations Convention on the Law of the Sea (1982).

[7] "Polluter Pays" is another principle that could be borrowed from environmental law and used in dealing with "Internet Pollution."

[8] See: World Summit on the Information Society, "Declaration of Principles", WSIS-03/GENEVA/DOC/4-E, 12 December, 2003, Article 49.

Variable geometry can be implemented through mechanisms that would need to include different core responsibilities for tackling particular Internet governance issues and a carefully weighted decision-making process, including the necessary checks and balances.

One possible criticism of the use of variable geometry in Internet governance is that the creation of such a system would require lengthy and detailed negotiations, especially in the grey zones, where various stakeholders may have competing and conflicting interests (e.g. the management of the core Internet resources). In negotiating grey zone issues, the win-win potential of variable geometry could be limited by the zero-sum approach to negotiations.

The Difference between International Public Law and International Private Law

The need for the use of international law is frequently raised in Internet governance discussions. The context within which such references are made, very often leads to certain conceptual and terminological confusion. The term *international law* is mainly used as a synonym for international *public* law, established by nation states and international organizations, usually through the adoption of treaties and conventions.[9] However, most possible international legal cases regarding the Internet include a strong private law feature, involving such issues as contracts and torts. In dealing with such issues, there is a need to use international private law, which creates an additional element of terminological confusion. Namely, the term *international private law* is, to a large extent, a misnomer. *Conflict of laws*, the term used in the United States, is more precise. The rules of international private law are stipulated in national legislation, not in international treaties.[10] The rules of international private law specify the criteria for establishing applicable jurisdiction and law in legal cases with foreign elements (e.g., legal relations involving two or more entities from different countries). The criteria for identifying the applicable jurisdiction and law include the link between an individual and national jurisdiction (e.g., nationality, domicile) or the link between a particular transaction and national jurisdiction (e.g., where the contract was concluded, where the exchange took place).

International Private Law

Given the global nature of the Internet, legal disputes involving individuals and institutions from different national jurisdictions are very frequent. However, only rarely has international private law been used for settling Internet-based issues, possibly because its' procedures are

[9] Other sources, according to the Statute of International Court of Justice, include customary law and general principles of law (see: Article 38 of the Statute of the International Court of Justice, UNCIO, Vol. 15, 355).

[10] A few international attempts have been made to harmonies international private law. The main global forum is the Hague Conference on International Private Law, which has adopted numerous conventions in this field.

usually complex, slow, and expensive. The main mechanisms of international private law developed at a time when cross-border interaction was less frequent and intensive and proportionally fewer cases involved individuals and entities from different jurisdictions.

International private law requires modernization in order to meet the needs of the Internet-based world, characterized by fast, simple and pragmatic *modus operandi*. Possible modernization might include simplified procedures for identifying appropriate jurisdictions and laws, the option of online deliberation, and flexible arrangements for legal counseling.

The Harmonization of National Laws

In the case of the need for global regulation, the most efficient option is the harmonization of national laws, resulting in the establishment of one set of equivalent rules at the global level. With identical rules in place, the question of applicable jurisdiction should become less relevant. If the same rules are applied, it becomes less relevant whether the court case is adjudicated, for example, in the USA or France. The harmonization of national laws can be achieved in areas where a high level of global consensus already exists, for example, regarding child pornography, piracy, and slavery. Views are converging on other issues too, such as spam and Internet security. However, in some fields, including content policy, it is not likely that a global consensus on the basic rules will be reached.

International Public Law

International public law regulates relations between nation states. Some international public law instruments already deal with areas of relevance to Internet governance (e.g. telecommunication regulations, human rights, international trade). It remains to be seen if international public law will be used more intensively in the field of Internet governance. In this part, the analysis will focus on the elements of international public law that could be used in the field of Internet governance, including treaties and conventions , customs, "soft law," and *ius cogens*.

***Treaties and Conventions*[11]**

Currently, the only convention that deals directly with Internet-related issues is the Council of Europe Cybercrime Convention. However, many other international legal instruments address

[11] The designations *treaty* and *convention* are used interchangeably in order to describe international legal instruments. The term *treaty* is used in the Vienna Convention on the Law of Treaties (1969). The term *convention* is used in Article 38(1)(a) of the Statute of the International Court of Justice. Other names are used as well: charter, covenant, agreement, protocol, and exchange of notes. The legal status of international legal instruments is not conditioned by name or by the form in which they are adopted.

broader aspects of Internet governance. For example, in the field of telecommunications, ITU regulations (Radio Regulations and International Telecommunication Regulations) govern issues related to telecommunication infrastructure.[12] Another set of Internet-related instruments deals with human rights. Freedom of expression is protected by Article 19 of the Covenant on Political Rights. Global and regional human rights instruments regulate other Internet-related rights, such as privacy and the right to information. In the field of dispute resolution, one of the main instruments is the New York Convention on Arbitrations (1958).

One of the Internet Governance Project's contributions to the WGIG discussions was its proposal for the adoption of the United Nations Framework Convention on Internet Governance.[13] The "framework-protocol" approach consists of the framework convention, which provides general principles, and subsequent protocols that provide more specific regulation.[14] The proposal of the Internet Governance Project rests on the analogy with the United Nations Framework Convention on Climate Change (1992). The following similarities between climate change and the Internet were underlined: involvement of a broad range of actors, including non-governmental organizations; a broad agreement on principles and norms; and a need to establish procedures for dealing with future issues. The possible differences between climate change in 1992 and Internet governance in 2005 is "ripeness" for the issue to be regulated by international convention. The WSIS/WGIG debate clearly indicated differences among main players, including disagreement about core Internet governance principles and norms. Although the "framework-protocol" approach would be an appropriate mechanism for regulating such a broad field as Internet governance, the introduction of this mechanism would require more time in order to develop wider support for the main Internet governance principles and norms.

Customary Law

Development of customary rules includes two elements: general practice (*consuetudo*) and recognition that such practice is legally binding (*opinio juris*). It usually requires a lengthy time-

[12] Although ITU regulations do not have the usual designation of convention or treaty, they are international, legally binding instruments.

[13] Mathiason, J. "A Framework Convention: An Institutional Option for Internet Governance," Concept Paper for the Internet Governance Project, December 2004 (http://dcc.syr.edu/miscarticles/igp-FC.pdf).

[14] Examples of the framework convention supported by protocols are the 1985 Vienna Convention on the Ozone Layer and its 1987 Montreal Protocol with its subsequent amendments; the 1992 United Nations Framework Convention on Climate Change with its 1997 Kyoto Protocol; and the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes with its 1999 Protocol on Water and Health and its 2003 Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters.

span for the crystallization of general practice. This was possible in the past. However, technological progress after the Second World War required the rapid introduction of international regulatory frameworks, given the profound economic and political consequences that these changes generated in a very short time-span. The Internet is a good illustration of this tendency.

One possible solution for overcoming tension between, on one hand, increasingly fast modern life and, on the other hand, the slow process of development of customary law was proposed by Roberto Ago who introduced the concept of *diritto spontaneo* or "instant customary international law."[15] This concept emphasizes *opinio iuris* and gives lower significance to general practice. The view has been criticized since it underestimates the importance of practice, which is the core element of customary law. In current international law, only one possible reference exists in the International Court, that of the *North Sea Continental Shelf,* that opens the possibility of developing customary law in a relatively short passage of time: "an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been both extensive and uniform."[16]

Some elements of emerging custom appear in the way the US government exercises oversight over the Internet root. The US government has observed a general practice of non-intervention when it comes to administering the Internet root zone file, which is the first element in identifying customary law. It remains to be seen if such general practice originated with the awareness that it was legally binding (*opinio iuris*). If this is the case, there is the possibility of identifying international customary law in managing parts of the Internet root server system that deal with the country domains of other countries. It would be difficult to extend such reasoning to the legal status of gTLDs (com, org, edu, net), which do not involve other countries.

Customary law may also be developed for regulating security-related Internet governance issues (e.g., spam, protection of critical infrastructure, virus protection).

Soft Law

"Soft law" has become a frequently used term in the Internet governance debate. Most definitions of soft law focus on what it is not: a legally binding instrument. Since it is not legally binding, it cannot be enforced through international courts or other dispute resolution mechanisms.

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[15] R. Ago, *Science juridique et droit international,* RdC (1956-II), 849-955, at 932 et seq.

[16] International Court of Justice Report 1969, 43.

The linguistic criterion for identifying soft law is the frequent use of the word "should," in contrast to the use of the word "shall;" the latter is usually associated with a more legally-binding approach codified in "hard" law (treaties). Soft law instruments contain principles and norms rather than specific rules. It is usually found in international documents such as declarations, guidelines, and model laws.

Why are some international documents considered to be soft law while others are not? For example, the Rio Declaration (1992) is soft law, but hundreds of other declarations adopted by the United Nations are not. The "legality" of soft law instruments is supported by the evidence that their norms are usually observed by many countries. Soft law could fall under the umbrella of Louis Henkin's statement that, "Almost all nations observe almost all of their obligations almost all of the time." When countries adopt a particular document, even if it is not legally binding, they express a certain commitment and moral obligation to observe it. The more negotiating energy put into reaching consensus and drafting a particular instrument, the more nation states are ready to support and observe such an instrument. This is one of the main elements that lead to the categorization of particular international documents as soft law.

As we can see, the difference between hard and soft law is not binary.[17] Moreover, some situations are *prima facie* paradoxical, where hard law conventions contain soft law rules and *vice versa*. [18]

Some soft law arrangements have had considerable political importance--such as the Helsinki Act from 1975, which established the framework for East-West relations and marked the beginning of the end of the Cold War. Other soft law instruments, such as the Stockholm Declaration (1972) and Rio Declaration (1992) have had a major impact and influence on the conduct of states in the field of environmental protection. More recently, the OECD Financial Action Task Force (FATF) adopted 40 recommendations on money laundering. Although the recommendations are soft law, the FATF established a very strict monitoring and reporting plus enforcement process that includes some very hard mechanisms, including the expulsion of a party from the FATF.

Soft law is used by states for various reasons, such as mutual confidence-building, stimulating development in progress, and introducing new legal and governmental mechanisms. Soft law has increasing importance, especially in situations where states agree on specific issues, but are

[17] There are also examples when soft law forms, such as minutes of a meeting, received the status of hard law (Maritime Delimitation and Territorial Questions between Quatar and Bahrain (Jurisdiction and Admissibility) (1994) ICJ Rep. At 112).

[18] For example the Framework Climate Change Convention contains numerous *shoulds* in Article 3 (soft law formulations); and some soft law instruments, such as the CSCE Helsinki Final Act from 1975, contain numerous *shalls* (hard law formulations).

not ready to bind themselves legally. Soft law is also sometimes preferred to hard law in order to avoid the potential complexity of the domestic ratification process. Another possible situation for the use of soft law instruments is in the process of the gradual development of norms that can result in the adoption of international legal instruments.[19]

The main corpus of existing instruments in the field of Internet governance is non-binding, and includes: the OECD Guidelines related to ICT and the Internet, the UNCITRAL Model Laws in E-Commerce, resolutions and declarations of the United Nations and other international organizations dealing with Internet governance related issues (e.g., the United Nations General Assembly Resolutions on Internet Security).

The main WSIS documents, including the Final Declaration, Plan of Action, and Regional Declarations have the potential to develop certain soft law norms. They are not legally binding, but they are usually the result of prolonged negotiations and acceptance by all countries. The commitment that nation states and other stakeholders put into negotiating these instruments and in reaching a necessary consensus creates the first element in considering that such documents are more than simple political declarations.[20]

Soft law provides certain advantages in addressing Internet governance issues. First, it is a less formal approach, not requiring the official commitment of states and, thereby, reducing potential policy risks. Second, it is flexible enough to facilitate the testing of new approaches and adjustment to rapid developments in the field of Internet governance, which is characterized by many uncertainties. Third, soft law provides greater opportunity for a multistakeholder approach than does an international legal approach restricted to states and international organizations.

Ius Cogens

Ius cogens is described by the Vienna Convention on the Law of Treaties as a "norm, accepted and recognized by the international community of States as a whole, from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character."[21] One of the main characteristics of *ius cogens* rules is that they are

[19] There are many examples of this evolution from the past. For example, the IAE Guidelines were the basis for the adoption of the Convention on Early Notification of a Nuclear Accident (1986); the UNEP Guidelines on Environmental Impact Assessment were further developed in the ECE Convention on Environmental Impact Assessment in a Transboundary Context.

[20] There is a high frequency of the use of the word "should" in the WSIS documents, one of the features of soft law instruments. For more information consult: Jovan Kurbalija, *The Emerging Language of ICT Diplomacy—Qualitative Analysis of Terms and Concepts*, DiploFoundation <http://www.diplomacy.edu/IS/Language/html/words.htm>.

[21] Article 53 of the 1969 Vienna Convention on the Law of Treaties.

inalienable. Professor Brownlie lists the following examples of *ius cogens* rules: the prohibition of the use of force, the law of genocide, the principle of racial non-discrimination, crimes against humanity, the rules prohibiting trade in slaves and piracy.[22] More conditionally, he also indicates the principle of permanent sovereignty over national resources and the principle of self-determination.[23] Can *ius cogens* be applied to the Internet? Some of the above-mentioned behaviours prohibited by *ius cogens*, such as piracy, slavery, and genocide cannot be performed via the Internet. Nevertheless, *ius cogens* covers behaviour that leads to such violations. Thus, *ius cogens* could be applied in such situations when the Internet is used for promotion or organization of prohibited acts, such as piracy, slavery, and genocide.

Conclusion

The WGIG Report and other documents produced in the WSIS/WGIG process are a solid basis for reflection on the main issues of Internet governance. The Tunis WSIS Declaration will provide the necessary policy endorsement of the overall process and a possible basis for the soft law status of some agreed solutions.

The nature and intensity of future international legalization in the field of Internet governance will depend on the outcome of the WSIS in Tunisia. If the parties agree to introduce an inter-governmental regime, it would require harder international instruments such as treaties. Other institutionalization options based on a multistakeholder approach and a *sui generis* form of international organization would favour soft law legalization. It is very likely that any compromise solution to be reached at the WSIS in Tunis will require considerable creativity in designing the future institutional framework for Internet governance.

[22] Ian Brownlie, *Principles of Public International Law* 5th Ed. (Oxford: Oxford University Press, 1999), p. 513.

[23] *ibid.*

INTERNET GOVERNANCE: STRENGTHS AND WEAKNESSES FROM A BUSINESS PERSPECTIVE

Ayesha Hassan

This chapter provides an overview of the strengths and weaknesses of the current Internet governance landscape from the perspective of the International Chamber of Commerce (ICC)[1]. In general, business views the current mechanisms that handle Internet related issues to be functioning well. Stability, security and consistency in the functioning and future development of the Internet are critical to business. Coordination, exchange of information and increased participation of all stakeholders from around the world, particularly from developing countries are the key areas that could be strengthened going forward. These areas will require attention and consideration at all levels---international, regional and national---to make progress.

What is Internet Governance?

"The Internet" refers to the global, seamless interconnection of networks using Internet Protocol (IP). Internet Protocol is a network layer protocol that contains the addressing information and some control information that allows packets to be routed. These networks are privately owned and operated, and have many different properties. They are all based on technical protocols, numbering and naming systems that use widely accepted standards to enable the transport of information across many interconnected networks.

Internet users rely on unique and predictable results in domain name resolution anytime and from anywhere in the world, and a high degree of reliability and stability in the operation of the networks themselves. Since the networks that make up the Internet are widely distributed and operated by thousands of different entities, both large and small, the Internet's infrastructure and operation is a collaborative activity[2].

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[1] More details about the work of ICC's Commission on E-Business, IT & Telecoms can be found at: <http://www.iccwbo.org/policy/ebitt/>

[2] For more detailed information regarding several of the organizations involved in the technical coordination of the Internet, please refer to ICC's "Information Paper on Organizations Involved in Technical Coordination of the Internet," updated version, 2 September 2003 <http://www.iccwbo.org/policy/ebitt/>

At a minimum, "Internet governance" includes the entire set of multi-stakeholder decision-making processes[3] for technical and public policy matters that affect information and communication technology (ICT) infrastructures and networks, Internet communications, and Internet commerce and applications.

"Internet governance" can be understood as comprising the following elements:

- the technical standardization activities that promote interoperability of Internet Protocol (IP) applications as well as network security, reliability and quality for the Internet;
- the technical coordination of the key protocols and addresses and names that underpin the technical functioning of the Internet; and
- the handling of public policy matters.

No single body performs all of these functions. Indeed, different stakeholders are leading, and should continue to lead on different components and sub-issues under each component. In addition, the Internet depends on other infrastructures, e.g. the telecommunications infrastructure to provide an underlying global platform, the energy infrastructure to provide power to operate user and network ICTs, the education infrastructure to educate and train people to use ICTs and their applications and to design, build and operate the Internet.

Technical Standardization and Internet Protocol Standards

Technical standards allow different components of the Internet to inter-operate and to provide secure, reliable and high-quality networks. Besides the Internet Engineering Task Force's (IETF) STD005, which defines the Internet Protocol (IP), the IETF develops many open, voluntary consensus-based interface and protocol standards that facilitate the development of hardware and software capabilities at Open System Interconnection (OSI) layer 3 and above. [4]

The Internet Architecture Board and the Internet Engineering Steering Group provide engineering management and process review functions for the IETF to ensure that the open,

[3] "Multi-stakeholder decision-making processes" here is taken to refer to activities in which governments, business and civil society each actively participate to create normative information. The actual design, deployment, operation, administration and maintenance of ICT networks and their applications by individual network operators and service providers may draw upon information from multi-stakeholder processes, but they are not multi-stakeholder process themselves. Similarly, important activities, such as those performed by the ITU-D, to broadly disseminate information about ICT technologies, standards, and regulations; to provide education and training on ICT, and to provide technical assistance are not viewed as "Internet Governance". These latter functions are discussed throughout the document to complement the discussion of Internet Governance.

[4] For further information regarding the OSI model see <http://www.webopedia.com/quick_ref/OSI_Layers.asp>

voluntary, consensus-based process works properly. The World Wide Web Consortium and specialized forums such as the Session Initiation Protocol Forum provide additional technical specifications for Internet applications and use to meet user needs. The International Telecommunication Union's (ITU) Telecommunication Standardization Sector (ITU-T) and Radiocommunication Sector (ITU-R), as well as other standards development organizations, develop the technical standards for the transport technologies at OSI layer 2 and below for wire line, wireless, cable, fiber optics, satellite, and other facilities. The ITU's Development Sector (ITU-D) assists developing countries by, among other activities, disseminating information on ITU standards, and producing reports on emerging technologies/applications and how they relate to existing infrastructures and services.

Each of the entities mentioned above plays an important role in ensuring the interoperability of networks to allow for seamless Internet communications. Business supports each of these organizations maintaining its current role and mandate, and stresses the critical importance of international, open, voluntary, consensus-based development of standards led by the private sector and market forces. As our use of the Internet grows, it is even more important that these organizations cooperate. These entities need to respect each others' expertise and establish mutually agreed-to working relationships[5] that recognize and promote private sector leadership and participation, and are based on a commitment to standards cooperation.

All of the above standards are voluntary, which makes them flexible and able to adapt to a rapidly changing technical environment. An exception is standardization of radio spectrum in ITU-R. Spectrum is a limited resource, so its use is regulated subject to global treaty agreements. The ITU also convenes world treaty conferences to identify, assign and allocate radio spectrum to support the transport infrastructure. The Internet is not a limited resource, and does not need to be regulated in this way.

Technical Coordinator of the Internet Names and Numbers System

Among the key elements that have been broadly discussed within the World Summit on the Information Society (WSIS) and the Working Group on Internet Governance (WGIG) processes is the technical coordination of the Internet names and numbers system. This function is performed by the International Corporation for Assigned Names and Numbers (ICANN), a not for profit global corporation. ICANN exists, first and foremost, because it is essential to ensure the stable functioning of the global Internet. ICANN is a rapidly adaptive

[5] For example, RFC 3356 is the "Internet Engineering Task Force and International Telecommunication Union - Telecommunications Standardization Sector Collaboration Guidelines", August 2002. It was approved by the ITU-Ts Telecommunications Standardization Advisory Group (TSAG) as Supplement 3 to the A-series Recommendations. It is at <http://www.ietf.org/rfc/rfc3356.txt?number=3356>

process that can be responsive to the dynamic nature of Internet growth and evolution in the area of assigned names and numbers, and the system for mapping between them.

The critical parts of this process are:

- the administration, coordination and allocation of IP addresses and the delegation of generic top level domain names;
- the administration and coordination of the root server system;
- the coordination of procedures related to the technical coordination of the Internet;
- the coordination of relationships with other entities, such as the regional addressing registries and the Country Code Top Level Domain (ccTLD) registries;
- promotion of competition within generic top-level domain name space (.com, .org, .net, etc);
- matters related to these functions, such as a system for domain name dispute resolution.

Along with these key responsibilities, ICANN, along with other organizations, has been addressing new challenges, such as introducing multilingual or Internationalized Domain Names (IDN) into the generic TLD domain name system (DNS), and encouraging them in the ccTLDs by issuing guidelines and approving standards for full interoperability between the different languages. Progress in IDN can establish an environment to encourage the development of content in multiple languages and promote greater cultural diversity in Internet content. Other challenges that will need to be addressed in the future are the move to IPv6, the growth of ENUM[6], the maintenance of stability of the core elements of the underlying protocols, names and numbers throughout the upcoming rapid expansion of the Internet's users.

It is important to note that ICANN has a limited mission focused narrowly on the technical coordination of the Internet functions identified above and directly related technical policy areas. ICANN does not take responsibility for general public policy matters related to the Internet.

The Government Advisory Committee (GAC) of ICANN is comprised of members from national governments and intergovernmental organizations such as the ITU, Organization for Economic Cooperation and Development (OECD), and World Intellectual Property Organization (WIPO). It is open to all United Nations member states. The GAC advises on ICANN activities as they relate to concerns of governments, particularly if the issues that are

[6] 'ENUM' refers to the IETF protocol that takes a complete, international telephone number and resolves it to a series of URLs using a Domain Name System-based architecture. (source: <http://www.enum.org>)

being addressed by ICANN would benefit from insights on laws, international agreements or public policy issues. The GAC has a strong role in ICANN, particularly following the ICANN reforms adopted in November 2002. Strengthening the level and geographic range of participation by government representatives in the GAC will be an important evolution.

Business supports each of the organizations identified in prior sections maintaining its current role and mandate, and the importance of private sector leadership in the technical management and development of the Internet. Business and the ICC in particular do not support the transfer to an intergovernmental body of any of the functions performed by private sector led organizations, or organizations that function as a partnership between the private sector and users.

Public Policy Issues

Public policy matters are the responsibility of governments. However, policy discussions must include the active participation of business and other stakeholders and should be motivated by broad national public objectives, e.g.:

- Promoting economic/infrastructure growth and development
- Attracting capital and encourage investment
- Stimulating innovation and creativity

While a public policy deliberation can result in governments regulating a particular activity, refraining from regulation, promoting a competitive environment or allowing business to self-regulate can increase user choice and reduce costs. Therefore, a public policy might be to forbear from regulating where it is not essential. Business believes forbearance to be a wise strategy in an area of rapid change and technological development to avoid constraining regulations that inhibit the use and deployment of technologies.

Public policy matters related to the information society include:

- privacy
- trade
- security
- education
- spam
- intellectual property protection

There are several other Internet related public policy issues, such as telecommunications infrastructure-related matters, and consumer confidence/empowerment and others which are not elaborated in this chapter for reasons of space, but that are important.

Many of these issues can benefit from *international cooperation and action*. There are international bodies such as WIPO and the World Trade Organization (WTO) with authority and jurisdiction for some of these issues. Other issues require *international coordination of national policy*. A number of bodies exist such as the OECD, Asian Pacific Economic Cooperation (APEC), and Inter-American Telecommunication Commission (CITEL) where these issues can be discussed and coordinated.

Strengthening the coordination and exchange of information amongst the bodies that are discussing these issues and developing important guidelines and best practices will be important. In addition, creating ways to ensure greater participation of all stakeholders, as relevant, from all geographies, will ensure a deepening of involvement in these bodies and enrich the outputs.

Capacity building is a critical element that needs particular attention in the immediate future to ensure that the Internet and the information society is truly people centered. This is related to Internet governance as without this element greater participation by all stakeholders from around the world will not be achievable.

Education

Throughout the WSIS and WGIG processes over the past four years, business advocated the importance of a sound education system as a fundamental building block to the creation of a truly global information society. Education is essential to derive sustainable benefit from the information society. Without the requisite education, including basic tools such as literacy and more targeted tools such as computer literacy, citizens will not be able to use the deployed infrastructure and equipment to access the Internet. Governments should ensure a framework that will develop the requisite skills to engage in an information society, through appropriate public/private partnerships.

Such a framework includes providing basic education, equipping young people with ICT knowledge and skills, recognizing the importance of lifelong learning in ensuring that the workforce skills do not become obsolete, and promoting private sector investment in training and development, which is important to retaining skilled workers and preventing 'brain drain'. Governments should also build a culture that promotes entrepreneurship.

Governments, along with other stakeholders, should also ensure that opportunities exist to obtain the specialized skills necessary to design, build, and operate ICT infrastructures to support the critical national needs for these capabilities.

Speech and Content

The Internet is a vibrant and growing medium for communicating, sharing information and knowledge, and doing business. Excessive regulation of Internet content will inhibit its flow and diminish the benefits of the Internet. Business proposes the following recommendations to governments on Internet speech and content:

- allow self-regulation to demonstrate its efficacy---filtering, labeling and self-regulation should be carefully considered as alternatives to legislation;
- regulation, when necessary, should be kept to a minimum and only deal with specific, observed abuses, taking account of existing technologies;
- laws and regulations should be clear, precise and narrowly tailored;
- legislation should not place additional costs and burdens on business beyond those born by users and government;
- jurisdiction and applicable law mechanisms should not expose business to unexpected risks that they are subject to laws and judgments in other countries;
- provisions dealing with liability should limit the liability of technical service providers in a manner that balances the interests of all stakeholders.

Privacy

The protection of personal data is an essential element of building confidence in the use of information and communication technologies and the Internet.

The general functions of privacy policies are as follows:

- *Identification:* identification includes analyzing technological trends, isolating threats to consumers, and suggesting how consumers might be protected from those harms. This can be done by businesses themselves, central authorities, regulatory agencies within their scope of responsibilities, legislative committees and academic research centres.
- *Education:* Consumers need to be educated about the uses of information, benefits those uses create, risks, and consumer rights and responsibilities. This education is the responsibility of government, business, consumer organizations, non-governmental organizations and even the media.
- *Implementation:* Implementation of privacy protection principles can be done directly, through legislation on either a sectoral or omnibus basis, as appropriate, and ensuring maximum clarity and flexibility, or through self regulation, use of appropriate technology or other 'bottom up' processes including sectoral and/or company codes of conduct, corporate rules and individual customer empowerment.
- *Enforcement:* There are numerous ways to ensure that privacy protections are enforced, for example, through self-regulatory initiatives, legislation, regulation, or other forms of third party oversight. The most important part of enforcement is not the type of organization, but that it promotes trust in the data protection regime.

Business advocates a privacy protection regime that offers sufficient protection to citizens while allowing the economy to flourish and thrive. Governments, business and other groups should agree on a solid core of privacy principles and then enable business to meet these requirements in a flexible manner that allows for cultural and business practice variations that are part of a thriving, competitive economy. The OECD adopted Privacy Guidelines[7] in 1980 that represent an international consensus on such a core set of principles. In November 2004, APEC adopted a Privacy Framework consisting of a set of principles, guidance for domestic implementation and a future work programme for cross border implementation.

With this background, business has recommended the following items for government actions to strengthen privacy frameworks.

- Adopt a set of principles to ensure adequate data protection, such as that included in this document, and in so doing, not exceed the principles set forth in the 1980 OECD Guidelines.
- Adopt a flexible and responsive approach to the protection of personal information, including the acceptance of self-regulatory solutions and technological innovations that empower the user, determining where specific laws are needed to protect consumers from harm and enact those laws in the most targeted fashion possible.
- Educate the public about privacy protection and the use of privacy-enhancing technologies.
- Cooperate internationally to ensure a seamless environment for different privacy regimes. In assessing the level of protection provided to personal information in other jurisdictions, the criterion should be the objective level of protection afforded by the system as actually used in practice within that jurisdiction.
- Avoid developing laws, policies and practices that create obstacles to crossborder flows of personal data.
- Endorse model contracts, codes of conduct, seal programmes, and other self-regulatory mechanisms prepared by the private sector in order to promote the free and secure flow of information within and between companies, and across borders.

Security

Business, and ICC in particular, strongly supports a global culture of security consistent with the OECD Guidelines for the Security of Information Systems and Networks, and United Nations General Assembly Resolution on this issue. ICC and the Business and Industry Advisory Committee to the OECD (BIAC), have developed "*Information Security Assurance for Executives*", a guide to help the global business community in fulfilling its role in the global culture of security. ICC and BIAC have also developed "*Information security issues and resources for*

[7] Organization for Economic Cooperation and Development, *OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data,* 1981 <http://www.oecd.org/document/18/0,2340,en_2649_34255_1815186_1_1_1_1,00.html>

small and entrepreneurial companies, A business companion to the 2002 OECD Guidelines for the security of networks and information systems: Towards a culture of security". This second application of the OECD security guidelines is directed especially at companies that do not have a dedicated ICT function or expertise.

Appropriate laws are necessary to address cybercrime, but laws are not necessary to mandate particular levels of security. Some laws and regulations could undermine security by offering hackers information as to the security measures deployed pursuant to such laws/regulations. Moreover, different sectors and different types of information and communication require different levels of security, making a flexible approach to security the most effective.

ICC proposes the following actions at the national level for governments:

- take steps to secure government networks and infrastructures;
- support private sector leadership in the development and deployment of technology solutions and services, and information-sharing mechanisms;
- remove controls on cryptographic technologies and applications; and
- educate all stakeholders on issues related to security.

Spam

Business is a victim of and a partner in the fight against spam, i.e. "fraudulent and unsolicited harmful e-mail". Spam is detrimental to consumers and business, as both are users of information and communication technologies. Governments should distinguish between fraudulent and untargeted commercial communications and legitimate commercial email, prohibiting the first two, while recognizing that the third plays a significant role in the emergence and growth of electronic commerce.

- *Education and cooperation:* Stakeholders must work together in public/private partnership to educate users in the fight against spam.
- *Technology:* Industry should continue to develop technological solutions to spam, working with governments and consumers to promote awareness of technological approaches.
- *Industry's role in fighting spam:* Anti-spam measures should distinguish between legitimate commercial e-mail and spam. Business can best manage legitimate unsolicited commercial e-mail with industry codes of conduct and other self-regulatory tools, while government enforcement is needed to combat spam.
- *Government Regulation/Enforcement:* Governments should ensure that existing legislation covers spam and is effectively enforced. New legislation or amendments, where needed, should focus on preventing illegitimate, fraudulent, or harmful messages.

The fight against cross-border spam is largely a matter of law enforcement cooperation. The OECD recommendations on cross-border fraud provide guidance on these issues[8]. Other international efforts are being made by the London Action Plan and through bilateral and multilateral memorandums of understanding to increase efforts to facilitate cross-border cooperation on enforcement actions against spammers. Concrete government actions, like active facilitation of international enforcement actions, are essential in fighting spam.

The ICC recently launched a Global Online Spam Resource, a global spam-fighting resource to help Internet users reduce their exposure to unwanted email[9]. The resource is an evolving project that contains practical information on how to opt out of unsolicited commercial email and spam in over 30 countries. It lists data protection authorities, direct marketing associations or other public and private organizations to which email users can report spammers and lodge complaints about privacy infringements.

Legal Frameworks

Intellectual Property Protection

It is essential to recognize that the existing international intellectual property system represents a delicate balance between the needs of the creator and the user, and is designed to promote innovation and creativity to benefit society as a whole. Intellectual property rights (IPRs) contribute to society by helping competition, encouraging the production and dissemination of a wide range of quality goods and services, underpinning economic growth and employment, sustaining innovation and creation (including the stimulation of local content), promoting technological and cultural advances and expression, and enriching the pool of public knowledge and art.

Strong intellectual property protection promotes economic and social development by stimulating innovation and investment. Business urges national governments to put into place the necessary measures to allow the intellectual property protection system to fulfill its potential as a tool for development, growth and progress. Any further discussions about intellectual property in the information society should be conducted within the United Nations specialized agency, the WIPO.

Fraud, Cybercrime and Law Enforcement Cooperation

Business strongly supports efforts to combat fraud on the Internet. Fraud undermines the commercial viability of the Internet for legitimate businesses. Therefore, business is eager to

[8] see <http://www.oecd.org/document/50/0,2340,en_2649_34267_2514994_1_1_1_1,00.html>

[9] see <http://www.iccwbo.org/policy/ebitt/id2399/index.html >

work with governments to identify mechanisms to combat fraud on the Internet. International cooperation is vital.

A key element to combating this problem is effective law enforcement cooperation. Every government should ensure that it has the tools to cooperate with law enforcement agencies from other countries. In this regard, business will cooperate with law enforcement in a manner consistent with business realities. The OECD recently adopted Guidelines on Cross-border Fraud. These Guidelines are a model for such cooperation.

The Council of Europe adopted its Convention on Cybercrime in November 2002. This Convention is open to signature by non-member Governments through a political process. As governments begin to implement the convention, ICC encourages them to consider the following factors:

- preventing conflicting privacy and security obligations;
- limiting service provider liability in a manner that balances the interests of all parties including copyright owners, service providers and users;
- adopting clear procedural safeguards;
- providing reimbursement for costs of compliance;
- identifying the appropriate circumstances for corporate liability;
- maintaining criminalization of copyright infringements;
- ensuring consistency between the misuse of devices provisions of the convention and existing law concerning anti-circumvention.

Technological Neutrality with Respect to User Choice

To promote innovation, increase access and foster diversity of choice, governments should adopt a policy framework that maximizes competition and allows users of technology to choose the technology that best meets their specific needs based on considerations such as performance, quality, reliability, security and life-cycle cost.

Government policies that limit choice, or that promote one form of technology over another, can deprive users, including governments themselves, of the best solutions and the full benefits of available technologies. This can stifle both competition and innovation, and potentially impair economic development, productivity and growth.

Conclusion

The Internet governance structures and mechanisms work well today. Business supports the existing organizations maintaining their current roles and mandate, and the importance of private sector leadership in the technical management and development of the Internet.

Business views the evolution, development and improvement of these structures as keys to unleashing the full potential of the Internet for all. The free flow of information, access, and full integration of ICTs and the Internet as tools for economic growth and social development will be enhanced by national level multistakeholder action, coordination and exchange of information at the national, regional and international levels, and increased participation of all stakeholders from around the world, particularly from developing countries.

SELF-REGULATION AFTER WGIG

Peng Hwa Ang

Back in the early days of the public Internet, *circa* 1994 to 1996, self-regulation was touted as *the* preferred mode of regulating the Internet. As the Internet Law and Policy Forum (ILPF) observed: "The recurrent mantra was that, 'the Internet should not be regulated by the government, but should be self-regulated instead.' Everyone was talking about self-regulation as the obviously preferable alternative to government regulation…"[1]

These were the euphoric days of the Internet, a precursor to the dotcom boom of the late 1990s, when the Internet and those who ran it could do "anything". It was the time of John Perry Barlow declaring cyberspace to be independent of government.[2] Self-regulation—regulation of industry not by government but by industry—was seen as the best and most enlightened mode of regulation.

In practice, however, this meant, as the ILPF noted: "as far as was evident from these discussions, 'self-regulation' equaled lack of government regulation."[3] Indeed, there were, and there still are, those who insist that the Internet should not and cannot be regulated and that therefore governments have no role in regulation. Instead, industries would do the work of government.

Self-regulation occurs when regulatory authority—the power to create and enforce rules—is formally delegated to a private entity. Sometimes, to ensure compliance, the punishment for non-compliance may be meted out by the formal regulatory authority instead of the private body. This in fact is the understanding of self-regulation in the Bertelsmann Foundation's 1999 study on Internet content when it also called for some government regulation.[4] That understanding of self-regulation was criticized by the Center for Democracy and Technology as being "an exercise in informal state action".[5] But that is precisely what self-regulation is: an exercise in delegated state action.

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[1] This chapter draws on the author's book, *Ordering Chaos* (Singapore: Thomson, 2005), pp.59 to 88.

[2] John Perry Barlow, "A Cyberspace Independence Declaration," Electronic Frontier Foundation, 1996, <http://www.eff.org/Publications/John_Perry_Barlow/barlow_0296.declaration>.

[3] Matthew J. McCloskey, quoted in, Ang, *Ordering Chaos,* p. 60.

[4] Jens Waltermann and Marcel Machill, eds., *Protecting Our Children on the Internet: Towards a New Culture of Responsibility* (Gutersloh, Germany: Bertelsmann Foundation Publishers, 2000).

[5] Deidre Mulligan, "An Analysis of the Bertelsmann Foundation Memorandum on Self-Regulation of Internet Content: Concerns from a User Empowerment Perspective" (Washington DC: Center for

The question addressed in this chapter is, what happens to self-regulation now that, with the spotlight shone by WGIG on regulation and governance, governments are likely to play a bigger role?

What is Self-Regulation

To begin at the beginning, there are various modes of regulating all of human activity including the Internet. As Lessig has summarized, four such modes are:

- social norms (by expectation, encouragement, or embarrassment),
- markets (by price and availability),
- architecture (what the technology permits, favours, dissuades, or prohibits),
- laws (by government and private sanctions and force).[6]

In this typology, self-regulation would be a "sub-mode" under the mode of "laws". Larry Irving, the former US Assistant Secretary of Commerce, has noted that the definition of self-regulation varies:

> *At one end of the spectrum, the term is used quite narrowly, to refer only to those instances where the government has formally delegated the power to regulate, as in the delegation of securities industry oversight to the stock exchanges. At the other end of the spectrum, the term is used when the private sector perceives the need to regulate itself for whatever reason—to respond to consumer demand, to carry out its ethical beliefs, to enhance industry reputations, or to level the market playing field—and does so.*[7]

In other words, the historically narrow view of self-regulation as a form of delegated authority has to give way to a broader conception where non-government entities take it upon themselves to regulate with or without the formal backing of government.

Conditions for Self-Regulation

In order to ensure that self-regulation is applied in the right context, it is important to understand the conceptual underpinnings for why self-regulation may be a good mode of regulation for the Internet and when self-regulation works best.

Democracy and Technology, October 1999) <http://www.cdt.org/speech/991021bertelsmannmemo.shtml>.

[6] Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999).

[7] Larry Irving, "Introduction to Privacy and Self-Regulation in the Information Age," US Department of Commerce, National Telecommunications and Information Administration, 1997. <http://www.ntia.doc.gov/reports/privacy/privacy_rpt.htm>.

The most significant reason for using self-regulation as a preferred mode of regulation is that the Internet is a new technology that is still evolving. This means that any regulation that assumes certain behaviour on the part of the users may be outdated by the time the legislation is passed. As a rule of thumb, legislation should trail, not anticipate, new technology. One example of why legislative trail-blazing is a poor idea is in the area of digital signatures: the technology-specific laws passed by the first movers, the US state of Utah and the Southeast Asian nation of Malaysia, have been made obsolete by new technologies.

Self-regulation, because it is done by industry, can adapt to changes in a fast-evolving industry much more quickly. In its report on self-regulation in e-commerce, the European Union cited as potential advantages the following:

- it is dynamic, being able to evolve according to need;
- it is adaptive, being less tightly constrained than is legislation;
- it is faster to implement than legislation;
- it can be made sector-specific based on common underlying principles;
- it can apply to a global community across national jurisdictions;
- it is easier to enforce within the "club";
- industry involvement may make self-regulation more relevant;
- it can respond to market forces;
- the burden of cost falls on those with commercial interest and saves government funds.[8]

While conceptually true, whether the advantages materialize will vary depending on context and circumstance. So for example, the author has been involved in a self-regulatory effort where proposed updates to the rules took many years to be passed.

The Australian Consumers Association, reporting to an Australian Taskforce in Industry Self-Regulation, observed that self-regulation works best when the following elements are present:

- *A small number of large players.* Some studies suggest that self-regulation work well when the group of asserting the self-regulatory power is relatively small and cohesive. Ideally, the industry association would be active and cohesive and embrace much of the industry players so that enforcement is easier.
- *Motivated industry.* That is, industry must be willing to police itself. Voluntary self-regulation can have little effect where there are companies that are not prepared to participate.

[8] European Union, "The Role of Self-Regulation in Electronic Commerce," Parliament/Industry Group Concerned with the Politics of the Information Society, *EURIM Briefing* No. 25, March 1999, <http://www.eurim.org/briefings/BR25FINX.html>.

- *Maturity in the market.* An industry that is stable in its infancy will not be motivated to self-regulate because many of its players will be fighting competitive battles.
- *A government regulatory backstop.* Because self-regulation involves industry policing itself, there may be the recalcitrant offender who refuses to abide by the industry norm. To be most effective therefore, a government regulatory backstop will be helpful to take care of such instances. [9]

The Taskforce also concluded that self-regulation works best when there are clearly defined problems but no potential for high risk of serious or widespread social harm, so that the failure of self-regulation imposes no great damage.[10]

Self-Regulation of the Internet

So where does the Internet stand in terms of the above conceptual framework? Well, the industry is highly competitive in many areas; many aspects of the Internet are still in their infancy; and, perhaps most challenging of all, the industry is disinclined toward regulation. This means that conceptually at least, it would be more difficult to use self-regulation as a mode of regulating the Internet.

This is not to say that self-regulation can never work at all for the Internet. A particularly successful model is the Internet Engineering Task Force (IETF) where industry players meet to set technical standards for new technologies. However, the important distinction is that there are more factors in favour of self-regulation: the players are motivated to self-regulate and there are typically only a few players directly involved in the process. And in place of officially-mandated sanctions from government, the penalty for non-compliance with an IETF standard is the electronic equivalent of the death penalty—the device does not work and the user is denied existence in cyberspace. And so the success of the IETF will, in all probability, lead to its continued existence as a self-regulatory forum.

The Internet Corporation for Assigned Names and Numbers (ICANN) is also a form of self-regulation although there the nature of the organization is such that its link to government is more overt. Like the IETF, those directly involved with domain names are motivated to self-regulate and the number of players although potentially large is fairly well-defined. And like the IETF, non-compliance with ICANN standards and policies is likely to lead to the electronic death-penalty—failure to get onto cyberspace.

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[9] Commonwealth Department of the Treasury, Australia, *Taskforce on Industry Self-Regulation: Report 2000,* (Canberra: Commonwealth of Australia, 2000). <http://www.treasury.gov.au/publications/ConsumerAffairs/IndustrySelf-Regulation/TaskForceOnIndustrySelf-Regulation/DraftReport/ch5.asp>.

[10] Commonwealth Department of the Treasury, *Taskforce on Industry Self-Regulation 2000,* p.50.

Interestingly enough, because of the nature of the sanctions on non-compliance, both the IETF and ICANN do not really need a government regulatory backstop. That is, both entities can, at least conceptually, stand on their own. Of course this assumes that there is proper governance should they be left to run on their own.

The Internet Governance Forum proposed in the WGIG Report would *not* be a self-regulatory body because as proposed the body would not have any enforcement powers. It would merely be a gathering to exchange views and share best practices.

For other aspects of the Internet, self-regulation would be a more difficult mode of regulation to apply. In areas that have been defined as criminal, such as child pornography and consumer fraud, self-regulation has very little place. Much of the action is taken by the national police with international police cooperation.

For acts that have yet to be universally defined as criminal, such as spamming and invasion of online privacy, much will depend on how the harm from those acts are perceived. Keeping in mind the legal maxim that the law does not deal with the trivial, it would not make sense for industry to stand in the way when Internet users are sufficiently bothered by such acts to petition for laws because by that time, the problem would be such a magnitude that the cost and liabilities are likely to be high.

Privacy protection is a tricky area in light of concerns about terrorism attacks. Until the September 11, 2001, terrorist attacks; it looked like the European view that privacy protection should be comprehensively safeguarded through legislation would prevail. The US approach had been and still is to adopt a sectoral approach where privacy protection standards vary by the industry. Conceptually, based on the factors listed above, it is possible to have self-regulation of privacy protection on a sectoral basis. It is easier to get a small well-defined group of players than for all the corporations of a country to be interested in self-regulating. After September 11, 2001, the perceived harm from invasion of privacy is deemed to be much less than a failure in security. So not surprisingly, the weaker privacy protection under self-regulation in the US will likely continue. The European approach of comprehensive legislation for privacy protection will therefore be slower to be adopted.

However, in areas that attract criminal liability, it is possible for industry to play a self-regulatory role. For example, the European ISP Association has a hotline service to tip off law enforcement agencies that illegal content is in their jurisdiction. Such a hotline could supplement criminal laws regarding the Internet. But these areas will be few and will have to be well-defined.

Conclusion

There was a perception by some in the Internet community even before it was completed that the WGIG Report would strengthen the hand of governments to regulate the Internet. To some extent the Report will do that because it highlights significant areas of the Internet that need special attention in governance, which includes regulation. And it is because the areas highlighted by the WGIG are significant that governments are likely to regulate or exercise governance. Certainly in the current climate where the US government is concerned about security, regulations regarding the Internet in the US are more likely to be promulgated by Congressional legislation than industry self-regulation. Any industry body, almost by definition, will take a measured approach in weighing the pros and cons of regulation, even where there are concerns about security.

Having said that, Governments are also aware of the attendant cost—both financial as well as the spillover impact—of legislation. Such self-regulation requires an industry literally prepared to pay the price. Self-regulation is cheaper and faster than legislation. But it is not necessarily cheap or fast; there are some real financial costs. In all probability organizations that work well with self-regulation, such as the IETF and ICANN, can remain self-regulated, but with some form of government oversight.

It should be borne in mind that the goal of the WGIG Report is to highlight issues preventing an enabling environment for the development and diffusion of the Internet and, ultimately, of society. So governments that legislate injudiciously, and their societies, will end up poorer.

Section 3

The Development Dimension

DRIVING THE PUBLIC POLICY DEBATE: INTERNET GOVERNANCE AND DEVELOPMENT[1]

Howard Williams

The recent actions and debates orchestrated by the international community at the Group of Eight meeting in Gleneagles, Scotland, the International Monetary Fund/World Bank annual meeting in Washington in September 2005, and during the United Nations summit in New York in September 2005 all point to a renewed commitment to addressing issues of development and the structural disparities between many countries. The clarion call of 'make poverty history' has at the same time galvanized much public opinion. It is within this renewed debate about development that models of the information society are being promulgated as a route to economic, political and social development.

Much recent evidence points to the information society as a model where information and communications technologies form the kernel of development processes.[2] Beyond establishing novel patterns of economic activity one of the key attributes of the information society is the linking of traditional economic activities with new flows of information and thereby creating new development opportunities. In this regard, societies not only need the traditional infrastructures, such as electricity, water, transport, but also an information infrastructure, the essence of which is embodied within the notion of the Internet.

The synergy between the physical and information infrastructures provides critical multipliers to development processes. Given these perspectives the questions surrounding Internet governance, in particular question over the *equitable distribution of resources*, open *access* to the Internet and is resources for all, and the *safe and secure* functioning of the Internet[3], are not arcane issues to be decided by technological elites but fundamental issues of public policy concern. It is, in effect, the development agenda that drives many of the issues of Internet

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[1] The author wishes to acknowledge the considerable support of members of the WGIG in shaping the structure of this paper. A version of this paper was first published by IDATE in *Communications and Strategies--The Economic Journal on Telecom, IT and Media* 55 (2005).

[2] See for example, Organization for Economic Cooperation and Development, *ICTs and Economic Growth: The OECD experience and Beyond* (Paris: OECD, March 2004); Qiang, C.Z-W., Pitt, A., Ayers, S., "Contribution of Information and Communications Technologies to Growth," *World Bank Working Paper No 24* (Washington DC: World Bank, 2004); and, Grace, G., Kenny, C., Qiang, C. Z-W., Liu, J., Reynolds, T., "Information and Communications Technologies and Broad-Based Development," *World Bank Working Paper No 12* (Washington DC: World Bank, 2003).

[3] Adapted from the WSIS Declaration of principles, paragraphs 48 and 49.

governance out from the existing institutional arrangements and into the main stream of international public policy debate.

This paper explores some of the issues surrounding Internet governance[4] from a developmental perspective and, in particular the issues that emerged during the Working Group on Internet governance (WGIG) process. The aim of the paper is to contribute to the growing debate and signal avenues for exploration rather than provide definitive solutions.

Development Issues and Internet Governance

Increasingly it is being recognized that access to ICT resources, including the Internet, is becoming paramount to enable all to be empowered to self-determine their lives in economic, political, social, cultural and environmental sectors of society. Hence, for many, particularly the debate within the World Summit on Information Society (WSIS), access and use of ICTs, including the Internet, is becoming fundamental to the delivery of the Millennium Development Goals (MDGs). From the early work of Maitland Commission[5], *The Missing Link*, there has been a concern that differentiated access to ICT resources is reinforcing a 'digital divide'; a structural divide between developed and developing countries, and within a country between urban and rural communities, rich and poor, young and old, able and disabled and women and men. Whilst there is some criticism of this perspective[6], and/or of the mechanism to address this divide, especially in the policy arena[7], addressing the digital divide has long been a policy priority for the international community as well as national Governments.

Within the context of WSIS the link between the evolution and use of the Internet, Internet governance and economic and social development is articulated in the Declaration of

[4] There is a growing literature on Internet governance. Obvious starting points include the *Report of the Working Group on Internet governance* (Geneva: United Nations, 2005) <http://www.wgig.org> and the 2003 WSIS Declaration of Principles and Action Plan <http://www.itu.int/wsis>. Other texts include, Peng Hwa Ang, Ordering Chaos, Regulating the Internet (Singapore: Thomsom, 2005); Organization for Economic Cooperation and Development, "Input into Working group on Internet governance," (Paris, 2005) www.wgig.org; Don MacLean, "Internet governance: A Progress Report from WGIG", presentation at *UNESCO Conference on "Paving the Road to Tunis – WSIS II"* (Winnipeg, May 14, 2005); and, Don MacLean, ed., *Internet governance: A Grand Collaboration*, (New York: United Nations ICT Task Force, 2004).

[5] The Maitland Commission, *The Missing Link*: *Report of Independent Commission on World Telecommunications Development* (Geneva: ITU, 1985).

[6] Kenny, C., "Should We Try to Bridge the Global Digital Divide?" *Info*, *(Vol. 4:3 2002)*

[7] See MacLean, D., Souter, D., Deane, J. and Lilley, S.*, Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making*, London, Commonwealth Telecommunications Organization (2002). Available at http://www.cto.int/publications/louder_voices_final_report.pdf.

Principles (DoP). The implication of this commitment in the DoP is to enable "individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life". Hence not only are there myriad issues within this development framework but also many of these issues are cross-cutting in nature and therefore manifest themselves in other policy debates. Issues of concern include:

- facilitate participation of all in the 'information age'
- promote national economic, political and social cohesion,
- support information and communication rights for all,
- reduce urban-rural disparity,
- contribute to poverty alleviation,
- take up challenges posed by global technological and economic trends,
- prevent the marginalization or people and communities from the global networked economy,
- deliver on economic and social developmental objectives.

However, one of the overarching concerns is with *access*. At one level access refers to the terms and conditions under which countries, firms and individuals gain access to the Internet. These terms and conditions not only include the immediate conditions such as the availability, quality and cost of access and the capability of users to exploit the Internet but also a wide range of institutional issues. Such institutional issues include the processes by which critical Internet resources managed, the security and safety of the Internet and it users as well as Internet relates aspects of other debates, for example trade, intellectual property rights and consumers rights.

Institutional Arrangements for Equitable and Stable Resource Management

For many developing countries the twin objectives of the equitable distribution of Internet resources and a stable and secure functioning of the Internet are not perceived as current realities; hence the clarion call of some in the Internet community who argue "it ain't broke don't fix it" is seen by many in the developing countries as the articulation of a particular view of Internet governance which perpetuates the existing elites.

In terms of the equitable distribution of Internet resources the current mechanisms around the governance of the domain name system, IP addresses and the operation of the root servers have become the focal point of much debate, especially for developing countries. For some the allocation of Internet resources by market-based mechanisms is seen to be highly effective; for others the opposite is the case. The existing system, however, is predicated on the assumption that at any one time all players have an equal capacity and equal resources to engage in and seek critical Internet resources. Hence the allocation system is one of adjudicating between competing proposals, all of which, in principle, are founded on broader similar capabilities and

information symmetries. Such conditions are rarely meet thus raising questions of how to balance market-based mechanism with those that prioritize public interest issues.

Despite the complexity of the institutional map of the Internet the focal point of this debate on the equitable distribution of resources has been focused on the Internet Corporation for Assigned Names and Numbers (ICANN)[8]. Technically, ICANN is a company established under Californian law as a non-profit organization and operates under a contract from the US Department of Commerce. The by-laws of ICANN explicitly exclude the rights of Governments to have direct involvement in its operations and this restriction for example precludes any Government representative becoming a board member of ICANN. For those who argue that ICANN has effectively assumed responsibility for a set on international public policy issues the current institutional setting of the organization in increasingly untenable. The argument is that as the number of users grows so the separation of an Internet user community from a broader political polity and the exclusion of Governments from issues on Internet governance so questions about the legitimacy of ICANN and its accountability increase[9].

However, the *modus operandi* of ICANN seek to aspire, albeit informally, to the WSIS principles of being multilateral, transparent and democratic and ensuring the involvement of Governments, the private sector, civil society. Thus at the pragmatic level ICANN can, in many ways, be seen as a remarkable organization that has consistently transformed itself to meet the challenges of a rapidly expanding Internet. It has created an environment where those who can contribute to substantive debate are able to do so without the cost often associated with attending and participating in international meetings. However, for some it remains a California company undertaking tasks on behalf of the Government of the USA.

There is growing momentum around changing the structure, constitution, by-laws and organizational nature of ICANN. Given that the contract between the US Department of Commerce and ICANN expires in 2006 the status quo is unlikely to be maintained. Whilst not the basis of full international consensus there is increasing support for three broad areas of reform, namely (i) increasing the role for Governments through changes in the Government Advisory Committee or something comparable, (ii) the establishment of an open policy forum

[8] There is a large literature on ICANN and related themes. See ,for example, Hans Klein and Milton Muellee, *What to Do about ICANN: a Proposal for Structural Reform*, the Internet governance Project, 2005, (www.Internetgovernance.org); Wolfgang Kleinwächter, "ICANN between Technical Mandate and Political Challenges," *Telecommunications Policy* 24 (August, 2000), pp. 553-563; and Milton Mueller and Lee McKnight, "The post-.COM Internet: Toward Regular and Objective Procedures for Internet governance," *Telecommunications Policy* 28 (August-September,2004), pp. 487-502.

[9] Outside the scope of this paper are key questions about the nature of the behaviour of ICANN in certain circumstances, such as (i) to what extent does ICANN act as an agent of the US Government, (ii) what happens to ICANN if it were to become insolvent. In the latter case preliminary opinion suggests that there is considerable ambiguity about the formal ownership of domain names.

which would seek to identify and define key public policy issues and (iii) greater co-ordination between existing international agencies coupled with an understanding that there is no need for a new international and inter-governmental agency.

For developing countries there are a number of significant issues in ensuring the fair and equitable distribution of critical Internet resources. Whilst at one level the exact institutional arrangements surrounding ICANN and the nature of the policy forum and the review committee are of some concern the actual process by which resources are allocated is of material importance. In some ways these issues are well illustrated by the migration to IPv6 represents a major issue for developing countries not only in terms of the assignment and administration of the address space but also in terms of the transitional arrangements. The arrival of IPv6 presents a number of potential challenges to operators and networked enterprises, especially to those in developing countries. The key challenges not only involved the access and use of critical Internet resources but access to new investment funds and the ability to establish new business models

Internet Access and International Transit Arrangements

Access to the Internet is both a function of national telecommunication policy, especially as it pertains to consumers. However, access to international connectivity and transit services for end-to-end connectivity throughout the entire Internet community is a major issue for developing countries. The significance of the issue has been recognized in WSIS; for example, the Plan of Action notes that, "Internet transit and interconnection costs should be oriented towards objective, transparent and non-discriminatory parameters."

All Internet service providers (ISPs) have to buy transit services in order to provide end-to-end connectivity for their users, in developing countries these transit services involve the purchase of significant international capacity and the associated commercial arrangements are redefining the traditional relationships between carriers that have and underpin the flow of international voice traffic. Although the international voice settlement regime based on cost and revenue sharing agreements based on traffic flows is being reformed the arrangements still result in a net flow of revenues into developing countries. The International Telecommunication Union (ITU) has estimated that between 1992 and 1998 the North-South flow of money through the international settlement regime was in the order of US $40bn.

With international Internet circuit arrangements, the cost sharing arrangements are considerably different, based on a so-called "full-circuit" model. The rationale is that the any ISP needs to purchase 'transit' from its suppliers in order to provide any-to-any connectivity across the Internet. Hence ISPs in developing countries wishing to interconnect to the global Internet must buy transit services and thus typically pay for the full costs of international leased

line circuits to backbone providers; as a consequence the ISP bears the full costs of both inbound and outbound traffic onto its network[10].

The situation is further aggravated by poor telecommunications infrastructure in some developing countries (e.g., landlocked countries, isolated island states and others without direct access to undersea cables), lack of economies of scale (e.g., in the least developed countries (LDCs) and poor interregional links (e.g., Africa). The result is that international bandwidth is also used to exchange traffic that could, with better infrastructure available, have stayed on national or regional networks. For example, Internet traffic between two African countries often transits via Europe or the United States. The result is that international Internet connectivity can be a significant cost for service providers in developing economies and this is inhibiting the growth of Internet usage in much of the developing world, particularly the LDCs. The concern is that, if the cost of Internet access is higher in developing countries, then the digital divide will grow wider.

The underlying drivers for this realignment in the costs of access for international transit and connectivity services are manifold. The international arrangements that currently apply to global Internet interconnections have emerged not only from the historic development of the Internet (US and European centric) and its technical characteristics (such as the dynamic paths and multi-homing) but also from business models and the dynamic economies of major Internet operators. Thus, part of issue is reshaping the business models of the ISPs.

However, several key drivers can be identified of which perhaps the most important are the volume and nature of Internet users with a country, the nature of local content, the relatively transactional cost of using Internet resources in other countries to support a wide range of Internet applications and national and regional market for exchanging Internet traffic. Empirical evidence shows that policy interventions that stimulate increase the number of Internet users (for example by encouraging the use of relatively low cost WiFi access networks), local content and local exchange of Internet traffic so the cost of international transit and connectivity fall. This solution has been recognized in WSIS; the Plan of Action state that, "The creation and development of regional ICT backbones and Internet exchange points, to reduce interconnection costs and broaden network access."

[10] At ITU, Study Group 3 of the Telecommunication Standardization Sector (ITU-T) has carried out extensive investigation and discussions on international Internet connectivity since 1998. In 2000, ITU-T Recommendation D.50 was adopted, representing a delicate balance between diverse interests. It calls for arrangements to be negotiated and agreed upon on a commercial basis, taking into account the possible need for compensation for elements such as, *inter alia*, traffic flow, number of routes, geographical coverage and the cost of international transmission. More recently work in the WTO has contributed to the debate and sought to explore the extent to which Internet backbone providers are subject to the GATS commitments.

In terms of consumer access to the Internet the key issues are not just the availability, quality and cost of the telecommunications infrastructure but also two other related issues; firstly, the availability and affordability of relevant consumer technologies and capacity to use such technologies and, secondly, the nature of demand and supply of information. In many ways national ICT policy frameworks seeks to address the first issue of increase service availability but fail to address in a coherent manner issues related to the adoption and use of Internet technologies and services.

In developing countries, however, access to the basic telecommunications infrastructure remains one of the major constraints on access to the Internet. Current best international best practice demonstrates that a strengthened role for the private sector in increasing access through a blend of market liberalization and pubic policy interventions, for example through the use of 'smart subsides', addresses the need for increasing access to basic telecommunication services[11]. The conceptual differentiation between a 'market' gap and an 'access' has enabled many consumers to rapidly enjoy the benefits of telephony, often through the rapid diffusion of mobile networks. However, it terms of translating this increased access in telephony into increased access to the Internet and, in particular to access to broadband services is not straight-forward and linear relationship. Thus for many developing countries there remains a significant public policy issue in terms of the availability, quality and cost of broadband services.

However, whilst there are many new 'last mile' technologies, such as those based on wireless, there is an emerging bottleneck with developing and between developing countries in terms of the capacity and quality of backbone networks. As with consumer access to Internet services, it is widely recognized that in many cases the market provides an effective solution to the development of backbone infrastructure and that the removal of regulatory restrictions can lead to significant new investments.

Furthermore, policy measures can encourage the development of Alternative Telecommunications Networks (ATNs). Many countries have extensive backbone capacity (including dark fiber) that exists as a result of investments by firms in other sectors, for example electricity and railways. Such capacity can form the basis of new backbone infrastructure and increase Internet connectivity. Exploiting this capability includes not only creating the technical capacity to use these resources as public telecommunications networks but also the necessary national and international policy barriers to interconnection and use.

[11] Considerable evidence from Latin America has documented how both market liberalization and 'smart subsidies' can successfully leverage additional investment and reduce the broad access gap.

The lack of adequate national and regional backbone may reflect market failure and require public policy intervention both in terms of funding and policy reform. In such cases there are clear international public policy issues and a need for donor support. Recent initiatives, for example is East Africa, have demonstrated that market failures in the provision of backbone can be effectively addressed through donor based funding. As with transit and international connectivity the development of local and regional Internet exchange points can leverage additional value of new backbone investments.

Finally, the combination of increase availability of broadband services for consumers (and at wholesale level for new entrants) and the nature of these Internet related transit and international connectivity agreements exacerbate the impact of Voice over IP (VoIP) on voice operators in national markets. Thus not only do these transit arrangements impact on the development of the Internet in developing countries but they also spillover into the voice market. In effect the ISPs in buying transit are paying the full cost of international connectivity for VoIP calls and shifting the basis of payment from per minute charges to bandwidth charges. Where tariffs remains significantly unbalanced, or the cost of broadband services is competitively priced the incentives to use VoIP can be considerable.

At one level the ability to separate voice services from network is illustrated by Skype downloads, a crude measure of VoIP uptake in the retail market. Current figures suggest that, worldwide, there are broadly the same number of Skype downloads as there are Broadband connections; the Organization for Economic Cooperation and Development (OCED) estimated 118 broadband lines in January 2005 compared with 158 million downloads of Skype (September 2005); moreover Skype has been estimated to carry approximately 6% of international voice minutes – characteristics of its performance that perhaps underline the value seen by e-bay in its recent acquisition of Skype. Further evidence of the challenge to voice revenues comes from the comparison of basic DSL prices with the distribution of monthly expenditure on voice telephony. Recent evidence from SE Asia suggests that whilst less than 20% of consumers would find it economic to switch to DSL and VoIP services these consumers often represent in excess of 30% of revenues in the voice market.

Safe and Reliable Internet and Network Security

Here the issues are essentially twofold. One set of issues can be seen as about a broad range of activities which amount to a 'denial of service' attack. On the other hand the issues are about the way in which the Internet can facilitate organized activity designed to harm or cause damage to users, including crime and the distribution of morally offensive material, such as pornography. Thus, the range of issues here includes the following:

- Spam

- Cybersecurity, cybercrime
- Security of network and information systems
- Critical infrastructure protection

From a developing country perspective these issue have a disproportionate effect and typically the operational experience is that of a 'denial of service' attack. The combination of these attacks and the limited capacity of developing countries to respond is debilitating for users in developing countries – a phenomena that undermines consumer demand for the Internet and demand stimulation measures by Government. Hence the failure to address this broad range of issues can create such conditions of uncertainty that the transition to an information society is severely compromised.

One of the key issue facing developing countries in dealing with these issues is the genuinely international scope of the activity and the absence of any global governance arrangements in place to deal with spam and other emerging threats to the stable and secure functioning of the Internet. Though there are a range of initiatives being promulgated at the International level, for example by the OECD and the European Union, arriving at common definitions of, for example, spam and pornography are highly problematic and inhibiting the establishment of common international frameworks. Further these difficulties of reaching an agreement on definitions is further compounded when these definitions form the basis for policy interventions in the operation and use of the Internet. Thus for example, whilst agreement could be reached on the basis of concerns about the original content producers little consensus could exist about the interpretation of this agreements with respect to ISPs and networks operators; such a situation exist with regard to production of pornography and its distribution over the Internet.

In terms of information and network security, the first line of defense in many countries is the Computer Emergency Response Team (CERT) when there is a breach, potential or otherwise, in information and network security. Carts are typically made up of technical experts who are in communication with other CERTs to share knowledge and best practices and to warn of impending attacks. In some countries, CERTs are part of a Government department; in other countries they may be in private sector organizations such as companies, or universities. Many CERTs belong to the Forum of Incident Response and Security Teams (FIRST) as membership enables a more effective response. However, for many developing countries the ability to maintain a credible technical and regulatory capacity with regard to CERT is highly problematic. Inevitably, 'denial of services' attacks involve highly innovative technologies that exploit weaknesses in the existing networks. As a result the technical resources needed to address these issues need to have equivalent and highly innovative technical capability and the ability to implement clear and coherent national policies.

There is a growing consensus that the experience of countries that have been pioneers in responding to these threats shows that a "multi-stakeholder, toolkit" approach is needed to deal with these kinds of problems – i.e. that to be effective, laws and regulations prohibiting harmful activities must be accompanied by public education, industry codes of conduct, and cooperative international enforcement arrangements, for example to help build technical and regulatory capacity.

For some commentators, for example the WSIS Gender caucus, argue that the focus on a safe and secure Internet and issues of network security place too much focus on the technology and insufficient attention to the social and human rights issues involved. Huyer comments, that it is important to ensure that " the Information Society enables women's empowerment and their full participation on the basis of full equality in all spheres of society and in all aspects of decision making processes…for women to be truly included in the information society, there must be support and promotion of technology capacity building for women so that they can participate in the management, design, manipulation and building of the information society. It is important that, rather than *recipients* of information women are *active participants* in and *designers* of an Information Society that meets the needs of and empowers both women and men"[12].

Huyer also argues that the gender issues involved in a safe a secure Internet include:

- Exploitation, trafficking, and abuse of women and children, where for example the Internet and its 'virtual world' becomes a vehicle for exploitation in a social world, such as with sex tourism.
- Threats to privacy, for example through the surveillance and unlawful distribution of images whether this information is created informally or through formal Government institutions.

Multilingualism and Local Content

Multilingualism and access to content raises a broad range of issues ranging from the technical structure of the Domain Name System (DNS) through to the accessible, in local languages, of local content.

In terms of multilingualism within the DNS the Governance issues associated with multilingualism are closely linked with DNS governance issues. However, at the heart of the DNS is a set of legacy decisions that have enshrined ASCII and to a large extent the English language. The extent to which these technical standards are embedded in the core operational procedures, in effect, determines the structural nature of the issues surrounding

[12] Sophia Huyer, Women in Global Science and Technology and Gender Advisory Board, United Nations Commission on Science and Technology for Development, Comments on the WGIG 10th February 2005 www.wgig.org.

multilingualism. From developing countries, whilst these issues are of profound important, the key decision and technical developments lie within the competence of other countries, institutions and organizations, for example, IETF in its role in the development and promulgation of technical standards and ICANN in its role with regard to the confirmation of language code tables and the policies designed to foster multilingual Top Level Domains (TLDs). Other organizations involved, for example, include the Multilingual Internet Names Consortium.[13]

For some commentators the issues of multilingualism open up the possibility of treating part of the DNS as a global public good and that this perspective, in turn, would suggest there are global public services. These views would lead to global policy initiative such as an obligation on gTLDs to support all scripts even where these are minority scripts that are of limited commercial significance. The decision in June 2005 by ICANN to approve .CAT can be seen at an important step in recognizing the importance of language commutates within the Internet. The concern is that without addressing issues of multilingualism the existing level of language diversity may be undermined.

For many the issues of multilingualism are more about access to content in local languages within and between countries. Under such conditions the issue is one of creating and sustaining a local content industry that supports multilingualism and cultural diversity and here the role of Government policy in encouraging indigenous activity is paramount. This role of public policy is particularly so when the applications are those central to the development of an information society such as e-health, e-education, e-government. Public policy is important in determining the availability of information within a country; for example free and open access to policy documents in local languages within a country as well as similar access to publicly funded research.

[13] MINC is the Multilingual Internet Names Consortium, whose work dates back to 1994 and which was officially formed in June 2000 to promote the Multilingualization of the Internet, the internationalization of Internet names including but not limited to multilingual Internet domain names and keywords. Over the years, MINC has established a wide range of links with international organizations, stakeholder organizations and other processes including The United Nations, the World Summit on Information Society (WSIS), ICANN, ITU, WIPO, IETF, as well as language groups such as JDNA (Japanese), CDNA (Chinese), INFITT (Tamil), EuroLINC (European Languages), CYINC (Cyrillic), GLWG (Georgian), RLWG (Russian) as well as The Arabic language and scripts WG (Arabic) and ULWG (Urdu). Our language groups develop their own language and variant tables, and coordinate with each other on these tables. They also discuss other IDN related issues like the development of Dispute Resolution Policies and the use of IDN in software applications. http://www.minc.org

Conclusion

The Internet opens up new opportunities for linking ICT and development activities and in reaching the United Nations Millennium Development Goals. However, the integration of the Internet into the development process highlights the fact that issues of Internet governance cannot be treated in isolation within a country or in terms of a single policy dimension. Thus, at a very practical level the integration of the Internet into the development process undermines those development strategies where ICT sector reform concentrates on the telecommunications sector alone and, in particular, an agenda heavily biased towards supply side initiatives. Whilst such supply side policies are an important starting point for sector reform they can no longer be seen as meeting both the necessary and sufficient conditions for realizing the opportunities presented by the Internet.

The range of issues that allow the Internet to shape development processes requires a new level of co-ordination and integration of policy development. In particular the intertwining of increased access, equitable distribution of Internet resources, safe and secure operation of the Internet and multilingualism brings to the fore a wide range of issues which need to be addressed simultaneously.

In terms of Internet governance these policy challenges are highlighting the limitations of existing institutional activity. The WSIS is providing an opportunity to address many of these issues and ensure that the institutional setting for securing the development opportunities flowing from the Internet can be realized. Whilst the outcome of WSIS will not result in immediate reform there is the opportunity to define new directions for processes of Internet governance.

ENCOURAGING INTERNET PUBLIC POLICY DEVELOPMENT AND CAPACITY BUILDING IN DEVELOPING COUNTRIES: LESSONS FROM THE FLOSS COMMUNITY

Chengetai Masango

The Background Report of the Working Group on Internet Governance (WGIG) stated "people from the developing world face a myriad of barriers when it comes to participating in the global Internet policy debate".[1] This chapter discusses some of the barriers that participants in developing countries face, and looks at the Free/Libre Open Source Software (FLOSS) movement to see if any of their experiences can be used in the effort to build up the capacity of people in developing countries to contribute and participate in the global Internet policy debate.

Over the past couple of years, various studies carried out under the Open Regional Dialogue on Internet Governance[2] and the Louder Voices project[3] have concluded that there is a need for sustainable capacity building in developing countries in order to strengthen their participation in the international ICT decision-making process. As noted in the WGIG Background Report, some of the issues include problems of access to information, prohibitive travel expenses associated with the attendance of meetings, and a general lack of collaboration among stakeholders within their regions.

One way to tackle such problems is to look at successful examples of distributed collaboration and see if lessons learnt there cannot be transplanted into the global policy space. One such place is the FLOSS environment, the products of which have been the object of much discussion in the information and communication technologies for development (ICT4D) arena. However, little attention has been paid within policy-making arenas to the ways the FLOSS environment organizes and creates these products.

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[1] Background Report of the Working Group on Internet Governance (Geneva: United Nations, 2005), <http://www.itu.int/wsis/wgig/docs/wgig-background-report.pdf>

[2] The Open Regional Dialogue on Internet Governance initiated in October 2004 by United Nations Development Program's Asia-Pacific Development Information Program (UNDP-APDIP).

[3] Panos, G8 Dot Force and DFID initiated survey and recommendation for actions to be taken by developing countries and international agencies to promote more effective, participation in decision-making around Information Communication Technologies <http://www.panos.org.uk/images/books/Louder%20Voices.pdf>

FLOSS is a broad term used to describe software developed and released under an "open source" license that allows for the inspection, modification and redistribution of the software's source without charge. The 'free' in FLOSS is used to encompass the Free Software movement, which also release software along the same terms as the Open Source Software movement, but with one important distinction: the resulting works *must* be made available under the same non-restrictive license terms. The use of the Spanish word 'Libre' was included to emphasize "freedom from entanglements," in contrast with the English word *free*, which unintentionally stresses the "pay no money" meaning of the word.

Community dynamics

FLOSS is usually developed by programmers who work in online communities for no remuneration. However, there is a growing trend toward big company proprietary software sponsorship of FLOSS projects 'for the common good', e.g. by such firms as IBM and Novell. FLOSS members interact primarily or exclusively via computer-mediated-communications with infrequent face to face meetings. Project members coordinate their activities primarily through private e-mail, mailing lists, bulletin boards and Internet relay chat rooms.

FLOSS communities are distributed, loosely coupled communities kept together by strong common values[4]. They generally have an open membership policy, meaning that anybody demonstrating initiative can join and participate in the community to the level that suits them. The more a member participates and contributes, the more they move into the center of the community. FLOSS groups do not have a formalized organizational structure; they are frequently described using a "bazaar vs. the cathedral" metaphor[5]. FLOSS developers autonomously decide schedule and contribution modes for software development in a manner similar to merchants in a bazaar, thereby dismissing the need for traditional forms of central coordination---the master architect of a cathedral. The bazaar metaphor does have its limits though, as it eliminates aspects of the FLOSS development process, such as the role of the project leader and the existence of de-facto hierarchies[6].

FLOSS developers are mostly volunteers, with varying interests and levels of expertise. Each member finds their own level of social and technological interaction within the community, which determines the roles and tasks they take on. Any individual who has an idea or feature request can either articulate it through the public forums such as mailing lists, chat rooms or

[4] J. Ljungberg, Open Source Movements as a Model for Organizing. Eighth European Conference on Information Systems, Vienna, 2000.

[5] E. S. Raymond, "A Brief History of Hackerdom", in C. DiBona, S. Ockman and M. Stone's ed., FLOSS's: Voices from the FLOSS Revolution. Sebastopol, CA, O'Reilly & Associates, 1999.

[6] N. Bezroukov, "A Second Look at the Cathedral and the Bazaar," First Monday 4 (12): 1999.

online project forms. Once a proposal for improvement of enhancement has been provided, it is up for discussion by the larger group. A subset of the members then decides whether or not to include it in the product.

The WGIG Background Report found that FLOSS "does not present an Internet governance issue in terms of the need for an analysis of 'governance mechanisms' and an assessment of global coordination." But it also suggested that several of FLOSS' underlying principles could be important in the development context.

Open standards

The first one of these principles is the adherence to open standards. According to the ePolicy Group's 'The Roadmap for Open ICT Ecosystems[7]', an open standard is one that consists of six elements. These are: it "cannot be controlled by any single person or entity with any vested interests"; the further evolution and management of the standard is carried out as a "transparent process"; the standards are "platform-independent, vendor-neutral and usable for multiple implementations"; as well as being "openly published" and "available royalty free or at minimal cost." The final criterion is that the standard has to be "approved through due process by rough consensus among participants."

Open standards in the development context signify a freedom of choice among technologies. This enables users to avoid the perils of vender 'lock in,' where a customer is dependent on a vendor for products and services and cannot switch vendors without substantial switching costs, such as converting data files, rewriting APIs, etc. Lock in also creates significant barriers to entry for local companies or small startups whose potential clientele are beholden to particular systems. Open standards can go a long way in leveling the playing field thereby encouraging innovation at a local level.

At the user level, open standards can smooth the path to knowledge sharing and collaboration as people from different regions and institutions can transparently access each other's information given the ability to open each other's documents even though they may have used dissimilar applications in the creation of the information. Open standards also mitigate the risk of data loss due to makers of propriety formats going out of business.

[7] "The Roadmap for Open ICT Ecosystems," <http://cyber.law.harvard.edu/epolicy/roadmap.pdf>

Knowledge sharing and online collaboration

As is also noted in the WGIG Report, another barrier to the full participation of people from developing countries in the global ICT policy debate is a lack of knowledge of the issues. A way that this can be addressed is through online collaboration and knowledge sharing.

Though far from approaching adequacy, great strides have been made in providing people in developing countries with access to ICTs through programs such as rural telecentres, information kiosks etc. What has lagged behind is the creation of information or knowledge that is understandable to the constituents. Most of these projects embrace a top down approach to knowledge sharing instead of a participatory approach. The information to be accessed is mostly compiled and created by people who, though knowledgeable in the given area, are far removed from the local situations in question. It therefore often ends up in a form unpalatable for local consumption. A participatory approach to knowledge creation and dissemination offers a more successful way. For data to become useful information it has to be relevant to the context of the user, for this to occur the user must become an active participant in the creation of that knowledge, giving them a chance to add value to the information and shifting the locus of control more towards the consumers of the information.

Creating local content has been a challenge, but given the space and with the right initiative communities in developing countries can become active participants in the creation of their own knowledge. An example that can be followed from the FLOSS world is wikipedia[8], which is a web based free content encyclopedia written collaboratively by online volunteers, anybody can log on write or correct an article in the encyclopedia. Information here is written and distributed following a collaborative, consensus based approach. Since its formation in 2001, it has grown exponentially[9] to become one of the most popular reference sites on the web. At the moment there are one hundred language editions available and anybody with access to the Internet can start their own language edition if one does not already exist.

Access to ICT policy professionals and staff is another difficulty that participants face in developing countries. These individuals are often physically located far away in capitals, and cannot readily travel and offer their services to the communities or institutions that need help. One way to overcoming this barrier is to enlist virtual volunteers who can provide help. An example of such a program is the United Nations Online Volunteers[10].

[8] Wikipedia <htttp://wikipedia.org/>

[9] Wikipedia growth statistics <http://en.wikipedia.org/wiki/Image:Wikipedia_growth.png>

[10] United Nations Online Volunteering <http://www.onlinevolunteering.org/>

Stakeholders in the international policy arena from developing countries find the cost of attending international meetings prohibitive. One way of overcoming this barrier, used extensible in the FLOSS world, is by expanding face-to-face meetings to incorporate on line collaboration tools. For instance, the WGIG successfully used live web casts and real time transcription services in some of its meetings to enable remote participants to follow what was going on. These techniques could be expanded to allow delegates to such meetings to use two-way synchronous meetings tools such as instant messaging, video conferencing, or Skype-like Voice over IP tools. In this manner delegates could be connected to their constituents back home in real time, with constituents transmitting their views or suggestions in real time to their representatives who could express them in the meeting instead of waiting for the delegate to come back and physically consult with his constituents. In addition to making such international meetings more inclusive, these capabilities could improve the efficiency of policy-making institutions by reducing the turn around time for resolutions of proposals to be reached. FLOSS groups have leveraged these techniques for years, when they hold face-to-face meetings, there is always a virtual component to it to allow their dispersed members to participate and remain in the loop.

Localization

"Access to information is the base of all development" but it is difficult to gain access to that information through a computer if you do not understand the language the instructions and the labels the buttons and menus are written in. In order to encourage the uptake of ICT in developing countries, some localization has to take place.

According to the Localization Industry Standards Association, localization is a process that involves: "taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold."[11] With computer software this means customizing of the Graphical User Interfaces, front ends of programs and system messages into interfaces that are meaningful and comprehensible to local users.

Localization significantly reduces the amount of training necessary to empower end-users to use a computer system, as they do not have to know a foreign language. Some of the other benefits include:

- Opening the way for the development of computer systems for a country's national, provincial and district level administration that will allow civil servants to work entirely in the local language and manage databases of local language names and data;
- Allowing citizens to communicate through e-mail in their own language;

[11] Localization Industry Standards Association <http://www.lisa.org/>

- Empowering local software development companies to work for the administration, the public sector and private companies;
- Reducing the reliance on imports. Local programmers gain expertise and experience;
- Promoting local control over software appearance and functionality;
- Allowing the creation for new local technical standards and educational opportunities;
- Establishing a local software industry;
- Bringing the locus of control to the region instead of being outside its boarders, which in turn brings about a feeling of ownership and control, which encourages participation; and
- Overcoming the problem that it is difficult for foreigners to do localization, since they do not normally have an intuitive feel for the local language, which can be compromised.

Examples of localization projects can be seen in the WGIG Background Report (the Khmer example) and the FLOSS Localization Primer[12], which has example of localization projects in the Asia pacific region.

Conclusion

As can be seen from the above, there are several techniques that we can borrow from the FLOSS world, which may enhance the capacity for people in the developing countries to participate in the global ICT policy space. The lessons learnt from the FLOSS movement could not only increase collaboration but also make the participants feel that they have more of a stake in the process. Of course, we still must contend with basic issues of infrastructure and access, which are far from adequate in many countries. Additionally, these techniques require that participants be proactive in acquiring the needed skills to use these tools, imitating information-seeking activities and contributing valuable knowledge. However, with this effort and an awareness of the possibilities, much can be accomplished.

[12] The Asia Pacific Development Information Program, Localization Primer <http://www.iosn.net/l10n/foss-localization-primer/>

THE CASE FOR NATIONAL INTERNET GOVERNANCE MECHANISMS

Waudo Siganga

In its report, the Working Group on Internet Governance (WGIG) suggested that Internet governance mechanisms need to build on policy coordination at the national level and can only be effective if there is coherence with regional, sub-regional and national-level policies. Towards this end, the WGIG recommended that coordination be established among all stakeholders at the national level and a multi-stakeholder national Internet governance steering committee or similar body be set up. Such national committees or other institutions could in essence be microcosms of international mechanisms like the proposed Forum, displaying a multi-stakeholder composition in the World Summit on the Information Society (WSIS) spirit of multistakeholder partnership. In this chapter I seek to underscore the important role such institutions could play, particularly in developing countries. I will describe an already existing best practice model and then consider some challenges to be overcome in the establishment of these committees.

The Current Lack of National Internet Governance Arrangements

The effective and meaningful participation by developing countries in global Internet governance (IG) is a major challenge, aptly recognized in the stipulations of the closing instruments of the first phase of the WSIS as well as in the WGIG report. The WGIG report identified, inter alia, lack of capacity building, costs (frequency and location of venues), and lack of transparency, openness and participatory processes as some of the contributory factors. In most developing countries at the moment there is no structured or institutional mechanism at the national level to resolve these issues identified by the WGIG.

Some countries undertake some Internet governance activity to a small extent by running Country Code Top Level Domain (ccTLD) administrations, although quite number lag behind even in this basic activity. Some also participate in varying degrees in the activities of the Internet Corporation for Assigned Names and Numbers' (ICANN) Governmental Advisory Committee (GAC), attend international forums such as those organized by the International Telecommunication Union (ITU), and have a regulatory regime for the Internet services sector. Nevertheless these efforts can be characterized as being disparate, uncoordinated and not involving all stakeholders. The national Internet governance regimes in most countries at the moment do not meet the WSIS criteria of being transparent, accountable, democratic and involving the full participation of all stakeholders.

It is therefore unlikely that current governance arrangements existing in the developing countries would be a solid foundation for meaningful participation at the international level. This makes it imperative that the WSIS endorse the proposal to set up national Internet governance committees, particularly in developing countries, because the national Internet governance mechanism is required as support for the international mechanism, and the international mechanism should be complimentary to national efforts.

The Brazilian Model

The Brazil model of Internet governance at the national level was presented at a workshop held in conjunction with the WGIG Report release event in Geneva in July 2005. It offers a best-practice model that is worth emulating in other developing countries. The Brazilian Internet Steering Committee was established on May 31st 1995 by an Inter-ministerial Ordinance and altered by the Presidential Decree No. 4, 829 of September 3rd 2003. The Brazilian Internet Steering Committee "is responsible for promoting the technical quality, innovation and the dissemination of the offered services. It is also responsible for assuring fair and free competition among Internet service providers and for maintaining suitable conduct standards fro users and providers.[1]

More specifically the Committee performs the following functions:

Registro.br

Registro.br is responsible for the maintenance and distribution of Internet addresses, domain name registration for the country code domain as well as offering engineering and hosting services for the regional Internet registrar (RIR).

Ptt.br

The steering committee created ptt.br to administrate and run regional Internet exchange points for the metropolitan areas of Brazil, as well as interconnecting commercial and academic networks with a centralized management.

Cert.br

The steering committee maintains a Computer Emergency Response Team that also offers services such as incident reporting, support to network administrators and Internet users in Brazil writes documents in the local language about network security and produces statistics about security incidents and spam. It also maintains an early warning project with the goal of

[1] Brazilian Internet Steering Committee presentation at the post-WGIG workshop 19th July 2005, Geneva. www.wgig.org

identifying new trends and alerting Brazilian networks involved in malicious activities. CERT.br works to increase the security awareness, acts in the correlation of events in the Brazilian Internet and helps the establishment of new Computer Security Incident Response Teams in Brazil.

Statistics and indicators

The Brazilian Internet Steering Committee works in a national project of developing indicators for the Brazilian Internet and to have information on the website about the network growth in the count.

Working Groups

The Brazilian Internet Committee's working groups – the GTER – Network Engineering; the GTS Computer Security; and the GTRH – Training of Human Resources – have been created to provide administrative and operational input for the decisions and recommendations made by cgi.br. Their members meet in periodic events and through mailing lists.

The Committee is a well-structured multistakeholder entity, having representation from government and democratically chosen representatives of the business sector, scientific and technological community and an Internet expert. It gives a good indication of how to address the WSIS objectives, and is a useful microcosm of what international Internet governance should be.

Lessons from the Brazilian Model

So what are the lessons or takeaways from the Brazilian model for other developing countries? Firstly, the Brazilian model provides a useful template in terms of a one-stop solution to the challenge of national Internet governance that can effectively feed, as meaningful and effective participation, into and support international Internet governance mechanisms. Many developing countries lack awareness on the activities falling under the ambit of Internet governance at the national level. Where such activities exist they are often manifested as disparate, uncoordinated and non-integrated. National Internet governance committees can be the basis to create awareness and identify the issues of Internet governance at the national level.

The second lesson that can be learned is that national Internet governance committees provide an effective springboard and framework to address the barrier of capacity building. The WGIG Report is explicit in supporting this view: "Adequate resources have not been made available to build capacity in a range of areas relevant to Internet management at the national level and to ensure effective participation in global Internet governance, particularly for developing

countries."[2] National Internet governance committees can be a vehicle for sourcing and congregating resources towards building capacity, as well as coordinating and prioritizing the application of the resources. This then would lead to effective participation not only at the local level, but at the international level as well.

A third take-away is that national Internet governance committees act as effective incubators for nurturing the multi-stakeholder spirit. Without a mechanism at the national level that brings together Internet governance activity under one roof and involving all stakeholders in a democratic and transparent way, it becomes difficult to envisage the developing countries participating effectively in a manner that meets the WSIS standards on the international stage. As mentioned earlier, what could be described as Internet governance activity in many developing countries is dissipated in uncoordinated, unrelated, often non-transparent, non-democratic and non-multi-stakeholder entities dealing with piecemeal issues like regulating the Internet service providers, running the ccTLD, or participating in the GAC.

Fourth, the Brazilian model presents an opportunity to create a standard for Internet governance at the national level. In existing arrangements, particularly those for ccTLD administration, there is a glaring lack of standardization, since ICANN does not get involved in the administrative of local arrangements of ccTLDs. This has meant, for example, that some ccTLDs are government run, some run by the private sector, and some are shades in-between. Without standardization and benchmarking it is difficult to bring together national efforts at an international level. Since the Brazilian model is a tested and proven it could offer the possibility of being accepted as a standard.

Finally, the Brazilian model shows that a national Internet governance committee can extend its relevance by offering practical services to the Internet community in the country, such as offering emergency response teams, writing documents on Internet governance in languages that the local population understands, formulating and offering statistical services, offering metropolitan and other Internet exchange points and running the domain name and addressing functions. There is proof from Brazil that all these activities can be coordinated from under one roof in a democratic, multi-stakeholder and transparent manner.

Challenges

Setting up national Internet governance committees is not an exercise without challenges. The proposed institutions are, for one, a new way of doing things and resistance can be expected in some quarters. In those cases where ccTLDs are already operational there could be perceived loss of independence if they are to operate under a larger umbrella of a national Internet

[2] Brazilian Internet Steering Committee, pg. 6.

governance committee. In those countries where the multi-stakeholder paradigm has not yet taken hold the new institutions are likely to encounter resistance as well.

It should also be kept in mind that the idea of national Internet governance committees may not appeal to the developed countries, most of which already have established mechanisms in which the Internet is governed within the country. A final major challenge is that the proposed committees currently do not feature in the ICANN structure. ICANN would have to be convinced about the need for these committees, and then incorporate them into its structure.

Conclusion

It is difficult to expect developing countries to participate in a meaningful and effective manner in international Internet governance if they are unable to maintain similar structures at the national level. The international community should therefore endorse the WGIG that countries set up national Internet governance committees or similar mechanisms. If this recommendation is passed developing countries will take Internet governance seriously, first at the national level, and later feed this into international Internet governance mechanisms.

The international community and partners should support the establishment and growth of these committees as one way of ensuring that the benefits of ICT, and the Internet in particular, are enjoyed by all.

CHALLENGES FOR AFRICA

Olivier Nana Nzepa

Before becoming a contentious issue in the 1st phase of the World Summit on Information Society (WSIS), the Internet was treated in Africa like a hot potato. Its unleashed potential was both seductive and feared. The establishment of the Working Group on Internet Governance (WGIG) convinced most of the African stakeholders to organize a major workshop dedicated to the issue in Accra during the Africa Regional Meeting in preparation to the 2nd phase of the Summit. One of the purposes of this effort was to explore the creation of an enabling environment in which Internet could take root on the continent.

The WSIS process is acting as a warning bell in a growing number of African countries. There now seems to be a race to adopt some form of broad-based information and communication technology (ICT) policies. The trouble is, many countries are having difficulties implementing them because of they lack the required resources. A related problem is the unrealistic targets that are usually set by information technology professionals or international institutions, e.g. those related to the United Nations Millennium Development Goals and poverty reduction strategies. It is becoming evident that while states may identify national ICT strategies, the complex nature of the global economy and the ICT sector requires the expertise of civil society and the private sector, which are barely involved in the whole process in Africa.

The question therefore is how to establish information societies enabled by the Internet that can achieve the WSIS principles of transparency, public accountability, public participation and equity, and that at the same time stimulate universal access to and use of ICTs. This chapter attempts to shed some lights on a process in the making, mainly characterized at this infancy stage by contrasting landscape, conflicting policies, contradictory messages, and uncertainty about the direction in which to go.

Contrasting Landscape

Linking Internet to development has become a buzz phrase in Africa these last months. Still, despite the great awareness stirred around ICTs by the ongoing WSIS process, most of the continent has yet to hear a phone ring, not to mention hold a mouse. For the 90% of African population still on the other side of the digital divide, communicating with the outside world remains an obstacle race. If in addition you are illiterate, the onerous process of sending a letter, for example, will start with hunting for a schoolboy or a public writer to draft the letter. Then you might wait for the next market day to lay hand on a relative or a passenger's bus carrier who can take the letter to the nearest post office. It may take somewhere between a day to months for the letter to get to its final destination. This demonstrates that there is a need to

distinguish between urban centres and rural areas that need broader developmental efforts. The one-size-fits-all approaches cannot achieve this.

A study led by Research ICT Africa shows that poor people in rural communities still travel quite some distances to make phone calls. Most of the time, the cost of such calls is unbearable. Such impediments make access to ICT in rural areas an issue to reckon with. The solutions provided fall short from solving the problem. More and more governments are considering universal access as a recipe. This explains in a way the growing interest in boosting efforts, revamping strategies and creating an IG environment conducive to achieving the development objectives. The will is real amongst the various stakeholders and partners in development. However, at the country level Internet as a priority is yet to be effectively integrated into national development strategies. Development initiatives increasingly incorporate an "ICT component" but mostly as mere projects without a focus on policy variables that could enhance impact and sustainability.

The African regional meeting held in Accra, Ghana in February 2005, as preparatory process for the 2nd phase of the WSIS, has registered a firm engagement by participating countries to harness ICTs for development purposes and build modern information infrastructures and knowledge capability in order to bridge the digital divide. But Accra did not address the lingering lack of coordination and cooperation among countries, regional institutions, their projects and programmes.

Accra tried to address the imbalance deriving from the fact that the very institutions that currently have a say on ICTs management, such as the International Telecommunication Union (ITU), the International Monetary Funds (IMF) and the World Bank determine most of the priorities at the national level. The meeting exposed a lot of resentment against the International Corporation on Names and Numbering (ICANN), for not providing national States with an effective voice on ICTs governance, and therefore not having a significant role on African ICT governance. Accra finally acknowledged that the response of African countries on international ICT decision-making had not always been adequate. Various reasons were mentioned, amongst which deficiencies within many of the international institutions and limited technical and policy capacity, lack of resources and information for effective participation by national states and regional bodies or to effectively implement appropriate regimes at national and regional levels.

As a first step towards addressing this development-policy divide together with developing policy tools and approaches that can further the integration of ICTs in development strategies, some regional organizations have decided to focus on content and linkages between ICTs-development strategies and policies on the continent, with a view to identify opportunities, constraints and priority areas of focus.

Accra sealed the shift from 10 years ago when discussions were mainly about ICT infrastructure and not about using ICTs for development. The importance of the ICT sector can be apprehended through its impact on most economic and social sectors of society, and its leading to better, improved health services. They are central to e-government. This is an accepted fact today in Africa.

These various changes in Africa are occurring at the time when, following the pressure from multilateral and bilateral donor agencies to privatize monopolies and liberalize the telecom markets, the hype associated to tremendous expectations that the free market will solve the lingering problem of access is starting to cool down. Progress toward universal access to ICTs is still a hypothetic dream. Research evidence demonstrates that the increase in access in Africa has been very slow. In most countries, state-run telecommunications systems have not been very effective, failing to provide access to the broader public. If it has become an accepted reality that information and communication technologies have rendered national and international boundaries meaningless, it also still is a reality that in most of rural areas, communicating with the outside world remains an obstacle race. Lack of adequate capacity to implement and enforce public interest policies, limited participation in global ICT negotiations and inadequate cooperation and coordination at regional levels are among the key constraints hampering access in Africa.

This however does not apply to the whole continent. The situation varies from one country to another, and often even within the country itself. In Research ICT Africa comparative study, South Africa performs better in E-readiness than most other African countries. Still, the E-readiness of all African countries is lower than the global average. Although progress was made throughout the last decade, the gaps not only persist, but also seem exacerbated these last years, indicating a growing digital divide. Infostate indicators also help shed some light on the driving forces behind this phenomenon. In 1995, South Africa's Infostate (38.8) was way ahead of other African nations. Zambia followed from a distance with 8.6, then Cameroon (4.3), Senegal (4.1), Ghana (3.9) Kenya (3.6), Uganda (3.4) and Ethiopia (0.7). Between 1995 and 2003, these countries improved their performances to varying degrees. Senegal grew relatively faster (31), outperforming both Cameroon (21.1) and Zambia (22.3) by the end of the period. Kenya jumped to 25.7. Uganda moved to 15.0 and Ethiopia hit the 8.6 mark. South Africa still led the pack with a 76.1. But the gap remained against Hypothetica (113.4). Statistically, the growth might look dramatic (about 400% between 1995 and 2003), but given the very low base in 1995 the absolute increase was relatively small and insufficient to close the gap between the countries studied and the rest of the world. This explains why the digital divide between these selected African countries and the rest of the world has increased over the considered period.

Furthermore, these data do not reflect the dynamism of the mobile penetration in the Continent. In almost all the countries, the surge in mobile exceeds all expectations.

Conflicting Policies

The various policies adopted in Africa reflect, at least in their intention, the objective to increase access to affordable communications and expansion of the sector to meet the needs of a modern economy through liberalization of the market. This is the powerful argument that has stirred tremendous changes in telecommunication markets in Africa. The rapid changes in technology, the poor performance by almost all of the incumbents of telecommunication services, associated to the pressure of the international organizations, have forced most African countries to end state monopolies and accept the privatization of their state-owned telecommunication providers. This in effect opened up portions of their telecommunication markets to competition, and gave birth to regulatory institutions.

The partial opening of the African market to competition has dramatically changed the landscape of mobile telecommunications and to some extend the Internet. In less than a decade, the number of subscriptions in mobile telephony has increased more than 2.000% in most countries, while the landline subscription rate was declining very sharply and thus, the revenues. The incumbents in most countries have become nervous, and have tried to find recourse in price hikes, rendering the costs of telecommunications unbearable. These various moves have cast doubts on the independence of the regulators and their willingness to foster a fair market game. The high telecommunication costs have laid the ground for a booming underground market consisting of VoIP and VSAT services.

The surge in mobile telephony growth has, in a way, compensated the disappointing performance of landline growth. Still, on a continent with around 850 millions inhabitants, the mobile sector accounts for more than 6% of teledensity and the landlines barely reach 2%. Unexpectedly, mobile services growth, whether though phone calls or SMS, are expanding universal service which originally fell in the purview of landlines operators. The surge in the mobile market seems to have a counter effect on policy decision makers. The tendency is to believe that the mobile technology has become the solution for the universal access. This is reflected in infrastructure investment strategies.

Uncertain Directions

The Internet development in Africa has been heavily affected by an overly cautious liberalization policy and regulatory uncertainty. The continent sometime looks schizophrenic about the course to take. Should the continent put emphasis on building infrastructure or human capacity? Lacking a clear response to that makes the bed for inconsistent policies, with the potential to exhaust the scare resources at hand, and increase the burden of bridging the digital divide.

After being considered for many years as "family jewels", the traditional landlines are no longer seen as priority by most African countries. Therefore, Internet access and use is negligible. In addition, the combination of high price and low income makes affordability a very important barrier to uptake on a continent where the annual income per capita is generally very low, and more than 40% of the population live below the poverty line. Local calls are very expensive due to time-based billing. Computer costs are still high relatively to income even if some governments have waived taxes, except VAT on import. In some countries, the bandwidth cost of access to the international Internet backbone via VSAT can reach 30 times the cost in industrialized countries. Various factors are hampering the performance of the sector, particularly in the fixed lines services, such as an ineffective investment strategy, poor management, interconnection problems and weak regulatory bodies. Political interference in the regulatory bodies sometimes makes things worse. Sometimes, conflicts of interest resulting from the government acting both as an operator and a regulator make people more confused about the direction to take.

In a quote by WRD/Intelcom Regulatory News, Mpoeng Tamasiga, Director of market development and analysis at the Botswana Telecommunications Authority says, "Telecom as an industry is the ideal vehicle for sustained economic growth, which is why regulation is essential…" But, according to a report by ITWeb, African telecommunication regulators face many challenges, such as lack of capacity, political interference and the use of regulatory tools not designed for a developing market.

Undoubtedly, there is in Africa an urgent need to harmonies the regulatory environment in order to provide an atmosphere conducive to investment. The continent regulatory environment, where it exists, faces though challenges, amongst which are the number of players, and the market design arising from the reform process. Structured around the state-owned company with whom the others networks had to interconnect in order for their customers to access subscribers on the incumbent's network, the existence of mobile operators is yet to change the market behaviour pattern of most incumbents which see the vertical integration as a mean to curb the falling trend. This puts a lot of pressure on the regulator which is not powerful enough to oppose many of their moves.

The complexities of the market place an enormous burden on African countries, and require expensive and skilled regulatory machinery to operate effectively. Addressing the market structure, the credibility problem and the lack of skilled human resources issues will require a major shift in the policy and a clear repartition of roles and attribution amongst the various governmental key players. The long awaited coordinating body aimed to resolve competencies problems is urgently needed. There is also is a need for legislation, which might remove some inhibiting effects such as the distinction between voice and data. The regulatory agencies are doing their best to change the prevailing perception that telecom services are no longer a

natural monopoly. With little success, if we consider that almost a decade after the introduction of competition in some countries, the incumbents are still short of meeting the needs, as evidence by persistently large unmet demand for fixed line connections, poor service quality, higher cost, limited territorial coverage and difficulty to set up viable Internet business.

In order to cope with the conventional wisdom, which sees competition as the most effective agent of change, the African regulatory bodies should play a critical role in order to improve the services. One important policy implication of this is that extending the exclusivity periods or delaying infinitely the liberalization of the sector may seriously impede the real benefits that seem to come with competition. In Africa today, there is a broad agreement that competition seems the most effective method of promoting improvements in the telecom sector and that the incumbents are unable to meet the large, varied and rapidly changing demands of all types of users. In order for the competition to bring about great improvements, it must be combined with effective regulation. Highly politicized regulatory bodies seem ill equipped to unleash the beneficial effect of the market reforms.

Addressing the various difficulties recounted here will require a major shift in the course of policymaking process. In that sense the governments should play a key role. It is their responsibility to set up independent regulators responsible for developing a competitive framework, a transparent regulatory environment for investors and building a stable and well-functioning market.

Contradictory Messages

The Internet field in Africa is marred by conflicting messages. While the various policymakers acknowledge its importance as development broker tool, the decisions or policies barely reflect this belief. It is sometimes difficult to read which government policies, business strategies, macro environments and other factors are behind the profession of faith. The Accra gathering has been unequivocal on this. No matter the policies adopted, any stakeholder should be able to clearly identify policies and strategies at work. This will facilitate the analyses of their impact on the evolution of Internet, their components for each country, and ease the identification of specific causal influences, whether drivers or impediments. This exercise should go hand in hand with the discussion of country-specific and time-specific contexts, involving macro socio-economic, institutional, cultural and even geographical influences that impact on the diffusion and use of ICTs and services.

The linkage between ICTs and the others sectors such as education, health still has to be forged and proven to be working. The civil society sometimes lacks critical support in sensitizing decision-makers and users on new applications of communications.

Conclusion

This chapter has tried to shed some light on the challenges Africa is facing on its journey towards the Information Society. Internet, as a wealth creation tool, needs to overcome various hindrances on the continent before unleashing its full potential. Regulatory uncertainty arising from structural conflicts of interest between multiple players is having negative effect on cost reduction and therefore accessibility. The economics benefits are still disputed. There is a lack of balance between the management and development impacts. Conflicting policies and confusion about the course of action call for a multi-partnership approach and a collective and participatory decision making-process. In order to move decisively from inputs to impacts, quick actions and results are needed. They can be achieved through the establishment of a consultative body in each country as advised for by the Accra meeting. The private sector, as a wealth creator, has a critical role to play. But the sector is still too weak in Africa to really play a decisive role. It lacks a critical mass, and is under funded. African policymakers need to articulate advanced policies through the reengineering of their national framework as related to Internet, favour the creation of continuing idea flows, reinforce and enable civil society amongst others stakeholders to share experiences and views, in order to enable sustainable solutions for the continent in a global context.

CHALLENGES FOR THE CARIBBEAN

Jacqueline A. Morris

According to the Association of Caribbean States, the "greater Caribbean" includes its twenty five member states and four associate member states. This view of the Caribbean covers all the countries that border on the Caribbean Sea, including many of the countries known as Central America, and even some from South America. In this greater Caribbean, the major language spoken is Spanish, followed by English, French, Dutch and Kreyol. It is a very complex region.

The Caribbean countries are at a disadvantage in today's global competitive environment because their comparative advantage in cheap labor or natural resource endowments has become outdated in a knowledge-based economy. For example, knowledge is the key to innovations in production that ultimately make products more competitive.

Characteristics of these countries often include:

- Low living standards (i.e. low real income per capita) associated with high income inequality, poor health and inadequate education and limited life expectancy;
- Low levels of productivity; unskilled labour; weak management practices;
- High population growth rate;
- Large-scale unemployment and underemployment;
- A small industrial sector with outdated technology unable to employ large numbers of poorly educated workers.
- Large but neglected agricultural sector and migration from rural to urban areas
- Market inadequacies.
- Limited technology, infrastructure, and social and political institutions.
- Low social capital and social cohesion

Of course, the Caribbean countries vary in terms of these features, but it is useful to look at the commonalities. Barbados, Jamaica, Bahamas and Trinidad and Tobago are the most developed of the English-speaking Caribbean countries, with relatively large and modern manufacturing, up to date technology in some sectors and diversified economies focusing on services. However, there are underdeveloped areas, mainly in health, provision of social services, and bloated Government bureaucracy, as well as a lack of modern infrastructure.

So, how do we develop? We need to look at the areas that are lacking. Developing countries suffer from poor productive capacities and competitiveness. There are weak linkages between manufacturing, services and infrastructural sectors such as telecommunications; insufficiently developed human resources; deficiencies in physical infrastructure; and an inability to generate

adequate resources to invest in reducing economic and social problems in ways that would help to improve productive capacity.

The agricultural revolution and the Industrial revolution of the last centuries focused on natural resources and human resources. Unfortunately, most of the region did not develop sufficiently during these phases as they were mainly used as providers of raw materials to the colonial powers that ruled them. Thus, sugar, agricultural products, crude oil, raw minerals were shipped overseas to fuel the industrial complexes of the empire, and the finished, higher-cost products shifted back to the colonies in the mercantilist model. At the dawning of the knowledge age, these countries were singularly ill-equipped to implement the changes necessary to compete in the global information economy. This is what we need to change. Internet technologies can be used to assist us in making these changes.

General Considerations

The Internet is a collection of packet-switching networks and routers that uses the Transmission Control Protocol/Internet Protocol suit and functions as a single, cooperative virtual network. Internet governance has been defined by the Working Group on Internet Governance (WGIG) as, "the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet." [1] What does Internet governance mean for the Caribbean region?

The Caribbean region would benefit from an international participatory Internet governance system that would harmonize technical and policy issues for the benefit of the global community. This should translate in practical terms to:

- Lower Internet connection costs
- Affordable hardware and software
- Regional Administration of root server system
- National administration of country code top-level domains
- (ccTLDs).

Governments and regional intergovernmental organizations should convene regular consultations with the relevant technical communities and other stakeholders to discuss best practices and relevant solutions. The CARICOM Secretariat and the Caribbean Telecommunications Union have begun this process for the Caribbean by convening the First

[1] *The Report of the Working Group on Internet Governance* (Geneva: United Nations, 2005), <http://www.wgig.org>

Internet Governance Forum in Georgetown, Guyana, in September 2005. The good start made by this multistakeholder forum needs to be followed up with energy and vigor to ensure that we benefit as a region.

At the National level, governments need to set up implementation frameworks with full and effective participation of civil society and business entities. National development plans need to include information and communication technology (ICT) strategies as an integral part. Plans and programmes aimed at implementing the United Nations Millennium Development Goals need to include ICT as a fundamental focus. Public investment in ICT infrastructure and the fostering of an enabling regulatory environment should be high priorities.

Except for strong trade unions, the Caribbean region has not generally had a robust civil society. Thus, traditional participants in policymaking have been Government, labor and private sector. Unfortunately, the labour movement has not been in the forefront of ICT issues; rather, in many cases, it has actively fought them due to the mistaken belief that ICT takes away jobs. One very important step in the Caribbean region would be to get the strong trade unions on board in the push to join the information society. As well, the current participation mechanisms need to be reconsidered to include other aspects of civil society, such as technical, academic, and nongovernmental organizations, as well as individual and virtual participation.

In short, important steps to be taken for the creation of a vibrant Caribbean information society would include:

- Promote sharing of experiences and cross-border implementation
- Strengthen information and negotiation mechanisms
- Promote multi-stakeholder approaches for ICT4D
- Build on current multi-stakeholder ICT initiatives
- Develop measurement and other statistical systems
- Understand and develop the relevance of standards in ICT[2]

Specific Issues of Concern

The main issues that are of interest to the English speaking Caribbean region include the above, as well as some specific issues from Clusters 1-3 of the WGIG report. Below we consider some of these issues in the Caribbean context.

[2] Caribbean Seminar/Workshop on The Information Society - Preparing for CHOGM 2005 and the WSIS Outcome Document, St. Kitts and Nevis, April 2005.

Affordable and Universal Access

One of the basic issues is access to the Internet for everyone. This will include access to the telecommunications infrastructure. This is generally a matter of national policy. In some cases, the market-based solution has made the access gap worse. In small markets such as the Caribbean islands, it may not be cost-effective or feasible for competition to drive access. The cost of infrastructure development for a small market may create a situation in which the provider cannot recoup the capital expenditure at a price point that allows any but the well-off to afford the service. In cases like these, one option is for the Governments to implement the infrastructure, as a public good, and allow competition in goods and services on top of this public telecommunications infrastructure. In some US cities, WiFi networks are being deployed in this manner.

Backbone Deployment

There is a lack of local and regional backbone infrastructure in the Caribbean region. One solution to this can be the development of regional traffic hubs to more efficiently utilize the expensive international lines. This should be considered as a public infrastructure issue, and may be implemented with a public/private investment mechanism. The lack of adequate national and regional backbone may reflect market/public policy failure and require public policy intervention both in terms of funding and policy reform. There is a role for donor funding as well in terms of this development. There is also a need for the establishment of national telecommunications policies that provide an environment conducive to the establishment of network access points in the region by backbone providers.

Education and Human Capacity Building

Capacity building is vital to allow the Caribbean states to take their place in the policy discussions at the international level. With less than seven million people, we do have fourteen votes via the Caribbean Community (CARICOM) in international forums. This is a good position to be in, but unfortunately we lack the capacity to take full advantage of it. There is a need to ensure that all stakeholders have the ability to participate. It is necessary to strengthen developing countries' participation in international ICT decision-making.

Internet Leased Line Costs

This is an issue that is common to almost all the developing countries. Internet service providers (ISPs) must purchase transit services from a Tier 1 backbone provider. In addition, if the backbone provider does not have a network access point (NAP) in the country, then the ISP must purchase international connectivity to the NAP based on the "full-circuit" model; as

a consequence the ISP bears the full costs of both inbound and outbound traffic. Some of the issues with regard to costs to the local and regional ISPs are:

- International transport costs are much higher than Internet port charges
- Peering arrangements are scant or non-existent
- Strong international content demand drives up costs
- "Sender Keeps All" IP settlement paradigm creates imbalance – global carriers benefit to the detriment of local and regional ISPs
- Local traffic subsidizes costly international traffic (leased lines are distance based)[3]

There is a need to measure the traffic patterns in the region. The problem cannot be solved if it is not first measured. When we have a better idea of the way that our regional traffic flows over the Internet, we can develop better intra-regional traffic management plans and local or regional Internet Exchange Points. A shift towards a "peering" regime between regional ISPs also would help. This would help reduce the high cost of the international component and encourage better optimization in the use of international bandwidth, thereby lowering the overall cost of Internet access.

Local Content and Cultural and Linguistic Diversity

A public-private partnership approach could be employed, with the support of intergovernmental organizations and the donors, in the establishment of the sub-regional clusters of exchange points and liberalization of the telecommunication industry to lower costs of international connectivity.

It is clear that access to the telecommunications infrastructure and the equipment necessary to utilize it is not all that is needed in the Caribbean region. The information is useless if it is not available in languages that people can understand.

There is also the issue of disabled access to the information. More tools are being built to allow full access to Internet information for blind people for example, but much more still needs to be done. Content that is hosted on websites is often inaccessible. More use of the global usability standards such as the World Wide Web Consortium standards for website design is necessary.

Development of local content also encourages the development of local business and entrepreneurship, as well as reduces the imbalance in the data transfer traffic patterns. An

[3] Brian Jahra, Presentation "An ISP Perspective On Internet Governance", CARICOM/CTU Internet Governance Forum, Georgetown, Guyana, Sept 2005. <http://www.caricom.org/jsp/projects/An%20ISP%20Perspective%20on%20Internet%20Governance%20-%20Brian%20Jahra%20AIISP.pdf>

increase in local content also works to redress the imbalance in the intellectual property rights holding, of which most IP patents and copyrights reside in developed countries.

Free and Open Source Software

Free/Libre Open Source Software (FLOSS) is a broad term used to describe software developed and released under an "open source" license that allows for the inspection, modification and redistribution of the software's source without charge. The term also encompasses the Free Software movement, which releases software under similar terms to the Open Software movement, but with one important distinction: the derivative works must be made available under the same non-restrictive license terms.[4]

FLOSS offers a number of advantages for developing countries, including in the Caribbean region. For example, the upfront cost is usually lower than normal. The additional costs involved in implementing and administration of a FLOSS based system can also be considered as an investment in the human resource of the country. However, FLOSS is not a silver bullet, and each project should look at FLOSS as well as proprietary solutions and evaluate each according to strict criteria. Moreover, the ability to access the source code is an opportunity for programmers in developing countries to learn from the Open Source community, and also to custom-tailor the code for their own local situations. This works towards building local capacity in ICTs, such as programming.

Conclusion

Internet governance is a major international issue. The Internet is becoming more and more central to the global economy. There are many roadblocks to Caribbean access to this resource, and as the governance issues are being worked out in the International forums, the Caribbean needs urgently to realize that these policy negotiations affect us in very basic ways. Caribbean countries need to participate fully in these negotiations and make sure that the decisions taken do not impact negatively on our development.

[4] *Report of the Working Group on Internet Governance* (Geneva: United Nations, 2005) www.wgig.org.

Section Four

Options for Institutional Change

THE NEED FOR INTERNATIONAL INTERNET GOVERNANCE OVERSIGHT

Abdullah A. Al-Darrab

A key issue addressed by in Phase I of the World Summit on the Information Society (WSIS) was the bridging of the global digital divide. To this end, an Action Plan was published which provides concrete action lines to be implemented at the national level within a specified time, and which include the provision of information and communication technology (ICT) services to key institutions such as schools, Government offices, libraries and hospitals. Implementation of these initiatives will enable widespread publication and access to information and will result in ever increasing dependency on the Internet. This has raised many key issues, including security, capacity building, multilingualism, cost of establishing infrastructure and protection of related investments.

The accelerating trend toward ubiquity and reliance on the Internet has made it an indispensable global resource, which in turn obligates everyone to cooperate in its construction, development and operation. This new reality has resulted in many stakeholders calling for a larger role in its international governance. In its 2003 Declaration of Principles, the WSIS affirmed that the international management of the Internet should be multilateral, transparent and democratic with the full involvement of stakeholders. The WSIS recognized the roles of the various stakeholders. Specifically, policy authority for Internet-related public policy issues is the sovereign right of States and international organizations also have an important role in the development of Internet-related policies. The WSIS also recognized the important role of civil society, and that of the private sector in the technical and economic fields. The Working Group on Internet Governance (WGIG), which was tasked by the United Nations Secretary-General to study this subject, reasserted these roles in its definition of Internet governance.

In its report, the WGIG indicated that a vacuum exists within the context of existing Internet governance structures, since there is no global multi-stakeholder forum to address Internet-related public policy issues. It concluded that there would be merit in creating such a space for dialogue among all stakeholders.

The WGIG dedicated an entire section of its Report to the discussion of Internet public policy and oversight. In that section the WGIG set out four models for consideration. Three of these models varyingly propose the creation of an Internet Council in which Governments would take a leading role and other stakeholders would have an advisory/observer role. Although these three models have many common elements, each one is a bit different from the other.

The remaining model proposes that there is no need for a specific oversight organization and that it "may be necessary to enhance the role of ICANN's Governmental Advisory Committee (GAC) in order to meet the concerns of some Governments on specific issues."

In view of my participation at most of the WSIS Preparatory Committee (PrepCom) meetings and as a member of the WGIG, I felt it appropriate in this chapter to shed some light on the oversight function, which was one of the most important subjects discussed in the WGIG Report. This issue has generated the greatest differences in viewpoints, and the debate is expected to continue for the next while. Hence, I will discuss the establishment of a Global Internet Council as proposed in the WGIG Model 1 (see Figure 1, below) which many believe is the most appropriate approach to address the issue of global Internet public policy and oversight.

Figure 1: WGIG Model 1

52. This model envisages a Global Internet Council (GIC), consisting of members from Governments with appropriate representation from each region and with involvement of other stakeholders. This council would take over the functions relating to international Internet governance currently performed by the Department of Commerce of the United States Government. It would also replace the ICANN Governmental Advisory Committee (GAC).

53. The functions of the GIC should include:

- Setting of international Internet public policy and providing the necessary oversight relating to Internet resource management, such as additions or deletions to the root zone file, management of IP addresses, introduction of gTLDs, delegation and redelegation of ccTLDs.
- Setting of international public policy and coordination for other Internet-related key issues, such as spam, privacy, cybersecurity and cybercrime, which are not being fully addressed by other existing inter-governmental organizations.
- Facilitating negotiation of treaties, conventions and agreements on Internet-related public policies.
- Fostering and providing guidance on certain developmental issues in the broader Internet agenda, including but not limited to capacity-building, multilingualism, equitable and cost-based international interconnection costs, and equitable access for all.
- Approving rules and procedures for dispute resolution mechanisms and conduct arbitration, as required.

54. The relationship between the GIC and technical and operational Internet institutions, such as the reformed and internationalized ICANN, should be formalized. In this model, ICANN will be accountable to GIC.

55. The GIC should be anchored in the United Nations.

56. For the issues dealt with in this body, the Governmental component will take a leading role. The private sector and civil society will participate in an advisory capacity.

The Debate on Oversight: A Matter of Perspective

It is a commonly accepted truth that the appearance of an object can vary depending on one's perspective. This truth naturally applies, to a great extent, to the issue of international governance of the Internet, which has been the subject of significant review and consideration by the governmental, commercial, social and academic communities. The intensity of this effort is increasing as the WSIS process progresses. Different perspectives on the issue have resulted in conflicting opinions, to the point where some, in good faith, are convinced that their view is correct, and that the views of others are not, when in reality the same thing is being observed from different perspectives. To add to the complexity, some are convinced that they alone know what is in the interest of others, and therefore their position must be accepted by all.

Those who have not been following the evolution of this debate over time may understandably encounter difficulty in fully understanding the issues due to their complexity. Another impediment to understanding is the 'headline' reporting in the media, which does not always provide analysis and explain the different perspectives. I believe that many of the differences concerning the stakeholder roles required, and the mechanisms proposed, for the global governance of the Internet stem from these and related sources.

Why Global Oversight is Needed

Before I address the issues that make Internet oversight the subject of so much attention by the international community, I would like to make it clear that the discussion of oversight does not imply abandoning existing arrangements associated with management and operation of the Internet. However, several questions remain, e.g.: What is meant by oversight? Why are governments concerned? Is oversight really needed?

The subject of oversight is very broad and cannot be covered rigorously in just a few pages. The Merriam-Webster dictionary defines oversight in terms of watchful and responsible care, and regulatory supervision.

With relation to Internet governance, the WGIG defined the following key policy areas:

- Issues relating to *infrastructure and the management of critical Internet resources,* including administration of the domain name system and Internet protocol (IP) addresses, administration of the root server system, as well as multilingualization;
- Issues relating to the *use of the Internet* (e.g. spam, network security and cybercrime, intellectual property rights), including issues whose impact is broader than the Internet, such as intellectual property rights and international trade, or that are related to development and capacity building.

Issues related to Internet governance do not generally affect just one country without also impacting others; in fact, they can impact all countries. Among the first Governments to encounter and address these issues was that of the United States. Most Governments of both the developed and developing worlds have now also become concerned by these issues. The participation of States in international Internet policy setting and oversight has become an important factor in giving them confidence to encourage investment, and to increase reliance on modern ICT.

National Governments are the most representative entities for the public, as they are appointed by the people, and they are responsible for the development of public policy within their territories. It therefore follows that governments must also be responsible for the setting of international public policy. The private sector and civil society cannot take the place of Governments in undertaking this role. However, their participation and support to Governments through the provision of advice and opinions is an important element in the successful execution by Governments of their policy setting and oversight role.

Since the Internet is a global network which knows no national boundaries, and the security of the Internet is of concern to all States and impacts their national security, it is not reasonable for one Government to undertake the oversight role on behalf of all the Governments of the world. This view was affirmed by the WGIG, which stated the principle that "No single Government should have a pre-eminent role in relation to international Internet governance."

The Internet Corporation for Assigned Names and Numbers (ICANN) is responsible for issues relating to the management of critical Internet resources. This includes coordination of the allocation and assignment of Domain names and IP addresses as well as operation and evolution of the domain name system's (DNS) root name server system. ICANN also develops policy related to these functions. ICANN is constituted in the United States and operates under a memorandum of understanding with the Department of Commerce of the US Government. ICANN in turn established a number of contractual relationships with other organizations as well as a number of Advisory bodies to assist in the policy making and management of the Internet naming and numbering resources, and in the operation of the root name server system.

ICANN can be said to provide a unique, centralized service for operation of the Internet, at a global level and in a non-competitive mode. Furthermore, in executing its mission ICANN can also be said to be performing an international industry regulatory function. Examples of the regulatory functions performed by ICANN include:

- Regulation of the pricing and structure of the domain name registration industry. It determines ('licenses') the top level domain (TLD) registries and controls the prices charged by the registries.
- Policy and regulation on the use of Internet naming and addressing resources, including establishment of new generic and country code TLDs.
- Policy and regulation of dispute resolution, through a compulsory and binding mechanism, on domain name related intellectual property.

Public organizations which develop policy and regulations traditionally function in a procedurally defined, transparent and consultative manner and are publicly accountable. Although ICANN has worked to achieve a transparent and consultative approach through an international diverse Board and by establishing various advisory groups, as a private entity it cannot be held publicly accountable to the international community.

Oversight of industry self-regulation mechanisms is traditionally the role of national Governments and intergovernmental organizations. In the case of ICANN, this role is currently being undertaken by the US Government. The input of other national Governments and public interest groups to the ICANN process is limited to provision of advice and for this reason; an important element of international legitimacy is missing.

Global oversight is also needed to address the category of international public policy issues which relate to the use of the Internet, such as spam, network security, cybercrime, privacy, content control and capacity building in developing countries, and which are outside the range of ICANN's mandate. Although many of these issues are addressed by existing multilateral organizations others are outside the scope of existing global organizations, or are not being fully addressed on a global basis.

The Case for Establishing a Global Internet Council

It can be seen from the discussion above that:

- Oversight of the monopoly, regulatory and policy functions of ICANN is needed;
- This oversight is currently provided by a single Government;
- There are some areas of international public policy for which oversight is needed, and which are outside the scope of existing organizations and are not being fully addressed;
- Policy authority for Internet-related public policy issues is the sovereign right of States.

It follows that a global organization in which Governments have a leading role is needed to perform the public policy setting and oversight functions including the role currently performed by the US Department of Commerce with input from all stakeholders. With

establishment of the Council, and the internationalization of ICANN, ICANN would continue to execute its technical and operational functions under a United Nations-like host-country agreement. ICANN's Government Advisory Committee would no longer be required.

The involvement of States in the overall Internet governance process through a Global Internet Council would provide international legitimacy and ensure accountability for ICANN and other existing and future Internet governance institutions where required. It would also legitimize the governance process in the eyes of national Governments and facilitate agreements on Internet-related public policies, as well as provide international legitimacy to dispute resolution and arbitration procedures relating to international intellectual property rights.

The Council also would facilitate full participation in Internet governance arrangements by developing countries. It would help overcome many of the obstacles faced by development programs in these countries, including but not limited to capacity-building, multilingualism, equitable and cost-based international interconnection costs, and access for all. The Council also would provide continuity to the WSIS process by ensuring implementation of the WSIS principles and action plans through IG processes and institutions.

Establishing the Council

To facilitate its establishment, the Council should be anchored in the United Nations. This would provide an existing and credible legal framework and reduce costs by providing access to an existing administrative support capability. Furthermore, by obviating the need for establishing new laws to regulate the relations between States, it would help expedite the process of setting up the Council; a factor which is particularly important given the expected termination in 2006 of the Memorandum of Understanding between ICANN and the US Government.

In order to ensure that the Council can keep up with the fast pace of Internet development, it is important that the decision making mechanisms for the Council be designed to be efficient while adhering to the principles of democracy, transparency and accountability. To this end, the Council could have an Executive Committee, with representation from the various regions of the world, which would meet on an as required basis to address issues and make recommendations to the full Council. To ensure involvement of all stakeholders, representatives from the private sector and civil society would participate in an advisory capacity in both the Executive Committee and the full Council. The Council would also have a solid linkage and synergy with the proposed multi-stakeholder Internet Governance Forum, which would debate and propose policy positions for adoption by the Council and, where required, coordinate their implementation.

Conclusion

The creation of a Global Internet Council would enable:

- Required international Internet public policy setting and regulatory oversight to be driven by States with involvement of all stakeholders, in a manner consistent with the principles established by the WSIS;
- Implementation of the WSIS goals, principles and action plans for the establishment of an inclusive, people centered and development oriented information society;
- Continuation of the current roles of the private sector and civil society in the technical management and operation of the Internet;
- Continued stable and safe functioning of the Internet;
- Strengthened support for issues requiring national Government involvement for their successful implementation e.g. capacity building, multilingualism.

INTERNATIONALIZED OVERSIGHT OF INTERNET RESOURCE MANAGEMENT

Qiheng Hu

The World Summit on the Information Society (WSIS) Geneva Phase meetings in 2003 focused world attention on global Internet governance issue, and especially related public policy issues. With the broad participation of the Governments, United Nations bodies, international organizations, private sector and civil society, all stakeholders reached an initial consensus on the principles, objectives of Internet governance. In addition, they deepened their understanding of the roles played by all actors in the Internet governance process. Based on the strong recommendation of the United Nations Member States, Secretary-General Kofi Anan established the Working Group on Internet Governance (WGIG) to undertake further studies on Internet governance issues. The contribution of WSIS with regard to Internet governance is extensive and historic, for at least two reasons.

First, it appears that through the WSIS process and WGIG study, the technological, structural and cultural features of Internet governance have been widely recognized and accepted among the major stakeholders in the Internet society. Second, considerable consensus has been achieved on a series of specific major issues. These include the indispensable role of the current "bottom-up" public-private partnership; the importance of respecting the architectural principles of the Internet, the quality and value goodness of the existing governance structures and related institutions, and the need to improve Internet governance on the basis of the existing governance structure and mechanisms rather than to build some mechanism to replace the existing one. At the same time, there is now recognition of the existing weak points and problems hidden in current global Internet governance mechanisms, and of the need for improvements on a comparatively compact set of issues. Furthermore, differences in view points on these issues and the ways to improve them seem to be clearer than ever.

The common understanding of these matters that is reflected in the WGIG Report provides a basis for further discussion and consensus on many complex issues of Internet governance. Looking back to the debates during Geneva WSIS, one could think that the progress made to date is quite encouraging for the long-term, from the Tunisia Summit in November 2005 and beyond.

Internet governance is complex, widespread, distributed and ongoing process. The existing structure is the product of thirty years of evolution that has accompanied the great practice of the Internet with the participation of multiple stakeholders worldwide. It has facilitated the growth of the global Internet. Improvements are not simple and must be taken with care so as

not to disturb all that is good. It is not a simple task to improve it. As if we are facing a complex puzzle game, to improve the mosaic one has to find out first what is really missing.

The Internet has become a pivotal global public infrastructure, penetrating into all aspects of human life, with intricate links to public policies and public interests in each country. Accordingly, Internet resources have become global strategic resources that are tightly knit with state sovereignty and public security. Efforts to provide possible solutions to public policy issues in relation to the Internet applications also need to be built on effective Internet resource management. Therefore, the management of Internet resources is not simply a matter of technological coordination, but also carries with it important public policy issues. For this reason the basic structure supporting decision-making should be internationally recognized, authoritative, effective and clearly mandated. The management of Internet resources and related mechanisms, practices and procedures should be clearly set up with a view to addressing issues that are either in existence at present and likely to occur in the future. That is why the issue of Internet resource management has been a high priority and major focus for WGIG to study.

Requirements for Further Evolution

The Internet in its evolution has undergone "bottom-up" technological innovations, business innovations and standard definitions involving broad participation with the US Government playing a profound and promoting role in the whole process especially in the initial stage, creating an open and transparent participatory system designed to take into account the needs and interests of both the private sector and civil society. Most of the prevailing Internet-related standards and rules are derivatives of such a "bottom-up" "consensus-building" mechanism. Behind the explosive growth of the Internet, such a mechanism has served as an instrumental driving force as it stresses the roles of civil societies and the private sector. It also emphasizes the effectiveness of rules and an equal sharing of cyber information by all. This is the most valuable “Internet Culture” that provides an encouraging and stimulating environment for the fostering of innovation in technology and business and further serves as the essential source of the dramatic development of the worldwide Internet.

Nevertheless, with the growth of the Internet and its transition into a key element of the global information infrastructure, certain shortcomings lurking in its operational and management mechanisms are gradually appearing:

Different countries/regions and different groups have varying rates of economic development, language backgrounds and cultures, resulting in *de facto* inequalities in terms of timely understanding of policies and regulations related to the Internet. They also have varying capacities to participate in and oversee the rule-making and related processes in the existing

model of Internet mechanism. Therefore, the involvement of developing countries in making international public policies related to the Internet falls short of the scale at which these societies use and rely on the Internet. Over the years this situation resulted in some prevalent Internet rules and regulations which do not and cannot fully reflect broader public interests of the worldwide community and especially the interests of groups that have limited or no Internet access, or groups that lag far behind developed countries in their Internet construction capabilities.

Internet resources have become global public resources critical to the safety and interests of all countries. Therefore, given the global nature of Internet resources and for the sake of reflecting the principle of equal participation, it is no longer appropriate for the Internet Corporation for Assigned Names and Numbers (ICANN) to follow an approach in which it is empowered by a single Government for specific operations and decision-making, especially for certain critical resource management issues.

Due to the lack of empowerment from Governments other than the US, weaknesses like low efficiencies and poor decision-making capabilities are apparent in the handling of many public policy issues that require strengthened cross-border coordination. One case in point is Internationalized Domain Names (IDN), which is still a pending issue after several years of discussion and is without any effective decision in sight in spite of years of efforts and attempts to have international policy coordination on this front. Meanwhile, because other countries are unable to partake in decision-making for the formidable Internet this naturally gives rise to misgivings in some of those countries, which in turn, to some extent, restrict the applications of the Internet (e.g., applications of high security requirements) in those countries. All this has, to a certain extent, constrained the development of the Internet.

In the ICANN decision-making process there is extremely low Government participation. This feature has its advantages and disadvantages. On the negative side, for some issues concerning public interests, ICANN cannot help being biased to unduly favor the private sectors. For example, the process of adding new Generic Top Level Domains (gTLDs) was not transparent enough, and the decision-making for it was not scientifically justified. This meant that, although it benefited the private sector it was not possible for the general public to express its needs through the voice of their Governments and, therefore, not possible for the general public to benefit from it in a real sense.

According to the ICANN mandate, ICANN is neither a policy-maker nor an international coordinator. It is restricted to remaining a small private corporate body with responsibility for technical coordination functions to keep the Internet operating steadily. However, since there is no international mechanism or body accredited by all countries designed to take charge of authorizations and global public policy-making in this field, ICANN by default has had to step

beyond its mandate to be saddled with such responsibilities. These responsibilities include providing international coordination, management and a decision-making mechanism for important Internet matters which affect public policies. Such a contradiction between ICANN's positioning and its mandates does not foster the expansion of Internet across the globe.

The wide application of the Internet has caused or exacerbated new cross-border tensions. Some of these include individual privacy rights versus social openness; information security versus information freedom; information sharing versus IPR protection; as well as the head-on collision between cultures; cross-border hacker attacks, computer viruses, harmful web information, cyber crimes etc. These tensions impact peace and social security, and increase the global digital divide and intensify conflicts and contradictions brought about by the unbalanced world development. All these indicate that the Internet at present is more acutely in need of strengthened international coordination and cooperation than ever, which is the one and only way which can lead toward practical and effective solutions to these complex public policy issues.

A private body like ICANN that is only empowered by a single Government cannot possess the breadth or sense of legitimacy necessary to carry out all of the functions listed above. Therefore, the continued absence of a legitimately empowered internationalized mechanism capable of effective decision-making is likely to severely impede the sense of safety, and stability associated with the Internet and impact further development of the Internet.

WSIS: An Opportunity for a Timely Improvement

WSIS has provided an important opportunity for rectifying the weaknesses hidden in the current Global Internet governance Mechanism. The 2003 Geneva Summit's Declaration of Principles and Plan of Action demonstrate a shared belief by the international community that the Internet has become a mighty tool for safeguarding world peace, reducing poverty and relieving backwardness as well as promoting common prosperity and progress in the world. The United Nations and all Governments are required, obligated and entitled to be involved in the management of Internet at the decision-making level in such fields as the making of international public policies, resource management and international coordination and collaboration, and they should join hands with all stakeholders to guarantee a further prosperous and securely sustainable, universal Internet. WGIG was responsible for taking hold of the opportunities offered by WSIS, recognizing existing problems hidden in the Internet governance mechanisms, and presenting effective recommendations for their reasonable improvement.

The development of the Internet should incorporate the routine participation of multiple stakeholders. Currently, all stakeholders including Governments, intergovernmental organizations, international organizations, private sectors and civil societies are broadly represented in the public policy field. This participation by all actors should be guaranteed in the future through any improved global Internet governance mechanism.

Considering the breadth and depth of the Internet's reach as well as its pivotal role in the information society, public policies for global Internet governance should not only take account of the interests of the Internet community, but also the needs of communities that are still outside the Internet or have only limited access. Naturally, the most legitimate representatives of the public interests at present are each Government and by the United Nations, acting as the most authoritative and widely-representative intergovernmental organization recognized by all nations. It can provide a proper platform to settle issues of public policies concerning global Internet governance.

Multilateralism is the Key

As to the management of Internet resources in particular, this is an issue of great significance to the development and security of the Internet. Due to historical reasons, there has been no globally authoritative body in charge of decision-making related to Internet resource management where the globally authoritative body had broad participation by all countries. Instead, the US Department of Commerce just approves changes to the root zone file. Over many years it has never proposed changes on its own, and so far it has never refused a recommendation from the Internet Assigned Numbers Authority (IANA) for a change. In this case, why this issue is considered so important? Why not just leave it to the US Government for the future period?

The core issue concerning Internet resource management that really needs oversight from outside the whole system of management---namely the centralized review and final approval of requests for additions, deletions or modifications to the root zone file record by an authoritative body---is a "thousands tons hanging on a thread" kind of issue. Approved changes are first applied to the "Distribution Master Server", and then automatically propagated throughout the root server system and mirror servers distributed worldwide. According to US law, the single Government that is holding this function is empowered to change the root zone file record. That is why many Governments, as the most responsible body vis-à-vis their citizens, are worried and focused on this tiny piece in the complicated system of Internet governance. While there are many Governments having substantial concern about the safety and security for their citizens, the potential threat to the universality of the Internet speaks for itself.

For a universally accessible, stable and robust Internet, we cannot avoid focusing on this small piece of centralized empowerment. If the Government of the very country that originally created, nurtured and shared the Internet with its neighbors in the global village, with an excellent historical record for management of the Internet during the past 30 years, still cannot make all countries feel comfortable about the unilateral management of the root zone file changes, it is obvious that this issue cannot be passed over without extensive thought. To deal with the core function in global Internet governance by relying solely on "trust" or a "guess" that "the single Government would not do any harm to the universal Internet" seems far from satisfactory. All sovereign states in the world would believe that their citizens' interests are appropriately protected only when there is basis in international law. It thus is quite clear that "multilateralism" is very missing piece in the puzzle.

The Need for an Intergovernmental Oversight Institution

In its Report, "The WGIG recognized that any organizational form for the governance function/oversight function should adhere to the following principles:

- No single Government should have a pre-eminent role in relation to international Internet governance.
- The organizational form for the governance function will be multilateral, transparent and democratic, with the full involvement of Governments, private sector, civil society and international organizations.
- The organizational form for the governance function will involve all stakeholders and relevant intergovernmental and international organizations within their respective roles."

These principles are in line with the spirit of WSIS and provide a basis for achieving worldwide consensus on this issue. One of the four models suggested in the Report calls for the establishment of a Global Internet Council (GIC). In this approach, the role and position of the US Department of Commerce would be replaced by an intergovernmental mechanism under the framework of the United Nations. That is to say, the Governments of all sovereign states together with the US Government would bear the responsibility of the management of Internet resources and public policy setting, with extensive involvement of private sector and civil society. Thus, it is suggested to expand the body that empowers ICANN, from the US Department of Commerce only, to an integrated body including all Governments.

This reform would not do any harm to the normal operation and functioning of the Internet. For example, the specific task of allocating and managing Internet resources, such as IP address allocation and domain name assignment, would still be executed by the institutional system with ICANN as the umbrella, but it does not mean that ICANN would not "root-and-branch" reforms gradually. The above-mentioned intergovernmental mechanism under the

framework of the United Nations should clearly define the responsibilities and obligations with ICANN through a Memorandum of Understanding or a contract.

Transparency is the Key

This is reasonable solution. Only under such a framework could all sovereign states feel that they are not being treated unevenly in comparison with the single country that holds the oversight function. Under such a scheme, all Governments hold the function of authorization to ICANN, which would be always accountable to the international society. Nevertheless, there is some concern that this new institution would gradually grow into a new bureaucracy and would interfere in many issues that do not need political interference at all. For example, how would one suggest that there is assurance that a multi-governmental oversight activity does not turn into a top-down policy making apparatus? If a group of Government representatives takes up the function carried out today by the US Department of Commerce, would they continue to treat the Internet and root zone policy as a "bottom-up" process? How would it be possible to avoid the politicization of the decisions of the new multi-governmental institution? When Governments get involved, external factors often enter into positions and decisions taken, and, Government control of the process may slow the innovation and evolution that has characterized the Internet to date, etc.

A number of tools could be employed to ensure that an international oversight institute does not "over perform" its duty. First, there should be international regulation defining what is in and what is beyond the scope of this GIC. In this regulation, all characteristic features that have guided the successful practice of global Internet growth should be stated and agreed upon by the international society, e.g. the Internet and root zone policy can only be a bottom-up process, the oversight institute has no right to make decision on issues which have not been discussed in the bottom-up process and have no consensus, etc.. The globally agreed regulation would make the process adequately transparent and open, putting it under the supervision of the international society.

Second, the existing institutions would resist any excessive political interference, if any should arise, from the GIC. Third, in case of anything really serious happening, it is always possible to put the matter on the table of United Nations to be discussed openly in the international society forum. As for the technical innovation and evolution processes that have characterized the Internet to date, it seems beyond the scope of this oversight function. Furthermore, such a framework would encourage all root server operators of ccTLDs to establish formal obligatory relations with ICANN, thus to make the root server system more robust and reliable, which would be greatly beneficial to the global security of Internet.

Conclusion

In my personal view, this would be the workable solution that does not require big changes in current Internet governance mechanisms. The model proposed here would protect and improve the continuing existence of the universally accessible, robust and reliable Internet in our life.

A SCENARIO FOR A NEW INTERNET GOVERNANCE

Carlos Afonso

This chapter is an exercise which seeks to derive a more decentralized organization from the only currently working structure specifically created for Internet governance – what I call here the Internet Corporation for Assigned Names and Numbers (ICANN) System, which involves ICANN and its supporting organizations, as well as the Number Resource Organization (NRO) and the Regional Internet Registries (RIRs). The chapter envisions governments moving from an advisory to an oversight role in a multistakeholder coordination and oversight body. As to root server management, the proposal calls for joint management of a single root system by a new ICANN and a new Country Code Names Supporting Organization (ccNSO).

Principles and Requirements

This proposal is based on the following definitions and principles:

1. The Internet currently is the global set of computer networks interconnected through IP-based data transfer and addressing protocols, a standardized packet addressing and routing scheme with globally unique addresses based on a centralized set of root servers and zone files, as well as other common information exchange protocols.
2. Internet governance is the set of Internet coordination and management activities based on standards, rules, procedures, recommendations, and global agreements.
3. Internet governance's mission involves, equally, the stable and secure operation and continuing evolution and widening deployment of the Internet in a free, safe and open development environment.
4. Internet governance should be multistakeholder in scope, with the participation of governments, private sector, civil society, academic and international organizations, including democratic, multilateral, and transparent decision-making.

While scenarios, depending on the qualifications of the proponent, might involve any number of Working Group on Internet Governance's (WGIG) long list of issues, the scenario advanced here pertains to four central needs of worldwide Internet governance:

1. management of domain names, IP numbers and protocols, today under the coordination of the Internet Corporation for Assigned Names and Numbers (ICANN)[1];
2. planning and standardization of regional and international interconnection (transit and peering);
3. establishment of standards or consensus recommendations for inter-country interconnection cost apportionment;
4. funding for self-sustainable operation and development of the global Internet governance system.

Choice of these components does not mean they are more or less important than others, nor that other components could or could not be also handled within the proposed institutional scenario. On the other hand, these seem to be key issues which are centrally brought to the fore in the discussions regarding a new institutional structure for Internet governance.

Only for the first need is there a functioning structure. This structure, with ICANN at the top, is the object of intense debate driven by strongly divergent opinions regarding the effectiveness of its representation, participation, and autonomy, as well as its dubious international nature. This proposal tries to present one of the possible scenarios of change, in which ICANN decentralizes part of its attributions and formalizes at the same time its status as a *real* international or global organization. In other words, the idea is to decentralize functions derived from the above needs into a group of coordinated international organizations.

As a result, three organizations would share responsibilities for requirements [1] and [2] above, and provide support for need [3]: the new ICANN, for the root system, protocols, and generic Top Level Domains (gTLDs); the new ccNSO for the root system and country code Top Level Domains (ccTLDs); and the new NRO for Internet Protocol (IP) addresses. These three organizations would be under a global oversight and coordination Council, as described below. The entire system would be funded from a global cost apportionment schema in which every country connected to the Internet and every registry selling domains on a commercial basis would be contributors.

Other scenarios have been proposed. These range from "do not fix what is not broken," an earlier favorite argument of ICANN and some other relevant stakeholders, which has since

[1] As Paul Wilson explains in a personal e-mail exchange, "actually, ICANN acts only as a central authority for a limited set of functions, and is not responsible for all aspects. As is well known, ccTLDs make their own policies autonomously, and so do RIRs. Also, ICANN's responsibilities in each area are very specific – for instance, in the DNS world, there is no equivalent to the process of IP address allocation; while in the IP address world, there is no equivalent to the process of delegating a cc- or gTLD. The limits of ICANN's authority are also specific. In the case of RIRs, ICANN has no authority to deregister an RIR, to deny IP address space requests, or to change RIR policies."

been revised; to the other extreme, namely drop the ICANN-based system and transfer all its attributions to a United Nations body, specifically the International Telecommunication Union (ITU). Given an abundant list of intensely debated and broadly demonstrated arguments in various spaces of the Internet governance debate, none of these extremes is viable. The scenario described below refers only to the main institutions involved, and does not enter into deeper details regarding the many forms of relationship and roles of various other existing institutions related to the three above mentioned needs of governance.

Considering the new qualities attributed in the following scenario to the organizations involved, it will become obvious that there might be changes of names, a move which I do not dare to propose here.

This chapter does not deal with a major difficulty that would be encountered, namely describing the complex path from the current structure to the proposed scenario. Some crucial issues would have to be dealt with, including:

- What would be the precise form of organization?
- How would participation of all stakeholders be carried out?
- What would be the decision-making processes and authoritative delegations?
- With which golden rules / protective clauses would the governance system operate? Under which Statement of Principles?

A New ICANN

In this scenario, ICANN would become effectively an international organization, independent from the United Nations system; some observers prefer to call such a non-United Nations form a "global organization." It would be headquartered in the United States, and would have similar immunity privileges as any international organization, and legal autonomy from US local, state and federal laws according to the standard practice for hosting this type of organization.[2]

The new ICANN's Council would be far more democratic than it is today. Representation would equally include the private, civil society, and academic sectors, involving stakeholders of

2 As Jovan Kurbalija describes in a personal e-mail, "there is a corpus of law that regulates relations between international organizations and host countries, which includes host state agreements (more frequently referred to as headquarters agreements) and a few conventions, including: the Convention on United Nations Privileges and Immunities (1946) and the Vienna Convention on Representation of States with International Organizations (1975)." It is understood, however, given recent history and political circumstances, that turning ICANN into a true international organization within the USA might be a difficult task to achieve (the United Nations itself is at times subject to constraints derived from the host country's reasons of State).

as many countries as possible. Since this representation on a one-to-one basis would be impossible to manage and very ineffective---we would be talking about a council with several hundred people---a regionalized balloting scheme for each interest group, in which every country in each region would be represented in an electoral committee on an equal basis, could provide a viable solution. Additionally, international organizations directly related to Internet and telecommunications infrastructure (like the ITU) would name representatives to the new ICANN's Council.

Executive management of the new ICANN would be chosen by indication and nomination through open voting of its Council members, in a configuration which guarantees representation of all stakeholders also in the executive structure. This could be done without compromising administrative efficiency, and the current ICANN Nominating Committees would cease to exist.

A New ccNSO

In this scenario, the ccNSO would no longer be a supporting organization under ICANN. It would become another international organization, also independent from the United Nations, headquartered outside of the USA, with the function of coordinating ccTLDs. The new ccNSO's institutional structure would follow the same logic of multilateral, multistakeholder, democratic and transparent participation as the new ICANN. Thus the new ICANN would directly handle only generic domain names, sponsored or un-sponsored.

Hopefully this new ccNSO could also help to stimulate more countries to treat their ccTLDs as their true country identities on the Internet. This would be must better than just giving their ccTLDs away as commodities to be marketed like gTLDs to any buyer anywhere. In some cases this commoditization of ccTLDs has contributed to make them very vulnerable to spam gangs, resulting in blacklisting to the point of temporarily isolating entire ccTLDs from the Internet.

Managing the Root System

Unlike today, the new ICANN and the new ccNSO would assume full joint responsibility for managing the root system, including the servers and database. Ideally it would be located in a physical place as neutral as possible without sacrificing stable and secure operation in any way. This includes full transfer of authority from the US government to the new ICANN and the new ccNSO regarding changes to the root zone file.

The new ICANN would no longer handle ccTLD coordination in any way. The new ccNSO would be fully responsible for any changes in the root system pertaining to ccTLDs.

Worldwide governance should not mean freezing the system in its current technical architecture, precluding its evolution, so these arrangements might change in the future.[3]

Earlier versions of this chapter explored the technical viability of "splitting the root" in two, with one piece under the new ICANN and the other under the new ccNSO.[4] However, inherent vulnerabilities of the current DNS system, which is demonstrably quite unsafe, and the coming upgrading to DNSSec to overcome most of these faults--- which will increase DNS traffic and load on the DN servers---seem to indicate that the best scenario would continue to be the joint management of a single root system by the new ICANN and the new ccNSO. Additionally, management of the 13 main servers in root system would no longer be done on a voluntary basis, but would be a matter of a contract between server operators, the new ICANN and the new ccNSO, so as to reinforce operational accountability.

A New NRO

The NRO is the most recently created organization within the current governance system for naming and numbering. It was specifically conceived to coordinate worldwide distribution of IP numbers.[5] In this scenario, the new NRO is a third international organization exclusively dedicated to coordinating distribution of IP numbers. The corresponding Internet Assigned Numbers Authority (IANA) function would be absorbed by the new NRO. The RIRs would be formalized as regional organizations of the new NRO. If the need arises for new IP number distribution organizations to be established besides the current five RIRs[6], these would also be

[3] Milton Mueller argues: "I would urge the elimination of any statement that implies that users should be required to point to an "authoritative" root. First, it violates a foundational principle of the Internet, which is that the Internet is a collection of private networks that choose to interconnect (or not) with each other. Furthermore, any attempt to designate and make mandatory an authoritative root would risk interfering with innovation in Internet naming technology. It would not be easy or unambiguous to define what "pointing to the authoritative root" means in legal terms without unintended consequences. Such a definition would have to careful not to outlaw technologies that might enhance the Internet, such as content distribution networks, keyword systems, or private name spaces." (Comment to WGIG issue papers, in *http://www.wgig.org/docs/Mueller-CommentRS.doc*)

[4] Karl Auerbach, in a comment to WGIG issue papers, points out that usually there is an "...unquestioning acceptance of the technological status quo as if it were a limitation of what could be in the future. For example, one paper blindly accepts the very unproven assertion that there may be but one DNS root as if that were fact despite years of continuous successful actual operational experience to the contrary." (*http://www.wgig.org/docs/Comment-Auerbach.pdf*)

[5] NRO is a formal coalition of all the RIRs, and it exists to carry out joint activities assigned to it by the RIRs. It exists independently from ICANN, but it has signed a Memo of Understanding with ICANN to form the ASO in order to carry out global IP address policy development. If ICANN dissolves or the ASO MoU ends, the NRO would continue to operate.

[6] For example, if the ITU itself could have use for a sufficiently large block of addresses to cover the needs of the entire United Nations system, it could become one such distributor.

under NRO's coordination. The NRO and RIRs would also follow the same logic of multilateral, multistakeholder, democratic and transparent participation as the new ICANN.

Thus far, there are only seven National Internet Registries (NIRs). These NIRs---in Brazil, Japan, Mexico, and elsewhere---would function in direct relationship with the corresponding RIRs, just as today. As the NIRs may be run by the ccTLD registry in each country, they might also be directly related to the new ccNSO. However, since most countries have chosen not to organize NIRs, or have not yet chosen to organize RIRs, other arrangements need to be in place to ensure every country's participation on equal footing through the corresponding RIRs in their regions.

The Internet Engineering Task Force (IETF) and other technical standards organizations would directly relate to the new ICANN. However, they would continue to work in the same manner as they do today, always emphasizing broad participation as much as possible and also relating closely to the other two international bodies.

Strategic Coordination and Oversight: the IICEC

The new ICANN, new ccNSO and new NRO would jointly form an International Internet Coordination and Evaluation Council (IICEC), with representation of the corresponding councils and executive management structures. The IICEC would be where governments are represented; ICANN's current Government Advisory Committee (GAC) would cease to exist. However, this representation would be construed in such way as to guarantee equal representation from all stakeholders, since governments would coexist on an equal decision-making basis with councilors appointed by the new ICANN, ccNSO, and NRO. A rotating form of regional and stakeholder representation could be devised to make sure total numbers of representatives of any sector are not too large.

Two alternatives for United Nations involvement in the IICEC could be envisioned:

1. The United Nations participates directly and is represented by the General Secretariat, and by a number of "tier-1" organizations and specialized agencies of the United Nations system, obviously including at least the ITU, United Nations Development Programme (UNDP), and the United Nations Economic, Social, and Cultural Organization (UNESCO).
2. The United Nations has sixteen specialized agencies, like the World Intellectual Property Organization (WIPO) and so on, which generally have not been characterized by transparency and inclusive participation. Could the IICEC become a new specialized agency in which multistakeholder participation and adequate autonomy from the United Nations system is ensured?

Civil Society Representation

Civil society participation in Internet governance is a key concern and long-running topic of discussion. The scenario posed here envisions that civil society representation would be based on organizations---local, national, regional, thematic, sectoral, membership-based, etc—rather than on individual users. The individual user of the Internet is an unclassifiable category, involving everyone from everywhere, from a kid using a community telecenter to Vint Cerf. Being so broad, the category is easily manipulated in terms of promoting representative voting processes. Even the so-called "netizen" ---understood as the more "militant" or "proactive" Internet users---represents a universe of highly diverse opinions on any issue, therefore not making, for representation purposes, this group any different from any other Internet user eventually called to vote on anything. The ICANN election of regional board members, carried out in October, 2000, based on the building of a universal constituency of individual users, without counting on the record of any similar previous experience, was a disaster which hopefully will never be repeated.

One cannot pretend that nation-state logic would not influence the whole process just because the Internet is supposed to be, in our dreams, truly horizontal---with every user equal in her/his capacity to understand the votes being cast and to vote in a safe, free manner, from Saudi Arabia to Canada. By organizing the candidates and voters in five geographic regions, ICANN explicitly introduced geopolitical constraints into what was supposed to be a purely global Internet users' election.[7] It is hard to imagine a viable global Internet users' voting system that would be immune to geopolitical interference and manipulation and would allow fair and representative one-user-one-vote direct elections.

As such, civil society representation in Internet governance structures is best done primarily through or by civil society organizations. As we all know, this is also imperfect, but at least it can be made less vulnerable to the above manipulations. At the very least, it opens up the possibility of an organized defense of principles and goals.

This view has already been considered by ICANN's At-Large Advisory Committee (ALAC), which is now carrying out a trial of a new structure based on membership organizations. This trial will need a thorough, critical evaluation. However, organized civil society participation

[7] Without perfecting the details of introducing regional voting, Brazil, for example, would quite probably win hands down (and this did happen), as it has (and quite possibly will continue to have) nearly half of the users in the region. Several governments got heavily involved in election campaigns, aggravating the geopolitical bias in the process. No provisions were made for rotation or quantitative balancing – countries with smaller Internet user populations could never get to elect regional board members, and so on. Finally, system and execution errors had put ICANN in a demoralizing situation. One cannot imagine how an institution which such a responsibility could carry out an election of that importance without making sure every technical or procedural aspect was covered beforehand.

ought to go further than the space ALAC or ICANN's Non-Commercial User Constituency (NCUC) currently provide.[8]

Budgetary Considerations

The costs of the proposed institutional structure would be covered by all participating countries, since the obvious counterpart to taking over more responsibility in governance is to be accountable for the self-sufficiency of the governance system. The amount of each country's contribution would be derived from a bandwidth usage apportioning model. One possibility is to derive the quotas from inter-country IP traffic statistics, regularly elaborated by NRO in coordination with the RIRs and, when applicable, the NIRs. Alternatively, international arrangements could be made to involve the ITU, in coordination with the NRO, to develop and maintain such statistics.

The inherent measurement difficulties here ought to be acknowledged, as many autonomous systems connect on their own to counterparts abroad in one-to-one traffic exchange contracts, since in most areas an optimized regional Internet Exchange Point (IXPs) is not prevalent or does not exist. Additionally, all for-profit registries, whether they are selling gTLDs or ccTLDs, would annually disburse a percentage of their gross income to contribute to cover the costs of this governance structure.

Towards Equitable Interconnection Charges

The new NRO, on a global basis, and the ITU in coordination with the RIRs in their regions, could take on the responsibility for monitoring and quantifying inter-country and inter-regional IP traffic, thus providing support to strategic planning of the regional structures of IXPs. Data gathered by that monitoring would feed a dynamic cost-sharing model of IP traffic among countries, to be built and maintained by consensus under the coordination of IICEC. It is understood that a lot of work still needs to be done here regarding the details of appropriate models that enable equitable cost apportioning. Propositions such as ITU's Recommendation D.50 on interconnection cost allocations just scratch the surface of this complex issue, although it is a welcome initiative in a field in which other players have begun to contribute with relevant proposals.

[8] One interesting development could be the constitution of a global organized registrant's association – a consumers' association consisting of holders of domain names, which would sit at the board of the new organizations. This would bring a bit of balance to the situation created by the unfortunate idea and initiative of converting domain names into commodities.

Preliminary Outline of the New Institutional Relationships

A simple and very incomplete graph of the proposed new structure is presented below.

A Comparison: The Brazilian Proposal

The process leading to the second phase of the World Summit on Information Society (WSIS) has set as one of its top priorities the formulation of a new global Internet governance mechanism. Among developing countries Brazil has been one of the most outspoken regarding the need for broad debate on the future of global Internet governance, and was one of the leading nations in the WSIS process that resulted in the formation of the Working Group on Internet Governance (WGIG).

The Brazilian government continues to seek a national consensus proposal regarding the future of global Internet governance. This is part of a broader multistakeholder initiative to establish consensus positions for the main themes of the WSIS. Brazil derives its global proposal from its national policy, which is based on the Internet Steering Committee in Brazil (CGIbr).[9]

An Interministerial Group on the Information Society ("Grupo Interministerial da Sociedade da Informação", GISI) has been established for this purpose, with representatives of several federal government ministries, private business, civil society organizations, and academic entities, under the coordination of the Ministry of Foreign Relations. GISI carries out periodic open meetings in Brasília to provide an opportunity for broad participation in the policy

[9] A description of the Brazilian governance mechanism is in Carlos A. Afonso, ".br – ccTLD as Asset of the Commons," in Don MacLean (ed.), *Internet Governance: A Grand Collaboration*, United Nations ICT Task Force, New York: 2004.

formation discussions. A GISI subgroup on Internet governance, working together with the Internet Governance Subcommittee of Brazil's Internet Steering Committee, has produced what is now being accepted as the Brazilian government's official position on the issue.

Brazil has been one of the first countries in the WSIS process to insist on the importance of considering a number of themes well beyond the mandate of ICANN in a future global Internet governance arrangement. The mechanism being proposed by Brazil bears strong similarities with the scenario presented above. The Brazilian vision involves the need to create an international and multi-institutional structure to encompass advice, conflict resolution and oversight on a broad set of governance themes, with "adequate" representation of all interest groups. Such a structure would be pluralist (multistakeholder), transparent, democratic and multilateral.

Based on the experience of its own internal arrangement for Internet governance, Brazil envisions four interest groups participating in a global mechanism:

- national governments
- business associations
- non-profit, non-business organizations
- academic/technical community

The last two sectors should be represented by civil society organizations or associations. The reason to keep these two sectors separate is to make sure there will always be representatives from the academic/technical community as well as from non-profit, non-business organizations, whichever election/selection mechanism chooses representatives, even though they may be viewed as part of the non-profit civil society organizations' realm. The CSIGC has not been able so far to establish a consensus view on this representation structure. While most agree with Brazil that academic associations are part of civil society, there is disagreement regarding their specific representation in a new global framework.

Brazil also agrees with the WGIG in proposing a global Forum for Internet governance. However, the WGIG Report presents four models for a global mechanism and in all of them the establishment of a pluralist forum is contemplated, but relegated to an advisory role only. The Brazilian proposal extends the scope of the Forum to include coordination/oversight functions, thus proposing a single pluralist body for all governance functions.

In Brazil's scenario, ICANN--reorganized as a true global organism, independent from any country and retaining its logical infrastructure governance functions---as well as any other future Internet governance mechanisms, would be under the coordination/oversight of the global Forum. The CSIGC tends to favor an advisory Forum as a starting point, derived from the WGIG Report's Model 2. The Forum would progress to become a global, authoritative

reference on Internet governance. In this way, the CSIGC proposal can be considered a subset of Brazil's proposal, as will be described below.

Brazil has detailed several aspects of its version of the global Forum, which its calls the Global Internet Governance Coordination Forum (GIGCF). The GIGCF would be autonomous and independent as regards any national government or intergovernmental organization. Brazil agrees that a formal link to the United Nations needs to be established in such a way that does not impair the four principles for process and participation---multilateralism, democracy, transparency and pluralism.

Some of the basic assumptions for the creation of the GIGCF, according to Brazil, are:

- Existing institutions which are involved in Internet governance must adapt to the above four principles.
- The GIGCF's working agenda should be broad and include all aspects of Internet governance.
- The GIGCF's structure should include an intergovernmental decision-making instance dealing with Internet governance aspects which impact on national policies.
- The GIGCF's implementation must be carried out in such a way to ensure stability and continuous development of the Internet.
- The governance model adopted in Brazil could serve as a reference to build the GIGCF, as well as to establish cooperation and exchange of experiences in structuring national governance models, in such a way as to facilitate participation of the national communities in the global Forum.

The last assumption refers to paragraph 73(b) of the WGIG Report, which recommends, "that coordination be established among all stakeholders at the national level and a multi-stakeholder national Internet governance steering committee or similar body be set up." The WGIG does not go as far as recommending explicitly the governance mechanism adopted in Brazil. The Brazilian model would conflict with national policies adopted in several countries, some of which have simply contracted a commercial incumbent to sell their ccTLDs in the world market, but suggests steps be taken in a similar direction.

Details of the Brazilian Proposal

As mentioned, beyond the models presented in the WGIG Report, Brazil suggests the creation of a single body with multiple functions, and which should as a whole be multistakeholder, democratic, transparent, and multilateral---the meaning of these features basically coincides with the WGIG's vision. Although the details of the Brazilian position are still being discussed, consensus is being reached around a fourteen-point proposal regarding the GIGCF. Each of these is listed below.

1. The GIGCF should be a global space for coordination and discussion of all governance issues, as well as to support development of global policies for the Internet.

The GIGCF is seen as a policy formulator operating, depending on the issue, in advisory, authoritative, coordination, oversight, and/or arbitration roles. It gets input from already existing technical, regulatory and advisory agencies and organizations, and is regarded by these entities as authoritative on Internet-related matters pertaining to their fields of activity.

This point shows there is a lot of work to be done in establishing precise roles and specific mechanisms (including delegation of roles to organizations either existing or to be created) at different levels and instances of oversight, regulation, arbitration and so on.

2. The GIGCF should coordinate a broad spectrum of governance activities.

This point is singled out to emphasize the importance of an overall mechanism in response to the non-existence of a governance instance consolidating all Internet-related issues.

3. The GIGCF should be pluralist or multistakeholder.

The Brazilian vision here is similar to the one adopted for its national governance body. The way it envisions national governments' participation is described in the next point.

4. The GIGCF should include an intergovernmental mechanism through which governments exert their responsibilities regarding Internet-related aspects of public policy.

This is one of the most relevant topics in the Brazilian proposal, and depending on the way it is presented it raises some controversy, particularly from the camp that wants to extend the ICANN model to all aspects of global governance. Brazil wants a Forum with full participation of all sectors in the building of recommendations and definitions of policies and international agreements. However, recommendations or regulations which are seen by governments to have implications in national public policy should be considered by the GIGCF's intergovernmental instance before any approval, following a clearly established procedure. Contrary to certain declarations or interpretations, there is no mention of the ITU or any other existing body as a replacement for ICANN in the governance of the logical infrastructure.

Of practical relevance is the fact that Brazil does not see the intergovernmental component of the GIGCF discussing and deliberating on all issues as a separate body. Rather it envisions representatives of the intergovernmental component participating in the overall processes of the Forum, which would remit to it the policy-related issues only.

5. The GIGCF, and any global governance mechanism, should not be under the jurisdiction of any specific country.

This is the expression of the WGIG Report's paragraph 48, which states:

The WGIG recognized that any organizational form for the governance function/oversight function should adhere to the following principles:

- No single Government should have a pre-eminent role in relation to international Internet governance.
- The organizational form for the governance function will be multilateral, transparent and democratic, with the full involvement of Governments, private sector, civil society and international organizations.
- The organizational form for the governance function will involve all stakeholders and relevant intergovernmental and international organizations within their respective roles.

In addition, Brazil sees the GIGCF as an international organism formally recognized by the United Nations, and legitimized by a specific international treaty. The CSIGC also agrees to a formal relationship with the United Nations, preferably directly with the Secretariat-General, the terms of which need to be defined.

6. The GIGCF should work for the global public interest.

This raises in particular arbitration issues (how to prevent or circumvent impasses resulting from national conflicts of interest which might block processes) and balanced participation issues (how to ensure developed and developing countries, private and public interests, commercial and non-commercial interests are equally represented).

7. The GIGCF should abide by the criteria of transparency, democracy and multilateralism.

These are aspects already expressed in the WSIS Geneva resolutions.

8. Each one of the representatives of the four interest groups---governments, business associations, non-profit non-business organizations, and academic/technical associations---ought to establish clear accountability rules regarding their constituencies.

Brazil emphasizes two particular issues in this regard: how to select and ensure global accountability of the non-governmental representatives and how to ensure qualified participation of the non-governmental sectors from developing countries. This is an explicit concern of the CSIGC as well.

9. Regarding existing global organizations dealing with specific, Internet-related issues, the Forum function should include coordinating these organizations instead of replacing them.

This is a significant proposition: the approach is to build on existing expertise and organizations, not on starting from scratch, and to consolidate global governance in a coordinated fashion around existing organizations for the functions these are able to carry out, as well as help build new mechanisms when needed for components not yet properly covered. This means relying not only on the capabilities of ICANN, but also on several of the existing United Nations agencies and other technical bodies.

10. The GIGCF should operate with efficacy and practicality to ensure rapid decision-making processes, in keeping with the dynamics of Internet expansion and evolution.

Brazil suggests mechanisms of representation in which the Forum is constituted by a relatively small number of representatives legitimately expressing the interests of all sectors. This requires adequate global procedures and mechanisms to ensure transparent and democracy election and selection processes on a country and regional basis.

11. The GIGCF should be flexible and adaptable to adjust its agenda and processes to the rapid evolution of the Internet.

This emphasizes new issues evolving from deployment of advanced technologies, the consequences of rapid convergence of different media and communications systems to the Internet, and so on. These developments in their turn might require a corresponding evolution in certain forum functions, rules, standards and recommendations.

12. The GIGCF should be able to act as an efficient clearing house collecting needs from the several interest groups and dispatching them (or the resulting resolutions) to the relevant organizations.

Brazil stresses that in this respect the Forum should rely heavily on the latest Internet-based knowledge management technologies, expediting transparency, democratic procedures and the clearing house functions, as well as relying on open online and face-to-face meetings as much as possible.

13. The GIGCF should be authoritative in its capacity to resolve conflicts and coordinate the work of different organizations.

Brazil sees this authoritative capacity defined by one or more international treaties or conventions, as well as specific contracts and memos of understanding.

14. The GIGCF should be self-sustained.

The Forum should be supported by an efficient, lightweight technical/administrative infrastructure. Meetings should as much as possible be online using the best Internet multimedia resources. Many activities would be carried out through specialized working

groups, usually constituted of volunteers compensated for travel and perdiem expenses when needed. These methods should help reduce the operational budget.

Funding for the GIGCF should come from all participating sectors according to their capacities. Ceilings for specific contributions should be established in order to avoid both barriers to entry and hegemonic positions. ICANN is the anti-example for this proposal, as its income comes basically from the major gTLD registries.

DE-MYSTIFICATION OF THE INTERNET ROOT: DO WE NEED GOVERNMENTAL OVERSIGHT?

Wolfgang Kleinwächter

The Internet is a decentralized "network of networks", connected by a joint protocol suite, the Transfer Control Protocol/Internet Protocol (TCP/IP). More than one billion Internet users communicate with each other via a distributed addressing and hierarchical naming system, which gives users identities through unique domain names or an individual e-mail address. The whole system works via decentralized coordination in which many players on many layers work together. The Internet has no center. Each player has a clearly defined but limited decision making capacity. And the Internet works only, if each player fulfills its function. But while the whole "multilayer multiplayer mechanism of communication, coordination and cooperation"[1] is decentralized, the domain name system (DNS) is based on a hierarchy with generic and country code names near the top.

The authorization of modifications, deletions or additions of root zone files in the so-called "Hidden Master" of the Root Server System has become the subject of a political controversy in the last couple of years. This chapter will look into the substance of the controversy and will analyze whether the execution of this function constitutes a privileged power position, which would enable the executer "to control the Internet".

The Development of the DNS

The design of the DNS was inspired by the naming system in the real world, where individuals have a first, middle and family name like "John Fitzgerald Kennedy" or "Michail Sergejevich Gorbatschov". The URL of my home university - www.imv.au.dk – follows this scheme. "IMV" stands for Institut for Informations- og Medievidenskab (Institute for Media and Information Sciences), "AU" stands for Aarhus University and "DK" for Denmark.

Names have to be registered somewhere in the hierarchy. When the fathers of the DNS developed their system, they decided to distribute the "address books" along the lines of the network structure and the names hierarchy.[2] The "address book" of the "family names", called "Top Level Domains" (TLDs), the most important parts of the individual identifier, were

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[1] See: Wolfgang Kleinwaechter, "Internet Co-Governance: Towards a Multilayer, Multiplayer Mechanism of Communication, Coordination and Cooperation," Paper presented at the Internet Governance Consultations, Geneva, September 21, 2004. <http://www.wgig.org/contributions-september.html>

[2] History of the DNS, see: <http://en.wikipedia.org/wiki/DNS>

stored in the rootserver zone file, secondary names (SLDs) in a zone file on a name server managed by the TLD registry, and third level names in the zone file on the chosen server of the registrant of the domain name.

In the case of imv.au.dk – the domain name of my institute at the University of Aarhus - the DNS records that tell DNS software where to find the .dk nameservers is in the rootzone file. The record for the .au part of the name is in the zone file that "resides" on the .dk nameserver. The records for the imv part of the name are in the zone file of the University of Aarhus.

This design of the DNS has made the communication between users fast and efficient. If I want to see the page, ww.wgig.org, (the URL of the Working Group on Internet Governance), my local resolver first determines if the data has been saved locally. If the data is not "cached" locally, my local machine determines if it has the address record for .org. If there is no data available on how to find the authoritative server for .org, then the record that will tell my local machine how to find the .org server must be sought from the root server.

The root server has no knowledge about "wgig.org", but it knows the IP of the nameserver of .org (which is now run by the Public Internet Registry/PIR) and transfers the query to the .org server, which knows certainly "wgig.org". The communication can start. My local machine always knows how to find the root servers. This data is rarely changes and is saved locally.

Each part of a domain name has an own data file. The management of the data files for the names has two components. Somebody has to create and manage the string of characters for the special files. And somebody has to decide that the file should be put into the server. The decision that the "imv"-file should be in the .au name server is done by the administrator of the .au zone. And the .dk Registry decides to put the au-file into the .dk name server.

Normally there is no real decision making involved. Name registration is done "first come, first served" and it is mostly done automatically. When students arrive in our department, they get an e-mail address with their name from imv.au.dk. The head of the department does not "control" the allocation of e-mail addresses to students. Why should he, as long as the technical person responsible for the e-mail addresses acts according to the general technical rules? The same is on the SLD level. The government of Denmark does not decide whether .au should or should not be in the .dk name server. If failures or misuse are happening they can be handled on a case-by-case basis by the relevant authorities. But as long is I can remember no case popped up in our Department. The data files have first of all to be correct and reliable. And they have to be protected against manipulation.

The simplicity of such a distributed system, based on bilateral relationships and developed without any governmental involvement, is part of the strengths of the Internet. Each server has only the knowledge it needs to manage the names under its own authority. But it knows exactly

where to ask if a query arrives for a name outside its own domain. The whole system is based on collaboration of different players on different layers. Each player has an own arena for decision making, no one can decide everything. And the fact, that the system was able to keep path with the explosive growth of Internet communication – within 15 years the number of Internet users grew from one million to one billion – has proven that it is robust, flexible and stable.

The whole chain of the zone file management includes different functions, some of them are purely technical, while others could include a public policy dimension. The relationship among the different players can be described like the interconnection between an "author", a "corrector", a "publisher" and a "printing office". The *author* (in this case the TLD Registry) has the responsibility for the content, the *printing office* (the root server) is responsible that the right content comes to the user. The IANA function[3] includes next to "book-keeping" also the role of a *"corrector"* who has to check text and eliminating spelling mistakes. The critical point, from a public policy perspective, is the *"publisher",* that is the individual/group that decides whether the publication should be published at all (or not). But as said above there is only little to "decide". More important, also from a public policy point of view, could be an "audit function, where an external "*auditor"* checks *post festum,* whether the involved parties has followed the agreed procedures.

Servers can host millions of name files. The name servers of VeriSign, which manages the .com Registry, have to deal with more than 30 million registered secondary names under .com. DENIC, the biggest ccTLD registry, manages more than nine million .de names.

The Authoritative Root

The DNS tree has a lot of branches, but only one root. The address record and the names of the nameservers for the TLDs are stored in the root zone file on the root server. When John Postel and Paul Mockapetris developed the DNS in the 1980s, they decided to start with 243 TLDs with a two character country code (ccTLD) and seven TLDs with a three character generic code (gTLDs). But there was no technical reason for such a limitation. If Postel would have introduced 5000 or 50 000 TLDs this would have worked the same way (and we would have probably today a different kind of discussion).

[3] The so-called IANA function is mainly the maintenance of accurate records of root zone file information, including detailed contact information, as well as the management of request for changes of TLD zone files according to the applicable technical and other requirements so that changes are made in a properly authenticated and timely manner, while ensuring the continued security and stability of the root zone. Relevant reports will be sent to the Department of Commerce for approval.

This system, which is a product of a specific historical development, continues up today. As said above, there is one DNS tree and this tree has only one root. This one root zone file is carried by thirteen root servers named A to M. All root servers have the same knowledge about the address records of the name servers authoritative for all the existing TLDs. 10 root servers are located in the US, two in Europe, one in Asia. This system is called the "authoritative root" or the "legacy root".[4]

Table 1: Root Server Operators in 2000

Name	Organization	City, State/Province	Country	URL
A	Network Solutions, Inc	Herndon, VA	USA	http://www.netsol.com
B	Information Sciences Institute, University of Southern California	Marina Del Rey, CA	USA	http://www.isi.edu
C	PSINet	Herndon, VA	USA	http://www.psi.net
D	University of Maryland	College Park, MD	USA	http://www.umd.edu
E	National Aeronautics and Space Administration	Mountain View, CA	USA	http://www.nasa.gov
F	Internet Software Consortium	Palo Alto, CA	USA	http://www.isc.org
G	Defense Information Systems Agency	Vienna, VA	USA	http://nic.mil
H	Army Research Laboratory	Aberdeen, MD	USA	http://www.arl.mil
I	NORDUNet	Stockholm	Sweden	http://www.nordu.net
J	(TBD)	Herndon, VA	USA	N/A
K	RIPE-NCC	London	UK	http://www.ripe.net
L	(TBD)	Marina Del Rey, CA	USA	N/A
M	WIDE	Tokyo	Japan	http://www.wide.ad.jp

[4] See, "ICP-3: A Unique, Authoritative Root for the DNS," ICANN, July, 9, 2001. **<http://**www.icann.org/icp/icp-3.htm >

Source: David Conrad, Akira Kato, Bill Manning, Root Name Server Year 2000 Status, issued by the DNS Root Server System Advisory Committee, 15 July 1999. <http://www.icann.org/committees/dns-root/y2k-statement.htm>

The A Root server functions as the "Master" of the system.[5] The other root servers - from B to M - mirror the data from the A Root Server several times per day. This mirror system guarantees that a name server can contact each root server and will get the same answer, regardless of where the root server is located. It guarantees further, that there will be no communication breakdown if one or two (or even many) root servers are temporarily out of service. The communication can continue with a few single root servers, although in peak time this could lead to some delays in the range of not more than a second or so.

When the system started in the early 1980s with some thousand users worldwide, it was rather natural that its inventor, Jon Postel, also had the full oversight of the root in his hands. The relationship among the different players, mainly the manager of the name servers, was based on "trust". Jon Postel delegated the authority for the management of a ccTLD very often by a "handshake" or a "phone call" to individuals or institutions, known in the Internet Community as trustworthy. There were no contractual arrangements. Needed technical regulations emerged bottom up, mainly in the IETF, and were fixed in the form of a Request for Comment (RFC).

The Role of the US Government

At the end of the 1980s, when the number of Internet users moved towards the one million mark, the US Department of Defense considered terminating funding the relevant research the US Government encouraged Jon Postel to institutionalize the root management and to share the growing responsibility. In 1991 the Information Science Institute (ISI) of the University of Southern California (USC) in Marina del Rey, where Postel worked, entered into a contract with the US Department of Commerce and they created the "Internet Assigned Numbers Authority" (IANA).

IANA was more or less a "one-man organization" of Mr. Postel. Funding continued via the US National Science Foundation (NSF). Network Solutions Inc. in Herndon/Virginia got a contract from the Department of Commerce to manage the gTLDs Registries for .com, .org, .net and .edu and after the NSF terminated its funding in 1993, the Department of Commerce allowed Network Solutions to charge for the registration of domain names.[6] NSI also overtook the management of the A Root server (Postel managed the B Root Server in Marina del Rey).

[5] In 2003 a new server, the so-called "Hidden Master" was installed which functions now as the master behind the 13 members of the authoritative root server system. The "Hidden Master" is managed by VeriSign on the basis of a contract with the US Department of Commerce.

[6] In 2000 NSI was bought by VeriSign Inc., which overtook also all contractual obligations from NSI.

The contractual relationship was based on a shared responsibility, with the final responsibility in the hands of the Department of Commerce. IANA was responsible for the management of the root zone files, but before modifications, deletions or additions of root zone files, done by IANA in Marina del Rey, entered the A root server in Herndon/Virginia, it had to pass via the "National Telecommunication and Information Administration" (NTIA) of the Department of Commerce in Washington D.C. When files arrived from IANA, NTIA "authorized" the publication and sent the IANA package to NSI. "Authorization" in this case is mainly a final check whether the IANA followed the established procedures.[7]

After the invention of the World Wide Web and the following explosion of the need for domain names, Jon Postel wanted to add 150 more TLDs in the middle of the 1990s. This failed because the concerned parties were unable to agree on a procedure. The Internet was meanwhile too big to leave the decision in the hands of one single person, even if Postel was globally recognized as the trusted "father of the DNS". But the "DNS children" discovered that there was much more than a "technical problem". More and more players realized that there is a "domain name market" with economic and political implications and interests.

Postel's next idea was to bring interested parties, including the International Telecommunication Union (ITU) and the World Intellectual Property Organization (WIPO) together and to create a public-private partnership among governmental, commercial and other institutions, dominated by technical experts, failed. The Clinton Administration stopped the efforts of the "Interim Ad Hoc Committee" (IAHC) to establish a "Memorandum of Understanding for gTLDs" in May 1997 (which included the launch of seven new gTLDs and the move of the A root server to Geneva) and proposed instead the privatization of the DNS management. In the "Global Framework for e-Commerce" released in July 1997, President Clinton and Vice President Al Gore denied a special role for governments in the management of the DNS.[8]

[7] That is the Department of Commerce authorizes the publication of proposed changes in root zone files and associated information, including modifications, additions and deletions to the root zone file or associated information that constitute delegation or re-delegation of top level domains. Actions by the Department of Commerce on delegation and re-delegation requests are made after reviewing reports submitted by IANA. The authorization is done by the National Telecommunication and Information Authority (NTIA) of the US Department of Commerce which verifies, based on a contract with IANA, whether IANA has followed the proper process and decides, whether the approved zone file should be introduced into the database of the Hidden Master.

[8] William Clinton / Al Gore, *A Global Framework for e-Commerce,* July 1997. <http://www.law.berkeley.edu/institutes/bclt/ecom/whyimpt.html>

The Emergence of ICANN

As a result, in October 1998, a private corporation was established and incorporated under Californian law just one week after Jon Postel died. The Internet Corporation for Assigned Names and Numbers (ICANN), headquartered in Postel´s office in Marina del Rey, entered into a Memorandum of Understanding (MoU) with the Department of Commerce and got the mandate to promote, "the global public interest in the operational stability of the Internet by … (iii) performing and overseeing functions development of policies for determining the circumstances under which new top-level domains are added to the DNS root system."[9]

Beside the United States, only few other governments were been involved in the making of ICANN, notably the European Union (EU) and Australia. In particular the EU insisted that the new corporation should be led by a Board of Directors, representing the global Internet community and avoiding dominance by US directors. The EU also supported the concept of "privatization".[10] Other governments, from China to Brazil, did not show any interest in this process at this time. For the involved governments, the establishment of a Governmental Advisory Committee (GAC) was seen as a sufficient channel for communication between the ICANN Board and the national governments.

The MoU from November 1998 did not specify the rights and responsibilities with regard to the root oversight function. These details were regulated in two additional contracts.

a. the Contract Between ICANN and the United States Government for Performance of the IANA Function from February, 9, 2000, which has been modified and amended several times (last version from March, 17, 2003) and
b. the Cooperative Research and Development Agreement (CRADA) between ICANN and US Department of Commerce of 1999, which was amended twice and has no termination clause. This agreement regulates the special treatment of proprietary information and the so-called "CRADA Data".[11] .

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[9] *Articles Of Incorporation Of Internet Corporation For Assigned Names And Numbers,* November 21, 1998. <http://www.icann.org/general/articles.htm>

[10] "Reply Of The European Community And Its Member States To The Us Green Paper," <http://europa.eu.int/ISPO/eif/InternetPoliciesSite/InternetGovernance/MainDocuments/ReplytoUSGreenPaper.html>

[11] CRADA has no fixed date for a termination. Article 11.11 says, that "It is mutually recognized that the duration of this project cannot be rigidly defined in advance, and that the contemplated time periods for various phases of the SoW (Statement of Work) are only good faith guidelines subject to adjustment by mutual agreement to fit circumstances as the SoW proceeds". Article 8, para 2. of CRADA gives the Department of Commerce the right to „terminate this Agreement immediately if direct or indirect control of the Collaborator (ICANN) is transferred to a foreign company or government; or, if Collaborator is already controlled by a foreign company or government, if that control is transferred to another foreign company or government."

Part of this arrangement was that the IANA function was formally integrated into ICANN via a MoU between ICANN and IETF on the technical work of IANA from March, 1, 2000. A special "Root Server System Advisory Committee" (RSSAC) was established which included all the operators of the root servers. After ICANN's reform in 2002, the chair of the RSSAC became a non-voting member of the Board of Directors of ICANN.

ICANN itself started from the very early days to develop a system for the enlargement of the DNS and the management of TLD root zone files. In the year 2000, seven new gTLDs were added to the root. In 2004 ICANN started a process to further the gTLDs namespace. ICANN also managed a number of new or re-delegations for ccTLDs, including .eu (for the European Union), .ps (for Palestine) and .iq (for Iraq).

The original plan of the Clinton Administration was to terminate the MoU after two years and to release ICANN into full independence until November 2000. But this plan did not work out. ICANN as a new corporation did not manage to implement all the tasks laid down in the MoU. In October 2000, the Clinton/Gore administration amended the MoU for another year. But Al Gore lost the 2000 election and a new administration took over.

For the Bush Administration – after the burst of the .com bubble – ICANN was not a high priority issue. More or less the Bush administration continued, on a low level, what the Clinton administration has started. It encouraged ICANN to do its homework and amended the MoU several times. But after the terrorist attacks of September, 11, 2001, ICANN was indirectly affected by the new US security strategy which saw the Internet as part of the critical national infrastructure. For the Bush administration, the stability and the security of the Internet got top priority.

ICANN reacted to this priority shift partly with its reform, which CEO Stuart Lynn started after ICANN's annual meeting in Marina del Rey in December 2001 where a series of consultations with members of the US Congress took place. ICANN completed its reform in 2003 that, *inter alia,* included also a more advanced channel for governmental involvement in ICANN's decision making process, in particular with regard to issues with a public policy component.[12]

In October 2003 the Department of Commerce announced that it will terminate the MoU in 2006 and release ICANN into independence on the condition that the defined objectives are achieved. The statement did not refer explicitly to the IANA-MoU and the CRADA agreement

[12] See: Wolfgang Kleinwächter, "From Self-Governance To Public-Private Partnership: The Changing Role Of Governments In The Management Of The Internet's Core Resources", in: Michael Froomkin ed., *ICANN 2.0: Meet the New Boss, Loyola Law School Review,* 36 (Spring 2003). <http://llr.lls.edu/volumes/v36-issue3/>

and it did also not specify how the authorization function will be handled beyond 2006 in the post MoU phase.

The WSIS Process: From Trust to Treaty?

The DNS and the underlying root server system have worked without any problems for more than twenty years. Nevertheless it became part of a political controversy when the United Nations World Summit on the Information Society (WSIS) started a debate on "Internet governance" in 2002. Some governments argued that the policy behind the technical functioning of the Internet is not in line with the principle of sovereign equality, a principle that is laid down as a *jus cogens* norm of the contemporary international law in the Charter of the United Nations and regulates the relationship among nations. The criticism circled mainly around three points:

a. the special role of the US Government who authorizes publications of root zone files in the Hidden/Master Server (formerly "A" Root Server)
b. the fact that 10 of the 13 root servers are located in the US
c. the informal character of the arrangements among the root server operators.

A substantial number of Governments, in particular China, Brazil, India and South Africa called for a greater role in the management of the global Internet core resources. They argued that these resources are crucial also for the functioning of the national Internet infrastructure and insofar part of their "national interests". They acknowledged the special role of the US Government in the early days of the Internet, but made clear that what was good of an Internet with one million users would be not good enough for an Internet with one billion users.

The main criticism was that the whole system is based on trust and that the rest of the world is depending on the good will of the US Government and the good service of IANA for the functioning of its own national Internet infrastructure as well as for the global functioning of the Internet as a whole. While the critics recognized that the US Government has never misused its function and the system has worked so far without any problems, they argued, that there is no legal guarantee for an unproblematic continuation. The special role of the US Government, which has to authorize any publication of any modifications, deletions or additions of zone files into the root server database, was seen as an unjustified "privilege" with a high risk factor for the rest of the world.

The present legal construction, as it has developed over the years, would allow the US Government theoretically to "punish" a country by removing the relevant ccTLD from the root. As a result, the users registered under this ccTLD would eventually be cut off from the communication with users in other domains which could have far reaching negative consequences for the national policy, economy and society in the "punished country".

Consequently a substantial number of governments called for a replacement of the "trust system" by a new negotiated "treaty system".

A Government always prefers a "treaty" over "trust" and national governments have to be concerned on the reliability of the functioning of their national ccTLD and its ability to communicate with the rest of the world. But the described "worst case scenario" is far from realistic and full of myth.

Consider a hypothetical case. France did not support the Iraq war of the Bush Administration. While in some parts of the US some groups called for a „boycott of French food" The fear is that the president could have also punished France by deleting the .fr address and name server records from the root zone file. The present system would allow him to send an order to the US Secretary of Commerce who would advise the NTIA to forward a message to VeriSign, the operator of the "hidden server." If VeriSign would delete the .fr records from the file in the hidden server, what would happen? How would this affect Internet communication and France?

The answer is, very little. Such an action would produce not only a worldwide protest with disastrous damages for the reputation of the US Government, it would also miss its political objective. In such a case the operator of the I-Root Server in Sweden would probably not follow this action and not mirror the new set of root zone files, when the daily package comes from the "hidden server." All queries with an involvement of .fr would go to the I-Server in Sweden or the K-Server in London and its more than 50 root server "instances" which are as part of the anycast system distributed around the world. The 10 root servers in the US, if they follow the changes made by VeriSign, would be simply bypassed and the authoritative root would have been broken. The whole action would be counterproductive, especially for the US Government.

In other words, the "punish capacity" of the "authorizer" of the root zone file publication is close to zero. The authorization function is not the "red button" of the nuclear bomb for the Internet and the scenario also demonstrates that the voluntary agreement among root server operators is not a weakness but a strength of the system. Without breaking a contract, any of the root operators, for instance the I root server in Stockholm, could reject such a misuse of the trust on which the whole system is based. Additionally, the fact that after the introduction of the anycast system in the early 2000s, there are now more than 100 anycast instances of root servers all over the world (the I Root Server in Sweden has now more than 30 copies all over the world) and makes the root server system even more invulnerable.

Table 2: Anycast Root Server System

Server	Operator	Anycast?	Sites	Geographic Coverage	Notes
A	VeriSign	No	1		No plans for anycast of a.root-servers.net
B	ep.net	Yes	4	Greater Los Angeles	Three more sites worldwide in progress
C	Cogent	Yes	4	United States	Expansion will continue
D	University of Maryland	No	1		No plans for anycast
E	NASA Ames Research Ctr	No	1		No plans for anycast
F	ISC	Yes	30	Worldwide	
G	US DoD NIC	No	1		
H	US Army Research Lab	No	1		
I	Autonomica/NORDUnet	Yes	27	Worldwide	
J	VeriSign	Yes	16	Worldwide	Approximately ten more sites planned in 2005
K	RIPE NCC	Yes	13	Worldwide	
L	ICANN	No	1		No plans for anycast
M	WIDE Project	Yes	3	Worldwide	
			103		

Source: Presentation of the ICANN's Root Server System Advisory Committee to the ICANN Meeting in Luxembourg, July 9, 2005, see:
<http://www.itu.int/osg/spu/newslog/Root+Servers+Anycast+DNSSEC+WGIG+And+WSIS.aspx>

While it is understandable that some Governments believe more in a "treaty" than in "trust", it has to be asked what the consequences of a treaty for the management of the Internet root would be and whether such a legally binding convention could prevent misuse of the management of core resources.

Internationalization of the Root Zone File Management?

When the Working Group on Internet Governance (WGIG) discussed the treaty-question there was no consensus among its members. Proponents of a convention argued, that a treaty would give the Internet more stability and that all Governments would share the same responsibility for its secure functioning. Opponents argued that a treaty system would bureaucratize the management of the Internet core resources and could lead to a senseless politicization of technical questions with very negative consequences for the functioning and the further development of the Internet. The only consensus WGIG could be reached at the

end of the day was to agree on three more general principles on which an "oversight system" should be based. Paragraph 48 of the WGIG Reports states:

> *1. No single Government should have a pre-eminent role in relation to international Internet governance.*
>
> *2. The organizational form for the governance function will be multilateral, transparent and democratic, with the full involvement of Governments, the private sector, civil society and international organizations.*
>
> *3. The organizational form for the governance function will involve all stakeholders and relevant intergovernmental and international organizations within their respective roles.*[13]

But the agreement on these principles was not followed by a single proposal for a new oversight model. Instead the WGIG report put forward four different models for further discussion and left it to the diplomats to negotiate the issue further within the WSIS process. The four models, offer different levels of governmental involvement in the oversight function. This ranges from a "status quo minus" with a reduced governmental involvement to a mixed proposal that would strengthen the role of ICANN's Governmental Advisory Committee (GAC) to a "Status quo ++" in form of a new World Internet Corporation for Assigned Names and Numbers (WICANN) with a Governmental Internet Council (GIC) as decision making body and a Global Internet Forum (GIF) as an advisory body.

The argument in favour of a further internationalization is, against the background of more than three billion Internet users in 2015 more than justified. But it is unclear what "internationalization" means in concrete terms if when it comes to a many different functions. With regard to the distribution of root servers, internationalization already takes place in the form of the Anycast System. Just recently two root servers in India, linked to the K and I-Root Server in Stockholm and Amsterdam started their operations. Internationalization with regard to the allocation of IP addresses has been further developed by the establishment of two new Regional Internet Registries (RIRs) in Africa (AfriNIC) and Latin America/Caribbean region (LACNIC) in 2005 and 2002. The DNS with the 243 ccTLDs is already internationalized. The open question is what "internationalization" could mean for the oversight function currently performed by one Government.

Theoretically there are three options: Option 1 is that one Government acts on behalf of all governments in this function. In this case, the one Government would need a mandate, based on a treaty, from the other 190 Governments of the world. Option 2 is that a new

[13] *Report of the Working Group on Internet Governance* (Geneva: United Nations, 2005) <http://www.wgig.org/docs/WGIGREPORT.pdf>

intergovernmental body composed by 20 to 50 Governments, probably with rotating membership, would overtake this function. Also such a construction would need an intergovernmental convention. The third option is to cease intergovernmental involvement at all in the oversight function and to let the authorization of the publication of the root zone file in the hands of the responsible technical institutions, ICANN and IANA. This would be on the basis of contractual relationships with the involved parties, mainly the TLD managers and the root server operators.

From the point of view of Internet users, there is no extra value if the present oversight function is "internationalized" in a sense that instead of one Government twenty or fifty Governments get the authorization function for root zone file changes. On the contrary, such a model, while probably closer to the United Nations principle of sovereign equality, could have rather negative side effects and has a higher risk to undermine the proper functioning and development of the Internet as a whole.

One look into the debates of the United Nations Security Council or into the complicated discussion around the United Nations reform demonstrate that one unwanted result of such an internationalization could be the blocking of decisions, which could lead to a slowdown of the further innovative development of the Internet with all its political and economic consequences. If the introduction of new gTLDs would need the approval by the 190+ members of the United Nations, users could probably wait for years until the Governments reach a final agreement. If a root zone file change for the TLD of India would need the approval by the Government of Pakistan, then the current simple system could become rather complex and could provoke unneeded but complicated "Internet wars". Another risk could be that sooner or later a substantial majority of Governments could have the idea, to create an artificial scarcity on Internet resources – domain names and IP addresses – with the aim to justify global or local domain name taxes or IP address license fees.

Such a move would lead the global Internet community into a dead end. Moving down this road is going in the wrong direction. From a technical point of view there is neither a reason nor a need that Governments – both the US Government and also the other Governments of the United Nations member states – are involved in the authorization of publication of root zone files. The special role of the US Government is the result of a concrete historical development. There was no really need in 1991 for the US Government to become involved in the way it did. There is no reason for the belief that without US governmental oversight, the IANA function would have been executed differently or misused against the interest of a local Internet community.

As described above, the management of root zone files is primarily a technical task. It can be done by the relevant technical organizations, like ICANN and IANA. There is no need for any

modifications of zone files to be approved by the US Government, in particular if such an approval is based only on the check that the agreed procedure has been used for the modification, the deletion or the addition of the individual zone file. Such a check, an "audit", could be done by a trusted neutral third party like KPMG on a weekly or monthly basis. The system will not collapse if the zone file does not cross the desk of a civil servant in the NTIA.

On the other hand the complete privatization of the oversight function would be possible only if ICANN:

a) is embedded into a contractual system with all TLD registries and the root server operators,
b) has a functioning internal and external control mechanism
c) completes its reform which would guarantee that all processes are managed democratically, openly, transparently, and in due course, on the basis of agreed procedures and
d) specifies its relationship with the GAC for cases which have a clear public policy component.

A misuse of an oversight function by ICANN and IANA is rather unrealistic if such an interactive self-control mechanism, embedded in a system of contractual arrangements and internal and external check and balances is in place. Problematic individual cases would be handled bilaterally among the involved parties on the basis of the relevant contracts. It makes no sense to internationalize individual cases like the .ly case, where one contractor did not fulfill its obligation, or the .iq case, where the guidelines laid down in the GAC ccTLD Principles, proved the efficiency of redelegation. Furthermore such a full privatization could improve the IANA service, in particular for ccTLD managers, by reducing the waiting time for completion and confirmation of zone file modifications for name servers. And if a problem would appear where a root zone file modification, deletion or addition has a clear global public policy component, the established procedures for the interaction among the ICANN Board and the GAC are efficient enough to discuss controversies and to find consensus.

The GAC was active in this field in the past by adopting the GAC ccTLD principles, by recommending the reservation of specific country names under .info and in the present .xxx case. All Governments can raise all issues in the GAC with regard to the root zone file management by IANA and ICANN.

Probably the internal procedures within the GAC are not developed enough at this stage to make sure that serious concerns from individual Governments get the proper treatment. One part of such a full privatization of the root zone file management would be also a reform of the GAC. According to the GAC Operating Principles, GAC is at the moment an "advisory body" with no decision taking capacity. A GAC reform could add, under certain circumstances, legal

procedures for decision taking with regard to issues with a public policy component. This would include also cases where root zone file management and root server operations play a role. But such an "intervention capacity" would be activated only if concrete and clear cases come up and would not need a standing oversight for day-to-day operations.

The further development of the Internet does not need more bureaucracy, it needs more efficiency. If the oversight function with regard to root zone file management could be demystified and depoliticized, Governments could concentrate much easier on Internet governance issues which have a much higher public policy component like cybercrime, spam, e-commerce, privacy and freedom of expression in cyberspace. The so-called "top 16 list of priority issues" which WGIG has agreed upon should enable Governments to concentrate on the substantial political issues when moving forward in the discussion of Internet governance.[14]

Is There a Threat of Fragmentation?

Nevertheless, the existing arrangement of the special role of the US Government continues to provoke other governments to take the wrong turn. In September 2005 it is not clear, whether the announced termination of the MoU between ICANN and the Department of Commerce does include also a handover of the oversight function to ICANN.

In a statement released on 30 June 200,5 the US Government made clear that at this moment it will not consider such a handover:

> The United States Government intends to preserve the security and stability of the Internet's Domain Name and Addressing System (DNS). Given the Internet's importance to the world's economy, it is essential that the underlying DNS of the Internet remain stable and secure. As such, the United States is committed to taking no action that would have the potential to adversely impact the effective and efficient operation of the DNS and will therefore maintain its historic role in authorizing changes or modifications to the authoritative root zone file.[15]

In the same statement, the US Government also recognizes the interests of sovereign Governments have with regard to their ccTLDs, strengthens ICANN's role as the technical organization for the management of the Internet core resources and supports a continuation of dialogue in existing organizations.

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[14] See, *Report of the Working Group on Internet Governance,* 2005.

[15] "US Principles on the Internet's Domain Name and Addressing System," US Department of Commerce, Washington, June, 30, 2005. <http://www.ntia.doc.gov/ntiahome/domainname/USDNSprinciples_06302005.htm>

This statement has had different interpretations. Some experts saw this as an announcement that the US Government is not ready for change and will continue forever with the execution of the oversight function. Others saw in the statement a starting point for a discussion, based on the acknowledgement, that the stability and security of the Internet has priority and should be the guideline for any further developments of the oversight function.

The issue is primarily a political one and full of sensible symbolism. But if the present situation continues without any prospective for a further development beyond 2006, there is a potential for another worst case scenario. Individual Governments or group of Governments, unsatisfied with the present situation, could move forward by authorizing the launch of an alternative root server system for their country or their language. Alternative root zone files could be stored in servers under national control, laws could be passed that registrants have to register under the TLDs in the newly created domains in the alternate roots. Such a development would make sense in particular for large Internet markets with a language that does not use characters based on the ASCII code. China, the Arabic countries, Russia, India, Brazil or other countries could follow this way.

The negative consequences of such fragmentation would be the end of the ubiquity of the Internet in which everywhere everybody could communicate every time with everybody. A system with diversified roots would not *per se* block communication among registrants in the different roots, but the whole mechanism would work totally different. Under such a system users within an alternate root would probably need a special password, which could be allocated to individual users via a governmental controlled license system (like governments control passports). Such a system would reduce Internet freedoms, choices and options for individual Internet users as well as for all kind of business and service providers substantially and would make it much easier for restrictive Governments to control the virtual life of their citizens. A system of alternate roots also would need a higher level of "coordination". And additionally, there would be a high risk that the same domain names and e-mail addresses exist in different roots could create a cosmic confusion with millions of e-mails flying through cyberspace with no idea where to go. Such a babylonic confusion is called by some experts the "Balkanization of the Internet" which could lead to new kind of "cyber-wars" around the globe.

Against this background, the second proposal of the WGIG makes even more sense. In paragraph 40 of its report, it says that:

> the WGIG identified a vacuum within the context of existing structures, since there is no global multi-stakeholder forum to address Internet-related public policy issues. It came to the conclusion that there would be merit in creating such a space for dialogue among all stakeholders. This space could

> address these issues, as well as emerging issues, that are cross-cutting and multidimensional and that either affect more than one institution, are not dealt with by any institution or are not addressed in a coordinated manner.

Conclusion

To have a space for discussion is particularly important if different constituencies with different legal statuses and different political, economic and cultural interests are involved. Neither the OECD, which represents only a limited number of Governments, nor ICANN, which represents special constituencies involved in the DNS, nor the ITU, which has its constituencies primarily in the telecommunications world, are prepared to offer such a broad based discussion Forum.

WGIG has paved the way from an unstructured to a structured dialogue by offering a working definition, listing the priority issues with a public policy component and clarifying the role and responsibilities of the different stakeholders involved. The next step has to be to formalize more precisely the interaction among the different stakeholders and to develop a discussion methodology for horizontal issues. Such a Forum, open to everybody, could bring together the main players from the existing organizations, conclusions and recommendations. It could both create more public awareness and help specific organizations with specific mandates and decision making capacity, to understand their responsibility and to encourage them to act if an issues calls for action.

The Forum would be on the top of a multi-layer multiplayer mechanism and it would mainly stimulate communication, collaboration and, where needed, coordination. This would not need a new bureaucracy. But it would offer a space where parties can express concerns about developments and can identify the relevant existing organization, which should be invited to take care of the issue.

Such discussion would also promote confidence in the goodwill, the expertise and the capacities of various involved stakeholders. In such an atmosphere it would be much easier to develop new mechanisms for the authorization of the publication of root zone files without undermining the stability and security of the Internet.

OVERSIGHT AND MULTIPLE ROOT SERVER SYSTEMS

Vittorio Bertola

The WGIG report addresses different options for the oversight of public policy issues in Internet governance, including the most problematic issue – the authorization of changes in the root zone file of the Domain Name System (DNS). All these options were developed under the assumption that it is possible to reach global agreement on a model for the management of a single root server system for the DNS.

While this is definitely the most desired outcome, it is important to provide an analysis of other options, in view of the possible scenario in which the only agreement that can be reached is that different stakeholder groups desire to set up different processes to manage the root server system, and, consequently, different root server systems.

In that scenario, the results for the stability and the functioning of the Internet can be very different according to modalities and relationships between the resulting root systems. There are ways of splitting the single root server system without damaging the Internet, which should be embraced in such a situation.

Reasons for a Single Root Server System

The discussion on whether the existence of multiple root server systems should be allowed or even encouraged has been going on for over ten years.

The existence of a single root server system is traditionally justified in terms of the two following objectives:

a. *Preventing confusion.* It is important that, whenever a user enters one URL or domain name into any Internet application, he is pointed at the same IP address. If different users were pointed at different places in different moments or by different service providers, global communications would be threatened.
b. *Ensuring stability.* Once a domain name is established, users start to build content, services, activities, companies that rely on its functioning. The sudden disruption of an entire Top Level Domain (TLD), or problems with the resolution of its names, could cause significant economic, social and even military disruption.

These two objectives have a lot of merit; certainly, a single root, if coupled with appropriate policies, ensures that they can be met. However, *it has never been demonstrated that a single root server system is the only way to meet these objectives.*

During the WSIS discussions, a third feature of the single root became evident: the centralization of control. Whichever entity controls a single root has the power to prevent confusion and ensure stability, but also to create confusion and disrupt stability. While this never happened in the past, and is unlikely to happen in the present arrangements, the increased importance of the Internet has brought many countries and stakeholders to demand a redefinition of control processes over the root zone files.

However, another option to prevent centralized control from being used badly – that is, against those who do not exert such control, but are affected by it – is to distribute control over the root zone.

Different Ways of Splitting the Root

The root server system is, in the end, a set of pointers, much like a central turnpike of the Internet. It is a sort of central place to which all users can go and ask, "Where do I have to go to find this name?" The pointers point the user at another place in which the name can be found, or where further pointers can be accessed. The different root servers of a single root server system correspond to multiple places in which the pointers on the turnpike are ensured to be the same.

As a first note, there is no practical effect caused by having multiple root server systems, managed by different entities, if all pointers continue to point at the same places. These multiple systems could be defined as *cooperative*: they share the burden of the service, and are in fact beneficial to the Internet. However, distribution of control in this scenario would be only partial: there would still be the need for global agreements, as changes in the pointers must happen similarly and at the same time in all the roots.

Confusion arises only when the uniqueness of the pointer breaks; that is, when different root server systems point the user at different places when asking for the same name. Two root server systems that do so can be defined as *confrontational*; this is a situation in which also the stability of the Internet would be severely disrupted, especially if the lack of agreement happens on major TLDs[1].

However, the case in which, while varying the root server system, the user is either told that the name does not exist, or pointed at the *same* place, does not create confusion. The uniqueness of the pointer would still be ensured, and the only consequence would be inaccessibility from users of those root server systems in which the TLD does not exist.

[1] Possibly, the only practical result would be getting someone to create "gateways" or "translators" between names in one root and in the other, and thus to create a "super-root" encompassing all roots in a new, single naming system.

This happens when someone establishes a new root server system by taking the content of the existing root and removing some TLDs, possibly with the purpose of making them inaccessible. The result would be a *decremental* root server system; it would not generate confusion, but it could disrupt the functioning of the TLDs that were deleted, or, as a minimum, prevent users of the decremental root server system from accessing content in those TLDs. This situation is generally undesirable, except that those who control a root server system might want to decrement it as a form of attack or retaliation against users and operators of the deleted TLDs.

However, this also happens when someone takes the content of the existing root zone file and only adds further TLDs of its liking, using strings that are not used anywhere else in any other root server system. This can be defined as an *incremental* root server system, and would not cause the same concerns as in the decremental case.

The four different situations, plus the single root, are assessed in the following table:

Table 1: Evaluation of different types of multiple root server systems

	Prevents confusion?	Preserves stability?	Distributes control?
Single root	Yes	Yes	No
Cooperative roots	Yes	Yes	Partly
Confrontational roots	No	No	Yes
Decremental roots	Yes	No	Yes
Incremental roots	Yes	Yes	Yes

Source: self

Lessons from the Past

The possibility of multiple root server systems is inherent to the decentralized nature of the Internet; as with any other application and protocol, any user is technically and practically free to pick which servers to use, and even to create a new root server system.

In the last ten years, while control on the "mainstream" root server system was being moved from Jon Postel to the Internet Corporation for Assigned Names and Numbers (ICANN), there have been a number of attempts to establish other root server systems. While none of them could have an appreciable impact, still some of them reached considerable user bases. Commercial companies such as New.net and UNIDT have established alternate root server systems[2] and reached agreements with major ISPs, software makers and even governmental

[2] This, however, was often coupled with the adoption of browser plug-ins to be installed by those who still used the "mainstream" root server system. The plug-in would intercept names in "non-

entities that started to use them, so that new TLDs, introduced by them in their own roots without any agreement with ICANN, are now visible to hundreds of millions of Internet users. Similarly, some countries are known to have established separate root server systems for the experimentation and deployment of Internationalized Domain Name (IDN) TLDs, given the somewhat slow pace at which this kind of domain names is being introduced in the ICANN root.

This shows that *the "single root" is in fact a myth: a significant number of different root server systems have been in use for years and already coexist without problems.*

The reason why these events were not subject to extensive public notice and review is that… they work. They meet the need of their users, without creating confusion or threatening the stability of the TLDs in the mainstream root. This, in turn, is due to the fact that all these root server systems, none excluded, were created in an *incremental* way: supporting ICANN for the mainstream Generic Top Level Domains (gTLDs) and Country Code Top Level Domains (ccTLDs), and only adding new TLDs, managed by the alternate root server system operator, to them.

In comparison, the only cases in which there has been extensive public concern over the DNS are related to decisions from ICANN, and especially creations and redelegations of gTLDs. The main cause for this, rather than mismanagement, is simply the major visibility and impact that the affected gTLDs have.

However, rather than defining the present situation as one in which there is one global root server system, it is more correct to say that in the present situation, for historical and practical reasons, one root server system has a de facto monopoly on the "market" for name resolution services at the root level. This monopoly situation, in turn, has made power struggles over its management so important and heated.

Having multiple root server systems, as long as users are freely able to pick which one to use, would constitute an intrinsic "check and balance" over how each root server system is managed, and would possibly make strict and direct oversight over the DNS less necessary.

The freedom of choice of the end user is a key element for this mechanism to work. If the user encounters a name that cannot be resolved and used through his own root server system, he will simply try to gain access to another system that works. This is why all alternate root server systems were born in an incremental way: if users can choose, they will pick the system that

mainstream" TLDs and convert them into a conventional subdomain of a domain name in the mainstream TLD which was owned and used to that purpose by the alternate root server system operator. In this way, also users of the "mainstream" root could access the new TLDs.

ensures the broadest accessibility of TLDs and the less concerns on its policies and management.

Dynamics of the Root Server Market

Users of the Internet pick which root server system to use when configuring the DNS servers that they will then use for the resolution of domain names into Internet Protocol (IP) addresses. This operation is typically done by ISPs and by corporate system administrators, rather than by individual end-users; however, smarter users – especially those who use the GNU/Linux operating system, and other Unix flavours – typically run their own DNS server themselves.

There is no simple way to force any user to pick one root server system against another. This would imply mass filtering of traffic through firewalls, as is done by some countries, and capillary control of each and every DNS server. However, it is fairly easy to bring the majority of users to use one root server system: most DNS server software – first of all BIND, the free DNS software which has a quasi-monopoly over this market – already comes with the choice of a root server system preconfigured into it, and, de facto, DNS software makers have the highest share of control in determining which root system is used. Another important role is that of ISPs: forcing all ISPs to use a given root system is a manageable task for a country and would possibly bring 90% of the users under control.

However, it must also be said that even now, in the present situation, nothing can prevent a country from passing legislation or adopting technical measures to force users onto a separate root server system, nationally controlled. In fact, some countries are said to be already doing it.

Apart from force, however, the only way to bring significant numbers of users and ISPs to adopt a different root server system than the current mainstream one is to give them a compelling reason to spend time in changing the configuration of their DNS servers. In the past, attempts have been focused on providing additional content and services through new TLDs. Whether an argument based on control and theoretical risks would be sufficient to push people to action, it is still to be determined.

Root Servers and Freedom of Expression

An additional argument often made in the press against multiple roots is that some countries would like to deploy their own root server system to increase opportunities for censorship.

Political censorship by governments is usually accomplished by altering results from search engines and filtering traffic at the application level – for example, matching all web pages that a user tries to access against a list of blacklisted URLs. (By the way, this usually happens thanks

to the well-paid technical efforts of leading technology companies from the United States and other Western countries.) The DNS does not have much to do with that.

Commercial censorship – that is, preventing anyone from talking negatively about a company and its products – is, on the other hand, often exerted by corporations through extra-judiciary actions, including challenging the registration of the domain name through alternate dispute resolution policies. To this regard, many experts from civil society consider ICANN's Uniform Dispute Resolution Policy (UDRP)[3] and the deriving policies to be imbalanced in favour of corporations, and to have been exploited for commercial censorship in a number of cases. In the end, the possibilities to exert commercial censorship through the policies for management of a root server system strongly depend on how much these policies are designed to protect freedom of expression; in that regard, the current mainstream root has a bad track of results.

In conclusion, freedom of expression is not endangered or fostered by whether there are a single or multiple root server systems, but by the policies enacted by each of them. The existence of multiple roots, however, would make it more likely to find at least one root server system whose policies are more friendly to freedom of expression or other human rights.

An Example of a Non-Damaging Split

Due to the architecture of the Internet, the deployment of alternate root server systems is likely to happen if no agreement can be found to change the management of the current mainstream root, or if some stakeholders are significantly unhappy with the agreement found.

This event, however, can be managed in a way so that it does not threaten the Internet, and it still meets the traditional objectives of preventing confusion and ensuring stability, while removing control from that party that exerted it traditionally, and distributing it.

The main condition, as evident from Table 1 above, is that the resulting set of root server systems is of the incremental type. This would mean, in practice, that:

a) All root server systems should agree to "carry" each other's TLDs, and let their users access all TLDs from all different root systems;

[3] The UDRP is a set of rules, established by ICANN after discussions with WIPO, that introduces extra-judicial procedures to arbitrate conflicts over the assignment of domain names, and fight against *cybersquatting* – the practice of registering domain names corresponding to known names so to later sell them to the companies or people who have a direct interest in such names. Parties who think to have special rights to a domain name may hire a UDRP provider (WIPO is the most frequently used one) which in turn will appoint arbitrators who will decide over the request to reassign the name. In practice, the most frequent use of the UDRP is by corporations who want to recover possession of domain names corresponding to, or containing, their name or the names of their products.

b) Different root server systems, with different regulating entities or processes, would be in charge for different sets of TLDs;

c) All root server systems should commit not to interfere with the management of TLDs that belong to other systems;

d) All root server systems would be free to introduce new TLDs, as long as the related strings are not already in use by any other root server system.

While all root server systems could manage all types of TLDs, there could be some merit and simplification in agreeing on a subdivision along specific categories. For example, there could be one root server system in charge for the management of ccTLDs, and one or more root server systems that manage existing gTLDs and introduce new ones on a "first come, first served" basis.

From the practical point of view, a *mechanical* registry would be necessary to keep formal account of which TLDs already exist, and which root server system is in charge for each of them. By "mechanical" we mean that no power of decision should be given to this registry – it should just record new additions as soon as they are requested, for example like Internet Assigned Numbers Authority (IANA)[4] does with port and protocol numbers.

Speaking from a user's point of view, in such a system names would exist and point at the same place independently from which root server system is used. The change would thus have no effect for users of the Internet.

However, as an additional note, one could imagine the case in which the managers of one root server system have an issue with a TLD created or managed by another root system. In that case, by removing rule number 1, each root server system would be free not to make other TLDs accessible if they deem this necessary. This, however, would fall into the "decremental" case, and potentially constitute a form of attack and "information warfare" between managers of different root server systems. Careful evaluation needs to be applied to determine whether advantages of this specific option are more than disadvantages.

Conclusion

An agreement between all parties, that addresses and resolves the concerns of all stakeholders through an evolution of the processes for the management of the existing "mainstream" root server system, is the most desirable outcome of the WSIS process for what concerns the DNS, provided that such agreement is compatible with the natural freedom of choice given to all stakeholders by the architecture of the Internet. Any agreement causing significant

[4] The IANA, currently run by ICANN, is the registry of protocol and port numbers, and of TLD delegations. It does not make policy decisions, but simply records decisions taken by others (e.g. by ICANN itself, for TLDs) or assigns resources (e.g. numbers) through a fixed and objective algorithm.

dissatisfaction in a stakeholder group would likely bring to the creation of alternate root server systems.

If no satisfying agreement can be found, however, a plan for the creation and deployment of multiple root server systems could be devised without hampering the functioning of the Internet, as long as the split is done in an incremental fashion and with some clear commitments by all. A decremental structure could be considered if the possibility for root system managers to "opt out" from the creation of new TLDs needs to be preserved, at the risk of hampering the stability of the DNS.

PROPOSAL FOR THE ESTABLISHMENT OF AN INTERNET GOVERNANCE FORUM

Charles Sha'ban *

The Internet might very well be the most prominent and important feature of our present age. US development, technology and research abilities have joined together to produce an achievement which sparks humanity's creativity, powers of invention, and skills for management and regulation, for which global society needs to be thankful. Although the Internet originated and is still administered mainly within the United States, it has extraterritorial importance and effects. It is therefore essential that all involved parties be given the chance to discuss and suggest how the future of the Internet may unfold. A variety of players must be invited to participate with their suggestions and opinions. It is vital, however, to point out that any change in the current Internet governance structure should not involve a change in its current logical elements and operators.

The Internet is merely a world-wide network of networks that connects servers and personal computers. This network has expanded at light speed to touch every destination in our global village. It now comprises a billion users around the world. All sectors and businesses are affected, in one way or another, by the Internet revolution. Airlines, universities, business, research, communication systems, contracts, mail systems, the computer industry, governments and finally the individual are considered the Internet's loyal dependants.

The fact that Internet involves a mosaic of users and suppliers with multifarious interests and needs results in their forming a very complex and layered society. Members of this society - in addition to the entities owning the infrastructure and other assets forming the Internet are considered as the "Internet stakeholders" (See Appendix I, below). It is very healthy when these stakeholders have mutually informative and constructive discussions where the parties involved may exchange ideas and suggest solutions, which may benefit the global Internet community. It is vital to mention here that this phase of discussion shall involve no major changes in Internet operations or infrastructure ownership.

The Working Group on Internet Governance (WGIG) has proposed the creation a discussion space wherein all stakeholders will be represented and feel free to discuss and make recommendations. This global participation should result in an acceptable Forum where all those involved in the effective upkeep and securing of the Internet may work towards ensuring ways and means of solving inevitable developmental obstacles and to establish an infrastructure capable of dealing with ongoing development and maintenance.

Forum Issues

Internet governance should be viewed in a broad sense so that a flexible approach may be reached, rather than one that limits the Internet to a collection of domain names and protocols. Accordingly, the WGIG Report has defined Internet governance as, "the development and application by governments, the private sector, and the civil society – in their respective roles - of shared principles and norms, rules, decision-making procedures, and programs that shape the evaluation and use of the Internet."

The WGIG has purposefully introduced a wide definition for Internet and its regulation so as to allow current entities such as the Internet Corporation for Assigned Names and Numbers (ICANN) and the International Telecommunication Union (ITU) to continue in their present role. The concept of soft discussion, such as the type indicated here, is the best means to retain the self-regulating character of the Internet while at the same time providing a means by which presently disparate entities may work together under a loosely defined 'umbrella' for the mutual benefit of the Internet and its users.

Internet governance involves many concerns that need to be addressed in a wide range of discussions. Listing the issues at stake is an ambitious endeavor; one attempt at this task is represented in Appendix II, below. It is recommended that decisions over whether a particular field should be considered an Internet public issue be vested in the Forum itself. This will add more elasticity to its functions.

Issues like domain names, root servers, Internet protocols, Internet services providers, interconnection costs, and telecommunication channels, should be open to member suggestions and recommendations. This would empower the international entities – such as ICANN and the ITU---respectively responsible for these issues. In the event that an issue may currently be addressed to an established entity, this fact shall not preclude the forum from discussing the issue in question and passing recommendations to the competent responsible entity.

Similarly, matters not falling within jurisdiction of any entity also could be discussed in the forum. This category includes, *inter alia* SPAM, intellectual property rights in cyberspace, recognition and enforcement of laws, human rights, jurisdiction procedure, terrorism and fraud repression, Internet security and stability among others. Regulation and enforcement, *however*, may be approached in a different manner. The Forum should be able to pass recommendations on to the concerned parties, and may also invite – or recommend that the United Nations invites –member states to discuss a certain issue in an official capacity, or via a vote in the United Nations General Assembly.

It is intended that the forum be equipped with abilities and expertise in all fields relevant to issues relative to the Internet. This assembly of experts will act as an "advisory party" for those issues requiring professional or academic qualifications.

Sponsorship and Participation

It is presumed that all these issues – along with many others - will be discussed by all the stakeholders in a Forum, pursuant to an invitation of the United Nations to act as an Internet governance body. The United Nations is the most likely organization to sponsor an Internet governance Forum. The exact relationship with the United Nations is not dealt with in this proposal; however, it is recommended that this relationship be restricted to a mere honorable patronage by the United Nations.

The Forum should be comprised of representatives from all parties concerned with the Internet. Membership will be egalitarian to ensure that all stakeholders are on equal footing. Business concerns, social sector members, governments, academic institutes, representatives from the United Nations, ITU and ICANN are just some of the groups and interests expected to participate. For logical and historical reasons, it is not unlikely that US participation will be highly visible, on account of America's early contributions and leading role today.

The forum also should be mandated with encouraging discussions at regional, sub-regional, and national levels. These discussions will ensure fair participation. The ideal scenario envisions sub-international committees reporting to the main forum for cultural and informational exchanges and to guarantee the discussion is representative of all involved sectors. The regional, sub-regional, and national committees might be more informal and be more fluid regarding centralized locations, procedures and structures.

Promoting Stability

It is important to ensure that current organizational responsibilities are not altered. Creating an international discussions space does not necessitate – in its most basic sense - any restructuring of the present operative entities, particularly in the case of domain names administration, root servers administration, Internet protocols administration, Internet infrastructure, and telecommunications regulation and administration. Current responsible bodies—including any oversight bodies---should not be weakened by the establishment of the proposed Forum. Establishing a Forum is only an effort to guarantee that all interested parties are represented and that their voices contribute in an advisory role to maintain principles of transparency, *and* utility.

The fact that the proposed Forum would have no real judicial or legislative authority does not imply that it will not be useful. Being a discussions space, the Forum would refrain from entering into political, historical, diplomatic and ceremonial processes. It would be practical and its recommendations will not be vitiated by the aforesaid restrictions. Moreover, the Forum would an assembly of well-practiced, educated, experienced, and prepared individuals who are only bound by science and principles of reasons. It would hence be a source of balanced and well-studied opinions and theory.

In light of its neutrality and the qualified staff, the Forum could be appointed as arbitrator or adjudicator of disputes. It could also act as a blueprint for a future system by serving as an example for future governance of technological advances and systems, as the need arises. Finally, due to its proposed base---including the regional, sub-regional and national levels---the Forum would have a resonance at all levels. These multi-layered connections would facilitate greater influence on societies, small enterprises, and individuals than what current bodies such as ICANN or the ITU can claim.

Conclusion

It is essential to bear in mind the complexity of the medium and the mosaic of users involved, and to ensure the Forum's transparency and accessibility. In spite of the fact that the proposed Forum is not to be empowered with legislative or judicial powers, or perhaps because of this fact, it should be flexible enough to suit diverse mode of discourse and provide a means of unifying otherwise disparate entities and pointing them toward the path of common benefit. By its very nature as a common ground and meeting place for all concerned it should accurately represent its stakeholders on all levels, from corporate bodies to individual users. In this way, the Forum can exercise its advisory function and at the same time serve as a blueprint for similar organizations in the future.

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*The present work entitled 'A Proposal for the Establishment of an Internet Governance Forum' is the result of a collaborative effort and represents not only my own views but also the thoughts of my firm Talal Abu-Ghazaleh Organization (TAGO). As the Internet continues to grow and change, it is our belief that such a transformation ought to be monitored attentively and guided in its process of growth by individuals and organizations committed to the idea that technological progress may only be defined as such if it truly benefits and progresses the interests of those whom it serves.

Appendix I

Stakeholders Table

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
(1) **Privacy and cross-border flows of personal data**	National privacy regime options: 1. General and/or sectoral regulation 2. Omnibus and sectoral legislation 3. Self-regulatory Initiatives Education and awareness raising activities	OECD Guidelines for the protection of privacy and trans-border flows of personal data OECD Privacy Online: policy and practical guidance OECD Privacy policy statement generator OECD work on Spam United Nations Guidelines for the regulation of computerized personal data files Council of Europe Convention (Forthcoming) APEC Privacy Guidelines	Education and awareness raising (e.g. ICC Global Spam Fighting Resource, ICC Privacy Toolkit) Self-regulatory codes and Enforcement organizations (e.g. ICC Guidelines on Marketing and Advertising on the Internet, Truste, BBB Online) ICC/BIAC discussion paper on Spam [forthcoming ICC policy statement on Spam] Provision of reporting and "opt out" services. (e.g. national direct marketing associations) Company codes of conduct / binding corporate rules Model contract clauses for cross-border transfers of personal data including the industry alternative model contract clauses for data transfers from the EU GBDe recommendations for protection of personal data Innovation and deployment of technologies that can protect information and mitigate SPAM, etc.
(2) **Consumer protection**	Education and awareness raising programs National policy regime options:	2000 OECD Guidelines for Consumer Protection in the Context of Ecommerce 2003 OECD Guidelines	Education and awareness raising programs Self-regulatory codes and enforcement organizations (e.g. BBBOnline)

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
	1. Regulation and legislation 2. Self-regulatory initiatives National, regional and local law enforcement cooperation	for Protecting Consumers from Fraudulent and Deceptive Commercial Practices Across Borders APEC Voluntary Consumer Protection Guidelines for the Online Environment Bilateral and multilateral government law enforcement and Cooperation internationally	Provision of alternative dispute resolution services Development and dissemination of industry best practices (e.g. ICC Tools for E-Business: "Putting it right: Best practices for customer redress in online business", "Resolving disputes online: Best practices for online dispute resolution in B2C and C2C transactions"; and GBDe policies on consumer confidence and legal (jurisdiction) aspects
(3) **Information systems and network security**	Education and awareness raising programs, development and dissemination of best practices (e.g. FCC industry advisory group, Physical and Cyber security Best Practices (voluntary)) Training and recruiting of technical specialists for law enforcement Dedicated information security incident reporting to law enforcement (e.g. UK National Hi-Tech Crime Unit) Support/encourage incident-reporting and information-sharing centers in the private sector Legislation on computer related crime	Coordination and information-sharing of national initiatives/centers on systems and network security (e.g. European Network and Information Security Agency) 2002 OECD Guidelines on the Security of Information Systems and Networks United Nations General Assembly Resolution on a Global Culture of Security APEC TEL WG e-Security Task Group OAS' CITEL PCC.I Working Group on Advanced Technologies and Services Technical standards in the ITU-T (see below under Technical Standards) ITU-D programs on e-strategies /applications to enhance security and trust in the use of networks	Incident reporting and information-sharing resources (e.g. National Computer Emergency Response Team for Australia, CERT® Coordination Center, US, ICC Commercial Crime Services, UK) Education and awareness raising, development and dissemination of best practices for industry and the general public. (e.g. national reporting and information sharing groups; ICC/BIAC business applications of OECD security guidelines) Technical standards in the IETF, W3C, IEEE, ISO/IEC, etc. (see below under Technical Standards) GBDe recommendations on security Innovation and deployment of information systems and network security technologies
(4) **Cryptography**	National policies related to cryptography	Wassenaar Arrangement on the export of dual-use goods including encryption	Technical standards in the IETF, W3C, IEEE, ISO/IEC, etc. (also see

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
		products OECD Guidelines on Cryptography Technical standards in the ITU (also see below under Technical Standards)	below under Technical Standards) Innovation and deployment of Cryptographic technologies
(5) **Cyber-crimes**	National legislation and regulation making certain online acts criminal	Council of Europe Convention on Cyber-crime (Note: nonmembers can accede to the Convention upon application and approval)	Cooperation with law Enforcement ICC commercial crime services (CCS) Fraudnet initiative
(6) **Electronic Authentication**	Encouragement of use by business and the public of electronic authentication in e-government, (e.g. in tax filing, and government procurement) Legislative measures to ensure legal validity and recognition of electronic signatures	OECD Ministerial Declaration on electronic authentication UNCITRAL Model Law on Electronic Signatures Technical standards in the ITU on public key infrastructure (also see below under Technical Standards)	Development and dissemination of guidance on electronic authentication (e.g. ICC General Usage for International Digital Commerce) GBDe recommendations on authentication Innovation and deployment of electronic authentication technologies
(7) **Contractual issues**	Legislative measures to ensure legal validity and recognition of electronic contracts	UNCITRAL Model Law on Electronic Commerce UNCITRAL is discussing a convention on electronic contracting	Provision of alternative dispute resolution services. Self-regulatory guidelines on electronic contracting (ICC E-Terms are being developed)
(8) **Taxation of e-commerce**	National policies regarding the taxation of electronic commerce	Work of the OECD Technical Advisory Groups on Tax in partnership with business	Work of the OECD Technical Advisory Groups on Tax in partnership with governments
(9) **Customs duties on electronic transmissions**	The assessment of Customs duties on electronic transmissions	WTO moratorium on customs duties on electronic transmissions	Cooperation with customs and other entities considering this issue Business support of the WTO moratorium on customs duties on electronic transmissions
(10) **Intellectual Property**	Implementation of national policies and enforcement of national laws and international	World Intellectual Property Organization (WIPO) Treaties on Copyright and the Performances and	Innovation and deployment of digital rights management technologies

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
	agreements	Phonograms, December 1996 WTO Agreement on the Trade Related Aspects of Intellectual Property (TRIPS)	ICC Intellectual Property (IP) roadmap Education and awareness raising programs Enforcement of rights
(11) **Content**	National legislation on access to or the dissemination of certain content	OECD Workshop on Online Content	Self-regulatory schemes (e.g. Internet Content Rating Association, filtering technologies) Innovation and development of content filtering tools for use by parents, service providers, etc.
(12) **Infrastructure development**	National economic development programs Incentives to private investment, e.g. "good governance" National Universal Service obligations for Basic telecommunications	WTO Information Technology Agreement, Relevant Services Commitments, e.g. Telecoms, Computer and Related Services ITU-D development work on communications infrastructure World Bank UNESCO's ICT development programs UNCTAD UNDP's ICT Development programs	Advocacy and best practice work on trade liberalization in telecommunications (e.g. ICC Business Guide to Telecoms Liberalization) Private sector investment and deployment of infrastructure
(13) **Education**	National, regional, and local educational systems from basic education to university, to IT specific training	UNESCO UNICT TF Forums/Workshops ITU and UNDP Human Capacity Building programs in IT	Numerous private sector capacity building exercises and public-private partnerships (e.g. Cisco network academies, Microsoft, Cable and Wireless Virtual Academy, Nokia BridgeIT program) Internal corporate training and life-long learning programs
(14) **Exchange of Internet Traffic**	Ensure that there are no legal barriers to the creation of regional traffic hubs Competition Law	ITU Recommendation D.50 ITU-T Rapporteurs Group continues to discuss this issue	Commercial negotiations among ISPs to exchange traffic (e.g. peering and transit) Business investment in

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
		OECD Study "Internet Traffic Exchange and the Development of End-to-End International Telecommunication Competition" ITU assistance in establishing regional Internet Exchange Points APECTEL Working Group	infrastructure including establishing Internet Exchange Points
(15) **Technical coordination of the Internet**	National laws apply to ccTLD administrators	Governmental Advisory Committee to ICANN and ITU activities under Resolution 102 (Marrakech 2002)	Internet Corporation for Assigned Names and Numbers (ICANN) The Internet Assigned Numbers Authority (IANA) Organizations such as CENTR, RIPE-NCC, APNIC etc.
(16) **Technical standards**	Support for and participation in national standards setting bodies/processes Participation in international standards setting bodies	ITU-T and ITU-R Recommendations for the telecommunications network and radio ITU-R (WRC) identification, allocation and assignment of radio spectrum ITU-R (global regulations for frequency allocations)	Organizations involved in interface and Performance standardization, including protocols: Internet Engineering Task Force (IETF), the Internet Engineering Steering Group (IESG) and the Internet Architecture Board (IAB) World Wide Web Consortium (W3C) Institute for Electrical and Electronic Engineers (IEEE) International Organization for Standards (ISO) International Electrotechnic Commission (IEC) SIP Forum
(17) **Multilingual (internationalized) Domain Names (IDNs)**	National acceptance of international standards		Internet Corporation for Assigned Names and Numbers (ICANN), including coordination with root servers, IANA

Issue	National government actions and initiatives	Intergovernmental organization actions and initiatives	Private sector and business actions and initiatives
			Internet Engineering Task Force (IETF), including technical and linguistic standards Multilingual Internet Names Consortium (MINC), including language tables

Source: Department of Policy and Business Practices, International Chamber of Commerce, on September 13, 2004.

Appendix II

Internet Public Issues and Priorities

1.	Root servers
2.	Domain Name system
3.	Dispute Resolution
4.	Content control
5.	Consumer Protection
6.	Privacy
7.	Cryptography
8.	Security of information Systems and networks
9.	Cyber-crime
10.	Taxation of e-commerce
11.	Customs duties on electronic transactions
12.	Contractual issues
13.	Electronic authentication
14.	Intellectual Property Rights
15.	Infrastructure development and management
16.	Education
17.	Technical coordination
18.	Exchange of Internet traffic
19.	Multilingualization of IDNS
20.	Further technology development
21.	Funding agreements
22.	Developed vs. developing balance
23.	Competition rules
24.	Cross-border disputes
25.	Secrecy rules
26.	Privacy rules
27.	Vo IP rules
28.	Domicile
29.	Rights of vested interests
30.	How far to liberalize and privatize
31.	Civil society role
32.	Future agreement negotiations
33.	Relationship to the telecommunications networks
34.	Internet for social benefits
35.	Human right to the Internet
36.	Spam
37.	Broadband
38.	WIFI rules
39.	Roles of stakeholders
40.	Jurisdiction
41.	Internet costs

Conclusion

WHY THE WGIG PROCESS MATTERED

William J. Drake

Did the Working Group on Internet Governance (WGIG) process matter? That might seem like an unusual question to pose in the Conclusion to a book such as this. Nevertheless, it is worth recalling that at various stages along the way, there was skepticism in some circles about the wisdom of the exercise. Tellingly, such skepticism was particularly pronounced among proponents of two polar opposite views: those who believed that there was no need for any sort of UN-based discussion of Internet governance, because everything was working just fine; and those who believed that everything was not fine and there was one single and obvious solution, namely to establish greater intergovernmental control over the Internet. Alternatively, some of the same people at times expressed fears that the WGIG would matter, but in ways they would not like. If I had a one US dollar for every time I was told---almost exclusively by my fellow Americans---that the WGIG was actually a UN plot to "take over the Internet" and give it to the International Telecommunication Union (ITU), I could have a quite nice dinner---in Geneva no less. If in addition I had a one US dollar for every time I was told that the WGIG was a plot *against* the ITU, I could have a nice dessert, and coffee too.

Rather than attempting to summarize the very diverse perspectives offered by the WGIG colleagues and staff members who agreed to participate in this project, this Conclusion will take a different approach. I will advance seven arguments for why I believe the WGIG process mattered and made significant positive contributions to the evolution of the global debate on Internet governance. These contributions pertained to both procedural and substantive matters, and are detailed below.

Procedural Contributions

1. The WGIG process demonstrated the benefits of multistakeholder collaboration.

While the WSIS was mandated to be a multistakeholder process, its actual conduct called into question the precise nature of this commitment. The modalities of participation gave Governments and session Chairpersons a good deal of discretion in their treatment of observers, and the private sector and civil society frequently found themselves to be on a yo-yo string---in one moment allowed into the room with sharply limited speaking opportunities, in the next told to sit silently, and in the next thrown out entirely. This naturally generated a very high degree of discontent among observers and, in the case of civil society, periodic discussions about the merits of continuing to participate and hence legitimate the WSIS' claims to multistakeholderism. Such treatment was particularly problematic with respect to Internet governance, a field in which the private sector and civil society play leading roles in the

development and management of the resources, services, and applications involved. In Phase I, significant damage was done to the WSIS' reputation among technologists, industry, and civil society, and the prospects were dim that these stakeholders would endorse and willingly abide by agreements negotiated without their meaningful participation.

The WGIG experience was very different, and it helped to reorient the dialogue somewhat during WSIS Phase II. The contributions to this volume collectively underscore that the WGIG comprised individuals with sometimes sharply different styles, priorities, and preferences. Nevertheless, this actually facilitated, rather than obstructed, the process. The open, intensive, and peer-level nature of the dialogue meant that WGIG's members could not simply make statements and then sit back and take it for granted that the rationales for their positions were clear and unassailable. As Nitin Desai notes in his Preface, they were obliged to explain the logic behind their views, and to listen and respond to the concerns of colleagues who might have different and even orthogonal perspectives. They had to persuade, and when that effort failed, accept that nonconsensual points would not be included.

This approach yielded a Report that all members could endorse, and that all WSIS participants could accept as a useful framing device to be considered in their subsequent deliberations. It is highly unlikely that a Report produced by a purely intergovernmental group would have fared as well, not only because the excluded stakeholders probably would not have supported it, but also because Government representatives could have deadlocked in the absence of alternative ideas from the other quarters. And the latter mattered a great deal; the private sector and civil society participants indisputably contributed heavily to the WGIG's discussions, conceptual work, and writing.

Of course, in a narrow sense, the WGIG simply wrote a report. It was not a negotiating body, and its decisions did not commit anyone to any course of action, and this key fact undoubtedly made multistakeholderism acceptable to many Governments. In contrast, its rules of the game certainly did not apply at Phase II's Preparatory Committee (PrepCom)-3 in September 2005, at which many developing country Governments, including some that were represented in the WGIG, sought to exclude observers from the text drafting groups. Writing a report that would inform negotiations was one thing, but writing actual negotiating texts apparently was something else entirely.

These considerations notwithstanding, it is notable that the WGIG's Open Consultations were truly open, and allowed all participants to weigh in on an equal basis in a large group setting. Similarly, and despite any qualms expressed in the period prior to the group's formation, today nobody publicly disputes whether peer-level multistakeholderism was the right model for the WGIG to have followed. And most importantly, in its aftermath, the WGIG experience has been routinely cited by even the most ardent champions of state-led governance when

advancing their visions of future mechanisms. This has applied in particular to the proposed Internet governance Forum, but the proposals that have been advanced for intergovernmental oversight of core resources also envision varying degrees of multistakeholder participation as well. As such, it seems sober enough to suggest that the WGIG experience has added significant weight to the political and functional arguments that Internet governance generally must be conducted on a multistakeholder basis. That so many governments that have otherwise been reticent about including the private sector and civil society have come to understand the necessity of doing so in the Internet governance arena is arguably a key example of the collective learning that has characterized the WSIS process.[1] Whether such multistakeholderism can be extended beyond consultations, agenda setting, and technical operations into actual policy decision making, or into extant and exclusionary intergovernmental and private sector bodies, of course remain open questions.

2. The WGIG process facilitated the WSIS negotiations.

WSIS Phase I provided the first opportunity for the international community to have a truly inclusive dialogue on Internet governance. It was inclusive in the dual sense that all interested stakeholders could weigh in on all the myriad issues and institutional arrangements that are now understood to be entailed by the term, Internet governance. Not surprisingly, the debate often had an exploratory, freewheeling, and unstructured character. Whether in the large Plenary and Subcommittee sessions or in the smaller *ad hoc* working group that considered Internet governance beginning with PrepCom-3 in September 2003, participants interjected whatever individual issues they thought important to mention at the moment, or made interventions comprising briefer observations or position statements on a range of diverse issues. Often these interventions did not build on the ones made previously, or referred back to something that had been said by speakers who took the floor much earlier.

In the aggregate, this process resulted in deliberations that bounced back and forth between topics without focusing and cumulating in a manner that would facilitate progress toward the resolution of any given item. One consequence was frustration in some quarters that the conversation was "all over the place" and "going nowhere." Conversely, this condition was congenial for those who were opposed to negotiating texts on Internet governance in the first place, since it could be cited to suggest that the whole enterprise was ill conceived and should

[1] For more examples of this phenomenon, see, William J. Drake, "Collective Learning in the World Summit on the Information Society," in, Daniel Stauffacher and Wolfgang Kleinwächter, eds., *The World Summit on the Information Society: Moving from the Past into the Future* (New York: United Nations Information and Communication Technology Taskforce, 2005), pp. 135-146. The entire book is available in one file at, <http://www.unicttaskforce.org/perl/documents.pl?id=1544.> The chapter was also published as a working paper of Computer Professionals for Social Responsibility and is separately available at, <http://www.cpsr.org/pubs/workingpapers/2/Drake.>

be abandoned. The fragmentary dialogue also revealed the emergence of a heterogeneous array of positional alignments on each of the many issues on the table. This problem was compounded by the fact that many participants were still in the process of working through the issues to arrive at national or organizational positions, so their views were at times unclear or subject to change. All these dynamics served to compound the deep divides that had opened up between particular parties on issues such as what is now referred to as the "oversight" of decision making concerning the Internet's core resources or logical infrastructure. That WSIS Phase I would prove unable to reach consensus on Internet governance was hardly a surprise.

Governments' decision to call on the UN Secretary-General to create the WGIG unblocked the negotiations and allowed the December 2003 Summit in Geneva to agree the Declaration of Principles and Plan of Action. Moreover, once the WGIG process got underway, it brought a growing sense of order to the WSIS Phase II deliberations. At the Open Consultations held in conjunction with the WGIG meetings and at PrepCom-2 in February 2005 and PrepCom-3 in September 2005, the WGIG's evolving parsing and clustering of the issues became a sort of template that imparted greater structure to the larger debates.

Rather than allowing everything to be on the table simultaneously, the session chairpersons sequentially focused the dialogues on separate issues or bundles of issues, e.g. the working definition, the "vertical issues" like interconnection charging or security, oversight, the forum, etc. This led to more bounded and focused discussions of each topic and thereby helped to clarify not only the issues at stake, but also the participant's positions and coalitions. That in turn facilitated the bargaining process both in the large group meetings and in the private side consultations and off-site discussions. Moreover, as a multistakeholder collaboration employing specialized expertise, the WGIG was able to specify the issues to an extent that would have been difficult to achieve in an intergovernmental drafting exercise, particularly one conducted in a large group setting. It also may be that the relative lull in the debate while the group's results were pending reduced the temperature a bit and gave WSIS participants more time to coordinate and work out positions. In short, in these and other senses, the WGIG process facilitated the WSIS negotiations and helped them to get further than they might have otherwise.

3. The WGIG process promoted public engagement in the Internet governance debate.

Directly or indirectly, the social shaping of Internet governance affects everyone who uses the Internet. Nevertheless, the overwhelming majority of Internet users worldwide have been largely or totally unaware of what is happening in the WSIS Internet governance debate. This disconnect was especially acute during WSIS Phase I when, as we have noted, the direction of the dialogue was often difficult for even the participants to follow. To peer in from the outside and make sense of the deliberations based on press accounts or even the materials available on

the ITU's helpful website probably required a level of dedication that most Internet users simply lacked.

The WGIG process went a long way toward making the debate transparent and intelligible to anyone with sufficient motivation. As it did for those involved in WSIS, the WGIG's parsing and organization of the issues provided non-participants with a manageable cognitive mapping of the terrain and imparted some structure to both the meetings they were following from geographically dispersed locations and the larger global dialogue. Moreover, excellent use was made of Internet tools. Beginning with the WGIG's second meeting in February 2005, the Secretariat worked with various partners to provide live and later archived webcastings of the Open Consultations via its website, www.wgig.org. From the third meeting in April 2005, these were complemented by real-time text transcriptions of the sessions. The website also offered the WGIG's voluminous documentation, including even the issue papers drafted by members as informal working inputs. Public comments were solicited and posted to the website, and these included both formal statements and participation in online chat spaces. A questionnaire was formulated to solicit structured replies on specific issues from both WGIG members and the wider world in the website's wiki workspace. Finally, during and after the completion of the WGIG's work, the group's leadership traveled widely to explain the process and product to many of the most keenly interested stakeholder groups.

All of these activities made it much easier for stakeholders and the general public around the world to follow the debate, interject their views directly into the proceedings, and otherwise mobilize around the WGIG process. The catalytic effects were often palpable; the impact on the open listserv of the civil society Internet Governance Caucus provides an illustrative example. Launched after Phase I's PrepCom-2 in February 2003 and hosted by Computer Professionals for Social Responsibility, the list began as a coordination tool and workspace for the two dozen or so civil society participants in WSIS who had a particularly keen interest in Internet governance. Over time the list's population began to grow, but it skyrocketed after the WGIG process took off. At the time of writing, the list has about 280 subscribers, including many people from international institutions, industry, and the technical community, and has morphed into what is arguably the premier public virtual space for sustained and intensive dialogue on Internet governance issues.

Inevitably, while the WGIG process clearly promoted public awareness and engagement, not all of this translated into sound understandings of its procedures and products. Particularly depressing in this regard has been the coverage provided by the English language press, much of which has remained stubbornly clueless. A great many journalists have ignored the multistakeholder character of the WGIG and referred to it simply as a "UN group" populated by representatives of various nondemocratic regimes; persisted in ignoring the Report's broad vision of Internet governance issues and mechanisms, preferring instead to focus solely on the

oversight question; claimed that the WGIG offered four oversight options because it deadlocked and could not agree on one, when the latter was never intended or attempted; depicted the Report as arguing for a "UN takeover of the Internet;" and retained as the overarching theme the much hyped struggle for oversight authority between the Internet Corporation for Assigned Names and Numbers (ICANN) and the ITU, long after that was no longer the main issue. These misframings of the WGIG process and product were widely recirculated on Internet listservs and picked up on and amplified by a multitude of local press outlets and web blogs to the point that they became the conventional wisdom and Durkheimian social facts. Particularly in the United States, where there has generally been little press coverage or public knowledge of the WSIS, they undoubtedly helped to agitate and mobilize politically salient opposition to the entire process. Not surprisingly, members of the US Congress have issued statements proclaiming that the WGIG recommended a UN takeover and voicing vehement opposition to this dastardly plot to grab "our" Internet. What, if anything, could have been done to avoid all this is an open question, but it is nevertheless safe to say that the WGIG process got peoples' attention.

Substantive Contributions

4. The WGIG demystified the nature and scope of Internet governance.

As the debate took shape during WSIS Phase I, many participants expressed uncertainty about the precise meaning and reach of the term, Internet governance. Some of this was due to a lack of clarity concerning the core concept, *governance*. Many people apparently equated the term with *government*. To proponents of greater governmental and intergovernmental involvement, this equation seemed to offer an opening to push their case. Conversely, to opponents of greater government involvement, the term seemed to constitute an invitation to potentially damaging meddling.

These interpretations of the term were heavily colored by two additional factors. From the time in the late 1990s that the term, Internet governance, took hold in the popular lexicon, it had generally been equated with the management of the Internet's core resources or logical infrastructure---e.g. the root zone file, the root server system, and domain names and Internet Protocol (IP) addresses---and later, by extension, the activities of ICANN. And beginning in the same time period, with support from many developing country Governments, the ITU had begun to push for a greater role in Internet governance, perhaps to include replacing ICANN. Hence, the term became a heavily contested concept, and the question of its meaning became bound up with a simmering power struggle between intergovernmental and private sector interests and governance models. Not surprisingly, some industry and technical organizations, most notably the International Chamber of Commerce and the Internet Society, strategically

called into question whether Internet governance was even a valid concept that merited international discussion.[2]

The WGIG's Report and Background Report contributed significantly to ending the sometimes confusing and divisive debate over the concept. Insofar as that debate was distracting attention from and blocking progress on the consideration of other aspects of Internet governance, this was a substantial contribution to the global dialogue. The WGIG's analysis proceeded in four steps. First, it emphasized that in terms of both etymology and normal language usage, the core concept, governance, refers not to government, but rather to the act of steering. That is, governance is about a process, rather than the identities of the social actors that engage in it, which can be in public, private, or non-profit sectors. Second, it argued for the necessity of a holistic conception of Internet governance that goes far beyond the realm of core resources like names and numbers to encompass the full range of shared mechanisms, public or private, that shape the Internet and its utilization to convey transactions and content.

Third, and by extension, the WGIG proposed a broad and holistic working definition: "Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet."[3] And fourth, it demonstrated the utility of this approach by presenting overviews and assessments---schematically in the main Report, and in significantly greater detail in the Background Report---of some of the many shared mechanisms or international regimes and programs involved in Internet governance. To varying degrees, the group analyzed, *inter alia,* the shared public and private frameworks for intellectual property, trade, e-commerce and applicable jurisdiction, "information security" and network security, technical standardization, privacy and consumer protection, freedom of expression, development, and of course, Internet names and numbers.

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[2] For an extended discussion on the definition and nature of Internet governance, see, William J. Drake, "Reframing Internet Governance Discourse: Fifteen Baseline Propositions," in, Don MacLean, ed. *Internet Governance: A Grand Collaboration* (New York: United Nations Information and Communication Technology Taskforce, 2004), pp. 122-161. The entire book is available in one file at <http://www.unicttf.org/perl/documents.pl?id=1392>). The chapter was also published as a working paper of the Social Science Research Council's Research Network on IT and Governance, 2004, and is separately available at, <http://www.ssrc.org/programs/itic/publications/Drake2.pdf>. For another view on some related issues, see, Jeanette Hoffman, "Internet Governance: Eine regulative Idee auf der Suche nach ihrem Gegenstand", in, Gunnar Folke Schuppert (Hrsg.), *Governance-Forschung – Vergewisserung über Stand und Entwicklungslinien, Band 1 der Reihe,* "Schriften zur Governance-Forschung," (Nomos-Verlag: Baden-Baden, 2005), pp. 277-301. The chapter is also available in English as, "Internet Governance: A Regulative Idea in Flux," at <http://duplox.wz-berlin.de/people/jeanette/texte/Internet%20Governance%20english%20version.pdf.>

[3] *Report of the Working Group on Internet Governance* (Geneva: WGIG, 2005), p. 4, available at <http://www.wgig.org.>

In addition, it assessed some issue-areas in which governance mechanisms are problematically absent or in a nascent state, such as international interconnection costs and spam. The WGIG's analysis demonstrated that the working definition met the criteria of being adequate, generalizable, descriptive rather than normative, concise, and process-oriented, and that it was equally applicable to the above and other Internet governance mechanisms.

While views were of course diverse with respect to individual issues and governance mechanisms, the response to the WGIG's analytical orientation was quite positive. Just a few rather minor quibbles were expressed in the written replies to the WGIG Report that were submitted by diverse stakeholders around the world, and in the statements made at the July 2005 Report release event and at PrepCom-3 in September 2005. Almost everyone who addressed these matters expressed satisfaction with the working definition and the larger analytical orientation in which it was embedded. Gone were the complaints, frequently heard in early stages of the WSIS process, that the whole debate was conceptually confused and hopelessly unmanageable.

Gone too was the excessive attention to the "ITU vs. ICANN" controversy. Like the question of whether governance meant government, to which it became intimately linked, this overarching theme of the pre-WGIG debate had significantly impeded progress toward a comprehensive Internet governance assessment and dialogue. It also fed an artificial sense of polarization; in the view of at least some vocal participants, you either had to be in one camp, or the other---no middle ground or orthogonal positions could be understood when viewed through this prism. And it was rather unlikely to lead to significant change, since the US Government, global business, and other stakeholders had consistently made it clear that they could never sign on to an agreement transferring ICANN's responsibilities to the ITU. Nevertheless, the fire had burned bright in the pre-WGIG period and made it difficult to see much of anything else.

Yoshio Utsumi, the Secretary General of both the ITU and the WSIS, set out his view of the WGIG's mandate in a statement read at the beginning of its first meeting. Among other things, the WGIG had,

> …no need, for instance, to discuss such issues as free flow of information, countering spam, network security, regional root servers, privacy protection or misuse of ICTs. Instead, we should focus on the core activity of the management of Internet resources by ICANN, in particular top-level domains, which is where important issues remain unresolved. Without having a shared common understanding and, most importantly, a narrow definition of Internet Governance, discussions in the Working Group are

> likely to remain unproductive. The Working Group, therefore, should strive to interpret the term "Internet governance" in its most narrow context.[4]

The WGIG did focus on the structure and functioning of ICANN---and that of the ITU as well. Both were assessed in relation to the Geneva Declaration of Principles stating that Internet governance should be "multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations."[5] Careful analysis and deliberation made clear that there was rather little support in the group for recommending a transfer of a multistakeholder organization's role to an organization in which, *inter alia,* many Internet businesses chose not to participate and from which civil society was, in effect, largely excluded. As such, the matter was not addressed in the WGIG Report, and the members who advocated intergovernmental oversight of the Internet's core resources instead opted in their respective oversight models to propose new entities for this purpose. PrepCom-3 in September 2005 debated at length on the merits of such proposals, rather than on the ITU vs ICANN theme. In short, the WGIG process helped the WSIS to move on, at least as of the time of writing.

5. The WGIG began the holistic assessment of "horizontal issues," including development, and made some broad but useful recommendations on key "vertical issues."

Of course, the international community never sat down and created a grand master plan that systematically mapped out the full range of issues that might require shared international regimes and programs pertaining to the Internet's development and use. Instead, Internet governance mechanisms generally have been created on a piecemeal and demand-driven basis to respond to individual technical, economic, and political challenges. The cumulative result of this process has been the establishment of a highly distributed governance architecture comprising a heterogeneous array of public and private sector arrangements. Their attributes naturally vary significantly along such dimensions as their institutional setting (whether they are linked to formal organizations or are free standing), agreement type (treaties, contracts, memorandums of understanding, recommendations, guidelines, declarations, custom), decision making procedures (rules on participation, representation and recognition, or on voting vs. consensus) rule strength (formal or informal, binding or voluntary agreements), scope (the number and interrelatedness of issues covered), domain (the number and character of parties),

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[4] Yoshio Utsumi, Secretary General, World Summit on the Information Society, "First Meeting of the Working Group on Internet Governance (WGIG)," November 23-25 2004, at <http://www.wgig.org/docs/Utsumi.pdf>.

[5] World Summit on the Information Society, *Declaration of Principles---Building the Information Society: A Global Challenge in the New Millennium,* WSIS-03/GENEVA/DOC/4-E, 12 December 2003, p.6, <http://www.itu.int/wsis/docs/geneva/official/dop.htm>.

compliance mechanisms (monitoring and enforcement), distribution of benefits (via markets or administrative procedures), and so on.

It would be useful to assess this distributed architecture in a holistic or horizontally crosscutting manner. Doing so would help the international community to identify potential weaknesses and gaps in the coverage of important issues, such as country code top level domains (ccTLDs), interconnection charges, spam and consumer protection, competition policy and restrictive practices, and the preservation of cultural and linguistic diversity; to address any procedural and substantive tensions or unrealized synergies between extant governance mechanisms, and hence the possible need for enhanced coordination among them; to draw "lessons learned" about best and worse practices from inter-institutional comparisons and contrasts; and to consider the merits of alternative design solutions to outstanding issues in light of other experiences and general patterns. That said, the holistic analysis of diverse governance mechanisms is a challenging exercise and falls outside the mandate of today's vertically segmented and functionally specific governance organizations and networks. Due to these and other considerations, it never had been seriously attempted.[6]

Accordingly, the WGIG's attempt to undertake this sort of assessment was pioneering and highly instructive. Rather than creating an elaborate new conceptual apparatus, the group based its efforts on criteria of evaluation that had already been accepted by the world's governments. These were the above-mentioned "WSIS Principles" stating that Internet governance should be "multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations." A range of governance organizations, regimes and programs were assessed for conformity with these standards, and this proved a revealing and helpful exercise, not only with respect to the "ITU vs. ICANN" question. The results of this effort are reflected primarily in the WGIG's Background Report, which is not a formally agreed consensus document. In a future Forum, the approach could be helpfully built out in a more systematic manner and used to encourage continuing progress toward conformity with standards of good governance in diverse arenas.

One might also argue that the WGIG's analysis pointed to the need to treat development promotion as a horizontally applicable standard of evaluation. In truth, the group began from a baseline of treating development as a separate domain, i.e. as one of four clusters of "vertical" or functionally segmented problem sets; this approach is reflected in the Background Report. However, as the dialogue proceeded, it became clear to at least some participants that it would have been preferable to position development promotion alongside the Geneva Principles and

[6] For more detailed discussions of the merits of holistic analysis and the need for a forum in which to conduct it, see, William J. Drake, "Reframing Internet Governance Discourse: Fifteen Baseline Propositions," 2004.

to systematically consider the extent to which each governance mechanism served the purpose. Reaching agreement on precisely how to do this would have been difficult in the time available, most notably because there are rather different points of view about what constitutes development and the best way to advance it. Obtaining consensus on the precise meaning of the terms included in the Geneva principles was difficult enough. However, there were two dimensions of this arena that are less open to diverse interpretations and controversy, and to which the group devoted greater horizontal attention: ensuring the effective and meaningful participation of all stakeholders from developing countries, at least in the most relevant mechanisms; and building capacity in terms of knowledge and human, financial and technical resources. All these issues merit significantly greater and more systematic consideration going forward than was possible within the WGIG's constraints.

Finally, the WGIG reports also addressed a series of key "vertical" issues. These were grouped into four clusters: issues related to infrastructure and the management of critical Internet resources (e.g. the root zone file and root server system, domain names, IP addresses, technical standards, peering and interconnection, telecommunications and convergence, and multilingualization); issues related to the use of the Internet (e.g. spam, e-commerce, network security, and cybercrime); relevant issues with an impact much wider than the Internet (e.g. intellectual property and international trade); and, as was just noted, issues related to development (particularly participation and capacity building). From these clusters, the group selected thirteen issues meriting special attention in the WSIS context: administration of the root zone files and system; allocation of domain names; IP addressing; multilingualism; interconnection costs; Internet stability, security and cybercrime; spam; meaningful participation by all stakeholders in global policy development; capacity building; intellectual property; freedom of expression; data protection and privacy rights; and consumer rights. On each of these it offered some rather broadly framed recommendations that could be readily agreed in a multistakeholder setting. While they are far from being revolutionary, these recommendations did help to sort through the myriad of vertical issues involved in Internet governance, and to establish priorities for further discussion. Accordingly, many of them have been taken up in the post-WGIG period, most notably at PrepCom-3 in September 2005, and at the time of writing they appear likely to receive mention in the texts to be adopted at the Tunis Summit in November 2005.

6. The WGIG offered four models for the oversight of core resources that helped to focus the global debate on the governance of the Internet's core resources.

As it clearly would have proven futile, the WGIG did not attempt to agree on a singular approach to the oversight of the Internet's core resources, or logical infrastructure. Instead, the group simply decided to include on an equal basis, and without comment, four alternative models proposed by particular clusters of members. While Nitin Desai genially and

diplomatically described them as "four equally beautiful brides," it would be fair to say that rather few WGIG members found more than one to be particularly attractive. Happily, since the objective was merely to provide the WSIS with options to consider, a broadly shared sense of aesthetics was not necessary.

Three of the models envisioned some sort of enhance intergovernmental authority over public policy aspects of Internet governance. Model 1 proposed a Global Internet Council (GIC) to which other stakeholders would relate in a purely advisory capacity. The GIC would be anchored in the United Nations system; take over the functions of the US Department of Commerce with respect to the authorization of changes to the root zone file; replace ICANN's Government Advisory Committee (GAC) and have formalized authority over a reformed and internationalized ICANN; set policy on core resource issues, and on Internet usage issues that are not being fully addressed by other intergovernmental organizations; facilitate the negotiation of binding agreements, such as treaties; foster and provide guidance on development issues; and approve rules and procedures for dispute resolution mechanisms and conduct arbitration, as appropriate. In short, the Council would be a powerful, omnibus organization with a broad reach covering much of the Internet governance terrain.

Model 4 was more institutionally elaborate. It proposed an intergovernmental Global Internet Policy Council, with other stakeholders serving in an advisory capacity, which again would have broad authority over public policy matters; a World Internet Corporation for Assigned Names and Numbers, a private-sector led body comprising a reformed and internationalized ICANN linked to the United Nations; and a Global Internet Governance Forum that would be responsible for facilitating coordination and discussion of Internet-related public policy issues, and in which all stakeholders would participate on an equal footing.

Model 3 was less ambitious. It proposed an International Internet Council, apparently a multistakeholder entity in which governments would play a "leading role" on policy matters after taking into account other stakeholders' advise. This Council would take over the US government's roles in relation to ICANN and the Internet Assigned Numbers Authority (IANA); address international public policy issues relating to Internet resource management and other issues that do not fall within the scope of existing intergovernmental organizations; foster certain developmental activities; potentially make the ICANN's GAC redundant; and be accompanied by an adequate host-country agreement for ICANN.

Finally, Model 2 represented a sharply different vision. The model posited that there is no need for a specific oversight organization, whether operated by one government or many. Instead, the model merely suggests that it may be necessary to enhance the role of GAC in order to meet the concerns of some Governments on specific issues. In addition, like Model 4, it called for the creation of a Forum that would be characterized by the full and equal participation of

all stakeholders, and would provide coordination functions and produce analysis and recommendations on some issues.

Two of the four models have gained significant support in the post-WGIG debate. At PrepCom-3 in September 2005, Saudi Arabia (speaking for the Arab Group) and Iran in particular played catalytic roles in assembling a coalition of developing countries favoring Model 1's GIC. In parallel, the European Union (EU) took off from Model 3 to propose a new approach that is simultaneously less specific on institutional forms but more specific on the functions to be performed. The EU position called for a "new model of international cooperation" that would not replace existing mechanisms or institutions, but rather would build on the existing structures in a multistakeholder manner. Governments would lead on public policy matters and collaborate "at the level of principles" on five issues related to names and numbers:

a. Provision for a global allocation system of IP number blocks, which is equitable and efficient;
b. Procedures for changing the root zone file, specifically for the insertion of new top level domains in the root system and changes of ccTLD managers;
c. Establishment of contingency plans to ensure the continuity of crucial DNS functions;
d. Establishment of an arbitration and dispute resolution mechanism based on international law in case of disputes;
e. Rules applicable to DNS system.[7]

The response to the EU statement was rather extraordinary. The developing country proponents of the GIC professed great interest in the concept, which they took to share much with their own approach, and moved quickly to enter into consultations with the EU. As it turned out, these discussions apparently brought out the differences between the two visions more than the similarities. For its part, the United States expressed surprise and consternation at the EU proposal, which the State Department and other branches of the Government proceeded to publicly denounce. The United States expressed interest instead in a proposal formulated by Argentina that, *inter alia,* called for the evolution and internationalization of Internet governance through existing and future mechanisms, institutions, and forums; the reinforcement of government involvement in the ICANN's GAC, and of the Regional Internet Registries; the continuing internationalization of ICANN; and the strengthening of developing country participation in Internet governance.

[7] European Union (UK), "Proposal for addition to Chair's paper Sub-Com A internet Governance on Paragraph 5, 'Follow-up and Possible Arrangements,'" Document WSIS-II/PC-3/DT/21-E, 30 September 2005, at, <http://www.itu.int/wsis/docs2/pc3/working/dt21.doc>.

The Chairperson of PrepCom-3, Ambassador Masood Khan of Pakistan, sought to promote compromise by advancing an informal "Food for Thought" paper. This called for, at the conclusion of the transitional period, examination of the establishment of an intergovernmental Council for global public policy and oversight of Internet governance. But his effort did not blunt the sharp edged differences that had emerged among the Governments, and the Prepcom ended in deadlock. At the time of writing, it is to be resumed in Tunis just before the Summit, on 13-15 November 2005. The EU has sought to clarify its position and find common ground with the United States, but strong opposition to any changes has taken hold in the White House, the Capitol, and elsewhere, so prospects for compromise presently seem remote.

Whatever happens in Tunis and beyond, and whatever one may think of the respective approaches being advanced, there can be little doubt that the WGIG exercise has proven to be highly consequential. Some of the models outlined in the Report have been interjected directly into the international negotiation process, and have crystallized the issues and clarified the divergent preferences of the various parties. After three years of run-up, the cards are now mostly on the table and the battle lines are drawn. This is a phase the international community has to go through, and the WGIG process helped it get there.

7. The WGIG proposed the establishment of an Internet governance Forum.

In its Report, the WGIG outlined the need to create a new Internet governance Forum that would be linked to the United Nations. The Forum would be open to all stakeholders from all countries, and anyone could bring up any Internet governance issue. It would not constitute a continuation of the WGIG, nor would it be duplicative with any other currently pending proposal for new collaborative mechanisms, such as the aforementioned GIC or the Global Alliance for ICT and Development. However, its plenary sessions would be modeled on the WGIG's Open Consultations, and it would be supported by a very lightweight Secretariat that is guided by a multistakeholder coordinating process. Overlap or duplication with existing institutions would be avoided, and it would draw on the research and work carried out by others, most notably partners in the academic and research institution communities. Extensive use would be made of the Internet and other information and communication technologies to enhance efficiency and ensure a continuing process of communication, information exchange, and collaboration, as needed.

The Forum was envisioned as filling a vacuum in the current governance architecture, as there is no global multistakeholder setting in which Internet-related public policy issues can be addressed by the international community as a whole. Similarly, there is no setting in which to conduct the sort of holistic or horizontal analysis described previously; monitor emerging trends in Internet governance generally; address any issues that "fall between the cracks" of

existing functionally segmented organizations and networks, or issues that are multidimensional or cross-cutting and hence ill-fitted to mandates of any one grouping; promote capacity building with respect to the specialized requirements of participating in Internet governance arrangements; or encourage inter-organizational coordination, as appropriate. More specifically, the Forum's possible functions were specified as follows:

- Interface with intergovernmental bodies and other institutions on matters under their purview which are relevant to Internet governance, such as IPR, e-commerce, trade in services and Internet/telecommunications convergence.
- Identify emerging issues and bring them to the attention of the appropriate bodies and make recommendations.
- Address issues that are not being dealt with elsewhere and make proposals for action, as appropriate.
- Connect different bodies involved in Internet management where necessary.
- Contribute to capacity-building for Internet governance for developing countries, drawing fully on local sources of knowledge and expertise.
- Promote and assess on an ongoing basis the embodiment of WSIS principles in Internet governance processes.[8]

The global response to the Forum proposal has evolved in a rather interesting manner. The initial reactions of some of the larger, wealthier, and more powerful developing countries was rather muted; their primary concern was with establishing intergovernmental authority over public policy aspects, broadly defined, rather than with having the opportunity for multistakeholder dialogue and analysis. The United States remained noncommittal, and presumably viewed its possible 11th hour agreement to a Forum as a concession that could be made when refusing to agree to oversight changes. But many other industrialized and developing countries---most notably the least developed countries, which would be among the primary beneficiaries---were more receptive. For their parts, industry groups generally expressed skepticism about the need for a new entity, while WSIS civil society participants were more enthusiastic.

Regarding the latter, in its written reply to the WGIG Report, the Internet Governance Caucus offered a fairly detailed response that included some complementarities but also some notable differences from the WGIG's approach. In particular, it stated that civil society supports the establishment of a Forum as long as it is truly global, inclusive, and multi-stakeholder in composition, and as stakeholders from all sectors are able to participate as equal peers. Moreover, the Caucus suggested that the Forum should not be anchored in any existing specialized international organization, but rather should be organized as a legally freestanding entity. If this proves to be impossible, then the Forum should be organized directly under the

[8] Report of the Working Group on Internet Governance (Geneva: WGIG, 2005), pp. 11-12.

auspices of the UN Secretary-General. The Forum should not by default have a mandate to negotiate hard instruments like treaties or contracts, but in very exceptional circumstances when the parties all agree, could include a mechanism that allows for their development. Otherwise, the Forum would normally focus on the development of soft law instruments like recommendations, guidelines, declarations, etc. The Caucus also suggested that the Forum could provide, *inter alia,* the following functions:

a. Inclusive dialogue, with a differentiated architecture allowing for peer-level interaction where appropriate, i.e. in working groups (here the ITU model is instructive, i.e. in the different ways study groups and plenaries work);
b. systematic monitoring of trends;
c. comparative, cross-sectoral analysis of governance mechanisms, with an eye toward "lessons learned" and best practices that could inform individual and collective institutional improvements;
d. assessment of horizontal issues applicable to all arrangements, e.g. the promotion of transparency, accountability, inclusion, and other principles of "good governance";
e. identification of weaknesses and gaps in the governance architecture, i.e. "orphaned" or multidimensional issues that do not fall neatly within the ambit of any existing body;
f. identification of potential tensions between separately developed mechanisms, and possibly efforts to promote enhanced coordination among them;
g. promotion of decentralized convergence among positions and initiatives, where possible;
h. pre-decision agenda setting that could, inter alia, feed into the work of other bodies.[9]

While the prospects were still uncertain going in, an interesting dynamic took hold in the September 2005 PrepCom-3. One government after another took the floor to express it support for the creation of a Forum, albeit at times with slightly different formulations of its purpose and potential functions. With the oversight battle having blown up, the United States expressed its support for the Argentine proposal, which endorsed the Forum. Industry participants regrouped to a position that the Forum would need to be well managed, low cost, clearly tasked, and so on. At the time of writing, the only WSIS participant still on record as opposing the creation of the Forum is the Internet Society.

In short, it appears that there is now widespread support for the establishment of an Internet governance Forum. This would constitute a significant achievement for the WSIS, and would fill a gap in the governance architecture that plainly needs mending. It is also a further and

[9] GLOCOM on behalf of the WSIS Civil Society Internet Governance Caucus, "Initial Reactions to the WGIG Report, 19 July 2005," Document WSIS-II/PC-3/CONTR/23-E, 1 August 2005, at, <http://www.itu.int/wsis/docs2/pc3/contributions/co23.doc>.

particularly clear demonstration that the WGIG Report mattered. What remains is to ensure that the Forum concept is developed in a manner that meets its full potential.

Conclusion

The WGIG process mattered. It demonstrated the utility and necessity of multistakeholder participation in Internet governance; facilitated the WSIS negotiations; promoted public engagement; clarified the nature and scope of Internet governance; began the holistic assessment of horizontal issues, and offered some useful recommendations on key vertical issues; advanced politically salient options on the oversight of core resources; and proposed the creation of a Forum, which appears likely to happen. By any measure, this is a rather good record of achievement on the part of a group of individuals coming from very diverse backgrounds and perspectives and working under difficult time and budgetary constraints. It is also a testimony to the virtue of open global dialogue on Internet governance that sets aside any efforts to preempt or preconfigure the agenda based on narrow special interests. One can only hope that this will be a model for the global debate going forward, in the Forum and beyond.

Annex

ABOUT THE AUTHORS

Carlos A. Afonso is Planning Director of the Information Network for the Third Sector (Rits), a Rio-based organization dedicated to democratizing information among NGOs and promoting public policies related to ICTs and human development. He is also a member of Brazil's Internet Steering Committee (CGIbr). He studied naval engineering at the Polytechnical School of the University of São Paulo; holds a Master in Economics, York University, Toronto; and has done doctoral studies in Social and Political Thought at the same university. He was a member of the Working Group on Internet Governance.

Peng Hwa Ang is Director of the Singapore Internet Research Centre and Dean of the School of Communication and Information, Nanyang Technological University, Singapore. His research interest is Internet law and policy, and he recently published *Ordering Chaos,* which argues the case that the Internet can be and is being regulated. He has presented his research in many meetings all over the world including the European Union, and Harvard and Oxford universities where he spent a sabbatical. A lawyer by training, he obtained his PhD from Michigan State University. He was a member of the Working Group on Internet Governance.

Vittorio Bertola is presently the Chairman of ICANN's At Large Advisory Committee (ALAC), the body that advocates the interests of the individual users inside ICANN. He is also President and Chief Technical Officer of Dynamic Fun, a start-up company in the field of wireless and digital innovation services. He has been involved in various capacities in Internet user-related committees and organizations, in policy-making for the .it Internet top level domain, and in the Italian chapter of the Internet Society. He also was Vice President for Technology of the Vitaminic group, the European leader in digital music distribution. He holds a degree cum laude in Electronic Engineering from the Politecnico di Torino. He was a member of the Working Group on Internet Governance.

Tarek Cheniti is a doctoral student of the James Martin Institute for Science and Civilization at Oxford University, and a member of Keble College. His main research interests are the global governance of science and technology, and the impact of scientific innovation on human welfare. He holds a MS in Analysis, Design and Management of Information Systems from the London School of Economics and Political Science and a BA in International Trade from the Institute of Higher Commercial Studies in Carthage, Tunisia. He was a consultant at the Secretariat of the Working Group on Internet Governance.

Kangsik Cheon is the COO of International Business Development for Netpia.com. Previously he has been the ICT director for the Gyeonggi Provincial Government in South

Korea, where he developed various ICT policies and managed province-wide governmental networks; a member of the technical staff at Korea Telecom, where he worked on network evolution strategy; and a participant in a research project on expansion of New York Stock Exchange Networks. He received his PhD in Electrical Engineering at Polytechnic University in Brooklyn, New York. He was a member of the Working Group on Internet Governance.

C. Trevor Clarke is the Government of Barbados' Permanent Representative to the United Nations in Geneva, and Special Representative to the World Trade Organization at the level of Ambassador. He has completed forty one years of service in telecommunications engineering and management with the British multinational corporation Cable & Wireless, and has held positions on the boards of various private sector and government statutory corporations. His primary area of interest is in trade policy and the legal aspects of information and communication technology. He completed his engineering degree at what is now Greenwich University in London, England and his Masters in the Law of Information Technology and Telecommunications with the University of Strathclyde, Scotland. Mr. Clarke is the recipient of the year 2000 Barbados Centennial Honors (BCH), and the Gold Crown of Merit (GCM) for his work in telecommunications and investment promotion in Barbados. He was a member of the Working Group on Internet Governance.

Abdullah Abdulaziz Al-Darrab is the Deputy Governor of Technical Affairs at the Communications and Information Technology Commission (CITC) of Saudi Arabia. He is also Chairman of the National Committee for the World Summit on the Information Society. Previously, he was the Vice President for Network Affairs at the Saudi Telecommunications Company, in charge of Engineering, Implementation and Operations of telecom networks; and was Vice Chairman of the ITU-R Study Group 8 for a period of ten years. Mr. Al-Darrab has a Degree in Electrical and Electronics Engineering from California State University. He was a member of the Working Group on Internet Governance.

Nitin Desai is a Special Adviser to the Secretary-General of the United Nations for the World Summit on the Information Society. Previously, after working in universities, the private sector, and the Government of India, he occupied a number of senior positions in the United Nations, including Under-Secretary-General for Economic and Social Affairs. He also coordinated the development of Agenda 21, head the Department for Policy Coordination and Sustainable Development and the Department of Economic and Social Affairs, and was the organizer of United Nations major summits including the Johannesburg Summit on Sustainable Development (2002), the Monterrey Conference on Finance for Development (2002), the Copenhagen Summit on Social Development (1995) and the Rio Conference on Environment and Development (1992). He is an Honorary Fellow at the London School of Economics and Political Science and the convener of one of the tracks in the Helsinki Process on

Globalization and Democracy. He was the Chairperson of the Working Group on Internet Governance.

Avri Doria is an independent researcher currently working with Luleå University of Technology in Sweden and with the Republic of Korea Ministry of Information and Communication's Electronics and Telecommunications Research Institute. Ms. Doria has been an Internet technologist for over twenty five years and is active participant in the IETF, is chair of the Internet Research Task Force's Routing Research group, and is a member of ICANN's Generic Names Supporting Organization council and of Computer Professionals for Social Responsibility and the Internet Society. Her current projects include bringing the Internet into areas that are communication challenged, and is working with the semi-nomadic Sámi population of Sapmi (aka Lapland). Ms. Doria has an MA in Philosophy from the University of Chicago, an MA in Counseling Psychology from Rhode Island College, and is currently completing a transdisciplinary PhD in the department of Humanities, Social Science and Technology at Blekinge University of Technology in Sweden. She was a member of the Working Group on Internet Governance.

William J. Drake is the President of Computer Professionals for Social Responsibility, a global civil society organization, and an ICT policy consultant based in Geneva, Switzerland. In addition, he is co-editor of the MIT Press book series, *The Information Revolution and Global Politics*. Previously, he has been a Visiting Senior Fellow at the Center for International Development and Conflict Management, University of Maryland, College Park; a Senior Associate and the founding Director of the Project on the Information Revolution and World Politics at the Carnegie Endowment for International Peace, Washington DC; the founding Associate Director of the Communication, Culture and Technology Program, Georgetown University, Washington DC; and an Assistant Professor of Communication at the University of California, San Diego. His primary research interests are the global governance of information and communication technology, and the impact of the information revolution on world politics. Among his publications are, *Governing Global Electronic Networks: International Perspectives on Policy and Power* (co-editor, forthcoming); *From the Global Digital Divide to the Global Digital Opportunity: Proposals Submitted to the G-8 Kyushu-Okinawa Summit 2000---Report of the World Economic Forum Task Force*; *Toward Sustainable Competition in Global Telecommunications: From Principle to Practice*; *Telecommunications in the Information Age* (editor); and *The New Information Infrastructure: Strategies for US Policy* (editor). He received his Ph.D. in Political Science from Columbia University, New York City.

Baher Esmat is the Telecom Planning Manager at Egypt's Ministry of Communications and Information Technology. Bringing twelve years of experience, he started his career in 1993 as a Systems Engineer at Egypt's Cabinet Information and Decision Support Center before moving to Newbridge Networks Inc. in 1999 as a Systems Consultant. His main areas of interest are

mobile IP and broadband wireless systems, on which he has published several papers in international conference proceedings. Esmat received a BA in Electronics and Communications Engineering from Cairo University in June 1993, and a Masters in Computer Science from the American University in Cairo in June 1999. He was a member of the Working Group on Internet Governance.

Juan Fernández is a Senior Advisor in the Ministry of Informatics and Communication of Cuba and the Coordinator of the Cuban Commission for Electronic Commerce. He also is a member of the United Nations ICT Task Force. Previously he has been the CIO of SIME, an industrial group of more than 200 enterprises; and a Senior Researcher and Professor in the Microelectronics Research Center at Havana Polytechnic Institute. His current interests include the use of ICTs for development, and the organization of the software industry in developing countries. He has a Physics Degree from Havana University and an MSc in Microelectronics from Havana Polytechnic Institute. He is a FIDE International Chess Master. He was a member of the Working Group on Internet Governance.

Qiheng Hu is President of the Internet Society of China, Vice president of the China Association for Science and Technology, and Chairperson of the Steering Committee for the China Network and Information Center. She has been a research professor at the Institute of Automation, Chinese Academy of Sciences, for twenty years and was the Academy's Vice President from 1988 to 1996. She has been a visiting research professor in Case Western Reserve University. Her background is as an automation engineer with a main interest in pattern recognition, after which she has worked for many years as an ICT policy advisor. She obtained her PhD at the Moscow Institute for Chemical Machinery. She was a member of the Working Group on Internet Governance.

Willy Jensen is the Director General of the Norwegian Post and Telecommunications Authority. He gained full Professorship in Informatics/Computer Networking at the University of Tromsø, Norway in 1982. He has conducted research on electronic communications and computer networks from 1974 to 1989 and was operationally active in the execution and management of projects establishing the university networks across Europe in the 1970s-80s. He moved to industry top management positions in 1989 and further to top management positions in the European Space Agency, working in Italy from 1993 to 1999. He was a member of the Working Group on Internet Governance.

Ayesha Hassan manages the International Chamber of Commerce's Commission on E-Business, IT and Telecoms and is based in Paris. She is in charge of the Coordinating Committee of Business Interlocutors (CCBI), a vehicle mobilizing and coordinating the involvement of the worldwide business community in the process leading to the World Summit on the Information Society (WSIS) Summits of 2003 and 2005. She also served on the

United Nations Secretary General's Task Force on Financial Mechanisms. Ms. Hassan is an experienced lawyer, and has a background in dispute resolution, international policy, and e-commerce issues. She was a member of the Working Group on Internet Governance.

Wolfgang Kleinwächter is a professor of international communication policy and regulation in the Department for Media and Information Sciences, University of Aarhus, Denmark. He is also active in different positions in ICANN's At Large community, and is a member of the International Council of the International Association for Media and Communication Research. Previously he taught at the University of Leipzig, the University of Tampere, and the School of International Services at the American University in Washington, D.C., and chaired the Management Board of the Interregional Information Society Initiative of the European Commission in Brussels. His main interests include international communication policy and regulation, and Internet governance. His book, *ICANN 2.0: The Long Road Towards Self-Regulation of the Internet,* will be published soon in Germany. He was a member of the Working Group on Internet Governance.

Jovan Kurbalija is the Director of DiploFoundation and a lecturer in Internet Governance in the MA Course in Contemporary Diplomacy (University of Malta). Since 1995, he has been directing postgraduate courses in diplomacy and ICT at the University of Malta, in which more than 300 diplomats, government officials, and ICT specialists have participated. His primary research interest is the impact of ICT/Internet on diplomacy and modern international relations. He has a professional and academic background in diplomacy, international law, and information technology. He has LL.D, MA in International Law and PhD from the University of Belgrade, and Master in Diplomacy from the Mediterranean Academy of Diplomatic Studies, University of Malta. He was a member of the Working Group on Internet Governance.

Markus Kummer is the Executive Coordinator of the Secretariat supporting the Working Group on Internet Governance (WGIG). He was appointed to this post by the United Nations Secretary-General in March 2004. From 2002 until 2004 he held the position as *eEnvoy* of the Swiss Foreign Ministry in Berne. His main tasks included foreign policy co-ordination with regard to information and communication technologies in general and the WSIS in particular. Mr. Kummer was a member of the Swiss delegation during the first phase of the WSIS where he chaired several negotiating groups, including the group on Internet governance that developed an agreed text on this issue for the WSIS Declaration of Principles and Plan of Action. He is a career diplomat who served in several functions in the Swiss Foreign Ministry in Berne, Lisbon, Vienna, Oslo, Geneva and Ankara. Between 1998 and 2003 he served as Head of Unit in the Secretariat of the European Free Trade Association (EFTA) in Geneva, where he was responsible for relations with countries outside the European Union.

Don MacLean is an independent consultant specialized in Internet and ICT-related policy, strategy and governance issues at the national and international levels. From 1992-99, he served as head of strategic planning and external relations for the International Telecommunication Union. Prior to joining the ITU, he served in a number of senior policy and planning positions in the Canadian Department of Communications. He was a member of the Working Group on Internet Governance.

Frank March is a Senior Specialist Advisor in the Information Technology and Telecommunications Policy Group of the Ministry of Economic Development, Wellington, New Zealand. His current work includes developing policy and advising on a wide range of technical and other Internet-related issues, and he is New Zealand's representative in ICANN's Governmental Advisory Committee. In a private capacity, he chairs a committee that is responsible for oversight of policy issues relating to management of the .nz top-level domain. He has a BSc (Hons) and PhD in chemistry from the University of Canterbury, Christchurch. He was a member of the Secretariat of the Working Group on Internet Governance.

Chengetai Masango is a Ph.D. Candidate at the School of Information Studies at Syracuse University, New York. His research concentrates on virtual collaboration and transnational collective action. He has a MA in International Relations (Global Information Policy) from the Maxwell School of Citizenship & Public Affairs, Syracuse University. He was a member of the Secretariat of the Working Group on Internet Governance

Jacqueline A. Morris is an Internet Specialist at Media 21 Ltd in Port of Spain, Trinidad and Tobago, and a part-time lecturer at the University of the West Indies, Trinidad. Previously, she has held several ICT and Internet focused positions at the Tourism and Industrial Development Company of Trinidad and Tobago; and has been a consultant at HR Consulting Associates and at Globaltech, Seattle. She was a Fulbright Fellow and a 3 Guineas Foundation Fellow. Her primary interests are encouraging women's and girls' participation in the ICT field, as well as utilizing the Internet to market and promote Trinidad and Tobago Entertainment ventures. She holds a BSc in Chemical Engineering from the UWI, an MS in Chemical Engineering from the UFSCar, Brazil, and an MS in Engineering Science from Rensselaer Polytechnic Institute, NY. She was a member of the Working Group on Internet Governance.

Olivier Nana Nzépa is an ICT international consultant, lecturer, and a senior researcher in the Research ICT Africa network and the Africa Management network. He holds a Ph.D. in communication from University of Montreal; an M.A. in International relations from ENAP, in Montreal; an M.A in Business management, H.E.C, Montreal; an M.Sci in communication, University of Montreal; and a BA in journalism from the University of Yaoundé, Cameroon. He was a member of the Working Group on Internet Governance.

Alejandro Pisanty is Head of Academic Computing Services for the National Autonomous University of Mexico, which he has also served as Coordinator for Open University and Distance Education and other functions. A Ph. D. and professor of Chemistry, Dr. Pisanty has done research in theoretical and computational chemistry, distance education, and several technology-related subjects. He has been active in the introduction and diffusion of the Internet into Mexico. He was the founding Chair of CUDI, the Mexican Internet-2 consortium, and is Chair of the Sociedad Internet de Mexico (ISOC Mexico) and Vice-Chair of the Board of ICANN. He was a member of the Working Group on Internet Governance.

Waudo Siganga is the Chairman of the Computer Society of Kenya and CEO of telecommunications firm, Signet Technologies. He serves on the steering committees of the Africa Federation of ICT Associations and the World Information Technology & Services Alliance. He has participated actively in ICT-related public policy developments in Kenya during the last decade that have been characterized by major changes like deregulation and liberalization of the market. A keen participant in topical international forums, he has particular interests in the use of ICT for development, and in the role of private sector business in attaining appropriate ICT policies. He has an undergraduate and masters degrees in Information Systems from Nairobi University. He was a member of the Working Group on Internet Governance.

Charles Sha'ban is the Executive Director of the Regional office of Abu-Ghazaleh Intellectual Property, a member of the Talal Abu-Ghazaleh Organization. Within ICANN, Mr. Shaban is a member of the country code Name Supporting Organization Council (ccNSO) and represents his firm in both the Business Constituency and the Intellectual Property Constituency. In addition, he is a board member of the Multilingual Internet Names Consortium, and holds memberships in various other international and regional organizations involved in the fields of the intellectual property and information and communication technology. He was a member of the Working Group on Internet Governance.

Howard Williams is Director of the Communication Management program at the University of Strathclyde, Glasgow. The programme has worked with professionals in over sixty five countries and is a leader in ICT capacity building for developing countries. Williams also works with World Bank, and was formerly the expert economist in DG InfoSoc at the European Commission. His primary interests are in the ways in which ICTs shape the development process, and in how public policy interventions facilitate investment in, and the diffusion and use of, innovative ICT networks and services. He received his PhD in Economics at the University of Newcastle. He was a member of the Secretariat of the Working Group on Internet Governance.