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**HERDING SCHRÖDINGER'S CATS:
SOME CONCEPTUAL TOOLS FOR THINKING ABOUT INTERNET GOVERNANCE¹**

*Background Paper for the ITU Workshop on Internet Governance
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¹ The expression “herding cats” refers to a task that is very difficult, perhaps impossible, to accomplish – a good description of the challenge of coordinating the Internet-related interests and activities of governments, the private sector, civil society, and international organizations. “Schrödinger’s cat” was the subject of a famous thought experiment by an Austrian physicist, which can be read as demonstrating that absurd results can follow if principles that make sense in one context are applied to very different kinds of problems – a suitable caution for all those grappling with the complexities of Internet governance!

Note on the Author

Don MacLean is an independent consultant specializing in ICT-related policy, strategy and governance issues. His work within Canada has included projects related to the extension of broadband networks and services, e-Government and innovation. His international work has included projects in support of the Global Knowledge Partnership, the G8 Digital Opportunities Task Force, the World Summit on the Information Society, and the Global ePolicy Resource Network. In addition, he has been involved in several projects related to the governance of global electronic networks.

Don MacLean served as head of the ITU strategic planning and external affairs unit from 1992-99. Prior to joining the ITU, he held a number of senior policy and planning positions in the Canadian Department of Communications.

I. INTRODUCTION

A. Background

1. The WSIS Plan of Action asked the Secretary-General of the United Nations to set up a working group to investigate and make proposals for action on the governance of the Internet. *Inter alia*, this group is expected to do four things:
 - a) develop a working definition of Internet governance;
 - b) identify the public policy issues that are relevant to Internet governance;
 - c) 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 developed and developing countries;
 - d) 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. In addition to governments, the private sector and civil society from both developing and developed countries, the Secretary-General's working group will involve relevant intergovernmental and international organizations and forums, of which the ITU is one.
3. In order to begin the process of preparing ITU input to the working group, the ITU Secretary-General has organized a workshop on Internet governance. This workshop will take place in the framework of the New Initiatives Program, and its report will be submitted to ITU members and decision-making bodies for their consideration.

B. Purpose, Scope and Methods

4. The purpose of this background paper is to provide some conceptual tools to help workshop participants do two things:
 - a) systematically address the three issues mentioned in the WSIS Plan of Action;
 - b) identify any other issues that ITU members may wish to consider bringing to the attention of the Secretary-General's working group (i.e. *alia*).
5. The paper will take a broad approach to issues of Internet governance.
 - a) Section II will explore the meaning of the two key terms for the exercise – the “Internet” and “governance” – alone and in combination, with a view to identifying the fundamental conceptual choices facing the Secretary-General's working group.
 - b) Section III will attempt to map the main issues raised by the Internet at the global level, along with the principal intergovernmental and international organizations and other fora currently involved in the governance of these issues. It will also identify a number of gaps that appear to exist between issues and governance structures.

c) Section IV will draw on previous research into international ICT decision-making to identify a number of key issues related to the capacity of intergovernmental and international organizations on the one hand, and governments, the private sector and civil society in developing countries on the other hand, to govern the Internet effectively according to the criteria established by WSIS.

d) On the basis of the foregoing analysis, Section V will present a set of conclusions with respect to key issues of Internet policy and governance that the Secretary-General's working group may wish to consider.

6. In presenting tools for thinking about Internet governance, the paper will draw on previous work by the author that is directly or indirectly related to this subject. In particular, the author wishes to thank the Commonwealth Telecommunications Organisation and Panos London, as well as the editors of *Information Technology and International Development* for permission to use conceptual tools originally published in the report "Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making" and in the article "The Quest for Inclusive Governance of Global ICTs: Lessons from the ITU in the Limits of National Sovereignty".²

II. INTERNET GOVERNANCE: WHAT ARE WE TALKING ABOUT?

7. The first task facing the Secretary-General's working group is to develop a working definition of "Internet governance". The results of this work will presumably determine the scope of three tasks that follow – to identify public policy issues that are relevant to Internet governance, to develop a common understanding of the roles and responsibilities of various stakeholders, and to propose action to WSIS-05 – plus any others that are added to the working group agenda. The success of this project will therefore depend on getting the working definition of Internet governance right in several different senses.

a) It should not be an abstract exercise, or an exercise in solving problems other than those posed by WSIS. In other words, the working definition of "Internet governance" should fit within the WSIS frame of reference – which is essentially about creating an inclusive global information society – and should lead to actionable results, beginning at WSIS-05. In this respect, it is worth noting that the WSIS Declaration of Principles and Plan of Action contain a surprisingly rich framework for thinking about Internet governance. We will examine this in § 23-4 below.

b) Given the time frames involved in dealing with governance issues at the global level, it should be forward looking and not deal only with the problems of the moment.

² See MacLean, D., Souter, D., Deane, J., & Lilley, S. (2002). *Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making*. London: Commonwealth Telecommunications Organisation and Panos London. See also MacLean, D. (2003). "The Quest for Inclusive Governance of Global ICTs: Lessons from the ITU in the Limits of National Sovereignty." *Information Technologies and International Development 1*: 1-18. The former document is available at <http://www.panos.org.uk/resources/booksection.asp?ID=1002>, while the latter is available at <http://mitpress.mit.edu/catalog/item/default.asp?sid=FA046030-D668-492D-AE85-7DED926A585E&ttype=4&tid=59>.

c) Given the ground rules for the Secretary-General's working group (an open and inclusive process that ensures a mechanism for the full and active participation of the major stakeholder groups), it must be something that everyone can agree is a reasonable point of departure for identifying issues, analyzing roles and making proposals for action.

8. This task is demanding, in and of itself. It is further complicated by the following factors.

a) The debates that have taken place about Internet governance, not just in the WSIS preparatory process, but over the better part of the past decade have caused a tendency in some quarters to equate "Internet governance" with arrangements for allocating and managing Internet addresses and domain names, while in other quarters there has been a tendency to assimilate "Internet governance" to "telecommunications governance". Neither viewpoint is accurate or helpful to the task facing the Secretary-General's working group.

b) The fact that these debates have taken place against the backdrop of a broader discussion about the effects of globalization, and the roles of the private sector and civil society in international decision-making, have led some to see the Internet as the standard bearer for a much broader governance reform agenda, both positively and negatively. Although Internet governance in some senses is a 'wedge issue', progress will depend on not overburdening an already difficult problem.

c) There appears to be a lack of clarity and common understanding among WSIS participants on the meaning of the terms "Internet" and "governance", when used either alone or in combination. For example, the WSIS Declaration of Principles appears to use the terms "governance" and "management" interchangeably; as we shall see in §16, it is more helpful to think of them as categorically distinct activities, belonging to different domains. The Declaration of Principles also refers to the Internet as a public "facility" – when in fact Internet services and applications run on the facilities of telecommunications operators. In addition, submissions from the International Chamber of Commerce (ICC) and the Internet Society (ISOC) oppose "governance" and "coordination" as mutually exclusive terms. Many would consider coordination – particularly of the kind done by bodies like Internet Corporation for Assigned Names and Numbers (ICANN) and the Internet Engineering Task Force (IETF) – to be a form of governance.³

9. In a more stable, less complex environment, the task facing the working group could be seen as a relatively simple exercise involving the construction of a 2-dimensional matrix or spreadsheet arraying public policy issues against institutional responsibilities. However, as we will see in the following sections, the whole question of Internet governance is very unstable and highly contestable on every dimension, ranging from the definition of key terms to the selection of appropriate forms of governance and institutional arrangements. The following sections propose an approach to working through these problems.

³ See the IIC contribution at http://www.itu.int/wsis/documents/listing.asp?lang=en&c_event=wglj&c_type=col, and the ISOC contribution at <http://www.isoc.org/news/7.shtml>.

A. The Internet

10. The working group must begin with an understanding of what the Internet is and the ways in which it is similar to and differs from other electronic networks. There are different views on this, and it is helpful to begin by exploring them since they condition different points of view on the relationship between the Internet, governance, and the manner in which it should be conducted. One feature all of them should share, however, is that they focus on the public Internet, or public networks that use Internet technology, and not on the private “Intranets” that are found in many companies and other organizations. While it may be questionable usage, the reference in the WSIS Declaration of Principles to the Internet as a “public facility” clearly indicates that the working group should limit its consideration to the public Internet

11. The traditional Internet view –the view from inside the Internet community, or the “Nethead” view – sees the Internet as different from other electronic information and communication networks (telecommunications and broadcasting). Rather than being a single, centrally controlled network designed to deliver one service to “dumb” terminals, it is a “network of networks” that is controlled from the “edge” by users on an “end-to-end” basis, using intelligent terminals across a dumb network to access and provide a wide range of services which, although functionally similar in some cases to the services provided by other networks and media, are inherently different for multiple reasons including technology, design, capability, control, and economics. On this view, there are things about the Internet that need to be governed – particularly the management of the Internet numbering and address systems and technical standards – but the institutional structures by which they are governed, like the Internet itself, should be completely different from those that govern other networks.⁴

12. The traditional telecommunications/broadcasting/media view – the view from the outside, particularly from some developing countries and regions, and from traditional information and communications media that are subject to competition from Internet based service providers (i.e. telecommunications, post, broadcasting, film and sound recording, publishing, etc). Proponents of this view would agree on the need to govern the Internet numbering and addressing systems and technical standards, but would see different institutions and processes as appropriate in at least some areas. In addition, on this view, there is a need to level the governance playing field between networks that deliver the same or functionally similar services that are subject to specific governance, on the theory that if it “looks like a duck walks like a duck, and quacks like a duck, it is a duck” – regardless of the underlying differences that may exist. This viewpoint is also justified in terms of the need to protect investments in existing infrastructure and services, particularly in developing countries; to maintain universal and affordable access to basic communication services; and on views of consumer and social welfare, and the appropriate relationship between government and the private sector, that in some cases differ substantially from those held by traditional “netheads”.

13. The network transformation view looks at the Internet and issues of Internet governance within a more wholistic perspective, in terms of past developments, present trends, and future possibilities. From this point of view the Internet is not unique, in terms of the patterns that have characterized the development of international governance arrangements. Other

⁴ See Denton, T. (1999). *Netheads versus Bellheads*, available at <http://www.tmdenton.com/pub/index.htm> for a classic exposition of the differences between the Internet and the PSTN from the nethead point of view.

information and communication technologies –beginning with the telegraph and continuing with the telephone, wireless, sound and television broadcasting – were not born as single, centrally-controlled networks. The need to standardize different systems so that they could interoperate was the driver behind the construction of national, regional and global governance arrangements – just as it is in the Internet today. Although other technologies functioned as centralized, one service networks for a certain period of time, the developments of the past decade have changed them significantly. Looking forward, this viewpoint would note the migration of traditional PSTNs to IP-based networks, and the potential integration of telecommunications, broadcasting, publishing and other media functions into these networks.⁵ This view might also hypothesize a future in which past divisions between “vertical” network structures would progressively be transformed into “horizontal” divisions between different network layers; in which a mixture of user- and centrally- controlled networks, providing different qualities of service, would coexist; and in which everything in the universe ultimately would be connected in ubiquitous, mobile, broadband networks. In this view, the traditional Internet would not necessarily disappear. It would likely have a similar relationship to the IP-based networks operated by telecom carriers as radio amateurs have to other wireless networks. (In fact, from a historical point of view, there appear to be similarities between the culture of radio amateurs and the culture of the traditional Internet).⁶

14. Judging which of these views is likely to prevail in the global information society, and which should provide the foundation for the working group, is not an easy task. It involves the consideration of complex questions at the levels of technology, business planning, consumer preference, and political risk analysis. In this respect, the workshop may wish to consider the following factors:

- a) the amount of work already underway in telecommunications standardization bodies such as ITU-T and ETSI, in some cases in cooperation with the IETF, to develop IP-based standards for telecommunications networks and to bridge Internet addressing and telecommunications numbering systems;
- b) the plans announced by major telecommunications incumbents to transform their wireline networks into IP-based networks and to adopt IP as the platform for future generation wireless networks;
- c) the increasingly aggressive approach of content industries and IP holders to traditional Internet services;
- d) the adoption by the sound recording industry of Internet-based distribution strategies, the consideration of similar strategies by other content industries;
- e) the difficulty providers of traditional Internet – based services (indeed, many competitors to incumbent telecommunication carriers) have had in developing

⁵ The “Report of the Secretary-General on IP Telephony” to the 2001 ITU World Telecommunication Policy Forum, which is available at <http://www.itu.int/osg/spu/wtpf/wtpf2001/sgreport/index.html> , provides a very useful overview of the migration that is underway to IP-based networks, and of the policy implications for different stakeholder groups.

⁶ See <http://www.itu.int/osg/spu/newslog/stories/2003/06/06/ubiquitousNetworksResources.html> for a list of reference resources on ubiquitous networks. See also <http://www.wired.com/wired/archive/3.05/dejavu.html> for the cultural similarities between radio and Internet pioneers.

successful business models – in spite of the fact that they have not had to invest in the very capital-intensive business of constructing transmission facilities;

f) the impact of spam, viruses, fraud, identity theft, etc. on consumer confidence and expectations;

g) the concern of governments about the impact of Voice over Internet Protocol (VoIP) on traditional telecommunication networks and services, as well as about network-based threats to national security (hackers, terrorists, cyber-warfare, and other forms of vulnerability).

B. Governance

15. In the English language, “governance” is an old term which, like “civil society”, fell into disuse, but which has been revived, given new meaning, and attained widespread currency. Like “government” and “governor”, it is derived from the Latin word “gubernare” – the action of steering a ship. A popular definition reflects these ancient Roman roots by defining governance as “steering, not rowing”.

16. This definition captures an essential feature of the current concept of “governance”. In this concept, there is a distinction between the people, structures, and processes that do the “rowing” in any human system – and the people, structures and processes that establish general goals for the system and guide the “rowers” toward these goals, setting the tempo and changing course as necessary. On this view, it is the action of “steering” that constitutes governance, while the action of “rowing” might be variously described as “government” or “public administration” if it takes place in the public sector, as “management” if it takes place in the private sector, or as “volunteering” or “social action” if it takes place in civil society.⁷

17. Recent discussion in different policy domains illustrates the ways in which this concept can be applied to different kinds of systems.

a) With respect to the public sector, there has been a lot of discussion about ways of improving governance at the national level in some developing countries by instituting democratic values, structures and processes, as an essential precondition to economic and social development. At the same time, in many developed countries there has been discussion about the need to revitalize popular participation in democratic processes and institutions. In both cases, there is belief that better democratic governance will lead to better government and public administration.

b) With respect to the private sector, there has been much discussion of the need to improve “corporate governance” in order to ensure that the managers run public corporations honestly, in the interests of their shareholders, and with greater attention to their social responsibilities – instead of for personal gain and private interests.

⁷ The Oxford English Dictionary defines governance in a similar sense as “controlling, directing, or regulating influence; control, sway, mastery”. A more elaborate definition, which was developed for the second Global Knowledge Conference (GKII), is “the process through which ... institutions, businesses and citizen’s groups articulate their interests, exercise their rights and obligations, allocate human choices and opportunities, and mediate their differences”

c) With respect to international affairs, there has been extensive discussion about the need to include the private sector and civil society in structures and decision-making processes that traditionally have been the preserve of national governments. In addition, there has been considerable discussion about the need to develop new structures and processes that include civil society and developing countries in the governance of the process known as “globalization”.

18. There are a number of different ways in which systems can be governed or steered. These can be conceived as ranging on a continuum from “hard” forms of governance such as laws and regulations to “softer” forms such as standards, policy coordination and voluntary cooperation.

- a) It is important to consider which form is appropriate to a particular governance problem and how it should be structured by asking such questions as: Who should have a hand on the tiller? What are their roles and responsibilities? How should these be carried out in terms of organizational structure and decision-making process?
- b) Before asking “how” questions of this kind, however, it is important to ask “why” questions. Why does a particular activity need governance? What is the value that will be added? Why can’t the rowers just get on with the job?
- c) The answers to “why” questions of this kind typically involve reference to deeper levels of meaning – common goals, shared values, accepted principles – as well as to conflicts of interest and differences of opinion that need to be resolved in order to progress the work of the rowers, to the benefit of society at large.

19. In any society, no matter how free, almost every activity is subjected to multiple sources of “hard” governance in the form of generally applicable laws and regulations, as well as to multiple sources of “soft” governance in the form of normal business practices, cultural values, and social conventions. In addition to these general forms of governance, some activities are subject to “sector-specific” governance in the form of laws, rules and regulations, as well as to “softer” forms of social control that apply specifically to these activities and are tailored to their particular features. In the information and communications sector, the following are among the reasons that typically trigger “sector-specific” governance:

- a) to make sure that systems work so that they can be used to communicate;
- b) to allocate scarce resources among competing users;
- c) to encourage and protect investment in infrastructure, services and content;
- d) to prevent the abuse of monopoly/market power – in terms of prices, service quality and availability, freedom of speech and expression, diversity of view, etc.;
- e) to ensure universal and affordable access to basic services;
- f) to protect public order and national security.

20. In comparing the Internet with traditional information and communications media, such as telecommunications and broadcasting, there are clear differences in patterns of governance at the national and international/global levels.

- a) Unlike traditional telecommunications, broadcasting and media, the traditional Internet has been subject to very limited sector-specific governance at the global level

– most notably in the areas of technical standardization and the management of Internet addresses and domain names – and has been free to govern itself without the involvement of public authorities. In many countries, this has also been the case at the national level. However, this appears to be beginning to change, as governments beginning to adopt Internet-specific laws and regulations to address issues like spam.

b) In its first few years as a widely-available public network, the Internet to some extent escaped governance under the general laws and regulations that many countries apply to traditional information and communications media in order to protect privacy and intellectual property rights; prevent illegal activities (e.g. commercial fraud, child pornography, hate crimes, abuses of freedom of expression, destruction of property, theft); protect consumers (e.g. unwanted solicitation, false advertising); and promote linguistic and cultural diversity (e.g. language of communication, local information). Some saw this as evidence the Internet had created a new, borderless world where the power of government was significantly diminished, and users ruled for better or for worse according to the rules and remedies they devised. Clearly, there are difficulties in applying national laws and regulations in cyber-space – to entities whose whereabouts may be unknown, or which may operate in different countries under different laws. There are also bound to be difficulties in enforcing laws that target users (as in the case of file sharing) or service providers, rather than originators. However, from the point of view of government, these difficulties are challenges that require the development of new tools for enforcing laws and regulations. They may also be an argument for harmonizing national approaches through international governance arrangements.

21. The primary concern of the Secretary-General's working group is international Internet governance, rather than national Internet governance (although there are references in the WSIS Declaration of Principles and Plan of Action to governance actions that might be taken at the national level). However, national and international governance are clearly linked.

a) Historically, the need to harmonize differences between national governance régimes in the interest of communications efficiency and global development led to the development of international governance arrangements for telecommunications and other ICTs.

b) It might be argued that the case of the Internet is different since – although it originated in one country – it was designed from the beginning to be operated as network of networks by a variety of different users, on a potentially global basis. The Internet grew to become a global medium without the kind of intergovernmental coordination that characterized the development of most previous communications media.

c) However, the debates about Internet governance that have taken place in different countries and regions and in various international forums in recent years appear to have demonstrated that it is one thing to design a medium of communications that operates on a global basis from the ground up on a technical level, and quite another thing to design a governance régime for such a medium that is acceptable in all countries and operates on an efficient, harmonized basis at the global level.

d) Today, it appears that the different approaches being taken to Internet governance at the national, regional and international levels may limit, or even threaten, the long-term viability of the Internet as a global communications and information medium. WSIS appeared to recognize the seriousness of these conflicts, by deciding to launch a process for examining Internet governance comprehensively at the global level, within a United Nations framework. In light of these developments, it is possible to conclude that the future history of global Internet governance may not be all that different from the past history of telecommunications and ICT governance – i.e. that there is a need to harmonize governance approaches on a global basis, in order to reap the potential benefits of Internet technology.

C. Internet + Governance = ?

22. In sum, three possible views of Internet governance appear to have emerged, which parallel the three different views of the Internet laid out in Section A.

a) One, which corresponds to the traditional Internet view, is articulated in the WSIS submissions of the Internet Society (ISOC) and the Internet Corporation for Assigned Names and Numbers (ICANN), as well as in the paper on Internet governance published by the ICC following the summit. On this view, Internet governance should be limited to three areas: technical standardization, management of the address and domain name systems and some service related issues, and that this should be accomplished through existing mechanisms of Internet self regulation and policy coordination, rather than through harder forms of governance involving the adoption of laws and regulations at the national and international levels.

b) A second view, which could be called the traditional telecommunications viewpoint, was articulated by a number of developing countries during the WSIS process. This view sees a much wider range of issues as requiring global governance, and favours a wider use of both established and new international governance mechanisms at the technical level (e.g. ITU involvement in the governance of the Internet addressing and domain name systems); in relation to financing the deployment of and access to the Internet (e.g. through telecom-style settlement systems, technical cooperation and development assistance programs); and in relation to the international framework for governing the Internet (e.g. through amendments to existing treaties, such as the ITU International Telecommunication Regulations, or the development of a new convention).

c) A third view, which might be called the network transformation view, focuses on the transformation of traditional telecommunication networks that is currently underway through the migration from circuit-switched to IP-based networks, and the progressive convergence of traditional telecommunications, broadcasting, information, entertainment and Internet services in the ubiquitous, broadband, mobile networks of the future. This view sees the need to re-think the governance of the Internet and the governance of other kinds of communication networks in light of these developments.

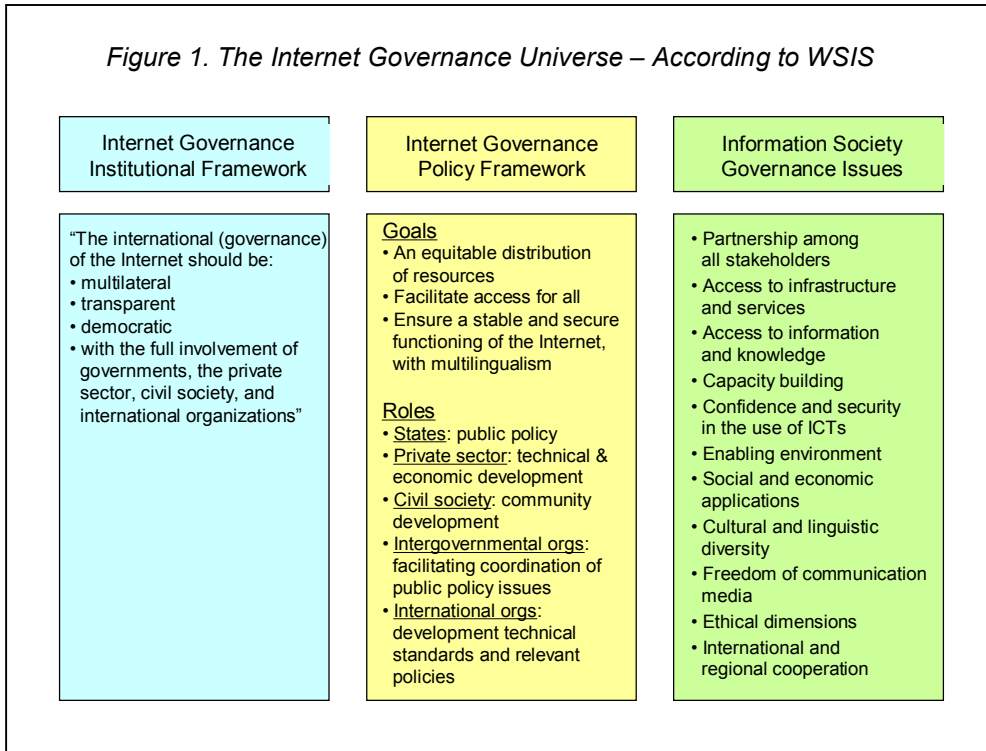
III. INTERNET GOVERNANCE: ISSUES AND FORA

23. Since one of the ground rules this paper has recommended for the workshop and the working group is to orient its work to the needs of the WSIS process, before attempting to map Internet governance issues and institutions, it is worthwhile analyzing what sort of framework WSIS Phase I put in place to demarcate the Internet governance universe. Figure 1 does this by using a framework for analyzing governance models and arrangements that was developed for a project on “Governance of Global Electronic Networks” being sponsored by the Social Science Research Council.⁸ This model distinguishes three levels in any set of governance arrangements:

- a) the institutional level – in the foreground are the legal foundations, organizational structures, procedures and processes that make up the governance institution;
- b) the policy level – embedded in these and underlying them are the players that participate in governance processes, the goals they share and the principles that guide their interaction;
- c) the issue level – at a deeper level of analysis are the interests in play and the general framework of values that shape the structure and operation of the layers above them.

⁸ See http://www.ssrc.org/programs/itic/ggen_book/ for information on this project.

Figure 1. The Internet Governance Universe – According to WSIS



24. The Internet governance universe demarcated in the WSIS Declaration of Principles suggests that the working group should take a broad view of its subject if it wishes to be faithful to the spirit of the summit.

- a) The three specific goals mentioned – ensuring an equitable distribution of resources, facilitating access for all, and ensuring a stable and secure functioning of the Internet, taking into account multilingualism – constitute an ambitious agenda in themselves.
- b) However, Internet governance, like any form of ICT governance, is not an end in itself, but is undertaken to achieve more general economic and social goals. In the WSIS context, it seems reasonable to conclude that achievement of the three specific, Internet-related goals are intended to support attainment of the 11 information society principles identified in the WSIS Declaration of Principles, and should be governed or “steered” with these ends in view.
- c) Moreover, the range of governance instruments contemplated, the number of players assigned roles and responsibilities, and the procedural requirements envisaged combine to suggest a rich and complex governance web.

25. It is also worth recalling the mandate of the working group set out in the WSIS Plan of Action, after developing a working definition of Internet governance, is to “identify the public policy issues that are relevant to Internet governance” and to “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”. Read in isolation, this text suggests that the working group could discharge its mandate by filling in a matrix of the kind presented in Figure 2.

Figure 2. Internet Governance – A Simple View

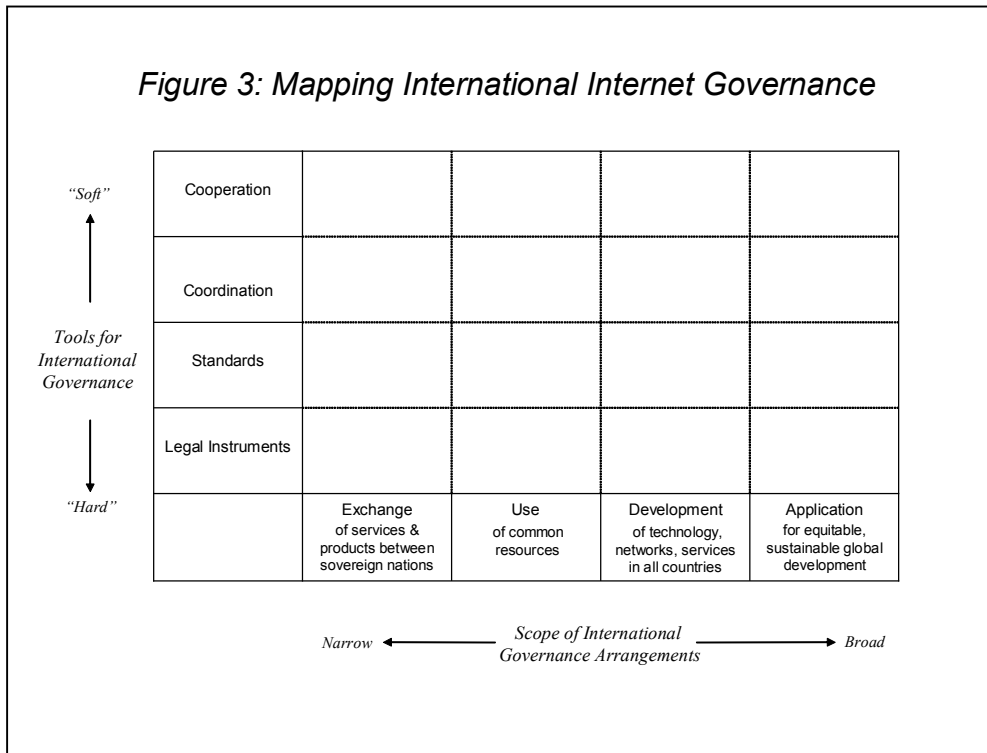
	Government	IGOs, IOs, & other Fora	Private Sector	Civil Society
Issue 1				
Issue 2				
Issue 3				
Issue n				

26. While attractive in its simplicity, an approach of this kind seems unsatisfactory for two reasons: it does not appear to be coherent with the framework set out in the WSIS Declaration of Principles; and it fails to capture the central and most intriguing feature of the Internet governance debate – the fact that everything has changed as a result of the Internet, that everything is now contestable. A more dynamic approach is needed to be faithful to the breadth of governance issues mapped out in the WSIS Declaration of Principles, and to take account of what is happening in “the real world”.

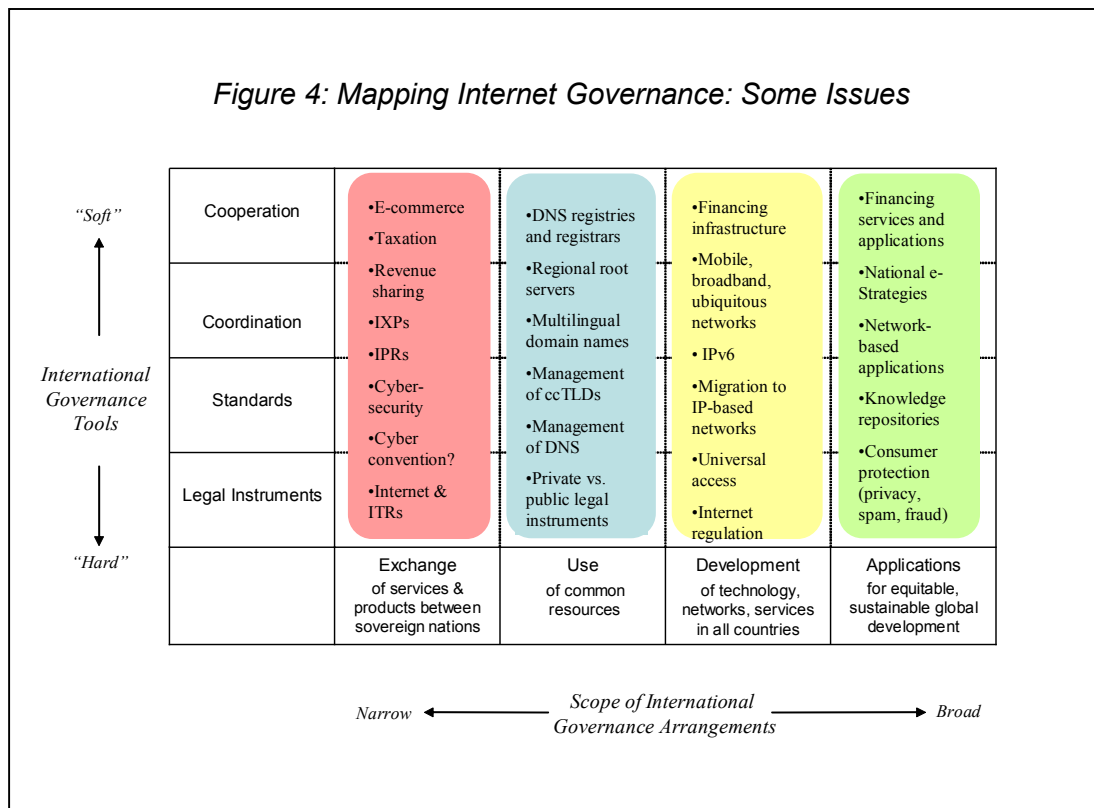
27. In this spirit, the following sections will use the matrix presented in Figure 3 to attempt to map some of the issues that arise on this broad view of the Internet governance universe, as well as the major governance fora. This “governance matrix” is a slightly modified version of a tool that was originally developed in order to map the entire universe of international ICT decision-making in the report “Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making”. This report was originally done for the G8 DOT Force, and has been adopted as a working document by Working Group 1 of the UN ICT Task Force. It arrays governance tools, ranging from “hard” to “soft” on one axis of the matrix, and the main categories of issues that historically have attracted international governance on the other – i.e. the exchange of information and communications between

countries, the use of common resources, the development of networks, and applications of technology for economic, social, cultural and political purposes. On the basis of these mapping exercises, the paper will assess current governance arrangements to see if there are gaps that need to be filled, and examine the extent to which current governance structures meet the WSIS test of being multilateral, transparent, democratic, and open to full participation by governments, the private sector and civil society.

Figure 3: Mapping International Internet Governance



A. Internet Governance Issues



28. Figure 4 illustrates how it is possible to use this matrix to map out some of the main current subjects of Internet governance discussion according the categories on the horizontal axis. It also highlights questions about the potential match or mismatch between different issues and governance tools. For example:

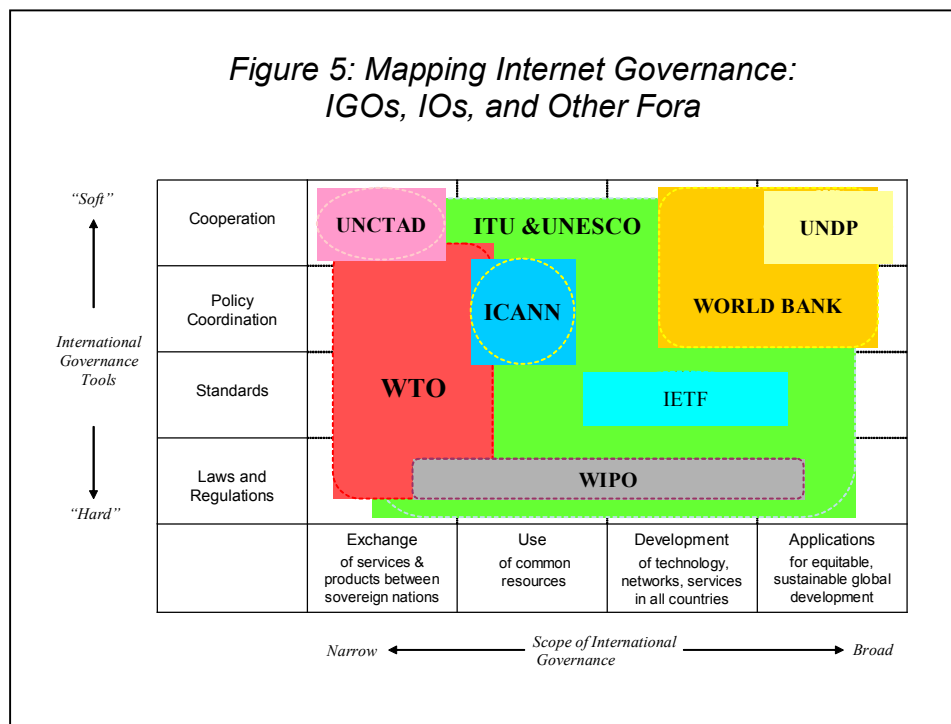
- a) If there is agreement that it necessary to construct some new international arrangements to govern the flow of Internet traffic and services between different countries and regions, should his be done by a treaty or convention with the force of international law, backed up by agreed standards of conduct? Or is policy coordination sufficient – alone or in combination with cooperative assistance between developed and developing countries? If a treaty instrument is preferable, should the existing ITU International Telecommunication Regulations simply be amended? Or is a new Cyberspace Convention required, as some have proposed? If the latter, what should be its scope? Should it be general, or focus on a specific issue such as cyber-security?
- b) Is it possible to resolve the issues that surround the management of the Internet numbering and addressing systems by improving the existing arrangements, which attempt to maintain the integrity and stability of the Internet by reconciling the interests of users, the private sector and government on a global basis through coordination arrangements based on private law within national jurisdictions? Will

these arrangements only work if they are migrated to an intergovernmental organization? Or should the system be divided between private, public and possibly civil society governance arrangements?

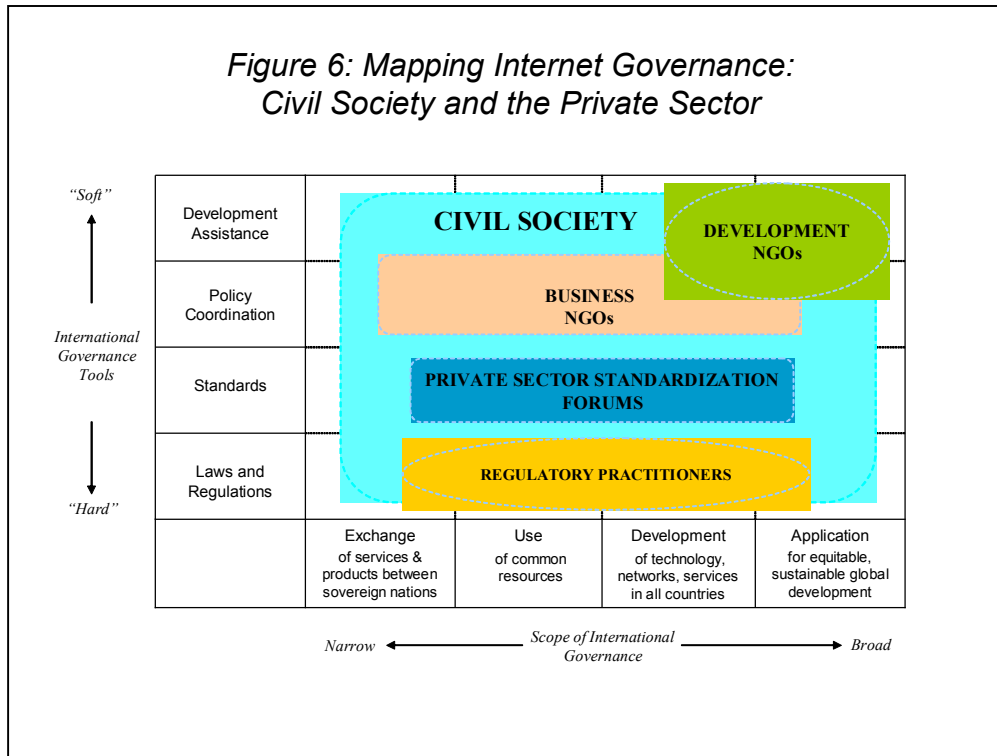
c) What issues are raised for developed and developing countries by the transformation of traditional, circuit-switched public telecommunications networks into IP-based networks, the consequent replacement of the PSTN by VoIP and other forms of Internet telephony, the vast expansion of the IP address space that will result from the implementation of IPv6, and the introduction of truly ubiquitous networks? Should traditional telecommunications regulation migrate in the direction of traditional Internet regulation (i.e. less public, more self)? Or should traditional Internet regulation migrate in the direction of traditional telecommunications regulation? Do we need a new paradigm? What is the meaning of universal affordable access to basic service in the new network environment?

d) How can all of the preceding trends and developments be governed in order to achieve the Information Society goals laid out in the WSIS Declaration of Principles and Plan of Action? Are new laws required to protect consumers and secure human rights and fundamental freedoms, or will existing ones serve the purpose? What arrangements are required to apply new, IP-based network technologies and stimulate the development of services and content – in the economy, in society, in government, and in the public sector? Are new relationships required between government, the private sector and civil society?

B. Internet Governance Structures



**Figure 6: Mapping Internet Governance:
Civil Society and the Private Sector**



29. Figures 5 and 6 illustrate how it is also possible to use the matrix to map the roles of different actors (intergovernmental organizations, international organizations and other non-governmental forums, the private sector, and civil society) in relation to their areas of assigned or self-selected governance responsibilities, as well as in relation to the governance tools they have at their disposal. When read in conjunction with the issues map, this institutional mapping exercise helps to highlight areas of potential complementarity and cooperation between the different players in the Internet governance game, as well as areas of potential conflict, overlap and duplication. In this way, it can help give a sense of governance trends and the direction in which things are moving “on the ground”. For example:

- a) In discussions and debates about Internet governance, it is often assumed that the ITU and the Internet community are implacable enemies, representing as they do different philosophies of network design, different constituencies, different cultures, and different ways of doing things. In the past, it was not hard to find evidence to support this view. But is it still the case? As incumbent telecommunications operators transform traditional PSTNs into IP-based networks, the ITU Standardization Sector (ITU-T) is becoming increasingly involved in IP standardization issues, and appears to be liaising on a significant range of issues with the Internet Engineering Task Force (IETF). One particularly high-profile example is

Electronic Numbering (ENUM), the critically important task of mapping IP addresses onto telephone numbers.⁹

b) While involvement of the ITU in the management of the Internet addressing and domain name systems remains a contentious issue, the relationship established between ICANN and the World Intellectual Property Organisation (WIPO) through the Uniform Domain Name Dispute Resolution Policy (UDRP) is another interesting example of the possibility of cooperation between traditional intergovernmental organizations and self-regulating international organizations.

c) In spite of the wide range of governance turf covered by existing intergovernmental and international organizations, there are significant gaps in international governance structures in relation to some of the key issues that appear on the issues map. For example, there is no obvious home for a general convention on cyberspace or a more limited convention on cyber-security. In addition, there do not currently appear to be adequate means at the international level for protecting consumers from spam or the other problems that threaten the public Internet. Although some telecom traditionalists may be inclined to think that the ITU International Telecommunication Regulations could provide a suitable platform for governing cyberspace, this is probably not a realistic view. Instead, a mix of new legal agreements, voluntary standards, and policy coordination likely will be required.

d) One obvious question, in light of the WSIS Declaration of Principles, is whether there is a need to construct a multilateral forum for discussing Internet governance issues that would engage participants from government, the private sector and civil society in developed and developing countries, through democratic and transparent processes. On the one hand, given the acknowledged importance of Internet governance issues to the global information society, it might be argued that such a forum is needed. On the other hand, given the range of issues and fora potentially related to Internet governance, it might also be argued that a general purpose Internet governance forum would at best, add little value and might at worst duplicate work better done elsewhere. To help the Secretary-General's working group consider this issue, it may once again be helpful to take a long view of the problem.

C. The Big Bang and the Quest for Inclusive Governance

30. In the article entitled "The Quest for Inclusive Governance of Global ICTs: Lessons from the ITU in the Limits of National Sovereignty" that was previously referenced, the author of this paper advanced the following arguments:

a) Throughout the history of electronic communication networks, major technological innovations have led to the development of international governance arrangements with almost predictable regularity.

b) From a technological point of view, the history of global electronic networks can be seen as a series of relatively "short cycles" – typically of one or two decades

⁹ See <http://www.itu.int/ITU-T/studygroups/com13/ip/ietf-wg.html> for a mapping of areas of common interest to IETF and ITU-T.

duration – each of which begins with an invention, continues through the stages of application, innovation and diffusion, and ends with the construction of governance arrangements designed to ensure that that the technology in question is developed, deployed and operated in the common interest. This pattern began with the invention of the telegraph in the 1840s and continues today with the Internet, wireless, and broadband.

c) In addition to these technology-driven short cycles, the history of electronic communication networks suggests the intriguing hypothesis that there may be governance “long cycles”, lasting sixty or seventy years, that alternate between periods of diversification and consolidation in international governance arrangements. Rather than being driven by specific technological innovations, these long cycles appear to be driven from the higher levels of policy and power, by sudden shifts in the perceived relationship between electronic communication networks on the one hand, and prevailing social and economic structures on the other.

d) The first of these long cycles, which began with the creation of the International Telegraph Union in 1865, was a period of institutional diversification that ended with the consolidation of the different governance structures that had been established for telegraph, telephone and radio technology consolidated into the International Telecommunication Union. During the second long cycle, which began in the early 1930s and ran until the late early 1990s, the ITU was effectively the single general-purpose forum for governing global electronic networks – a governance monopoly that reflected the monopoly enjoyed in most countries by incumbent telecommunications operators. However, the ITU governance model was blown apart in the first half of the 1990s, not just by the Internet and other technological innovations, but by a fundamental shift in thinking among all developed and many developing countries about the relationship between communication networks and economic and social development, and the models that would govern this relationship most effectively. This “Big Bang” brought a tidal wave of new issues, new players and new forums onto the governance scene – the World Trade Organisation first and foremost among them.

31. The paper argues that the revolution in governance of global electronic networks that launched this third long wave has created “*a global governance void within which a complex and confusing array of local activities take place without any overall coherence or “top-down” coordination*” of the kind formerly provided by the ITU. It goes on to suggest that in the new governance universe:

“The most powerful actors are able to exercise a significant degree of policy and regulatory control “from the bottom up” by pursuing national and/or regional interests across a wide range of fora, while the most powerful private actors are able to exercise an equally significant degree of market control by coordinating their activities through private fora, or through the exercise of raw market power. But what is often missing are opportunities for the less powerful to be engaged in discussion of global governance issues, to participate in decision-making processes,

to understand the consequences of these decisions, and to adapt their policies, regulations and practices accordingly.”¹⁰

32. The paper postulates that “*policy, like nature, abhors a vacuum*” and notes that it was not long before a quest began to put some sort of order into the diverse arrangements that characterize the new governance universe. It argues that:

“It is important to be clear about the nature of this quest and how it differs from the goals that guided the earlier governance cycles. It is not a quest for a new overarching treaty or a new umbrella organization Instead, it is a quest with three ambitious but nonetheless challenging objectives. The first is to develop a policy vision, along with a set of goals and principles, that in some general sense applies to all of the diverse governance arrangements that characterize the new cycle, in order to provide a beacon for guiding and coordinating their activities. The second is to frame these overarching goals and principles in a way that addresses the needs and captures the interests of both developed and developing countries, so that no country is left out of the policy picture. The third is to include partnership between government, the private sector and civil society as a fundamental feature of this policy framework and of any coordinating mechanisms that are put in place to give it effect. In other words, the essential goal of this quest is to develop an inclusive policy and action framework, which brings together the diverse contributions of all players – not to establish a new institutional framework based on a new treaty agreement and featuring a new organizational structure”.¹¹

33. Although this analysis was undertaken with respect to the entire universe of global ICT governance, it appears to apply to the more limited domain of Internet governance, which is also characterized by a jumble of governance issues and institutions, and marked by tremendous disparities in the power of different participants in Internet governance processes.

34. If this is correct, the WSIS Declaration of Principles appears to be an important step in the quest for a new framework for governing not only the Internet, but also global ICTs in a more general sense. Whatever its weaknesses, it does set out goals and principles to guide governance that reflect the interests of all players – to a greater or lesser extent – and does establish participation and partnership between governments, the private sector, and civil society from developing and developed countries as the foundation of governance arrangements.¹² It does this with respect to Information Society issues in general and, as demonstrated in Figure 1, with respect to Internet governance in particular.

¹⁰ MacLean (2003: 7)

¹¹ MacLean (2003: 7)

¹² When the WSIS Declaration of Principles and the Civil Society Declaration to WSIS are compared, there appears to be substantial overlap at the level of principle, even if there are significant differences in vocabulary, tone and emphasis. The main area of disagreement, not surprisingly, is concerns the roles of the private sector and market mechanisms on the one hand, and public institutions and community initiatives on the other hand, in the achievement of development objectives.

IV. GOVERNANCE CAPACITY

35. Even if the principles and goals embodied in the WSIS Declaration of Principles are a helpful first step, it would be a significant challenge to resolve even one major Internet governance issue, through the tangle of intergovernmental and international organizations likely to be involved, within the WSIS time frame. To resolve several of them would be exceptional. And to resolve any of them according to the governance formula embedded in the WSIS Declaration of Principles – i.e. in a way that is “multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society, and international organizations” – would be nothing less than heroic! As we set out on this particular stage of the global governance quest, there are many issues, a large number of governance forums – and not one that operates fully according to these principles. The issue of governance capacity should surely rank high in the list of *alia* that the Secretary-General’s working group may wish to consider.

36. In 2002, the Commonwealth Telecommunication Organisation and Panos London undertook a research project to study developing country participation in international ICT decision-making, including participation by governments, the private sector and civil society. Three very different organizations were chosen for study – the ITU, the WTO and ICANN – and research was conducted from two contrasting perspectives: at the institutional level, by a research team that interviewed and observed developing country participants in meetings of these three organizations; and in six developing countries by local experts who studied national policy processes related to the governance agendas of these organizations.

37. The main output of this project was the Louder Voices report referred to previously. A number of its findings may be relevant to discussions of Internet governance.

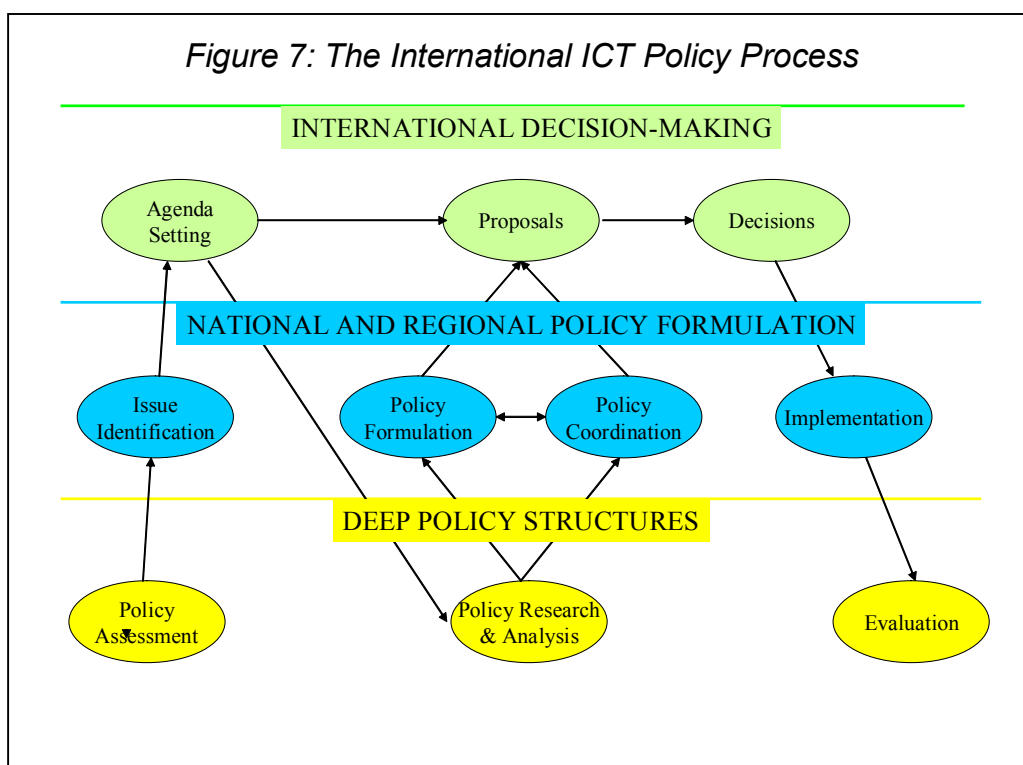
38. There were clear differences between the three organizations that were the focus of the study – in terms of their purposes, histories, memberships, organizational cultures, structures, working methods, decision-making processes, etc. There were also clear differences between the six countries that were given detailed study – Brazil, India, Nepal, South Africa, Tanzania and Zambia – in terms of geography, demography and level of development. In addition, there were clear differences between the members of the institutional and in-country research teams, in terms of background, training and work experience. In spite of these differences, the study found that there was a high degree of coherence between “top-down” and “bottom up” points of view on the obstacles facing developing country participants, and convergence on the actions required to strengthen their engagement.

39. The main obstacles to effective participation identified in the study were:

- a) lack of awareness of the importance of ICT-related issues in relation to development goals;
- b) lack of technical and policy capacity;
- c) lack of easy, affordable and timely access to information;
- d) weaknesses in governance processes;
- e) financial barriers.

40. Study participants identified a number of actions that intergovernmental and other international organizations could take to help remove these obstacles – for example, by: providing better information on governance issues and processes to developing country participants; reforming governance structures; improving governance processes; and making more effective use of financial resources. However, there was consensus that the key to strengthening developing country participation in international ICT governance lies at the national and regional levels. Recommended actions included:

- a) creating policy awareness among public and private sector decision makers of the links between ICTs and development, so that ICT governance becomes a key component of national e-Strategies;
- b) building technical and policy capacity, with the assistance of international forums and development agencies;
- c) strengthening national policy institutions and processes on both national and international governance issues by improving information flows, ensuring policy coordination between different agencies, promoting informed public discussion and debate, and including all relevant stakeholders in policy-making at the national and international levels.



41. As illustrated in Figure 7, international governance processes are complex. Many developing countries attend meetings and are present when decisions are made – but this is only a small part of the governance process. Effective participation requires the capacity to anticipate developments, identify interests, analyze issues, help set agendas, coordinate proposals, implement decisions, and evaluate their results. The Louder Voices report found that this capacity was lacking to a greater or lesser extent in the institutions and developing countries studied. The study concluded that building governance capacity in developing countries is a long-term challenge, and that developing countries will only succeed if they receive more effective capacity-building support from bi- and multi-lateral aid agencies, as well as from international organizations themselves.

V. CONCLUSIONS

42. In attempting to apply some conceptual tools drawn from his previous research to the problems of Internet governance identified in the WSIS Declaration of Principles, the author has reached the following conclusions.

- a) If it is true that we are entering a third “long cycle” in the governance of global electronic networks – in which it is only possible to govern the Internet and other ICTs across multiple fora on the basis of guiding principles and inclusive processes, rather than on the basis of an overarching treaty and central institutional structure – then the WSIS Declaration of Principles and Plan of Action provide a workable point of departure in the quest for multilateral, transparent, democratic and inclusive governance arrangements.
- b) As a corollary to (a), this is of course only the case if all parties are truly committed to the WSIS framework – or at least sufficiently committed to continue to talk through their differences on specific points.
- c) The Secretary-General’s working group needs to clarify the meaning of “Internet governance” within the WSIS framework as quickly as possible, in order to provide a foundation for building on the significant, but fragile, consensus among governments, civil society organizations and the private sector from developed and developing countries that appears to have been achieved through the WSIS process.
- d) Growing this “fragile flower” will be a challenge. In addition to the differences of perspective on Internet governance outlined in this paper, underlying differences concerning the roles of the private and public sector in the general governance of the information society could impede progress and rapidly render the Internet governance problem intractable. It therefore will be critical for the Secretary-General’s working group to develop ways of managing these cleavages.
- e) In the longer term, there will clearly be a need for widespread institutional reform, in order to actually implement the WSIS framework through the multiple intergovernmental and international fora involved in Internet governance. In this respect, competition between different organizations may be healthy. It is something of a myth that only Internet governance is driven from the “bottom up”. All international organizations, including traditional intergovernmental bodies like the ITU, reflect the interests and wishes of their members. Any governance structure that

becomes truly open to and inclusive of governments, the private sector and civil society from developed and developing countries is likely to become increasingly attractive to those who are doing the “rowing” – i.e. who are actually developing Internet technologies, networks, services and applications – if it is able to combine inclusiveness with efficient and effective governance in the relevant time frames (which may range from short- to long-term).

f) Efforts to develop inclusive governance structures at the international level will be ineffective unless initiatives are taken to build Internet governance capacity in developing countries and regions. In particular, it will be essential to build technical and policy capacity in relation to the migration to IP-based networks and the use of common resources, be they names, numbers, addresses or spectrum. In this regard, current initiatives to build broad e-Strategy, e-Policy, and ICT governance capacity may provide useful models.

g) While there may be no need to re-invent the capacity-building wheel, there is a need to identify good practices and to focus on key capacity issues. This should primarily be the work of governments, the private sector and civil society from developing countries and regions, although much can also be learned from the experience of those on the other side of the digital divide in many developed countries (e.g. aboriginal communities, rural and remote areas, urban core, etc.).

h) Even though it likely does not make sense to attempt to construct a new overarching Internet governance regime, there are clearly “holes” in the Internet governance universe that need to be filled. Issues relating to network security and consumer protection are leading candidates for immediate action. How large these holes are and how they should be filled depends to some extent on the view that is taken of the meaning and scope of “Internet governance”. In some areas, it may be necessary to consider the adoption of treaty arrangements (e.g. cyber-security). In others, it is possible that holes can be filled through “softer” forms of governance – e.g. technical and operational standards, policy coordination, codes of conduct, etc.

i) In designing arrangements for Internet governance, it is important to bear in mind the architectural maxim that “form should follow function”. In other words, the governance tools chosen to address a particular issue, and the decision-making structures designed to apply these tools to specific problems, should reflect and fully represent the balance of interests, capabilities and needs that exist in the ‘real world’ – and change as this balance changes. The history of global ICT governance demonstrates that some things are best left to the private sector, some are best left to governments, and that satisfactory arrangements have yet to be devised for including developing countries and civil society in either the public or private domains of governance. This experience has also shown that it is difficult, if not impossible, to become truly inclusive without fundamental recognition of the separate and complementary functions of public and private governance structures, the legitimate roles of different actors, and the need to create dynamic linkages between them.

43. As the title of this paper is meant to indicate, issues of Internet governance are difficult to analyze, discuss and manage – because of their novelty – because of their complexity – and because the differing points of view of different stakeholder groups are part of the problem, as

well as part of the solution. This latter comment is intended to as much self-criticism as observation. The analysis and conclusions presented in this paper are clearly partial, since they reflect the author's own background, experience and point of view. However, in this respect as in others, the Internet may not be as unique as is sometimes thought. Even very mundane, mature technologies can generate controversy and sharp differences of opinion when issues of global governance are at stake. At this point WSIS seems – perhaps somewhat improbably – to have given all stakeholders a reasonable point of departure on their quest for inclusive Internet governance.