WSIS, WGIG, TECHNOLOGY AND TECHNOLOGISTS
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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 than 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 realities 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.