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“Multi-Stakeholderism” and the Internet Policy Debate

With WICT-12 over, and now the preparation for the forthcoming WTPF underway, and of course also we have the WTDC and WTISD coming up, one could be excused for thinking that that world famous, but hopelessly unintelligible, cartoon character from the 80's and 90's, Bill the Cat (http://en.wikipedia.org/wiki/Bill_the_Cat), has come out of retirement to work as head of Acronym Engineering at the ITU.

However, no matter how unintelligible the acronyms of these meetings can get, the issue of how we come to terms with a technology-dense world is a serious matter. Too often we appear to use yesterday's tools and techniques to address tomorrow's issues, and take the view that if it worked in the past it should work now. I'd like to look at this approach in a little more detail here, and try and understand why WCIT was such a comprehensive failure and why the prospects for the next round of telecommunications sector meetings are not exactly looking rosy.

Recent ITU-sponsored processes, such as the revision of the International Telecommunications Regulations (ITRs) at the 2012 World Conference on International Telecommunications (WCIT-12), have stimulated much debate about the manner in which telecommunications policies, particularly international frameworks for telecommunications policies, are formulated. One view is to use our existing institutions and forums to consider such matters, and use traditional representation-based mechanisms to bring various national perspectives into an international context of policy formulation. Another perspective that has come to prominence in recent years is to use a framework of direct participation in policy formulation, and directly involve the various stakeholders in the process of formulating common policies.

In this article I'd like to look at these approaches from the lens of the evolving technology base of communications, and argue that the current changes in the underlying architectures used in information technology and telecommunications are so fundamental in nature that have a direct bearing on the policy process and the way in which various interests are most effectively brought to bear on the policy process.

Nostalgia

It is possible for some to construct a case that very little has actually changed in the past quarter century in the telecommunications sector. The larger players in this sector appear to be a constant, including such venerable names as AT&T, NTT, British Telecom, France Telecom and so on. These entities, which were often the incumbent national monopoly telephone service operators at the last

quarter of the twentieth century, still remain highly prominent entities today. While they may no longer operate in a monopoly manner, and may no longer operate as de facto organs of public administration, they still possess significant market share in their respective national markets, they still are major conduits of infrastructure investment, still employ a significant workforce in their respective economies, and still exercise significant social and political power with their respective nations.

If one were to look at these entities in their role as carriage service providers, then even from this perspective one could make the case that not all that much has changed over the past twenty five years. By 1987 much of the core of the public telecommunications network had been transitioned to a fully digital system, operating over a hybrid network of copper strands radiating out from a fibre-based digital core. Mobile services were also emerging, and the towers were being set up. Twenty five years ago the base currency of the carriage service function was provided by a collection of digital switching and transmission units. The same can be said for today's telecommunications networks.

It could be argued that we've spent the past twenty five years working on the evolution of the consumer device, and while the clunky computers and telephone handsets of the late 80's have been replaced by tablets, sleek handsets and ultra light computers, back in the engine room of the communications system nothing has changed. It's still all just a mundane task of shovelling 1's and 0's through a series of tubes.

I can't let that pass without making a passing reference to the late US Senator Ted Stevens (http://en.wikipedia.org/wiki/Series_of_tubes), or if you prefer the video version, perhaps: <http://www.youtube.com/watch?v=EtOoQFa5ug8> or maybe http://www.youtube.com/channel/HCD_K-L3iih5E

Given such an apparently relatively static view of the public telecommunications sector over the past quarter century, then it shouldn't be surprising that a consistent view of the public policy agenda for the telecommunications sector should also make use of the same institutions, the same forums, the same set of actors and essentially the same set of objectives as was the case back in 1987.

An international expression of this conservative view of the public telecommunications endeavour is to continue to invoke these institutions, principally the ITU, as being the most appropriate institution to facilitate international harmonization of what are represented to be essentially a collection of national telecommunications regulations. Such a view essentially promotes the primacy of the telecommunications role, and assumes that telecommunications policy lies at the heart of today's global online environment.

While such a nostalgic interpretation of the past twenty five years may offer some basic reassurance and a degree of comfort to some, it represents a comprehensive misunderstanding of the true extent of the changes that have occurred in this sector over this time. Indeed to claim that telecommunications policy lies at the heart of the online environment and is the essential and vital core of the wellbeing of today's digital economy is to completely confuse the relative roles of carriage and content in the Internet.

The End-to-End Architecture of the Internet

To illustrate the extent of the change in approach in communications and services over this period it is useful to compare the relative models of telephony and the Internet. In telephony the terminal device, the handset, is a very simple pair of analogue transducers, namely a speaker and a microphone. The

totality of the telephone communications function was contained within the network. This entailed a signalling system to support the establishment of virtual on-demand synchronous circuits across the network, and a set of switching functions that were able to support synchronous real time circuit switches. The technology investment, and the associated capital investment model, was centralised in the hands of the telephone service operator. The responsibility for the utility and fidelity of the service rested with the service operator, and necessarily this required all telephone service operators to operate their services within the confines of a common set of technical standards relating to the nature of the service. While it was possible to connect computers to a telephone network, and make use of the underlying digital circuits to support computer-to-computer communication, this represented an unnecessarily extravagant approach to computer-mediated communications.

The architecture of the Internet takes the paradigm of a simple terminal device and a capable network and completely inverts it. The network services required by the Internet is confined at its most rudimentary form to a simple, stateless datagram model. The network accepts individual transactions in the form of fully formed data packets, and uses the outer Internet Protocol packet header to forward the packet to its intended destination. There is no concept of synchronous virtual circuits in the Internet. Packets may take diverse paths through the network, packets may be reordered by the network, and arbitrary packets may be discarded completely. Within the IP architecture, there are no fixed or guaranteed service standards for a network to adhere to, and no specified level of end-to-end service delivery. These factors are resolved instead by a competitive service model between competing telecommunications service providers which has seen, over the past 20 years, continual and dramatic increases in service value for all users.

In today's world therefore, telecommunications networks perform a highly streamlined and commoditised utility role, while the onus for creating and exploiting network services lies instead with the terminal devices. Unlike telephony services, which were entirely artefacts of the operation of the telecommunications network, Internet services are artefacts of the operation of the end-point devices connected to the network, and using network-independent service protocols. Transactions within the Internet are not defined and supported by the network; rather, they are defined from end-to-end, and do not require the specialised support of the intervening telecommunications networks.

This technological shift has facilitated a remarkably different industry structure in the broader information technology and telecommunications sector. The primacy of the telecommunications network, and the relative significance of the telecommunications network operator has rapidly diminished with the advent of the Internet. Economic and social value has shifted from the carriage function to those operators who offer services over the Internet, and such service providers have no particular requirement to also operate a network in their own right. The end-to-end architectural model of network service essential defines the services as a shared state between cooperating end systems who have direct visibility of each other over the top of the network. This has led to a shift in value and impetus in the information technology and telecommunications sector from the traditional network operators to the so-called "over-the-top" service providers

Public Policies and Internet Governance

How do these architectural changes in the model of networks that support computer-mediated services impact on public policy formulation?

In the period where delivered services were provided by telecommunications network operators, then the public policy agenda focussed on telecommunications policies in both national and international contexts. The harmonisation of technical standards, operational practices, infrastructure investment and various forms of cost apportionment and financial settlement between network operators were of paramount importance in order to provide a consistent fidelity of service to customers. Such a requirement led to the development of specialised telecommunications regulations at national levels,

and underpinned the role of the ITU in the international context to harmonise such national frameworks to support a consistent service that operated across all of these national operators.

But while telecommunications policies have a dominion of the carriage function of the telecommunications activity, they do not necessarily have a clear purview over the functionality provided by computing systems, whether or not they are connected to the network. Typically, national regimes use the policy frameworks associated with trade and commerce, consumer interests, and citizens' rights to oversee the provision of goods and services through computer mediated transactions, in the same way that the same policy framework is provided for their physical world counterparts of the provision of goods and services. This is not, as has been claimed by some, the invention of novel rules and law for the Internet, but the application of existing policies and law to the function of the provision of goods and services over the top of a communications network. The substantive change here is that the applicable framework for such policies is not based in telecommunications services and not based solely in serving the interests of the network operators in undertaking a carriage function, but one that is based on the broader function of the efficient and effective provision of goods and services within national and global economies.

In this context the topic of "Internet Governance" has many dimensions, and with each national environment there are many stakeholders and many diverse interests. To expect that the diversity of these interests can be coherently represented within a single national delegation, and within a single telecommunications-oriented forum is surely unrealistic, or indeed impossible, in today's world. The fallacy behind many of the telecommunications forums in their claims to oversee or guide the formation of policies related to the Internet, or even go so far as to claim a pre-eminent role in the governance of the Internet, is the presumption of the pre-eminence of the telecommunications carriage function within the Internet. One of the major outcomes in the past twenty five years of the development of the Internet is the commoditisation of the carriage function and the re-casting of the carriage role in to that of just another utility service provision role. Its not telecommunications per se that fuels the value of the Internet – it's the service infrastructure and the establishing of relationships between service providers and consumers that drives the Internet economy.

The Internet is a highly diverse and flexible amalgam of many components, and when we consider the policy matters related to its governance now and in the future it's clear that this topic is one that necessarily directly engages many stakeholders, of which the actors in the telecommunications sector form just one part of many. The calls for continuation of representative-based meeting of national delegations within the narrow confines of telecommunications sector to subsume the public policy agenda of the Internet all suffer from a limited perspective of the Internet itself. Addressing this limitation of perspective in such considerations of public policies entails far more than making the working documents of these conferences and forums publicly available, or calling for national telecommunications policy delegations to consult their national communities within the limited confines of telecommunications practices and policies.

If we are going to have a meaningful and productive discussion about the Internet, then we need to consider how to sustain open multi-stakeholder participation in an open dialogue about such topics of Internet governance that directly reflect the diversity of interests and activities that collectively form the Internet itself. This is not just a telecommunications debate any longer – it's a debate that directly touches upon many aspects of our society, and the institutions that wish to claim a role in this debate need to shed their nostalgia for their glorious past and understand that relevance to tomorrow's world is critical to their continued existence. Perhaps the centre stage needs to be generously shared between the broad range of interests and stakeholders rather than steadfastly proclaiming that, in spite of ample contradictory evidence, this is still all just telecoms' business. Until this happens we can expect the debacle of the recent WICT to be repeated at the WTPF, the WTDC and stretching out to the ITU Plenipotentiary next year.

Enough of policies and politics. A technical topic next month. I promise!

Disclaimer

The above views do not necessarily represent the views or positions of the Asia Pacific Network Information Centre.

Author

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