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The Future of the Internet - A Political View

If the title itself was not sufficient warning, I should warn readers at the outset that this is not a technical article - far from it!

On June 17th and 18th the Organization for Economic Co-operation and Development (OECD) hosted a [Ministerial Meeting on the Future of the Internet Economy](#), attended by Ministers for communications from the 30 OECD member nations and some 15 other nations, all to talk about the future of the Internet Economy.



This was not the only dedicated Internet gathering on the 2008 calendar for governmental delegations, which includes the normal load of two meetings of the [Internet Governance Forum \(IGF\)](#) a year as well as three [ICANN Governmental Advisory Committee](#) meetings. The track record of the lasting value of such meetings does not appear to be overly impressive, and it appears to be difficult to make the claim that the [World Summit on the Information Society \(WSIS\)](#) and the subsequent set of IGF meetings have actually achieved anything at all. In fairness to the IGF, however, achievement of particular outcomes was never a part of the IGF agenda, and in providing a venue for this multi-stakeholder discussion it is claimed that the IGF has kept the worst excesses of the political wolves at bay. Without these forums for inter-governmental dialogue and engagement between governments and other organized sectors of common interest it is often asserted that all this could've turned out so much worse in terms of politically inspired governmental meddling with the Internet.

But let's face it, gathering a collection of ministerial delegations to laboriously recite prepared speeches to each other sounds about as exciting as watching paint dry. And observing meetings where the major outcome appears to be limited to the scheduling of the next meeting can become somewhat tedious after a while. It should not be surprising that the level of expectation of tangible outcomes for such governmental meetings is invariably abysmally low.

So what's the value of adding yet another meeting to governments' schedule? What makes this OECD-hosted meeting so unique in the context of the Internet's current political landscape and its political future? Why would a meeting about the [dismal science](#) of economics hold any interest at all?

Maybe it was the host this time around that made this meeting relatively unique in its class. The OECD is a widely referenced and respected source of objective economic data and comparative studies of national economies and economic performance. The organization has a very impressive track record of high quality research and justified reputation of excellence in its publications, even with its overt predilection to economic reform through a strong preference for open markets. Anyone who is interested in the issues behind the imminent exhaustion of IPv4 and the related transition to IPv6 simply must read the OECD report on [Internet address space: economic considerations in the management of IPv4](#) if that's the only article they read on the topic. And the 2004 OECD report on [generic top level domain names: market development and allocation issues](#) is one of the few rational studies of the evolution of the DNS name registration market, and, four years later, it's still one of the better sources of information about the structure of this emergent industry, its actors, and the detailed characteristics of the domain name market. Maybe it's because these OECD ministerial meetings on the Internet are not so common. The last such OECD-hosted meeting was held ten years ago. Maybe it's because the ministers who attend are in fact ministers for Communications rather than Finance, and the considerations that are aired are more about broader issues that are more aligned to Internet politics than a limited interpretation of a study of economic activity. Maybe it's because such OECD activities in the past have proved to be instrumental in facilitating change in governmental approaches to common issues that have broad economic and social dimensions.

However it's often hard to break from the mold, and on one level the meeting was not dissimilar to other such meetings. Ministers and their delegations attended with due pomp and ceremony, speeches were recited, statistics were scattered about with gay abandon, hyperbolic claims of the promise of the future were stacked on top of each other to reach dizzying heights, and at the end of two days it was universally acclaimed that the Internet had some potential to be a Good Thing! But to cast such cynicism aside for a moment, and to politely ignore the claim from Commissioner Viviane Reding from the EU that the world is running out of email addresses for a moment, it was interesting to note that the level of informedness and insight into the current issues that face the Internet was generally very high. In this case the discourse at the meeting was one that was well-informed and thoughtfully focused, and the various misconceptions that all too often are a part of such governmental discussions about the Internet were, on the whole, completely absent.

The Ministerial meeting was careful to wrap up the message of the future of the Internet in a simple phrase of "Convergence, Creativity and Confidence." This encompasses themes of technology evolution and the increasing reliance on IP as the universal substrate, the continual process of innovation in the range and scope of services, and the issues of security and integrity of the network and its services. At the meeting the themes of convergence and creativity received much attention, while security appeared to be, well, a problem! As a result, the theme of "confidence" struck a slightly discordant note, if only because of the recognition that we really have not coped well with the various forms of hostile attack that plague today's Internet. Indeed the continuing ineffectual nature of our response to date appears to attest to the inefficacy of rhetoric alone as an effective solution to complex problems.

So maybe 2 out of 3 isn't bad. But there are also some problems with the term "convergence". This word has a rich history in this industry, being used to refer to various efforts to integrate voice and data platforms into a single common platform, such as in the marketing campaign for ATM, for example. But the term grew, and encompassed a far larger collection of sins when was extended to encompass the efforts of the legacy telcos to vertically integrate infrastructure elements and services, and bundle these combination in such a way as to shut out effective competition. From this perspective "convergence" is a rather unfortunate choice of words, in so far as it is a term that has become synonymous with monopolistic anti-competitive behaviors, customer lock-in, and the lucrative prospect of price gouging on the part of the legacy telcos through the determined exploitation of an effective monopoly position of control over the access market. What I suspect was intended for "convergence" in the context of this meeting was the expectation that many, if not all, telecommunications services will find themselves sitting above an IP substrate sooner or later, somehow or other. This has happened. Sitting above the IP layer is an entire universe of applications, and at this application layer its not "convergence," but "divergence" that is the most striking aspect of this environment. Despite a collection of more than a billion users, every user's local view of the Internet is truly unique, and we've managed to use these technologies to deploy customized services on a scale that was previously undreamt of. Equally, below IP is a wide diversity of transmission media, and IP finds itself cast into its intended role as a universal adaptation layer, allowing both media and services to head down a multiplicity of diverse paths simultaneously. So, maybe a better term to use would be "divergence", but I suspect that "divergence, creativity and confidence" is hardly as catchy a phrase.

On a deeper level than the choice of catchy theme phrase, this was a meeting that has made some important strides in the political landscape of the Internet. The two years of effort in preparing for this Ministerial meeting appears to have produced some very interesting outcomes. We've come a long way in the last decade when one can now see governments rejecting efforts to shoehorn the Internet back into the constrained box of regulatory initiatives as phrased though the inter-governmental treaty organizations such as the ITU.

The [Seoul Declaration](#) of 39 national governments and the European Union recognizes that the Internet is as much concerned with economic activity and well-being, cultural diversity, and social interaction at all levels as it is with the intricate technical task of shoveling large piles of bits into data pipes. The Declaration recognizes that the propelling engine of the Internet is not regulatory in nature, but is instead an engine that has been fuelled by the cooperative open participation of many interests and communities and ignited by the deregulation of the communications sector, the introduction of intense levels of competition at all levels of the network service environment, and the surge in innovation in user visible services of all forms. It recognizes that prospects of national economic performance are tightly bound to the prospects of the Internet itself, and in the same way that deep safe harbors facilitated the generation of wealth when shipping ruled the world, an efficient, effective and broadly deployed Internet infrastructure appears to be a critical ingredient for a competitive national economy in this century. It appears to me that this is stating that the overall cooperation and coordination to support the Internet is far too broad and critical a topic leave to structures that are bound by inter-governmental treaties, and by inference, to pass over to the hands of the ITU-T. This is far more than a conventional exercise of regulation of a communications technology, and its future will of necessity involve not only governments, but all forms of enterprise and individual actions as well.

The intent of taking a more decentralized approach to policy formulation for the Internet economy that includes the open participation of various stakeholder communities in addition to governments fits comfortably with the solid foundations of the open transparent participatory process that are the cornerstones of the self-regulatory policy development framework used by the Regional Internet Registries and by ICANN. The commitment of the governmental signatories to this declaration to work closely with business, civil society, and the technical community on maintaining a policy framework for the Internet that promotes competition, empowers and protects consumers and expands Internet access and use worldwide would be nothing particularly novel, were it not for the explicit commitment to with in cooperation with

these other stakeholders, and were it not for the particular emphasis on open competition, as distinct from the traditional recourse to imposed regulatory fiat.

The good news is that the constant pressure over the last decade for various regulatory regimes to take a further necessary step along the deregulatory path by recognizing that there are indeed other communities of interest who also have a legitimate voice in the overall framework of "governance" appears to have come to fruition. It appears that the closed door position that was used by many governments when representing national interests at international levels is changing, and this ministerial declaration offers some evidence of such significant progress.

The major positive aspect of this Seoul Declaration is that of the recognition that in a deregulated diverse activity sector serving a public communications utility there are many interests that sit alongside those of national governments, and this is indeed a welcome recognition.

This model is going to be put to the test straight away. There are many issues that are expressed at a national level, particularly referring to infrastructure investment and outcomes such as accessibility, affordability and quality of Internet access, and the extent of penetration of such services to households and enterprises. There are however a number of issues that transcend national and regional interest that require international coordination and cooperation.

One concerns the rise of overlay environments that create global service markets, such as Skype, eBay and Google advertising. To what extent such markets can ever be effectively moderated by any individual regulatory regime, and to what extent these markets pose a clear call for further evolution of international trade frameworks is an open issue today. Another concerns the security of the network, where the incredible ease with which criminal activity passes across multiple regimes in this networked environment, leaving a diverse trail for law enforcement agencies that is daunting to follow at best. Our institutional frameworks in this area have a legacy of national focus and the next set of challenges also poses a call for change in aspects of this activity to respond in more effective ways to this problem. And a problem which has been dear to my heart for some years is the IPv6 transition issue, where the industry appears to be playing some strange game of seeing how far they can drive the network into the uncharted territory of address scarcity, with its consequent extensive need for creative and complex address and protocol manipulation tools, while still keeping some form of the Internet still running. Here individual short term actions and day to day business drivers, and the longer term common requirements appear to be at odds, and realigning these two set of objectives is presenting us with some novel challenges.

None of these matters have easy and obvious solutions, and further examination of the underlying issues tends to point towards economic or business factors. Customers are invariably unwilling to pay for services that they do not perceive an immediate need for. They are unwilling to pay a premium that would allow a service provider to make additional investments in security infrastructure within the network. They do not understand the distinction between protocol versions and certainly do not see any compelling reason to pay a premium to add IPv6 to the service offering. Customers tend to be very price sensitive, and in an activity where there are economies of scale there is a continual pressure for the supply side of the market to aggregate, leading to the re-establishment of de-facto monopolies within parts of the supply chain, and then the temptation to exploit this monopoly position to place pressure on other elements of the supply chain. This is particularly the case in Internet access markets where the barriers to entry for competitive players generally remain high in those regimes where they are forced to deploy parallel access infrastructure. So we have issues that are simultaneously everyone's and no one's problem, and failure to address these issues in the near future adds to the longer term potential of having to undertake more expensive measures later on, ultimately at a far higher cost to the consumer.

All of these are important topics, and current topics. If the flowery rhetoric about the rosy future of a dramatically larger, more diverse, more ubiquitous Internet is to ever come even

close to a reality, then these topics will demand some form of resolution. If the OECD fulfils its intention to meet again to evaluate progress, then the effectiveness of the Seoul Declaration should be gauged on the extent to which these business and economic issues have been addressed between now and then.

In any case the Seoul Declaration makes one thing pretty clear even today: its not "their" Internet and its not "their" issues, but its very much "our" Internet, and its future is in "our" hands. That overt recognition of a shared responsibility for the Internet in the Seoul Declaration is indeed a big shift in governmental perspective, and for me that's what made this particular meeting one of the more important meetings in 2008.

Further Reading

The Seoul Declaration (June 2008)

<http://www.oecd.org/dataoecd/49/28/40839436.pdf>

The OECD Meeting of the Future of the Internet Economy (June 2008)

http://www.oecd.org/site/0,3407,en_21571361_38415463_1_1_1_1_1,00.html

Workshop: Social and Economic factors Shaping the Future of the Internet (July 2007)

http://www.oecd.org/document/4/0,3343,en_21571361_38415463_39046340_1_1_1_1,00.html

NSF/OECD Workshop "Social and Economic Factors Shaping the Future of the Internet", Washington D.C. (January 2007)

http://www.oecd.org/document/59/0,2340,en_2649_34255_37921851_1_1_1_1,00.html

Proceedings of 8 March 2006 workshop "the Future of the Internet" (August 2006)

<http://www.oecd.org/dataoecd/26/36/37422724.pdf>

Internet address space: economic considerations in the management of IPv4 and in the deployment of IPv6 (May 2008)

<http://www.oecd.org/dataoecd/7/1/40605942.pdf>

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