

UNDP-APDIP Open Regional Dialogue on Internet Governance

Summary Report of the Online Forum on Internet Governance Priorities for the Asia-Pacific Region

February 2005



**UNDP ASIA-PACIFIC DEVELOPMENT
INFORMATION PROGRAMME**

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and
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UNDP-APDIP Online Forum on Internet Governance Priorities for the Asia-Pacific Region: [IGOVAP]

Summary, 22 February 2005

Forum Participants:	180 members
Countries Participating:	27 countries in the Asia-Pacific region
Number of Messages Posted:	>350 messages
Forum Moderators:	Adam Peake (Lead), Dieter Zinnbauer, Phet Sayo

Executive Summary

As part of its initiative to foster Internet policies that are inclusive, equitable and responsive to development concerns UNDP-APDIP held a five week multi-stakeholder Online Forum on Internet Governance Priorities for the Asia-Pacific Region. More than 180 participants from civil society, public and private sector of 27 countries in the Asia-Pacific engaged in a very lively dialogue that clearly indicated that Internet governance is neither abstract, nor the exclusive domain of industrialized countries or engineers. Participants contributed a wealth of interesting first-hand case studies, ranging from domain name issues in Bangladesh, Mongolia and the Philippines to bandwidth markets in Fiji and Tonga or institution building for Internet policies in Indonesia.

To some extent the topics raised mirrored the main patterns of the global discussion on Internet governance with the roots server, IP address management and ICANN garnering a lot of interest and motivating candid exchanges that brought to light interesting views and facts on IP address allocations and root server management. Other global concerns such as network security, reliability and trusted online payment systems were also viewed as important issues for the Asia-Pacific. In addition participants raised a number of issues that are of particular concern to the region, such as how to make the Internet more conducive to languages with non-English character and, more generally, how to preserve cultural diversity online, a challenge that was found to concern not only the use but also the architecture of the Internet. Differing views on bandwidth markets and the price of international connectivity also highlighted that priorities in Internet governance vary significantly across sub-regions and countries and that both international and domestic factors impact upon the efficacy of Internet policies. Contributors from South-Asia considered international bandwidth markets as sufficiently competitive and emphasized domestic shortcomings, while participants from Pacific Island countries voiced strong concerns about choice and prices for international connectivity.

Overall, the more than 350 messages received also forcefully underscored that Internet governance evokes a wide variety of legitimate viewpoints and values. Contributions were motivated by principles of technical effectiveness, robustness and openness to innovation, sovereignty and subsidiarity, transparency and equitable participation as well as freedom, choice and empowerment. Balancing these values and sustaining a constructive dialogue between all stakeholders is vital to making the Internet work for human development, now and in the future.

To view the Forum archives please visit <http://lists.apdip.net/pipermail/igovap/> and for more information on UNDP-APDIP's Internet governance initiative please visit: www.igov.apdip.net.

Introduction

The IGOVAP mailing list was established as a forum where people from the Asia and Pacific region could express and discuss their views and concerns on a broad range of Internet governance issues. The Forum is part of the UNDP's Asia Pacific Development Information Programme ([APDIP](#)) Open Regional Dialogue on Internet Governance ([ORDIG](#)) initiative, a region-wide activity encouraging a constructive dialogue on ICT policy priorities and contributing a regional perspective to the global debate on Internet Governance. Major activities for ORDIG include a regional multi-stakeholder survey on Internet governance priorities for the Asia-Pacific; a community-managed online portal and targeted research on various ICT policy aspects and a series of consultative meetings and consultations throughout the region. All findings, consultations and research outputs generated by ORDIG are also intended as inputs to the second phase of the UN World Summit on the Information Society (WSIS) and the related UN Working Group on Internet Governance (WGIG).

ORDIG will also look beyond the WSIS process and develop a long-term platform for the exchange of ideas and concerns about ICT policy issues among stakeholders from the region. Some activities of ORDIG are carried out in partnership with UNESCAP, APNIC and the Diplo Foundation, while financial support is provided by the International Development Research Centre of Canada.

IGOVAP Forum

Launched on 13 January 2005, the IGOVAP Forum has seen very lively discussion of more than 10 major topics covering a wide range of ICT policy issues. Subjects raised were not new to the Internet governance debate or to the WSIS process, but a strong regional perspective emerged in many cases. The two topics generating the most comments were the Domain Name System, where some of the differences of opinion seen in the global discussion also emerged at our regional level, and in discussion of Internet charging and interconnection, a global issue with roots in the Asia Pacific and the International Charging Arrangements for Internet Services (ICAIS) debate of the late 1990s. Other issues ranged from ISP liability, ensuring greater participation of developing nations in ICT policy processes broadly and issues of culture and heritage.

The Forum has not attempted to reach definitive positions on any issue, and this summary does not try to present a consensus. We do however try to indicate the general outcome and direction of the discussions and add some observations and comments along the way. As is the nature of a summary we can only paint a picture with a broad brush. Unfortunately, this means that a great wealth of ideas, suggestions, references and case studies that have been raised and certainly merit the attention of the reader cannot be included. A separate list of resources and references that have been mentioned in the debate will be compiled and distributed separately.

1.) Domain Name System (DNS)

Discussion of the DNS covered Root Server issues and Anycast, IP address allocation, ICANN, ccTLDs and Internationalized Domain Names.

With the Internet recognized as critical global infrastructure a thread underlying discussion of all the above-noted issues was consideration of sovereignty, the role of governments and the nation state. Discussion was similar to what we have seen at the global level, but some participants from the region, particularly contributors from China, engaged in more depth and brought some new insights to proposals that had been previously stated but not fully debated. Discussion made clear that there are still many misunderstandings about the DNS and related actors.

1.1.) Root Servers: diversity, security and oversight

One of the first discussion threads was about the root servers, questioning whether the current system of 13 separately managed operators were more vulnerable to attack than a more controlled and homogeneous system. It was also suggested that the concentration of servers in the United States (10 of 13) was problematic from the point of view of geographic diversity, both in the sense of such concentration of resources presenting a possible security failure (particularly in time of war) and also being geopolitically inappropriate. Other concerns related to the traffic loads that top-level servers in a hierarchical root server system need to cope with. A recommendation was made to the effect that ICANN establish universal guidelines for root server operators and they be required to conduct regular security updates and checks.

Other commentators were generally supportive of the current system, emphasizing that the organizational diversity of the root server operators might be considered a strength and that concerns about overloading top-level servers are not borne out by the statistics. Some commentators expressed the view that "Monoculture" is often considered a security concern, and the diversity of organizations operating roots -- government, private sector, not-for profit and academia-- using a variety of different technical systems is considered by most technical experts to be advantageous.

Participants also pointed out that geographic concentration of root servers in the United States had been recognized as a problem and has been addressed by the introduction of Anycast, a technique that enables one root server to be "cloned" in multiple locations. Anycast servers are mirror images of the root server they replicate. These mirrors operate in just the same way as one of the 13 and provide local root services, additional security through redundancy, and faster response to queries. APNIC announced the launch of Anycast project in the Asia Pacific in November 2002. Statements from APNIC Forum members indicated that APNIC currently funds or partly funds eight root servers operations in the region. There are an additional five root servers in the Asia Pacific provided by other projects and activities (including one of the 13 authoritative root servers which is located in Japan.)

There are now more than 80 operating root servers serving DNS queries from around the world and more than half are located outside the United States. More are being added on a regular basis. Discussions described how to participate in Anycast projects, welcoming interest from potential operators, and made some general comments about costs and implementation.

The current technical operational structure was clearly explained, and addressed the concerns raised. However the issue of "universal guidelines" was not discussed further. There was some misunderstanding of ICANN's role and powers, suggesting that as the "global domain name system regulator" ICANN might be in a position to require universal guidelines for root server operation, and for security in particular. ICANN has no such regulatory powers. Diversity of operation and Anycast are often described as strengths of the system, however that they are not well documented or explained as a weakness. We have come to expect critical infrastructure to be operated in a predictable and visible way that the general populous can recognize.

Future discussions might aim to consider how universal guidelines for root servers operations can be implemented not as regulation of how they operate, but procedural guides that explain their structures, processes and institutional arrangements.

1.2.) IP Address allocation

The allocation of IP addresses was perhaps the most controversial issue discussed in the Forum. Concerns were voiced about how addresses had been allocated in the past and about how they would be allocated in the future. The discussion was familiar as it mirrored that heard at the global level, echoing remarks made by delegates at WSIS and particularly recommendations by Mr. Houlin Zhao Director of ITU's Telecommunication Standardization Bureau. <http://www.itu.int/ITU-T/tsb-director/itut-wsis/files/zhao-netgov01.doc>.

Forum participants from China led discussions, suggesting that means of IP address allocation to date had favoured developed nations, especially the United States. And that as IP addresses are a global public resource and more concern should be shown for sovereign national needs. It was also suggested that the IP address system was inherently unfair, based on "first come first serve" and that this led to scarcity before many developing nations had the chance to request for addresses. That is, present IP address allocation policies were a bottleneck to development and not in proportion to population size and needs of big developing countries. There was a suggestion that a bias towards US organizations was the result of ICANN's MoU with the US Department of Commerce.

One participant said they had heard that a large US university had more IPv4 address space than the whole of China. Because of this shortage of IP addresses, the person's research lab had to use private IP addresses, which meant less functionality. This depiction sums up how many other participants saw these suggestions. However, other commentators pointed out that some years ago, Stanford University had a very large allocation, that was made in the early 1990s before the current system of IP address allocation using Regional Internet Registries (RIR) was introduced circa 1993-1995. (Stanford has since renumbered its networks and returned the early allocation to the global address pool.) ICANN does not set IP address allocation policies, nor does the US government. Policies are made by the communities of the four (soon to be five) RIRs. APNIC Forum members and other commentators pointed out that in the past two years China has been among the largest recipients of address space. It was suggested regional allocation policies were unlikely to be the cause of any shortage Forum members had experienced.

The discussion brought to light that since the RIR system was introduced, address space has been allocated on the basis of demonstrated need. IPv4 address space is limited and has been allocated with conservation in mind. It was pointed out that there is no known instance in the Asia Pacific region of a request for addresses space that showed a demonstrated need being turned down.

However, with this view of the unfairness of past allocation in mind, participants went on to make recommendations about appropriate policies for IPv6 address space. Some said that as IPv6 address space is so large that by current ideas of possible uses it is almost inexhaustible, this global resource should be allocated in large blocks for nations to distribute. Others thought that however large the IPv6 space might be it could still be used up by developed nations, that a lack of reservation principles can make routing less efficient and that national governments were therefore the best protectors of such resources. Further comments recommended that assigning large consecutive blocks to countries would enable the country to better control its national networks, to identify and monitor users and so provide better security. Overarching in these suggestions was the notion that as the Internet penetrates deeply into all our lives so IP resources naturally take on national attributes and the issue of sovereignty becomes paramount when considering how they are allocated. The Internet and in this case IP allocation had thus become a role for the state.

Contributors who did not share this view pointed out that some of these suggestions were based on the false premise that the current allocation system was unfair and restricted development; however, there seems to be no proof of such unfairness. IPv6 address space is also considered to be so large that depletion anytime soon is extremely unlikely. As an example of the potential of IPv6, it was mentioned that using one method of counting potentially available addresses the IPv6 address space currently allocated to operators in China may provide as many as 47 billion addresses for each of China's more than 1 billion population.

It was also stressed that allocations by country do not mesh well with the international interconnection models used by connectivity providers. So while not infeasible, a country-based allocation regime would consequently have implications beyond just changing the current system of IP allocation (not a small task in itself.) The concern was expressed that routing tables for the Internet are likely to be adversely effected by such a national scheme. There was discussion of the ideas that allocation of blocks by country equates to creating centralized planning regime vs. a regime based on evolving need. Centralized planning requires foresight into matters such as population size, technology change, and is potentially anti-innovation.

We were also reminded that creating an allocation scheme based on the needs of population overlooks that IP addresses are assigned to devices not people. Those devices move, increasingly so as we consider concepts of ubiquitous networks where we will be assigning addresses to more and more mobile devices, Radio Frequency Identification Devices (RFIDs), for example. People are becoming increasingly mobile, it seems to be a characteristic of development, and so for population location may also not be an essential consideration.

Furthermore it was suggested that sovereignty as the main concern for address allocation may also be difficult to justify, since the most important characteristic of an IP address used on the public Internet is that it must be globally unique. The concern was expressed that sovereign and national schemes may not fit well with this fundamental requirement.

However, we also heard opinions that good allocation policies are about optimization of resources, and ensuring that developing countries have enough address space might be considered one aspect of optimization when the potential for digital divide is taken into account. Particularly in the Asia Pacific region, governments are making

IPv6 deployment part of national ICT strategies. China, Korea and Japan for example have a joint project promoting IPv6 development and deployment. As such, governments are likely to take an increased role in IPv6 allocation and policies. APNIC recognizes this situation and is increasing its liaison with government.

1.3.) ICANN

ICANN was of course discussed in relation to the root servers and IP addresses. ICANN was described as an organization that was out-of-date: some considered it to be under control of the US Department of Commerce, and so not an appropriate entity to be controlling aspects of a network which has become a global resource. A perception of bias towards US organizations in IP address allocation has already been mentioned. ICANN's control over editing of the content of the root zone file --the database that contains information about all ccTLDs and gTLDs-- meant that it had the power to remove a country's record from the root and therefore delete it from the Internet.

As we move towards Next Generation Networks, some considered that traditional Internet organizations such as ICANN will become less important than intergovernmental bodies such as the ITU where standards for these networks are developed and the major communications companies gather. Developing nations have a well-established presence in the ITU.

In response to these comments it was recognised that ICANN does have a Memorandum of Understanding with the US Department of Commerce to perform its functions, but the MoU does not invoke the degree of control that some suggested. However, control of the content of the root zone file is widely viewed as a problem, although it is the Department of Commerce not ICANN that has the final decision on the contents of the file, and also on who is designated to manage any TLD, including country code TLD. This issue was not discussed on the list, but it is well understood from discussion in WSIS that many countries, not just those in the Asia Pacific region, are concerned about this matter and it is a topic that will continue to feature prominently in Internet governance debates.

Some felt that ICANN excluded developing nations from its processes. There was no in-depth discussion of this as a specific issue. However, the view was expressed that while participation in all technical and policy processes is difficult and expensive, ccTLD operators in particular must make involvement on ICANN a priority, it is too important for them to ignore.

There was discussion about a more general statement that the international community should involve developing nations more in ICT policy-making and Internet governance, and that equality of participation in ICT policy making was important in fighting the digital divide. Some, particularly from technical backgrounds had reservations about this statement, saying that a level of technical and ICT development was necessary before meaningful participation could be achieved. It seems that this view might have been the case if applied to the Internet when it was still mainly an R&D network. But today it is far too important a factor in all aspects of society and has policy implications so great that technical and policy capacity building must go hand in hand.

Discussion about ICANN also brought to light some misunderstandings about the domain name system generally. Some considered ICANN to be the global regulatory of the DNS, with associated powers of a regulator controlling root servers IP address

and all TLDs. People had misconceptions about the root server system and other factual matters. This should be a concern as effective policy discussions cannot be held based on misconceptions. Part of the role of the Forum and the broader ORDIG initiative should be to provide a solid factual basis for understanding of Internet governance and ICT policy issues.

1.4.) Country Code Top Level Domain Names (ccTLDs)

Experiences with the management and good operation of ccTLDs were discussed in some detail. The question was asked what could be done if a country's ccTLD was being mismanaged, particularly what could be done if the ccTLD in question was managed by the country's government.

Questions about ccTLDs and Internet governance are typically about how a domain that was assigned many years ago, often to a person outside the country, can be re-delegated to a person or organization that the country in question prefers. These re-delegations are often time consuming and difficult processes. ICANN is involved, it has responsibility under the MoU with the Department of Commerce, and is often blamed for causing delays and for interfering with what on the face of it should be a domestic matter. Consequently, it was interesting to hear Forum participants focus more on domestic problems of ccTLD management.

The Bangladesh ccTLD, .BD was mentioned as an example. Contributors explained that it is managed by the government run telecommunications carriers, and has a reputation inside and outside the country for being unreliable. Some expressed surprise at this as Bangladesh has achieved some notable success in areas such as broadband. However, connections to the .BD server are often down for several hours at a time causing email to bounce, while offers to help from members of the local Internet community have reportedly fallen on deaf ears.

So the question was asked "can or should ccTLD operators be held to a minimum standard?" Some argued that outside interference would not be appropriate, and ICANN would certainly not get involved in instructing a ccTLD operator what to do. ICANN can force a re-delegation of a ccTLD, but only at the express and clear request of the local Internet community including the government.

It was suggested that if there cannot be a certain set of required standards for ccTLD operation (and sovereignty suggests that standards cannot be imposed) then recommended technical specifications would be a start, and they could be shared with the government via an international body that may be the most effective way to proceed (local Internet industry cannot supply unsolicited recommendations for suspicion of having vested interests.) In this case, best practise documents were references on the list. <<http://old.centri.org/meetings/ga-18/tech-bestpractice.html>> and it is hoped that they will be helpful in persuading the ccTLD operator in Bangladesh to improve.

The problem of a government department mismanaging or not effectively managing ccTLDs in the region is not unique to Bangladesh. A paper delivered by a Forum member at a meeting of the United Nations ICT Task Force in March 2004 describes a very similar situation in Cambodia (reference "Internet Governance Perspectives from Cambodia", Norbert Klein

<<http://www.unicttaskforce.org/perl/documents.pl?id=1297>>)

The author describes how the Cambodian ccTLD .KH was established by a local NGO and run quite efficiently. However operation was then taken over by a

government ministry and operational performance dropped while the price of domain names increased.

We heard that management of the Philippines ccTLD .PH has been a problem inside the country for many years. There has been a strong desire among many in the local Internet community to either change how the ccTLD is administered or to change the ccTLD manager. The Philippines may force a re-delegation, but even if successful, the current operator will have the option to appeal to the Philippine courts and so delay implementation of the decision.

We also heard that the Mongolian ccTLD, .MN was popular in the State of Minnesota in the United States, and the national operator made good money from marketing it to both Mongolian and Minnesotan users. The Pacific Islands of Tuvalu (.TV) and Niue (.NU) market their domain names almost exclusively as generic Top Level Domain names like .COM and .INFO. The Forum did not discuss whether this was good or bad, but there was agreement that it should be a local decision.

1.5.) Internationalised Domain Names (IDN)

Discussion of IDNs was surprisingly limited given the importance of the issue to the Asia Pacific region where there are many non-English speakers and most languages do not use the Latin alphabet.

Some questioned whether IDNs were an Internet governance issue, or one of technical standards and implementation. But discussion made clear that governance was an issue: Deployment of IDNs will require coordination between script sharing communities not bounded by territory, such as the case of China, Korea and Japan. IDNs will give rise to new intellectual property issues, they will create problems for law enforcement as they track activity across borders to domain names and registrations they cannot read, and characters in some scripts look very similar to each other so we can expect more fraud and phishing as a result. Creation and implementation of IDNs at the top level will have implications for root server operations, ICANN and its community. All of these would have some place under a broad definition of Internet governance. ICANN received some criticism for not having acted as quickly as it could have done on the issue of IDNs.

IDNs issues are likely to become more salient in the discussions on Internet governance.

2.) ISP Liability

ISP Liability after abuse by customer/3rd party was raised and there was some discussion of emerging best practises.

Technology oriented solutions were suggested, recommending that the ISP be proactive by having systems and policies in place as part of operational practise to ensure easy detection of abuse and to put a stop to such abuse when it occurs. Operational practises might take the form of appropriate use policies that easily allow an ISP to deal with the abuse in a manner supported by a contract agreed by the customer.

Safe harbour was discussed, which requires an ISP to act on reasonable notice, but to not be liable for anything it did not know about. We heard that a risk of a proactive approach vs. relying on safe harbour was that the ISP had to make judgements

about what is a liability, it becomes "judge and jury" in matters of law, and if it gets it wrong it may as a result lose the safe harbour protection.

There was discussion of a recent real world situation where the safe harbour laws in India failed to protect the CEO of the local eBay operation, citing the case of teenagers making a MMS video of a sexual act and putting it on a chat room run by the company. While the company removed the video when notified by the police, a judge still found the CEO liable for the offence of making pornography available.

Discussion revealed that the problem was one of the judiciary not understanding eBay's role as an intermediary network of buyers and sellers. The case illustrated the need for clarification of the law and education of the judiciary and police, with the Forum making suggestions for: better coordination between actors; appropriate laws; educated law enforcement; and accepting and understanding digital evidence. Control of harmful content at the content provider rather than ISP level was also discussed as a possible strategy. In this regard participants mentioned self-rating systems and codes of conduct for content providers that are encouraged in countries such as Australia.

3.) Positive use of the Internet for promoting and preserving culture

These ideas were raised particularly from participants from Pacific island countries.

Question was asked whether the names of countries should be restricted from use in generic top-level domain names, for example fiji.com. tonga.com, UnitedStatesOfAmerica.com are all owned by private companies. They can be bought back. But the perception of .com is so strong that for many not having "your" name in that domain name space is seen as a problem. One governance issue is the scarcity of top-level domain names. The Forum did not discuss whether such pressure had been reduced with the introduction of .INFO and other new generic top-level domain names.

Language was suggested as an important issue. Few developing countries have the technical resources to either complete language specifications, or to maintain Internet resources in multiple languages. Some international organizations, for example the Unicode consortium, dealing with languages and Internet technologies and standards have agreed to include native language speakers in their work, but this is not always the case. It was noted that in Pacific countries most print materials are available in the local language and in poor quality English translations, but on the Internet it is mostly in English with no local language equivalents.

Tools for multi-language content management systems, where the navigation not just the content can be in multiple languages would be helpful. But here discussion strays more into areas of e-strategies and development than governance, but these are tools to help good Internet governance.

4.) Access and interconnection

Are Asia Pacific countries overpaying for connectivity, users offered limited choice/competition and generally getting a bad deal?

One view was that there are competition and market forces at work in reducing cost of connectivity in many countries. Forum members from the Pacific islands took issue with this, noting that connectivity in their part of the region is not competitive.

They are dependent on two satellites (C-Band satellite links, which have high infrastructure costs associated with them) and very little undersea fibre. Telecommunications operators are reluctant to liberalize saying the market is too small and dispersed, although experience of a few cases of liberalization suggest otherwise. The Pacific is very much a sellers market, and while excess capacity exists on satellites, that capacity is reserved for failures, which are unfortunately not infrequent. The competitive situation is not helped by the need for high start-up capital expenditure for local/base infrastructure, discouraging new competitors.

Institutional arrangement such as interconnection, peering and cooperation among ISPs were generally recognized as very beneficial, keeping traffic as local as possible and keeping money from flowing out of the country. Extensive local caching is also cost effective, Palau has been quite successful in this regard. But where ISPs don't cooperate, there is little the government can do, except give incentives. Trust cannot be forced on operators, and trust is at the basis of most interconnection and cooperation. Local content and services should also be encouraged. Localized versions of popular services such as Yahoo! Groups can save significant bandwidth. But the situation remains that when bandwidth is scarce, users pay very high fees, an example was mentioned from Fiji of 128Kb/s at US\$3500/month.

In most other parts of the Asia Pacific, Internet connectivity should be available competitively. And there are claims that in some cases it is the monopolistic tendencies of in-country regulation that has made bandwidth more expensive for consumers, not the cost of international bandwidth. The indication here is that liberalization and particularly a strong pro-competitive regulator is at least part of the solution.

It was noted that the ITU established a study group to discuss international Internet connectivity in 1998 and has been unable to achieve a solution. A new study period was recently agreed to run from 2005-2008. The issue has undergone a long and what many view as an unproductive debate in the ITU and it was suggested that this may be an indication of how ineffective an intergovernmental body could be in dealing with the significant practical Internet related issues developing countries are facing. Emerging technologies such as wifi or wimax that could encourage more interconnection, serve to make bandwidth markets more competitive and enhance the choice of available delivery services has received only limited attention. Only the advent of digital TV was mentioned as an opportunity to free spectrum for data transmissions.

5.) Is Internet Governance a good thing or even necessary? What is the role of WSIS and WGIG?

Many postings related to more conceptual and fundamental questions about the benefits, meaning and legitimate reach of Internet governance. Some Forum members questioned whether there was or could be such a thing as "Internet Governance". The Internet grew as a network without central control or management, no one was in charge. This can be seen as a feature that encouraged innovation and the rapid development we enjoy today. So in our discussions we were warned not to seek Internet governance for the sake of it.

The response was that governance does not mean rules or more rules, it does not mean government. There is already a lot of "Internet governance" at both international and architectural levels. Governance makes the Internet work. The first definition of Internet governance suggested on the Forum was "the rules and regulations, the policies, institutions and organisations that shape the architecture,

infrastructure and applications of the Internet." We later heard about definitions being discussed in the WGIG with consensus perhaps emerging on a few points:(1) Collective action by (2) groups of stakeholders on (3) process, laws, policies, outcomes (4) that affect or concern (5) the internet.

Members expressed that governments had always been involved and necessary in the Internet, from early funding to ICANN as a creation of the US government. Cross border problems of hacking, spam and cyber crime mean government must be involved; these problems cannot be solved by technical methods or by the private sector alone. There is a role for governmental organizations to help solve the problems of cyberspace. So government and governance has to balance with innovation and lack of regulation, the Internet has thrived because of this, and regulation will stifle what has given it growth.

We heard further reaction to the idea of no governance as a "feature" of the Internet, simply stating that this concept does not scale. It might have been true before the Internet became so important, but today technical solutions and coordination are not enough. And it was noted that "good" governance is implied. Just as with corporate governance the end goal of governance is to improve the outcome for the regulated product/service/process, and it was suggested that this is how the Forum should view this central topic. That the Internet works as an internetworking activity may be considered proof that collective action is governance. Some participants suggested that one should be careful not to reinvent the wheel and assess first, which organisations and fora are already in place to deal with specific Internet governance issues and where demand for new bodies and fora really exists.

Given these competing views on Internet governance it is not surprising that both WSIS and WGIG were perceived very differently by Forum participants. Some contributors described these initiatives as useful vehicles to address important Internet governance issues and advance necessary reforms. Others were very sceptical as to the efficacy and quality of solutions that these initiatives might eventually generate. Accordingly, the first set of issue papers released by WGIG was met with sceptical reviews in the Forum.

A point was also made that a one-size-fits-all approach and dogmatic preference for one or the other arrangement for governance is not feasible. According to this view, actors in developed markets exist to take on new governance roles, where both private sector and civil society is mature. But these institutions are often lacking in developing countries so government intervention can be more necessary. This may explain some of the differing points of view in the Forum and other discussions.

6.) Security, trust, network reliability

Several discussion threads revolved around security and trust issues online. Participants discussed the availability of feasible micro-payment options and cited several reasons, including a lack of trust and business model or online credit card fraud as reasons for the lack of feasible online payment options.

Other participants pointed to promising solutions such as trust accounts maintained by intermediaries or billing via Internet service providers and also raised the question of whether development organizations such as UNDP-APDIP might be able to play a role in catalyzing the adoption of such options in developing countries. The discussion also briefly touched upon digital signatures as a possible option that has yet to live up to its promise. Other contributors offered better user education and

business opportunities for premium, more secure services as possible measures to enhance the situation.

7.) Summarizing Forum and closing comments

Governments have a role in issues that require international harmonization such as spam, Internet-crimes like phishing, etc., where the offline world of nation states and borders meets the cross-border Internet. Developing countries need to get involved, but many need fundamental help in capacity building to enable meaningful and effective participation. We heard a passionate observation that fighting the digital divide isn't and shouldn't be flag waving for political struggle. At the same time Internet governance is not exclusively a technocratic affair but touches upon many public policy issues that raise legitimate questions about accountability and participation. The digital divide is a real problem and it goes beyond IP address allocation. If we are serious about the digital divide, we might start by trying to ensure that all languages are properly encoded in Unicode because without that people can't even "speak" their own languages on the Internet.

Forum discussions made clear that there are problems with many of the current systems --ICANN, root server or IP address allocation (and they are being reviewed all the time) --but the debate also showed that some of these are problems of the past that have been or are actively addressed and that proof of fundamental failures is hard to come by, thus suggesting an agenda for gradual reform rather than radical restructuring of existing arrangements. This will require keen attention to technical and public policy details, a pragmatic approach that appreciates well-functioning extant arrangements but is open to innovative improvements and, above all, a constructive ongoing dialogue of all stakeholders. Tempers may run high at times and misunderstandings are inevitable. But given the wealth of information and insightful reasoning that this forum has generated there is every reason to be optimistic that such a dialogue will be possible to the benefit of Internet governance that is effective, inclusive and responsive to development concerns.

UNDP-APDIP, Kuala Lumpur, 22 February, 2005

Annex

UNDP-APDIP Forum on Internet Governance Priorities for the Asia-Pacific Region Draft List of major resources referenced in the debate

This is a list of the main information resources that were referenced in the discussion. The organization of topics follows the structure of the draft discussion summary.

0) Main Background Note

Adam Peake: "Internet Governance and the World Summit on the Information Society (WSIS)
<http://igov.apdip.net/opening_discussion/resources/wsis_governance_paper.pdf>

This paper provides a very concise and accessible overview of the major issues in Internet governance as discussed in the WSIS process. It is an revised version of a paper that Adam Peake, the main moderator of the forum, wrote for the Association for Progressive Communication, a public interest group.

1.) Domain Name System (DNS)

1.1.) Root Servers: diversity, security and oversight

<<http://www.apnic.net/services/rootserver/>>

APNIC now supports the following Root nameservers in the Asia Pacific region

RIPE's DNSMON project

<<http://dnsmon.ripe.net>>

Provides statistics on TLD Server load and performance

APNIC's Anycast Activities

<<http://www.apnic.net/info/faq/rootserver-faq.html>>

Introduction to the activities undertaken by APNIC to increase the number of root server mirrors in the Asia-Pacific

Che-Hoo Cheng: "Thanks to anycast technology, there are in fact more than 80 operating root servers serving DNS queries from around the world. You can refer to <<http://root-servers.org>> for details."

Papers that discuss the rationale of having a single root

<http://www.cavebear.com/rw/nrc_presentation_july_11_2001.ppt>

<<http://www.wgig.org/docs/Comment-Auerbach.pdf>>

<<http://www.wgig.org/docs/Mueller-CommentRS.doc>>

1.2.) IP Address allocation

Houlin Zhao Director of ITU's Telecommunication Standardization Bureau: "ITU and Internet Governance"

<<http://www.itu.int/ITU-T/tsb-director/itut-wsis/files/zhao-netgov01.doc>>

most quoted position paper that outlines concerns with the current IP address allocation system and other issues from an ITU perspective

<http://www.nro.net/documents/nro17.html>

response to the ITU position paper by the Number Resource Organization on behalf of the Regional Internet Registries

<<http://bgp.potaroo.net/ipv4/>>

Report with projections on the growth of demand for IP address space. It is generated automatically on a daily basis, and reflects the application of best fit models to historical data relating to the growth in the address space advertised in the BGP routing table.

1.3.) ICANN

ICANN's Public Summary of Reports Provided Under Cooperative Research and Development Agreement CN-1634 Between the Internet Corporation for Assigned Names and Numbers and the United States Department of Commerce

<<http://www.icann.org/general/crada-report-summary-14mar03.htm>>

1.4.) Country Code Top Level Domain Names (ccTLDs)

<<http://old.centri.org/meetings/ga-18/tech-bestpractice.html>>

List of best practices for ccTLD (as direct response to the discussion of the problems with .bd domain server management)

Norbert Klein: "Internet Governance Perspectives from Cambodia

"<<http://www.unicttaskforce.org/perl/documents.pl?id=1297>>

Description of management shortcomings for country TLD

<<http://www.iana.org/reports/cctld-reports.htm>>

IANA Reports about ccTLDs

1.5.) Internationalised Domain Names (IDN)

<<http://www.icann.org/general/idn-guidelines-20jun03.htm>>

ICANN began work identifying the technical and policy issues in 2001, issued a comprehensive report in the autumn of 2002 and finalized guidelines for the implementation of IDNs in June 2003.

<<http://www.faqs.org/rfc/rfc3743.txt>>

"This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited."

Adam Peake: "While ICANN has an IDN Committee which published a discussion paper on IDN Top Level Domain (TLD) in 2002 <<http://www.icann.org/committees/idn/registry-selection-paper-13jun02.htm>>, no defined process or policies have been defined since then on how to go about getting IDN TLD.

<<http://www.internetworldstats.com/stats7.htm>>

The domain name system is based on the Latin alphabet. It is estimated that about 17% of the world's population are English speakers.

2.) ISP Liability

no specific references mentioned

3.) Positive use of the Internet for promoting and preserving culture

<<http://www.alvestrand.no/mailman/listinfo/ietf-languages>>

mailing list which manages the IANA language definition registration, as per RFC 3066, according to participants a vital first step to have one's language included in Internet specifications

4.) Access and interconnection

Geof Houston: "Where's the Money? Internet Interconnection and Financial Settlements"
<<http://www.potaroo.net/ispcol/2005-01/index.html>>

Introduction to Internet interconnection issues and discussion of reform proposals

<<http://james.seng.sg/archives/000341.html>>
less technical comments on the interconnection issue

Asian Internet Interconnection Initiatives Project

<<http://www.ai3.net/>>

example of interconnection initiative by a consortium of Asian universities as a testbed for regional Internet research co-operation

<<http://www.picisoc.org/tiki-index.php?page=Intelsat804+fault+-+Country+Status>>

Description of the recent satellite failure that led to prolonged connectivity outages for Pacific Island Countries

<<http://www.itu.int/ITU-T/studygroups/com03/iic/index.html>>

ITU Study Group that addresses interconnection pricing issues

<<http://www.apjii.or.id/dokumentasi/statistik.php?lang=ind>>

APJII release statistics on Internet users in Indonesia (in Indonesian Bahasa)

5.) Is Internet Governance a good thing or even necessary? What is the role of WSIS and WGIG?

Vint Cerf: "The Catnet Model for Internetworking"

<<http://www.isi.edu/in-notes/ien/ien48.txt>>

An interesting approach to conceptualize Internetworking

<<http://wgig.org/working-papers.html>>

repository of WGIG issue papers

<<http://wgig.org/Comments-Papers.html>>

repository of comments on WGIG papers

WGIG Inventory of Public Policy Issues and Priorities

<<http://www.wgig.org/docs/inventory-issues.html>>

<<http://igtj.jp/Comment-IGTFJ0211F.pdf>>

comments on WGIG papers by Internet Governance Task Force of Japan

<http://james.seng.sg/archives/2005/02/04/wgig_papers.html>

comments on WGIG papers by James Seng

<<http://streaming.polito.it/wgig-meeting>>

webcast of WGIG meetings

General comments from the Government of India

<<http://wgig.org/docs/India-Comment.doc>>

6.) Security, trust, network reliability

<<http://www.paybysnap.com/faq/>>

An example of an online payments system that uses intermediary trust accounts to facilitate online payments

<<http://www.newscientist.com/article.ns?id=dn6955>>

Interesting article on the use of technology AND law to catch spammers

Standard Australia AS8015: Corporate Governance of ICT

<<http://www.acs.org.au/governance>>

7) Misc other

<www.faqs.org>

authoritative archive of Requests for Comments (RFCs), the main technical consultation paper that specify technical features of the Internet

<<http://www.ida.gov.sg/idaweb/doc/download/I3048/PC-VOIP&ENUM3.pdf>>

IP Infocomm Development Authority of Singapore (IDA): Discussion Paper on Voice over IP

<<http://www.apjii.or.id/dokumentasi/statistik.php?lang=ind>>

Statistics on Internet use in Indonesia released by Association of ISPs in Indonesia (in Bahasa Indonesia)

<<http://www.rfc-editor.org/>>

The Requests for Comments (RFC) document series is a set of technical and organizational notes about the Internet (originally the ARPANET), beginning in 1969.

UNDP-APDIP, Kuala Lumpur, 16 February, 2005