

# DRIVING THE PUBLIC POLICY DEBATE: INTERNET GOVERNANCE AND DEVELOPMENT<sup>1</sup>

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The recent actions and debates orchestrated by the international community at the Group of Eight meeting in Gleneagles, Scotland, the International Monetary Fund/World Bank annual meeting in Washington in September 2005, and during the United Nations summit in New York in September 2005 all point to a renewed commitment to addressing issues of development and the structural disparities between many countries. The clarion call of 'make poverty history' has at the same time galvanized much public opinion. It is within this renewed debate about development that models of the information society are being promulgated as a route to economic, political and social development.

Much recent evidence points to the information society as a model where information and communications technologies form the kernel of development processes.<sup>2</sup> Beyond establishing novel patterns of economic activity one of the key attributes of the information society is the linking of traditional economic activities with new flows of information and thereby creating new development opportunities. In this regard, societies not only need the traditional infrastructures, such as electricity, water, transport, but also an information infrastructure, the essence of which is embodied within the notion of the Internet.

The synergy between the physical and information infrastructures provides critical multipliers to development processes. Given these perspectives the questions surrounding Internet governance, in particular question over the *equitable distribution of resources*, open *access* to the Internet and is resources for all, and the *safe and secure* functioning of the Internet<sup>3</sup>, are not arcane issues to be decided by technological elites but fundamental issues of public policy concern. It is, in effect, the development agenda that drives many of the issues of Internet

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<sup>2</sup> See for example, Organization for Economic Cooperation and Development, *ICTs and Economic Growth: The OECD experience and Beyond* (Paris: OECD, March 2004); Qiang, C.Z-W., Pitt, A., Ayers, S., "Contribution of Information and Communications Technologies to Growth," *World Bank Working Paper No 24* (Washington DC: World Bank, 2004); and, Grace, G., Kenny, C., Qiang, C. Z-W., Liu, J., Reynolds, T., "Information and Communications Technologies and Broad-Based Development," *World Bank Working Paper No 12* (Washington DC: World Bank, 2003).

<sup>3</sup> Adapted from the WSIS Declaration of principles, paragraphs 48 and 49.

governance out from the existing institutional arrangements and into the main stream of international public policy debate.

This paper explores some of the issues surrounding Internet governance<sup>4</sup> from a developmental perspective and, in particular the issues that emerged during the Working Group on Internet governance (WGIG) process. The aim of the paper is to contribute to the growing debate and signal avenues for exploration rather than provide definitive solutions.

## Development Issues and Internet Governance

Increasingly it is being recognized that access to ICT resources, including the Internet, is becoming paramount to enable all to be empowered to self-determine their lives in economic, political, social, cultural and environmental sectors of society. Hence, for many, particularly the debate within the World Summit on Information Society (WSIS), access and use of ICTs, including the Internet, is becoming fundamental to the delivery of the Millennium Development Goals (MDGs). From the early work of Maitland Commission<sup>5</sup>, *The Missing Link*, there has been a concern that differentiated access to ICT resources is reinforcing a 'digital divide'; a structural divide between developed and developing countries, and within a country between urban and rural communities, rich and poor, young and old, able and disabled and women and men. Whilst there is some criticism of this perspective<sup>6</sup>, and/or of the mechanism to address this divide, especially in the policy arena<sup>7</sup>, addressing the digital divide has long been a policy priority for the international community as well as national Governments.

Within the context of WSIS the link between the evolution and use of the Internet, Internet governance and economic and social development is articulated in the Declaration of

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<sup>4</sup> There is a growing literature on Internet governance. Obvious starting points include the *Report of the Working Group on Internet governance* (Geneva: United Nations, 2005) <<http://www.wgig.org>> and the 2003 WSIS Declaration of Principles and Action Plan <<http://www.itu.int/wsisis>>. Other texts include, Peng Hwa Ang, *Ordering Chaos, Regulating the Internet* (Singapore: Thomsom, 2005); Organization for Economic Cooperation and Development, "Input into Working group on Internet governance," (Paris, 2005) [www.wgig.org](http://www.wgig.org); Don MacLean, "Internet governance: A Progress Report from WGIG", presentation at *UNESCO Conference on "Paving the Road to Tunis – WSIS II"* (Winnipeg, May 14, 2005); and, Don MacLean, ed., *Internet governance: A Grand Collaboration*, (New York: United Nations ICT Task Force, 2004).

<sup>5</sup> The Maitland Commission, *The Missing Link: Report of Independent Commission on World Telecommunications Development* (Geneva: ITU, 1985).

<sup>6</sup> Kenny, C., "Should We Try to Bridge the Global Digital Divide?" *Info*, (Vol. 4:3 2002)

<sup>7</sup> See MacLean, D., Souter, D., Deane, J. and Lilley, S., *Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making*, London, Commonwealth Telecommunications Organization (2002). Available at [http://www.cto.int/publications/louder\\_voices\\_final\\_report.pdf](http://www.cto.int/publications/louder_voices_final_report.pdf).

Principles (DoP). The implication of this commitment in the DoP is to enable “individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life”. Hence not only are there myriad issues within this development framework but also many of these issues are cross-cutting in nature and therefore manifest themselves in other policy debates. Issues of concern include:

- facilitate participation of all in the ‘information age’
- promote national economic, political and social cohesion,
- support information and communication rights for all,
- reduce urban-rural disparity,
- contribute to poverty alleviation,
- take up challenges posed by global technological and economic trends,
- prevent the marginalization of people and communities from the global networked economy,
- deliver on economic and social developmental objectives.

However, one of the overarching concerns is with *access*. At one level access refers to the terms and conditions under which countries, firms and individuals gain access to the Internet. These terms and conditions not only include the immediate conditions such as the availability, quality and cost of access and the capability of users to exploit the Internet but also a wide range of institutional issues. Such institutional issues include the processes by which critical Internet resources managed, the security and safety of the Internet and its users as well as Internet relates aspects of other debates, for example trade, intellectual property rights and consumers rights.

### ***Institutional Arrangements for Equitable and Stable Resource Management***

For many developing countries the twin objectives of the equitable distribution of Internet resources and a stable and secure functioning of the Internet are not perceived as current realities; hence the clarion call of some in the Internet community who argue “it ain’t broke don’t fix it” is seen by many in the developing countries as the articulation of a particular view of Internet governance which perpetuates the existing elites.

In terms of the equitable distribution of Internet resources the current mechanisms around the governance of the domain name system, IP addresses and the operation of the root servers have become the focal point of much debate, especially for developing countries. For some the allocation of Internet resources by market-based mechanisms is seen to be highly effective; for others the opposite is the case. The existing system, however, is predicated on the assumption that at any one time all players have an equal capacity and equal resources to engage in and seek critical Internet resources. Hence the allocation system is one of adjudicating between competing proposals, all of which, in principle, are founded on broader similar capabilities and

information symmetries. Such conditions are rarely met thus raising questions of how to balance market-based mechanism with those that prioritize public interest issues.

Despite the complexity of the institutional map of the Internet the focal point of this debate on the equitable distribution of resources has been focused on the Internet Corporation for Assigned Names and Numbers (ICANN)<sup>8</sup>. Technically, ICANN is a company established under Californian law as a non-profit organization and operates under a contract from the US Department of Commerce. The by-laws of ICANN explicitly exclude the rights of Governments to have direct involvement in its operations and this restriction for example precludes any Government representative becoming a board member of ICANN. For those who argue that ICANN has effectively assumed responsibility for a set on international public policy issues the current institutional setting of the organization is increasingly untenable. The argument is that as the number of users grows so the separation of an Internet user community from a broader political polity and the exclusion of Governments from issues on Internet governance so questions about the legitimacy of ICANN and its accountability increase<sup>9</sup>.

However, the *modus operandi* of ICANN seek to aspire, albeit informally, to the WSIS principles of being multilateral, transparent and democratic and ensuring the involvement of Governments, the private sector, civil society. Thus at the pragmatic level ICANN can, in many ways, be seen as a remarkable organization that has consistently transformed itself to meet the challenges of a rapidly expanding Internet. It has created an environment where those who can contribute to substantive debate are able to do so without the cost often associated with attending and participating in international meetings. However, for some it remains a California company undertaking tasks on behalf of the Government of the USA.

There is growing momentum around changing the structure, constitution, by-laws and organizational nature of ICANN. Given that the contract between the US Department of Commerce and ICANN expires in 2006 the status quo is unlikely to be maintained. Whilst not the basis of full international consensus there is increasing support for three broad areas of reform, namely (i) increasing the role for Governments through changes in the Government Advisory Committee or something comparable, (ii) the establishment of an open policy forum

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<sup>8</sup> There is a large literature on ICANN and related themes. See ,for example, Hans Klein and Milton Muellee, *What to Do about ICANN: a Proposal for Structural Reform*, the Internet governance Project, 2005, ([www.Internetgovernance.org](http://www.Internetgovernance.org)); Wolfgang Kleinwächter, "ICANN between Technical Mandate and Political Challenges," *Telecommunications Policy* 24 (August, 2000), pp. 553-563; and Milton Mueller and Lee McKnight, "The post-.COM Internet: Toward Regular and Objective Procedures for Internet governance," *Telecommunications Policy* 28 (August-September, 2004), pp. 487-502.

<sup>9</sup> Outside the scope of this paper are key questions about the nature of the behaviour of ICANN in certain circumstances, such as (i) to what extent does ICANN act as an agent of the US Government, (ii) what happens to ICANN if it were to become insolvent. In the latter case preliminary opinion suggests that there is considerable ambiguity about the formal ownership of domain names.

which would seek to identify and define key public policy issues and (iii) greater co-ordination between existing international agencies coupled with an understanding that there is no need for a new international and inter-governmental agency.

For developing countries there are a number of significant issues in ensuring the fair and equitable distribution of critical Internet resources. Whilst at one level the exact institutional arrangements surrounding ICANN and the nature of the policy forum and the review committee are of some concern the actual process by which resources are allocated is of material importance. In some ways these issues are well illustrated by the migration to IPv6 represents a major issue for developing countries not only in terms of the assignment and administration of the address space but also in terms of the transitional arrangements. The arrival of IPv6 presents a number of potential challenges to operators and networked enterprises, especially to those in developing countries. The key challenges not only involved the access and use of critical Internet resources but access to new investment funds and the ability to establish new business models

### ***Internet Access and International Transit Arrangements***

Access to the Internet is both a function of national telecommunication policy, especially as it pertains to consumers. However, access to international connectivity and transit services for end-to-end connectivity throughout the entire Internet community is a major issue for developing countries. The significance of the issue has been recognized in WSIS; for example, the Plan of Action notes that, "Internet transit and interconnection costs should be oriented towards objective, transparent and non-discriminatory parameters."

All Internet service providers (ISPs) have to buy transit services in order to provide end-to-end connectivity for their users, in developing countries these transit services involve the purchase of significant international capacity and the associated commercial arrangements are redefining the traditional relationships between carriers that have and underpin the flow of international voice traffic. Although the international voice settlement regime based on cost and revenue sharing agreements based on traffic flows is being reformed the arrangements still result in a net flow of revenues into developing countries. The International Telecommunication Union (ITU) has estimated that between 1992 and 1998 the North-South flow of money through the international settlement regime was in the order of US \$40bn.

With international Internet circuit arrangements, the cost sharing arrangements are considerably different, based on a so-called "full-circuit" model. The rationale is that the any ISP needs to purchase 'transit' from its suppliers in order to provide any-to-any connectivity across the Internet. Hence ISPs in developing countries wishing to interconnect to the global Internet must buy transit services and thus typically pay for the full costs of international leased

line circuits to backbone providers; as a consequence the ISP bears the full costs of both inbound and outbound traffic onto its network<sup>10</sup>.

The situation is further aggravated by poor telecommunications infrastructure in some developing countries (e.g., landlocked countries, isolated island states and others without direct access to undersea cables), lack of economies of scale (e.g., in the least developed countries (LDCs) and poor interregional links (e.g., Africa). The result is that international bandwidth is also used to exchange traffic that could, with better infrastructure available, have stayed on national or regional networks. For example, Internet traffic between two African countries often transits via Europe or the United States. The result is that international Internet connectivity can be a significant cost for service providers in developing economies and this is inhibiting the growth of Internet usage in much of the developing world, particularly the LDCs. The concern is that, if the cost of Internet access is higher in developing countries, then the digital divide will grow wider.

The underlying drivers for this realignment in the costs of access for international transit and connectivity services are manifold. The international arrangements that currently apply to global Internet interconnections have emerged not only from the historic development of the Internet (US and European centric) and its technical characteristics (such as the dynamic paths and multi-homing) but also from business models and the dynamic economies of major Internet operators. Thus, part of issue is reshaping the business models of the ISPs.

However, several key drivers can be identified of which perhaps the most important are the volume and nature of Internet users with a country, the nature of local content, the relatively transactional cost of using Internet resources in other countries to support a wide range of Internet applications and national and regional market for exchanging Internet traffic. Empirical evidence shows that policy interventions that stimulate increase the number of Internet users (for example by encouraging the use of relatively low cost WiFi access networks), local content and local exchange of Internet traffic so the cost of international transit and connectivity fall. This solution has been recognized in WSIS; the Plan of Action state that, “The creation and development of regional ICT backbones and Internet exchange points, to reduce interconnection costs and broaden network access.”

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<sup>10</sup> At ITU, Study Group 3 of the Telecommunication Standardization Sector (ITU-T) has carried out extensive investigation and discussions on international Internet connectivity since 1998. In 2000, ITU-T Recommendation D.50 was adopted, representing a delicate balance between diverse interests. It calls for arrangements to be negotiated and agreed upon on a commercial basis, taking into account the possible need for compensation for elements such as, *inter alia*, traffic flow, number of routes, geographical coverage and the cost of international transmission. More recently work in the WTO has contributed to the debate and sought to explore the extent to which Internet backbone providers are subject to the GATS commitments.

In terms of consumer access to the Internet the key issues are not just the availability, quality and cost of the telecommunications infrastructure but also two other related issues; firstly, the availability and affordability of relevant consumer technologies and capacity to use such technologies and, secondly, the nature of demand and supply of information. In many ways national ICT policy frameworks seeks to address the first issue of increase service availability but fail to address in a coherent manner issues related to the adoption and use of Internet technologies and services.

In developing countries, however, access to the basic telecommunications infrastructure remains one of the major constraints on access to the Internet. Current best international best practice demonstrates that a strengthened role for the private sector in increasing access through a blend of market liberalization and public policy interventions, for example through the use of ‘smart subsidies’, addresses the need for increasing access to basic telecommunication services<sup>11</sup>. The conceptual differentiation between a ‘market’ gap and an ‘access’ has enabled many consumers to rapidly enjoy the benefits of telephony, often through the rapid diffusion of mobile networks. However, in terms of translating this increased access in telephony into increased access to the Internet and, in particular to access to broadband services is not straight-forward and linear relationship. Thus for many developing countries there remains a significant public policy issue in terms of the availability, quality and cost of broadband services.

However, whilst there are many new ‘last mile’ technologies, such as those based on wireless, there is an emerging bottleneck with developing and between developing countries in terms of the capacity and quality of backbone networks. As with consumer access to Internet services, it is widely recognized that in many cases the market provides an effective solution to the development of backbone infrastructure and that the removal of regulatory restrictions can lead to significant new investments.

Furthermore, policy measures can encourage the development of Alternative Telecommunications Networks (ATNs). Many countries have extensive backbone capacity (including dark fiber) that exists as a result of investments by firms in other sectors, for example electricity and railways. Such capacity can form the basis of new backbone infrastructure and increase Internet connectivity. Exploiting this capability includes not only creating the technical capacity to use these resources as public telecommunications networks but also the necessary national and international policy barriers to interconnection and use.

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<sup>11</sup> Considerable evidence from Latin America has documented how both market liberalization and ‘smart subsidies’ can successfully leverage additional investment and reduce the broad access gap.

The lack of adequate national and regional backbone may reflect market failure and require public policy intervention both in terms of funding and policy reform. In such cases there are clear international public policy issues and a need for donor support. Recent initiatives, for example in East Africa, have demonstrated that market failures in the provision of backbone can be effectively addressed through donor based funding. As with transit and international connectivity the development of local and regional Internet exchange points can leverage additional value of new backbone investments.

Finally, the combination of increased availability of broadband services for consumers (and at wholesale level for new entrants) and the nature of these Internet related transit and international connectivity agreements exacerbate the impact of Voice over IP (VoIP) on voice operators in national markets. Thus not only do these transit arrangements impact on the development of the Internet in developing countries but they also spillover into the voice market. In effect the ISPs in buying transit are paying the full cost of international connectivity for VoIP calls and shifting the basis of payment from per minute charges to bandwidth charges. Where tariffs remain significantly unbalanced, or the cost of broadband services is competitively priced the incentives to use VoIP can be considerable.

At one level the ability to separate voice services from network is illustrated by Skype downloads, a crude measure of VoIP uptake in the retail market. Current figures suggest that, worldwide, there are broadly the same number of Skype downloads as there are Broadband connections; the Organization for Economic Cooperation and Development (OCED) estimated 118 broadband lines in January 2005 compared with 158 million downloads of Skype (September 2005); moreover Skype has been estimated to carry approximately 6% of international voice minutes – characteristics of its performance that perhaps underline the value seen by e-bay in its recent acquisition of Skype. Further evidence of the challenge to voice revenues comes from the comparison of basic DSL prices with the distribution of monthly expenditure on voice telephony. Recent evidence from SE Asia suggests that whilst less than 20% of consumers would find it economic to switch to DSL and VoIP services these consumers often represent in excess of 30% of revenues in the voice market.

### **Safe and Reliable Internet and Network Security**

Here the issues are essentially twofold. One set of issues can be seen as about a broad range of activities which amount to a ‘denial of service’ attack. On the other hand the issues are about the way in which the Internet can facilitate organized activity designed to harm or cause damage to users, including crime and the distribution of morally offensive material, such as pornography. Thus, the range of issues here includes the following:

- Spam



- Cybersecurity, cybercrime
- Security of network and information systems
- Critical infrastructure protection

From a developing country perspective these issues have a disproportionate effect and typically the operational experience is that of a 'denial of service' attack. The combination of these attacks and the limited capacity of developing countries to respond is debilitating for users in developing countries – a phenomena that undermines consumer demand for the Internet and demand stimulation measures by Government. Hence the failure to address this broad range of issues can create such conditions of uncertainty that the transition to an information society is severely compromised.

One of the key issues facing developing countries in dealing with these issues is the genuinely international scope of the activity and the absence of any global governance arrangements in place to deal with spam and other emerging threats to the stable and secure functioning of the Internet. Though there are a range of initiatives being promulgated at the International level, for example by the OECD and the European Union, arriving at common definitions of, for example, spam and pornography are highly problematic and inhibiting the establishment of common international frameworks. Further these difficulties of reaching an agreement on definitions is further compounded when these definitions form the basis for policy interventions in the operation and use of the Internet. Thus for example, whilst agreement could be reached on the basis of concerns about the original content producers little consensus could exist about the interpretation of this agreement with respect to ISPs and networks operators; such a situation exists with regard to production of pornography and its distribution over the Internet.

In terms of information and network security, the first line of defense in many countries is the Computer Emergency Response Team (CERT) when there is a breach, potential or otherwise, in information and network security. CERTs are typically made up of technical experts who are in communication with other CERTs to share knowledge and best practices and to warn of impending attacks. In some countries, CERTs are part of a Government department; in other countries they may be in private sector organizations such as companies, or universities. Many CERTs belong to the Forum of Incident Response and Security Teams (FIRST) as membership enables a more effective response. However, for many developing countries the ability to maintain a credible technical and regulatory capacity with regard to CERT is highly problematic. Inevitably, 'denial of services' attacks involve highly innovative technologies that exploit weaknesses in the existing networks. As a result the technical resources needed to address these issues need to have equivalent and highly innovative technical capability and the ability to implement clear and coherent national policies.

There is a growing consensus that the experience of countries that have been pioneers in responding to these threats shows that a “multi-stakeholder, toolkit” approach is needed to deal with these kinds of problems – i.e. that to be effective, laws and regulations prohibiting harmful activities must be accompanied by public education, industry codes of conduct, and cooperative international enforcement arrangements, for example to help build technical and regulatory capacity.

For some commentators, for example the WSIS Gender caucus, argue that the focus on a safe and secure Internet and issues of network security place too much focus on the technology and insufficient attention to the social and human rights issues involved. Huyer comments, that it is important to ensure that " the Information Society enables women's empowerment and their full participation on the basis of full equality in all spheres of society and in all aspects of decision making processes...for women to be truly included in the information society, there must be support and promotion of technology capacity building for women so that they can participate in the management, design, manipulation and building of the information society. It is important that, rather than *recipients* of information women are *active participants* in and *designers* of an Information Society that meets the needs of and empowers both women and men"<sup>12</sup>.

Huyer also argues that the gender issues involved in a safe a secure Internet include:

- Exploitation, trafficking, and abuse of women and children, where for example the Internet and its ‘virtual world’ becomes a vehicle for exploitation in a social world, such as with sex tourism.
- Threats to privacy, for example through the surveillance and unlawful distribution of images whether this information is created informally or through formal Government institutions.

## **Multilingualism and Local Content**

Multilingualism and access to content raises a broad range of issues ranging from the technical structure of the Domain Name System (DNS) through to the accessible, in local languages, of local content.

In terms of multilingualism within the DNS the Governance issues associated with multilingualism are closely linked with DNS governance issues. However, at the heart of the DNS is a set of legacy decisions that have enshrined ASCII and to a large extent the English language. The extent to which these technical standards are embedded in the core operational procedures, in effect, determines the structural nature of the issues surrounding

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<sup>12</sup> Sophia Huyer, Women in Global Science and Technology and Gender Advisory Board, United Nations Commission on Science and Technology for Development, Comments on the WGIG 10<sup>th</sup> February 2005 [www.wgig.org](http://www.wgig.org).

multilingualism. From developing countries, whilst these issues are of profound importance, the key decision and technical developments lie within the competence of other countries, institutions and organizations, for example, IETF in its role in the development and promulgation of technical standards and ICANN in its role with regard to the confirmation of language code tables and the policies designed to foster multilingual Top Level Domains (TLDs). Other organizations involved, for example, include the Multilingual Internet Names Consortium.<sup>13</sup>

For some commentators the issues of multilingualism open up the possibility of treating part of the DNS as a global public good and that this perspective, in turn, would suggest there are global public services. These views would lead to global policy initiative such as an obligation on gTLDs to support all scripts even where these are minority scripts that are of limited commercial significance. The decision in June 2005 by ICANN to approve .CAT can be seen at an important step in recognizing the importance of language communities within the Internet. The concern is that without addressing issues of multilingualism the existing level of language diversity may be undermined.

For many the issues of multilingualism are more about access to content in local languages within and between countries. Under such conditions the issue is one of creating and sustaining a local content industry that supports multilingualism and cultural diversity and here the role of Government policy in encouraging indigenous activity is paramount. This role of public policy is particularly so when the applications are those central to the development of an information society such as e-health, e-education, e-government. Public policy is important in determining the availability of information within a country; for example free and open access to policy documents in local languages within a country as well as similar access to publicly funded research.

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<sup>13</sup> MINC is the Multilingual Internet Names Consortium, whose work dates back to 1994 and which was officially formed in June 2000 to promote the Multilingualization of the Internet, the internationalization of Internet names including but not limited to multilingual Internet domain names and keywords. Over the years, MINC has established a wide range of links with international organizations, stakeholder organizations and other processes including The United Nations, the World Summit on Information Society (WSIS), ICANN, ITU, WIPO, IETF, as well as language groups such as JDNA (Japanese), CDNA (Chinese), INFITIT (Tamil), EuroLINC (European Languages), CYINC (Cyrillic), GLWG (Georgian), RLWG (Russian ) as well as The Arabic language and scripts WG (Arabic) and ULWG (Urdu). Our language groups develop their own language and variant tables, and coordinate with each other on these tables. They also discuss other IDN related issues like the development of Dispute Resolution Policies and the use of IDN in software applications. <http://www.minc.org>

## Conclusion

The Internet opens up new opportunities for linking ICT and development activities and in reaching the United Nations Millennium Development Goals. However, the integration of the Internet into the development process highlights the fact that issues of Internet governance cannot be treated in isolation within a country or in terms of a single policy dimension. Thus, at a very practical level the integration of the Internet into the development process undermines those development strategies where ICT sector reform concentrates on the telecommunications sector alone and, in particular, an agenda heavily biased towards supply side initiatives. Whilst such supply side policies are an important starting point for sector reform they can no longer be seen as meeting both the necessary and sufficient conditions for realizing the opportunities presented by the Internet.

The range of issues that allow the Internet to shape development processes requires a new level of co-ordination and integration of policy development. In particular the intertwining of increased access, equitable distribution of Internet resources, safe and secure operation of the Internet and multilingualism brings to the fore a wide range of issues which need to be addressed simultaneously.

In terms of Internet governance these policy challenges are highlighting the limitations of existing institutional activity. The WSIS is providing an opportunity to address many of these issues and ensure that the institutional setting for securing the development opportunities flowing from the Internet can be realized. Whilst the outcome of WSIS will not result in immediate reform there is the opportunity to define new directions for processes of Internet governance.