Strategy Panel:
ICANN's Role in the Internet Governance Ecosystem[1]

(with errata, v.20142302)

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Strategy Panel:
ICANN's Role in the Internet Governance Ecosystem
(Executive Summary)

The Strategy Panel studied ICANN's Role in the Internet Organizations' Ecosystem, and in particular, the Panel reviewed the assumptions, linkages and frameworks that dictate ICANN's responsibilities in the current Internet governance ecosystem. It sought insights into ways to maintain and enhance ICANN's role in the evolving ecosystem while cultivating thought leadership on ways in which ICANN can serve a complex network of Internet interests. The Panel convened for the first time at ICANN 48 in Buenos Aires in November 2013, and developed its recommendations after a mixture of in-person meetings, several collaborative video conferences, phone calls and online collaboration. The Panel collected input from ICANN's global community through two public webinars, and provided opportunities for feedback from the community by email and through a survey. A summary of the Panel's main findings and recommendations are provided below.

Historical Perspective

The Internet has become a vast and increasingly accessible and global information and communication infrastructure since its invention in 1973 and its operational birth in 1983. The diversity and number of organizations and individual users; providers of equipment; services; applications; and elements of the Internet's governance reflect its extraordinary expansion by a millionfold over the period of its operation. Agencies of the US Government, beginning with the US Defense Department, have persistently relinquished governance responsibilities over a period of 40 years in favor of private sector institutions. The last remaining element manifests itself through the National Telecommunications and Information Agency's (NTIA) relationships with ICANN and with Verisign who have a shared responsibility for the generation and propagation of the Root Zone of the Internet Domain Name System (DNS). Many private and some public sector organizations have been delegated responsibility from ICANN for the management of top-level domain names.

ICANN also has responsibility for managing top-level assignment of the numeric Internet Protocol (IP) address space and for administration of a number of registries for parameters and their values associated with the Internet protocol suite. The private sector Internet Architecture Board (IAB) and the Internet Engineering Task Force (IETF), housed in the Internet Society (ISOC), have responsibility for the evolution of the core Internet protocol standards while the World Wide Web Consortium (W3C) deals with the protocols and standards of the World Wide Web.

The challenge before us is to determine a path for ICANN to accommodate participation of all stakeholders in a way that reflects the global reach of the Internet. The Internet is expected to serve 90-95% of the world's population by 2030. Applications of the Internet continue to grow and diversify. As with almost all significant infrastructure, the Internet can

be and is abused by a small fraction of the population of its users. The combination of scale, diversity, geographic scope and mix of constructive applications and harmful abuses creates an enormously complex governance challenge. The essentially transnational character of the network of networks comprising the Internet adds depth and color to governance questions.

Ecosystem Models

A wide range of individuals and institutions, including governments at all levels, are involved in creating, developing, operating and evolving applications and services on the Internet or defining the interoperable standards that apply to its evolution and use. These myriad actors have diverse agendas, interests, motivations and incentives, not all of which are aligned. There are extremely diverse products and services that interoperate and rely on the Internet and the World Wide Web to enable their use.

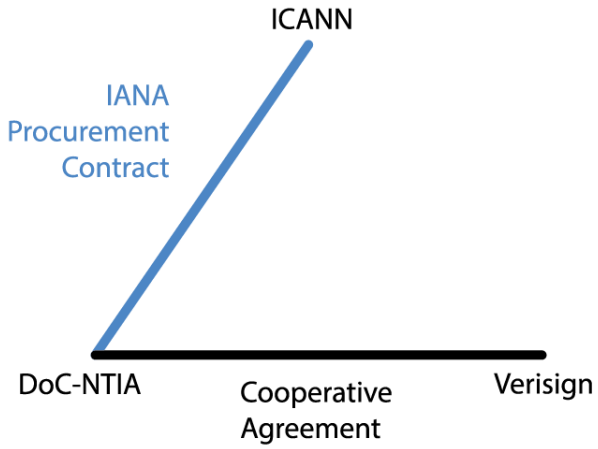

Figure 1: Description of Root Zone Management Process Through IANA Functions

The Panel developed several illustrative models of the Internet ecosystem as a way to help think about the nature of the current relationships that exist. First, the Panel looked at the unique relationship that exists between ICANN, the U.S. Department of Commerce (DOC) via its National Telecommunications and Information Administration (NTIA) and Verisign (Figure 1).

Layering of functionality of the Internet and parsing of primary institutional focus into various sectors helped the Panel to analyze the parties interested in Internet governance and the nature of their incentives and responsibilities. While such models are never complete or precise, they help to categorize the focus of attention of many of the organizations that populate the Internet ecosystem, including those with a share of governance responsibility. The two illustrations below demonstrate alternative ways to analyze the ecosystem, showing how there are different functional layers in which actors operate.

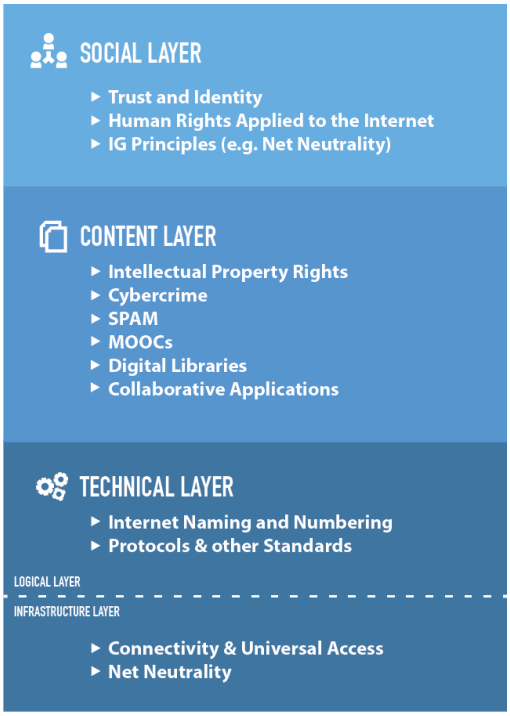

Figure 3: Layered Model of the Internet — Issues

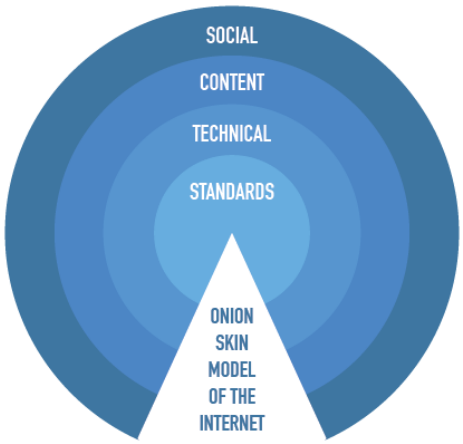

Figure 2: Onion Skin Perspective

Governance Models

As the Internet has expanded in scope and importance, there has been an increase in interest among many stakeholders to change the way Internet governance is implemented. Some have argued for an international, multi-lateral structure such as the International Telecommunication Union (ITU), to undertake a primary role. Others have argued strongly for a governance structure that is inclusive and representative of governmental *and* non-governmental interests. **The Panel's conclusion is that the multistakeholder model is by far preferable and should be elaborated and reinforced.** In defining what "governance" means, the Panel adopted this working definition of Internet governance from the World Summit on the Information Society (WSIS):

> Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet.

Stewardship in the Internet Governance Ecosystem

The Panel spent considerable time discussing the role of various actors within the Internet ecosystem as "stewards." There are many players in the Internet ecosystem, some pursue academic and research interests, some focus on economic goals, some have political and societal objectives, some primarily care about the needs of individual users or their

protection.[2] Given the increasingly ubiquitous nature of the Internet, all actors have a common interest in the well-functioning of the overall infrastructure and a common concern that it is not abused. Still, none of these actors on their own have the capacity to address all these issues, rather they have a joint interest in exercising their responsibilities. Stewardship means caring more for the good management, use and evolution of a shared resource than for any individual stake in it. The inescapable, trans-border interdependence among all actors produces a *shared or entangled responsibility for the stewardship* of the common Internet infrastructure.

Perspectives on Internet Governance

The Panel studied the perspectives of several stakeholders in the governance ecosystem and noted the specific concerns that these stakeholders have about the Internet Assigned Numbers Authority (IANA) functions. The technical community assembled to make their position clear through the "Montevideo Statement" on October 7, 2013.[3] Among the recommendations, the technical community made,

- They identified the need for ongoing effort to address Internet governance challenges, and agreed to catalyze community-wide efforts towards the evolution of global multistakeholder Internet cooperation.
- They called for accelerating the globalization of ICANN and the IANA functions, towards an environment in which all stakeholders, including all governments, participate on an equal footing.

The Panel also studied the dissatisfaction that some governments have with the current arrangement that span multiple political perspectives. The calls for change are broad, and they come from all areas of the political spectrum. We offer a few examples below, and further detail is available in the main report:

- ***Europe***. In a report about the Internet and international politics, one European official stated Europe's position this way: "How can the EU take on this challenge? . . . We need a firm commitment from the member states to work together on this issue and to continue to work with the United States. We also should bring in like-minded countries like Brazil and India."[4] On February 12, 2014, the European Commission issued a position paper that called for further work to "identify how to globalize the IANA functions, whilst safeguarding the continued stability and security of the domain-name system."[5]

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[2] For example, law enforcement, privacy, security, data integrity and protection from harm.

[3] Montevideo Statement on the Future of Internet Cooperation, Oct 7, 2013, *available at* http://goo.gl/dwGcuG

[4] Erin Baggot (Rapporteur), "The Internet and International Politics: Implications for the United States and Europe," Jun 16, 2013 at 30, *available at* http://goo.gl/OSI6t5

[5] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Internet Policy and Governance, COM(2014) 72/4, Feb 12, 2014, *available at* http://goo.gl/RDEPu1. In response, the U.S. government weighed in with a swift confirmation, stating that the U.S. government has "long encouraged the further globalization of ICANN." Statement of Assistant Secretary Strickling on the European Commission

- ***India***. *The Hindu* reported on an internal document drafted by the Indian National Security Council Secretariat in December 2013 as follows: "[t]he control of Internet was in the hands of the U.S. government and the key levers relating to its management was dominated by its security agencies... Mere location of root servers in India would not serve any purpose unless we were also allowed a role in their control and management."[6]
- ***Brazil***. Brazil has openly encouraged the adoption of an inclusive multistakeholder model, although President Dilma Rousseff also noted in her September, 2013 speech at the UN General Assembly that "[t]he United Nations must play a leading role to regulate the conduct of states with regard to these technologies."[7]
- ***Russia***. Politicians at all levels within Russia have consistently called for the allocation of names & numbers to be moved to a state-based mechanism.

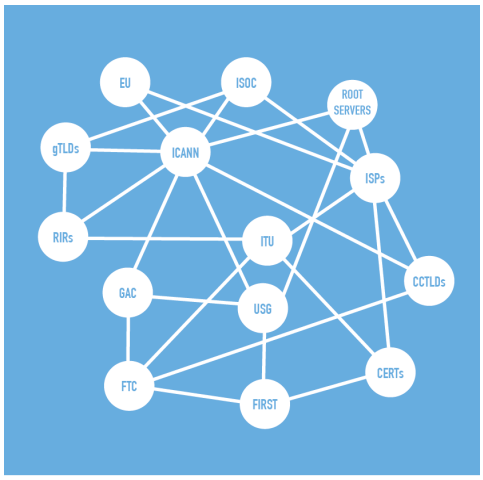

Figure 5: A Web of Relationships

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Mapping the Internet Governance Ecosystem

In its most general sense, the governance of the Internet is characterized by a ***web of relationships*** among institutions that have roles affecting the operation and use of the Internet across all the layers that comprise its functions. These relationships reflect and recognize the responsibilities, roles and dependencies among various institutions and organizations. The ensemble of collaborative and loosely-coupled mutual dependencies is a feature in the system, and respect for them has been and continues to be a fundamental characteristic of the governance of the Internet. Figure 5 illustrates this in a notional way.

ICANN itself partakes of this web of relationships, and in Figures 6 and 7 we illustrate some of those connections. ICANN *coordinates* closely with other organizations that have a direct role in managing these technical elements of the Internet architecture. Moreover ICANN has *participatory* relationships with many international or global institutions that have interest in and responsibilities for other aspects of governance.

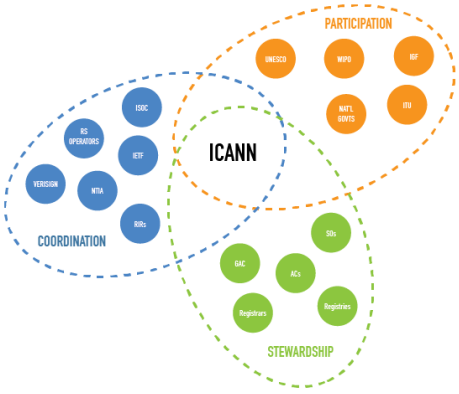

Figure 6: Expanding Web of ICANN Relationships

Statement on Internet Governance, Feb. 12, 2014, *available at* http://goo.gl/OaeW4G.

[6] Sandeep Joshi, "India to push for freeing Internet from U.S. control," *The Hindu* Dec 7, 2013, *available at* http://goo.gl/zGPofR

[7] Statement by H.E. Dilma Rousseff at the Opening of the General Debate of the 68th Session of the United Nations General Assembly, Sep 24, 2013, *available at* http://goo.gl/1NWf7f.

Mapping ICANN Relationships within Layered Model

How does ICANN fit within the Internet's layered model? Under the multi-stakeholder Internet governance ecosystem, no single institution, stakeholder or influencer plays a unique role in governance, but instead, participates as a representative of its respective constituency or in accordance with its particular responsibilities. In Figure 7, we provide an illustration of how some of these organizations fit into the Internet's layered model. Note that our illustration is not a comprehensive view, it is intended to characterize some of the institutions, as well as some of the interactions, but there are many more.[8] This particular illustration focuses on ICANN although similar illustrations exist for many of the different actors in the ecosystem.

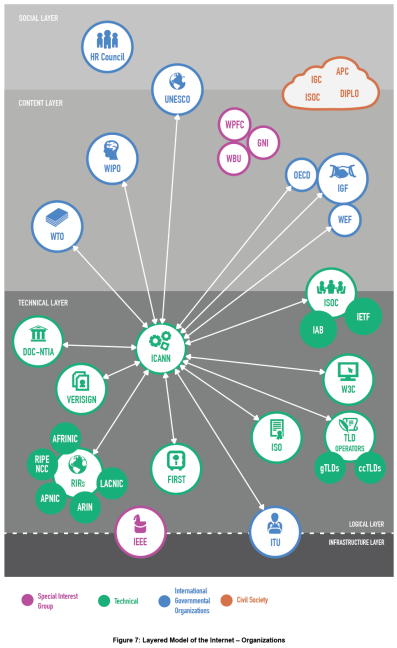

Figure 7: Layered Model of the Internet – Organizations

If one had to select one word to characterize the Internet governance ecosystem it would have to be *diversity*. The system is populated by individuals, small or large formal and informal groupings, organizations and institutions drawn from the private sector, academia, civil society and governments, as well as intergovernmental and non-governmental organizations across the globe.

Principles for ICANN in this Ecosystem

There may never be and perhaps never should be a single "constitutional moment" for the Internet, or for ICANN. This Panel contributes to the development of principles by proposing a set in the context of "5 Rs." These are: (1) Reciprocity, (2) Respect, (3) Robustness, (4) Reasonableness and (5) Reality.

1. ***Reciprocity:*** Do no harm nor threaten to harm. A principle of reciprocity will help assure that actors behave and take actions with others in the same way that they, themselves, would expect to be treated in the ecosystem.
2. ***Respect:*** Honor freedom of choice and diversity. As Professor David Clark (formerly Chief Internet Architect of the project after 1982) famously articulated in 1992, "We reject kings, presidents and voting." The absence of formal hierarchies and titles, then, implicates a profound need for inclusion, cooperation and collaboration. For ICANN we believe that this means putting in place incentives for cooperation across all stakeholders, including the supporting organizations,

[8] Examples of ICANN relationships to other organizations in the ecosystem include: GAC observers (ITU, WTO, OECD, UNESCO, and WIPO); IETF works with ICANN on the protocol parameter registry service of the IANA functions; ITU, W3C, and IAB advise the ICANN Board through Technical Liaison Group (TLG); WIPO is Uniform Domain-Name Dispute Resolution Policy (UDRP) provider for gTLDs; UNESCO works with ICANN on IDNs (Internationalized Domain Names) for new gTLD program; ICANN relies on ISO regarding for ccTLD designations; and ICANN is a member of WEF. ICANN has no specific relationship with the UN Human Rights Council; WPEC; WBU; GNI; IEEE.Note that we only represent governmental organizations that have more than one government, although ICANN also has relationships with single agencies like the NTIA or single companies like Verisign.

advisory councils, board, and staff. The expansion of one group's participation must not occur at the expense of another's diminution.

3. ***Robustness:*** Send conservatively and accept liberally. The Internet and its governance mechanisms are very complex. Where possible, ICANN should borrow from the principles that have worked at the IETF in this context and adapt them. In particular, the "Postel Principle," suggests that actors in the ecosystem should "be conservative in what you send, and liberal in what you accept."[9] In the context of the IETF, this has become known as the "Robustness principle.[10]" It is by this methodology that the interactions between users, the various aspects of the technical community, and the issues within it are addressed. While striving to iterate, validate and simplify, ICANN's policy-making work can also embrace the Robustness principle and avoid top-down mandates.
4. ***Reasonableness:*** Avoidance of capricious or arbitrary decisions. The legitimacy of any governance system depends on the trust that the participants place in the process, the decisions, and the outcome. It would be rare to achieve unanimous support of any action, the hallmark of a trusted system is one where reasonable people can have different opinions. In order for reason to prevail, the Panel believes that stakeholders must have faith in ICANN's transparency, accountability, subsidiarity, and fairness.
5. ***Reality:*** Theories must be persistently measured and tested against practice. Internet governance has been developed through a heuristic approach (i.e., experience-based techniques for problem solving, learning, and discovery) and should continue to evolve this way in the future. The distributed nature of the Internet's implementation and the communication among many bodies contributing the Internet's operation demonstrate the feasibility of a flexible collaborative model, even knowing that mistakes will be made. Internet governance mechanisms and institutions must adopt structure, mechanisms for action, decision-shaping, -making, -review, and –recourse that follow the function of the mechanism or organization. Form follows function.

Roadmap

After reviewing the areas described above, the Panel made the following recommendations for ICANN's roadmap:

1. ***Globalize, not Internationalize****.* Countries are stakeholders, to be sure, but the structure of ICANN and its associated or related institutions are now and should become increasingly global or regional in scope. We are reminded once again that form follows function.
2. ***Consolidation and Simplification of Root-Zone Management****.* The Panel sees

[9] Proposed by Internet pioneer Jon Postel, this concept is referred to variously as the "Postel Principle" or "Postel's Law" or the "Robustness principle." See more in Main Report at §2; *Also see* Paul Hoffman "Tao of IETF: A Novice's Guide to the Internet Engineering Task Force" *IETF*, Nov 2, 2012, *available at* http://www.ietf.org/tao.html.

[10] "Robustness Principle" Wikipedia, Nov 8, 2013, *available at* http://en.wikipedia.org/wiki/Robustness_principle.

the issues related to the protection of the root-zone system and the IANA functions contract as issues that should be addressed holistically. Transparency and accountability principles should dictate a high degree of public visibility for this process.

3. ***A Web of Affirmations of Commitments (Document what happens today)***. Among the most important concepts discussed in the panel was the use of bilateral, and possibly multilateral, affirmations of mutual commitments to document the relationships and commitments among the players in the Internet governance ecosystem. The resulting web of documented relationships will create a flexible, resilient and defensible structure that can evolve over time and that has no central point of brittle control. There are currently multiple ways that stakeholders work with each other, although only a few of these commitments and work practices are established in writing.
4. ***Establish ICANN Affirmations of Commitments*** The Panel recommends that ICANN develop tailored Affirmation of Commitments (AOC) texts related to ICANN's responsibilities. These would document bilateral or multilateral commitments between and among ICANN and non-governmental ecosystem partners (e.g., the I* organizations) that wish to participate. In the case of ICANN relationships with governments, it is recommended that a separate and common Affirmation text be established so as to achieve egalitarian treatment. It is possible that the GAC can be of assistance in helping to craft the text of such a common document.
5. ***Globalize the Process for Accountability within a Web of Relationships***. We posit the idea of accountability panels whose membership and processes are agreed by parties to an AOC. The purpose of a panel is to provide recourse should a party to an AOC believe that another party has failed in some way that must be accounted for and that all other resolution mechanisms implied or explicit within the AOC have not yielded satisfaction.

Conclusion

The Panel believes that ICANN has a critical but confined role in the Internet ecosystem that is strongly bounded by its responsibility to manage the Root Zone of the DNS and delegation to top-level domain name registries, top-level assignment of Internet address space primarily to the Regional Internet Registries and through them to Internet Service Providers (ISPs), and parameter registries in accordance to advice given to the IANA from the work of the IETF.

ICANN has an obligation to make progress documenting mutual relationships with and commitments to other entities in the Internet ecosystem; refining its internal practices in the pursuit of its excellence in operation; and ensuring that it carries out its responsibilities in the global public interest. The Panel emphasizes that the Report does not imply that there need be any expansion of ICANN's role beyond the responsibility that it has already been given. Mutual AOCs could be flexible and adapt with technology, time, and need.

The Panel believes that the actions found in the Roadmap (Section 7) of this report represent concrete steps towards realizing the principles outlined in Section 6. We recognize the evolving nature of ICANN's tasks and hope that this report will contribute to ICANN's ability to fulfill its obligations and the vision that created it in 1998.

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ERRATA TO EXECUTIVE SUMMARY

A previous version said that ICANN assigns Internet address space to the Internet Service Providers. It is more correct to say that it assigns space to Regional Internet Registries who, in turn, assign address space to Internet Service Providers.

A previous version implied that parameters registries were maintained by ICANN's IANA on behalf of IETF and IAB. Only the IETF provides parameter registry guidance to the IANA.

[Full Report Follows]

Strategy Panel:
ICANN's Role in the Internet Governance Ecosystem[11]
(Full Report)[12]

1. Preamble

As requested by the Internet Corporation for Assigned Names and Numbers (ICANN), this panel will review the assumptions, linkages and frameworks that dictate ICANN's responsibilities in the current Internet governance ecosystem. It will seek insights into ways to maintain and enhance ICANN's role in the evolving ecosystem while cultivating thought leadership on ways in which ICANN can serve a complex network of Internet interests. The panel's task has been described by ICANN as follows:[13]

- Facilitate review of the assumptions, linkages and frameworks that underlie ICANN's responsibilities in the current Internet ecosystem;
- Seek insights on ways to maintain and enhance ICANN's stewardship in an evolving ecosystem; and
- Cultivate thought leadership on ways in which ICANN can serve a complex set of Internet constituencies;
- Provide a set of guiding principles to ensure the successful evolution of ICANN's transnational multistakeholder model in cooperation with national and international bodies;
- Propose a roadmap for evolving and globalizing ICANN's role in the Internet governance ecosystem in consultation with global players; and
- In coordination with the many other global players and ICANN stakeholders, propose a framework for implementation of ICANN's role, objectives and milestones in global Internet governance.

The Strategy Panel studied ICANN's Role in the Internet Organizations' Ecosystem, and in particular, the Panel reviewed the assumptions, linkages and frameworks that dictate

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[11] Authors: Panel Chair, Vinton G. Cerf, vgcerf@gmail.com; Panelists: Adiel Akplogan, Debbie Monahan, Michael Barrett, Alice Munyua, Hartmut Glaser, P.J. Narayanan, Erik Huizer, Hagen Hultzsch, Alejandro Pisanty, Janis Karklins, Carlton Samuels, Ismail Serageldin, Luis Magalhães, Pindar Wong. See ICANN announcement for Strategy Panels, available at http://goo.gl/zyCYbW. Rapporteurs, drafters: Grace Abuhamad, Bertrand de la Chapelle, James Cole, Alice Jansen, Carla LaFever, Patrick S. Ryan, Theresa Swinehart. Recommended citation: Vinton G. Cerf (Chair) et al., "ICANN's Role in the Internet Governance Ecosystem," Report of the ICANN Strategy Panel, February 20, 2014. The opinions are the panelists' opinions and this does not reflect any official position of ICANN. The panelists and drafters may be contacted through a public listserv at ioepanel@icann.org.

[12] Please see Footnote 1, *supra*, for the authors' note. Recommended citation: Vinton G. Cerf (Chair) *et al.,* "ICANN's Role in the Internet Governance Ecosystem," Report of the ICANN Strategy Panel, February 2014. The opinions are the panelists' opinions and this does not reflect any official position of ICANN.

[13] "Strategy Panels Unveiled at ICANN 47 in Durban" *ICANN*, Jul 15, 2013, *available at* http://www.icann.org/en/news/announcements/announcement-15jul13-en.htm

ICANN's responsibilities in the current Internet governance ecosystem. It sought insights into ways to maintain and enhance ICANN's role in the evolving ecosystem while cultivating thought leadership on ways in which ICANN can serve a complex network of Internet interests.

The Panel convened for the first time at ICANN 48 in Buenos Aires in November 2013, and developed its recommendations after a mixture of several collaborative video conferences, phone calls and online collaboration. The panelists collaborated in the writing of this report together with drafters and staff through the use of a shared online document wherein participants had ongoing opportunities to propose the text, offer comments, alert each other to alternative viewpoints and to deliberate. Additionally, the Panel collected input from ICANN's global community through two public webinars,[14] and provided opportunities for feedback from the community by an open email listserv that was open for submission from September 2013 until February 14, 2014,[15] and through a survey.[16] The Panel believes the report represents a rough consensus view, though it is possible that not all observations are unanimous. The Panel reports on its findings below.

2. Everyone and Everything On the Internet

The Internet emerged from a long-term series of experiments and developments in collaboration with government, academia, and later, civil society and the private sector. Its early roots as a project initiated by the U.S. Department of Defense (among others) have now been shed and the Internet has become a global digital communication and information platform that continues to evolve, grow and extend in scope even as it has reached over 30 years of operation in 2014.[17]

It is important to recognize that the Internet is different from all the familiar networks that have come before it. It is *always on* and the devices connected to it are *always in contact*. It is a two-way system, unlike broadcast networks like traditional cable and over-the-air television or radio. Unlike the telephone system, any device is ready to send or receive traffic to and from multiple sources and sinks at the same time. It is not surprising that it has developed a unique set of governance practices arising out of practical necessity, catering to its history and technology.

a) Globalization of the Internet

[14] The Strategy Panel Webinar archive is *available at* http://goo.gl/uYh5Kr.

[15] The Strategy Panel email archive is *available at* http://mm.icann.org/pipermail/ioepanel/.

[16] The survey was hosted through Survey Monkey, and contained several questions for the community. The questions are noted in the webinar presentation deck, *available at* http://goo.gl/LrwU0o

[17] Conceived in 1973, the Internet arose out of earlier explorations of packet communication technology, and required ten years of development before it was launched into operation in early 1983. A useful historical summary: "Brief History of the Internet" *Internet Society*, 2014, *available at* http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet

The Internet is pervasive in many parts of the world and there are currently 2.7 billion people online, which is about 40% of the global population.[18] According to a recent study[19], the next 5 billion users will come from Asia and Africa:

	Internet Penetration Today	***Target Penetration for 5B***	***New Internet Users to Hit Target by 2030***	***% of Total Growth***	***Expected Annual Growth***
Asia	32%	90%	3.1B	62%	7.3%
Africa	16%	90%	1.3B	26%	13.9%
Americas	61%	95%	0.5B	10%	3.9%
Europe	75%	95%	0.1B	2%	1%

As can be seen above, of the next 5 billion Internet users, most will not come from the same developed regions as before, nor will they access the Internet in the same way. As Vinton Cerf described in 2005, "the Internet is actually a grand collaboration of hundreds of thousands of network operators.[20]" The complexity of this collaboration continues and includes providers of access through fiber-optic cables, copper, satellite and mobile phone companies, together with nearly two billion websites and as many as 1 trillion separately indexed pages.[21] The increasing use of smart phones is spreading access more broadly than ever, and 4 billion (the majority) of the next 5 billion users (the "long tail") will change the context within which we view and frame Internet governance issues. The basic underlying notion surrounding the Internet is now, and should remain, an open communication platform for everyone. The world has only just started to see this evolution in technology.[22]

We will discuss the ecosystem further in Section 4 below. However, it is worth noting now that the Internet's policy landscape is just as dynamic as the technology itself. By way of illustration, in addition to the panels proposed by ICANN, there are some illustrative announcements that have garnered great interest in the Internet community. While these

[18] *Id.*

[19] David Reed, Jennifer Haroon and Patrick Ryan, "Technologies and Policies to Connect the Next 5 Billion" *Berkeley Technology Law Journal*, Vol. 29, 2014, (forthcoming), *available at* http://ssrn.com/abstract=2378684 [Hereinafter: Reed et al., Next 5 Billion]

[20] Vinton G. Cerf, "Internet Governance -- Draft 1.3" *ICANN*, Oct 28, 2004, *available at* http://www.icann.org/en/news/presentations/cerf-internet-publication-28oct04-en.pdf [Hereinafter: Cerf, Internet Governance]

[21] *See* Jesse Alpert & Nissan Hajaj, "We knew the Web was big…" *Official Google Blog*, Jul 25, 2008, *available at* http://googleblog.blogspot.com/2008/07/we-knew-web-was-big.html (noting 1 trillion pages); Also see "The Size of the World Wide Web" available at http://www.worldwidewebsize.com/ (noting about 1.82 billion web sites).

[22] John Markoff, "Viewing Where the Internet Goes" *New York Times*, Dec 30, 2013, *available at* http://www.nytimes.com/2013/12/31/science/viewing-where-the-internet-goes.html?pagewanted=1

are only a few among several initiatives, they demonstrate how quickly the landscape is changing: the first is the Global Multistakeholder Meeting on the Future of Internet Governance, also known as Net Mundial, expected to be a global multistakeholder event hosted in Brazil this April;[23] the second is the creation of /1net, an initiative started by the technical infrastructure community in the wake of the Montevideo Statement,[24] and the third is the announcement of a Global Commission on Internet Governance led by Chatham House and CIGI.[25] These diverse initiatives differ greatly in terms of their scope, objectives, inclusiveness and participation. For example, anybody can join in a lively online discussion through the /1net listserv, while the Commission is a closed, invitation-only group of experts. Although the level of inclusiveness and kinds of activities that will come out of these initiatives may be different, they all partake of the commonality that defines the Internet: a shared view of responsibilities and stewardship. Any legitimacy that may arise from any specific initiative comes from the trust and confidence of the constituencies involved. The increased interest of so many different groups in defining how the future Internet should take shape, and the willingness to join the conversation, are positive developments.

When ICANN was formed in 1998, Internet access was a phenomenon that required a wired connection, and there were only about 147 million global Internet users, only 6% of the 2.7 billion users in 2014.[26] In the case of Africa, a World Bank report stated that 21 African countries were estimated to have just over 1,000 users each in 1999, noting that the Internet was a "largely insignificant medium."[27] Not only was adoption and use of the Internet in relative infancy, so were the systems of multistakeholder institutions. For example, the Internet Society (ISOC) was formed only six years before (in 1992) and the Internet Governance Forum (IGF) was not established until seven years later (in 2005). As mentioned above, in 2013 and early 2014, a number of new events and initiatives have already been announced. With these initiatives, it is likely that the Internet governance ecosystem will be richer ten years from now: likely more diverse, more developed and more interrelated than ever before. While we cannot predict how this ecosystem will look, hopefully it will evolve in a way that is inclusive of the many new voices that are joining the Internet, particularly from emerging economies-- and as the new users join the Internet, they increasingly participate in the governance discussions that affect their use of it. Additionally, it's not just people that are joining the Internet: devices and appliances (the "Internet of Things") represent an estimated $4.8 trillion market today and estimated to become a $8.9 trillion market by 2020.[28]

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[23] Global Multistakeholder Meeting on the Future of Internet Governance, *available at* http://netmundial.br/ or http://netmundial.org/

[24] /1net, *available at* www.1net.org

[25] "CIGI and Chatham House launch Global Commission on Internet Governance, chaired by Sweden's Carl Bildt," Chatham House, Jan 22, 2014, *available at* http://www.chathamhouse.org/media/news/view/196835

[26] "Internet Growth Statistics" *All About Market Research*, Feb 2014, *available at* http://www.allaboutmarketresearch.com/internet.htm.

[27] Charles Kenny, "Expanding Internet access to the rural poor in Africa" *Information Technology for Development*, Vol. 9, 2000, 25-31, *available at* http://itd.ist.unomaha.edu/Archives/28.pdf

[28] Larry Dignan, "Internet of Things: $8.9 trillion market in 2020, 212 billion connected things" *ZD*

As the Internet grows, and as it adds more users and devices, so has the diversity of applications of the technology. The utility of the Internet has grown so broad that many people and institutions that are not direct users are still affected by, or indirectly dependent upon, the use and reliable operation of the Internet. While the Internet in itself is nothing more than a tool with an impressive positive usage, a realistic assessment of the Internet's impact unfortunately also has to take into account a range of abuses perpetrated by a small fraction of the population that harbors ill intent[29] and exploit the open, global infrastructure, as is a risk with all tools. To this must also be added organized crime and harmful national agendas. The diverse mix of positive and negative activity creates an extremely complex and nuanced governance challenge with many dimensions.

b) Institutional Diversity

Adding to the complexity of Internet governance is the wide range of individuals and institutions, including governments at all levels, that are involved in creating, developing, operating and evolving applications and services on the Internet or defining the interoperable standards that apply to its evolution and use. These myriad actors have diverse agendas, interests, motivations and incentives, not all of which are aligned. There are extremely diverse products and services that interoperate and rely on the Internet and the World Wide Web to enable their use.[30]

If anything characterizes the Internet it is an intense focus on open standards and on interoperability among all its components and across all borders. That so many diverse systems, hardware and software constructs and institutions can co-exist and interact in the Internet's operational environment is a consequence of its design philosophy. For this reason, Rick Whitt has argued that "lawmakers should understand and, where appropriate, defer to the substance and processes imbued in the Internet's functional design."[31] Thanks to practical, open standards protocols developed by rough consensus, and a layered approach to architecture, anyone is able to independently build pieces of Internet infrastructure and/or applications and have reasonable expectation for global interoperability. In addition, the Internet is fundamentally transnational in its character, introducing a cross-border dimensionality coloring any governance efforts.

Net, October 3, 2013, *available at* http://goo.gl/PE8DS8

[29] An extended example of criminal abuses can be found in "Internet Crime Reoprt," Internet Crime Complaint Center (I3C), 2012, *available at* http://www.ic3.gov/media/annualreport/2012_IC3Report.pdf

[30] The World Wide Web is an application that uses the Internet for connectivity and transport. See "Brief History of the Internet," *Internet Society,* 2014, *available at* http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet

[31] Richard S.Whitt, "A Deference to Protocol: Fashioning a Three-Dimensional Public Policy Framework for the Internet Age," Cardozo Arts & Entertainment Law Journal, Jul 12, 2013, *available at* http://ssrn.com/abstract=2031186.

c) Modeling the Internet and its Ecosystem

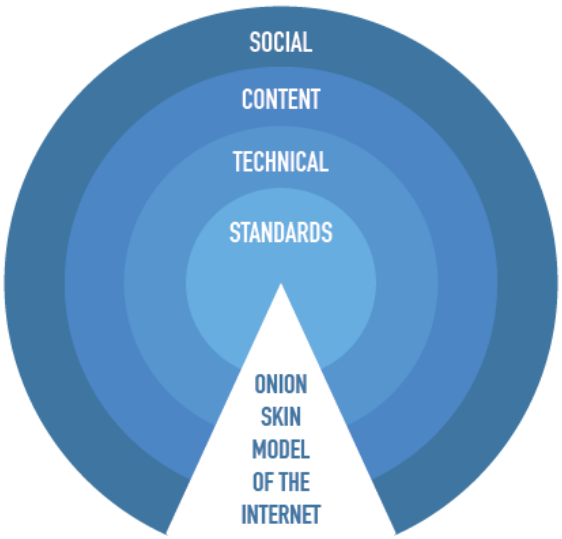

Figure 2: Onion Skin Perspective

Scholars have, for some time, been comfortable describing the Internet's technical architecture with a layered model that segregates and characterizes different functions of the Internet and its applications.[32] Although there are different ways to look at these layers, as shown in Figure 2, at the core are the technical standards that define the Internet's functional operation. These standards form the building blocks for an *infrastructure layer*—the highway that enables the traffic, and that layer is closely accompanied with a *logical layer* using standards for the transfer of data packets, including the TCP/IP suite of protocols, and the management of the DNS. Together, the *infrastructure layer* and the *logical layer* form a *technical layer*. The binary digits (bits) that flow across the Internet are guided along the infrastructure layer with the aid of the logical layer, and the "loose coupling" between these two areas continues to evolve.

At or near the top of the layered model, most scholars agree that there is a *content layer* where technical operations matter less but other policies like intellectual property rights and content control are most directly implicated. As questions of trust, identity, freedom of expression and human rights gain the spotlight in Internet and information policy, we support the addition of a *social layer.* This layer identifies and stratifies the relevant institutions that may have a mandate to deal with the steering of practices, continuous assessment and handling of emerging policy issues. The social layer deals with practices that define paramount rights and principles associated with "social conduct" online.[33] Our

[32] Yochai Benkler, "From Consumers to Users: Shifting the Deeper Structures of Regulation Towards Sustainable Commons and User Access," *Fed. Comm. L.J.,* Vol. 52, 561, 2000, *available at* http://www.yale.edu/lawweb/jbalkin/telecom/benklerfromconsumerstousers.pdf

[33] Vinton G. Cerf, Patrick Ryan, Max Senges, "Internet Governance is Our Shared Responsibility,"

description, in Figure 2, of the "onion skin model" should be understood as a simplification, given that especially the "social" and "content" layers do have some dynamics that are not as strictly layered as the model suggests. Figures 3 and 4 illustrate the scope and variety of potential governance issues that may arise depending on the functional layer in which issues may arise.

In a more traditional perspective, Figure 3 below illustrates the nature, functionality and example issues associated with each layer in this model.

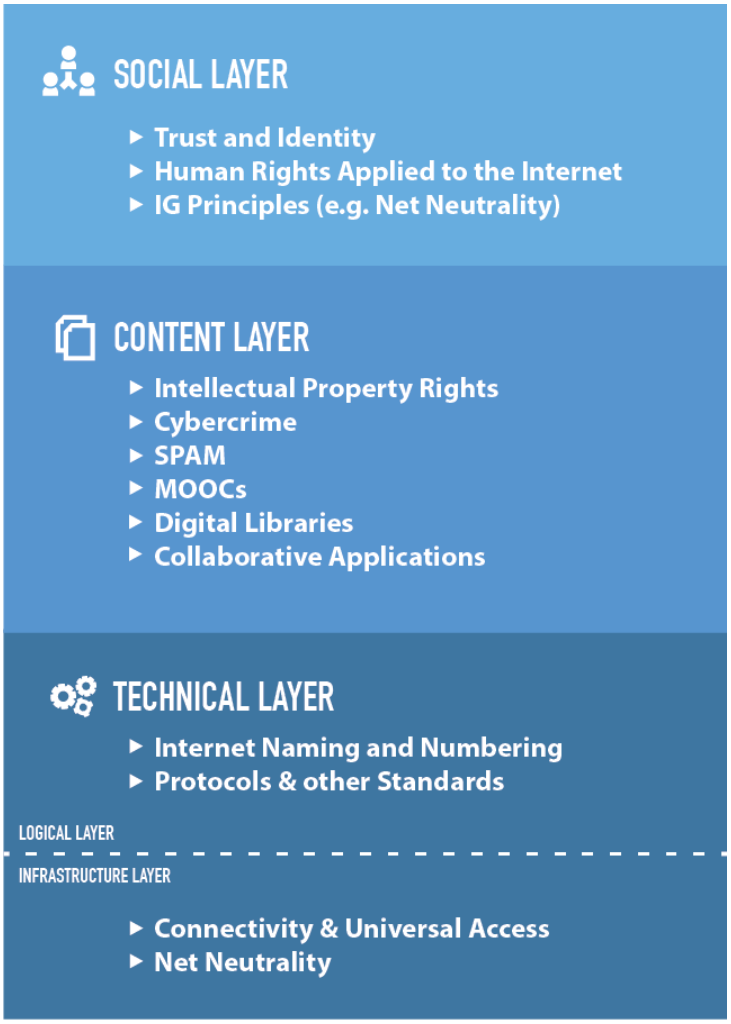

Figure 3: Layered Model of the Internet — Issues

Finally, another way to view the Internet ecosystem is to segment it by function as is shown in Figure 4 below. While the figure does not and cannot list all interested parties, it captures the diversity of their interest and primary areas of responsibility. These organizations participate in the diverse web of relationships we discuss in Section 5.

Forthcoming in *I/S: J. Law and Policy for the Information Society,* 10 ISJLP, 2014*, available at* http://ssrn.com/abstract=2309772 [Hereinafter: Cerf, Shared Responsibility].

ICANN is one among many other organizations in the ecosystem to have developed a glossary for those not familiar with the alphabet soup of acronyms associated with the Internet's diverse institutions.[34]

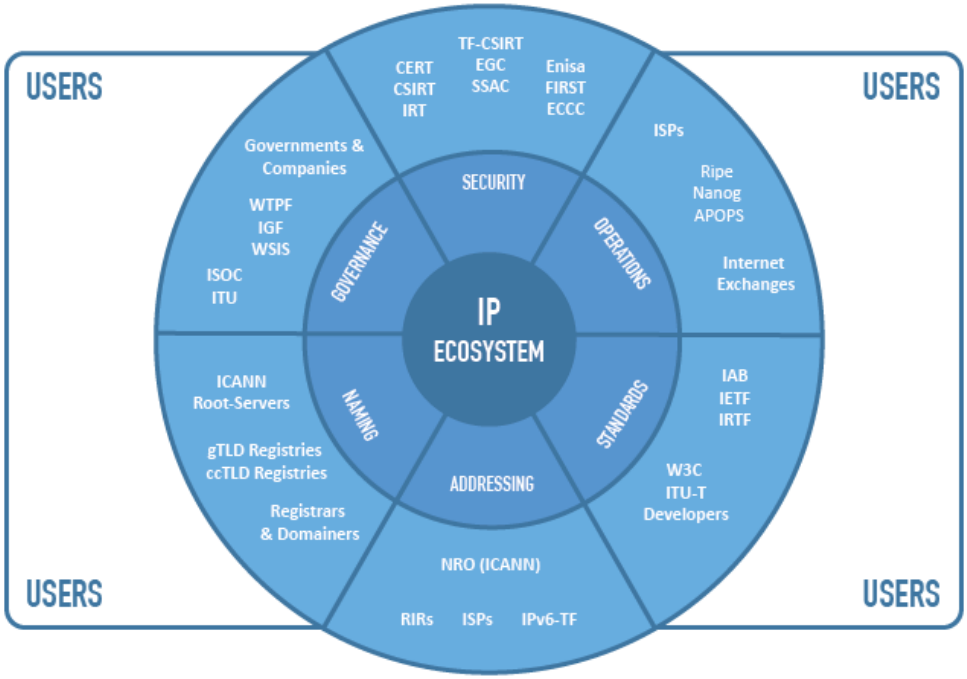

Figure 4: A Functional View of the Internet Ecosystem

In the end, there is a potentially infinite number of graphical ways to represent the various institutions and groups that deal with development of standards and the organizations that cover them. The proposals in this report provide some perspectives but are neither comprehensive nor authoritative in this sense, and the Panel emphasizes the admonition of Professor George Box, that "essentially, all models are wrong, but some are useful."[35] We will now turn to a discussion on the meaning of "governance" within the ecosystem that we have described thus far.

3. Meaning of "Governance"

Governance is a potentially vast topic and its application to the Internet specifically does not reduce its scope very much. There have been, and will continue to be, arguments over what is meant by governance: What is the relevant scope? Who is affected? What rules

[34] *See* ICANN Glossary, *available at* http://www.icann.org/en/about/learning/glossary

[35] George E. P. Box and Norman R. Draper, "Empirical Model-Building and Response Surfaces," Wiley Books, 1987 at 424. The entities in Figure 4 are inspired from a chart that the Internet Society has previously used, and there are some entities that are missing: for example, ICANN itself is not in Figure 4, because ICANN is not a body (given its stewardship role), nor is the ITU, in spite of the ITU's work in various aspects of the ecosystem.

apply? How are they enforced? Who makes the rules and why are they legitimate? How are disputes over rules or their violation resolved? How is the transnational nature of the Internet and its use accommodated?

Governance expresses what is *permitted, forbidden, required and/or accepted* with regard to practices in some context. A full rendering of governance would have to describe not only the individuals, entities (including institutions) and behaviors that are governed, but also by whom and by what means. It would also have to include some explanation of the means by which the governing rules are created, amended and adopted, as well as enforcement modalities.

The Panel chose to use the working definition of Internet governance that was proposed in 2005 at the close of the World Summit on the Information Society (WSIS) in the Tunis Agenda:

> Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet.[36]

This definition, accepted by more than 180 governments, clarified many important issues, including that Internet governance: requires the involvement of all different types of stakeholders, even if significant ambiguity remains regarding their "respective roles"; covers both policy-making and implementation ("development and application"), which may or may not include dedicated institutions; is organized around the production of various governance systems; and covers both the Internet as system (its "evolution") and the behavior of its users (the "use of the Internet"). The Panel recognized the possibility that there might be need to revise this text in the future to accommodate changing conditions.

As seen above, there are various institutions that provide opportunities for individuals, companies, corporations, academics, governments, and other stakeholders to plug into a governance ecosystem. Although this complex ecosystem provides ample opportunities for rapid growth and evolution of the technology, there has never been a "one stop shop" for Internet governance matters and it can be a challenge for any stakeholder group to correctly identify where it may make its own impact, in the areas that are important to it.

a) Governance vs. Government

Governance should ***not*** be confused with *government*. Both governance and governments establish "regimes"[37] of activity or action, but in very different ways. As important and as influential as governments are in rulemaking, government is one among several possible

[36] "Report of the Working Group on Internet Governance," WGIG, Jun 2005, *available at* http://www.wgig.org/docs/WGIGREPORT.pdf

[37] The Panel's use of the term "regimes" refers to a combination of norms, rules and best practices, and can sometimes implicate the execution of managerial, administrative, or coordinating functions.

modes of governance. Governments exercise considerable authority over what is permitted in national societies and act as a proxy for citizens. As a practical matter, governments often directly manage natural resources and national resources like taxpayer funded roads and highways. In the context of the Internet, governments provide a legal framework, exercise law enforcement, and cater to the common good of their citizens. Sometimes governments are co-investors in the infrastructure, as in the case of Australia, New Zealand and increasingly, a number of Latin American countries.[38] Government is typically layered at national, provincial and local levels. There may be multi-national regional arrangements as is the case for the European Union (EU). The United Nations (UN) and systems of bilateral and multilateral treaties represent examples of intergovernmental governance.

b) Examples of Governance Systems

Systems of rules may be adopted by entities other than governments to constrain and define the practices that are allowed in some context. Non-governmental organizations may also be formed by groups of actors to provide governance of their common activity. This kind of coordination is not unique to the Internet. As described in Text Box 1 below, governance exists in social and other non-technical activities.

Text Box 1. Governance in Other Sectors

In 1899, the Royal and Ancient Golf Club of St. Andrews, Scotland convened with the United States Golf Association in order to come up with a uniform set of rules for the game. The agreement noted that the rules "*can only be kept uniform by mutual agreement not to alter it unilaterally. If Questions of alteration arise . . . [the parties in Scotland and the USA] will consult with each other and with the governing bodies in other countries, and will use all possible means to ensure the maintenance of uniformity*."

In the private property context, what is permitted in a residential neighborhood may be governed, in part, by a private Home Owner's Association (e.g. through covenants), that spell out, among other things, rules for the appearance of the homes and gardens making up the neighborhood, and these covenants often differ from the local zoning and planning rules.

Likewise, the technical rules defining the functional operation of the Internet and the World Wide Web are defined by the relevant stakeholders, inter alia, through the Internet Engineering Task Force (IETF) and the World Wide Web Consortium (W3C).

The environment is also subject to numerous arrangements for its governance. Besides local, other subnational, and national mechanisms, bilateral, multilateral and global agreements are in place or being created for specific aspects of environmental governance. Among the most relevant for this study is the Intergovernmental Panel on Climate Change. Although limited to formal decision-making by governments, it involves stakeholders such as industry, civil-society organizations, and subject-matter experts organically. At more local levels, the formality of intergovernmental processes gives way to cooperative management of common resources, which often antedates formal mechanisms by many centuries.

In some systems of governance, the affected parties are uniform in nature. The citizens of a country are generally treated as a uniform set of individuals, whose permitted actions are governed by the laws of the land. In the Internet, however, widely diverse actors are drawn together to create, operate and use the Internet's network of networks and the interoperable devices they interconnect. These actors have varying structure, scale and

[38] *See* Benoit Felten, "Connectivity Models for Developing Economies," *Diffraction Analysis*, Oct 21 2013, *available at* http://ssrn.com/abstract=2343233.

interests and range from corporations and governments to individuals and institutions. Attempts to define a taxonomy of the myriad heterogeneous stakeholders with an interest in some aspects of the Internet yields results ranging from vastly oversimplified to impossibly detailed. The reality is that every entity or individual now has a stake in the well-functioning of the Internet and the innovation that drives its evolution.

Another example from the private sector helps illustrate the challenge. A company that offers Internet access may find itself subject to a wide range of governance rules. As a corporation, there may be national or regional laws that require certain rules for licensing and operation, incorporation and reporting, and these may come from the National Regulatory Authority, the Executive Branch or the Treasury. Through rules that are either formal (e.g., from the National Regulatory Authority) or informal (e.g., through the Internet Engineering Task Force (IETF), the Institute of Electrical and Electronics Engineers (IEEE), or the International Telecommunication Union (ITU)) the company will be asked to meet technical obligations for the sake of interoperability with the telephone network, with other providers, and to accommodate users that bring devices with them. Additionally, as with the development and deployment of any technology, the company may be subject to rules from the Ministry of the Environment that relate to the environment, and to the Ministry of Labor for management of human resources. Finally, in addition to rules from the National Regulatory Authorities, the company may be subject to telecommunications regulation, depending on the exact nature of its offerings, and may need to comply with privacy rules set by Data Protection Authorities. If it also provides applications (e.g. email, cloud computing, software-as-a-service, mobile apps, etc.), it may be subject to various additional requirements regarding user privacy, enforcement requirements regarding copyright or trademark protection, and in some cases, the Ministry of Foreign Affairs passes rules on the export of certain kinds of information.

There are other examples as well from the academic and civil-society contexts that are useful to illustrate governance from other areas. In the academic context, there are, similarly, groups that affiliate to share information and to perform a certain level of self-regulation. For example, in engineering, the Accreditation Board for Engineering and Technology (ABET) provides accreditation to more than 3,100 programs in more than 24 countries.[39] Similarly, for the development of educational business curricula and related standards, the Association to Collegiate Schools of Business (AACSB) develops global accreditation standards, curricular advice, and quality verification for universities that choose to opt-in to their standard. Many countries around the globe that are involved in business education have universities that collaborate with the AACSB to make sure their business curricula have global relevance.[40] Although civil society is very diverse in its interests and work, since 1951 the One World Trust initiative has been working to provide voluntary cooperative engagement principles for effective engagement for civil society globally.[41]

[39] ABET, *available at* http://www.abet.org/about-abet/
[40] AACSB, *available at* http://goo.gl/JsTRFH
[41] One World Trust *available at* http://www.oneworldtrust.org/

The responsibility within *government* for engaging on these activities can often be found with the appropriate ministries or agencies, but they are not so clear in the general context of *governance*. Many distinct entities may be involved in applying and enforcing hypothesized governance constraints and it is even possible that there will be inconsistencies and conflicts among the rules put forth by distinct governance agents[42]. The processes by which governance rules are created and applied may also vary from regime to regime. In the case of Internet governance, it is important to have processes in place that can identify the conflicts, tensions and frictions between stakeholders, issues and models and to find mechanisms to resolve them over time.

c) Stewardship as primary guide

The Panel spent considerable time discussing the role of various actors within the Internet ecosystem as "stewards." There are many players in the Internet ecosystem, some pursue academic and research interests, some focus on economic goals, some have political and societal objectives, some primarily care about the needs of individual users or their protection.[43] Given the increasingly ubiquitous nature of the Internet, all actors have a common interest in the well-functioning of the overall infrastructure and a common concern that it is not abused. Still, none of these actors on their own have the capacity to address all these issues, rather they have an interest in exercising responsibility for the matters for which they have stewardship. Furthermore, there is an inescapable, trans-border interdependence among actors: the action of one has potential impact on the others. They have therefore a *shared or entangled responsibility* to organize the governance of this common infrastructure.[44] It is fair to describe the ensemble as a 'grand collaboration.[45]

Our discussion of the governance ecosystem yielded three terms to describe the nature of the roles that different actors take: stewardship, coordination and contribution through informed participation. Each are described below:

i) Stewardship

Stewardship is a form of leadership. As the concept developed in the environmental field and the theory of collective action it describes the management of common resources or spaces for the optimal benefit of all concerned through shared sets of rules.[46] This can include entrusting specific entities to help develop and – potentially enforce such rules. In the context of Internet governance, the term applies to the specific public interest responsibilities of each structure, for instance: the development of standards by the IETF or the World Wide Web Consortium (W3C) or the management of IP addresses by the Number Resource Organisation (NRO) through the Regional Internet Registries (RIRs).

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[42] It is far to say, however, that within governments, one can also find overlap and inconsistency.
[43] For example, law enforcement, privacy, security, data integrity and protection from harm.
[44] Cerf, Shared Responsibility, cited *supra*
[45] Cerf, Internet Governance, cited *supra*
[46] See in particular the work of Elinor Ostrom, Nobel prize Laureate in Economics in 2009

Stewardship means caring more for the good management, use and evolution of a shared resource than for any individual stake in it. In many ways, this is like a guardianship role protecting a resource such as the domain name space, recognizing and providing for the range of stakeholders involved. It includes providing principles and purpose for how we manage, develop and protect such a space, while ensuring we prevent harms or activities that may result in persistent imbalances. We need to assure that decisions we make regarding what is or is not appropriate for ICANN reflect those principles. In other words, stewardship requires a very broad, flexible view of the world: at times, it may mean that ICANN may need to put the interests of the ecosystem first and step aside, while in other cases, ICANN may need to actively fill a void or vacuum in the ecosystem, while having the sense and humility to step back if and when other stakeholders fill the void.

The stewardship concept we use stems largely from the management of common-pool resources. The Internet has long ago ceased being such a resource, given the introduction of markets, property rights, and other features. However, the Panel found it necessary to emphasize that most if not all Internet governance must be imbued with this principle as a way to emphasize that win-lose or lose-lose games are suboptimal, and the health of the Internet as a whole needs a vision that is above the specific interests of particular players.

A sense of stewardship and awareness of surroundings must guide all organizations involved in Internet governance. Note that stewardship does not and need not imply scope creep. As such, the advice that Ira Magaziner[47] gave to the ICANN CEO and Board in 2011 is helpful. Magaziner said that ICANN's "leaders must avoid trying to build an empire. I think you will be best served by doing what you need to be doing, to be focused on but not build something that's too big an empire because a bigger empire becomes a bigger target."[48]

For these reasons, checks and balances, and transparency and accountability, are not only principles in themselves, but also serve to ensure that actors stay true to this stewardship principle, and more generally, to take measures to assure that guiding principles of all kinds are real and do not hang in empty space. Indeed we observe that the essence of careful stewardship predates current Internet governance discussions by several decades, albeit in simpler times under Jon Postel,[49] and enabled the Internet to evolve to what it is today. We believe that careful stewardship will continue to be valued by the global Internet community as the Internet governance discussion itself evolves and that stewardship should feed into all of ICANN's thinking.

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[47] Ira Magaziner served as senior policy advisor during the Clinton Administration and facilitated the creation of ICANN. This was in conformance with the general Clinton-Gore initiative to expand access to the Internet to the private sector.

[48] Comments of Ira Magaziner at ICANN Meeting Welcome Session, Mar 24, 2011, *available at* http://svsf40.icann.org/meetings/siliconvalley2011/transcript-welcome-14mar11-en.txt

[49] Jon Postel was a computer scientist who contributed to developing many of the technologies that form the Internet. He was the editor of the Request for Comment series and created (and manually operated) IANA out of the University of Southern California/Information Sciences Institute. He was trusted by all for his fairness and expertise.Internet Hall of Fame, *available at* http://internethalloffame.org/inductees/jon-postel

ii) Coordination, Coordination & Coordination

Any distributed institutional system requires coordination to deal with potential mandate overlaps, to facilitate joint actions and to ensure that no responsibility "falls into the cracks" between structures. ICANN's bylaws and mission sets it up at the core of some of the most fundamental coordination issues.[50] The bylaws lay out ICANN's "coordination" role very clearly in Article 1, Section 1 as follows, setting ICANN up to:

- **Coordinate** the allocation and assignment of the three sets of unique identifiers for the Internet;
- **Coordinate** the operation and evolution of the DNS root name server system;
- **Coordinate** policy development reasonably and appropriately related to these technical functions.

In the Internet governance landscape, this coordination is particularly important in the "logical layer" described in section 2(d) Figure 3, among the so-called I* community.[51] Counter-intuitively the coordination that has proved most effective is *not* a clockwork-like coordination, which assumes strict, rigid or mechanistic linkages between the parts and a central coordination engine, but rather a flexible, loosely-coupled approach which will be described further in Section 6.

iii) Contribution through Informed Participation

Beyond the two dimensions above, each process or institution benefits from the interactions with, contributions from and participation in the activities of entities dealing with issues distinct from theirs but whose decisions could impact them or which could benefit from their experience. In the Internet governance realm, this applies in particular to interactions between informed participants and entities dealing with the different layers, as the separation between them is not strict but somewhat fluid and porous: for instance, technical decisions have policy implications and vice versa.

d) Characteristics and Values of Multistakeholder Governance

What are the characteristics of an open, participatory policy development process? This question is being analyzed within the context of the Strategy Panel on Multistakeholder Innovation chaired by Beth Noveck.[52] However, for readers that may not be familiar with the standards-setting processes of the IETF or with the models for development of

[50] Bylaws for Internet Corporation for Assigned Names and Numbers, available at http://www.icann.org/en/about/governance/bylaws#I

[51] The I* community includes ICANN, IAB, IETF, ISOC, W3C, and the 5 RIRs (AFRINIC, APNIC, ARIN, LACNIC, RIPE NCC).

[52] See Strategy Panel on ICANN Multistakeholder Innovation, *available at* http://goo.gl/o8oN90, tasked to propose "new models for broad, inclusive engagement, consensus-based policymaking and institutional structures to support such enhanced functions; and Designing processes, tools and platforms that enable a global ICANN community to engage in these new forms of participatory decision-making."

open-source software, the Panel thought it would be valuable to introduce the concept of openness and loose coupling through the essay of programmer Eric Raymond, who penned the essay "Cathedral and the Bazaar" in 1997. Raymond's article addressed different approaches to software engineering methods.[53] The article is used in many educational fora to describe processes that are "open" and those that are "closed," and the description provides a good conceptual model for the kinds of processes that have helped inspire innovation in the Internet.

Raymond described the "cathedral model" to software development, where the software code's viewing is restricted to a defined hierarchical group of software developers. He contrasted the cathedral model to the "bazaar model," where code is shared openly over the Internet and with the public, subject to comment by all. He takes the development of the Linux operating system as an example and describes its philosophy.

> Before cheap Internet, there were some geographically compact communities where the culture encouraged Weinberg's "egoless" programming, and a developer could easily attract a lot of skilled kibitzers and co-developers. Bell Labs, the MIT AI and LCS labs, UC Berkeley—these became the home of innovations that are legendary and still potent. . . . Linux was the first project for which a conscious and successful effort to use the entire world as its talent pool was made. I don't think it's a coincidence that the gestation period of Linux coincided with the birth of the World Wide Web, and that Linux left its infancy during the same period in 1993–1994 that saw the takeoff of the ISP industry and the explosion of mainstream interest in the Internet.[54]

According to Raymond, the "bazaar" method is synonymous with the philosophy of the Internet's development as compared to older telecom industries. In essence, the "bazaar" method for software writing is not unlike the model for Wikipedia's work: the system is open, exposed, subject to comment by anyone who has an opinion.[55] Raymond's central claim is that "given enough eyeballs, all bugs are shallow." Essentially, this means that broad dissemination and discussion of coding provides better products.[56]

The equivalent of the bazaar in standard-setting organizations is the IETF—an open, volunteer-based standards-setting environment without any formal corporate "personality," where engineers have developed the core functionality that enables packets to transfer throughout the Internet. All IETF designs are freely accessible, and all IETF processes are published in their entirety on the Internet.[57] If anything, reading the IETF website can be a bit onerous if only because it might feel like there's too much information available. Notably,

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[53] Eric S. Raymond, "The Cathedral and the Bazaar, v. 3.0," *CatB.org*, Sep 11, 2000, *available at* http://www.catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/.

[54] *Id.*, at 18.

[55] *See* "The free-knowledge fundamentalist," *The Economist*, Jun 5, 2008, *available at* http://www.economist.com/node/1148406.

[56] *Id.*, at 8.

[57] Harald Alvestrand, "A Mission Statement for the IETF", IETF RFC 3935, *available at* http://www.ietf.org/rfc/rfc3935.txt.

the publications are all available and readable in any format, and it's expected that anyone, anywhere, can participate in the IETF process. As Harald Alvestrand describes, the IETF depends on an entirely open process, which means that

> any interested person can participate in the work, know what is being decided, and make his or her voice heard on the issue. Part of this principle is our commitment to making our documents, our WG [working group] mailing lists, our attendance lists, and our meeting minutes publicly available on the Internet.[58]

Drawing from analogies throughout the open-standards space, the IETF is a true meritocracy: If members of the IETF community determine that an engineer's ideas have value, those ideas are adopted and incorporated into the Internet's suite of standards. Ideas that are dated or counterproductive, on the other hand, fester and fail. As famously stated by David Clark of the Massachusetts Institute of Technology (formerly Chief Internet Architect after 1982): "We reject kings, presidents and voting. We believe in rough consensus and running code."[59] While the characteristics of good practices in open and closed processes are being developed in separate projects, the Panel wishes to emphasize its preference towards the philosophy and practice of openness that is used in the IETF. Open participation, regardless of specific interest, perspectives or background, provides the flexibility to engage all parties who wish to be engaged and also the transparency to decide not to be. The legitimacy of the IETF is vested in the communities that choose to recognise it, through their participation in its processes, or recognize its output, by implementation or use of the open standards it develops.

4. Perspectives on Internet Governance

Historically the Internet Assigned Numbers Authority (IANA) functions include coordination of protocol parameters, management of the DNS root zone, allocation of numbering resources (ie. Internet Protocol addresses and Autonomous System Numbers),[60] and servicing the .ARPA and .INT domains.[61] In 1998, in its Statement of Policy (the "White Paper"), the U.S. government committed to transitioning the management of the IANA functions to a private sector entity that would operate in a bottom-up, consensus-based manner.[62] A primary objective behind the U.S. government's policy to privatize the Domain Name System (DNS) was to facilitate "global participation in the management of Internet

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[58] *Id.*

[59] "The Tao of IETF: A Novice's Guide to the Internet Engineering Task Force," *IETF Website, available at* http://www.ietf.org/tao.html.

[60] As RFC 7020 explains, "[t]he Internet Assigned Numbers Authority (IANA) is a role, not an organization. For the Internet Numbers Registry System, the IANA role manages the top of the IP address and AS number allocation hierarchies." *See* "RFC 7020: The Internet Numbers Registry System" *IETF,* RFC 7020, Aug 2013, *available at* http://tools.ietf.org/html/rfc7020

[61] The IANA Functions Contract is publicly available on the NTIA website. IANA Functions Contract, NTIA Website, *available at* http://www.ntia.doc.gov/page/iana-functions-purchase-order

[62] Management of Internet Names and Addresses, ICANN Statement of Policy, Jun 10, 1998, *available at* http://www.icann.org/en/about/agreements/white-paper [Hereinafter: White Paper]

names and addresses."[63] The U.S. government stated its belief that "neither national governments acting as sovereigns nor intergovernmental organizations acting as representatives of governments should participate in management of Internet names and addresses."[64]

The U.S. government's National Telecommunications and Information Administration (NTIA), a division of the US Department of Commerce (DOC) recognized ICANN as the private sector entity charged with the management of these functions and executed the first IANA functions contract with ICANN. It was anticipated that ICANN would perform the IANA functions and that a short-term transitional contract with NTIA would be used only to ensure the security and stability of this vital part of the Internet. In Annex A, we provide further details on the historical relationship between ICANN and the NTIA. Once ICANN was firmly established, the NTIA set out to transfer the management of these functions to the private sector. NTIA set out a relatively short transition period by stating that it "would prefer that this transition be complete before the year 2000. To the extent that the new corporation is established and operationally stable, September 30, 2000 is intended to be, and remains, an 'outside' date."[65]

ICANN's relationship with NTIA has evolved in parallel to the globalization of the Internet. On September 30, 2009, ICANN and NTIA executed an Affirmation of Commitments (AOC),[66] moderating the NTIA's exclusive involvement with ICANN and further institutionalizing ICANN's accountability to the global Internet community. In paragraph 4 of the AOC, NTIA affirmed "its commitment to a multi-stakeholder, private sector led, bottom-up policy development model for DNS technical coordination that acts for the benefit of global Internet users." As Mawaki Chango has observed, previous arrangement "between ICANN and the DOC was replaced by a so-called Affirmation of Commitments that transferred responsibility to monitor ICANN from the U.S. government to a global review process."[67] In the words of the AOC, this is "a private coordinating process, the outcomes of which reflect the public interest, is best able to flexibly meet the changing needs of the Internet and of Internet users."[68] The transfer represents a case of evolving stewardship.

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[63] *Id*. "The U.S. Government is committed to a transition that will allow the private sector to take leadership for DNS management."

[64] *Id*.

[65] *Id*. Regarding the need for a transitional period prior to the full transfer of the IANA functions, the U.S. Government stated its belief that "it would be irresponsible to withdraw from its existing management role without taking steps to ensure the stability of the Internet during its transition to private sector management."

[66] Affirmation Of Commitments by the United States Department Of Commerce and the Internet Corporation For Assigned Names And Numbers, Sep 30, 2009, *available at* http://www.ntia.doc.gov/files/ntia/publications/affirmation_of_commitments_2009.pdf [Hereinafter, Affirmation of Commitments].

[67] Mawaki Chango, "Accountability in private global governance: ICANN and civil society," publiched in the copendium by Jan Aart Scholte (Ed.), "Building Global Democracy?: Civil Society and Accountable Global Governance," Cambridge University Press, 2011, at 270-71.

[68] Affirmation of Commitments, cited *supra*, at 4.

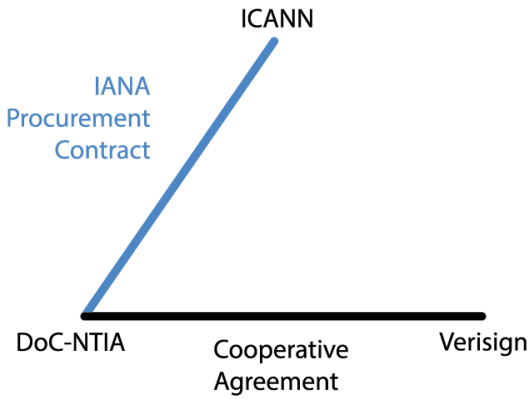

Figure 1: Description of Root Zone Management Process Through IANA Functions

In Figure 1, we provide an overview of the root-zone management process through the IANA functions. The DOC-NTIA's (Administrator) current agreements with ICANN (IANA Functions Operator) and Verisign (Root Zone Maintainer) describe the root zone management process as follows:[69]

1. TLD operator submits change request to the IANA Functions Operator;
2. the IANA Functions Operator processes the request;
3. the IANA Functions Operator sends a request to the Administrator for verification/ authorization;
4. the Administrator sends verification/authorization to the Root Zone Maintainer to make the change;
5. the Root Zone Maintainer edits and generates the new root zone file; and
6. the Root Zone Maintainer distributes the new root zone file to the 13 root server operators.

NTIA maintains separate agreements with ICANN and Verisign, Inc. All three organizations cooperate daily to carry out their responsibilities. ICANN is the IANA Functions Operator, which means it also services a no-cost procurement contract with NTIA to perform the IANA functions. NTIA also has a Cooperative Agreement with Verisign, Inc., the Root Zone Maintainer, related to the performance of its functions: Verisign edits, publishes, and distributes the root zone file. ICANN and Verisign also have procedural agreements that relate to the IANA functions.

a) /1net Views on Root-Zone Management

The topic of root-zone management was taken up recently within the /1net listserv, and the discussion led to the presentation of a cogent problem set to describe the issues with root

[69] "Notice of Inquiry on DNSSEC implementation at root zone level" Department of Commerce, Federal Register, Vol. 73, No. 197 (October 2008), available at http://www.ntia.doc.gov/legacy/frnotices/2008/FR_DNSSEC_081009.pdf

zone management.[70] The following is the presentation of the issues as proposed by George Sadowsky and amended through the discussion with the community:[71]

Text Box 2. Contribution by /1net

The topic of root-zone management was taken up recently within the /1net listserv, and the discussion led to the presentation of a cogent problem set to describe the issues of the root zone. The following is the presentation of the issues as proposed by George Sadowsky and amended through the discussion with the community:

i) IANA's Role in Vetting Changes to the Root Zone
The Internet Assigned Names and Numbers Authority (IANA) has as one of its functions the vetting of changes in the Internet root zone file. The members of the team that performs the IANA functions are employed by ICANN, the Internet Corporation for Assigned Names and Numbers.

ii) Relationship between US government and ICANN
ICANN has a zero-cost contract with the US government to perform the IANA functions. The US government authorizes changes made to the root zone by verifying that ICANN abides by publicly documented policies prior to the changes being submitted for implementation.

iii) Requirement for US venue for IANA functions contract
It has been a requirement for the contractor providing the IANA function to be a US organization, resulting in the provision of the IANA function being subject to US law and the decisions of the US judiciary.

iv) Objections to U.S. government involvement
Objections have been raised to US government involvement in this process on several grounds, including exclusivity and concerns of trust. Objections have equally been raised to movement of the function to several international organizations.

b) Technical Community

The technical community has recently assembled to make their position clear through the Montevideo Statement on October 7, 2013. At the meeting, ICANN met with the members of the technical community who called for the "accelerating the globalization of ICANN and

[70] The purpose of /1net as stated on the website, www.1net.org, is to "provide an inclusive and open venue supporting discussion of Internet governance matters for all those interested (individuals, governments, civil societies, technicians, etc.) and to deliver the results of those discussions to the agendas of established and developing Internet governance institutions. It is vital that the voices of all contributors be heard and carried forward to help shape the future of the Internet's governance."

[71] Taken from George Sadowsky's points in "Definition 1, Version 5," on the 1net listserv and commented upon by numerous members of the community, Jan 21, 2014, *available at* http://goo.gl/mgfRbh.

IANA functions, towards an environment in which all stakeholders, including governments, participate on an equal footing."[72] In making this statement, available in its entirety in Text Box 3 below, the technical community joined the statements of many governments regarding the future of the IANA functions.

Text Box 3. Montevideo Statement on the Future of Internet Cooperation (October 7, 2013)

Montevideo, Uruguay – The leaders of organizations responsible for coordination of the Internet technical infrastructure globally have met in Montevideo, Uruguay, to consider current issues affecting the future of the Internet.

The Internet and World Wide Web have brought major benefits in social and economic development worldwide. Both have been built and governed in the public interest through unique mechanisms for global multistakeholder Internet cooperation, which have been intrinsic to their success. The leaders discussed the clear need to continually strengthen and evolve these mechanisms, in truly substantial ways, to be able to address emerging issues faced by stakeholders in the Internet.
In this sense:

- They reinforced the importance of globally coherent Internet operations, and warned against Internet fragmentation at a national level. They expressed strong concern over the undermining of the trust and confidence of Internet users globally due to recent revelations of pervasive monitoring and surveillance.
- They identified the need for ongoing effort to address Internet Governance challenges, and agreed to catalyze community-wide efforts towards the evolution of global multistakeholder Internet cooperation.
- They called for accelerating the globalization of ICANN and IANA functions, towards an environment in which all stakeholders, including all governments, participate on an equal footing.
- They also called for the transition to IPv6 to remain a top priority globally. In particular Internet content providers must serve content with both IPv4 and IPv6 services, in order to be fully reachable on the global Internet.

c) Government Perspectives

It is undeniable that some governments around the world have been dissatisfied with the unique role that the U.S. government has in the DNS root-zone management system that is described in the previous section and in Figure 1. Although governments use the Internet, they represent only one class of the many stakeholders with interest in the Internet. Understanding these governmental perspectives has been a crucial level-setting component in the Panel's work, because it is the Panel's opinion that countries will continue to express similar kinds of dissatisfaction, and if unaddressed, this could lead to the *splintering* of the Internet into potentially disconnected or non-interoperable pieces.[73]

[72] Montevideo Statement on the Future of Internet Cooperation, Oct 7, 2013, *available at* http://goo.gl/dwGcuG

[73] Some have referred to the result as "Splinternet."

The following examples illustrate the dissatisfaction that some governments have with the current arrangement that span multiple political perspectives. The calls for change are broad, and they come from all areas of the political spectrum. We'll first look at the Brazil, Russia, India, China and South Africa (BRICS), then Europe, and then the emerging Internet world:

i) The BRICS

In 2011, the countries of India, Brazil and South Africa joined forces to make a proposal for a new UN agency to take over many of the governance roles that ICANN currently manages to "integrate and oversee the bodies responsible for technical and operational functioning of the Internet, including global standards setting."[74] Although this proposal has not continued in the past couple years, these countries have continued to be vocal in the press and in other fora about their dissatisfaction with the status quo.

Brazil. Although Brazil has openly encouraged the adoption of an inclusive multistakeholder model, it is also making calls for increased government voices in governance matters. For example, President Dilma Rousseff's opening statement for the 68th Session of the UN General Assembly stating that "[t]he United Nations must play a leading role to regulate the conduct of states with regard to these technologies."[75] President Rousseff's declaration received almost immediate support from more than 50 endorsements from international civil society organizations and numerous law and technology professors and users.[76] Although President Rousseff's statement is anchored mostly in the context of surveillance, her position is also consistent with other statements that Brazilian officials have made about the ability of their government to influence matters of Internet governance, for example, in the public statements that Brazil made with its submission to the World Telecommunication/ICT Policy Forum in 2013, lamenting that "governments so far only had a limited advisory role in international Internet governance, and no actual decision making process."[77]

Russia. The position of Russia has been consistent, emphatic, and public about moving the responsibility for the allocation of names and numbers to a state-based mechanism. Russian President Vladimir Putin famously set the stage for this by calling for "establishing international control over the Internet using the monitoring and supervisory capabilities of the International Telecommunication Union."[78] This was the core of a proposal that Russia

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[74] Milton Muller, "India Brazil and South Africa Call for Creation of 'New Global Body' to Control the Internet", *IGP Blog*, Sep 27, 2011, *available at* http://goo.gl/UqJdHV.

[75] Statement by H.E. Dilma Rousseff at the Opening of the General Debate of the 68th Session of the United Nations General Assembly, Sep 24, 2013, *available at* http://goo.gl/1NWf7f.

[76] Letter from International Civil Society Organizations to President Dilma Rousseff in Support of Her Statement at the 68th Session of the UNGA, Seo 26, 2013, *available at* http://goo.gl/ans6JT.

[77] Daniel Cvalcanti, "Operationalizing the Role of Governments in Internet Governance," *ITU Blog,* Jun 5, 2013, *available at* http://goo.gl/ECT2vG.

[78] Leo Kelion, "US resists control of internet passing to UN agency," *BBC News,* Aug 2, 2012, *available at* http://www.bbc.co.uk/news/technology-19106420.

made in 2012 at the World Conference on International Telecommunications (WCIT) together with several other countries.[79] Although the proposal was not accepted in Dubai, as has been pointed out, it is likely that proposals of this kind will continue to be made.[80] In December 2013, Russian Foreign Minister said "we can't understand why radio frequencies are distributed by the International Telecommunication Union, while world Internet domain names are assigned by the California-based corporation ICANN controlled by the U.S. Department of Commerce."[81]

India. In December 2013, *The Hindu* reported on an internal document drafted by the Indian National Security Council Secretariat that called for Indian say in the root-zone management system, stating the problem as follows: "[t]he control of Internet was in the hands of the U.S. government and the key levers relating to its management was dominated by its security agencies... Mere location of root servers in India would not serve any purpose unless we were also allowed a role in their control and management."[82]

China. The Chinese government signed on to the same proposal with Russia to change control of Internet addressing.[83] An article in 2012 summarizes what is often believed to be the Chinese view. The article first asserts that the DOC claims to want to "indefinitely retain oversight of the Internet's 13 root servers," the article goes on to say that the U.S. does not wish to globalize and that "this refusal reflects [the United States] hegemonic mentality and double standards."[84]

South Africa. Although South Africa has not been vocal in the last couple of years, it was earlier one of the leaders in the "IBSA Proposal," a coalition between India, Brazil and South Africa. The IBSA parties carried this process forward from about 2009 through 2011 and recommended guidelines for a "new global body" that would "be located within the UN system."[85] Widely discussed at the IGF in Nairobi in 2011, this proposal built on the joint statement about ICANN that IBSA made at the United Nations:

> Although there is a positive movement towards improving transparency and accountability in the activities of the Internet Corporation for Assigned Names and

[79] Document DT-X, Proposal by Russia, UAE, China, Saudi Arabia, Algeria, Sudan and Egypt, Dec. 5, 2012 at §3A.2, *available at* http://files.wcitleaks.org/public/Merged%20UAE%20081212.pdf. This provision also appears elsewhere. *See* Document 47-E, Proposal by Algeria, Saudi Arabia, Bahrain, China, UAE, Russia, Iraq and Sudan, at §3A.2, Dec 11, 2012, *available at* http://files.wcitleaks.org/public/S12-WCIT12-C-0047!!MSW-E.pdf

[80] *See* Cerf et. al., Shared Responsibility, cited *supra* at 12-13.

[81] "Moscow backs idea of Internet's int'l regulation," *Voice of Russia,* Dec 5, 2013, available at http://goo.gl/qQUJnq

[82] Sandeep Joshi, "India to push for freeing Internet from U.S. control," *The Hindu*, Dec 7, 2013, *available at* http://goo.gl/zGPofR

[83] *See* Document DT-X, cited *supra*.

[84] "US must hand over Internet control to the world," *People Daily*, Aug 18, 2012, *available at* http://english.peopledaily.com.cn/90777/7915248.html

[85] IBSA Multistakeholder meeting on Internet Governance, Recommendations, Sep 1-2, 2011, available at http://goo.gl/W5qpt

> Numbers (ICANN), its legal status remains problematic. The fact that only one country, instead of the international community of States, is the provider and guarantor of the management of names and numbers of the Internet in all countries contravenes established UN principles and universally accepted tenets of multilateralism.

ii) Europe

One of the greatest set of political allies for the U.S. government is found in Europe. Although perspectives between the U.S. and Europe on globalization of ICANN are increasingly aligning, this is a recent phenomenon. In a report about the Internet and international politics, Lars-Erik Forsberg, Deputy Head of the International Unit of the European Commission said that "ICANN is still a show for the few," and that Europe's position on the IANA functions aligns with Brazil and India: "How can the EU take on this challenge? . . . We need a firm commitment from the member states to work together on this issue and to continue to work with the United States. We also should bring in like-minded countries like Brazil and India."[86]

On February 12, 2014, the European Commission issued a position paper and a press release related to the globalization of ICANN and on Internet governance generally. In the press release, entitled "Commission to pursue role as honest broker in future of global negotiations on Internet governance," Vice President Neelie Kroes said that "Europe must contribute to a credible way forward for global internet governance. Europe must play a strong role in defining what the net of the future looks like."[87]

The European Commission paper called for further work to "identify how to globalize the IANA functions, whilst safeguarding the continued stability and security of the domain-name system."[88] In response, the U.S. government weighed in with a swift confirmation:

> The U.S. government welcomes the strong and continued commitment of the European Commission to the multistakeholder model of Internet governance. We will work with the Commission and other Internet stakeholders to make multistakeholder governance more inclusive, especially to support the engagement of countries in the developing world. We have long encouraged the further globalization of ICANN as reflected in our work the last five years to improve the accountability and transparency of ICANN to all nations and stakeholders.[89]

The European Commission announcement arose from a consultation with stakeholders

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[86] Erin Baggot (Rapporteur), "The Internet and International Politics: Implications for the United States and Europe,"Jun 16, 2013 at 30 available at http://goo.gl/OSI6t5

[87] European Commission Press Release, "Commission to pursue role as honest broker in future global negotiations on Internet Governance," Feb 12, 2014, available at http://europa.eu/rapid/press-release_IP-14-142_en.htm

[88] *Id*.

[89] Statement of Assistant Secretary Strickling on the European Commission Statement on Internet Governance, Feb 12, 2014, *available at* http://goo.gl/OaeW4G

that it opened in October, 2013.[90] The consultation attracted responses from governments, associations, and the private sector.[91] The Panel has summarized selected examples of responses in the table below. Although the excerpts below are from private-sector actors, we note many of them have significant ownership from European governments, indicating that the perspectives carry broader influence than they may have from a purely private-sector context.

Organization/ Government	***Statement on Oversight of IANA Functions***
Nominet (.UK Registry)	"We would not welcome inter-governmental oversight of the IANA function: we believe that this would lead to politicisation of a process that should solely be a national matter. Any further internationalisation of the IANA should be through developing direct accountability"
Orange *(27% owned by the government of France)*	"While the AoC [...] is a fundamental step towards ICANN independency from the historical management by the US Government, the operational part of the ICANN mission, named IANA function [...] remains covered by a contract with the US Government Department of Commerce. This situation is not satisfactory and true internationalization of the structure including its operational mission is essential."
Telecom Italia (TI)	"TI supports the effort from the new ICANN President Fadì Chehade to make ICANN a truly international organization rebalancing the role that historically the US had in assigning the IANA contract for allocating addresses and managing the DNS root."
European Telecommunications Network Operators' Association (ETNO)	"A central part of that debate between all relevant stakeholders needs to be the question around whether the IANA functions should continue to be subject to an US Government procurement contract."
Denmark	"We believe that a new framework for ICANN and IANA must be discussed in an open process with global stakeholders"
Deutsche Telekom *(32% owned by government of Germany)*	"Unilateral national prerogatives like the IANA functions which are still subject to an US Government procurement contract are not compatible with what is today a multilateral issue."

Many of the responses to the European Commission consultation were in favor of the multistakeholder model of Internet governance and supported the Montevideo Statement (see Text Box 3), especially in its call for IANA globalization. The Panel notes that, while many responses were in favor of IANA globalization, they had different ideas as to how the process would be replaced.

iii) Countries in Early Stages of Adoption

[90] Neelie Kroes, "Internet Governance: I want your views!," *EC Blog on the Digital Agenda,* Oct 9, 2013, *available at* http://goo.gl/PnJwkd.

[91] "Europe and the Internet in a Global Context" European Commission, Nov 2013, *available at* http://ec.europa.eu/digital-agenda/en/content/europe-internet-global-context

In countries where the Internet is still in early stages of adoption and where private-sector investment is new, it has proven difficult for local Internet community members and their government representatives to navigate and participate fully in the multistakeholder processes of ICANN, IETF, W3C, the RIRs and other standards and policy development organizations. Here the complexity of the interrelationships between the various loosely coupled institutions works against such new Internet adopters, who are isolated when their policy priorities do not resonate with whatever the pressing policy issue of the day happens to be.

In these countries, the private sector and civil society stakeholders cannot yet play the same role that these stakeholders would in countries where the infrastructure and multistakeholder philosophy are more developed. This lack of capacity is replaced by more government involvement, and the limited resources these countries have are geared towards government-based careers. Additionally, although there are scholarship opportunities for budding members of the technical community from emerging economies to join events at the IETF, the IETF has not historically reached out to work in emerging markets directly. A review of its future plans demonstrates that most all of its planned meetings are in highly industrialized locations. We note that APNIC has a robust outreach program,[92] and the Asia Pacific Regional Internet Conference on Operational Technologies (APRICOT), similarly, engages in effective outreach. These activities can be further bolstered and expanded with additional resources.[93] The managers of country-code Top Level Domains (ccTLDs)[94] and the RIRs (AFRINIC, APNIC, ARIN, LACNIC and RIPE) all play an important role with the stakeholders in their regions.

The work of the IETF, the RIRs and others are showing progress, however, there is another explanation for the lack of participation by countries in Internet governance from countries that are in the early stages of Internet adoption. In many cases, there is much more of a custom and tradition for representatives to justify attendance and involvement in the umbrella of UN-based organizations than private sector entities that make up most of the technical Internet governance apparatus. The ITU is a specialized agency of the UN and has developed a "Human Capacity Building Division" that actively conducts outreach to participants in developing economies.[95] This has produced investment in several "Centers of Excellence" where the ITU, together with various government officials, engage in a regular program of training and outreach in the region.[96] The ITU first opened Centres of Excellence in Dakar and in Nairobi in 2007: these Centres have even become

[92] *See* APNIC, Community Activities, *available at* https://www.apnic.net/community/support

[93] *See* APRICOT website, *available at* https://www.apricot.net/about.html

[94] One example of collaboration between ccTLDs and RIRs to address specific needs in emerging markets is AYITIC, a capacity-building project designed specifically for Haiti. The outreach program has been implemented together by the ccTLD for Haiti, LACNIC and by several sponsors and benefactors. *See* Ayitic, *available at* http://www.ayitic.net/en/about.html

[95] ITU, Human Capacity Building Programme, *available at* http://www.itu.int/ITU-D/hcb/

[96] ITU, Information on the Creation of Centres of Excellence in Africa, *available at* http://www.itu.int/en/ITU-D/Capacity-Building/Pages/coe-afr.aspx

revenue-generating, with revenues from its training rising up to $2.7 Million in 2007.[97] Additionally, the ITU complements this with many "Internet training centers" including 7 academies in the Arab Region, 21 academies in Asia Pacific, 17 academies in Africa, and 9 academies in Latin America.[98] Moreover, the ITU offers travel fellowships to come to Geneva or to travel to meetings that occur globally and has pre-approved the eligibility of participants from 64 countries for the program.[99] Thus, a canon of offerings (and indeed, an educational and networking superstructure) is available to experts in emerging economies that is hosted by the UN.

It is thus understandable that participants from countries in early stages of Internet adoption come to the table with a natural predisposition to think about the Internet both in telecom-centric terms and in the context of multilateralism. This is how the public officials are regularly trained and exposed to technology policy and this also serves as an attractive career path. For this reason, education, outreach, private-sector investment and capacity building initiatives are essential to address the deficiency in multistakeholder participation from these countries. The telecommunications sector has been relatively successful in developing policy makers by offering training in specialized programs and schools of telecommunication. These programs often exist through public-private partnerships. While some initiatives exist presently through organizations such as the Diplo Foundation, United States Telecommunications Training Institute (USTTI), ISOC, and ICANN, the breadth is smaller than the ITU and individuals attending these trainings have a relatively mixed level of institutional impact in their respective countries. This may be because many attend in the context of personal interest rather than as a part of an institutional and governmental strategy. Also, many of current initiatives involve international travel which further limits the capacity building aspect of outreach: providing more individuals to get exposure locally is truly what *outreach* (*reaching out*) entails. The Panel sees remediation of education and capacity deficiency to be an important objective for improving the multistakeholder processes of Internet governance.

5. Mapping the Internet Governance Ecosystem

In its most general sense, the governance of the Internet is characterized by a ***web of relationships*** among institutions that have roles affecting the operation and use of the Internet across all the layers that comprise its functions. These relationships reflect and recognize the responsibilities, roles and dependencies among various institutions and organizations. It is the ensemble of this collaborative and loosely-coupled environment that has allowed the Internet to evolve, expand and support an increasingly diverse set of

[97] *Id.*

[98] ITU, Internet Training Centers, *available at* http://www.itu.int/en/ITU-D/Capacity-Building/Pages/ITUInternetTrainingCentres(ITC).aspx

[99] "Countries eligible for fellowships and reduced fees", ITU, *available at* http://www.itu.int/en/ITU-T/membership/Pages/fellowships-reduced-fees.aspx

applications. That there are mutual dependencies is a feature and respect for them has been and continues to be a fundamental characteristic of the governance of the Internet. Figure 5 illustrates this in a notional way. Readers should *not* read any more into the figure than its representational sense of the richness and diversity of these cooperatively interacting institutions. In the real Internet world, some of linkages in the figure (i.e., the relationships) are documented and some are more informal. There are many more organizations in the space than can be shown in one diagram.

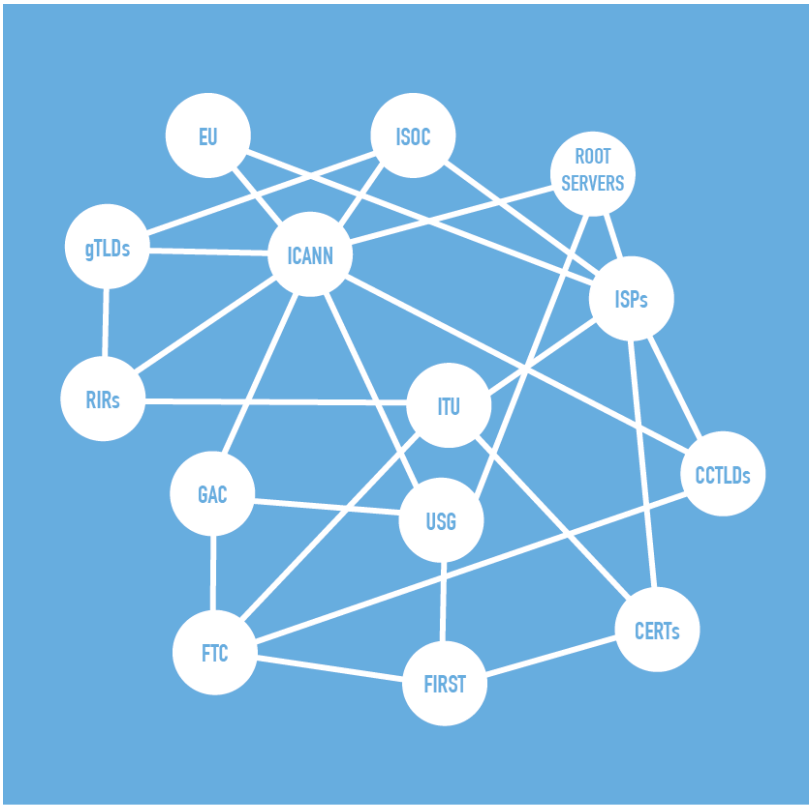

Figure 5: A Web of Relationships

How does ICANN partake in this web? In Figure 6, we illustrate the nature of its relationships. Within ICANN itself are closely-coupled elements in the form of supporting organizations and advisory committees, including the Government Advisory Committee (GAC), that partake of ICANN's *stewardship* role for managing Internet identifiers and protocol parameters. To satisfy its responsibilities, ICANN *coordinates* closely with other organizations that have a direct role in managing these technical elements of the Internet architecture. More generally, ICANN has *participatory* relationships with many international or global institutions that have interest in and responsibilities for other aspects of governance. Further, as described elsewhere in the text, the organizations and mechanisms for Internet governance have their own ebb and flow. Some problems appear, then rise to prominence, are at least partially solved, then fade away either because of a solution that is underway, or because new problems gain prominence. The ecosystem changes dynamically over time.

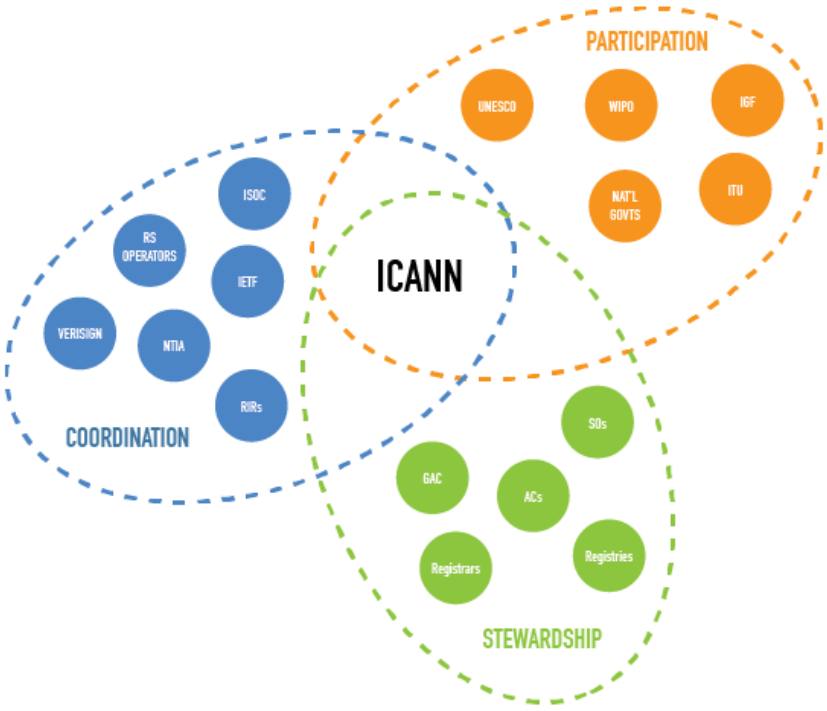

Figure 6: Expanding Web of ICANN Relationships

b) Mapping ICANN Relationships within Layered Model

How do the actors in the Internet ecosystem relate to the Layered Model? Under the current multi-stakeholder Internet governance ecosystem, no single institution, stakeholder or influencer (with the historical exception of the U.S. government) plays a unique role in governance. Instead, each stakeholder participates as a representative of its respective constituency or in accordance to its particular responsibilities, either through local policymaking and regulatory fora or through participation in government-focused bodies like the ITU. Governments maintain a uniquely important role in Internet governance, of course, as they ultimately issue rules in the public interest and develop mandates for law enforcement, competition, consumer protection agencies, data protection authorities, and other governmental and intergovernmental agencies. It is important to remember that governments are also participants in many other fora besides the ITU: for example, they have a special place to express their views in ICANN through the GAC, and they regularly sponsor discussions on economic policy issues at the Organization for Economic Co-operation and Development (OECD).

In Figure 7, we provide an illustration of how some of these organizations form part of the Internet's layered model. Note that our illustration is not a comprehensive view, it is

intended to characterize some of the institutions, as well as some of the interactions, but there are many more.[100] This particular illustration focuses on ICANN although similar illustrations exist for many of the different actors in the ecosystem.

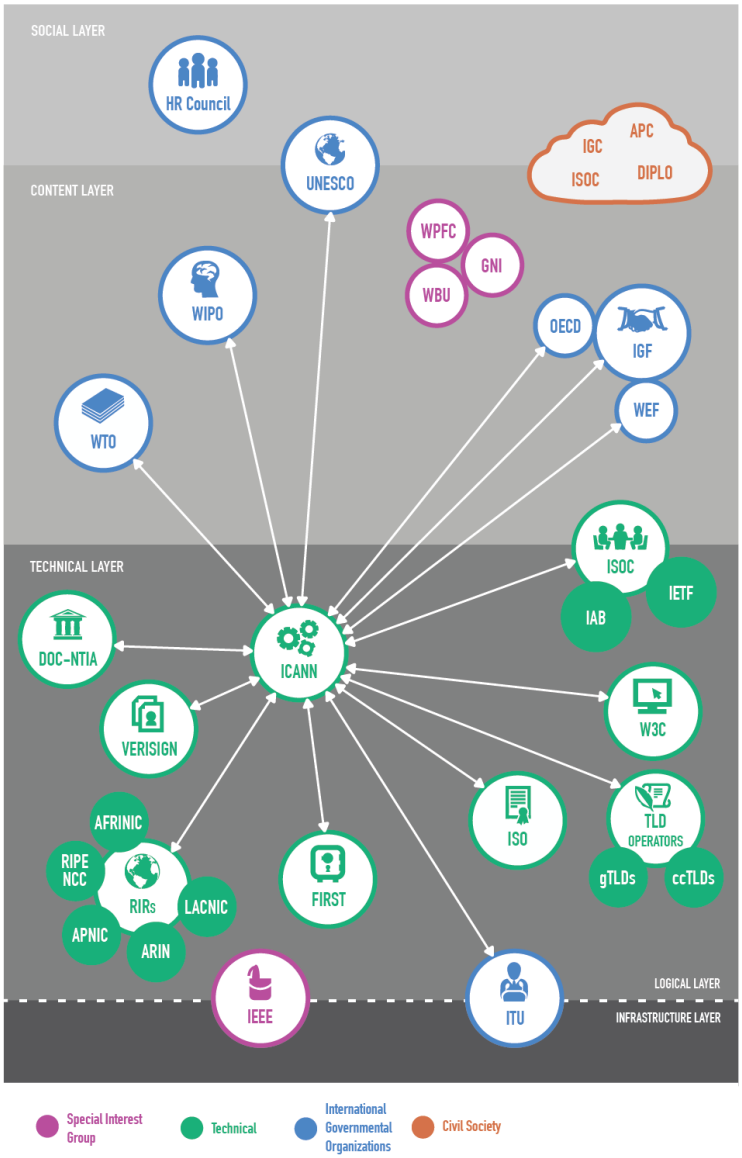

Figure 7: Layered Model of the Internet – Organizations

[100] Examples of ICANN relationships to other organizations in the ecosystem include: NTIA, GAC observers (ITU, WTO, OECD, UNESCO, and WIPO); IETF works with ICANN on the protocol parameter registry service of the IANA functions; ITU, W3C, and IAB advise the ICANN Board through Technical Liaison Group (TLG); WIPO is Uniform Domain-Name Dispute Resolution Policy (UDRP) provider for gTLDs; UNESCO works with ICANN on IDNs (Internationalized Domain Names) for new gTLD program; ICANN relies on ISO regarding for ccTLD designations; and ICANN is a member of WEF. ICANN has no specific relationship with the UN Human Rights Council; WPEC; WBU; GNI; IEEE. Note that we only represent governmental organizations that have more than one government, although ICANN also has relationships with single agencies like the NTIA or single companies like Verisign.

In this context, governance structures and mechanisms for the Internet have emerged progressively and largely out of necessity, on an issue-by-issue basis. The Panel found resonance in the phrase "form follows function" because many of the institutions associated with the Internet have emerged out of need (see Section 2). ARPANET, the predecessor to the Internet,[101] fostered the creation of a Network Working Group (NWG) to coordinate the distributed development of protocols for implementing and using the network. The historical cooperative atmosphere and effectiveness of this group then successively contributed to the formation of the International Network Working Group (INWG), the Internet Architecture Board (IAB), the IETF, the Internet Research Task Force (IRTF), ISOC and the RIRs among many other bodies associated with the Internet today.

It is vital to note further that governance relationships vary strongly and widely according to the issue or problem one is dealing with. The Working Group on Internet Governance (WGIG) identified some 40 issues of Internet governance, and recently Laura DeNardis has made a list of many of the complex coordination tasks in Internet governance.[102] For several of these tasks, organizations in the figure play central roles and need to coordinate closely; for others they are barely relevant or not at all. For example, ICANN plays a central role in coordination of the DNS; a significant role in some aspects of cybersecurity that concern the DNS but do not affect it directly; and barely a role, if any, in the provision of direct access to the Internet, according to ICANN's own clearly bounded remit.

Indeed, the Internet has seen a constant set of challenges arise, and, to address these challenges,[103] both formal and informal institutions and relationships have arisen (and some, already, have gone away).[104] The Panel expects this trend to continue as the Internet globalizes. True to this tradition, ICANN was created to give a dedicated home to the function of coordinating the system of unique identifiers of the Internet after the Internet itself was open for commercial activity in the mid 1990s. ICANN, along with many other institutions closely associated with the Internet, emerged from multi-stakeholder discussions and initiatives driven by the growth and adoption of the Internet and its technology and, especially, its use in the private sector and by individuals. The latest and prime example of emergence based on need is the IGF that was created out of the extensive debates of the WSIS and WGIG, in order to allow the continuation of a

[101] Sponsored by the U.S. Defense Advanced Projects Agency (DARPA) starting in 1968 as an experiment for computer resource sharing.

[102] Laura DeNardis, "The Global War for Internet Governance" *Yale University Press,* 2014, at 45.

[103] *See* Andrew L. Russell, "'Rough Consensus and Running Code' and the Internet-OSI Standards War," *IEEE Annals of the History of Computing*, 2006, *available at* http://doi.ieeecomputersociety.org/10.1109/MAHC.2006.42; and Andrew L. Russell, "OSI: The Internet that Wasn't," *IEEE Spectrum* (July 30, 2013), available at http://spectrum.ieee.org/computing/networks/osi-the-internet-that-wasnt

[104] For example, the Commercial Internet Exchange (CIX) was the center of the commercial Internet universe in 1995, but it expired in 2001. The National Science Foundation Network (NSFNET) was retired in 1995. ARPANET was terminated in 1990. The Internet Configuration Control Board (ICCB) became the Internet Activities Board that then became the Internet Architecture Board (IAB). Most of the NSF-sponsored intermediate level networks have long since expired or been acquired by larger ISPs.

multi-stakeholder dialogue on the various public policy issues related to the Internet and in particular its use – and misuse.

If one had to select one word to characterize the Internet governance ecosystem it would have to be *diversity*. The system is populated by individuals, small or large formal and informal groupings, organizations and institutions drawn from the private sector, academia, civil society and governments, as well as intergovernmental and non-governmental organizations across the globe. As depicted in Figure 8, this array of actors and institutions helps produce tensions--but also opportunity. Such actors find some utility from connection to the global Internet and create a positive feedback loop, a network effect, for others to connect that further popularizes its adoption. In this case, as RFC 1958 points out, "connectivity is its own reward" and drives demand for the adoption of the open standards that simultaneously encourage both interoperability and competition.[105] This diversity of interests, not all of which may be aligned and which may also change over time - have evolving needs and wants that generate the symptomatic 'tension and friction' associated with successful 'permissionless innovation'. Any kind of sustainable Internet governance regime is going to have to take into account the diversity of these entities in the ecosystem and the interests that motivate their actions.

The actors in the Internet's ecosystem may also have overlapping interests and authorities, just as in any complex ecosystem. The rapid flux and movement of technology and policies may create a *dynamic friction* among the actors resulting from real or perceived overlaps. There may also be *static tensions* between actors should their issues find no clear resolution or manifest in diametrically opposed directions. This friction and tension is good, in so far as it helps drive the need for further innovation. A functioning governance regime should not seek to eliminate all these 'tussles'[106], but instead, to moderate them in productive way so as to help identify the problems and then, as a concrete next step, to help reduce the problem to workable pieces and resolve them. In other words: good engineering.

A well-functioning forum can convene actors of different interests, promote discussion between and among the actors, and then reduce the negative effects that arise from conflicts. The panel found it useful to visualize some of the tensions among actors with a triangular diagram shown in Figure 8 below.

[105] Brian Carpenter, "Architectural Principles of the Internet" *IETF RFC 1958*, Jun 1996, *available at* http://www.ietf.org/rfc/rfc1958.txt

[106] David D. Clark, *et al.*, "Tussle in Cyberspace: Defining Tomorrow's Internet" *IEEE/ACM Transactions on Networking*, Vol. 13, No. 3, Jun 2005, *available at* http://groups.csail.mit.edu/ana/Publications/PubPDFs/Tussle%20in%20Cyberspace%20Defining%20Tomorrows%20Internet%202005%27s%20Internet.pdf

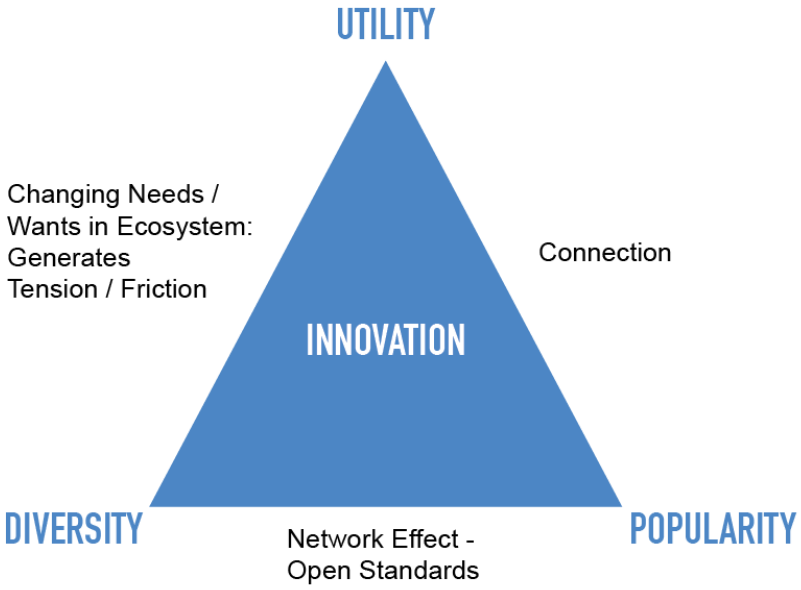

Figure 8: Tensions Among Actors in the Ecosystem

An important aspect of the Internet governance ecosystem is therefore the way in which authority and responsibility for the governance of the Internet is distributed among numerous actors and structures and understanding them within their complex network of interests. The distribution of responsibility among institutions in the ecosystem creates resilience for the Internet's governance in the same way that the Internet itself is resilient because of its distributed architecture. Navigating the ecosystem is difficult, and for this reasons, actors within it must adhere to a strong sense of principle-based leadership. We turn to some of these suggested principles in the next section.

6. Principles for ICANN in this Ecosystem

There may never be and perhaps never should be a single "constitutional moment" for the Internet, or for ICANN. In Annex B, below, we outline some of the efforts that have taken place in the past 15 years, including some of the principles that have been proposed within the context of the current ICANN Strategy Panels. The Panel set out to identify principles to guide ICANN in its evolution within the Internet ecosystem, as one of the most important tasks in our charge. To achieve this goal, the Panel analyzed exhaustively the bewildering number and diversity of sets of principles proposed over the recent years for ICANN, for Internet governance as a whole, and for subsets of it such as Internet freedoms or human rights. We also examined thoroughly the principles and values established in the ICANN foundational statements and Bylaws.

From this study we identified a set of proposed principles that would apply generally to Internet governance organizations and mechanisms, and the form in which they would apply specifically to ICANN.

In the following paragraphs we state and describe these principles. In some cases, where there is a significant further differentiation for the application of a principle specific to ICANN this is stated explicitly. The Panel proposes a set of principles in the context of "5 Rs." These are: (a) Reciprocity, (b) Respect, (c) Robustness, (d) Reasonableness and (e) Reality. Each are described below.

a) Reciprocity: Do no harm nor threaten to harm

The Internet and its governance mechanisms are characterized not by a top-down hierarchical model, but instead, by a web of complex relationships between and among different stakeholders. The ecosystem is in a constant state of flux and the actors within should always keep in mind the objective of constantly enhancing the stability, security and resilience of the Internet. And they must do so in a way that anticipates and expects reciprocity from other actors. In Figure 5 we present a view of the "web of relationships" that exist in the Internet ecosystem. The figure is merely illustrative; it does not include all of the actors in the Internet ecosystem. However, all organizations involved in Internet governance should be focused on the objective of improving the stability, security and resilience of the Internet, by proactive, thoughtful action, and, reflexively, by avoiding damaging omission. They may go about their approaches in different ways, but a principle of **reciprocity** will help assure that actors behave and take actions with others in the same way that they, themselves, would expect to be treated in the ecosystem.[107]

b) Respect: Honor freedom of choice and diversity

As we've described above, the complex web of relationships in the ecosystem requires that all actors engage with each other in a respectful way. As David Clark famously articulated in 1992, "We reject kings, presidents and voting." The absence of formal hierarchies and titles, then, implicates a profound need for inclusion, cooperation and collaboration.

Inclusion. All organizations involved in Internet governance must be inclusive, to the extent possible and which does not conflict with their mission. Inclusiveness is the ability to bring into the policy-development process (PDP) affected participants from all geographies, professions, fields of commerce and industry, ages, genders, ethnicities, disabilities,[108]

[107] *See* Request for Comments on the Internet Assigned Numbers Authority (IANA) Functions, National Telecommunications and Information Administration, Docket No. 110207099–1099–01, available at http://goo.gl/dGbByp. The RFC describes the shared responsibility as follows: "Given the importance of the Internet as a global medium supporting economic growth and innovation, continuing to preserve the security and stability of the Internet DNS remains a top priority for NTIA. This is a shared responsibility among all stakeholders in the Internet community."

[108] Added as per European Commission report (p.6): "In this context, the needs of persons with disabilities must also be taken into account," *available at*

etc. Inclusion and diversity must be managed with honesty and transparency, avoiding simulations and deliberate deceit and making false representations.[109]

Cooperation and collaboration. Organizations involved in Internet governance should act guided by the will to cooperate above the drive to compete among themselves. Internally they must incentivize cooperation and collaboration while promoting an environment that encourages competition among ideas, technology and business cases so that the best survive. The stakeholders must be granted a level field for competition, and cooperate in order to keep the ecosystem healthy and the total market expansive. Cooperation in this case has a hard boundary in the avoidance of oligopolies, collusion and other anti-competitive market practices.

For ICANN we believe that this means putting in place incentives for cooperation across all stakeholders, including the supporting organizations, advisory councils, board, and staff. The expansion of one group's participation must not occur at the expense of another's diminution.

c) Robustness: *Send conservatively and accept liberally*

The Internet and its governance mechanisms are very complex. Where possible, ICANN should borrow from the principles that have worked at the IETF in this context and adapt them. In particular, the "Postel Principle" suggests that actors in the ecosystem should be "be conservative in what you send, and liberal in what you accept.[110]" In the context of the IETF, this has become known as the "Robustness principle.[111]" It is by this methodology that the interactions between users, the various aspects of the technical community, and the issues within it are addressed. The Panel understands robustness as the ability of a system to continue to operate under wide variations of the prevailing conditions and recommend that this definition be tested for all Internet governance mechanisms and organizations.

We find that ICANN has been able to evolve continuously in the face of large variations in the number of participants, levels of stakeholder (including government) exchanges, dispute readiness, litigation, growth in the number of TLD registries, re-delegations, and many other externally-determined variables. The Panel recommends that future variations be planned to pass this strenuous test and that ICANN prefer to engage with others in such a way as to increase robustness.

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http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4453.

[109] One example of this that is prevalent in many areas is the concept of "astroturfing." This is the practice of hiring a third-party group to advocate for an issue, falsely giving the impression that the effort is a "grassroots," bottom-up initiative.

[110] Proposed by Internet pioneer Jon Postel, this concept is referred to variously as the "Postel Principle" or "Postel's Law" or the "Robustness principle." See §2, Paul Hoffman "Tao of IETF: A Novice's Guide to the Internet Engineering Task Force" *IETF*, Nov 2, 2012, *available at* http://www.ietf.org/tao.html [Hereinafter: Tao of IETF].

[111] "Robustness Principle" Wikipedia, Nov 8, 2013, *available at* http://en.wikipedia.org/wiki/Robustness_principle.

As we note above, the robustness principle as articulated by Jon Postel in 1981 has withstood the test of time, in spite of valid criticisms about its limitations.[112] ICANN should hold itself to the highest standards while being as forgiving as possible of the failures of others to do the same. While striving to iterate, validate and simplify, ICANN's policy-making work can also embrace the Robustness principle and to avoid top-down mandates. The elements of the Robustness principle can be further seen through the lenses of technical rationality, the concept of "loose coupling," evolvability, simplicity and scaling, all briefly described below.

Technical rationality. All aspects of Internet governance must be firmly rooted in the technical rationality of the Internet, from its core design principles and standards, through their evolution, and into the operational aspects of scalability, efficiency, and SSR (Security, Stability and Resilience). The Internet is completely a man-made medium whose properties cannot simply be taken for granted. Its stewardship and governance determines its evolution; therefore it is a form of engineering that must be undertaken with the same care, subjected to the same constraints, and managed according to the same principles as any other Internet engineering project.

Loose coupling. The term "loose coupling" means that interactions among the components of the Internet governance ecosystem are based on knowledge of relevant information stemming from different components as well as foresight for their impact, but not in a strictly mandated coordination except when and where indispensable. By loosely coupling the relationships, robustness is more likely because the actors are not bound by any artificial constraints. Loose coupling embraces complexity and provides better tools for response to complexity and for adaptation to changes than a top-heavy, inflexible and strictly mandated construct. Organizations and mechanisms for Internet governance should use this principle for flexibility, strength and resilience. We illustrate some examples of loose coupling in Figure 7, which demonstrates the relationships that ICANN has with many other actors in the ecosystem. Note that many of these relationships are not based on any firm contractual obligation, but instead based on memoranda of understanding and collaborative practice.

Evolvability and Business Excellence. All Internet governance mechanisms must be prepared for the Internet's own evolution, the evolution of the subject matter of their action, and the mechanism and corresponding organizations' own capacity to adapt and evolve in a timely fashion. This may even mean that ICANN may need to be prepared for the possibility that its function and business model may become unnecessary at some point in the future. Evolution is not synonymous with mission creep; instead, it should be viewed in the context of a systematic effort to develop a culture of operational and organizational

[112] Note that the Postel Principle is not perfect for all uses, and as Steve Crocker has pointed out, it is not a good principle for many security-related topics. The Panel believes that it is, however, a valid principle in the context of human engagement within the ecosystem. For another view, see Eric Allman, "The Robustness Principle Reconsidered" *ACM Queue*, Jun 22, 2011, *available at* http://queue.acm.org/detail.cfm?id=1999945

business excellence allowing ICANN and its related constituencies to adapt to changing conditions and requirements in the Internet ecosystem.[113] This focus should be on the long-term stability and responsibility for the IANA functions based on successful and established 'Business Excellence' criteria. ICANN should prepare for the possibility that itself---as well as other organizations in the ecosystem---will split into component parts, spawn new organizations, or, in the opposite direction, merge totally or partially, or dissolve and disappear. In a sense, certain aspects of ICANN may be in perpetual "beta" stage and never fully baked, reflecting the nature of the Internet itself.[114]

Simplicity. Internet governance is concerned with the governance of a complex system and is therefore bound to become complex in itself. Further complexity arises from the multiple problem spaces it comprises and the corresponding multiple, interacting loci of governance. In so far as is possible, Internet governance mechanisms must seek the minimal addition of complexity to this system. Yet, ICANN should not be satisfied with the complexity and ICANN should constantly and proactively iterate, validate, simplify its own processes---particularly as a mechanism to encourage the participation of others that aren't within the ecosystem. Nothing should be considered to be sacrosanct, and the organization should seek to iterate and validate its own evolution. As the system becomes more complex, the organization should constantly seek simpler solutions so long as they comply with all other principles. ICANN should constantly strive to remove artificial barriers for participation and engagement in the community. Some of the key actions in this regard should include work towards minimizing the many acronyms that represent various functions, and to make the history of ICANN (and the 40,000 documents for which it is the custodian) more easily searchable and accessible externally.

Scaling. The Internet's impressive scalability is based and reflected in the scalability of many of its components and must be preserved and enhanced. The scale factors for each aspect of Internet governance must be determined in advance, as far as possible. Among these are the number of connected points affected.[115] Alternative mechanisms to substitute for the original plans must be instituted in advance, with all characteristics of good Internet governance (for example, the evolution of manual processing to automation). ICANN must monitor and adjust its internal procedures and structures for scaling with respect to scale factors such as the number of new gTLDs placed in the root, the number of disputes including lawsuits, failures at compliance, reorganization of constituencies (both disaggregations and regroupings), attacks on the DNS to which ICANN can contribute a response, staff size, number of offices, etc. Scaling must also occur across stakeholders, geographic boundaries, and cultural values.

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[113] There are many ways to accomplish the objective of business excellence, through the application of various best practices that should be explored. *See* "Business Excellence", *Wikipedia*, Jan 16, 2014, *available at* http://en.wikipedia.org/wiki/Business_excellence

[114] Tim O'Reilly, "What is Web 2.0," *O'Reilly.com*, Sep 30, 2005, *available at* http://goo.gl/ognr. The author describes the perpetual beta as follows: "The open source dictum, 'release early and release often' in fact has morphed into an even more radical position, 'the perpetual beta,' in which the product is developed in the open, with new features slipstreamed in on a monthly, weekly, or even daily basis."

[115] Examples include individual users, computers, devices, "things" (as in the "Internet of Things"), parties in contention, bandwidth, layers, etc.

d) Reasonableness: Avoidance of capricious or arbitrary decisions

The legitimacy of any governance system depends on the trust that the participants place in the process, the decisions, and the outcome. It would be rare to achieve unanimous support of any action, the hallmark of a trusted system is one where reasonable people can have different opinions. In order for reason to prevail, the Panel believes that stakeholders must have faith in ICANN's transparency, accountability, subsidiarity, and fairness. Each are described below.

Transparency. Internet governance demands transparency for the sake of the principle itself, as a universal one, and for the functions it serves, such as evaluation of compliance with other principles and to be commensurate with the transparency that the Internet has engendered elsewhere. All Internet governance mechanisms and organizations must comply with this principle. ICANN must continue to evolve and adapt its mechanisms for transparency and to demand increasing transparency from the individuals and organizations that shape its decisions. Transparency and effectiveness may be at odds at times since transparency often is interpreted to demand extensive documentation *ex-ante* and *ex-post*. A balance that does not sacrifice effectiveness is a dynamically changing goal to be pursued.

Accountability. All organizations and mechanisms involved in Internet governance must be held accountable to stakeholders on a regular basis. The diversity of problem spaces and mechanisms of Internet governance necessitates a large diversity of mechanisms of accountability. The accountability mechanisms must be strong enough to be able to mandate change in the organization. Accountability refers to, among others, the ability to explain the rationale behind decisions, particularly to affected parties. Although we note that the accountability does not mean that there are multiple levels of recourse to the point where every decision has layers upon layers of appeal. It does, however, mean that any group within ICANN that issues a decision should have a clear path for recourse. Additionally, in order to satisfy the goal of transparency, decisions that are reconsidered, appealed, or stalled should be reported through a public set of metrics.

Accountability and transparency should, of course, be understood as cutting two-ways, thus obligating accountability and transparency on the parties demanding them. Equally, the ability to influence policies in an Internet governance organization or mechanism must be proportional to either the solidity of the principles espoused or the commitment of the parties to the outcome of the change. This reinforces and expresses in action the reciprocity principle recommended above.

Subsidiarity. All Internet governance decisions must be made at the right locus: one where the relevant stakeholders converge on an equal basis, that is relevant for the problem to be solved by the decision, that is sustainable, and that can have the maximum effect possible. To this end, subsidiarity is an organising principle of decentralisation---that matters ought

to be handled by the smallest, lowest, or least centralised authority capable of addressing that matter effectively. In Internet governance, subsidiarity is closely related to the layered architecture of the Internet already discussed above. As much as possible, decisions must be confined to a single layer, or the least contiguous layers possible. ICANN's decisions are concerned with the central coordination of the DNS and the IP address allocation system, and the repository of IETF protocol parameters. For the purposes of subsidiarity, "policy" in ICANN means the removal or reduction in possible arbitrariness (or perception thereof) or discretion as its work relates to the DNS. Governance and enforcement should be applied as close as possible to the layer(s) in which problems requiring governance arise. In the case of user-centric problems, in particular, the solutions should be addressed as close to the user as possible.

Fairness. Organizations involved in Internet governance must operate and act with fairness for all parties which take part in their decision-making and operation, as well as vis-á-vis other organizations. To the maximum extent possible they must work with reciprocity; an organization that invites another one into its processes, or is open to its participation on an equal footing to other participants, should be entitled to similar reception in the other organization. On the other hand, repeated refusal to cooperate, failures on fairness, and lack of reciprocity should not be rewarded. ICANN should operate with fairness -- as established in section 2.8 of its Bylaws,[116] "making decisions by applying documented policies neutrally and objectively, with integrity and fairness,"-- and seek collaboration and openness in other Internet governance stewards. If this cooperation is denied, ICANN should be entitled to adjust the conditions of the relationship with such parties.

e) Reality: Persistent Testing of Theories in Practice

Internet governance has been developed through a heuristic approach (i.e., experience-based techniques for problem solving, learning, and discovery) and should continue to evolve this way in the future. History shows that there is no clear way to create a single, one-size-fits-all mechanism for any industry, and Internet governance is no exception. Even if it were possible to create a single Internet governance mechanism, it is not clear that it is necessary to do so. The distributed nature of the Internet's implementation and the communication among many bodies contributing the Internet's operation demonstrate the feasibility of a flexible collaborative model, even knowing that mistakes will be made. This is the nature of a "beta" system that is constantly evolving, improving, and "running code." This means that global, multistakeholder governance does not always need to result in a rule or decision, so long as there is a clear heuristic process for reaching a conclusion. Some topics may need some time to be defined, or be so broadly agreed that the need to be specific is important, but secondary. ICANN's internal governance decisions must be made according to documented procedures; this includes changes in said procedures.

[116] "Making decisions by applying documented policies neutrally and objectively, with integrity and fairness." *See* Article 1, Section 2.8, Bylaws for the Internet Corporation for Assigned Names and Numbers, *available at* http://www.icann.org/en/about/governance/bylaws

Form follows function. Internet governance mechanisms and institutions must be oriented to facilitate the operation and evolution of the Internet as an interoperable 'network of networks' based on the IP protocol or an eventual successor to it, "based on the full participation of all stakeholders," per the Tunis Agenda.[117] The organizational structure, mechanisms for action, decision-shaping, -making, -review, and –recourse must follow the function of the mechanism or organization. ICANN was designed for its mission and, in the constellation of Internet governance related organizations, is shaped following function. Further changes must follow the principle.

Effectiveness. Internet governance mechanisms and organizations must be effective in achieving their declared mission. They must be able to reach decisions and enact them efficiently, with enough foresight that major side effects which could be foreseen by themselves or others are avoided and the ability to reverse decisions that have undesired, negative consequences in a graceful manner, *i.e.* without leaving a wake of irreversible damage. The Panel believes that one of the things that ICANN can do to maintain its effectiveness is to engage in the governance ecosystem in the areas where it is relevant, while exercising deference to others for their topics. In other words, stick to the mission and avoid mission creep. For more details on the Panel's view of ICANN's location in the ecosystem, see Section 4.

Learn from history. The history of Internet governance is brief (the term itself continues to be disputed), yet intense. Notwithstanding the relatively short time that Internet governance has existed as a discipline, there are important related subjects whose history is relevant for Internet governance, both as lessons on what not to do and what to do. These topics include broad areas of network economics, international relations, the doctrine of essential facilities, intellectual property policy and the study of the commons. Recourse to these histories is mandatory in order to avoid repeating known mistakes. Within this context, Internet governance actors must also move forward and innovate where this is called for. In Annex A, we have outlined the historical engagement of ICANN and the U.S. government in the governance space. This historical background demonstrates the trend toward globalization.

7. Roadmap towards Globalization of ICANN

ICANN's role as a steward for specific functions means that it can not and should not address all of the Internet's issues. Like all institutions in the governance ecosystem, it is crucial that ICANN understand its role, where it sits within the layered model, and strive to optimize its effectiveness in that place. Like any organization, ICANN has a number of

[117] Tunis Agenda, cited *supra.*

interests that are immediately linked to its work, as well as others that find themselves at different places within its circle of interests.

a) Globalize, not Internationalize

ICANN has responsibility for the administration of key components and registries of the transnational Internet. Despite its U.S. government origins, the Internet's design, implementation and operation had primary roots in the academic and private sectors. Its architecture and usage are largely non-national in character and this has yielded institutions that reflect a global but not necessarily international (ie. inter-nation state) governance model. Countries are stakeholders, to be sure, but the structure of ICANN and its associated or related institutions are now and should become increasingly global or regional in scope. We are reminded once again that form follows function.

b) Consolidation and Simplification of DNS Root-Zone Management

The globalization of Internet's critical resources continues, and ICANN is facing one of the critical next steps: the stability of the DNS root zone. It has also become apparent that the current structure of IANA functions contract, with its exclusive involvement of NTIA, has become inconsistent with the global multistakeholder governance model that the Panel and the U.S. government endorse.[118] The Panel sees the issues related to the protection of the root-zone system and the IANA functions contract as matters that should be addressed holistically. Transparency and accountability principles should dictate a high degree of public visibility for this process.

The multistakeholder community has been working on this question as well. Although the /1net group has not yet made a specific set of recommendations, as of January 31, 2014, the /1net participants observed that in the past past "[a] number of potential solutions have been proposed; however, there has been no consensus that any of them are broadly acceptable."[119] The /1net discussions also resulted in the production of several "criteria" that could be used to measure acceptable solutions. The criteria outlined are as follows:

1. Support of a single, unified root zone
2. Integrity, stability, continuity, security and robustness of the administration of the root zone
3. Protection of the root zone from political or other improper interference
4. Widespread trust by Internet users in the administration of this function
5. Agreement regarding an accountability mechanism for this function that is broadly accepted as being in the global public interest[120]

The Panel found the articulations noted above to be insightful and consistent with points that were raised during the two public consultations that the Panel held in the preparation of

[118] NTIA White Paper, cited *supra* at Note 17 *et seq.*
[119] /1net listserv, cited *supra.*
[120] /1net Listserv, cited *supra*.

this report. Although the development of a consolidation plan may take some time, ICANN could adopt and make public the criteria by which it will evaluate the development of a plan for the consolidation and simplification of root-zone management.

c) A Web of Affirmations of Commitments

Among the most important concepts discussed in the panel was the use of bilateral and possibly multilateral affirmations of mutual commitments to document the relationships among the players in the Internet governance ecosystem (see Section 5, Figure 5). The proposal was discussed at the IGF in Nairobi in 2011.[121] These affirmations cement and document mutual understandings and recognitions of roles and responsibilities. Fundamental to all such affirmations should be a commitment to stewardship as a guiding principle for all agreements.

The resulting web of documented relationships will create a flexible, resilient and defensible structure that can evolve over time and that has no central point of brittle control. The structure permits the creation and exit of ecosystem entities and variations of pairwise commitments without requiring wholesale agreement to changes by all ecosystem parties at once. This form of agreement could also create the means for achieving accountability among the committed parties.

AOCs with Non-Governmental Ecosystem Partners

It is vital that ICANN, the I* organizations, the Root Server Operators, the TLD operators (especially the ccTLD operators) and others document mutual commitments and respect for one another's roles in the Internet governance ecosystem.

The Panel recommends generally that ICANN develop tailored AOC texts to be used to establish bilateral or multilateral, documented relationships between and among ICANN and ecosystem partners that wish to participate.[122]

There are existing documents that can serve at least as a conceptual basis for these bilateral affirmations. The following IETF documents, known as Requests for Comments (RFCs)[123] represent a foundation from which the proposed affirmation of commitments mights be drawn: RFC 2860 and its partial successor RFC 7020;[124] the Memorandum of

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[121] *See* Bill Drake (moderator), "Institutional Choice in Global Internet Governance Media Change & Innovation Division," IGF Workshop hosted by IPMZ University of Zurich, Sep 29, 2011, *available at* http://www.friendsoftheigf.org/transcript/81. IN the Workshop, John Curran states: "And I guess so I would say the things I would take away is the fact that [the Affirmation of Commitments] is an open model. People can see it and in theory I believe others could enter into a similar agreement, that is a possibility."

[122] Note that the Panel refers to these as AOCs, but they need not explicitly be AOCs, but could be an AOC-like commitment.

[123] *See* IETF, "Request for Comments", *available at* https://www.ietf.org/rfc.html.

[124] "Memorandum of Understanding Concerning the Technical Work of the Internet Assigned Numbers Authority," *IETF RFC 2860*, Jun 2000, *available at* http://tools.ietf.org/search/rfc2860 and "The Internet Numbers Registry System," IETF RFC 7020, Aug 2013, *available at*

Understanding among the RIRs and ICANN; the establishment of the Numbers Resource Organization through mutual agreements among the RIRs and ccTLD operators; and the ICANN/NTIA AOC.

ICANN AOCs with Governments

In the case of ICANN relationships with governments, it is recommended that a common Affirmation text be established so as to achieve egalitarian treatment. It is possible that the GAC can be of assistance in helping to craft the text of such a common document.

The Panel notes that there have been 31 Congressional hearings on the DNS and ICANN in the U.S. since 1997, and with all of this lawmaker interest, there has been no legislation to require any exclusive management or oversight by the U.S. government.[125] At the time the AOC was signed, the government stated the rationale as follows:

> NTIA and ICANN co-signed an [AOC] that completes the transition of the technical management of the DNS to a multi-stakeholder, private-sector-led model. The [AOC] ensures accountability and transparency in ICANN's decision-making with the goal of protecting the interests of global Internet users. The [AOC] also establishes mechanisms to address the security, stability, and resiliency of the Internet DNS as well as promote competition, consumer trust, and consumer choice.[126]

d) Globalize the Process for Accountability within a Web of Relationships

The Panel has recommended in Section 5 that ICANN continue to see itself in the evolving Internet ecosystem as part of a web of relationships. Similarly, the Panel recommends enabling more opportunities for all stakeholders to join the web of relationships through mechanisms like mutual AOCs. The question of how to address accountability within this web of relationships is a complex one, and each of the parties to an AOC may have different preferences for accountability.

We posit the idea of *accountability panels* whose membership and processes are agreed by parties to an AOC. The purpose of a panel is to provide recourse should a party to an AOC believe that another party has failed in some way that must be accounted for and that

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http://tools.ietf.org/html/rfc7020.

[125] Leonard Kruger, "Internet Governance and the Domain Name System: Issues for Congress," *Congressional Research Service*, Nov 13, 2013 at 19, *available at* https://www.fas.org/sgp/crs/misc/R42351.pdf.

[126] Press Release, "U.S. Dep't of Commerce, NTIA, Commerce's NTIA and ICANN Establish a Long-Lasting Framework for the Technical Coordination of the Internet's Domain Name and Addressing System," Sep 30, 2009, *available at* http://www.ntia.doc.gov/press-release/2009/commerces-ntia-and-icann-establish-long-lasting-framework-technical-coordinatio-0.

all other resolution mechanisms implied or explicit within the AOC have not yielded satisfaction. One of the challenges of an accountability panel may be the natural asymmetry of power between governments and ICANN (and the power asymmetry that governments have over most all stakeholders). For this reason, the implementation of accountability panels might be studied further to see if they could be set up in an internationally binding way, for example, in the way that arbitration matters are enforceable globally via the New York Convention of 1958.[127] As the web of affirmations becomes documented, another challenge arises from third-party beneficiaries who may not be parties to any particular documented arrangement. The resolution of these interests will similarly need to be analyzed in the context of further studies.

The term accountability panel should not be misunderstood as a necessarily *sui generis* creation. It might be a recognized arbitration entity, an agreed legal jurisdiction and litigation system, an existing recourse mechanism available to the AOC parties, or it might actually be a body created in consequence of the development of the AOC. What is important to emphasize is that this formulation allows for flexibility, experimentation, and choice of accountability enforcement. The Panel has observed that Mutual Legal Assistance Treaties (MLATs) are currently the main mechanism for addressing jurisdictional questions. There are many issues related to Internet governance that do not fit within the framework of MLATs, although this is an area that merits further study.[128]

In the case of the proposed common AOC between ICANN and governments, it is thought that a common choice would be preferable and that it might rely on a body or bodies with recognized skill in international arbitration. This choice might also satisfy the important task of assuring that ICANN's actions stay within the public interest. Charged with protecting public interest, governments could exercise international arbitration to resolve concerns about ICANN's decisions and the public interest, bearing in mind that the scope of ICANN's responsibility is confined by the descriptive language in the AOC.

Under its current AOC with the U.S. government, ICANN makes commitments for "accountability, transparency and the interests of global Internet users,"[129] to assure that ICANN is "[p]reserving security, stability and resiliency"[130] and for matters of "[p]romoting competition, consumer trust, and consumer choice."[131] The Panel recommends that ICANN undertake further analysis of accountability options.

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[127] Convention on the Recognition and Enforcement of Foreign Aribitral Awards, UN Conference on International Commercial Arbitration, 1958, also known as thee "New York Convention of 1958," *available at* http://goo.gl/hS3IQ6.

[128] See the Internet and Jurisdiction Project 2013 White Paper, *available at* http://www.internetjurisdiction.net/2013-white-paper/

[129] Affirmation of Commitments, cited *supra* at §9.1.

[130] *Id*, at §9.2.

[131] *Id*.at 9.3

8. Conclusions

The Panel believes that ICANN has a critical but confined role in the Internet ecosystem that is strongly bounded by its responsibility to manage the Root Zone of the DNS and delegation to top-level domain name registries, top-level assignment of Internet address space primarily to Regional Internet Registries (RIRs) and through them to Internet Service Providers (ISPs), and parameter registries in accordance to advice given to the IANA from the work of the IETF.

ICANN has an obligation to make progress documenting mutual relationships with and commitments to other entities in the Internet ecosystem; refining its internal practices in the pursuit of its excellence in operation and ensuring that it carries out its responsibilities in the global public interest.

The Panel believes that the actions found in the Roadmap (section 7) of this report represent concrete steps towards realizing the principles outlined in section 6. We recognize the evolving nature of ICANN's tasks and hope that this report will contribute to ICANN's ability to fulfill its obligations and the vision that created it in 1998.

ERRATA

A previous version said that ICANN assigns Internet address space to the Internet Service Providers. It is more correct to say that it assigns space to Regional Internet Registries who, in turn, assign address space to Internet Service Providers.

A previous version implied that parameters registries were maintained by ICANN's IANA on behalf of IETF and IAB. Only the IETF provides parameter registry guidance to the IANA.

ANNEX A: History Of ICANN And The Department Of Commerce (DOC)

Development of ICANN and its Relationship with DOC

The U.S. government has played a significant role in managing the DNS since the earliest days of the Internet. It became the early *de facto* controller of the DNS primarily due to its investment and innovation in packet-switching technology and payment of the costs associated with DNS management through government contracts.[132] DNS management was generally an *ad hoc* process performed by volunteers, the National Science Foundation ("NSF"), and government contractors.[133] IANA was managed by the Information Sciences Institute of the University of Southern California (USC), under a contract with the U.S. Department of Defense.[134] IANA was responsible for coordinating the assignment of IP addresses by allocating blocks of numerical addresses to regional IP registries.[135] IANA also had responsibility for assigning and maintaining a registry of the unique protocol assignments (*e.g.*, protocol numbers, port numbers, autonomous system numbers, and management information base object identifiers).[136] Another private government contractor, Network Solutions, Inc. (NSI), signed a cooperative agreement with NSF to manage the system of registering names for Internet users and maintained the .com, .org, and .net domains.[137] NSI, in consultation with IANA, was also responsible for control of the root system.[138]

As use of the Internet grew exponentially in the mid-1990s, DNS management became more complicated and businesses and foreign governments pressured the U.S. government to increase competition and privatize control over the DNS.[139] On July 1, 1997, as part of the Clinton Administration's Framework for Global Electronic Commerce, the President directed the Secretary of Commerce to privatize, increase competition in, and promote international participation in the DNS.[140] In response, in June 1997, the National Telecommunications and Information Administration (NTIA), an agency of the Department of Commerce (DOC), issued a Request for Comments (RFC) on "the current and future system(s) for the registration of Internet domain names."[141] Noting the central role the U.S. government played in the "initial development, deployment, and operation of domain name

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[132] U.S. Gov't Accountability Office, OGC-00-33R, Department of Commerce: Relationship with the Internet Corporation for Assigned Names and Numbers (2000), at 35, *available at* http://www.gao.gov/new.items/og00033r.pdf [Hereinafter: "GAO Report].

[133] "ICANN: The Debate over Governing the Internet", *Duke L. & Tech. Rev.* Iss. No. 2, 2001, at 5.

[134] GAO Report, at 17-18.

[135] *Id.,* at 3.

[136] *Id.,* at 5-6.

[137] *ICANN: The Debate over Governing the Internet*, *supra* note 2, at 5.

[138] *Id.*

[139] *Id.,* at 6.

[140] Management of Internet Names and Addresses, 63 Fed. Reg. 31, 741, Jun 10, 1998, *available at* http://www.ntia.doc.gov/files/ntia/publications/6_5_98dns.pdf

[141] Request for Comments on the Registration and Administration of Internet Domain Names, 62 Fed. Reg. 35,896, Jul 2, 1998, *available at* http://www.ntia.doc.gov/files/ntia/publications/dn5notic.pdf

registration systems," the RFC stated that "Internet expansion has been driven primarily by the private sector. The Internet has operated by consensus rather than by government regulation. Many believe that the Internet's decentralized structure accounts at least in part for its rapid growth."[142]

Following the RFC, the NTIA released "The Green Paper" in January 1998 seeking comment on a proposal to privatize the DNS management and "facilitate [the government's] withdrawal from DNS management."[143] According to the NTIA,

> The Green Paper proposed certain actions designed to privatize the management of Internet names and addresses in a manner that allows for the development of robust competition and facilitates global participation in Internet management. The Green Paper proposed for discussion a variety of issues relating to DNS management including private sector creation of a new not-for-profit corporation (the "new corporation") managed by a globally and functionally representative Board of Directors.[144]

NTIA received more than 430 comments to the RFC[145] and 650 comments to The Green Paper.[146] In response to the public feedback, NTIA released a Statement of Policy "White Paper" in June 1998 which called on the Internet community to form a private, not-for-profit corporation to manage DNS and the IANA function.[147] The Federal Register publication of the White Paper identified several statutory sources to support NTIA's authority for creating such an organization for DNS management. First, it cited a statutory section of Title 15 that authorizes the DOC to "foster, promote, and develop foreign and domestic commerce."[148] It also referenced several sections of the Telecommunications Authorization Act of 1992 that authorizes NTIA "to provide for the coordination of the telecommunications activities of the executive branch and assist in the formulation of policies and standards for those activities," "to develop and set forth telecommunications policies pertaining to the Nation's economic and technological advancement and to the regulation of the telecommunications industry," and "to conduct studies and make recommendations concerning the impact of

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[142] *Id.*

[143] Improvement of Technical Management of Internet Names and Addresses, 63 Fed. Reg. 8826 Feb 20, 1998.

[144] *See* Mgmt. of Internet Names & Addresses, 63 Fed. Reg. 31,741, 43, Jun 10, 1998, *available at* http://www.ntia.doc.gov/files/ntia/publications/6_5_98dns.pdf

[145] *Id.* at 31,742.

[146] Registration and Administration of Internet Domain Names – Summary of Comments, Docket No. 97061337-7137-01, Aug. 18, 1997, *avilable at* http://www.ntia.doc.gov/other-%20publication/1997/registration-and-administration-internet-domain-names-summary-comments-docket. The International Ad Hoc Committee organized by IANA, the Internet Society and other groups was among the private sector groups that submitted proposals. It proposed that a not-for-profit international consortium of competing registrars run a new registry out of Switzerland. *Also see* Establishment of a Memorandum of Understanding on the Generic Top-Level Domain Name Space of the Internet Doman Name System, Feb 28, 1997, *available at* http://www.itu.int/net-itu/gtld-mou/gTLD-MoU.htm

[147] *See* NTIA White Paper, cited *supra*.

[148] 15 U.S.C. at 1512.

the convergence of computer and communications technology."[149]

On November 25, 1998, DOC entered a Memorandum of Understanding ("MOU") with ICANN that formally recognized ICANN as the private, non-profit organization for which the White Paper called. The MOU also established a joint project (the "DNS Joint Project") under which ICANN and DOC agreed to design, develop, and test the mechanisms, methods, and procedures that should be in place and the steps necessary to transfer the U.S. government's technical management responsibilities to ICANN.[150] The parties amended the MOU (later referred to as the Joint Project Agreement ("JPA")) several times to refine the scope of the DNS Joint Project and to extend the term of the agreement.[151]

In 2009, ICANN and NTIA entered into an Affirmation of Commitments ("AOC"),[152] which served to replace the MOU/JPA as the overarching document reflecting the relationship between the U.S. government and ICANN.[153] In the AOC, DOC affirmed its commitment to "a multi-stakeholder, private sector led, bottom-up policy development model for DNS technical coordination that acts for the benefit of global Internet users,"[154] and ICANN committed, among other things,

> to adhere to transparent and accountable budgeting processes, fact-based policy development, cross-community deliberations, and responsive consultation procedures that provide detailed explanations of the basis for decisions, including how comments have influenced the development of policy consideration [;] . . . to provide a thorough and reasoned explanation of decisions taken, the rationale thereof and the sources of data and information on which ICANN relied[;] . . . [to] remain a not for profit corporation, headquartered in the United States of America with offices around the world to meet the needs of a global community; . . . to operate as a multi-stakeholder, private sector led organization with input from the public, for whose benefit ICANN shall in all events act[;] . . . [and] to maintain and improve robust mechanisms for public input, accountability, and transparency so as to ensure that the outcomes of its decision-making will reflect the public interest and be accountable to all stakeholders . . . .[155]

ICANN also made commitments on "preserving security, stability and resiliency" in the

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[149] 47 U.S.C. 902(b)(2)(H)-(I),(M).

[150] Memorandum of Understanding Between the U.S. Department of Commerce and Internet Corporation for Assigned Names and Numbersm Nov 25, 1998, *available at* http://www.ntia.doc.gov/page/1998/memorandum-understanding-between-us-department-commerce-and-internet-corporation-assigned-

[151] *See* DOC/ICANN Agreements: ICANN Memorandum of Understanding/Joint Project Agreement, *available at* http://www.ntia.doc.gov/page/docicann-agreements. The MOU, which was renamed the Joint Project Agreement in 2006, was replaced in 2009 by the Affirmation of Commitments. *See infra.*

[152] Affirmation of Commitments, cited *supra.*

[153] *See* A. Michael Froomkin, "Almost Free: An Analysis of ICANN's 'Affirmation of Commitments'," *J. Telecomm. & High Tech. L.,* Volume 9, 2001, at 187, 198, 203, 206-07.

[154] Affirmation of Commitments, cited *supra*, at 4.

[155] Froomkin, cited *supra*, at 200. The author quotes the Affirmation of Commitments, cited *supra*.

DNS,[156] and on "promoting competition, consumer trust, and consumer choice."[157]

Separate from the AOC (and the MOU/JPA before it), DOC and ICANN entered into a sole-source contract for ICANN to perform the technical IANA functions described above (the "IANA Contract"). The parties entered into the IANA Contract initially in February 2000,[158] and subsequently extended it several times.[159] The most recent contract award followed a Notice of Inquiry and Further Notice of Inquiry and a formal competition.[160] The current IANA Contract extension runs through September 2015.[161] DOC has the unilateral option to extend the contract through September 2017, and again through September 2019.

Trends Towards Government Divestiture of IANA Functions

In 1998, the White Paper set forth "the U.S. government's policy regarding the privatization of the domain name system in a manner that allows for the development of robust competition and that facilitates global participation in the management of Internet names and addresses," and indicated that DOC wished to pursue the privatization of DNS management.[162] Despite the aspirations expressed in the White Paper, DOC has not been able to relinquish its involvement in the IANA functions, owing in part to conditions in the Internet ecosystem mitigating against disengagement. Instead, DOC has continued to award procurement contracts for IANA management to ICANN, and its most recent request for comments through NTIA prior to the current contract does not reflect a clear desire for further privatization.[163] DOC has not made any recent formal statement regarding its intent to relinquish its formal role fully vis-à-vis the IANA Contract. For its part, NTIA held a public meeting in 2006[164] and solicited comments regarding transitioning DNS management to

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[156] Affirmation of Commitments, cited *supra*, at 9.2.

[157] *Id.* at 9.3

[158] IANA Functions Contract, Feb 9, 2000, *available at* http://www.ntia.doc.gov/files/ntia/publications/ianacontract.pdf .

[159] *See* IANA Functions Contract, Mar. 21, 2001, *available at* http://www.ntia.doc.gov/files/ntia/publications/sb1335-01-w-0650.pdf; *Also see* IANA Functions Contract, Mar 13, 2003, *available at* http://www.ntia.doc.gov/files/ntia/publications/ianaorder_03142003.pdf; *Also see* IANA Functions Contract, Aug. 11, 2006, *available at* http://www.ntia.doc.gov/files/ntia/publications/ianacontract_081406.pdf .

[160] Request for Comments on the Internet Assigned Numbers Authority (IANA) Functions, National Telecommunications and Information Administration, Docket No. 110207099–1099–01, *available at* http://goo.gl/dGbByp.

[161] *See* IANA Functions Contract (July 2, 2012), at F.1, *available at* http://www.ntia.doc.gov/files/ntia/publications/sf_26_pg_1-2-final_award_and_sacs.pdf.

[162] *See* White Paper, cited *supra.* The White Paper was published "in order to facilitate [the government's] withdrawal from DNS management").

[163] *See* Request for Comments on the Internet Assigned Numbers Authority (IANA) Functions, 76 Fed. Reg. 10,569, Feb 25, 2011, The RFC states: "Given the [impending expiration] of this contract, NTIA is seeking public comment to enhance the performance of the IANA functions in the development and award of a new IANA functions contract." *available at* http://www.gpo.gov/fdsys/pkg/FR-2011-02-25/pdf2011-4240.pdf.

[164] U.S. Dep't of Commerce, NTIA, Commerce's NTIA To Hold Public Meeting On Transition Of The Internet DNS To Private Sector, Press Release, Jul 25, 2006, *available at* http://www.ntic.gov/legacy/ntiahome/press/2006/dnstransition_072506.htm.

the private sector,[165] and continues to reiterate that it is committed to a multi-stakeholder approach in deciding what terms to require in each subsequent IANA contract,[166] particularly with regard to security.[167]

The AOC signed by NTIA and ICANN in September 2009 could represent the most significant development in the trend toward divestiture.[168] At a minimum, the AOC is symbolically important given how the parties characterized it at the time it was signed:

> NTIA and ICANN co-signed an [AOC] that completes the transition of the technical management of the DNS to a multi-stakeholder, private-sector-led model. The [AOC] ensures accountability and transparency in ICANN's decision-making with the goal of protecting the interests of global Internet users. The [AOC] also establishes mechanisms to address the security, stability, and resiliency of the Internet DNS as well as promote competition, consumer trust, and consumer choice.[169]

The AOC does not replace the IANA Contract. Instead, the two documents exist simultaneously—while the AOC was signed in 2009, the IANA Contract was again renewed in 2012. As such, an active procurement contract between the U.S. government and ICANN remains in force, despite the parties' stated intent that the AOC govern the technical management of the DNS.[170]

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[165] The Continued Transition of the Technical Coordination and Mgmt. of the Internet Domain and Addressing Sys., 71 Fed Reg. 30,388, May 25, 2006, *available at* http://www.ntia.doc.gov/legacy/ntiahome/domainname/dnstransition.html .

[166] *See* Request for Comments, cited *supra*, at 10570 The RFC states: "NTIA recognizes that the IANA Functions Operator [i.e., ICANN], in the performance of its duties, requires close constructive working relationships."

[167] *Id.* Explaining as follows: "Given the importance of the Internet as a global medium supporting economic growth and innovation, continuing to preserve the security and stability of the Internet DNS remains a top priority for NTIA. This is a shared responsibility among all stakeholders in the Internet community."

[168] Affirmation of Commitments, cited *supra*.

[169] "U.S. Dep't of Commerce, NTIA, Commerce's NTIA and ICANN Establish a Long-Lasting Framework for the Technical Coordination of the Internet's Domain Name and Addressing System," Press Release, Sep 30, 2009, *available at* http://www.ntia.doc.gov/press-release/2009/commerces-ntia-and-icann-establish-long-lasting-framework-technical-coordinatio-0.

[170] Froomkin, cited *supra*, at 206-07.

ANNEX B: There May Never Be a Single "Constitutional Moment"

In developing the principles that the Panel has proposed, the Panel formed a subgroup to review Internet governance principles broadly, and the subgroup offers this supplementary observation about the calls for a "Constitutional Moment" for the Internet. As is well known, the many processes started by or around the World Summit on the Information Society (WSIS) and the Internet Governance Forum (IGF) have given rise to numerous attempts to codify principles to norm Internet governance, mostly globally. Up to now, none have been adopted universally. However, 2014 may be the year where the community makes progress on alignment, even if the alignment is only loosely coupled. To this, the Panel asks: how are principles developed in Internet governance, and will there ever be a single "constitutional moment?" Should the Internet community push for such a moment?

In short, the Panel's observation on this point is both yes and no. Yes, the Internet community should continue to strive for principles and to the extent possible, to extend those principles as universally as possible within the governance ecosystem. But no, the community should not consider this effort to culminate in a single *constitutional* event and the community should not wait for any particular *moment*. Progress in the Internet governance ecosystem need not to be defined by a single constitutional moment, but by the smaller instances in which actors contribute principles to the ecosystem. For now, the Panel is content with this "good enough governance.[171]" As we describe below, the process of establishing, testing and working with principles should be an ongoing one that is always being improved. A study of constitutional practice, amendments and rewrites has helped us to reach this conclusion.

a) Principles and Constitutions

The process of proposing and gaining consensus on Internet principles is one of the most complicated ongoing efforts in Internet governance---it has not yet resulted in consensus and it may never do so. This doesn't mean that the effort is futile; to the contrary, discussions on principles is crucial to any participatory governance process. However, because of the philosophical nature of principles, the many valiant efforts to develop global principles is ongoing and unlikely to resolve anytime soon. It may never be resolved. Indeed, if we analyze the idea of principle drafting with constitutions, we see that their

[171] Stewart Patrick, "Unruled World: the case for good enough global governance," *Foreign Affairs*, Jan/Feb 2014, *available at* http://www.foreignaffairs.com/articles/140343/stewart-patrick/the-unruled-world. The author explains as follows:

> A decade ago, the Harvard scholar Merilee Grindle launched a broadside against the lengthy list of domestic good-governance reforms that the World Bank [...]. She implored international donors to put their long, well-intentioned checklists aside and focus instead on "good enough governance." Rather than try to tackle all problems at once, she suggested, aid agencies should focus on achieving the minimal institutional requirements for progress. This advice to lower expectations and start with the necessary and possible is even more applicable in the international sphere, given all the obstacles in the way of sweeping institutional reform there.

setting and resetting happens all the time. Like the real world, perhaps the virtual world -- the Internet -- can have multiple sets of principles, and an ongoing, always-evolving set of constitutions?

In many occasions, the Internet community has made analogies between the need to set principles and have called for a "constitutional moment." David Post made a relatively famous call for this in 1998.[172] Ten years later, Susan Crawford declared that "[t]his year, 2008, is a constitutional moment for ICANN."[173] At the IGF in Nairobi, the Council of Europe held a workshop that also looked at the need for a Constitutional moment.[174] And now, in 2014, the ICANN Strategy Panels are looking at principles and it has been announced as one of the top agenda items for the Global Multistakeholder Meeting on the Future of Internet Governance in Brazil. In fact, codes of ethics and principles have been a permanent feature of the Internet's evolution.

Many very large countries have never finalized their constitutions (e.g., the United Kingdom and Israel), and every year, there are 5-6 complete rewrites of constitutions around the globe. Other countries like France seem to be in a constant state of rewriting. At the University of Chicago, Thomas Ginsburg, Zachary Elkins and James Melton have said that constitutions are "fragile mechanisms." They point to the following joke: "a patron goes into a library and asks for a copy of the French Constitution, only to be told that the library does not stock periodicals."[175] After studying world's constitutions, Ginsberg and his co-authors determined that the mean lifespan of constitutions since 1789 is 17 years. In fact, the time is shorter in some regions: "Our current analysis suggests that the mean lifespan in Latin America (source of almost a third of all constitutions) and Africa is 12.4 and 10.2 years, respectively, with 15 percent of constitutions from these regions perishing in their first year of existence."[176]

If the development of Internet principles is anything like constitutions, then there may never be a magical "moment" where the constitution is written. Alternatively, the principles may be in a permanent draft phase and never reach full consensus, but still be workable (a "beta phase" for principles). Or, a constitutional moment may have in fact already happened at WSIS in 2005. It is possible that, in spite of the many calls for a singular constitutional moment, the development of the Internet's constitution has been ongoing for decades (long before the Internet was conceived), and it may continue for the next several decades. As constitutional scholar Lawrence Tribe points out, a constitution should be designed in a way that it "protects people, not places."[177] Thus, the process of drafting principles itself,

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[172] David G. Post, "Cyberspace's Constitutional Moment" *The American Lawyer*, Nov 1998, *available at* http://www.temple.edu/lawschool/dpost/DNSGovernance.htm

[173] Susan Crawford, "ICANN's Constitutional Moment," *Publius*, May 20, 2008, *available at* http://publius.cc/icanns_constitutional_moment.

[174] Council of Europe, "Human Rights come first – a 'constitutional moment' for Internet governance?" *IGF Report for Workshop 144*, Sep. 27, 2011, *available at* http://goo.gl/yQj08A

[175] Thomas Ginsburg, Zachary Elkins, and James Melton, "The Lifespan of Written Constitutions," *The Record Online* Spring 2009, *available at* http://www.law.uchicago.edu/alumni/magazine/lifespan

[176] *Id.*

[177] Laurence H. Tribe, "The Constitution in Cyberspace," *Proceedings from the Conference on*

could be just as valuable (or more valuable) as reaching a time when things are permanently written into a single universally agreed document.

Recognizing the lack of permanence Constitutions and the ever-changing "perpetual beta" nature of the Internet would be consistent with the Panel's recommendation in Section 6 of the main report regarding *evolvability and business excellence*. The setting of guiding principles embraces the value of loosely coupled arrangements, where ambiguity and informality can be desirable qualities, even if this informality can create discomfort. In any case, the reality is that constitutions and the principles within them are often made anew, changed, discussed, or maybe never addressed. Thus, the Country of Bhutan may have been in inhabited as early as 4,000 years ago, but wrote its first Constitution only in 2008.[178] In the United States, there have been 11,539 attempts to amend the Constitution and only 27 have passed.[179] The Snowden revelations also revealed to the world that the United Kingdom does not provide a constitutional guarantee of press freedom.[180]

b) Trends in Principles Drafting

The principles that the Panel have proposed are in many ways a compilation of other principles that come from scholars that have studied the principle-setting effort in governance. Some of the key sources include: the study from Jeonghyun Baak and Carolina Rossini;[181] a comparison table created by Wolfgang Kleinwächter;[182] and the principles recommended by the OECD,[183] Internet NZ,[184] and CGI Brazil[185] (these last two are of national reach only). Several companies from private sector has recently weighed in (AOL, Facebook, Google, LinkedIn, Microsoft, Twitter and Yahoo!) with a proposal of five principles,[186] and as the Panel finalized its report, another set of principles has been proposed by the Strategy Panel chaired by Beth Noveck.[187]

Computers, Freedom & Privacy, Mar 1991, *available at* http://goo.gl/GnIsw3.

[178] Neil Fraser, Anima Bhattacharya, and Bimalendu Bhattacharya, Geography of a Himalayan Kingdom: Bhutan," Concept Publishing, 2001. *Also see* "Mix and Match: Countries Change their Constitutions Often. There's an App for That," *The Economist,* Nov 9, 2013, *available at* http://goo.gl/expV6Z

[179] U.S. Senate, Measures Proposed to Amend the Constitution, *available at* http://goo.gl/oYi9vv.

[180] NYT Editorial Board, "British Press Freedom Under Threat," *New York Times*, Nov 14, 2013, *available at* http://goo.gl/DyuaAB.

[181] Jeonghyun Baak and Carolina Rossini, "Issue Comparison of Major Declarations on Internet Freedom," Summer 2013, *available at* http://goo.gl/PNcnkV

[182] Wolfgang Kleinwächter, "Internet Governance Outlook 2014: Good News, Bad News, No News?" *CircleID*, Dec 31, 2013, *available at* http://www.circleId.com/posts/20131231_internet_governance_outlook_2014_good_news_bad_news_no_news/

[183] Recommendation of the Council on Principles for Internet Policy Making, *OECD*, Dec 13, 2011, *available at* http://goo.gl/2dUJhG [Hereinafter: OECD Principles]

[184] "Principles," *InternetNZ*, *available at* https://internetnz.net.nz/principles

[185] "Principles for the Governance and Use of the Internet, Resolution," CGI.br RES/2009/003/P, *available at* http://www.cgi.br/regulamentacao/pdf/resolucao-2009-003-pt-en-es.pdf

[186] *See* Reform Government Surveillance website, *available at* http://www.reformgovernmentsurveillance.com/

[187] "Quest for a 21st Century ICANN: A Blueprint," *The GovLab*, Jan 31, 2014, *available at* http://thegovlab.org/the-quest-for-a-21st-century-icann-a-blueprint/ [Hereinafter: GovLab Blueprint]

Independent researchers lead the way in the analysis. The work of Baak/Rossini and Kleinwächter are particularly notable because they capture, within their analysis, most all of the other principles that have been proposed. This reduces the need for us to select specific examples to highlight, and allows the researchers who have done this work to continue their analysis.

Although independent researchers are doing good work to analyze the trends and to propose consensus items, there are at least three notable exceptions that we make to the observation above. The first is the OECD, because the recommendation represents a consensus of more than 30 countries (although we note that the OECD view is not reflective of developing economies).[188] The second exception are the principles from CGI Brazil, which we include because of their time-tested nature and application in the country, and the likely discussion of them in months to come. Further, some of the principles of CGI Brazil have been transported to the "Marco Civil" legislation which is being discussed in the legislature of that country. The third exception is the entry of the private sector into the discussion with the collaboration proposed in December 2013 by Google, AOL, Apple, Facebook, LinkedIn, Microsoft, Twitter, and Yahoo.[189]

The work of Baak/Rossini and Kleinwächter demonstrate that it is exceedingly difficult to extract a single set of principles from the superset of all proposals that they studied. No such set can be reflected in a comprehensive view of principles for Internet governance in general that attracts widespread agreement. There are vast contradictions, differences in priorities, and linguistic preferences. While the taxonomy of Baak/Rossini (e.g., the "issue trees"), demonstrates that there is some alignment on core issues, it also demonstrates that considerable additional work is required in order to take the next step and propose a set of principles from these sources that would be universally accepted. The effort to harmonize these efforts (if ever harmonized) will take more time to accomplish. Below, the Panel analyzes trends in Principles drafting that are important per our criteria set out in the report:

i) Baak/Rossini

This project summarizes a total of 18 declarations, including 7 from civil society, 4 from business organizations, 4 from government coalitions and 3 from international organizations. Baak/Rossini categorize these principles into several "issue families" and an "issue tree." The authors were "astonished and challenged by how random the issue families are" and noted that different stakeholders have wildly strong opinions about choice of words, such as "openness," "freedom of expression" and the like.

ii) Wolfgang Kleinwächter

[188] OECD Principles, cited *supra*.

[189] Internet Association, "Reform Government Surveillance," *available at* http://reformgovernmentsurveillance.com/

The work of Wolfgang Kleinwächter provides another independent set of analysis of different proposals. In a recent article of his, Kleinwächter says, "a rough analysis shows that more that 80 per cent of the principles in those documents are the same."[190] While we have noted that it is exceedingly difficult to extract a single set of principles, Kleinwächter's observation merits further study.

iii) OECD

The OECD provided a Recommendation of the Council on Principles for Internet Policymaking in 2011.[191] These principles represent the consensus view of the 34 member countries that participated. Notably missing from the OECD makeup, of course, is representation from the developing world.

iv) CGI Brazil

The principles adopted by CGI Brazil are useful references because they were established by a multistakeholder community and are regularly used by all stakeholders in Brazil for Internet policy making. The principles are enunciated and maintained by CGI.BR both for the organization's primary operational function of managing the .BR ccTLD as well as for the role of CGI.BR in advising on Internet policy issues in that country.[192]

v) InternetNZ

The principles used by InternetNZ are divided into two subsets, one for policy and one for the top-level domain (TLD) environment. Both sets form short lists, set out below.[193]

Policy Principles

1. The Internet should be open and uncapturable.
2. Internet markets should be competitive.
3. Internet governance should be determined by open, multi-stakeholder processes.
4. Laws and policies should work with the architecture of the Internet, not against it.
5. Human rights should apply online.
6. The Internet should be accessible by and inclusive of everyone.
7. Technology changes quickly, so laws and policies should focus on activity.
8. The Internet is nationally important infrastructure, so it should be protected.

Top Level Domain Principles

1. Domain name markets should be competitive.
2. Choice for registrants should be maintained and expanded.
3. Domain registrations should be first come, first served.
4. Parties to domain registrations should be on a level playing field.
5. Registrant data should be public.

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[190] Kleinwächter, cited *supra*.
[191] OECD Principles, cited *supra*
[192] CGI Principles, cited *supra.*
[193] InternetNZ Principles, cited *supra.*

6. Registry / Registrar operations within a TLD should be split.
7. TLD policy should be determined by open multi-stakeholder processes.

In both cases we can see that there are seeds that can translate to guide ICANN as a whole -- internally and in its work in the ecosystem -- but while satisfactory at a national level they are insufficient for ICANN.

vi) Internet Rights & Principles Coalition

The Internet Rights & Principles Coalition (IRP Coalition) is a "dynamic coalition" as used in the parlance of the IGF.[194] The IRP began its work in promoting rights-based principles in 2008.[195] Discussions with global stakeholders gained momentum after the IGF in Vilnius in 2010, and rolled out at the IGF in Nairobi in 2011: the IRP Coalition has since hosted various workshops to develop a Charter of Human Rights and Principles.[196] Additionally, the IRP Coalition discussion has been brought to the European Dialogue on Internet Governance (EuroDIG).[197] The IRP Charter offers 10 Rights and Principles for Internet governance. (The information within the Charter and accompanying background is so complete that we won't reproduce the Charter here.)[198] The Charter presents a set of Internet-wide principles as opposed to the ICANN-focused principles that the Strategy Panel on Multistakeholder Innovation and the Ecosystem Panel have suggested.

vii) Strategy Panel on Multistakeholder Innovation

As this Ecosystem Panel wrapped up its work, the concurrent Strategy Panel on Multistakeholder Innovation (MSI), chaired by Beth Noveck, released its report. The work of the MSI Panel presents further evidence that a flexible, loosely-coupled approach can produce alignment in unexpected ways. The MSI Panel suggests several proposals, of which three key principles align nicely with the work of the Ecosystem Panel. These are: *effectiveness, legitimacy, evolutionary.*[199] A brief description of the work of each panel in this regard:

Effectiveness. The MSI Panel's definition of effectiveness proposes the development of expert networks, using open data and open contracting tools and encouraging collaborative online drafting. The Ecosystem Panel's description of effectiveness (as a subset of the Reality Principle) suggests that governance mechanisms must be able to reach decisions and to enact them efficiently. These two definitions are complementary.

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[194] IGF Website, "Dynamic Coalitions," *available at* http://www.intgovforum.org/cms/dynamiccoalitions

[195] Charter of Human Rights and Principles for the Internet (Version 2.0), *available at* http://goo.gl/j8yTzh

[196] Friends of the IGF Website, *available at* http://goo.gl/yRRmKU. Search term used: "IRP Coalition".

[197] EuroDIG Website, "Towards a Human Internet? Rules, Rights, and Responsibilities for Our Online Future," *available at* http://goo.gl/GiF9h

[198] IRP Charter Website, *available at* http://internetrightsandprinciples.org/wpcharter/

[199] GovLab blueprint, cited *supra*

Legitimacy. The MSI Panel suggested that legitimacy includes an inclusive approach through crowd sourcing at each level of decision making, having citizen juries, and innovating voting and public forum protocols. This resonates with the ideas expressed in the Ecosystem Panel's Reasonableness principle which includes accountability, transparency and fairness as primary foci for legitimacy. The legitimacy of any system depends of the trust that participants place in the process.

Evolutionary. In developing their evolutionary principle, the MSI Panel suggested experimental learning through games and embracing evidence generated by data. In the Ecosystem Panel's report, we highlight the importance of the Reality principle: one must evaluate what works and what doesn't. We note that this is the nature of an evolving ecosystem.

c) Review of ICANN's Existing Principles

Like many organizations ICANN has developed principles that are enshrined in different parts of its documentation and organizational history (e.g. amended bylaws,[200] mission statements, etc). Our recommendation is that ICANN make an attempt to consolidate its principles into a single, short document that is easily referenceable. By taking this approach, ICANN's principles can be clearly accessed by anyone in the community. If the principles are in need of modification, only one document will need to be updated, and the references to it will therefore automatically be incorporated by reference.

This, however, does not preclude constituencies from developing their own guiding principles as they may see fit for their operation or perspective. In fact, all institutions involved in Internet governance should clearly formulate the processes by which decisions are made; these processes should include clear rules, checks and balances among sufficiently independent parts of the organization, due-process definitions, and opportunities for review and, if necessary, reversal of decisions..

[200] "Bylaws for the Internet Corporation for Assigned Names and Numbers", *ICANN*, Apr 11, 2013, *available at* http://www.icann.org/en/about/governance/bylaws

Text Box 4. ICANN Bylaws --- Section 2. Core Values

In performing its mission, the following core values should guide the decisions and actions of ICANN:

1. Preserving and enhancing the operational stability, reliability, security, and global interoperability of the Internet.
2. Respecting the creativity, innovation, and flow of information made possible by the Internet by limiting ICANN's activities to those matters within ICANN's mission requiring or significantly benefiting from global coordination.
3. To the extent feasible and appropriate, delegating coordination functions to or recognizing the policy role of other responsible entities that reflect the interests of affected parties.
4. Seeking and supporting broad, informed participation reflecting the functional, geographic, and cultural diversity of the Internet at all levels of policy development and decision-making.
5. Where feasible and appropriate, depending on market mechanisms to promote and sustain a competitive environment.
6. Introducing and promoting competition in the registration of domain names where practicable and beneficial in the public interest.
7. Employing open and transparent policy development mechanisms that (i) promote well-informed decisions based on expert advice, and (ii) ensure that those entities most affected can assist in the policy development process.
8. Making decisions by applying documented policies neutrally and objectively, with integrity and fairness.
9. Acting with a speed that is responsive to the needs of the Internet while, as part of the decision-making process, obtaining informed input from those entities most affected.
10. Remaining accountable to the Internet community through mechanisms that enhance ICANN's effectiveness.
11. While remaining rooted in the private sector, recognizing that governments and public authorities are responsible for public policy and duly taking into account governments' or public authorities' recommendations.

These core values are deliberately expressed in very general terms, so that they may provide useful and relevant guidance in the broadest possible range of circumstances. Because they are not narrowly prescriptive, the specific way in which they apply, individually and collectively, to each new situation will necessarily depend on many factors that cannot be fully anticipated or enumerated. Also, because they are statements of principle rather than practice, situations will inevitably arise in which perfect fidelity to all eleven core values simultaneously is not possible. Any ICANN body making a recommendation or decision shall exercise its judgment to determine which core values are most relevant and how they apply to the specific circumstances of the case at hand, and to determine, if necessary, an appropriate and defensible balance among competing values.

d) Conclusion

The Internet community should continue to propose, discuss, debate, tweak, modify, amend, and establish principles for its governance. While 2014 may be a year of intense drafting and discussion of principles in various fora, the “constitutional moment” may never happen. This outcome may be perfectly acceptable so long as there is consistent movement towards establishing a common set of principles. Each and every organization developing its own principles is a positive step towards commonality because it expresses

the desire to reflect on principles. For now, having principles in development among different Internet ecosystem actors is "good enough governance."[201]

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ANNEX C: List of Figures and Text Boxes

[201] Stewart Patrick, "Unruled World: the case for good enough global governance" F*oreign Affairs* (January/February 2014), available at http://www.foreignaffairs.com/articles/140343/stewart-patrick/the-unruled-world.