The Future of Internet Governance: Should the United States Relinquish Its Authority Over ICANN?

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Summary

Currently, the U.S. government retains limited authority over the Internet's domain name system, primarily through the Internet Assigned Numbers Authority (IANA) functions contract between the National Telecommunications and Information Administration (NTIA) and the Internet Corporation for Assigned Names and Numbers (ICANN). By virtue of the IANA functions contract, the NTIA exerts a legacy authority and stewardship over ICANN, and arguably has more influence over ICANN and the domain name system (DNS) than other national governments.

On March 14, 2014, NTIA announced the intention to transition its stewardship role and procedural authority over key Internet domain name functions to the global Internet multistakeholder community. To accomplish this transition, NTIA has asked ICANN to convene interested global Internet stakeholders to develop a transition proposal. NTIA has stated that it will not accept any transition proposal that would replace the NTIA role with a government-led or an intergovernmental organization solution.

Internet stakeholders are engaged in a process to develop a transition proposal. While the IANA functions contract was due to expire on September 30, 2015, NTIA has the flexibility to extend the contract for any period through September 2019. NTIA expects that it will receive a final transition proposal in January 2016 with additional time necessary for review, testing, and implementation. On August 17, 2015, NTIA announced that the IANA contract will be extended for one year until September 30, 2016.

Concerns have risen in Congress over the proposed transition. Critics worry that relinquishing U.S. authority over Internet domain names may offer opportunities for either hostile foreign governments or intergovernmental organizations, such as the United Nations, to gain undue influence over the Internet. On the other hand, supporters argue that this transition completes the necessary evolution of Internet domain name governance towards the private sector, and will ultimately support and strengthen the multistakeholder model of Internet governance.

Legislation has been introduced in the 113th and 114th Congresses which would prevent, delay, or impose conditions or additional scrutiny on the transition. In the 114th Congress, H.R. 805/S. 1551 (the DOTCOM Act of 2015) would prohibit NTIA from relinquishing its authority until 30 legislative days after NTIA submits a report to Congress in which it certifies that the transition proposal meets certain criteria. On June 23, 2015, H.R. 805 was passed by the House. H.R. 2578 (FY2016 Commerce, Justice, Science (CJS) Appropriations Act), as passed by the House, directs that NTIA may not use any FY2016 appropriated funds to relinquish its responsibility with respect to Internet domain name system functions.

The proposed transition could have a significant impact on the future of Internet governance. National governments are recognizing an increasing stake in ICANN and DNS policy decisions, especially in cases where Internet DNS policy intersects with national laws and interests related to issues such as intellectual property, cybersecurity, privacy, and Internet freedom. How ICANN and the Internet domain name system are ultimately governed may set an important precedent in future policy debates—both domestically and internationally—over how the Internet should be governed, and what role governments and intergovernmental organizations should play.

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Background: The Domain Name System and the Role of the U.S. Government

The Internet is often described as a "network of networks" because it is not a single physical entity, but hundreds of thousands of interconnected networks linking hundreds of millions of computers around the world. As such, the Internet is international, decentralized, and comprised of networks and infrastructure largely owned and operated by private sector entities.[1]

Computers connected to the Internet are identified by a unique Internet Protocol (IP) number that designates their specific location, thereby making it possible to send and receive messages and to access information from computers anywhere on the Internet. Domain names were created to provide users with a simple location name, rather than requiring them to use a long list of numbers. The domain name system (DNS) is the distributed set of databases residing in computers around the world that contain the address numbers, mapped to corresponding domain names. Those computers, called root servers, must be coordinated to ensure connectivity across the Internet.

The U.S. government has no statutory authority over the DNS. However, because the Internet evolved from a network infrastructure created by the Department of Defense, the U.S. government originally owned and operated (primarily through private contractors) many of the key components of the network architecture that enabled the domain name system to function.[2] In 1998, with the Internet expanding beyond the academic and governmental spheres, the U.S. government transitioned the management of the DNS to a newly created not-for-profit international organization based in California called the Internet Corporation for Assigned Names and Numbers (ICANN).[3] ICANN employed (and continues to employ) a multistakeholder system of governance whereby policy decisions are made by a Board of Directors with input from the various stakeholder groups that comprise the Internet and the domain name system. These stakeholders include owners and operators of servers and networks around the world, domain name registrars and registries, regional IP address allocation organizations, standards organizations, Internet service providers, local and national governments, noncommercial stakeholders, business users, intellectual property interests, and others.

After the 1998 transition, the U.S. government, through the Department of Commerce's National Telecommunications and Information Administration or NTIA, retained a degree of authority over ICANN's management of the DNS and other unique Internet identifiers such as Internet address numbers and protocols. With respect to ICANN, the U.S. government first exercised its legacy authority through a Memorandum of Understanding (1998-2006), followed by a Joint Project Agreement (2006-2009). Currently, NTIA and ICANN are joint participants in an Affirmation of Commitments (AoC) agreement, in which both parties agree to scrutiny and

[1] For more information on how the Internet is governed, see CRS Report R42351, *Internet Governance and the Domain Name System: Issues for Congress*, by Lennard G. Kruger.

[2] For a history of U.S. government involvement in the development of the Internet DNS, see ICANN Security and Stability Advisory Committee (SSAC), *Overview and History of the IANA Functions*, August 15, 2014, pp. 6-10, available at https://www.icann.org/en/system/files/files/sac-067-en.pdf. Also see Aaron Shull, Paul Twomey and Christopher S. Yoo, Global Commission on Internet Governance, *Legal Mechanisms for Governing the Transition of Key Domain Name Functions to the Global Multi-stakeholder Community*, November 2014, pp. 6-7, available at https://ourinternet-files.s3.amazonaws.com/publications/gcig_paper_no3.pdf.

[3] For more information on ICANN, see CRS Report 97-868, *Internet Domain Names: Background and Policy Issues*, by Lennard G. Kruger.

evaluation by review boards. The AoC is voluntary, and either ICANN or NTIA can withdraw from the agreement at any time.[4]

Concurrently, a separate contract between the ICANN and NTIA—specifically referred to as the "IANA[5] functions contract"—authorizes ICANN to manage the technical underpinnings of the domain name system (DNS). The IANA functions can be broadly grouped into three categories:

1. Number resources—the coordination and allocation of the global pool of IP numbers;
2. Protocol Assignments—the management of IP numbering systems in conjunction with Internet standards bodies; and
3. Domain names—management of the DNS authoritative root zone file.[6]

Additionally, and intertwined with the IANA functions contract, a cooperative agreement between NTIA and VeriSign (the company that operates the .com and .net registries) authorizes VeriSign to manage and maintain the official root zone file that is contained in the Internet's root servers[7] which underlie the functioning of the DNS.[8]

The IANA functions contract gives the U.S. government, through NTIA, the authority to approve various technical functions such as modifying the root zone file (which would include, for example, adding additional generic top level domains (gTLDs) to the root zone). In this narrow sense, NTIA's role is strictly clerical and administrative.[9] Policymaking—such as decisions to make changes in the root zone file—are made by ICANN through its internal policy development process. Although it has the authority to do so under the IANA functions contract, NTIA has never refused to approve any IANA related actions as directed by ICANN.

However, the IANA functions contract, while primarily administrative in nature, carries broader significance because it has conferred upon the U.S. government a "stewardship" role over ICANN and the domain name system. This stewardship role does not mean that the NTIA controls ICANN or has the authority to approve or disapprove ICANN policy decisions. Rather, the U.S. government's authority over the IANA functions has been viewed by the Internet community as a "backstop" that serves to reassure Internet users that the U.S. government is prepared and positioned to constitute a check on ICANN under extreme circumstances (such as, for example, fiscal insolvency, failure to meet operational obligations, or capture or undue influence by a single stakeholder or by outside interests).

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[4] The agreements between NTIA and ICANN are available at http://www.ntia.doc.gov/page/docicann-agreements.

[5] Internet Assigned Numbers Authority. See http://www.internetassignednumbersauthority.org/about.

[6] The authoritative root zone is a globally shared set of data that functions as a central and unified directory that ensures an Internet user will connect with the website that corresponds with the domain name that he or she types into their browser.

[7] According to the National Research Council, "The root zone file defines the DNS. For all practical purposes, a top level domain (and, therefore, all of its lower-level domains) is in the DNS if and only if it is listed in the root zone file. Therefore, presence in the root determines which DNS domains are available on the Internet." See National Research Council, Committee on Internet Navigation and the Domain Name System, *Technical Alternatives and Policy Implications, Signposts on Cyberspace: The Domain Name System and Internet Navigation*, National Academy Press, Washington, DC, 2005, p. 97.

[8] On August 17, 2015, NTIA announced that Verisign and ICANN had developed a proposal for removing NTIA's administrative role associated with root zone management as part of the IANA stewardship transition. See http://www.ntia.doc.gov/files/ntia/publications/root_zone_administrator_proposal-relatedtoiana_functionsste-final.pdf.

[9] An explanation of NTIA's role in managing the authoritative root zone file is at http://www.ntia.doc.gov/files/ntia/publications/ntias_role_root_zone_management_12162014.pdf.

Meanwhile, the U.S. government continues to participate in the ICANN policy development process through membership in the Governmental Advisory Committee (GAC), which provides advice to ICANN on issues of public policy, especially where there may be an interaction between ICANN's activities or policies and national laws or international agreements.[10] However, while all governments have access to membership in the GAC, the U.S. government arguably has had more influence over ICANN and the DNS than other governments by virtue of the IANA functions contract with ICANN.

NTIA Intent to Transition Stewardship of the DNS

On March 14, 2014, NTIA announced its intention to transition its stewardship role and procedural authority over key domain name functions to the global Internet multistakeholder community.[11] NTIA's stated intention was that it would let its IANA functions contract with ICANN expire on September 30, 2015, if a satisfactory transition could be achieved. With NTIA having the option of extending the contract for up to two two-year periods through September 30, 2019, NTIA announced on August 17, 2015, that it will extend the IANA functions contract through September 30, 2016.

As a first step, NTIA asked ICANN to convene interested global Internet stakeholders to develop a proposal to achieve the transition. Specifically, NTIA expects ICANN to work collaboratively with parties directly affected by the IANA contract, including the Internet Engineering Task Force (IETF), the Internet Architecture Board (IAB), the Internet Society (ISOC), the Regional Internet Registries (RIRs), top level domain name operators, Verisign, and other interested global stakeholders. In October 2013, many of these groups—specifically, the Internet technical organizations responsible for coordination of the Internet infrastructure—had 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."[12]

NTIA has stated that it will not accept any transition proposal that would replace the NTIA role with a government-led or an intergovernmental organization solution. In addition, NTIA told ICANN that the transition proposal must have broad community support and address the following four principles:

- support and enhance the multistakeholder model;
- maintain the security, stability, and resilience of the Internet DNS;
- meet the needs and expectation of the global customers and partners of the IANA services; and
- maintain the openness of the Internet.

[10] For more information on the GAC, see https://gacweb.icann.org/display/gacweb/Governmental+Advisory+Committee.

[11] NTIA, *Press Release*, "NTIA Announced Intent to Transition Key Internet Domain Name Functions," March 14, 2014, available at http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions.

[12] ICANN, "Montevideo Statement on the Future of Internet Cooperation," October 7, 2013, available at https://www.icann.org/en/news/announcements/announcement-07oct13-en.htm.

Multistakeholder Process to Develop a Transition Proposal

ICANN has convened a process through which the multistakeholder community will attempt to come to consensus on a transition proposal. The process is divided into two separate but related parallel processes: (1) IANA Stewardship Transition and (2) Enhancing ICANN Accountability. **Figure 1** shows a schematic diagram of the two interlinked processes. NTIA has stated that it views these two processes as "directly linked" and that "both issues must be addressed before any transition takes place."[13] The ICANN Board is expecting to receive both proposals at "roughly the same time" and will "forward them promptly and without modification to NTIA."[14]

IANA Stewardship Transition

Based on feedback received from the Internet community at its March 2014 meeting in Singapore, ICANN put out for public input and comment a draft proposal of *Principles, Mechanisms and Process to Develop a Proposal to Transition NTIA's Stewardship of the IANA Functions*.[15] Under the draft proposal, a steering group was formed "to steward the process in an open, transparent, inclusive, and accountable manner."[16] The steering group was composed of representatives of each ICANN constituency and of parties directly affected by the transition of IANA functions (for example, Internet standards groups and Internet number resource organizations).

On June 6, 2014, after receiving public comments on the steering group draft proposal, ICANN announced the formation of a Coordination Group which is responsible for preparing a transition proposal.[17] The IANA Stewardship Transition Coordination Group (ICG) is composed of 30 individuals representing 13 Internet stakeholder communities.[18] On August 27, 2014, the ICG released its charter, which stated that its mission is "to coordinate the development of a proposal among the communities affected by the IANA functions."[19]

[13] Testimony of Lawrence Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, before the Senate Committee on Commerce, Science, and Transportation, "Preserving the Multistakeholder Model of Internet Governance," February 25, 2015, p. 11, available at http://www.commerce.senate.gov/public/?a=Files.Serve&File_id=3abbe751-4440-4c5f-83bd-382b38cbdc05.

[14] ICANN, "ICANN Board Statement on ICANN Sending IANA Stewardship Transition and Enhancing ICANN Accountability Proposals to NTIA," February 12, 2015, available at https://www.icann.org/news/announcement-3-2015-02-12-en.

[15] Available at http://www.icann.org/en/about/agreements/iana/transition/draft-proposal-08apr14-en.htm.

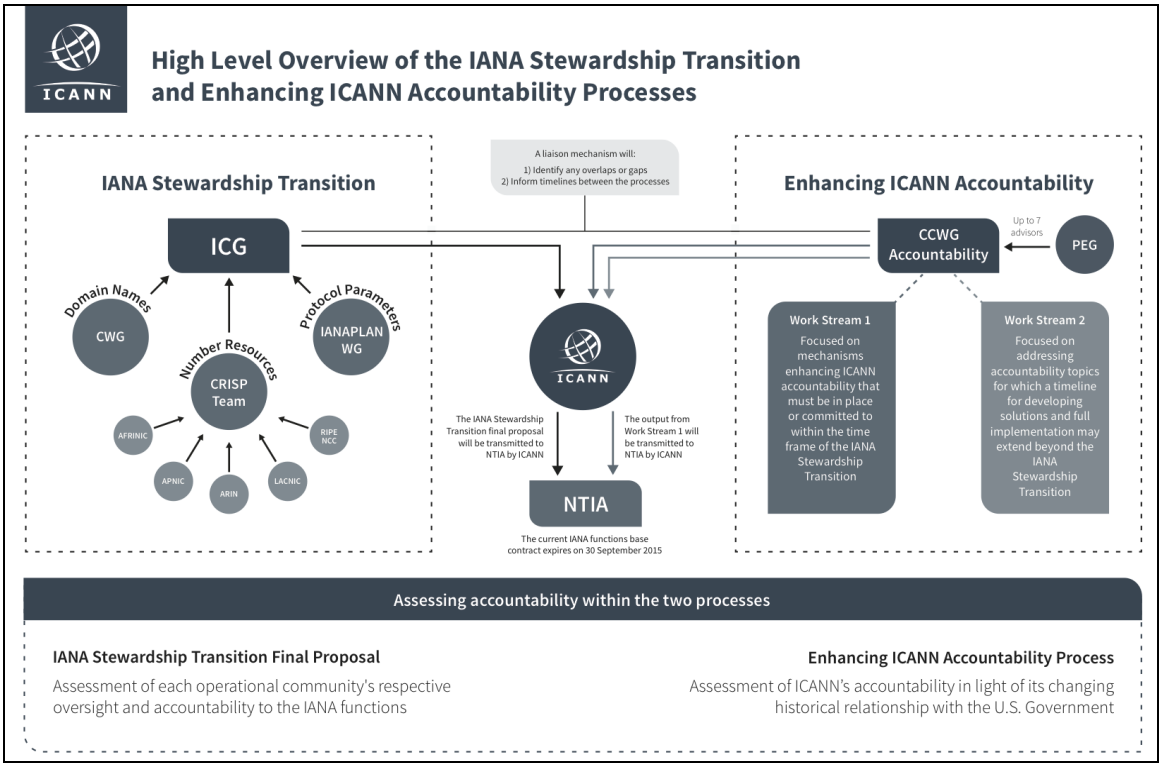
[16] Ibid.

[17] Details on the Coordination Group are available at https://www.icann.org/resources/pages/process-next-steps-2014-06-06-en#/.

[18] Information on ICG membership is available at https://www.icann.org/resources/pages/icg-members-2014-07-29-en.

[19] Charter for the IANA Stewardship Transition Coordination Group, August 27, 2014, available at https://www.icann.org/en/system/files/files/charter-icg-27aug14-en.pdf.

Figure 1. Schematic of Process to Develop IANA Transition Proposal



Source: ICANN.

Notes: ICG = IANA Stewardship Transition Coordination Group; CRISP = Consolidated Regional Internet Registries (RIR) IANA Stewardship Proposal Team; CWG = Cross Community Working Group on Naming Related Functions; CCWG = Accountability Cross Community Working Group; PEG = Public Experts Group.

The ICG requested a proposal for each of the three primary IANA functions (domain name-related functions, numbering, and protocol parameters) to be developed by the three operational communities associated with each of those primary functions. Upon receipt of the three proposals, the ICG worked to develop a single consolidated proposal. The three proposals and break out as follows:

- Number Resources—developed by the five Regional Internet Registries (RIR) via the Consolidated RIR IANA Stewardship Proposal Team (CRISP Team).
- Protocol Parameters—developed by the Internet Engineering Task Force (IETF) through the IANAPLAN Working Group (IANAPLAN WG).
- Domain Names—developed by the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions (CWG-Stewardship).

While the Number Resources and the Protocol Parameter proposals were completed in January 2015, consensus on a domain name function proposal proved more difficult to reach, with the CWG-Stewardship group unable to meet an initial January 2015 deadline. This is perhaps due to the fact that both numbering and protocols are currently operated by external groups which already perform these activities under contract with ICANN. The domain name IANA function is performed by ICANN itself (under contract to NTIA), and the question of how to transition away from the NTIA contract with respect to the domain naming function is inherently more complex and controversial.

The CWG-Stewardship group is composed of 19 members appointed by chartering organizations and 115 participants who contributed to mailing list conversations and meetings. The key question the group has grappled with is whether a new organization or entity should be created to oversee the IANA functions contract (an external model), or whether ICANN itself—subject to enhanced accountability measures—should be given authority over the IANA function (an internal model).

Proposal

On July 31, 2015, the ICG released its IANA Transition Stewardship Proposal for public comment. The proposal combines the three proposals developed for Numbers Resources, Protocol Parameters, and Domain Names:

- Numbers Resources—the numbers community proposed that ICANN continue to serve as the IANA Functions Operator and perform those services under a contract with the five Regional Internet Registries (RIRs). The numbers community also proposed a contractual Service Level Agreement between the RIRs and the IANA Numbering Service Operator and a Review Committee comprising community representatives from each region to advise the RIRs on the IANA functions operator's performance and adherence to identified service levels.
- Protocol Parameters—the protocol parameters community proposed to continue to rely on the current system of agreements, policies and oversight mechanisms created by the IETF, ICANN, and IAB for the provisions of the protocols parameters-related IANA functions.
- Domain Names—the domain names community proposed to form a new, separate legal entity, Post-Transition IANA (PTI), as an affiliate (subsidiary) of ICANN that would become the IANA functions operator in contract with ICANN. This proposal integrates elements of both the internal and external models. ICANN would assume the role currently fulfilled by NTIA (overseeing the IANA function), while PTI would assume the role currently played by ICANN (the IANA functions operator).The legal jurisdiction in which ICANN resides (California) is to remain unchanged. The proposal includes the creation of a Customer Standing Committee (CSC) responsible for monitoring the operator's performance according to the contractual requirements and service level expectations. The proposal establishes a multistakeholder IANA Function Review process (IFR) to conduct review of PTI.

On October 29, 2015, the ICG announced that it had incorporated public comments into its final transition proposal[20] and had completed its work. The domain names portion of the proposal is conditioned on the completion of the ICANN Accountability proposal. The numbers and protocol parameters portions of the proposal are complete and ready for implementation.[21]

[20] Available at https://www.ianacg.org/icg-files/documents/IANA-transition-proposal-v9.pdf.

[21] *ICANN Blog*, "ICG Completes Its Work and Awaits Conclusion of CCWG on Enhancing ICANN Accountability," October 29, 2015, available at https://www.icann.org/news/announcement-2015-10-29-en.

Enhancing ICANN Accountability

In parallel with the IANA stewardship transition process, ICANN initiated a separate but related process on how to enhance ICANN's accountability. The purpose of this process is to ensure that ICANN will remain accountable to Internet stakeholders if and when ICANN is no longer subject to the IANA contract with the U.S. government. Specifically, the process is to examine how ICANN's broader accountability mechanisms should be strengthened to address the potential absence of its historical contractual relationship with the DOC, including looking at strengthening existing accountability mechanisms (e.g., the ICANN bylaws and the Affirmation of Commitments).

To implement the accountability process, ICANN formed a Cross Community Working Group (CCWG) to develop proposals to enhance ICANN's accountability towards all stakeholders.[22] The CCWG is pursuing two interrelated Work Streams. Work Stream 1 focuses on mechanisms enhancing ICANN accountability that must be in place or committed to within the time frame of the IANA Stewardship Transition. Work Stream 2 focuses on addressing accountability topics for which a timeline for developing solutions and full implementation may extend beyond the IANA Stewardship Transition.

Membership in the CCWG is open to individuals appointed by the various stakeholder organizations within the ICANN community. Decisions will be made by consensus. Additionally, the CCWG will be open to any interested person as a participant. Participants will be able to attend and participate in all meetings, but will not be part of any consensus or decisionmaking process.

Additionally, up to seven advisors, to be selected by a Public Experts Group,[23] will provide the CCWG with independent advice and research and identify best practices at an early stage of deliberation. Other members of the CCWG include an ICANN staff member, a past participant in the Accountability and Transparency Review Team(s), a liaison with the IANA Stewardship Transition Coordination Group (ICG), and an ICANN Board liaison. All of those individuals will participate but are not part of the decisionmaking process.

If approved by all or most of the CCWG chartering organizations, an accountability proposal will be submitted to the ICANN Board, which can approve the proposal or send it back to the CCWG for modification or reconsideration. Any decision by the Board not to implement a recommendation (or a portion of a recommendation) is to be accompanied by a detailed rationale.

The CCWG-Accountability group is comprised of 26 members appointed by chartering organizations and 150 participants contributing to mailing list conversations and meetings.[24]

Proposal

On August 3, 2015, the CCWG-Accountability group released its 2nd Draft Proposal containing Work Stream 1 recommendations.[25] The draft proposal recommended that ICANN be held accountable to the multistakeholder community by changing ICANN from a corporation with no

[22] The CCWG Charter uses the following definition of stakeholder: "a person, group or organization that has a direct or indirect stake or interest in the organization because it can either affect the organization or be affected by it." See https://www.icann.org/news/announcement-2014-11-05-en.

[23] https://www.icann.org/news/announcement-2014-08-19-en.

[24] The latest statistics are available at https://community.icann.org/pages/viewpage.action?pageId=50823970.

[25] Available at https://www.icann.org/en/system/files/files/ccwg-draft-2-proposal-work-stream-1-recs-03aug15-en.pdf.

members to a Sole Member Model which serves as a Community Mechanism in which ICANN's Supporting Organizations (SO) and Advisory Committees (AC)[26] jointly participate. No third parties and no individuals would become members of ICANN. Each decision would be made by the SOs and ACs through their own formal decision making processes, after a community-wide debate. Through this Community Mechanism, the multistakeholder community would be empowered to

- recall the entire ICANN Board of Directors;
- appoint and remove individual Board Directors;
- reconsider or reject the operating plan and budget;
- reconsider or reject changes to ICANN "Standard" Bylaws; and
- approve changes to "Fundamental" Bylaws.

Fundamental Bylaws offering special protections that preserve the multistakeholder community role would be established which could only be changed with 75% approval from the ICANN Board and prior approval by the multistakeholder community. The proposal also recommended incorporating the Affirmation of Commitments into the ICANN bylaws, enhancing ICANN's Independent Review Process, and reforming ICANN's Independent Review and Request for Reconsideration process.

The ICANN Board opposed the Sole Member model, arguing that it could destabilize the Board's ability to govern ICANN. At the ICANN54 Dublin meeting, the Board and the CCWG-Accountability group agreed to develop a revised proposal featuring a Sole Designator model for enforcing accountability.[27] Under the Sole Member model, the multistakeholder community would have the power to reconsider or reject ICANN's annual operating plan and budget. Under the Sole Designator model, the community would have recourse to recall Board members if it disagreed strongly enough with ICANN actions.

Stress Tests

A critical aspect of the CCWG-Accountability group proposal is designing "stress tests" for each solution or accountability measure that the two work streams develop. Stress tests are designed to measure the resistance of the accountability measures to various contingencies. The proposal has identified 37 specific contingencies that have been consolidated into five categories of stress tests:

- Financial crisis or insolvency: ICANN becomes fiscally insolvent, and lacks resources to adequately meet obligations;
- Failure to meet operational expectations: ICANN fails to process change or delegation requests to the IANA Root Zones, or executes a change of delegation over objections of stakeholders;
- Legal/legislative action: ICANN is the subject of litigation under existing or future policies, legislation, or regulation. ICANN attempts to delegate a new TLD or redelegate a non-compliant existing TLD;

[26] For information on ICANN's Supporting Organizations and Advisory Committees, see https://www.icann.org/community#groups.

[27] *ICANN Blog*, "Cross Community Working Group on Enhancing ICANN Accountability ICANN54 Co-Chairs' Statement," October 22, 2015, available at https://www.icann.org/news/blog/cross-community-working-group-on-enhancing-icann-accountability-icann54-co-chairs-statement.

- Failure of accountability: Action by one or more Board members, the CEO, or staff is contrary to mission or bylaws. ICANN is captured by one stakeholder segment; and
- Failure of accountability to external stakeholders: ICANN modifies its structure to avoid obligation to external stakeholders. ICANN delegates, subcontracts, or abdicates obligations to a third party. ICANN merges or is acquired by an unaccountable third party.[28]

According to the CCWG-Accountability charter, stress tests could include an analysis of potential weaknesses and risks; an analysis of existing remedies and their robustness; a definition of additional remedies or modification of existing remedies; and a description of how the proposed solutions would mitigate the risk of contingencies or protect the organization against such contingencies.[29]

Ultimately, any proposed accountability enhancements will be tested against the following questions:

- Do they make ICANN more susceptible to "capture" (or the assertion of undue influence) by one stakeholder or group of stakeholders?
- Can any individual or group make use of the redress and review processes in a way that paralyzes the work of ICANN?
- Does any group of stakeholders have the ability to modify its internal procedures in a way that shifts how it interacts among the rest of the stakeholders within ICANN?[30]

An issue surrounding stress tests regards Stress Test 18, which presents a scenario whereby the GAC amends their operating procedures to change from consensus decisions to majority voting for advice to ICANN's Board. Under current bylaws, ICANN must consider and respond to GAC advice, even if that advice is not supported by consensus. To address this, the CCWG recommended amending the bylaws to require trying to find a mutually acceptable solution only where GAC advice was supported by GAC consensus.

Timeline

After a comment period and feedback from multistakeholder groups, the CCWG-Accountability group plans to develop a revised proposal and submit its Work Stream 1 recommendations to the ICANN Board in late January 2016. This will be incorporated with the IANA transition proposal and submitted to NTIA, which will likely take two to three months to evaluate the proposal.[31] There will also likely be time allotted for Congress to evaluate the plan, and for the proposed

[28] Cross Community Working Group on Enhancing ICANN Accountability (CCWG-Accountability),"Enhancing ICANN Accountability," February 11, 2015, p. 8, available at http://singapore52.icann.org/en/schedule/wed-ccwg-accountability/presentation-ccwg-accountability-11feb15-en.

[29] Cross Community Working Group (CCWG) Charter, November 3, 2014, p. 4, available at https://community.icann.org/display/acctcrosscomm/Charter.

[30] ICANN, Response to Question for the Record submitted by Senator Klobuchar, Senate Commerce Committee Hearing, "Preserving the Multistakeholder Model of Internet Governance," February 25, 2015, available at https://www.icann.org/en/system/files/correspondence/chehade-to-klobuchar-06apr15-en.pdf.

[31] Testimony available at http://energycommerce.house.gov/hearing/internet-governance-progress-after-icann-53.

transition actions to be fully tested and implemented. On August 17, 2015, NTIA announced that the IANA contract will be extended for one year until September 30, 2016.[32]

Role of NTIA

NTIA must approve the multistakeholder community proposal in order for the transition to take place. Given that Congress has prohibited NTIA from spending any FY2015 appropriated funds on relinquishing its responsibility with respect to Internet DNS functions, many observers wondered what role NTIA would play in the transition process during FY2015. At the 2015 State of the Net Conference, NTIA Administrator Lawrence Strickling stated:

> we will not use appropriated funds to terminate the IANA functions contract with ICANN prior to the contract's current expiration date of September 30, 2015. Nor will we use appropriated dollars to amend the cooperative agreement with Verisign to eliminate NTIA's role in approving changes to the authoritative root zone file prior to September 30. On these points, there is no ambiguity.
>
> The legislative language, however, makes it equally clear that Congress did not expect us to sit on the sidelines this year. The act imposes regular reporting requirements on NTIA to keep Congress apprised of the transition process. To meet those requirements, NTIA will actively monitor the discussions and activities within the multistakeholder community as it develops the transition plan. We will participate in meetings and discussions with ICANN, Verisign, other governments and the stakeholder community with respect to the transition. We will continue to represent the United States at the meetings of ICANN's Governmental Advisory Committee.
>
> We will provide informal feedback where appropriate. We are as aware as anyone that we should not do anything that interferes with an open and participatory multistakeholder process. We support a process where all ideas are welcome and where participants are able to test fully all transition options. Nonetheless, the community should proceed as if it has only one chance to get this right. Everyone has the responsibility to participate as they deem appropriate. If, by asking questions, we can ensure that the community develops a well-thought-out plan that answers all reasonable concerns, we will do so.[33]

Administrator Strickling called on the CWG-Stewardship group to equally consider all transition proposal models and to ensure that any new organizational structures created to replace NTIA's oversight of the IANA functions contract be itself accountable and not susceptible to inefficiencies and politicization. With respect to the accountability process (CCWG-Accountability), NTIA stated that

> it is critical that this group conduct "stress testing" of proposed solutions to safeguard against future contingencies such as attempts to influence or take over ICANN—be it the Board, staff or any stakeholder group—that are not currently possible given its contract with NTIA. We also encourage this group to address questions such as how to remove or replace board members should stakeholders lose confidence in them and how to incorporate and improve current accountability tools like the reviews called for by the Affirmation of Commitments.[34]

[32] NTIA Administrator Lawrence E. Strickling, *Blog*, "An Update on the IANA Transition," August 17, 2015, available at http://www.ntia.doc.gov/blog/2015/update-iana-transition.

[33] NTIA, "Remarks by Assistant Secretary Strickling at the State of the Net Conference," January 27, 2015, available at http://www.ntia.doc.gov/speechtestimony/2015/remarks-assistant-secretary-strickling-state-net-conference-1272015.

[34] Ibid.

Finally, NTIA has stated that both transition processes (IANA function stewardship and accountability) should remain in sync, and that NTIA will only consider a coordinated and complete transition plan. NTIA has stated:

> As for timing, both groups are aiming to deliver a transition plan to us in the summer. While September 2015 has been a target date, because that is when the base period of our contract with ICANN expires, we have the flexibility to extend the contract if the community needs more time to develop the best plan possible.[35]

On August 17, 2015, NTIA announced its intention to extend the IANA function contract for one year, until September 30, 2016. NTIA stated that beyond 2016, they have the option of extending the contract for an additional period of up to three years, if needed.[36] NTIA also announced that in March 2015, it asked ICANN and Verisign to develop a transition plan for managing the root zone file after the IANA transition. Currently, NTIA has a cooperative agreement with Verisign which designates NTIA as the Root Zone Administrator. Under a proposal developed by ICANN and Verisign, the IANA Functions Operator (currently ICANN and to be determined under the IANA transition) will have administrative authority over Verisign's operation of the root zone file.[37]

Role of Congress in the IANA Transition

Concerns have arisen in Congress over the proposed transition. Some Members argue that the transition requires additional scrutiny by Congress, while others question whether the transition should take place at all. While the U.S. government has no statutory authority over ICANN or the DNS, Congress does have legislative and budgetary authority over NTIA, which is seeking to relinquish its contractual authority over the IANA functions. As such, Congress is keenly monitoring the progress of the transition, primarily through congressional committees with jurisdiction over NTIA. These include the House Energy and Commerce Committee and the Senate Commerce, Science, and Transportation Committee. Additionally, the House and Senate Appropriations Committees—which determine and control NTIA's annual budget—could impact NTIA's ability to relinquish its existing authority over the IANA functions.

Legislative Activities in the 113th Congress

On March 27, 2014, Representative Shimkus introduced H.R. 4342, the Domain Openness Through Continued Oversight Matters (DOTCOM) Act. H.R. 4342 would have prohibited the NTIA from relinquishing responsibility over the Internet domain name system until GAO submits to Congress a report on the role of the NTIA with respect to such system. The report would have included a discussion and analysis of the advantages and disadvantages of the change and addressed the national security concerns raised by relinquishing U.S. oversight. It would also have required GAO to provide a definition of the term "multistakeholder model" as used by NTIA with respect to Internet policymaking and governance. H.R. 4342 was referred to the

[35] NTIA, "Stakeholders Continue Historic Work on Internet DNS Transition at ICANN Singapore Meeting," February 19, 2015, available at http://www.ntia.doc.gov/blog/2015/stakeholders-continue-historic-work-internet-dns-transition-icann-singapore-meeting.

[36] NTIA Administrator Lawrence E. Strickling, Blog, "An Update on the IANA Transition," August 17, 2015, available at http://www.ntia.doc.gov/blog/2015/update-iana-transition.

[37] *Verisign/ICANN Proposal in Response to NTIA Request: Root Zone Administrator Proposal Related to the IANA Functions Stewardship Transition*, available at http://www.ntia.doc.gov/files/ntia/publications/root_zone_administrator_proposal-relatedtoiana_functionsste-final.pdf.

House Energy and Commerce Committee. On April 2, 2014, the Subcommittee on Communications and Technology held a hearing on the DOTCOM Act.[38] H.R. 4342 was approved by the House Energy and Commerce Committee on May 8, 2014. Subsequently on June 5, 2014, the House Energy and Commerce Committee requested that the GAO examine the Administration's proposal to transition NTIA's current authority over IANA to the multistakeholder Internet community.[39] On August 15, 2015, GAO released a report finding that NTIA had not yet developed a formal framework for evaluating the transition plan. GAO recommended that NTIA review existing frameworks for evaluation to help evaluate and document whether and how the transition proposal meets NTIA's core goals.[40]

On May 22, 2014, the text of the DOTCOM Act was offered by Representative Shimkus as an amendment to H.R. 4435, the National Defense Authorization Act for FY2015. During House consideration of H.R. 4435, the amendment was agreed to by a vote of 245-177. H.R. 4435 was passed by the House on May 22, 2014. The House Armed Services bill report accompanying H.R. 4435 (H.Rept. 113-446) stated the committee's belief that any new Internet governance structure should include protections for the Department of Defense-controlled .mil generic top level domain and its associated Internet protocol numbers. The committee also supported maintaining separation between the policymaking and technical operation of root-zone management functions.

On June 2, 2014, the Senate Armed Services Committee reported S. 2410, its version of the FY2015 National Defense Authorization Act. Section 1646 of S. 2410 ("Sense of Congress on the Future of the Internet and the .mil Top-Level Domain") stated that it is the sense of Congress that the Secretary of Defense should

> advise the President to transfer the remaining role of the United States Government in the functions of the Internet Assigned Numbers Authority to a global multi-stakeholder community only if the President is confident that the '.MIL' top-level domain and the Internet Protocol address numbers used exclusively by the Department of Defense for national security will remain exclusively used by the Department of Defense.

Section 1646 also directed DOD to take "all necessary steps to sustain the successful stewardship and good standing of the Internet root zone servers managed by components of the Department of Defense." In the report accompanying S. 2410 (S.Rept. 113-176), the committee urged DOD to

> seek an agreement through the IANA transition process, or in parallel to it, between the United States and the Internet Corporation for Assigned Names and Numbers and the rest of the global Internet stakeholders that the .mil domain will continue to be afforded the same generic top level domain status after the transition that it has always enjoyed, on a par with all other country-specific domains.

The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 was signed by the President on December 16, 2014 (P.L. 113-235). The enacted law does not contain the DOTCOM Act provision contained in the House-passed version. Section 1639 of P.L. 113-235 ("Sense of Congress on the Future of the Internet and the .mil Top-Level

[38] Hearing before the House Energy and Commerce Committee, Subcommittee on Communications and Technology, "Ensuring the Security, Stability, Resilience, and Freedom of the Global Internet," April 2, 2014, available at http://energycommerce.house.gov/hearing/ensuring-security-stability-resilience-and-freedom-global-internet.

[39] See http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/letters/20140605GAO.pdf.

[40] Government Accountability Office, Internet Management: Structured Evaluation Could Help Assess Proposed Transition of Key Domain Name and Other Technical Functions, GAO-15-642, August 2015, 60 pages, available at http://www.gao.gov/assets/680/672055.pdf.

Domain") states it is the sense of Congress that the Secretary of Defense should support the IANA transfer

> only if assurances are provided for the protection of the current status of legacy top-level domain names and Internet Protocol address numbers, particularly those used by the Department of Defense and the components of the United States Government for national security purposes; mechanisms are institutionalized to uphold and protect consensus-based decision making in the multi-stakeholder approach; and existing stress-testing scenarios of the accountability process of the multi-stakeholder model can be confidently shown to work transparently, securely, and efficiently to maintain a free, open, and resilient Internet.

It is also the sense of Congress that the Secretary of Defense should "take all necessary steps to sustain the successful stewardship and good standing of the Internet root zone servers managed by components of the Department of Defense, including active participation, review, and analysis for transition planning documents and accountability stress testing."

On May 8, 2014, the House Appropriations Committee approved H.R. 4660, the FY2015 Commerce, Justice, Science (CJS) Appropriations Act, which appropriates funds for DOC and NTIA. The bill report (H.Rept. 113-448) stated that in order that the transition is more fully considered by Congress, the committee's recommendation for NTIA does not include any funds to carry out the transition and that the committee expects that NTIA will maintain the existing no-cost contract with ICANN throughout FY2015. During House consideration of H.R. 4660, an amendment offered by Representative Duffy was adopted on May 30, 2014 (by recorded vote, 229-178) which stated that (Section 562) "[n]one of the funds made available by this Act may be used to relinquish the responsibility of the National Telecommunications and Information Administration with respect to Internet domain name system functions, including responsibility with respect to the authoritative root zone file and the Internet Assigned Numbers Authority functions." H.R. 4660 was subsequently passed by the House on May 30, 2014.

On June 5, 2014, the Senate Appropriations Committee reported its version of the FY2015 Commerce, Justice, Science, and Related Agencies Appropriations Act (S. 2437). In the bill report (S.Rept. 113-181) the committee directed NTIA to

- conduct a thorough review and analysis of any proposed transition of the IANA contract to ensure that ICANN has in place an NTIA-approved multistakeholder oversight plan that is insulated from foreign government and intergovernmental control; and
- report quarterly to the committee on all aspects of the privatization process and inform the committee, as well as the Committee on Commerce, Science, and Transportation, not less than seven days in advance of any decision with respect to a successor contract.

The committee also expressed its concern that NTIA has not been a strong enough advocate for U.S. businesses and consumers through its participation in ICANN's Governmental Advisory Committee (GAC), and stated that it awaits "the past due report on NTIA's plans for greater involvement in the GAC and the efforts it is undertaking to protect U.S. consumers, companies, and intellectual property."

The Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235) was signed by the President on December 16, 2014. Section 540 provides that during FY2015, NTIA may not use any appropriated funds to relinquish its responsibility with respect to Internet domain name system functions, including its responsibility with respect to the authoritative root zone file and the IANA functions. The prohibition on funding for NTIA's IANA transition activities expires on

September 30, 2015. Additionally, the Explanatory Statement accompanying P.L. 113-235 reiterates House and Senate language regarding ICANN and IANA matters and modifies the Senate language by directing NTIA "to inform appropriate Congressional committees not less than 45 days in advance of any such proposed successor contract or any other decision related to changing NTIA's role with respect to ICANN or IANA activities." The Explanatory Statement also directs NTIA to submit a report to the House and Senate Committees on Appropriations within 45 days of enactment of P.L. 113-235 regarding "any recourse that would be available to the United States if the decision is made to transition to a new contract and any subsequent decisions made following such transfer of Internet governance are deleterious to the United States."

Other legislation addressing the proposed transition included

- H.R. 4367 (Internet Stewardship Act of 2014, introduced by Representative Mike Kelly on April 2, 2014), which would have prohibited NTIA from relinquishing its DNS responsibilities unless permitted by statute;
- H.R. 4398 (Global Internet Freedom Act of 2014, introduced by Representative Duffy on April 4, 2014), which would have prohibited NTIA from relinquishing its authority over the IANA functions; and
- H.R. 5737 (Defending Internet Freedom Act of 2014, introduced by Representative Mike Kelly on November 19, 2014), which would have prohibited NTIA from relinquishing its responsibilities over domain name functions unless it certifies that the transition proposal meets certain specified criteria.

H.R. 4367, H.R. 4398, and H.R. 5737 were referred to the Committee on Energy and Commerce. None of those bills were enacted by the 113th Congress. Meanwhile, the House Judiciary Committee, Subcommittee on Courts, Intellectual Property, and the Internet, held a hearing on April 10, 2014, that examined the proposed transition.[41]

Legislative Activities in the 114th Congress

House Legislation

The DOTCOM Act of the 113th Congress was reintroduced into the 114th Congress by Representative Shimkus as H.R. 805 on February 5, 2015. As introduced, the DOTCOM Act of 2015 would have prohibited NTIA from relinquishing responsibility over the Internet domain name system until GAO submitted a report to Congress examining the implications of the proposed transfer. H.R. 805 would have directed GAO to issue the report no later than one year after NTIA received a transition proposal. On June 17, 2015, the House Committee on Energy and Commerce approved an amended DOTCOM Act. The amended version of H.R. 805 reflected a bipartisan agreement and was approved unanimously by voice vote. On June 23, 2015, H.R. 805 was passed by the House (378-25) under suspension of the rules.

H.R. 805, as passed by the House, does not permit NTIA's authority over the IANA function "to terminate, lapse, be cancelled, or otherwise cease to be in effect" until 30 legislative days after

[41] House Subcommittee on Courts, Intellectual Property, and the Internet, Committee on the Judiciary, Hearing, "Should the Department of Commerce Relinquish Direct Oversight over ICANN?" April 10, 2014, testimony available at http://judiciary.house.gov/index.cfm/hearings?ID=027833A0-0028-42E2-A14B-B9C8BA2576A6.

NTIA submits a report to Congress on the final IANA transition proposal. Specifically, the report must contain the final transition proposal and a certification by NTIA that the proposal

- supports and enhances the multistakeholder model of Internet governance;
- maintains the security, stability, and resiliency of the Internet domain name system;
- meets the needs and expectations of the global customers and partners of IANA services;
- maintains the openness of the Internet; and
- does not replace the role of NTIA with a government-led or intergovernmental organization solution.

H.R. 805 also requires NTIA to certify that the required changes to ICANN's bylaws contained in the transition proposal have been adopted by ICANN.

Meanwhile, on June 3, 2015, the House passed H.R. 2578, the FY2016 Commerce, Justice, Science (CJS) Appropriations Act, which appropriates funds for DOC and NTIA. Sec. 536 of H.R. 2578 states that "[n]one of the funds made available by this Act may be used to relinquish the responsibility of the National Telecommunications and Information Administration with respect to Internet domain name system functions, including responsibility with respect to the authoritative root zone file and the Internet Assigned Numbers Authority functions."

Other House-introduced legislation that addresses the proposed IANA transition includes

- H.R. 355 (Global Internet Freedom Act of 2015, introduced by Representative Duffy on January 14, 2015), which would prohibit NTIA from relinquishing its authority over the IANA functions.
- H.R. 2251 (Defending Internet Freedom Act of 2015, introduced by Representative Mike Kelly on May 15, 2015), which would prohibit NTIA from relinquishing its responsibilities over domain name functions and the IANA function unless it certifies that the transition proposal meets certain specified criteria.

Senate Legislation

S. 1551, the Senate companion version of the DOTCOM Act of 2015, was introduced on June 11, 2015 by Senator Thune. The language of S. 1551 is virtually identical to H.R. 805 as approved by the House Committee on Energy and Commerce. S. 1551 was referred to the Senate Committee on Commerce, Science, and Transportation.

On June 16, 2015, the Senate Appropriations Committee reported its version of the FY2016 Commerce, Justice, Science, and Related Agencies Appropriations Act. In the bill report (S.Rept. 114-66) the committee directed NTIA to "continue quarterly reports to the committee on all aspects of the transition process, and further directs NTIA to inform the Committee and the Senate Committee on Commerce, Science and Transportation, not less than 45 days in advance of any decision with respect to a successor contract." The committee also stated that it "continues to be concerned about this process and supports the continued stewardship role of the United States over the domain name system in order to ensure the security of the .gov and .mil domains and to protect the freedom of speech and expression internationally."

Also in the Senate, S.Res. 71—designating the week of February 8 through February 14, 2015, as "Internet Governance Awareness Week"—was introduced by Senator Hatch on February 5, 2015.

S.Res. 71 seeks to increase public awareness regarding NTIA's proposed transition, encourage public education about the importance of the transition process; and call the attention of the participants at the ICANN meeting in Singapore to the importance of designing accountability and governance reforms to best prepare ICANN for executing the responsibilities that it may receive under any transition of the stewardship of the IANA functions. S.Res. 71 was passed by the Senate on February 5, 2015.

Congressional Hearings

As part of its continuing oversight over NTIA and the domain name system, Congress has held hearings on the proposed IANA transition and on ICANN's management of the domain name system:

- On February 25, 2015, the Senate Committee on Commerce, Science, and Transportation held a hearing entitled, "Preserving the Multistakeholder Model of Internet Governance."[42]
- On May 13, 2015, the House Committee on Energy and Commerce, Subcommittee on Communications and Technology, held a hearing entitled, "Stakeholder Perspectives on the IANA Transition."[43]
- On May 13, 2015, the House Committee on the Judiciary, Subcommittee on Courts, Intellectual, Property and the Internet, held a hearing entitled, "Stakeholder Perspectives on ICANN: The .Sucks Domain and Essential Steps to Guarantee Trust and Accountability in the Internet's Operation."[44]
- On July 8, 2015, the House Committee on Energy and Commerce, Subcommittee on Communications and Technology, held a hearing entitled, "Internet Governance Progress After ICANN 53."[45]

Other Activities

On September 22, 2015, the Chairmen of the House and Senate Judiciary Committees (Representatives Goodlatte and Senator Grassley), Senator Cruz, and Representative Issa sent a letter to GAO expressing concern that the IANA transition and the relinquishing of U.S. government control over the root zone file may constitute a transfer of government property that may only be authorized by an act of Congress.[46] Specifically, the letter asked GAO to examine three questions: would the termination of NTIA's contract with ICANN cause government property of any kind to be transferred to ICANN; is the root zone file or other related of similar materials or information U.S. government property; and if so, does NTIA have the authority to transfer the root zone file or other related materials or information to a non-federal entity?

On October 15, 2015, the Chairman of the Senate Committee on Commerce, Science, and Transportation and the Ranking Member of the Subcommittee on Communications, Technology,

[42] Testimony available at http://www.commerce.senate.gov/public/index.cfm?p=Hearings.

[43] Testimony available at http://energycommerce.house.gov/hearing/stakeholder-perspectives-iana-transition.

[44] Testimony available at http://judiciary.house.gov/index.cfm/hearings?ID=7E5AF16E-B1F8-45B8-803B-9E389A9B745E.

[45] Testimony available at http://energycommerce.house.gov/hearing/internet-governance-progress-after-icann-53.

[46] Available at http://www.cruz.senate.gov/files/documents/Letters/20150922%20Grassley%20Cruz%20Goodlatte%20Issa%20GAO%20Request%20ICANN.pdf.

Innovation, and the Internet (Senator Thune and Senator Schatz) sent a letter[47] to ICANN calling for robust accountability reforms which may lessen the Board's power and authority if those reforms conform with the multistakeholder community's accountability proposal. The Senators further stated that no arbitrary deadlines should be used as a way to deter the community from securing the reforms it must have to sufficiently replace the role currently played by NTIA.

Key Issues for Congress

If the transition occurs and NTIA relinquishes its authority over the IANA functions, the U.S. government, through NTIA, will continue to participate in ICANN through the Governmental Advisory Committee. However, in a post-transition environment, the U.S. government (both the executive branch and Congress) will arguably have less authority and influence over ICANN and the DNS than it currently has.

Key issues for Congress are: should the NTIA relinquish its authority? If so, what organizational structures and safeguards should be in place within the multistakeholder transition plan to ensure that the domain name system remains stable, efficient, and free from the disproportionate influence of intergovernmental entities (such as the United Nations) as well as from other governments who may be hostile to U.S. interests?

Should the NTIA Relinquish Its Authority?

Supporters of the transition[48] argue that by transferring its remaining authority over ICANN and the DNS to the global Internet community, the U.S. government will bolster its continuing support for the multistakeholder model of Internet governance, and that this will enable the United States to more effectively argue and work against proposals for intergovernmental control over the Internet. The argument follows that if NTIA does *not* relinquish authority over the IANA functions, the United States will continue to be in the paradoxical and problematic position of opposing moves in intergovernmental fora to increase the power of governments in governing the Internet, while at the same time maintaining its unilateral authority over the Internet DNS by virtue of the IANA contract.

Supporters of the transition also point out that the U.S. government and Internet stakeholders have, from the inception of ICANN, envisioned that U.S. authority over IANA functions would be temporary, and that the DNS would eventually be completely privatized.[49] According to NTIA, this transition is now possible, given that "ICANN as an organization has matured and taken steps in recent years to improve its accountability and transparency and its technical competence."[50]

Those opposed, skeptical, or highly cautious about the transition[51] point out that NTIA's role has served as a necessary "backstop" to ICANN, which has given Internet stakeholders confidence

[47] Available at https://regmedia.co.uk/2015/10/16/thune-schatz-icann-oct15.pdf.

[48] ICANN, "Endorsements of the IANA Globalization Process," March 18, 2014, available at https://www.icann.org/en/about/agreements/iana/globalization-endorsements-18mar14-en.pdf.

[49] The Commerce Department's June 10, 1998 Statement of Policy stated that the U.S. government "is committed to a transition that will allow the private sector to take leadership for DNS management." Available at http://www.ntia.doc.gov/legacy/ntiahome/domainname/6_5_98dns.htm.

[50] NTIA, *Press Release*, "NTIA Announced Intent to Transition Key Internet Domain Name Functions," March 14, 2014

[51] See for example, Atkinson, Rob, "U.S. Giving Up Its Internet 'Bodyguard' Role," March 17, 2014, available at http://www.ideaslaboratory.com/2014/03/17/u-s-giving-up-its-internet-bodyguard-role/; and Nagesh, Gauthem, *Wall Street Journal*, "U.S. Plan for Web Faces Credibility Issue," March 18, 2014.

that the integrity and stability of the DNS is being sufficiently overseen. Critics assert that in the wake of the Edward Snowden NSA revelations, foreign governments might gain more support internationally in their continuing attempts to exert intergovernmental control over the Internet, and that any added intergovernmental influence over the Internet and the DNS would be that much more detrimental to the interests of the United States if NTIA's authority over ICANN and the DNS were to no longer exist.

Another concern regards the development of the transition plan and a new international multistakeholder entity that would provide some level of stewardship over the DNS. Critics are concerned about the risks of foreign governments—particularly repressive regimes that favor censorship of the Internet—gaining influence over the DNS through the transition to a new Internet governance mechanism that no longer is subject to U.S. government oversight.

Transition Plan: External or Internal Solution?

NTIA and Congress will be examining whatever final transition plan is developed by the multistakeholder process. In the absence of NTIA's stewardship role (by virtue of the IANA functions contract with ICANN) will there be sufficient accountability checks on ICANN and the DNS? In other words, what entity or mechanism will assume NTIA's role after NTIA relinquishes its authority over the IANA function and its stewardship over ICANN?

A key issue is: to what extent should the proposed transition be addressed by an "external" or "internal" solution? Alternately, a hybrid solution could be developed which combines elements of both an external and internal approach. Under an external solution, a new organizational entity—controlled by Internet multistakeholders—would be formed to assume NTIA's oversight and stewardship role. The advantage of an external solution is "separability," whereby authority over the IANA functions would continue to be separated from ICANN, which sets DNS policy and currently acts as the IANA functions operator subject to its contract with NTIA. A separate entity with authority over the IANA functions could provide an accountability check on ICANN similar to the accountability check that NTIA currently provides through the IANA functions contract. On the other hand, the disadvantage of an external solution is that creating new organizational entities and structures risks adding bureaucracy, inefficiency, politicization, and perhaps instability to the DNS.

Under an internal solution, authority over the IANA function would be transferred to ICANN itself. However, enhanced accountability measures would be put in place to ensure that ICANN remains accountable to the multistakeholder community, with internal mechanisms existing to enable multistakeholders to transfer authority over the IANA functions to another entity, if warranted. The advantage of an internal solution is that it would avoid the risks and possible dislocations of creating new organizational structures to oversee the IANA function (particularly domain name root zone oversight). The disadvantage is that an internal solution puts ICANN in the position of policing itself with respect to the IANA function, and some observers question whether internal accountability measures will be sufficient to ensure adequate stewardship over ICANN by the multistakeholder community.

Whether an external, internal, or hybrid solution is ultimately chosen, it is clear that ICANN's accountability and the authority over the IANA functions are inextricably linked. The two parallel multistakeholder processes—IANA stewardship transition and enhancing accountability—must be carefully coordinated, and the final transition proposal will be an integration of the results of both processes.

Concluding Observations

Ultimately, the debate over the transition will come down to the final transition proposal that is delivered to NTIA by the multistakeholder community. Stress tests—whereby the transition proposal is tested under various dire hypothetical scenarios—may be critically important to help NTIA and Congress evaluate the robustness of the transition plan.

The future of how ICANN and the DNS will be governed is highly relevant to the broader question of how the Internet should be governed. While it is true that ICANN's jurisdiction is limited to the technical underpinnings of the Internet (unique Internet identifiers such as domain names and addresses), it is also true that ICANN policy decisions (such new gTLDs) can affect other areas of Internet policy such as intellectual property, cybersecurity, privacy, and Internet freedom.

As the Internet expands and becomes more pervasive in all aspects of modern society, the question of how it should be governed becomes more pressing, with national governments recognizing an increasing stake in ICANN policy decisions, especially in cases where Internet DNS policy intersects with national laws and interests. While ICANN does not "control" the Internet, how it is ultimately governed may set an important precedent in future policy debates—both domestically and internationally—over how the Internet might be governed, and what role governments and intergovernmental organizations should play.

Appendix. Acronyms

Table A-1. Selected Acronyms Used in This Report

AoC	Affirmation of Commitments
CWG	Cross Community Working Group on Naming Related Functions
CCWG	Accountability Cross Community Working Group
DNS	domain name system
DOC	Department of Commerce
DOD	Department of Defense
GAC	Governmental Advisory Committee
GAO	Government Accountability Office
gTLD	generic top level domain
IAB	Internet Architecture Board
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
ICG	IANA Stewardship Transition Coordination Group
IETF	Internet Engineering Task Force
IP	Internet protocol
ISOC	Internet Society
NTIA	National Telecommunications Information Administration
PEG	Public Experts Group
PTI	post-transition IANA
RIRs	Regional Internet Registries

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