

Transition of U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) Stewardship of the IANA Functions to the Global Multistakeholder Community



Nigel Hickson
VP; IGO Engagement

The U.S. government's announcement

- + On 14 March 2014, the U.S. Government (USG) announced its intent to transition its stewardship of the IANA functions to the global multistakeholder community;
- + As the first step, it asked ICANN to convene global stakeholders to develop a proposal to transition the current role played by the USG;
- + ICANN was asked to serve as a convener based on its role as the IANA functions administrator (since 1998) and the global coordinator for the Internet's Domain Name System (DNS).
- + The multistakeholder community has set the policies implemented by ICANN for more than 15 years.

Why now?

- + The USG always envisioned its role as transitional;
- + Transitioning the USG out of its current role marks the final phase of the privatization of the DNS as outlined by the USG in 1997;
- + The decision further supports and enhances the multistakeholder model of Internet policymaking and governance.

Transition proposal's guiding principles

NTIA has communicated to 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 resiliency 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.

NTIA also specified that it will **not** accept a proposal that replaces the NTIA role with a government-led or an intergovernmental organization solution.

What are the IANA functions?

The IANA functions involve the coordination of unique Internet identifiers, including:

- + maintenance of the protocol parameter registries on behalf of the IETF;
- + allocation of Internet Numbers in cooperation with the Regional Internet Registries;
- + management of the .ARPA and .INT domains;
- + administrative responsibilities of the DNS root zone;
- + coordination of root zone management.

The IANA functions at-a-glance

Draft for Discussion



Draft for Discussion

IANA FUNCTIONS: THE BASICS



When you want to visit a website, you type or paste the site's **domain name** into your browser, or click on an html link.

That domain name is sent to a server which translates the name into a series of numbers – the Internet Protocol or **IP Address** - which the server uses to direct your request to the website's physical location. *This all happens in the blink of an eye.*

Those names and numbers are called **"unique identifiers"** and are aligned with a standard set of **protocol parameters** that ensure computers can talk to and understand each other.

These are part of the **IANA functions**, which are managed by **ICANN**, the Internet Corporation for Assigned Names and Numbers.

These functions aren't just limited to browsing the Internet - they also enable you to send an email or backup photos to the cloud, amongst other tasks.

1

THE HISTORY

Internet Assigned Numbers Authority

The acronym was developed when Jon Postel was administering the ARPANET, a U.S.-government-funded Department of Defense network. It was originally called The IANA, as it was just one person performing the functions.

Since then, the Internet has grown tremendously. The IANA functions are no longer managed by just one person. Instead, they are managed by ICANN.

2

THE IANA FUNCTIONS ONLINE

Coordinating the unique identifiers that make the Internet run is an important IANA function.

When a computer or device comes online, it needs to know how to talk to the other devices that are online. It is able to do so because there are standards set in place, and each device has a unique identifier.



3

NAMES AND NUMBERS

The Internet is designed to be user-friendly and simple to navigate. In performing the IANA functions, ICANN coordinates Domain Name Names, like www.icann.org. Each Domain Name points to a specific IP address.

icann.org } DOMAIN NAME
192.0.32.7 } IP ADDRESS

4

THE INTERNET ECOSYSTEM

The IANA functions are a major part of the Internet ecosystem, but they are just one part. Other actors play a vital role in the operation of the Internet.

ICANN, in performing the IANA functions, coordinates the unique identifiers.

ICANN performs these functions under a contract with the **NTIA**.

Verisign edits and publishes the authoritative root zone file.

NUMBER RESOURCES

A key IANA function is the global coordination of the Internet Protocol addressing systems, commonly known as IP Addresses. There are two types of IP addresses in active use:

IPv4

192.0.2.53

IPv6

2001:db8:582::ae33

The allocation of blocks of AS numbers to Regional Internet Registries (RIRs) is another part of this function. AS numbers are used to identify the networks that control their own routing by connecting to multiple networks controlled by other organizations.

The allocation of IP addresses and AS numbers to RIRs are made according to global policies. The five RIRs, each of which serves a continental region, establish consensus-based global policies.



Regional Internet Registries (RIRs)

Non-profit corporations that administer and register IP address space numbers within a defined region.

PROTOCOL ASSIGNMENTS



The Protocol Parameters management function involves maintaining many of the codes and numbers used in Internet protocols. This is done in coordination with the IETF.

ACRONYM CHEAT SHEET

IANA: Internet Assigned Numbers Authority
ICANN: Internet Corporation for Assigned Names and Numbers
IETF: Internet Engineering Task Force
NTIA: National Telecommunications and Information Administration
DNS: Domain Name System
DNSSEC: Domain Name System Security Extensions
AS number: Autonomous System Number
TLD: Top-Level Domain

DOMAIN NAMES



Maintaining the Root Zone Database is a key IANA function. It contains the authoritative record of all the TLDs.



Part of that function is processing routine updates for TLD operators, as well as adding new TLDs into the root of the DNS.



The Root DNS Key Signing Key allows people to verify DNS answers from the root zone. DNSSEC is critical to the security of the Internet.

WHAT IS DNSSEC?

DNSSEC is a technology that digitally 'signs' DNS answers so you can know they are valid. To be sure of an answer's validity, a digital signature is needed at each stage in the hierarchy from the root zone to the final domain name (e.g., www.icann.org). DNSSEC does not encrypt DNS queries or answers. It lets you know whether a DNS answer is valid.

NTIA



ICANN currently performs the IANA functions on behalf of the global Internet community under a contract from the United States' Department of Commerce.

NTIA, an agency of the Department of Commerce, performs a process check before authorizing changes to the DNS's authoritative root zone file.

For more information, visit www.icann.org



Developments since the announcement

- + ICANN launched a multistakeholder-designed process at the ICANN 49 Meeting in Singapore in March 2014;
- + The goal was to gather the community's views and contributions on how the mechanisms for the transition of NTIA's stewardship of the IANA functions should occur;
- + The wider Internet community was also invited to provide their input via a publicly archived mailing list (ianatransition@icann.org), with an initial comment deadline of 27 March.

Developments since the announcement

- + On 8 April, ICANN posted the scoping document and, based on initial community feedback and dialogue, issued a call for public input (translated into the six official UN languages) on the draft proposal;
- + The draft proposal includes:
 - + a set of principles and mechanisms;
 - + the creation of a steering group to shepherd process;
 - + the process to develop a proposal; and,
 - + opportunities for participation.

Scoping document: inside and outside of the scope of the proposal

+ In scope:

- + defining accountability mechanisms that would serve to replace the USG role to ensure ICANN's performance of the IANA functions based on the agreements and/or policies provided by the respective bodies (IETF, GNSO, RIRs, ASO, ccTLDs, ccNSO);

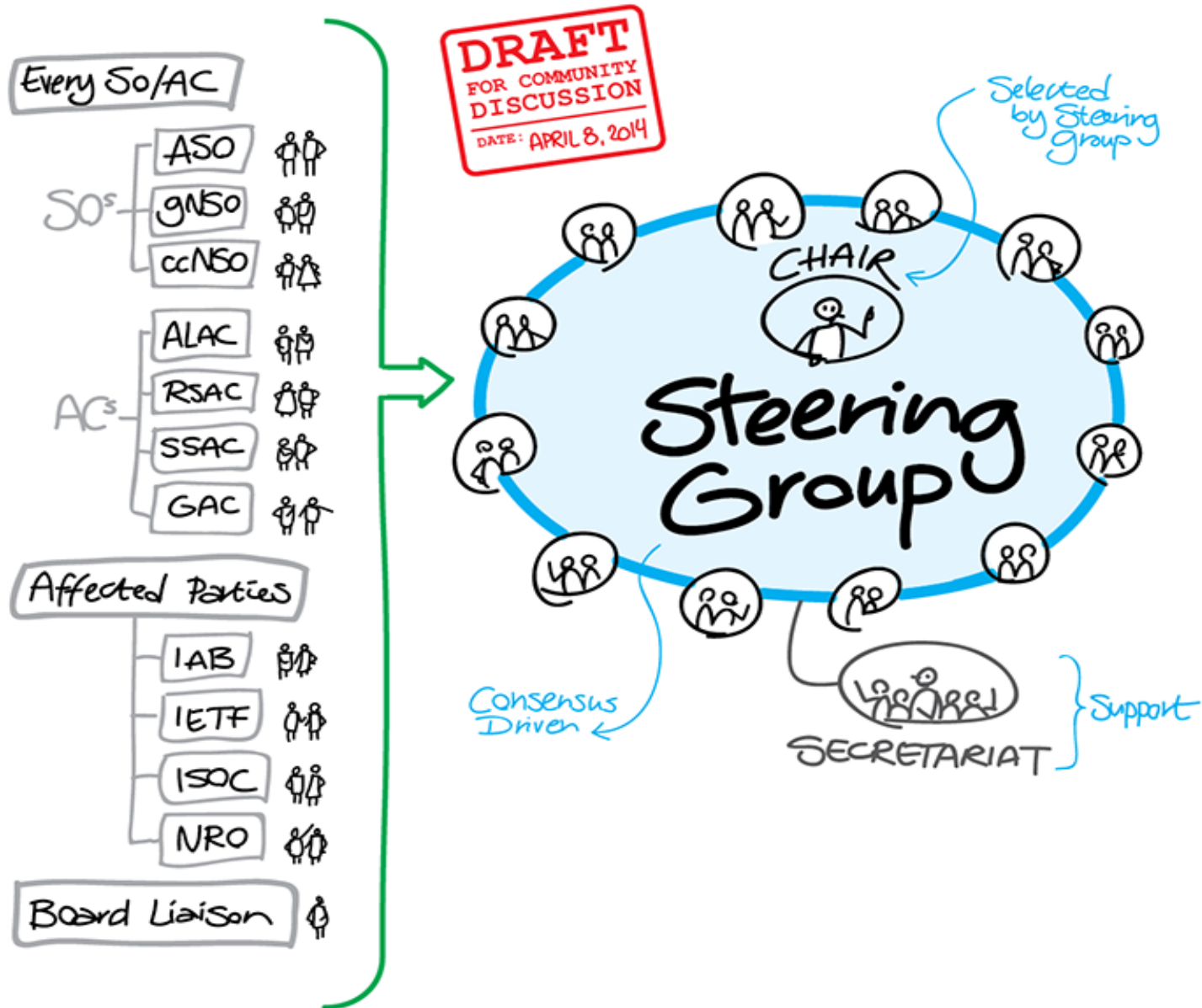
+ Out of scope:

- + policy development related to the IANA functions
- + IANA functions operator
 - + ICANN's role as the operator of the IANA functions is not the focus of the transition
- + issues not within the IANA functions

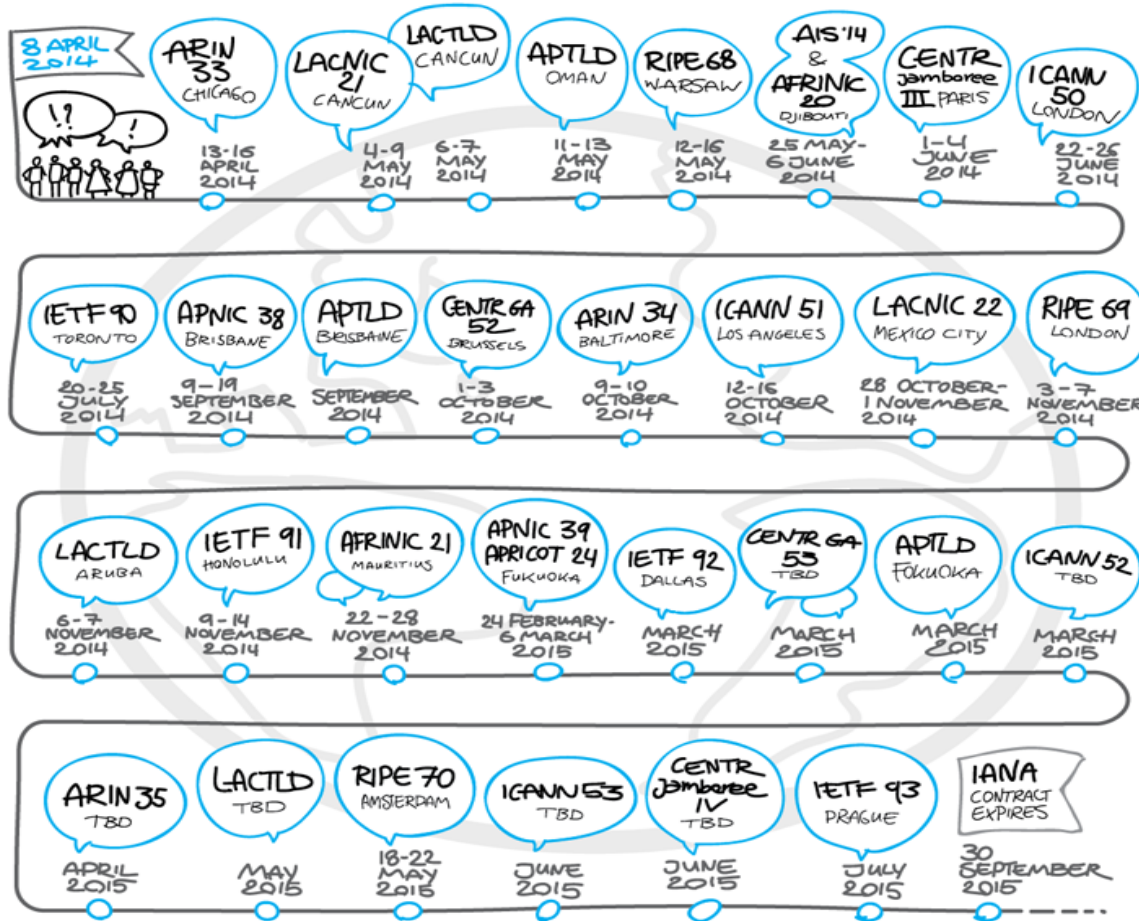
The scoping document can be viewed at:

<http://www.icann.org/en/about/agreements/iana/iana-transition-scoping-08apr14-en.pdf>

Proposed steering group



Opportunities for participation (non-exhaustive)



NB. There are multiple dialogues and opportunities for discussions, including at events not listed in the timeline (for example, regional and national IGFs, etc.).

What happens next?

- + The community will provide its feedback on the proposed process by 8 May;
- + The community input received will be compiled, the process then put into place and published soon after 8 May;
- + A dedicated website that is interactive and contains the necessary tools to facilitate the transition proposal process will be launched by ICANN 50 meeting in London in June.

IANA functions stewardship transition FAQs

- + **Q.** What is this process about?
 - + **A.** To develop a proposal to transition NTIA's stewardship of the IANA functions;

- + **Q.** What is this process **not** about?
 - + **A.** This is **not** about ICANN's role as the operator of the IANA functions – this role is not the focus of the transition;

- + **Q.** Is there a target date for the transition to take place?
 - + **A.** Depending on the progress of the dialogue, the global multistakeholder community could be ready to complete the transition before the renewal of ICANN's contract with the USG in September 2015.

- + **Q.** Does this announcement jeopardize the security, stability and resiliency (SSR) of the Internet DNS?
 - + **A.** No. In fact, maintaining the SSR of the Internet DNS is one of the principles outlined by the NTIA.

Addition FAQs can be found at

<http://www.icann.org/en/about/agreements/iana/functions-transfer-faqs-14mar14-en.pdf>

How can you get involved?

- + Visit ICANN.org
 - + get the latest resources on the topic;
 - + participate in the events listed in the timeline;
 - + follow us on our social channels.
- + Mailing list
 - + join to contribute and/or follow the discussion ianatransition@icann.org
 - + access the public archives <http://mm.icann.org/pipermail/ianatransition/>



Thank you!

Questions?

