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Thank you for soliciting input and recommendations on the issue of international internet policy priorities. Primarily I would like to address items in your categories Free Flow of Information and the Multistakeholder Approach, but will also touch on a few issues not specifically raised.

Background:

Since I believe the Department of Commerce should be held accountable for certain shortcomings in internet development and governance, I will begin with a few background references.

The Discussion Draft of January, 1998 (the Green Paper available at https://www.ntia.doc.gov/legacy/ntiahome/domainname/dnsdrft.htm) references Dr. Jon Postel. In March, 1994, Dr. Postel described the structure of the internet domain name system and, after listing what we now call the legacy top level domains, included the opinion: "It is extremely unlikely that any other TLDs will be created." (https://www.ietf.org/rfc/rfc1591.txt)

Subsequently in an internet draft document of June, 1996 Dr. Postel wrote: "There is a perceived need to open the market in commercial iTLDs to allow competition, differentiation, and change, and yet maintain some control to manage the Domain Name System operation." [iTLDs are what we now call generic top levels.]

"The current situation with regards to these domain spaces, and the inherent perceived value of being registered under a single top-level domain (.COM) is undesirable and should be changed." (https://tools.ietf.org/html/draft-postel-iana-itld-admin-01)

It seems this is the formal genesis of our current new generic top-level domains, but whether or not Dr. Postel originated the idea or had the 'perceived need' thrust upon him is unknown. It should be noted that the 1996 draft represents a 180-degree reversal of the opinion he expressed two years earlier.

The Green paper and later Statement of Policy (White paper) from June, 1998, mention new top-level domains, in some format, approximately 20 times each. In creating ICANN, it would seem that the DoC encouraged and promoted the creation of new TLDs in order to foster competition between suppliers. Both papers state, as a primary reason for creating new corporation ICANN to manage the domain name system: "There is widespread dissatisfaction about the absence of competition in domain name registration."

At that time the domain name system was run by a single registry under contract to the U.S. Government.

The papers state under Principles for a New System, point 2 – Competition: "The Internet succeeds in great measure because it is a decentralized system that encourages innovation and maximizes individual freedom. Where possible, market mechanisms that support competition and consumer choice should drive the technical management of the Internet because they will promote innovation, preserve diversity, and enhance user choice and satisfaction."

The White paper also states, in a reply to comments: "The U.S. Government is of the view … that competitive systems generally result in greater innovation, consumer choice, and satisfaction in the long run."

It is understandable that ICANN's founding constituencies endorsed and internalized the desire to create multiple new competing new top-level internet domains. That is what the DoC called for. It is unfortunate that those founding constituencies saw no need for competition outside the creation of new top-level internet domains.

How much competition is evidenced by listing new TLD character strings?

Does the Department agree it is the province of the IETF, "the principal body engaged in the development of new Internet standard specifications…" (https://www.ietf.org/about/participate/tao/) to determine for the market that "the inherent perceived value of being registered under a single top level domain (.COM) is undesirable and should be changed"?

Since the market is obviously of a different mind, does Commerce believe the market is wrong?

Under point IV, C in your request, NTIA asks: "What are the current best practices for promoting innovation and investment for emerging technologies?" The Department of Commerce has a very powerful in-house tool for promoting innovation and competition – the U.S. Patent and Trademark Office. Does Commerce believe that its USPTO is not the current best practice for promoting innovation and investment in emerging technologies? This is not a rhetorical question!

The Tao of the IETF states under point 6.2 "Letting Go Gracefully - The big-gest reason some people do not want their documents put on the IETF stand-ards track is that they must give up change control of the protocol. That is, as soon as you propose that your protocol become an IETF standard, you must fully relinquish control of the protocol. If there is general agreement, parts of the protocol can be completely changed, whole sections can be ripped out, new things can be added, and the name can be changed."

"Some authors find it very hard to give up control of their pet protocol. If you are one of those people, don't even think about trying to get your protocol to become an IETF standard."

There may be legitimate reasons to refrain from patenting, but no individual or organization should be coerced into not seeking intellectual property rights covering their creations.

If the Department disagrees, pleased explain your stance on patenting.

If the Department wished to encourage innovation and competition, why did the DoC deliver the packaged solution of adding new TLDs rather than saying 'compete by developing better alternatives'.

If internet experts could not imagine a different or better system for managing internet domain names 2 decades ago, does the DoC believe that further development (innovation) is impossible? Does the phone in your pocket have the same features and functions as the one you carried 20 years ago?

I would like to address a few items in the notice of inquiry against this background.

The Free Flow of Information - What role can NTIA play in helping to reduce restrictions in the free flow of information over the internet and ensure free expression online?

This request for comment was generated by a branch of the Department of Commerce, and I note that it asks how to encourage growth and innovation for the internet and internet-enabled economy.

Universal access to appropriate domain names, a longstanding problem, must still be recognized as a restriction on the internet-enabled economy.

ICANN was created to foster competition by introducing new top-level domains. It hasn't worked. For whatever reasons – first mover advantage or mindshare driven by the media equating the internet with .com – users have made their choice.

Legacy top level .com registers more than 135 million names.

As of today, 1231 delegated ngTLDs register only about 21.6 million second level names. (https://namestat.org/s/newgtld-summary) Another reference shows the top 10 ngTLDs hold 50% of all the new second level domains in 1227 ngTLDs. (https://ntldstats.com/tld)

The same reference shows the total number of names registered in the (still growing number of) ngTLDs is at the same level it was in late June of 2016, and (at https://ntldstats.com/parking/registrar) that 74% of the registered names are either parked, suffer from technical errors, or redirect to another URL. The percentages for .com names may be similar of course.

The new generic TLDs are now old business. While new ones are still being added to the internet, the first batch of new top levels was delegated in 2001. One of them, .info, registered over 8.3 million names in March, 2012. Today it registers fewer than 5.8 million. (https://charts.icann.org/public/index-registry-monthly.html and http://research.domaintools.com/statistics/tld-counts/ respectively)

Returning to the Department's initial discussion and policy papers: "Where possible, market mechanisms that support competition and consumer choice should drive the technical management of the Internet because they will promote innovation, preserve diversity, and enhance user choice and satisfaction."

If user choice was an important criterion when ICANN was created, how do you respond when users overwhelming reject ICANN's multiple new top-level domains?

"The goal of the IETF is to have its standards widely used and validated in the marketplace. If creating a product that uses a standard requires getting a license for a patent, people are less likely to implement the standard. Not surprisingly, then, the general rule has been 'use good non-patented technology where possible'." (https://www.ietf.org/about/participate/tao/ point 6.4.5)

It sounds like the IETF doesn't understand, or doesn't accept, the role of the market as arbiter of 'good technology'. Can technology be validated in a marketplace with no competition?

If the IETF teaches against patenting, who within the Department has acquiesced to their continuing role in internet technical development? Why hasn't the Department of Commerce, parent agency of the U.S. Patent and Trademark Office, stipulated that ICANN and its stakeholder the IETF solicit new, patented technology?

The IETF describes itself as: "a loosely self-organized group of people who contribute to the engineering and evolution of Internet technologies. It is the principal body engaged in the development of new Internet standard specifications. The IETF is unusual in that it exists as a collection of happenings, but is not a corporation and has no board of directors, no members, and no dues" (ibid. point 2)

Would the U.S. Government procure military equipment designed and standardized by a group with IETF's description? Is the internet less vital to U.S. interests?

Regarding user satisfaction: I don't remember the DoC or ICANN ever considering what the market wanted. I doubt that this request for comments will elicit much input from the market, but rather more from ICANN's existing stakeholders.

Regarding standardization: it is an obvious necessity for any system requiring interoperability. But it is also obvious that offering potential solutions, and standardizing those solutions, should be the responsibility of different entities in order to avoid conflicts of interest.

Standardization itself does not lead to success in the market. Significant effort must have been devoted to the coding/decoding standards for 3D television programing, but you cannot buy a new 3D television receiver today because the market did not develop.

Regarding innovation: what innovation has benefited domain names since ICANN was founded? All I can think of was the introduction of internationalized domain names that allow the use of foreign characters and scripts in names. Standards for internationalized domain names were introduced by the IETF in 2003. That's the year before Facebook was first launched. What has happened since then?

Knowing they want to use good non-patented technology, do we know if the IETF rejected better solutions in favor of 'good' non-patented technology? When the IETF chooses good non-patented technology, it is the IETF that defines what is 'good'.

The Multistakeholder Approach to Internet Governance

We can admit that the internet is unlike anything we've previously known, but there are other systems that likewise were unlike anything previously known. Examples include shortwave radio and aviation. In each case national regulation is required, but international 'interoperability' requires international standardization.

But how much 'governance', by how many stakeholding actors, is actually required?

The multistakeholder model sounds appealing, but a combination in restraint of trade can also be described as a multistakeholder model for the 'governance' of some system, branch, service or product. Combinations in restraint of trade are illegal. (https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws)

The DoC must determine whether the current multistakeholder system supports free and unfettered competition.

There is competition between ngTLD registries, but what about solutions other than adding new top-level domains? I know of at least one U.S. patent describing a solution that operates within the existing internet and supports universal naming while reducing or eliminating many longstanding domain name problems. If ICANN sees it conflicting with a perceived mandate to 'add TLDs', what chance does it have to engage in free and unfettered competition?

There are organizations including the ITU with respected track records of managing competing technologies and supporting intellectual property rights while creating mutually agreed upon standards. The crux is that the ITU can work objectively since it is <u>not</u> a stakeholder in any particular proposed technology.

Alternately the Department itself (via NTIA or NIST?) may be a candidate to re-assume certain parts of ICANN's current responsibilities. A strategic goal of the Department is to deliver customer-centric service excellence as part of its mission to foster innovation by setting standards and conducting foundational research and development. (https://www.commerce.gov)

No, if we desire the greatest international coordination of the internet, one of the bullet points under The Need for Change in the original discussion and policy papers, perhaps it is wisest to let an established multinational organization such as the ITU manage it.

I believe ICANN is too 'set in its ways' to self-reform. ICANN has an At-Large community that accepts participation by individual internet users. I applied to join on May 7 and received same-day acknowledgement of my application. Since then I have heard nothing. Is that because my application included the comment: "ngTLDs have not been successful and they could never solve the ccTLD name shortage"?

If ICANN accepts participation only by those who do not question ICANN's focus and performance, then it is easy for ICANN to claim multistakeholder consensus.

We cannot discount the valuable contributions made by non-U.S. citizens to internet technology and operation. However, the internet began as a U.S. taxpayer funded DARPA project designed to defend and protect American principles and interests.

Even as we open internet technical development and governance to non-U.S. entities, the DoC/NTIA should ensure that U.S. principles are not contra-vened.

The internet has been given away and subverted by experiments in development and management that do not support these principles.

The Department of Commerce must find guidance in the Patent Clause of the U.S. Constitution and in U.S law, not the opinion of respondents to the NTIA's Request for Comment voting for or against maintaining ICANN.

Respectfully,

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