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To:
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National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue. N.W. Room 4701
Washington DC 20230

Comments on the DNS transition

on diskette in PC-format:
DNS transition.doc (MS Word 97/2000/XP)
DNS transition.pdf

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Thank you for soliciting comments on the transition of the technical coordination and management of the Internet's domain name and addressing system. We should all be grateful to ICANN for the work they have done in the past decade while attempting to invent (and sometimes reinvent) themselves. However, I believe they have been assigned an impossible task and there are good reasons to question the transfer of responsibility from the Department to ICANN.

Concerns include: non-egalitarian access to names, a dearth of innovation, self-absorbed emphasis on governance, skewed representation, anti-commercial development philosophy, confusion over legal reach, fragmentation of responsibilities, and network security, to name a few.

The White Paper noted under *The Need For Change*: "In May of 1996, Dr. Postel proposed the creation of multiple, exclusive, competing top-level domain name registries. This proposal called for the introduction of up to 50 new competing domain name registries, each with the exclusive right to register names in up to three new top-level domains, for a total of 150 new TLDs."[1]

Previously however, in March of 1994, Dr. Postel had written in RFC1591:[2] "There are a set of what are called "top-level domain names" (TLDs). These are the generic TLDs (EDU, COM, NET, ORG, GOV, MIL, and INT), and the two letter country codes from ISO-3166. *It is extremely unlikely that any other TLDs will be created"* [my emphasis]. It is understood that Dr. Postel had also been a proponent of multi-tiered hierarchical domain name structures, such as: www.co.bedford.va.us/.

While naming standards were still evolving to meet the needs of an expanding Internet, the White Paper and subsequent MoU were taken as government fiat designating one particular way forward. This path may have appeared logical at the time since additional TLDs promised an increased name supply and met the objections of those who identified the lack of competition in registry and registrar services, but this makes the addition of new generic TLDs exactly the type of top-down decision that ICANN was supposed to avoid.

The White Paper supports Private, Bottom-Up Coordination. Excuse me, what does that mean? In ICANN we find 'both up and down from the middle'. I interpret bottom-up to mean customer focused, but within ICANN we see non-customer constituencies driving (and often disagreeing over) developments.

Regarding representation, let's ask a rhetorical question: had the early telephone network been governed by an ICANN-like organization with telephone operators as a major constituency (which is logical), how quickly would we have seen automated exchanges installed? The Internet is a valuable resource, we must expect various groups to try to secure their interests in this resource for their own purposes. This isn't paranoid, it acknowledges good business principles, but it also points up the need for oversight to ensure the rights of the citizenry that paid for creating the resource.

The Intellectual Property Constituency, IPC, is an example of special interest representation in Internet governance. The name is a misnomer since a review of their position statements[3] shows they focus entirely on one aspect of IP rights, trademarks, and almost exclusively those of major corporations. In the interest of transparency, shouldn't they call themselves the Famous Trademark Constituency? Following a transition of responsibility to ICANN, would the IPC

1 http://www.icann.org/en/general/white-paper-05jun98.htm
2 http://www.ietf.org/rfc/rfc1591.txt page 1
3 http://www.ipconstituency.org/position_statements.htm

constitute an unregulated supranational body with the right to determine which trademarks are "globally well-known" and therefore granted exclusively to only one company (presumably a member of the IPC) for use on the Internet?

Under point 9.d. of the MoU, ICANN is charged with taking into account recommendations regarding trademark/domain name policies,[4] yet at its March 6, 2009, meeting in Mexico, ICANN decided that a new Implementation Recommendation Team, to be appointed by the IPC, was needed to resolve problems pertaining to the introduction of proposed new TLDs. The IRT preliminary report was posted on April 24 for a 30 day comment period, however "those wishing to have the IRT consider their comments" were requested to submit them by May 6.[5] The 30-day comment period was unilaterally shortened by 60%.

After a decade of owning the problem and several previous rounds of TLD expansion, does ICANN give itself a failing grade on the trademark issue; will the IPC opportunistically suggest granting itself additional authority and protections?

ICANN's self-description states: "Within ICANN's structure, governments and international treaty organizations work in partnership with businesses, organizations, and skilled individuals involved in building and sustaining the global Internet."[6] If this is true, why is there no WIPO representation on the Implementation Recommendation Team[7] and how would the situation differ if, for example, the Federal Communications Commission, in concert with the International Telecommunications Union, were responsible for building and sustaining the Internet?

The NTIA may not want to run the Internet, but does the Department lack faith in the FCC's ability to manage the components assigned to ICANN, or in their ability to coordinate with others in the best interest of the Internet and Internet users? The US telephone network was created privately but is under the oversight of various FCC bureaus. The Internet was created at US taxpayer expense but the thrust of the MoU was to place it in the hands of private management. Has the Department suggested liberating telecommunications from FCC oversight?

Is ICANN's existence a reflection of the sentiment for deregulation that was popular a decade ago? Has anything happened in the past few years that warns us against dogmatic deregulation?

According to the White Paper: "Certain management functions require coordination. In these cases, responsible, private-sector action is preferable to government control. A private coordinating process is likely to be more flexible than government and to move rapidly enough to meet the changing needs of the Internet and of Internet users."

The FCC and ITU are coordinating bodies. Should we believe that a private agency owned by a limited number of self-interest constituencies will be more flexible or more responsible to the Internet and Internet users than a governmental agency? Does the Department claim ICANN has demonstrated an ability to move rapidly?

One intended function for ICANN was to coordinate the assignment of Internet technical parameters as needed to maintain universal connectivity on the Internet. I once approached ICANN with a suggestion, to which they responded: "This is a question for the IETF to decide."[8] So, what is this organization that ICANN defers to on technical parameters, and what makes them worth including in comments on ICANN?

As with ICANN itself, we are all indebted to the hard work of the Internet Engineering Task Force.

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4 http://www.icann.org/en/general/icann-mou-25nov98.htm
5 http://www.icann.org/en/topics/new-gtlds/irt-draft-report-trademark-protection-24apr09-en.pdf
6 http://www.icann.org/tr/english.html
7 http://www.icann.org/en/topics/new-gtlds/irt-list-23mar09-en.pdf
8 http://www.icann.org/en/meetings/amsterdam/gtld-action-plan-topic.htm

The IETF is part of an alphabet soup of interrelated organizations including ICANN, the IESG (Internet Engineering Steering Group), IRTF (Internet Research Task Force), IAB (Internet Architecture Board), IANA (Internet Assigned Numbers Authority) and ISOC (the Internet Society)[9] claiming authority over the Internet.

The IETF is a self-appointed and "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." It 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."[10] Ultimately this means the IETF is happy to take credit for Internet technology, but cannot be held responsible.

This is how the IETF approaches patents: "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.'"[11]

This tells us three things: IETF does not trust the market to determine what 'good' technology is, the IETF does not promote patenting to generate technical development, and the IETF believes a product can be 'validated' in the market without competition.

Internet standards are described in documents called RFCs. The IETF maintains an RFC Editor. Anyone can submit a suggestion, but the RFC Editor can exercise his own discretion regarding publication. IETF document RFC 3932 tells us: "For documents that specify a protocol or similar technology and are independent of the IETF process: This RFC is not a candidate for any level of Internet Standard."[12] With all due respect for necessary standardization – how does this arbitrary lid on who may propose standards encourage independent innovation and commercial competition in developing Internet infrastructure?

Would the Department grant de-facto monopoly to a self-appointed group (one that is not a corporation, has no board of directors and no members), allowing them both to create and approve (standardize) all new pharmaceuticals? Does the Department agree that non-patenting is the best way to drive technical innovation? I'll play devil's advocate and ask – wasn't the Internet originally developed to protect the U.S. from an IETF-like philosophy that made Trabant the most 'validated' car in old East Germany? Is the Department party to a combination in restraint of trade by grandfathering the IETF through ICANN?

There's an inscription above one portal to the Commerce Department building in Washington: Commerce invades every domain. Please drape that inscription with a black shroud until Commerce insists the Internet's infrastructure be granted the advantages of open, competitive technical development.

Someone will say 'that's not the way the Internet works' to which one can only reply 'this is the way the Internet does not work'. A press release issued by the ITU in March of '09 tells us the Internet and cellular mobile telephony had similar-sized user bases in 1998. Cellular mobile is now used by 61% of the global population while only "23 out of 100 inhabitants globally used the Internet at the end of 2008."[13] Yes, people are willing to pay for commercially driven development and deployment. Two thirds of mobile cellular subscriptions are now in the developing world. Compare this with Internet use, for which "penetration levels in the developing countries remain low."

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9 http://www.iesg.org, www.irtf.org, www.iab.org, www.iana.org and www.isoc.org
10 What is the IETF at http://www.ietf.org/tao
11 http://www.ietf.org/tao#patents Copyright (c) 2009 IETF Trust
12 http://www.rfc-editor.org/rfc/rfc3932.txt
13 http://www.itu.int/newsroom/press_releases/2009/07.html

Stability is mentioned 16 times in the White Paper and 7 times in the MoU, security is mentioned only 4 times in each. Security concerns have exploded since the White Paper was written.

As I write this, the Government has published a Cyberspace Policy Review, the White House web site tells us: "Protecting cyberspace requires strong vision and leadership and will require changes in policy, technology, education, and perhaps law"[14] and President Obama has announced he is creating the post of cuber security coordinator, saying our digital infrastructure would be "a national security priority".[15] A decade ago the White Paper told us: "a comprehensive security strategy should be developed." Where is ICANN's contribution?

We have seen that deregulating resources that are important to society, and putting them into the hands of those who have most to gain from controlling those resources, is not always optimal for society at large. This the rationale for anti-trust legislation.

We have seen other communications systems function well without being handed over to private governance groups. This includes telecommunication where national and international governmental agencies cooperate with private enterprise without need for an additional layer of constituency-centered governance.

We have seen that ICANN has not, in a decade, resolved primary problems such as trademark protection and egalitarian access to names in the Internet. For background please see the comments at http://forum.icann.org/lists/2gtld-guide/msg00053.html.

We have seen the Green Paper note the addition of new TLDs ideally should be left to a new corporation (ICANN), while the introduction of additional gTLDs has been interpreted on all sides as a top-down directive.

We have seen that user adoption of proposed new TLDs was not considered a criterion for success by those who spoke for new TLDs in comments to the Green Paper. If we consult the customer, new gTLDs have been neither demanded nor accepted.

We have seen that IETF's development philosophy is at odds with commercial development of Internet infrastructure and has not generated needed system innovation in step with security needs.

We have seen infighting between ICANN constituencies increasingly delay action -- the current program to introduce new gTLDs has been forced into its third round of comment.

We have seen that Internet related national security concerns are much more prominent now than when ICANN was first proposed. DNS technology is part of the security complex.

As a consequence, I recommend that ICANN's functions be transferred to the FCC (or revert to the NTIA) in cooperation and coordination with the ITU, that the United States manage gTLDs and central root servers with the ITU managing ccTLDs in conjunction with the nations and geographic areas they represent.

A fee on registered names, similar to the one levied by ICANN (or patent fees), can help defray the costs to these organizations. Just as foreign nationals are allowed to apply for US patents, anyone should be allowed to register a legitimate name under a generic TLD.

The US government agency (FCC or NTIA) together with ITU in coordination with other responsible offices should identify infrastructure elements that need to be strengthened to provide increased security, and standardize the deployment of new technology.

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14 http://www.whitehouse.gov/CyberReview/
15 http://news.bbc.co.uk/2/hi/americas/8073654.stm

I suggest a moratorium on the introduction of new gTLDs until responsibility for the technical coordination and management of the Internet's domain name and addressing system has been firmly established.

I further suggest that the Internet be treated the same as any other technical infrastructure system, with development promoted through commercially proven means including supplier competition (with intellectual property rights) and supplier-neutral standardization.

In summation: ICANN has been trapped in the dead end of a top-down directive that has prevented normal market mechanisms from functioning. ICANN is not user oriented but focused instead on the perceived needs of limited constituencies. ICANN has not only failed to meet the developing security challenges of the Internet, it has not even found a formula for successfully meeting the challenges in the MoU. Through its reliance on the IETF, ICANN has disincentivized competition in technical development which has negative consequences for security and the continued growth and egalitarian use of the Internet. Greater rather than less government coordination would be beneficial, as would greater emphasis on traditional commercial development.

Thank your for providing the opportunity to comment.