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UNITED STATES DEPARTMENT OF COMMERCE

Management of Internet Names and Addresses

Docket Number: 980212036-8146-02

AGENCY: National Telecommunications and Information Administration

ACTION: Statement of Policy

SUMMARY: On July 1, 1997, as part of the Clinton Administration's *Framework for Global Electronic Commerce*,⁽¹⁾ the President directed the Secretary of Commerce to privatize the domain name system (DNS) in a manner that increases competition and facilitates international participation in its management.

Accordingly, on July 2, 1997, the Department of Commerce issued a Request for Comments (RFC) on DNS administration. The RFC solicited public input on issues relating to the overall framework of the DNS administration, the creation of new top-level domains, policies for domain name registrars, and trademark issues. During the comment period, more than 430 comments were received, amounting to some 1500 pages.⁽²⁾

On January 30, 1998, the National Telecommunications and Information Administration (NTIA), an agency of the Department of Commerce, issued for comment, *A Proposal to Improve the Technical Management of Internet Names and Addresses*. The proposed rulemaking, or "Green Paper," was published in the Federal Register on February 20, 1998, providing opportunity for public comment. NTIA received more than 650 comments, as of March 23, 1998, when the comment period closed.⁽³⁾

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

EFFECTIVE DATE: This general statement of policy is not subject to the delay in effective date required of substantive rules under 5 U.S.C. § 553(d). It does not contain mandatory provisions

and does not itself have the force and effect of law.⁽⁴⁾ Therefore, the effective date of this policy statement is [insert date of publication in the Federal Register].

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AUTHORITY: 15 U.S.C. § 1512; 15 U.S.C. § 1525; 47 U.S.C. § 902(b)(2)(H); 47 U.S.C. § 902(b)(2)(I); 47 U.S.C. § 902(b)(2)(M); 47 U.S.C. § 904(c)(1).

SUPPLEMENTARY INFORMATION:

Background:

Domain names are the familiar and easy-to-remember names for Internet computers (e.g., "www.ecommerce.gov"). They map to unique Internet Protocol (IP) numbers (e.g., 98.37.241.30) that serve as routing addresses on the Internet. The domain name system (DNS) translates Internet names into the IP numbers needed for transmission of information across the network.

U.S. Role in DNS Development:

More than 25 years ago, the U.S. Government began funding research necessary to develop packet-switching technology and communications networks, starting with the "ARPANET" network established by the Department of Defense's Advanced Research Projects Agency (DARPA) in the 1960s. ARPANET was later linked to other networks established by other government agencies, universities and research facilities. During the 1970s, DARPA also funded the development of a "network of networks;" this became known as the Internet, and the protocols that allowed the networks to intercommunicate became known as Internet protocols (IP).

As part of the ARPANET development work contracted to the University of California at Los Angeles (UCLA), Dr. Jon Postel, then a graduate student at the university, undertook the maintenance of a list of host names and addresses and also a list of documents prepared by ARPANET researchers, called Requests for Comments (RFCs). The lists and the RFCs were made available to the network community through the auspices of SRI International, under contract to DARPA and later the Defense Communication Agency (DCA) (now the Defense Information Systems Agency (DISA)) for performing the functions of the Network Information Center (the NIC).

After Dr. Postel moved from UCLA to the Information Sciences Institute (ISI) at the University of

Southern California (USC), he continued to maintain the list of assigned Internet numbers and names under contracts with DARPA. SRI International continued to publish the lists. As the lists grew, DARPA permitted Dr. Postel to delegate additional administrative aspects of the list maintenance to SRI, under continuing technical oversight. Dr. Postel, under the DARPA contracts, also published a list of technical parameters that had been assigned for use by protocol developers. Eventually these functions collectively became known as the Internet Assigned Numbers Authority (IANA).

Until the early 1980s, the Internet was managed by DARPA, and used primarily for research purposes. Nonetheless, the task of maintaining the name list became onerous, and the Domain Name System (DNS) was developed to improve the process. Dr. Postel and SRI participated in DARPA's development and establishment of the technology and practices used by the DNS. By 1990, ARPANET was completely phased out.

The National Science Foundation (NSF) has statutory authority for supporting and strengthening basic scientific research, engineering, and educational activities in the United States, including the maintenance of computer networks to connect research and educational institutions. Beginning in 1987, IBM, MCI and Merit developed NSFNET, a national high-speed network based on Internet protocols, under an award from NSF. NSFNET, the largest of the governmental networks, provided a "backbone" to connect other networks serving more than 4,000 research and educational institutions throughout the country. The National Aeronautics and Space Administration (NASA) and the U.S. Department of Energy also contributed backbone facilities.

In 1991-92, NSF assumed responsibility for coordinating and funding the management of the non-military portion of the Internet infrastructure. NSF solicited competitive proposals to provide a variety of infrastructure services, including domain name registration services. On December 31, 1992, NSF entered into a cooperative agreement with Network Solutions, Inc. (NSI) for some of these services, including the domain name registration services. Since that time, NSI has managed key registration, coordination, and maintenance functions of the Internet domain name system. NSI registers domain names in the generic top level domains (gTLDs) on a first come, first served basis and also maintains a directory linking domain names with the IP numbers of domain name servers. NSI also currently maintains the authoritative database of Internet registrations.

In 1992, the U.S. Congress gave NSF statutory authority to allow commercial activity on the NSFNET.⁽⁵⁾ This facilitated connections between NSFNET and newly forming commercial network service providers, paving the way for today's Internet. Thus, the U.S. Government has played a pivotal role in creating the Internet as we know it today. The U.S. Government consistently encouraged bottom-up development of networking technologies, and throughout the course of its development, computer scientists from around the world have enriched the Internet and facilitated exploitation of its true potential. For example, scientists at CERN, in Switzerland, developed software, protocols and conventions that formed the basis of today's vibrant World Wide Web. This type of pioneering Internet research and development continues in cooperative organizations and consortia throughout the world.

DNS Management Today:

In recent years, commercial use of the Internet has expanded rapidly. As a legacy, however, major components of the domain name system are still performed by, or subject to, agreements with agencies of the U.S. Government.

1) Assignment of numerical addresses to Internet users.

Every Internet computer has a unique IP number. IANA, headed by Dr. Jon Postel, coordinates this system by allocating blocks of numerical addresses to regional IP registries (ARIN in North America, RIPE in Europe, and APNIC in the Asia/Pacific region), under contract with DARPA. In turn, larger Internet service providers apply to the regional IP registries for blocks of IP addresses. The recipients of those address blocks then reassign addresses to smaller Internet service providers and to end users.

2) Management of the system of registering names for Internet users.

The domain name space is constructed as a hierarchy. It is divided into top-level domains (TLDs), with each TLD then divided into second-level domains (SLDs), and so on. More than 200 national, or country-code, TLDs (ccTLDs) are administered by their corresponding governments or by private entities with the appropriate national government's acquiescence. A small set of gTLDs do not carry any national identifier, but denote the intended function of that portion of the domain space. For example, .com was established for commercial users, .org for not-for-profit organizations, and .net for network service providers. The registration and propagation of these key gTLDs are performed by NSI, under a five-year cooperative agreement with NSF. This agreement expires on September 30, 1998.

3) Operation of the root server system.

The root server system is a set of thirteen file servers, which together contain authoritative databases listing all TLDs. Currently, NSI operates the "A" root server, which maintains the authoritative root database and replicates changes to the other root servers on a daily basis. Different organizations, including NSI, operate the other 12 root servers.⁽⁶⁾ The U.S. Government plays a role in the operation of about half of the Internet's root servers. Universal name consistency on the Internet cannot be guaranteed without a set of authoritative and consistent roots. Without such consistency messages could not be routed

with any certainty to the intended addresses.

4) Protocol Assignment.

The Internet protocol suite, as defined by the Internet Engineering Task Force (IETF), contains many technical parameters, including protocol numbers, port numbers, autonomous system numbers, management information base object identifiers and others. The common use of these protocols by the Internet community requires that the particular values used in these fields be assigned uniquely. Currently, IANA, under contract with DARPA, makes these assignments and maintains a registry of the assigned values.

The Need for Change:

From its origins as a U.S.-based research vehicle, the Internet is rapidly becoming an international medium for commerce, education and communication. The traditional means of organizing its technical functions need to evolve as well. The pressures for change are coming from many different quarters:

- There is widespread dissatisfaction about the absence of competition in domain name registration.
- Conflicts between trademark holders and domain name holders are becoming more common. Mechanisms for resolving these conflicts are expensive and cumbersome.
- Many commercial interests, staking their future on the successful growth of the Internet, are calling for a more formal and robust management structure.
- An increasing percentage of Internet users reside outside of the U.S., and those stakeholders want to participate in Internet coordination.
- As Internet names increasingly have commercial value, the decision to add new top-level domains cannot be made on an *ad hoc* basis by entities or individuals that are not formally accountable to the Internet community.
- As the Internet becomes commercial, it becomes less appropriate for U.S. research agencies to direct and fund these functions.

The Internet technical community has been actively debating DNS management policy for several years. Experimental registry systems offering name registration services in an alternative set of exclusive domains developed as early as January 1996. Although visible to only a fraction of

Internet users, alternative systems such as the name.space, AlterNIC, and eDNS affiliated registries⁽⁷⁾ contributed to the community's dialogue on the evolution of DNS administration.

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. While some supported the proposal, the plan drew much criticism from the Internet technical community.⁽⁸⁾ The paper was revised and reissued.⁽⁹⁾ The Internet Society's (ISOC) board of trustees endorsed, in principle, the slightly revised but substantively similar version of the draft in June of 1996.

After considerable debate and redrafting failed to produce a consensus on DNS change, IANA and the Internet Society (ISOC) organized the International Ad Hoc Committee⁽¹⁰⁾ (IAHC or the Ad Hoc Committee) in September 1996, to resolve DNS management issues. The World Intellectual Property Organization (WIPO) and the International Telecommunications Union (ITU) participated in the IAHC. The Federal Networking Council (FNC) participated in the early deliberations of the Ad Hoc Committee.

The IAHC issued a draft plan in December 1996 that introduced unique and thoughtful concepts for the evolution of DNS administration.⁽¹¹⁾ The final report proposed a memorandum of understanding (MoU) that would have established, initially, seven new gTLDs to be operated on a nonexclusive basis by a consortium of new private domain name registrars called the Council of Registrars (CORE).⁽¹²⁾ Policy oversight would have been undertaken in a separate council called the Policy Oversight Committee (POC) with seats allocated to specified stakeholder groups. Further, the plan formally introduced mechanisms for resolving trademark/domain name disputes. Under the MoU, registrants for second-level domains would have been required to submit to mediation and arbitration, facilitated by WIPO, in the event of conflict with trademark holders.

Although the IAHC proposal gained support in many quarters of the Internet community, the IAHC process was criticized for its aggressive technology development and implementation schedule, for being dominated by the Internet engineering community, and for lacking participation by and input from business interests and others in the Internet community.⁽¹³⁾ Others criticized the plan for failing to solve the competitive problems that were such a source of dissatisfaction among Internet users and for imposing unnecessary burdens on trademark holders. Although the POC responded by revising the original plan, demonstrating a commendable degree of flexibility, the proposal was not able to overcome initial criticism of both the plan and the process by which the plan was developed.⁽¹⁴⁾ Important segments of the Internet community remained outside the IAHC process, criticizing it as insufficiently representative.⁽¹⁵⁾

As a result of the pressure to change DNS management, and in order to facilitate its withdrawal from DNS management, the U.S. Government, through the Department of Commerce and NTIA, sought public comment on the direction of U.S. policy with respect to DNS, issuing the Green Paper on January 30, 1998.⁽¹⁶⁾ The approach outlined in the Green Paper adopted elements of

other proposals, such as the early Postel drafts and the IAHC gTLD- MoU.

Comments and Response: The following are summaries of and responses to the major comments that were received in response to NTIA's issuance of *A Proposal to Improve the Technical Management of Internet Names and Addresses*. As used herein, quantitative terms such as "some," "many," and "the majority of," reflect, roughly speaking, the proportion of comments addressing a particular issue but are not intended to summarize all comments received or the complete substance of all such comments.

1. Principles for a New System. The Green Paper set out four principles to guide the evolution of the domain name system: stability, competition, private bottom-up coordination, and representation.

Comments: In general, commenters supported these principles, in some cases highlighting the importance of one or more of the principles. For example, a number of commenters emphasized the importance of establishing a body that fully reflects the broad diversity of the Internet community. Others stressed the need to preserve the bottom-up tradition of Internet governance. A limited number of commenters proposed additional principles for the new system, including principles related to the protection of human rights, free speech, open communication, and the preservation of the Internet as a public trust. Finally, some commenters who agreed that Internet stability is an important principle, nonetheless objected to the U.S. Government's assertion of any participatory role in ensuring such stability.

Response: The U.S. Government policy applies only to management of Internet names and addresses and does not set out a system of Internet "governance." Existing human rights and free speech protections will not be disturbed and, therefore, need not be specifically included in the core principles for DNS management. In addition, this policy is not intended to displace other legal regimes (international law, competition law, tax law and principles of international taxation, intellectual property law, etc.) that may already apply. The continued applicability of these systems as well as the principle of representation should ensure that DNS management proceeds in the interest of the Internet community as a whole. Finally, the U.S. Government believes that it would be irresponsible to withdraw from its existing management role without taking steps to ensure the stability of the Internet during its transition to private sector management. On balance, the comments did not present any consensus for amending the principles outlined in the Green Paper.

2. The Coordinated Functions. The Green Paper identified four DNS functions to be performed on a coordinated, centralized basis in order to ensure that the Internet runs smoothly:

1. To set policy for and direct the allocation of IP number blocks;
2. To oversee the operation of the Internet root server system;

3. To oversee policy for determining the circumstances under which new top level domains would be added to the root system; and

4. To coordinate the development of other technical protocol parameters as needed to maintain universal connectivity on the Internet.

Comments: Most commenters agreed that these functions should be coordinated centrally, although a few argued that a system of authoritative roots is not technically necessary to ensure DNS stability. A number of commenters, however, noted that the fourth function, as delineated in the Green Paper, overstated the functions currently performed by IANA, attributing to it central management over an expanded set of functions, some of which are now carried out by the IETF.

Response: In order to preserve universal connectivity and the smooth operation of the Internet, the U.S. Government continues to believe, along with most commenters, that these four functions should be coordinated. In the absence of an authoritative root system, the potential for name collisions among competing sources for the same domain name could undermine the smooth functioning and stability of the Internet.

The Green Paper was not, however, intended to expand the responsibilities associated with Internet protocols beyond those currently performed by IANA. Specifically, management of DNS by the new corporation does not encompass the development of Internet technical parameters for other purposes by other organizations such as IETF. The fourth function should be restated accordingly:

· to coordinate the *assignment* of other Internet technical parameters as needed to maintain universal connectivity on the Internet.

3. Separation of Name and Number Authority.

Comments: A number of commenters suggested that management of the domain name system should be separated from management of the IP number system. These commenters expressed the view that the numbering system is relatively technical and straightforward. They feared that tight linkage of domain name and IP number policy development would embroil the IP numbering system in the kind of controversy that has surrounded domain name issuance in recent months. These commenters also expressed concern that the development of alternative name and number systems could be inhibited by this controversy or delayed by those with vested interests in the existing system.

Response: The concerns expressed by the commenters are legitimate, but domain names and IP numbers must ultimately be coordinated to preserve universal connectivity on the Internet. Also, there are significant costs associated with establishing and operating two separate management entities.

However, there are organizational structures that could minimize the risks identified by commenters. For example, separate name and number councils could be formed within a single organization. Policy could be determined within the appropriate council that would submit its recommendations to the new corporation's Board of Directors for ratification.

4. Creation of the New Corporation and Management of the DNS. The Green Paper called for the creation of a new private, not-for-profit corporation⁽¹⁷⁾ responsible for coordinating specific DNS functions for the benefit of the Internet as a whole. Under the Green Paper proposal, the U.S. Government⁽¹⁸⁾ would gradually transfer these functions to the new corporation beginning as soon as possible, with the goal of having the new corporation carry out operational responsibility by October 1998. Under the Green Paper proposal, the U.S. Government would continue to participate in policy oversight until such time as the new corporation was established and stable, phasing out as soon as possible, but in no event later than September 30, 2000. The Green Paper suggested that the new corporation be incorporated in the United States in order to promote stability and facilitate the continued reliance on technical expertise residing in the United States, including IANA staff at USC/ISI.

Comments: Almost all commenters supported the creation of a new, private not-for-profit corporation to manage DNS. Many suggested that IANA should evolve into the new corporation. A small number of commenters asserted that the U.S. Government should continue to manage Internet names and addresses. Another small number of commenters suggested that DNS should be managed by international governmental institutions such as the United Nations or the International Telecommunications Union. Many commenters urged the U.S. Government to commit to a more aggressive timeline for the new corporation's assumption of management responsibility. Some commenters also suggested that the proposal to headquarter the new corporation in the United States represented an inappropriate attempt to impose U.S. law on the Internet as a whole.

Response: The U.S. Government is committed to a transition that will allow the private sector to take leadership for DNS management. Most commenters shared this goal. While international organizations may provide specific expertise or act as advisors to the new corporation, the U.S. continues to believe, as do most commenters, that neither national governments acting as sovereigns nor intergovernmental organizations acting as representatives of governments should participate in management of Internet names and addresses. Of course, national governments now have, and will continue to have, authority to manage or establish policy for their own ccTLDs.

The U.S. Government would prefer that this transition be complete before the year 2000. To the extent that the new corporation is established and operationally stable, September 30, 2000 is

intended to be, and remains, an "outside" date.

IANA has functioned as a government contractor, albeit with considerable latitude, for some time now. Moreover, IANA is not formally organized or constituted. It describes a function more than an entity, and as such does not currently provide a legal foundation for the new corporation. This is not to say, however, that IANA could not be reconstituted by a broad-based, representative group of Internet stakeholders or that individuals associated with IANA should not themselves play important foundation roles in the formation of the new corporation. We believe, and many commenters also suggested, that the private sector organizers will want Dr. Postel and other IANA staff to be involved in the creation of the new corporation.

Because of the significant U.S.-based DNS expertise and in order to preserve stability, it makes sense to headquarter the new corporation in the United States. Further, the mere fact that the new corporation would be incorporated in the United States would not remove it from the jurisdiction of other nations. Finally, we note that the new corporation must be headquartered somewhere, and similar objections would inevitably arise if it were incorporated in another location.

5. Structure of the New Corporation. The Green Paper proposed a 15-member Board, consisting of three representatives of regional number registries, two members designated by the Internet Architecture Board (IAB), two members representing domain name registries and domain name registrars, seven members representing Internet users, and the Chief Executive Officer of the new corporation.

Comments: Commenters expressed a variety of positions on the composition of the Board of Directors for the new corporation. In general, however, most commenters supported the establishment of a Board of Directors that would be representative of the functional and geographic diversity of the Internet. For the most part, commenters agreed that the groups listed in the Green Paper included individuals and entities likely to be materially affected by changes in DNS. Most of those who criticized the proposed allocation of Board seats called for increased representation of their particular interest group on the Board of Directors. Specifically, a number of commenters suggested that the allocation set forth in the Green Paper did not adequately reflect the special interests of (1) trademark holders, (2) Internet service providers, or (3) the not-for-profit community. Others commented that the Green Paper did not adequately ensure that the Board would be globally representative.

Response: The Green Paper attempted to describe a manageably sized Board of Directors that reflected the diversity of the Internet. It is probably impossible to allocate Board seats in a way that satisfies all parties concerned. On balance, we believe the concerns raised about the representation of specific groups are best addressed by a thoughtful allocation of the "user" seats as determined by the organizers of the new corporation and its Board of Directors, as discussed below.

The Green Paper identified several international membership associations and organizations to designate Board members such as APNIC, ARIN, RIPE, and the Internet Architecture Board. We

continue to believe that as use of the Internet expands outside the United States, it is increasingly likely that a properly open and transparent DNS management entity will have board members from around the world. Although we do not set any mandatory minimums for global representation, this policy statement is designed to identify global representativeness as an important priority.

6. Registrars and Registries. The Green Paper proposed moving the system for registering second level domains and the management of generic top-level domains into a competitive environment by creating two market-driven businesses, registration of second level domain names and the management of gTLD registries.

a. Competitive Registrars. Comments: Commenters strongly supported establishment of a competitive registrar system whereby registrars would obtain domain names for customers in any gTLD. Few disagreed with this position. The Green Paper proposed a set of requirements to be imposed by the new corporation on all would-be registrars. Commenters for the most part did not take exception to the proposed criteria, but a number of commenters suggested that it was inappropriate for the United States government to establish them.

Response: In response to the comments received, the U.S. Government believes that the new corporation, rather than the U.S. Government, should establish minimum criteria for registrars that are pro-competitive and provide some measure of stability for Internet users without being so onerous as to prevent entry by would-be domain name registrars from around the world. Accordingly, the proposed criteria are not part of this policy statement.

b. Competitive Registries. Comments: Many commenters voiced strong opposition to the idea of competitive and/or for-profit domain name registries, citing one of several concerns. Some suggested that top level domain names are not, by nature, ever truly generic. As such, they will tend to function as "natural monopolies" and should be regulated as a public trust and operated for the benefit of the Internet community as a whole. Others suggested that even if competition initially exists among various domain name registries, lack of portability in the naming systems would create lock-in and switching costs, making competition unsustainable in the long run. Finally, other commenters suggested that no new registry could compete meaningfully with NSI unless all domain name registries were not-for-profit and/or noncompeting.

Some commenters asserted that an experiment involving the creation of additional for-profit registries would be too risky, and irreversible once undertaken. A related concern raised by commenters addressed the rights that for-profit operators might assert with respect to the information contained in registries they operate. These commenters argued that registries would have inadequate incentives to abide by DNS policies and procedures unless the new corporation could terminate a particular entity's license to operate a registry. For-profit operators, under this line of reasoning, would be more likely to disrupt the Internet by resisting license terminations.

Commenters who supported competitive registries conceded that, in the absence of domain name portability, domain name registries could impose switching costs on users who change domain name registries. They cautioned, however, that it would be premature to conclude that switching

costs provide a sufficient basis for precluding the proposed move to competitive domain name registries and cited a number of factors that could protect against registry opportunism. These commenters concluded that the potential benefits to customers from enhanced competition outweighed the risk of such opportunism. The responses to the Green Paper also included public comments on the proposed criteria for registries.

Response: Both sides of this argument have considerable merit. It is possible that additional discussion and information will shed light on this issue, and therefore, as discussed below, the U.S. Government has concluded that the issue should be left for further consideration and final action by the new corporation. The U.S. Government is of the view, however, that competitive systems generally result in greater innovation, consumer choice, and satisfaction in the long run. Moreover, the pressure of competition is likely to be the most effective means of discouraging registries from acting monopolistically. Further, in response to the comments received, the U.S. government believes that new corporation should establish and implement appropriate criteria for gTLD registries. Accordingly, the proposed criteria are not part of this policy statement.

7. The Creation of New gTLDs. The Green Paper suggested that during the period of transition to the new corporation, the U.S. Government, in cooperation with IANA, would undertake a process to add up to five new gTLDs to the authoritative root. Noting that formation of the new corporation would involve some delay, the Green Paper contemplated new gTLDs in the short term to enhance competition and provide information to the technical community and to policy makers, while offering entities that wished to enter into the registry business an opportunity to begin offering service to customers. The Green Paper, however, noted that ideally the addition of new TLDs would be left to the new corporation.

Comments: The comments evidenced very strong support for limiting government involvement during the transition period on the matter of adding new gTLDs. Specifically, most commenters -- both U.S. and non-U.S.-- suggested that it would be more appropriate for the new, globally representative, corporation to decide these issues once it is up and running. Few believed that speed should outweigh process considerations in this matter. Others warned, however, that relegating this contentious decision to a new and untested entity early in its development could fracture the organization. Others argued that the market for a large or unlimited number of new gTLDs should be opened immediately. They asserted that there are no technical impediments to the addition of a host of gTLDs, and the market will decide which TLDs succeed and which do not. Further, they pointed out that there are no artificial or arbitrary limits in other media on the number of places in which trademark holders must defend against dilution.

Response: The challenge of deciding policy for the addition of new domains will be formidable. We agree with the many commenters who said that the new corporation would be the most appropriate body to make these decisions based on global input. Accordingly, as supported by the preponderance of comments, the U.S. Government will not implement new gTLDs at this time.

At least in the short run, a prudent concern for the stability of the system suggests that expansion of gTLDs proceed at a deliberate and controlled pace to allow for evaluation of the impact of the new gTLDs and well-reasoned evolution of the domain space. New top level domains could be

created to enhance competition and to enable the new corporation to evaluate the functioning, in the new environment, of the root server system and the software systems that enable shared registration.

8. The Trademark Dilemma. When a trademark is used as a domain name without the trademark owner's consent, consumers may be misled about the source of the product or service offered on the Internet, and trademark owners may not be able to protect their rights without very expensive litigation. For cyberspace to function as an effective commercial market, businesses must have confidence that their trademarks can be protected. On the other hand, management of the Internet must respond to the needs of the Internet community as a whole, and not trademark owners exclusively. The Green Paper proposed a number of steps to balance the needs of domain name holders with the legitimate concerns of trademark owners in the interest of the Internet community as a whole. The proposals were designed to provide trademark holders with the same rights they have in the physical world, to ensure transparency, and to guarantee a dispute resolution mechanism with resort to a court system.

The Green Paper also noted that trademark holders have expressed concern that domain name registrants in faraway places may be able to infringe their rights with no convenient jurisdiction available in which the trademark owner could enforce a judgment protecting those rights. The Green Paper solicited comments on an arrangement whereby, at the time of registration, registrants would agree to submit a contested domain name to the jurisdiction of the courts where the registry is domiciled, where the registry database is maintained, or where the "A" root server is maintained.

Comments: Commenters largely agreed that domain name registries should maintain up-to-date, readily searchable domain name databases that contain the information necessary to locate a domain name holder. In general commenters did not take specific issue with the database specifications proposed in Appendix 2 of the Green Paper, although some commenters proposed additional requirements. A few commenters noted, however, that privacy issues should be considered in this context.

A number of commenters objected to NSI's current business practice of allowing registrants to use domain names before they have actually paid any registration fees. These commenters pointed out that this practice has encouraged cybersquatters and increased the number of conflicts between domain name holders and trademark holders. They suggested that domain name applicants should be required to pay before a desired domain name becomes available for use.

Most commenters also favored creation of an on-line dispute resolution mechanism to provide inexpensive and efficient alternatives to litigation for resolving disputes between trademark owners and domain name registrants. The Green Paper contemplated that each registry would establish specified minimum dispute resolution procedures, but remain free to establish additional trademark protection and dispute resolution mechanisms. Most commenters did not agree with this approach, favoring instead a uniform approach to resolving trademark/domain name disputes.

Some commenters noted that temporary suspension of a domain name in the event of an objection by a trademark holder within a specified period of time after registration would significantly extend trademark holders' rights beyond what is accorded in the real world. They argued that such a provision would create a de facto waiting period for name use, as holders would need to suspend the use of their name until after the objection window had passed to forestall an interruption in service. Further, they argue that such a system could be used anti-competitively to stall a competitor's entry into the marketplace.

The suggestion that domain name registrants be required to agree at the time of registration to submit disputed domain names to the jurisdiction of specified courts was supported by U.S. trademark holders but drew strong protest from trademark holders and domain name registrants outside the United States. A number of commenters characterized this as an inappropriate attempt to establish U.S. trademark law as the law of the Internet. Others suggested that existing jurisdictional arrangements are satisfactory. They argue that establishing a mechanism whereby the judgment of a court can be enforced absent personal jurisdiction over the infringer would upset the balance between the interests of trademark holders and those of other members of the Internet community.

Response: The U.S. Government will seek international support to call upon the World Intellectual Property Organization (WIPO) to initiate a balanced and transparent process, which includes the participation of trademark holders and members of the Internet community who are not trademark holders, to (1) develop recommendations for a uniform approach to resolving trademark/domain name disputes involving cyberpiracy (as opposed to conflicts between trademark holders with legitimate competing rights), (2) recommend a process for protecting famous trademarks in the generic top level domains, and (3) evaluate the effects, based on studies conducted by independent organizations, such as the National Research Council of the National Academy of Sciences, of adding new gTLDs and related dispute resolution procedures on trademark and intellectual property holders. These findings and recommendations could be submitted to the board of the new corporation for its consideration in conjunction with its development of registry and registrar policy and the creation and introduction of new gTLDs.

In trademark/domain name conflicts, there are issues of jurisdiction over the domain name in controversy and jurisdiction over the legal persons (the trademark holder and the domain name holder). This document does not attempt to resolve questions of personal jurisdiction in trademark/domain name conflicts. The legal issues are numerous, involving contract, conflict of laws, trademark, and other questions. In addition, determining how these various legal principles will be applied to the borderless Internet with an unlimited possibility of factual scenarios will require a great deal of thought and deliberation. Obtaining agreement by the parties that jurisdiction over the domain name will be exercised by an alternative dispute resolution body is likely to be at least somewhat less controversial than agreement that the parties will subject themselves to the personal jurisdiction of a particular national court. Thus, the references to jurisdiction in this policy statement are limited to jurisdiction over the domain name in dispute, and not to the domain name holder.

In order to strike a balance between those commenters who thought that registrars and registries

should not themselves be engaged in disputes between trademark owners and domain name holders and those commenters who thought that trademark owners should have access to a reliable and up-to-date database, we believe that a database should be maintained that permits trademark owners to obtain the contact information necessary to protect their trademarks.

Further, it should be clear that whatever dispute resolution mechanism is put in place by the new corporation, that mechanism should be directed toward disputes about cybersquatting and cyberpiracy and not to settling the disputes between two parties with legitimate competing interests in a particular mark. Where legitimate competing rights are concerned, disputes are rightly settled in an appropriate court.

Under the revised plan, we recommend that domain name holders agree to submit infringing domain names to the jurisdiction of a court where the "A" root server is maintained, where the registry is domiciled, where the registry database is maintained, or where the registrar is domiciled. We believe that allowing trademark infringement suits to be brought wherever registrars and registries are located will help ensure that all trademark holders - both U.S. and non-U.S. - have the opportunity to bring suits in a convenient jurisdiction and enforce the judgments of those courts.

Under the revised plan, we also recommend that, whatever options are chosen by the new corporation, each registrar should insist that payment be made for the domain name before it becomes available to the applicant. The failure to make a domain name applicant pay for its use of a domain name has encouraged cyberpirates and is a practice that should end as soon as possible.

9. Competition Concerns.

Comments: Several commenters suggested that the U.S. Government should provide full antitrust immunity or indemnification for the new corporation. Others noted that potential antitrust liability would provide an important safeguard against institutional inflexibility and abuses of power.

Response: Applicable antitrust law will provide accountability to and protection for the international Internet community. Legal challenges and lawsuits can be expected within the normal course of business for any enterprise and the new corporation should anticipate this reality.

The Green Paper envisioned the new corporation as operating on principles similar to those of a standard-setting body. Under this model, due process requirements and other appropriate processes that ensure transparency, equity and fair play in the development of policies or practices would need to be included in the new corporation's originating documents. For example, the new corporation's activities would need to be open to all persons who are directly affected by the entity, with no undue financial barriers to participation or unreasonable restrictions on

participation based on technical or other such requirements. Entities and individuals would need to be able to participate by expressing a position and its basis, having that position considered, and appealing if adversely affected. Further, the decision making process would need to reflect a balance of interests and should not be dominated by any single interest category. If the new corporation behaves this way, it should be less vulnerable to antitrust challenges.

10. The NSI Agreement.

Comments: Many commenters expressed concern about continued administration of key gTLDs by NSI. They argued that this would give NSI an unfair advantage in the marketplace and allow NSI to leverage economies of scale across their gTLD operations. Some commenters also believe the Green Paper approach would have entrenched and institutionalized NSI's dominant market position over the key domain name going forward. Further, many commenters expressed doubt that a level playing field between NSI and the new registry market entrants could emerge if NSI retained control over .com, .net, and .org.

Response: The cooperative agreement between NSI and the U.S. Government is currently in its ramp down period. The U.S. Government and NSI will shortly commence discussions about the terms and conditions governing the ramp-down of the cooperative agreement. Through these discussions, the U.S. Government expects NSI to agree to take specific actions, including commitments as to pricing and equal access, designed to permit the development of competition in domain name registration and to approximate what would be expected in the presence of marketplace competition. The U.S. Government expects NSI to agree to act in a manner consistent with this policy statement, including recognizing the role of the new corporation to establish and implement DNS policy and to establish terms (including licensing terms) applicable to new and existing gTLD registries under which registries, registrars and gTLDs are permitted to operate. Further, the U.S. Government expects NSI to agree to make available on an ongoing basis appropriate databases, software, documentation thereof, technical expertise, and other intellectual property for DNS management and shared registration of domain names.

11. A Global Perspective

Comments: A number of commenters expressed concern that the Green Paper did not go far enough in globalizing the administration of the domain name system. Some believed that international organizations should have a role in administering the DNS. Others complained that incorporating the new corporation in the United States would entrench control over the Internet with the U.S. Government. Still others believed that the awarding by the U.S. Government of up to five new gTLDs would enforce the existing dominance of U.S. entities over the gTLD system.

Response: The U.S. Government believes that the Internet is a global medium and that its technical management should fully reflect the global diversity of Internet users. We recognize the need for and fully support mechanisms that would ensure international input into the management of the domain name system. In withdrawing the U.S. Government from DNS management and promoting the establishment of a new, non-governmental entity to manage Internet names and

addresses, a key U.S. Government objective has been to ensure that the increasingly global Internet user community has a voice in decisions affecting the Internet's technical management.

We believe this process has reflected our commitment. Many of the comments on the Green Paper were filed by foreign entities, including governments. Our dialogue has been open to all Internet users - foreign and domestic, government and private - during this process, and we will continue to consult with the international community as we begin to implement the transition plan outlined in this paper.

12. The Intellectual Infrastructure Fund.

In 1995, NSF authorized NSI to assess domain name registrants a \$50 fee per year for the first two years, 30 percent of which was to be deposited in the Intellectual Infrastructure Fund (IIF), a fund to be used for the preservation and enhancement of the intellectual infrastructure of the Internet.

Comments: Very few comments referenced the IIF. In general, the comments received on the issue supported either refunding the IIF portion of the domain name registration fee to domain registrants from whom it had been collected or applying the funds toward Internet infrastructure development projects generally, including funding the establishment of the new corporation.

Response: As proposed in the Green Paper, allocation of a portion of domain name registration fees to this fund terminated as of March 31, 1998. NSI has reduced its registration fees accordingly. The IIF remains the subject of litigation. The U.S. Government takes the position that its collection has recently been ratified by the U.S. Congress,⁽¹⁹⁾

and has moved to dismiss the claim that it was unlawfully collected. This matter has not been finally resolved, however.

13. The .us Domain.

At present, the IANA administers .us as a locality-based hierarchy in which second-level domain space is allocated to states and U.S. territories.⁽²⁰⁾ This name space is further subdivided into localities. General registration under localities is performed on an exclusive basis by private firms that have requested delegation from IANA. The .us name space has typically been used by branches of state and local governments, although some commercial names have been assigned. Where registration for a locality has not been delegated, the IANA itself serves as the registrar.

Comments: Many commenters suggested that the pressure for unique identifiers in the .com gTLD could be relieved if commercial use of the .us space was encouraged. Commercial users and trademark holders, however, find the current locality-based system too cumbersome and

complicated for commercial use. They called for expanded use of the .us TLD to alleviate some of the pressure for new generic TLDs and reduce conflicts between American companies and others vying for the same domain name. Most commenters support an evolution of the .us domain designed to make this name space more attractive to commercial users.

Response: Clearly, there is much opportunity for enhancing the .us domain space, and .us could be expanded in many ways without displacing the current structure. Over the next few months, the U.S. Government will work with the private sector and state and local governments to determine how best to make the .us domain more attractive to commercial users. Accordingly, the Department of Commerce will seek public input on this important issue.

ADMINISTRATIVE LAW REQUIREMENTS:

On February 20, 1998, NTIA published for public comment a proposed rule regarding the domain name registration system. That proposed rule sought comment on substantive regulatory provisions, including but not limited to a variety of specific requirements for the membership of the new corporation, the creation during a transition period of a specified number of new generic top level domains and minimum dispute resolution and other procedures related to trademarks. As discussed elsewhere in this document, in response to public comment these aspects of the original proposal have been eliminated. In light of the public comment and the changes to the proposal made as a result, as well as the continued rapid technological development of the Internet, the Department of Commerce has determined that it should issue a general statement of policy, rather than define or impose a substantive regulatory regime for the domain name system. As such, this policy statement is not a substantive rule, does not contain mandatory provisions and does not itself have the force and effect of law.

The Assistant General Counsel for Legislation and Regulation, Department of Commerce, certified to the Chief Counsel for Advocacy, Small Business Administration, that, for purposes of the Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq., the proposed rule on this matter, if adopted, would not have a significant economic impact on a substantial number of small entities. The factual basis for this certification was published along with the proposed rule. No comments were received regarding this certification. As such, and because this final rule is a general statement of policy, no final regulatory flexibility analysis has been prepared.

This general statement of policy does not contain any reporting or record keeping requirements subject to the Paperwork Reduction Act, 44 U.S.C. ch. 35 (PRA). However, at the time the U.S. Government might seek to enter into agreements as described in this policy statement, a determination will be made as to whether any reporting or record keeping requirements subject to the PRA are being implemented. If so, the NTIA will, at that time, seek approval under the PRA for such requirement(s) from the Office of Management and Budget.

This statement has been determined to be not significant for purposes of Office of Management and Budget review under Executive Order 12866, entitled Regulatory Planning and Review.

REVISED POLICY STATEMENT:

This document provides the U.S. Government's policy regarding the privatization of the domain name system in a manner that allows for the development of robust competition and that facilitates global participation in the management of Internet names and addresses.

The policy that follows does not propose a monolithic structure for Internet governance. We doubt that the Internet should be governed by one plan or one body or even by a series of plans and bodies. Rather, we seek a stable process to address the narrow issues of management and administration of Internet names and numbers on an ongoing basis.

As set out below, the U.S. Government is prepared to recognize, by entering into agreement with, and to seek international support for, a new, not-for-profit corporation formed by private sector Internet stakeholders to administer policy for the Internet name and address system. Under such agreement(s) or understanding(s), the new corporation would undertake various responsibilities for the administration of the domain name system now performed by or on behalf of the U.S. Government or by third parties under arrangements or agreements with the U.S. Government. The U.S. Government would also ensure that the new corporation has appropriate access to needed databases and software developed under those agreements.

The Coordinated Functions

Management of number addresses is best done on a coordinated basis. Internet numbers are a unique, and at least currently, a limited resource. As technology evolves, changes may be needed in the number allocation system. These changes should also be coordinated.

Similarly, coordination of the root server network is necessary if the whole system is to work smoothly. While day-to-day operational tasks, such as the actual operation and maintenance of the Internet root servers, can be dispersed, overall policy guidance and control of the TLDs and the Internet root server system should be vested in a single organization that is representative of Internet users around the globe.

Further, changes made in the administration or the number of gTLDs contained in the authoritative root system will have considerable impact on Internet users throughout the world. In order to promote continuity and reasonable predictability in functions related to the root zone, the development of policies for the addition, allocation, and management of gTLDs and the establishment of domain name registries and domain name registrars to host gTLDs should be coordinated.

Finally, coordinated maintenance and dissemination of the protocol parameters for Internet addressing will best preserve the stability and interconnectivity of the Internet. We are not,

however, proposing to expand the functional responsibilities of the new corporation beyond those exercised by IANA currently.

In order to facilitate the needed coordination, Internet stakeholders are invited to work together to form a new, private, not-for-profit corporation to manage DNS functions. The following discussion reflects current U.S. Government views of the characteristics of an appropriate management entity. What follows is designed to describe the characteristics of an appropriate entity generally.

Principles for a New System. In making a decision to enter into an agreement to establish a process to transfer current U.S. government management of DNS to such a new entity, the U.S. will be guided by, and consider the proposed entity's commitment to, the following principles:

1. Stability

The U.S. Government should end its role in the Internet number and name address system in a manner that ensures the stability of the Internet. The introduction of a new management system should not disrupt current operations or create competing root systems. During the transition and thereafter, the stability of the Internet should be the first priority of any DNS management system. Security and reliability of the DNS are important aspects of stability, and as a new DNS management system is introduced, a comprehensive security strategy should be developed.

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 management of the Internet because they will lower costs, promote innovation, encourage diversity, and enhance user choice and satisfaction.

3. Private, Bottom-Up Coordination.

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 private process should, as far as possible, reflect the bottom-up governance that has characterized development of the Internet to date.

4. Representation.

The new corporation should operate as a private entity for the benefit of the Internet

community as a whole. The development of sound, fair, and widely accepted policies for the management of DNS will depend on input from the broad and growing community of Internet users. Management structures should reflect the functional and geographic diversity of the Internet and its users. Mechanisms should be established to ensure international participation in decision making.

Purpose. The new corporation ultimately should have the authority to manage and perform a specific set of functions related to coordination of the domain name system, including the authority necessary to:

- 1) set policy for and direct allocation of IP number blocks to regional Internet number registries;
- 2) oversee operation of the authoritative Internet root server system;
- 3) oversee policy for determining the circumstances under which new TLDs are added to the root system; and
- 4) coordinate the assignment of other Internet technical parameters as needed to maintain universal connectivity on the Internet.

Funding. Once established, the new corporation could be funded by domain name registries, regional IP registries, or other entities identified by the Board.

Staff. We anticipate that the new corporation would want to make arrangements with current IANA staff to provide continuity and expertise over the course of transition. The new corporation should secure necessary expertise to bring rigorous management to the organization.

Incorporation. We anticipate that the new corporation's organizers will include representatives of regional Internet number registries, Internet engineers and computer scientists, domain name registries, domain name registrars, commercial and noncommercial users, Internet service providers, international trademark holders and Internet experts highly respected throughout the international Internet community. These incorporators should include substantial representation from around the world.

As these functions are now performed in the United States, by U.S. residents, and to ensure stability, the new corporation should be headquartered in the United States, and incorporated in the U.S. as a not-for-profit corporation. It should, however, have a board of directors from around the world. Moreover, incorporation in the United States is not intended to supplant or displace the laws of other countries where applicable.

Structure. The Internet community is already global and diverse and likely to become more so over time. The organization and its board should derive legitimacy from the participation of key stakeholders. Since the organization will be concerned mainly with numbers, names and protocols, its board should represent membership organizations in each of these areas, as well as the direct interests of Internet users.

The Board of Directors for the new corporation should be balanced to equitably represent the interests of IP number registries, domain name registries, domain name registrars, the technical community, Internet service providers (ISPs), and Internet users (commercial, not-for-profit, and individuals) from around the world. Since these constituencies are international, we would expect the board of directors to be broadly representative of the global Internet community.

As outlined in appropriate organizational documents, (Charter, Bylaws, etc.) the new corporation should:

- 1) appoint, on an interim basis, an initial Board of Directors (an Interim Board) consisting of individuals representing the functional and geographic diversity of the Internet community. The Interim Board would likely need access to legal counsel with expertise in corporate law, competition law, intellectual property law, and emerging Internet law. The Interim Board could serve for a fixed period, until the Board of Directors is elected and installed, and we anticipate that members of the Interim Board would not themselves serve on the Board of Directors of the new corporation for a fixed period thereafter.
- 2) direct the Interim Board to establish a system for electing a Board of Directors for the new corporation that insures that the new corporation's Board of Directors reflects the geographical and functional diversity of the Internet, and is sufficiently flexible to permit evolution to reflect changes in the constituency of Internet stakeholders. Nominations to the Board of Directors should preserve, as much as possible, the tradition of bottom-up governance of the Internet, and Board Members should be elected from membership or other associations open to all or through other mechanisms that ensure broad representation and participation in the election process.
- 3) direct the Interim Board to develop policies for the addition of TLDs, and establish the qualifications for domain name registries and domain name registrars within the system.
- 4) restrict official government representation on the Board of Directors without precluding governments and intergovernmental organizations from participating as Internet users or in a non-voting advisory capacity.

Governance. The organizing documents (Charter, Bylaws, etc.) should provide that the new corporation is governed on the basis of a sound and transparent decision-making process, which protects against capture by a self-interested faction, and which provides for robust, professional management of the new corporation. The new corporation could rely on separate, diverse, and robust name and number councils responsible for developing, reviewing, and recommending for the board's approval policy related to matters within each council's competence. Such councils, if developed, should also abide by rules and decision-making processes that are sound, transparent, protect against capture by a self-interested party and provide an open process for the presentation of petitions for consideration. The elected Board of Directors, however, should have final authority to approve or reject policies recommended by the councils.

Operations. The new corporation's processes should be fair, open and pro-competitive, protecting against capture by a narrow group of stakeholders. Typically this means that decision-making processes should be sound and transparent; the basis for corporate decisions should be recorded and made publicly available. Super-majority or even consensus requirements may be useful to protect against capture by a self-interested faction. The new corporation does not need any special grant of immunity from the antitrust laws so long as its policies and practices are reasonably based on, and no broader than necessary to promote the legitimate coordinating objectives of the new corporation. Finally, the commercial importance of the Internet necessitates that the operation of the DNS system, and the operation of the authoritative root server system should be secure, stable, and robust.

The new corporation's charter should provide a mechanism whereby its governing body will evolve to reflect changes in the constituency of Internet stakeholders. The new corporation could, for example, establish an open process for the presentation of petitions to expand board representation.

Trademark Issues. Trademark holders and domain name registrants and others should have access to searchable databases of registered domain names that provide information necessary to contact a domain name registrant when a conflict arises between a trademark holder and a domain name holder.⁽²¹⁾ To this end, we anticipate that the policies established by the new corporation would provide that following information would be included in all registry databases and available to anyone with access to the Internet:

- up-to-date registration and contact information;
- up-to-date and historical chain of registration information for the domain name;
- a mail address for service of process;
- the date of domain name registration;

- the date that any objection to the registration of the domain name is filed; and

- any other information determined by the new corporation to be reasonably necessary to resolve disputes between domain name registrants and trademark holders expeditiously.

Further, the U.S. Government recommends that the new corporation adopt policies whereby:

- 1) Domain registrants pay registration fees at the time of registration or renewal and agree to submit infringing domain names to the authority of a court of law in the jurisdiction in which the registry, registry database, registrar, or the "A" root servers are located.

- 2) Domain name registrants would agree, at the time of registration or renewal, that in cases involving cyberpiracy or cybersquatting (as opposed to conflicts between legitimate competing rights holders), they would submit to and be bound by alternative dispute resolution systems identified by the new corporation for the purpose of resolving those conflicts. Registries and Registrars should be required to abide by decisions of the ADR system.

- 3) Domain name registrants would agree, at the time of registration or renewal, to abide by processes adopted by the new corporation that exclude, either pro-actively or retroactively, certain famous trademarks from being used as domain names (in one or more TLDs) except by the designated trademark holder.

- 4) Nothing in the domain name registration agreement or in the operation of the new corporation should limit the rights that can be asserted by a domain name registrant or trademark owner under national laws.

THE TRANSITION

Based on the processes described above, the U.S. Government believes that certain actions should be taken to accomplish the objectives set forth above. Some of these steps must be taken by the government itself, while others will need to be taken by the private sector. For example, a new not-for-profit organization must be established by the private sector and its Interim Board chosen. Agreement must be reached between the U.S. Government and the new corporation relating to transfer of the functions currently performed by IANA. NSI and the U.S. Government must reach agreement on the terms and conditions of NSI's evolution into one competitor among many in the registrar and registry marketplaces. A process must be laid out for making the management of the root server system more robust and secure. A relationship between the U.S. Government and the new corporation must be developed to transition DNS management to the

private sector and to transfer management functions.

During the transition the U.S. Government expects to:

1) ramp down the cooperative agreement with NSI with the objective of introducing competition into the domain name space. Under the ramp down agreement NSI will agree to (a) take specific actions, including commitments as to pricing and equal access, designed to permit the development of competition in domain name registration and to approximate what would be expected in the presence of marketplace competition, (b) recognize the role of the new corporation to establish and implement DNS policy and to establish terms (including licensing terms) applicable to new and existing gTLDs and registries under which registries, registrars and gTLDs are permitted to operate, (c) make available on an ongoing basis appropriate databases, software, documentation thereof, technical expertise, and other intellectual property for DNS management and shared registration of domain names;

2) enter into agreement with the new corporation under which it assumes responsibility for management of the domain name space;

3) ask WIPO to convene an international process including individuals from the private sector and government to develop a set of recommendations for trademark/domain name dispute resolutions and other issues to be presented to the Interim Board for its consideration as soon as possible;

4) consult with the international community, including other interested governments as it makes decisions on the transfer; and

5) undertake, in cooperation with IANA, NSI, the IAB, and other relevant organizations from the public and private sector, a review of the root server system to recommend means to increase the security and professional management of the system. The recommendations of the study should be implemented as part of the transition process; and the new corporation should develop a comprehensive security strategy for DNS management and operations.

ENDNOTES

1. Available at <<http://www.ecommerce.gov>>.

2. July 2, 1997 RFC and public comments are located at:
<<http://www.ntia.doc.gov/ntiahome/domainname/index.html>>.

3. The RFC, the Green Paper, and comments received in response to both documents are available on the Internet at the following address: <<http://www.ntia.doc.gov>>. Additional comments were submitted after March 23, 1998. These

comments have been considered and treated as part of the official record and have been separately posted at the same site, although the comments were not received by the deadline established in the February 20, 1998 Federal Register Notice.

4. See Administrative Law Requirements at p. 19.

5. See Scientific and Advanced-Technology Act of 1992; Pub. L. 102-476 § 4(9), 106 Stat. 2297, 2300 (codified at 42 U.S.C. § 1862 (a)).

6. An unofficial diagram of the general geographic location and institutional affiliations of the 13 Internet root servers, prepared by Anthony Rutkowski, is available at <<http://www.wia.org/pub/rootsev.html>>.

7. For further information about these systems see: name.space: <<http://namespace.pgmedia.net>>; AlterNIC: <<http://www.alternic.net>>; eDNS: <<http://www.edns.net>>. Reference to these organizations does not constitute an endorsement of their commercial activities.

8. Lengthy discussions by the Internet technical community on DNS issues generally and on the Postel DNS proposal took place on the *newdom*, *com-priv*, *ietf* and *domain-policy* Internet mailing lists.

9. See *draft-Postel-iana-itld-admin-01.txt*; available at <<http://www.newdom.com/archive>>.

10. For further information about the IAHC see: <<http://www.iahc.org>> and related links. Reference to this organization does not constitute an endorsement of the commercial activities of its related organizations.

11. December 1996 draft: *draft-iahc-gtlds-spec-00.txt*; available at <<http://info.internet.isi.edu:80/in-drafts/files>>.

12. The IAHC final report is available at <<http://www.iahc.org/draft-iahc-recommend-00.html>>.

13. See generally public comments received in response to July 2, 1997 RFC located at <<http://www.ntia.doc.gov/ntiahome/domainname/email>>.

14. For a discussion, see Congressional testimony of Assistant Secretary of Commerce Larry Irving, Before the House Committee on Science, Subcommittee on Basic Research, September 25, 1997 available at <<http://www.ntia.doc.gov/ntiahome/domainname/email>>.

15. See generally public comments received in response to July 2, 1997 RFC located at <<http://www.ntia.doc.gov/ntiahome/domainname/email>>.

16. The document was published in the *Federal Register* on February 20, 1998, (63 Fed. Reg. 8826 (Feb. 20, 1998)).

17. As used herein, the term "new corporation" is intended to refer to an entity formally organized under well recognized and established business law standards.

18. As noted in the Summary, the President directed the Secretary of Commerce to privatize DNS in a manner that increases competition and facilitates international participation in its management. Accordingly, the Department of Commerce will lead the coordination of the U.S. government's role in this transition.

19. 1998 Supplemental Appropriations and Rescissions Act; Pub. L. 105-174; 112 Stat. 58.

20. Management principles for the .us domain space are set forth in Internet RFC 1480, <<http://www.isi.edu/in-notes/rfc1480.txt>>.

21. These databases would also benefit domain name holders by making it less expensive for new registrars and registries to identify potential customers, enhancing competition and lowering prices.

Comments concerning the layout, construction and functionality of this site
should be sent to webmaster@icann.org.

Page Updated 22-July-2000

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