

INTERNATIONAL TELECOMMUNICATION  
UNION

TELECOMMUNICATION  
STANDARDIZATION SECTOR

STUDY PERIOD 2001-2004

**ccTLD Doc 37**  
**Original: English**

Workshop on Member States' experiences with ccTLD  
Geneva, 3-4 March 2003

**DOCUMENT FOR ccTLD WORKSHOP**

**Source:** United States Government NTIA/DOC

**Title:** .us re-delegation case study

---

**Introduction**

At the ICANN Government Advisory Committee (GAC) inter-sessional meeting in Canberra, Australia, a number of representatives, including the U.S. representatives agreed to compose and share an outline describing the events surrounding the re-delegation of their respective Country Code Top Level Domains (ccTLDs). This document outlines the re-delegation process of the .us domain corresponding to the United States of America.

**Background**

*The Historic .us domain Structure and Administration*

In 1992, the National Science Foundation (NSF) entered into a cooperative agreement with Network Solutions Inc. (NSI) to provide registry and registrar services for generic top level domains, including the .com, .net, .org, .gov, and .edu domains, as well as the .us domain. In 1993, NSI provided funding to the University of Southern California's Information Sciences Institute (USC/ISI) to serve as the .us registrar. USC/ISI continued in this role through September 2000.

Dr. Jonathan B. Postel of USC/ISI originally administered the .us domain as a locality based hierarchy in which second-level domain space was allocated to states, U.S. territories and special purposes as described in the Internet Engineering Task Force's (IETF) RFC 1480.<sup>1</sup> The .us domain was further subdivided into localities and other functional designations and became a widely distributed registry with over 11,000 domain delegations to over 800 individuals and entities. These delegated managers maintained a registry and provided registration services for commercial,

---

<sup>1</sup> For example, the web site [www.co.arlington.va.us](http://www.co.arlington.va.us) corresponds to the Official Web Site of Arlington County, Virginia. The second level is dedicated to the state, the third level to the locality, and the fourth to the type of entity in the county. As described in the RFC 1480: The US Domain hierarchy is based on political geography. The basic name space under US is the state name space, then the "locality" name space (like a city, or county), then organization or computer name and so on.

---

**Contact:** Cathy Handley  
NTIA/DOC  
USA

Email [chandley@ntia.doc.gov](mailto:chandley@ntia.doc.gov)

**Attention:** This is not a publication made available to the public, but **an internal ITU-T Document** intended only for use by the Member States of the ITU, by ITU-T Sector Members and Associates, and their respective staff and collaborators in their ITU related work. It shall not be made available to, and used by, any other persons or entities without the prior written consent of the ITU-T.

educational, and governmental entities in the space. Under this system, the .us domain was generally used by U.S. state and local governments, although some commercial names were assigned. Where registration for a locality had not been delegated, Dr. Postel served as the registrar.

*The Department of Commerce's Role in the Development of Policy for the .us domain*

On July 1, 1997, as part of the *Framework for Global Electronic Commerce*, the President directed the Secretary of Commerce to privatize management of certain technical aspects of the Internet domain name system (DNS) in a manner that would increase competition and facilitate international participation in DNS management.<sup>2</sup> In response to this directive, the

Department of Commerce, through the National Telecommunications and Information Administration (NTIA), began a process of gathering public comments to develop the U.S. Government's policy regarding privatization of certain technical aspects of the DNS, including a commitment to further explore and seek public comment about the evolution of the .us domain.<sup>3</sup> In September 1998, NSF transferred its cooperative agreement with NSI to the Department to permit a ramp down of the agreement as part of the privatization process.<sup>4</sup>

In a policy development process paralleling the Department's privatization efforts, NTIA began an extensive outreach effort to the U.S. Internet stakeholder community on the expansion and future administration of the .us domain, including an initial request for public comment in August 1998.<sup>5</sup> Early the next year, NTIA hosted a public meeting regarding the future management and administration of the .us domain with approximately 60 participants, including the then-current usTLD Administrator; then-current .us registrars; educators; representatives of the technical, public interest, and business communities; and federal, state and foreign government officials.<sup>6</sup> Afterwards, NTIA established an open electronic mailing list to facilitate further public discussions of the issues.<sup>7</sup>

---

<sup>2</sup> See *A Framework for Global Electronic Commerce* (July 1, 1997) (available at <http://www.ta.doc.gov/digeconomy/frameworkr.htm>).

<sup>3</sup> See *Improvement of Technical Management of Internet Names and Addresses*, Proposed Rule and Request for Public Comment, National Telecommunications and Information Administration, Department of Commerce, 63 Fed. Reg. 8825 (Feb. 20, 1998) (available at <http://www.ntia.doc.gov/ntiahome/domainname/domainname130.htm>); *Management of Internet Names and Addresses*, Statement of Policy, National Telecommunications and Information Administration, Department of Commerce, 63 Fed. Reg. 31741 (June 10, 1998) (available at <http://www.ntia.doc.gov/ntiahome/domainname/domainhome.htm>).

<sup>4</sup> During the policy development process and the later U.S. Government procurement process, NSI continued to provide registry and registrar services for the .us domain through its arrangement with USC/ISI until September 2000 and then directly until November 2001. See Amendment 19 to Cooperative Agreement NCR-9218742 (available at <http://www.icann.org/nsi/coopagmt-amend19-04nov99.htm>) and Amendment 21 to Cooperative Agreement NCR-9218742 (available at <http://www.ntia.doc.gov/ntiahome/domainname/agreements/amendment21.htm>).

<sup>5</sup> See *Enhancement of the .us Domain Space*, Notice, Request for Comments, National Telecommunications and Information Administration, Department of Commerce, 63 Fed. Reg. 41547 (Aug. 4, 1998) (available at <http://www.ntia.doc.gov/ntiahome/domainname/usrfc/dotusrfc.htm>). The comment period was extended to October 5, 1998, to afford interested parties a full opportunity to address the issues raised in the request. See *Extension of Comment Period*, National Telecommunications and Information Administration, Department of Commerce, 63 Fed. Reg. 45800 (Aug. 24, 1998) (available at <http://www.ntia.doc.gov/ntiahome/domainname/usrfc/dotusext.htm>).

<sup>6</sup> See *Enhancement of the .us Domain Space, Notification of Public Meeting*, Notice, National Telecommunications and Information Administration, Department of Commerce, 64 Fed. Reg. 6633 (Feb. 10, 1999). The agenda for that meeting is available at <http://www.ntia.doc.gov/ntiahome/domainname/dotusagenda.htm>.

<sup>7</sup> See *Enhancement of the .us Domain Space, Notification of Open Electronic Mailing List for Public Discussions Regarding the Future Management and Administration of the .us Domain Space*, Notice, National Telecommunications and Information Administration, Department of Commerce, 64 Fed. Reg. 26365 (May 14,

Through this public outreach process, NTIA learned that the distributed registration model developed for the .us domain afforded scalable registration services and opportunities for commercial entities to provide name registration services. However, because of the relative lack of public awareness about the availability of .us domain domain names and its deeply hierarchical and somewhat cumbersome structure, the .us domain had not attracted a high level of domain name registration activity and remained under-populated in comparison with other ccTLDs. Some commenters suggested that the general absence of non-locality based registration space in the .us domain contributed to the perceived overcrowding in the generic .com, .net, and .org top level domains. There was general consensus in the U.S. Internet stakeholder community that opening the .us domain to direct second-level domain registrations would increase the attractiveness of the space to most consumers.

In an effort to develop a more concrete framework for obtaining new services for the .us domain identified during the public comment process, NTIA prepared a draft Statement of Work to be incorporated in a request for proposal for management and administration of the .us domain. This draft Statement of Work was also subject to public comment and amended accordingly.<sup>8</sup> The Department then began a competitive procurement process, which resulted in the award of a contract to NeuStar, Inc. (NeuStar) for the provision of administrative and technical services for the .us domain.<sup>9</sup>

#### *The .us Contract*

The Department awarded NeuStar a four-year contract (with two one-year, optional extensions) that sets forth the terms for the technical management of .us and a number of enhanced services for .us consumers. In the contract, the Department of Commerce outlines the U.S. Government's objectives for the .us domain:

- To ensure that the procedures and a framework of accountability for the delegation and the administration of the .us domain evolve into a more robust, certain, and reliable system.
- To promote increased use of the .us domain by the U.S. Internet community, (including small businesses, consumers, Internet users, not-for-profit organizations, and local governments (i.e., state, city, and county), among others, with residence or a bona fide presence in the United States through introduction of enhanced services, dissemination of information through advertising and/or other appropriate mechanisms, and simplification of registration services including direct registration.
- To create a centrally administered and efficiently managed structure that ensures both registrant/consumer confidence and infrastructure stability through coordination of delegations as well as other appropriate functions.
- To create a stable, flexible, and balanced environment within the .us domain that is conducive to innovation and that will meet the future demands of potential registrants.
- To ensure continued stability of the domain name systems as a whole and the .us domain, particularly throughout the transition period from the current management structure into the new structure developed and maintained under the contract.

---

1999) (available at <http://www.ntia.doc.gov/ntiahome/domainname/usrfc/dotuslistfedreg51099.htm>)

<sup>8</sup> *Management and Administration of the .us Domain Space*, Notice, Request for Public Comment, National Telecommunications and Information Administration, U.S. Department of Commerce, 65 Fed. Reg. 50964 (Aug. 22, 2000) (available at <http://www.ntia.doc.gov/ntiahome/domainname/usrfc2/dotusrfc2.htm>).

<sup>9</sup> A copy of the competitive Request for Proposal and Contract award are available on NTIA's web site at <http://www.ntia.doc.gov/ntiahome/domainname/usca/index.html>.

- To manage the .us domain consistent with the Internet Corporation for Assigned Names and Numbers' (ICANN) technical management of the DNS.
- To allow for the adequate protection of intellectual property in the .us domain.
- To establish and maintain consistent communication between the Department, the Contractor and ICANN. This includes representation of the .us domain in the ICANN ccTLD constituency and contribution to ICANN's operating costs as apportioned to the .us domain through the ICANN budget process.
- To promote robust competition within the .us domain and in particular registration services that will lead to greater choice, innovation, and better services for users.

The Contractor is required to be incorporated in the United States, possess and maintain throughout the performance of the contract a physical address in the country, and conduct all primary registry services in the United States. The Contractor is precluded from charging the U.S. Government for the .us domain services, but is permitted to establish and collect reasonable fees from third parties for performance of the contract requirements, after approval by the U.S. Government.

The contract also requires that the Contractor perform the following requirements:

- (1) Core Registry Functions, including provision of all systems, software, hardware, facilities, infrastructure, and operation for the following services: operation and maintenance of the primary, authoritative server for the .us domain; the operations and/ or administration of a constellation of secondary servers for the .us domain the compilation, generation and propagation of the .us domain zone file(s); the maintenance of an accurate and up-to-date database of .us domain sub-delegation managers; the establishment of a data escrow for .us domain zone file and domain name registration information, including chain of registration data; the compliance with applicable Internet Engineering Task Force and applicable ICANN policies for these functions; and the promotion of awareness and registration in the .us domain, including maintaining the website with up-to-date policy and registration information for the .us domain.
- (2) Core Policy Requirements, including implementation of a United States nexus requirement, a uniform domain dispute resolution procedure, and a sunrise policy; adoption of NTIA approved ICANN policies pertaining to open ccTLD's, and conformance with the GAC's "Principles for the Delegation and Administration of Country-Code Top Level Domains" (GAC Principles).
- (3) Locality-based .us domain Structure Functions, including service for existing delegees and registrants and for undelegated third level sub-domains, modernization of locality-based .us domain processes, coordination with existing locality-based .us TLD users, an investigation of compliance with existing locality-based .us domain policies, and development of a database of .us domain delegated Managers and a registrant WHOIS database.
- (4) Expanded .us domain Space Function, including the development and implementation of a shared registration system, an accreditation system of .us domain registrars, a technical certification of such registrars, a WHOIS database, and a community outreach plan. The Contractor is prohibited from serving as a registrar in the .us domain.

### **Re-Delegation**

Consistent with GAC Principles, the Department of Commerce took a number of steps to ensure the continued stable operation of the .us domain during the transition from NSI/VeriSign, Inc.

(VeriSign) to NeuStar.<sup>10</sup> As noted above, the underlying contract for management of the .us domain commits NeuStar to manage the .us domain in a manner consistent with not only the GAC Principles, but also ICANN's technical management of the domain name system. This commitment provides a framework for an arrangement between ICANN and NeuStar as contemplated by section V.C.6 of the Memorandum of Understanding between the United States Department of Commerce and ICANN, as amended by Amendment 2. The Department notified ICANN about the contract award to NeuStar for the management of the .us domain. Next, the former administrator of the .us domain, VeriSign, contacted ICANN using the Internet Assigned Numbers Authority (IANA) process to propose changing the technical and administrative contacts of the .us domain to the successor contractor, NeuStar. VeriSign provided transition plans to the IANA to move the name servers, and at the same time, NeuStar provided ICANN with the appropriate NeuStar contacts for assuming the technical, operational, and administrative operations of the .usTLD. After reviewing the transition plan, ICANN transmitted a recommendation to the Department to approve the redelegation. The Department in turn authorized VeriSign to update the authoritative root zone file to effect the redelegation. VeriSign and NeuStar completed the technical transition as outlined in the transition plan. The final stages of the transition took place during November 2001.

### **Funding**

The Contractor is precluded from charging the U.S. Government for the .us domain services, but is permitted to establish and collect fees from third parties for performance of the requirements of this purchase order, such fees to be reasonable and approved by the U.S. Government.

### **Changes in .us Structure Since Re-Delegation**

Since April 2002, .us registrations have been available at the second level.

---

<sup>10</sup> In June 2000, VeriSign, Inc. and Network Solutions merged. As a result, "NSI" refers to Network Solutions, Inc., a wholly owned subsidiary of VeriSign, Inc..