

.US Compliance Report

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FINAL

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Executive Summary

The usTLD has expanded its breadth and recognition to rank among the 20 largest domain spaces on the Internet. This was made possible only by the expansion of the domain to allow second-level registrations and moving the management of the entire namespace (the existing locality space and the expanded space) to a highly available, near-real time registration system. The new popularity of domain does not mean the legacy space can be forgotten; the locality space requires resources to consolidate, monitor and track its valuable registrations and ensure consistent registry availability.

The names within the .US locality space represent some of the most important public resources to Americans today. It is the naming structure adopted by most public schools, state and local governments to provide valuable resource materials to its citizenry, many of the public libraries of the United States, and the North American Indian Nations. Due to the history of its creation by Jon Postel (as summarized in Section 2) and its highly distributed nature, each of these namespaces has numerous points of contact, the “delegated managers”, at various nodes in the DNS. This presents a challenge in identifying and contacting the delegated managers and adequately cataloguing all of their registrations and responsibilities. Subsequently, each node within the usTLD has only a minimum base of consistent standards.

This report summarizes the creation and structure of the locality space of usTLD, its usage, and the study undertaken by Neustar to determine this information.

Unfortunately, we did not receive the participation we hoped for when the study commenced, and the results subsequently reflect only a minority of the delegations within the usTLD locality space reporting. An important outcome of this survey was the expansion of the public usTLD Whois; 16,773 delegations are now available. Additionally, the study showed the delegated managers take their responsibilities very seriously and properly manage their respective sub-domains. Although the locality space is fairly well developed, there are a number of action items detailed in this report that need to be taken in order to increase the functionality and utility of the locality space. These include:

- The development and introduction of a Lane Delegation Policy;
- Centralized and automated Whois registrations and updates;
- Policies and procedures (including any relevant fees) for new delegations, cancellation of delegations, and re-delegations, and;
- Instituting a standard agreement between the usTLD Administrator and delegated managers.

Neustar, as the current administrator of the usTLD, will address these by proposing solutions to the Department of Commerce in the coming weeks.

In conclusion, Neustar submits the following final report as a first step in managing the locality space in a responsible fashion, and uses this document as an opportunity to address the mechanisms we will implement to continue innovation. Each of the recommendations noted above will be

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addressed by appropriate policies and procedures, and in tandem, we will continue to be responsive to the needs of the usTLD locality space.

1. Introduction

As discussed in our proposal for the administration of the .US top level domain (usTLD), Neustar's approach to the Compliance Investigation and Report is based on outreach to the locality Delegated Managers to document their feedback and to understand the potential problems with the current locality space.

Delegating portions of localities within the usTLD hierarchy began as a logical method of maintaining the space and encouraging individuals within those physical localities to register domain names. However, the lack of coordination within the domain, noncompliance by some delegees, atrophy of the domain name registration services in subsequent handoffs from ISI and NSI, and lack of customer support have all caused stagnation in registrations and have done little to promote the public interest aspect of the usTLD.

This compliance investigation effort provides a first step in improving usTLD locality operation and use. It will also aid efforts in usTLD community outreach to communicate with Delegated Managers, to enable the achievement of stable, consistent service, and to pursue enhancements in the usTLD locality space. Because of the history of usTLD administration, there is little information about current administration and operations. It is essential that a thorough investigation be performed to obtain a baseline for current information about the status of usTLD operations, to assess points of satisfaction and dissatisfaction among current delegees and current registrants, and to enable Neustar to provide recommendations to the Department of Commerce ("DoC") for improvements by surveying current delegees and current registrants.

The stated goal for the Compliance Report activity is to establish a basis for moving to consistent quality of service for usTLD administration. However, investigation would be appropriate even with a flawless history, because it would permit Neustar to develop initial channels of communication with the existing usTLD community and to learn what changes and enhancements the community desires. Neustar anticipates that this investigation and report is the first step toward codifying new technical and administrative policies.

Our outreach approach to this compliance investigation encouraged participation in our survey. 21% of the Delegated Managers responded to the compliance questionnaire survey and provided valuable feedback.

The compliance report is organized into the following sections:

Section 2 - History of the usTLD

Section 3 - Structure and health of the current .US locality name space

Section 4 - Registration and delegation under the usTLD locality name space

Section 5 - Findings from the survey of the delegated managers

Section 6 - Recommendations for the usTLD locality name space

2. History of the usTLD

The beginnings of the usTLD can be traced to work that led to the commercialization and public use of portions of the Internet (including the usTLD). A timeline, listing the important milestones surrounding the usTLD, is provided in Appendix A of this report.

2.1 U.S. Government Role in Development of the Internet

The beginnings of the usTLD can be traced to the work begun by the U.S. Government that eventually led to the commercialization and public use of the Internet (including the usTLD). The National Telecommunications and Information Administration “White Paper” released on June 5, 1998 summarizes the events that played a major role in the development of the Internet as it is today:

“More than 30 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 [Information Sciences Institute (ISI)], 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 ISI at the University of Southern California (USC), he continued to maintain the list of assigned Internet numbers and names under contracts with DARPA. ISI International continued to publish the lists. As the lists grew, DARPA permitted Dr. Postel to delegate additional administrative aspects of the list maintenance to ISI, 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 ISI

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. Until the introduction of ICANN in 1998, NSI managed key registration, coordination, and maintenance functions of the Internet domain name system. NSI (and now other competing ICANN accredited registrars) register 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 (now VeriSign Global Registry Services) also currently maintains the authoritative database of Internet registrations for .com, .net, and .org."

The formation of the Internet Corporation for Assigned Names and Numbers (ICANN) in October 1998 by a broad coalition of the Internet's business, technical, academic, and user communities, led to further modification of the Cooperative Agreement with NSI/VeriSign as ICANN assumed responsibility for a set of technical functions previously performed under U.S. government contract by IANA and other groups. Specifically, ICANN assumed responsibility for the assignment and coordination of the Internet domain names, IP addresses, and protocol parameters and port numbers. In addition, ICANN assumed responsibility for coordinating the stable operation of the Internet's root server system.

2.2 Definition and Administration of the usTLD

2.2.1 How does the usTLD fit into this picture?

The original Cooperative Agreement for NSI to manage Internet names and addresses between the NSF and NSI signed on December 31, 1992 was amended to allow NSI to charge for the registrations of domain names. This change also included the responsibility for NSI to fund and support the activities of IANA. One of the activities undertaken by IANA was designating ISI as the administrator of the US Domain Registry; the administration of the usTLD also fell under this umbrella.

2.2.2 Who defined the original structure of the usTLD?

IANA granted authority for Dr. Jon Postel and Ann Cooper of the Information Sciences Institute of the University of Southern California (ISI) to establish the original structure and administrative mechanisms of the usTLD via two RFCs entitled “The US Domain.” Originally released as RFC 1386 in December 1992 and updated as RFC 1480 six months later, the existing usTLD locality structure is still primarily based on RFC 1480.

ISI’s initial focus was the delegation of locality domain name spaces to managers (the delegation process is discussed in detail later in this document). In subsequent years, ISI implemented a few new rules, policies, and guidelines, but the basis of the .US Locality Name Space remains primarily based on RFC 1480.

2.2.3 How did the Administration of the usTLD evolve after its inception?

In September of 1998, the National Science Foundation officially transferred authority for oversight and administration of Internet issues and policies to the Department of Commerce. In October of 1998 the Cooperative Agreement with NSI/VeriSign was transferred from the NSF to the DoC. Unfortunately, also in October of 1998, Dr. Jon Postel, the driving force behind the US Locality Name Space, passed away.

After Jon’s passing, ISI continued as the administrator of the usTLD. However, limited funding and staffing resulted in a minimal level of service and response. During this time, the continued operation and existence of the .US Locality can primarily be attributed to the dedication of many of the managers to whom Dr. Postel delegated locality domain name spaces. Any delegations, registrations under undelegated domains, and modifications processed by ISI, often took weeks or months to process, if they were processed at all.

In November 2000 the DoC and NSI/VeriSign amended the Cooperative Agreement. NSI/VeriSign agreed to continue to provide administrative services, including Registry and, as appropriate, Registrar services, for the usTLD until such time as the DoC designated a successor registry for the .US top level domain, or November 10, 2001, whichever came first. Shortly thereafter, in December of 2000, ISI formally stepped down as the administrator of the usTLD, and the administration of the usTLD became the responsibility of NSI/VeriSign.

While NSI/VeriSign continued to provide administrative services as long required by the amendment to the Cooperative Agreement, the ability to administer the .US Locality Name Space was clearly suffering from years of neglect and disrepair. Many delegated managers continue to register and maintain names in the localities they manage, but with the lack of any cohesive administration, the ability to easily identify who the delegated managers are and which delegated localities were still being managed had disappeared.

In June 2001 the DoC issued a “Request for Quotations for Management and Coordination of the usTLD”. The statement of work stated that a number of technical enhancements to the usTLD system functions are required to make the existing locality-based system more robust and reliable as well as the addition of functions to allow, on a competitive basis, for the registration of second level domains directly under the usTLD.

Neustar submitted a response to the RFQ and after careful review of the proposals, the NTIA awarded a purchase order to Neustar for the management of the usTLD on October 26, 2001. Neustar took over as the new administrator of the usTLD in early November 2001.

3. Structure and Health of the Current .US Locality Name Space

The hierarchical structure of the usTLD established by RFC 1480 is based on political geography. The second level is designated for states and US territories, based on the two-letter state and territory codes assigned by the U.S. Postal Service, and this space is further subdivided into localities. This is the primary basis of the .US Locality Name Space.

In addition to strictly geographical names, some special affinity name spaces are also reserved, such as FED, STATE, K12, LIB, CC, TEC, GEN, DST, COG, MUS, ISA and NSN. Domain names may only be registered under the locality domains or under the affinity domains. These affinity domains are either parallel to the locality domains (i.e., under the state names) or parallel to the state names (i.e., parallel to the state names directly under .US).

Anyone can still register under the .US Domain locality name space as long as they adhere to the naming structure, although U.S. Nexus requirements now officially apply. A detailed description of the current naming structure follows (as defined in RFC 1480 and updated by Dr. Postel and others). A diagram of the existing .US Locality name space can be found in Figure 1.

3.1 Name spaces within the states

3.1.1 Locality names

General format: <host-name>.<locality>.<state-code>.US.

Special reserved names: <city-agency>.CI.<locality>.<state-code>.US., <county-agency>.CO.<locality>.<state-code>.US.

The state name space is further divided into "locality" name spaces, which may be cities, or counties (parishes or townships), or local names.

This structure is ideal for small entities like individuals or small businesses. There is usually no problem with selecting locality-based names. For example, the Brown family living in Houston, Texas could register:

Brown.Houston.TX.US.

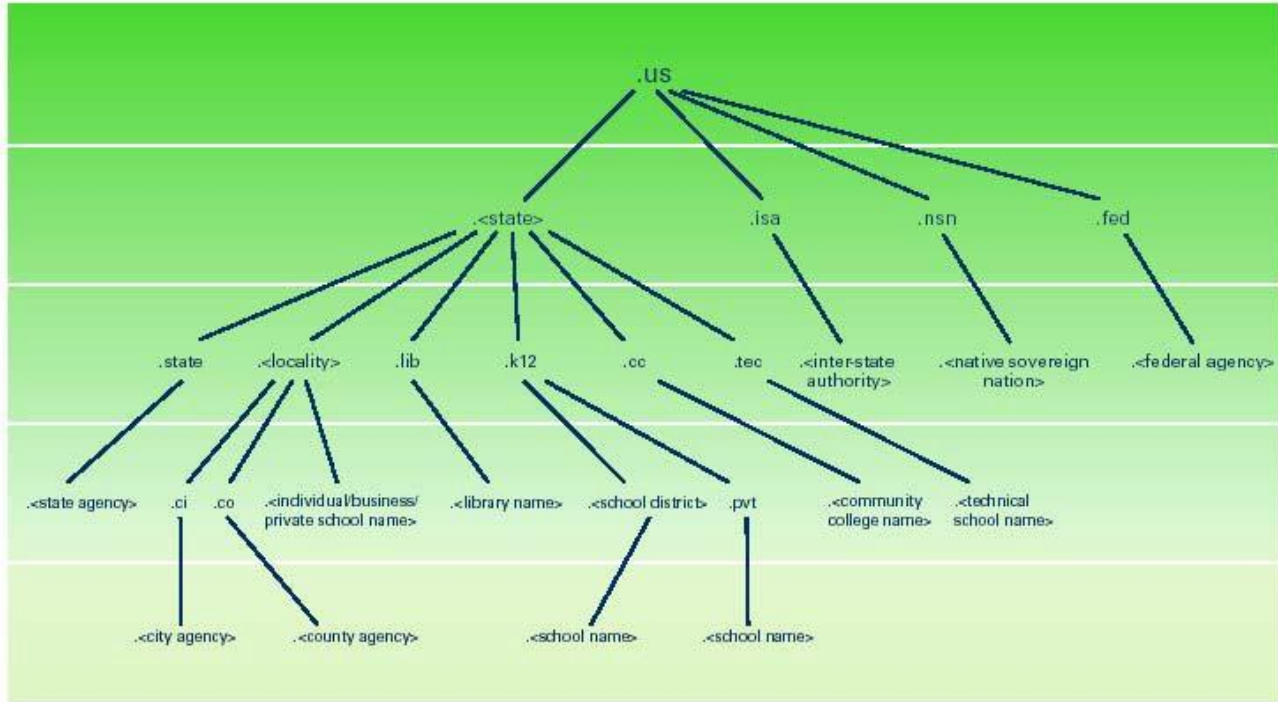


Figure 1. usTLD Address Space Hierarchy

And Fred's Barber Shop in Phoenix, Arizona could register:

FredsBarberShop.Phoenix.AZ.US.

And Boy Scout Troop 123 in Baltimore, Maryland could register:

Troop123.Baltimore.MD.US.

While the .US Locality Structure was designed primarily for small local and regional entities, registering large entities like corporations with multiple facilities in several cities or states under a locality often seems like an unreasonable constraint (especially when compared with the alternative of registering directly in the .COM domain). This is a prime reason why very few large corporations have registered under the usTLD. The suggestion that a company register their name under the particular locality where they have a head office has enticed few of them to register under the usTLD. For example, under the locality structure, IBM and Microsoft may elect to register as:

IBM.Armonk.NY.US

Microsoft.Redmond.WA.US

The locality based domain names are the fundamental concept for naming in the .US Domain. All other subdomains or branches are exceptions.

City (CI) and county (CO) government agencies

The "CI" branch is a subdomain under the <locality> name for the city government. The "CO" branch is a subdomain under the <locality> name for the county government. "CI" and "CO" are reserved names under all locality namespaces:

<agencyname>.CI.<locality>.<state>.US (city government agency)

<agencyname>.CO.<locality>.<state>.US (county government agency)

In the cases where the locality name is a county, there is a branch under the locality name, called "CO" that is used by the county government. Businesses, individuals, and other local organizations are expected to register directly under the locality name.

<businessname>.<locality>.<state>.US (businesses, individuals, organizations)

Under the city locality name space there is a "CI" branch for city government agencies (some localities may elect to use other names such as "town", "village", "borough", or "parish"; however, these names are not formally reserved).

In cases where both a county and a city exist with the same locality name, there is no conflict, since the names used by the county and city governments will be unique because they will use "CO" or "CI", respectively. For example, when the county has a fire department and the city has its own fire department, they could have names like:

Fire-Dept.CI.Ventura.CA.US

Fire-Dept.CO.Ventura.CA.US

Cities are named (designated) by their full name (spelled out with hyphens replacing spaces (e.g., Santa-Monica or Fort-Collins)). In a few cases in the past, a well-known city abbreviation known throughout a locality was allowed. However, whenever possible, these abbreviated names were replaced with the fully spelled out version to ensure that all users in the same city use the same designator for the city. That is, any particular locality should have just one locality domain name space under the usTLD.

Acceptable locality names are those listed in the U.S. Postal Service ZIP Code Directory or a well-known atlas.

There is no requirement, as far as the overall .US domain administration is concerned, that the user of a "locality" US domain name actually be in or have any connection with that locality.

3.1.2 Kindergarten through 12th grade schools (K12)

General format: <public-school-name>.<district>.K12.<state-code>.US

Special reserved names: <private-school-name>.PVT.K12.<state-code>.US

This branch is used for Kindergarten through 12th-grade schools and districts. A special name "PVT" may be used in the place of a school district name to accommodate private schools.

Many K-12 schools are connected to the Internet and registering in the Internet Domain Name System. Under RFC 1480, the Internet Assigned Numbers Authority (after consultation with the new INTERNIC Internet Registry and the Federal Network Council (FNC)) decided to direct these school registrations to the US domain using the naming structure described here. Presently, only two and four year colleges and universities may register under the .EDU domain, leaving the usTLD as the only option designed for K-12 schools. K-12 domains should be managed by an educational organization (for example, a university or a department of education) within the state.

Generally, school names are unique within a district. This provides two points at which to delegate a branch of the database to distinct administrators – the K12 administrator for each state, and the district administrator for each school district within a state.

Examples of K-12 Public School Names and Districts:

Clinton-Hs.Acsd.K12.TN.US	(Clinton High School) Riverdale-
Hs.Rcsd.K12.TN.US	(Riverdale High School)
Northstar.K12.AK.US	(North Star School District)
Prs.K12.NJ.US	(Princeton Regional School District)

Summary of Entities That Go Under K12

- Schools (public and private)
- School districts
- School boards
- Special Education Service Units
- State Departments of Education
- City and County Departments of Education
- Consortiums connecting school districts and schools
- State Agencies connecting K12 schools
- School Networks providing connectivity to school districts

School (Education) Related Entities Falling Under Other .US Domain Branches

FED - Military Schools Overseas For

example: K12.DODDS.FED.US STATE -

State Departments of Education For

example: IND.DOE.STATE.IN.US

LOCALITY - City or County Departments of Education

For example: ED.CO.TULARE.CA.US

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LOCALITY - Private K12 schools

For example: CCDS.CINCINNATI.OH.US

Private schools (PVT)

To accommodate both public and private schools in each state's K-12 branch, "PVT" is a reserved name under all K-12 delegations. Essentially, this creates an artificial district called private or "PVT". This gives a private school the option of registering like a business under "locality" or in the PVT.K12.<state-code>.US branch.

3.1.3 Community college (CC) and technical/vocational schools (TEC)

General format: <community-college-name>.CC.<state-code>.US., <technical-school-name>.TEC.<state-code>.US.

To distinguish Community and Junior colleges and Technical/Vocational schools, the keywords CC and TEC were created. CC and TEC domains should be managed by an educational organization (for example, a university or a department of education) within the state.

Community colleges and Junior colleges are generally two-year colleges sometimes offering an Associate of Arts degree. The courses offered at Community and Junior colleges are usually the equivalent of the first two years of a four-year college. Until recently, the .edu domain was restricted to accredited four-year colleges and universities. The .edu domain recently revised its requirements to also allow registrations by accredited community and junior colleges. This may impact the use of the CC keyword under the .US domain.

Technical and Vocational schools usually offer courses and training leading to specific specialized skills in a particular subject or technology. The naming structure for community colleges and technical/vocational schools takes the form:

<school-name>.CC.<state-code>.US

<school-name>.TEC.<state-code>.US

3.1.4 State government agencies (STATE)

General format: <agency-name>.STATE.<state-code>.US.

Delegations directly under <state-code>.US are presently not allowed. While discussions of allowing state governments to register directly have taken place, no official action has ever been taken. Instead, state governments are still expected to register under the "STATE" name space. The STATE domain is most appropriately managed by an agency of the state government.

While the option to allow states access to the state code domains still exists, two other options have recently come into play: registration under the .gov domain, and fully spelled-out state names under the .US domain.

RFC 2146 US Government Internet Domain Names (RFC 2146 can be found at <http://www.isi.edu/in-notes/rfc1386.txt>) released by the Federal Networking Council in May of 1997 clearly states: "The .GOV domain is for registration of U.S. governmental entities on the federal

level only. Registrations for state and local governmental agencies shall be made under the .US domain in accordance with the policies for that domain.” Nonetheless, the .GOV domain sometimes allows state and local governments to register their names under .GOV.

In a more recent development, all fully spelled-out state names are on the list of reserved names under the second level of the .US domain. By reserving these names, state governments could be granted rights to use the domains, thereby providing additional naming options for state governments.

3.1.5 Libraries (state, regional, city, county) (LIB)

General format: <library-name>.LIB.<state-code>.US., <library-network>.LIB.<state-code>.US.

This branch is used for public and private libraries, as well as library networks, consortiums, and systems. The American Library Association (ALA) is a staunch supporter of the .US Locality Name Space as many of its member libraries throughout the U.S. have registered names under this structure. A governmental or educational institution should manage the LIB name space.

3.1.6 Museums (MUS)

General format: <museum-name>.MUS.<state-code>.US.

This branch is used for museums. A governmental or educational institution should manage the MUS name space.

3.1.7 Councils of government (COG)

General format: <council-name>.COG.<state-code>.US.

This branch is used for federations of cities or counties or their sub-agencies to work on particular issues on a regional basis forming councils of government. COG is considered by most to be an obscure domain. Consideration should be given whether to continue adding delegations to this name space.

3.1.8 DST - Districts (DST)

General format: <org-name>.DST.<state-code>.US.

This branch is for governmental agencies in districts that may or may not have common boundaries with cities or counties, general administrative districts, such as water supply, and resource management. DST is considered by most to be an obscure domain. Consideration should be given whether to continue adding delegations to this name space.

3.1.9 General independent entities (GEN)

General format: <org-name>.GEN.<state-code>.US.

This branch is for registrations that fall into the infamous “other” category for things that do not fall under any other category. Some of the recommended uses for GEN was for such things as state-wide organizations, clubs, or domain parks.

As is usually the case with anything that is designed to catch anything or anyone that does not fall under any other category, GEN is considered by most to be a very obscure domain. Consideration should be given whether to continue maintaining this name space.

3.2 Name spaces parallel to the states

In addition to names parallel to the localities falling under each state, some special affinity name spaces are also reserved directly on the second level of the .US domain. These include FED, ISA, and NSN. Each of these name spaces are designed for very specific uses.

3.2.1 Federal government (FED)

General format: <federal-agency>.FED.US.

This branch is for use by agencies of the federal government. The intention was the migration of the .GOV domain into the FED.US domain, which was further reinforced by RFC 2146 US Government Internet Domain Names (RFC 2146 can be found at <http://www.isi.edu/in-notes/rfc1386.txt>) released by the Federal Networking Council in May of 1997. However, this migration has never occurred. and rather than restricting the use of the .GOV domain, its use has actually been expanded.

3.2.2 Native sovereign nations (NSN)

General format: <indian-nation>.NSN.US.

This branch is to be used for North American Indian Nations comprised of Indian tribes, villages, rancherias, colonies, and other Indian communities that can span state, regional and national boundaries.

3.2.3 Interstate authority (ISA)

General format: <authority-name>.ISA.US.

This branch is used for joint governmental authorities that are multi-state, for example, the Port Authority of New York and New Jersey.

3.3 Changes to the locality structure

The current locality structure was created and is still governed by RFC 1480. While the entire locality structure has never found widespread use by the US Internet community, some portions of

the name space clearly have found their intended users. Perhaps the most notable of the special affinity domain name spaces are primary and secondary educational institutions and libraries.

The locality domains themselves have established a strong following among local governments. Some confusion among Internet users, however, has arisen from the .GOV domain allowing registration of names by local governments.

As noted above, several of the affinity name spaces never found much of a following among their target users and their continued use should be evaluated. Others have become (or may soon become) redundant, so their continued use should also be evaluated.

3.4 .US zone file domain health survey

The health of the usTLD DNS zone files must be carefully monitored. Each organization's DNS in the .US name space is a critical infrastructure component of their online presence. It provides access to common resources such as Web browsing, email, remote login, and other fundamental Internet services. These services are totally disrupted if the organization's DNS becomes unavailable or is misconfigured.

The following tables 3.4.1a-c summarize the results of a domain health survey performed on the usTLD locality name space domain delegations. Of the 11,441 delegations scanned, 3,208 are lame delegations (i.e., no authoritative name server was found for the delegations). Nearly 100 % of the delegations have a minimum of two name servers. Of the 11,441 delegations, 3,784 have no DNS configuration errors and 7657 have DNS configuration errors of different levels of severity as shown in the table below.

TABLE 3.4.1a Delegation Summary

Delegation (Domain) Status	Delegations		%
Start of authority ("SOA") record found	8,233		71.93%
All Name Servers respond	5,721	69.49%	
Subset of Name Servers respond	2,499	30.35%	
No Name Servers respond	13	0.16%	
Subtotal	8,233	99.84%	
Lame Delegated	3,208		28.07%
Total Delegations Found	11,441		100.00%

TABLE 3.4.1b Name Servers per Delegation

# of Name Servers	All Delegations (Domains)		Lame Delegations	
One	65	0.57%	43	1.33%
Two	8,544	74.68%	3,007	93.36%
Three	1,961	17.14%	136	4.22%
Four	377	3.30%	25	0.78%
Five	486	4.25%	10	0.31%
Six	8	0.07%	0	0.00%
Totals	11441	100.00%	3221	100.00%

TABLE 3.4.2c Delegation Perfection Status

Delegation (Domain) Perfection Status	Delegations	
Perfect (no errors)	3,784	33.07%
Perfect but not all NS answer	1,453	12.70%
NS not matching SOA same	2,557	22.35%
NS not matching SOA diff	239	2.09%
Answer but No NS	190	1.66%
No-Answer	3,209	28.05%
Errors	9	0.08%
Total	11,441	100.00%

Next, we scanned the name servers in the .US locality space. (Please refer to tables 3.4.2a-c below for a summary of the results of the name server health survey.) We found 11,428 unique name server RR record sets. Of 27,065 name servers listed, we found 17,322 authoritative name servers, 9,731 name servers with errors, and 3,477 name servers that do not exist (likely those associated with the lame delegations). In addition, we found bad DNS records and obsolete records (CNAME, HINFO, and WKS), which should be purged from the .US Zone file. The number of lame delegations is also of concern due to the query load placed on the .US root DNS name servers. Neustar is recommending a Lame Delegation Policy to correct this problem.

TABLE 3.4.2a Name Server Summary

Name Server Statistics	Name Servers
Total RR sets in the Zone:	24,329
Total Number of Delegations (NS RR sets):	11,441
Duplicated Delegations:	13
Unique Delegations:	11,428
Total name servers listed:	27,065
Average number of name servers per name:	2.37
Authoritative Name Servers	17,322

TABLE 3.4.2b Name Server Configuration Data

Name Server Configuration Status	Name Servers	
Name serves with missing glue	4	0.01%
Name servers omitted due to duplication	26	0.10%
Name servers that do not exist	3,477	12.85%
Name servers that did not respond (time out)	2,432	8.99%
Name servers not authoritative	3,782	13.97%
Misconfigured delegations	9	0.03%
Name servers with errors	9,731	35.95%
Name servers with no errors	7,604	28.10%
Total	27,065	100.00%

TABLE 3.4.2c Other Record Types

Record Type	Totals	
Address Record Sets	800	
Glue addresses (A records for name servers)	591	
A records that are not Glue (other A rr sets)	209	
Subtotal	800	
Pointer records (CNAME)	36	
HINFO RR sets (obsolete record)	202	
Mail servers (MX RR sets)	418	
Mail servers that require Glue	20	
Mail servers not requiring Glue	398	
Subtotal	418	
WKS RR sets (Obsolete records)	4	
Wildcard RR sets	12	
Total	1,472	

4. Registration and Delegation under the .US Locality Name Space

All registrations in the .US Locality Name Space are by delegation. There are two types of delegations:

1. **Delegation of zones** – A zone delegation occurs when a branch of the .US Locality Name Space (commonly called a delegated zone) is assigned to an organization running name servers to support that branch (these organizations are usually referred to as the “delegated manager” of the zone).
2. **Delegation of domains** – A domain delegation (i.e., a domain registration) occurs when an individual or organization submits a request for a domain name under any designated locality domain name space. The registrant must meet the requirement for registering a name under that locality.

4.1 Registration

To register a domain in a delegated zone, the registrant completes a copy of the current .US Domain Template (the current template is found at:

http://www.nic.US/register/US_Domain_Template_v2.0.txt)

and emails it directly to the Delegated Manager contact for the locality domain name space they want to register under (the list of currently delegated zones and the email address of the manager is found at http://www.nic.US/register/delegated_subdomains.txt). If the locality is not currently delegated, then the template is sent directly to the .US Domain Administration (support@nic.US), who then completes the registration.

4.2 Delegation

Because the total number of possible locality domains is quite large (around 30,000 possible unique domains), the responsibility for providing the Registry and registrar functions under the localities has been delegated to independent managers. Domain delegation requests received for any locality or affinity name space that is not delegated to a locality manager are handled directly by the .US Domain Administrator (i.e., the .US Domain Administrator acts as the delegated manager).

Locality domains can be managed by any organization willing to assume responsibility. Since July 1997, delegated managers must obtain authorization from the government for that locality. For the affinity domains, delegations are typically granted to appropriate organizations or groups. In other cases, the usTLD Administrator manages the space.

4.2.1 Existing requirements for all delegated managers

The delegated manager must be knowledgeable with respect to the Internet DNS and be capable of providing competent technical support. The delegated manager must also provide at least two independent (robust and reliable) DNS name servers in physically separate locations on the Internet. The servers should be active and responsive to DNS queries BEFORE a delegation request is submitted. Except for restrictions imposed by the various affinity domains, the delegated manager is required to accept all applicants on an equal basis and provide timely processing of requests.

To ensure the delegated zone(s) continue to be active and responsive, the delegated manager is required to notify the usTLD Administrator immediately about any changes in the name servers that should be reflected in the usTLD zone files, or changes in the administrative and technical contact information. Administrators are expected to follow the policies in RFC 1480, as well as any additional policies that have been implemented. The administrator is also expected to assist applicants in selecting a domain name based on the guidelines provided in RFC 1480.

The contact phone number provided to the usTLD Administrator should be answered during regular business hours. All messages received after business hours should be answered the next working day. This is required to resolve problems from either the usTLD Administrator or by the customer directly. If too many validated complaints are received or the usTLD Administrator experiences any problems getting in touch with the delegated manager, the delegation may be revoked.

Some domain managers have taken on the responsibility for managing a large number of locality domains. To promote diversity, no single domain manager (person or company) should be responsible for more than 50 localities in one state, or 500 localities in total.

As of July 1, 1997, the US Domain Administrator required that every applicant for the delegation (or redelegation) of a locality name obtain the written agreement of the legitimate government for that locality for the applicant to manage the domain name of that locality.

Evidence of such an agreement does not need to be presented at the time of delegation (except that the administrative contact on the application template must be the government representative). However, if the delegation is later challenged or contested, the manager of the locality domain must produce the agreement. Failure to do so will most likely result in the transfer of the management of the locality domain to another manager that does have such an agreement.

If there is a dispute as to the legitimate government for a locality and who may act for it, the league of cities or association of municipalities that each state (as recognized by the National League of Cities) may be asked to assist in resolving such disputes.

In some places there are overlapping jurisdictions with the same name (for example, the city of Los Angeles and the county of Los Angeles). In such cases, the higher-level government has priority.

4.2.2 Existing requirements for delegation of the affinity domains

The affinity domains (K12, CC, TEC, LIB, MUS, STATE, DST, COG and GEN) under each state are established for special purposes (as defined in RFC 1480).

In addition to the constraint to use them only for the defined purpose, each of these special domains is also delegated only to a manager within the given state or the usTLD Administrator, and the operation of the delegated registry should be non-profit.

A governmental or educational institution should manage the LIB and MUS domains.

Further, it is most appropriate for the K12, CC, and TEC, domains to be managed by an educational organization (for example, a university or a department of education).

The STATE domain is most appropriately managed by an agency of the state government. DST and COG should be managed by a government agency.

The GEN domain may be delegated to any organization that will provide the registration service for free.

4.2.3 History of delegation in the US locality name space

In writing RFC 1386 and RFC 1480 Dr. Postel anticipated the delegation of all locality and affinity domains to individuals and organizations so they could provide the Registry and registrar services for these domains, relieving the usTLD administrator of this task.

When RFC 1386 was released in December of 1992, 59 localities were delegated to 22 locality managers. By November of 1998, shortly after Dr. Postel passed away, the number stood at 6,393. When NSI/VeriSign (VeriSign Global Registry Services) assumed control of usTLD in December 2000, the number of delegations was at 6,507.

The delegated manager contact list provided to Neustar in November of 2001 lists 6,507 locality name space delegations to 1,103 individuals and organizations.

The usTLD zone files contain a total of 11,441 delegated zones, with 6,663 of these zones listed as delegated to a delegated manager. However, the contact information is only accurate for approximately 2,506 Delegated Managers. Of these 2,506 Delegated Managers where we have valid contact information, 1,933 Delegated Managers manage one (1) domain delegation.

5. Findings from the Survey of the Delegated Managers

Neustar produced a Web-enabled .US Compliance Questionnaire (see Appendix D) and hosted the questionnaire on the Neustar website under user ID and password control. An email was sent to a list of 3,523 Delegated Managers that was compiled from information in the .US zone file. The email provided a user ID and password for the Delegated Manager to log on and complete a confidential .US Compliance Questionnaire web form.

5.1 Outreach results

The Neustar outreach communication effort proved to be a difficult process because contact data for the delegated managers was out of date. The initial contact list of Delegated Managers available to Neustar was the list of delegated zones with the email address of the delegated manager for that zone that was passed on from the previous usTLD Administrator who obtained it from USC Information Sciences Institute who was the .US Administrator. Over one-fifth of the email addresses from the initial list were invalid. A comparison of the initial list to the contact data in the .US zone file showed that over 2,420 Delegated Managers were missing and 5,063 zones were missing from the initial contact list. While the .US zone file contains contact data in the form of comments for 6,663 delegations, contact information of Delegated Managers is missing for 4,907 delegations.

The current list of delegated managers obtained from VeriSign Global Registry Services contained 1,103 Delegated Managers and 6,507 domain delegations. In Neustar's first attempt to contact all existing locality managers, we sent an email to the email addresses in the ISI contact list. Of 1,103 emails sent, 200 email addresses bounced. We then parsed the current .US zone file to update our contact list and include new Delegated Managers who were not on the initial list we received from VeriSign. The current .US zone file contains 3,523 Delegated Managers and 6,663 domain delegations. There were 4,907 delegations with no Delegated Manager or contact information. On our second email we contacted the 3,523 Delegated Managers to inform them of the availability of the .US Compliance Questionnaire web site. For the second email, 1,017 emails were invalid. Of the 2,506 Delegated Managers who we successfully contacted via email, 541 Delegated Managers responded and completed parts of the .US Compliance Questionnaire, corresponding to a response rate of approximately 21%.

The contact email encouraged Delegate Managers to respond, with instructions on completing the compliance questionnaire that included the following statement:

"Please complete the entire survey and answer all of the questions to the best of your ability. Do not be concerned if you are not in compliance with one or more of the existing policies. Based on your responses, these policies will either be modified, eliminated, or you will be provided ample opportunity to address any remaining issues. However, if you fail to

complete the survey or you knowingly provide false or misleading information, your delegation may be affected.”

Of the delegated managers responding to the survey, only 3 of 541 respondents manage 100 or more domains. The majority of the respondents managed less than a dozen domains, with the greatest number managing only one locality. About half of the respondents to the survey are long standing locality managers that received their delegations prior to the implementation of the “July 1997 Rule”.

More than half of all the respondents (282 out of 539) indicated they are a state or local government agency or entity. The next largest group of respondents are individuals (98) closely followed by Internet Service Providers (85).

5.2 Locality squatting issue

The DoC also requires that this report include an evaluation of “locality-squatting” issues, or the practice of registering a locality name without providing a responsive level of service to such locality. This issue appears to be one more of perception than of reality. Delegations that were made prior to the implementation of the “July 1997” rule did not require obtaining the permission from a local government as a condition of delegation.

Often times when a local government learns of the US domain and looks into registering their “CI” or “CO” reserved domain name under the locality, they discover that the name has already been delegated to a manager. The local government often perceives this as someone “hijacking” their locality when, in reality, the delegated manager has been operating this domain for that community for years as a public service.

Those who are familiar with the .US Locality Name Space understand that someone obtaining a delegation for the purpose of “locality squatting” makes no sense, as there is no practical reason to do this. While there may always be an isolated occurrence of such “locality squatting” it certainly is not prevalent in the .US Locality Name Space.

An issue that does arise out of this is whether a local government should have the right to remove a delegation from a manager who has diligently and faithfully operated the locality for many years. Ultimately, the local government should have the right to decide who operates their locality name space, but the local government should first be educated about the role the existing manager has played so they can make an informed decision.

5.3 Registration restrictions

The original intent of Dr. Postel was that the delegated managers not restrict registrations under any locality beyond those already defined under RFC 1480. Over the years, however, both the usTLD Administrators and locality managers have imposed additional registration restrictions.

Some delegated managers have indicated that in order to obtain authorization to manage the locality, the local governments required the delegated manager to restrict registrations under the locality to registrants with an address in that locality.

This restriction has been imposed by both individual localities and NSI/VeriSign during its short tenure as the usTLD administrator. For any registration requests under an undelegated locality, NSI/VeriSign imposed the requirement that registrant can only register in the locality of their address. NSI/VeriSign further required that the requested domain name match the registrant's organization name. VeriSignGRS also imposed the 50/500 requirement on registrants as well as delegated managers.

While many "requirements" were proposed and imposed over the years, the current requirements for the usTLD locality namespace are based primarily on RFC 1480 released in June of 1993 and several subsequent policies implemented by Dr. Postel. Clarifications of existing policies and any new policies were posted to the usTLD website by Dr. Postel (See Appendix B - "Overview of US Domain Structure and Policy").

5.4 Current requirements

5.4.1 CI and CO reserved names

The only officially reserved names are "CI" for city and "CO" for county; however, most respondents also reserve "CITY" and "COUNTY". Only a small number (19) reserve additional names such as "BOROUGH", "TOWNSHIP", "VILLIAGE", and "PARISH", to name a few. Locality managers are required to authorize requests for "CI" and "CO" subdelegations. More than half of the respondents support reserving additional municipal types. When asked what form of authorization each locality manager requires, more than half the respondents did not provide an answer. Of the remainder, 25% obtain some type of authorization, 15% of the localities are operated by the municipalities, and 10% obtain no authorization. Because of the large number of "no response", Neustar will recommend a formal policy for obtaining and maintaining authorization. Neustar will develop such a policy for review by the DoC.

5.4.2 K12 – School names

45 respondents manage at least one K12 domain. Over 60% of K12 affinity domains are not operated by a school or school district. About two thirds do not have any registrations under their delegation. More than half do not obtain authorization to register under the domain.

5.4.3 CC – Community college names

19 respondents manage at least on CC domain. Only 20% of CC delegations have any registrations under them. Very few respondents require any authorization to register under a CC delegation. Less than 20% are operated by a community college. With community and junior colleges now allowed to register under .edu, the need for any additional delegations or registrations under this affinity domain is in question.

5.4.4 TEC – Technical school names

15 respondents manage at least one TEC domain. Only 30% of TEC delegations have any registrations under them.

5.4.5 LIB – Library names

33 respondents manage at least one LIB domain. A little more than 40% have any registrations under them. Over 60% have obtained some type of authorization to operate the delegation.

5.4.6 GEN – General independent entities

15 respondents manage at least one GEN domain. At 17%, very few have any delegations under them. With the opening of registrations under the second level, the need for this category should be reviewed.

5.4.7 STATE – State agency names

22 respondents manage at least one STATE domain. Only 30% have any registrations under their delegation. Less than half require any authorization to register a domain.

5.4.8 Other names

23 respondents manage other domains not mentioned above. About one-third have no registrations under their delegations.

5.4.9 Operational requirements

Anyone requesting a domain under a delegated locality name space is required to complete the current .US Domain template (found at http://www.nic.US/register/locality_template.txt) and to email it to the delegated locality manager (found at http://www.nic.US/register/delegated_subdomains.txt). The delegated manager is required to meet minimum technical requirements and be willing to service registration requests in a fair and timely manner.

As shown by Neustar's attempts to contact delegated managers, one out of every three respondents indicated the registration email address found on the list of delegated locality managers is not correct. Two out of every three respondents also require submission of registration requests via the .US Domain Template and the remainder also allow submission of registration requests via other forms (free form, web i/f, phone, and postal mail). Almost 20% do not require that all mandatory information is provided. This may be reason to expect all registrations to be submitted via a central site that requires all information to be entered before a registration request can be submitted.

Almost 80% of the respondents perform some form of validation check to ensure the name servers meet registration requirements and over 40% actually verify their existence. This is a good indicator that allowing the delegated managers to continue manage the zone files for their delegations is an acceptable practice. However, it has become apparent to Neustar that 20% do not have name servers at two physically separate locations, which may fall short of a best practices recommended standard for the resolution of names residing in these zones.

Additionally, delegated managers are required to provide timely processing of requests, be familiar with the technical details of the Internet, and have a primary manager. Almost every respondent satisfies each of these requirements.

Over the history of the .US Locality Domain Name Space, several commercial enterprises have attempted to cash in on unsuspecting registrants by collecting their registration and charging a registration fee and then passing the registration on to the delegated manager for processing. Technically, delegated managers should only process requests verified to have come from the registrant. Over 60% of the respondents do verify the registration came directly from the registrant. The majority accomplish this either via email, telephone, or fax.

Of the respondents, very few have ever had the usTLD Administrator intervene to resolve a dispute and all of them were minor incidents that were resolved. No respondent has ever had a delegation removed by the usTLD Administrator for failure to properly manage the delegation.

5.4.10 Postel's policies

During his tenure of operating the US domain space, Dr. Postel implemented a variety of policies which were documented on the ISI website. The final revision of the document is found in Appendix B.

50/500 rules

Domains delegated prior to July of 1997 fall under the "50/500 rule." The rule states that any locality manager can only be delegated a maximum of 500 localities and no more than 50 in any state). As mentioned above, a majority of the respondents manage delegations awarded prior to July of 1997.

July 1997 rule

Domains delegated from July of 1997 to the present require that someone from the local municipality grant approval to the delegated managers. The official policy states:

"Evidence of such an agreement does not need to be presented at the time of delegation (except that the administrative contact on the application template must be the government representative). However, if the delegation is later challenged or contested, the manager of the locality domain must produce the agreement. Failure to do so will most likely result in the transfer of the management of the locality domain to another manager that does have such an agreement."

This policy should be further revised to indicate the process and requirements for obtaining authorization. If no municipal authority exists, the domain may still be delegated, otherwise the municipal government should be required to complete a standard form for submission. Some delegated managers indicate that municipalities have imposed additional requirements before the municipality would grant authorization. A standard form would prevent municipalities from such actions.

5.5 Registration policies and procedures of the delegated managers

While the current policies and procedures cover many aspects of managing the usTLD locality name space, some aspects of operating as a delegated locality manager were left to each manager. The delegated managers were asked about their own registration policies and procedures to determine if any of these should be incorporated as new procedures or policies.

5.5.1 Website

Very few (10%) of the delegated managers maintain a website for their delegated localities. Of those that do provide a website, less than 15% provide the US Domain Template on their site and only half provide contact information. About 15% provide a privacy policy. Very few offer any additional services other than registration via their website.

5.5.2 Registration

Only 15% of the respondents require registrants to agree to a “Registration Agreement.” This is an area that will have to change, as the DoC requires that a Registration Agreement be required of all registrants under the US Locality Domain Name Space.

The delegated managers are required to process and reply to registration requests in a timely manner. Almost 60% of the respondents indicated that they respond to registration requests in 24 hours or less and 90% indicated that they respond in 48 hours or less. 80% indicated they provide registrants with both telephone contact information and a mailing address for the delegated manager.

Dr. Postel stated, “Most managers of delegated branches do not charge for registering a host in the US domain in their localities, though some do. There is no requirement that domain names be free, only that any charges be fair and applied equally to all customers.” Of the respondents, almost 90% do not charge for registrations. The remainder charge fees ranging from \$10 to \$50, with some charging an annual registration fee and others charging a one-time setup fee.

Only 30% of the respondents offer registrations for more than one year. Over 80% of the respondents do not require renewal. While this is the simplest procedure for delegated managers to follow, this also creates problems with build-up of lame registrations. A procedure for renewals, even if there is no charge for a registration, should be implemented through a delegated manager agreement to ensure all domains remain current.

5.6 Registration policies and procedures of the delegated managers

5.6.1 Delegated manager database and public Whois

The DoC requires Neustar to create and maintain a database of all delegated managers and to provide this information via public Whois. About 30% of the respondents object to having some part of their contact data provided via public Whois. While some respondents object to the provision of address or phone number, a few respondents objected to providing any information. The greatest concern is the inclusion of email addresses in the public Whois due to spamming potential. Despite these concerns, in February 2003, Neustar updated its public Whois (located at www.whois.us) to include information about delegated managers. It should be noted that Neustar was only able to include the information about such delegated managers that it received from VeriSignGRS and various other delegated managers that have personally contacted Neustar since the transition of the registry in 2001. As delegated managers are located by Neustar, the public Whois records are updated to reflect any changes that it is made aware of.

5.6.2 Registrant database and Whois

The DoC requires Neustar to create and maintain a database of all registrants in the locality name space. This is a major task that is in progress. Over half of the Delegated Managers maintain registration records by saving a copy of the email template. 20% maintain paper records, 10% maintain data in electronic format, and the balance keep it in a variety of other formats, including comments in the zone files.

As of February 2003, Neustar has added all known delegated managers to its public Whois (www.whois.us). This information was either contained in the original zone or has come to us via change requests from delegated managers. All Whois changes (and now DNS) are now dynamically updated within 15 minutes.

5.6.3 Modernization and automation of usTLD delegation process

To address the DoC requirement that Neustar modernize and automate the usTLD delegation process, Neustar expects in the future to provide an area of the .US NIC website password accessible only by current delegated managers. The site will allow current delegated managers to maintain and modify their contact information as well as configure and manage their locality domain delegations. Only 2% of the respondents believe no further delegations should be allowed, while 60% believe delegations should continue (the remainder have no opinion).

5.6.4 Modernization and automation of usTLD registration process

The DoC requires Neustar to modernize and automate the registration process. This includes determining how to automate and manage the interface between the registrant, registry, and delegated managers, ensure all registrant data is collected by the registry, and provide registrants with an automated registration process.

Currently, registrants who seek to register a domain under a locality domain delegation go to the usTLD Administrator's web site <http://www.neustar.us>. Registrants download and complete the email template form and email the form to the current Delegated Manager for the locality (or to a local mailbox if the locality is undelegated). Upon receipt of the email template, the locality delegated manager processes the registration. First, the locality manager checks the template for all required information. If anything is missing, the locality manager must email the registrant asking them to provide the missing information. Next, if the name space has any restrictions, the locality manager must evaluate if the registrant qualifies to register. The locality manager may then require the payment of a registration fee before the domain is registered (optional). Finally, the delegated manager registers the domain by adding it to the zone files and notifying the registrant that the domain is live.

Clearly, with registrants accessing the Neustar web site for new registrations, there is an opportunity to centrally collect registrant contact information, the Delegated Manager, and name server information and populate a Registrant public Whois service. The process of sending registrant data to the delegated managers for verification via email template should continue, as over 90% of the respondents indicate the email template is the preferred method. If the Registry must collect a Registry fee, almost half of the respondents prefer that the Registry collect all fees, 25% indicate the

Registry should collect its fees and the delegated manager should collect theirs, and 20% prefer that the delegated managers collect all fees. The remaining 5% provided a variety of answers, with the most common being that there should not be any fees.

5.6.5 U.S. Nexus requirements

All registrations under the usTLD are required to meet U.S. Nexus requirements, including registrants under the usTLD locality name space. Locality managers are required to ask registrants under which Nexus category they qualify and to maintain this information as part of the registrant data.

5.6.6 Trademark issues

The launch of the expanded usTLD name space commenced with a Sunrise period where holders of U.S. Federal Trademarks had an opportunity to register and protect their mark. An overwhelming majority of the Delegated Managers responded that Trademark issues were not applicable to the .US locality namespace.

5.6.7 Dispute resolution

The DoC requires the implementation of a “Uniform Dispute Resolution Policy (UDRP)” for the usTLD, including the locality domain name space. Neustar has implemented the usTLD Dispute Resolution Policy (usDRP). Not all Delegated Managers understood the UDRP requirement; however, a majority of the Delegated Managers felt the UDRP requirements did not apply to the .US locality namespace. However, consideration should be given to the fact that businesses may also register in the usTLD locality space, thereby potentially raising trademark concerns.

5.6.8 usTLD Administrator-delegated manager agreement

Neustar is required to create an “usTLD Administrator-Delegated Manager Agreement,” which must be approved by the DoC and then signed by each of the delegated managers. The Neustar proposal included a proposed “draft” agreement to serve as a discussion document (<http://www.ntia.doc.gov/ntiahome/domainname/usca/cafiles/SectionG.pdf>). This draft was initially modeled after the ICANN gTLD Registry-Registrar agreements.

A number of Delegated Managers provided comment on the draft. The comments primarily addressed the commercial nature of the agreement generally, and such specific provisions as marketing, fee, and insurance requirements. Most commenters argued that such commercial provisions are inappropriate for the vast majority of usTLD locality delegations.

A smaller number of commenters argued that the usTLD Administrator, and in some cases the Department of Commerce, has no authority to require entering into such an agreement in the first instance. Neustar believes that this position is incorrect and will recommend to the DoC an agreement for delegated managers to abide by, which addresses the issues set forth herein.

Based upon these comments and further outreach, Neustar recommends, as contemplated in the original proposal, significant revision to this agreement prior to approval by the Department of Commerce. Indeed, the “agreement” should be cast as “terms and conditions” as discussed below.

6. Recommendations for the US locality name

space Neustar has been generally pleased with its findings in this study. For the major part, the usTLD locality domains have been properly managed and maintained by the Delegated Managers and the past usTLD Administrators. There are, however, several areas of concern that must be addressed. The following recommendations will focus on these areas.

Based upon the Questionnaire results and the comments of and discussions with Delegated Managers, as well as our own analysis of the “health” of the usTLD zone, Neustar has identified four primary areas where further action may be required. This further action is, of course, in addition to the requirements set forth in the RFQ and the Neustar proposal. Neustar recommends further work in the areas of (1) centralization and coordination of domain administration, (2) technical coordination and improvement, (3) registration, delegation and re-delegation policies and processes, and (4) the development of usTLD Administrator-Delegated Terms and Conditions.

Neustar will draft formal policies and/or proposals for each of the recommendations discussed below.

In addition to the implementation of the following recommendations, Neustar recommends that RFC 1480 be transferred to “historical status” with the Internet Engineering Task Force as much of what was contained in that RFC is no longer applicable to the usTLD. Upon redesignation of this document, all of the operative requirements from the RFC will be covered in the U.S. Government contract and the usTLD Administrator-Delegated Manager Terms and Conditions.

6.1 Centralization and coordination of domain administration

Neustar’s experience in conducting the necessary outreach to produce this report, demonstrates that serious effort is needed to “clean up” the Delegated Manager and registrant data held by the usTLD Administrator, and to centralize certain functions to ensure that critical information is maintained going forward.

Recommendations

Information Accuracy and Whois/Centralized Registration

Neustar has begun the development of a Web Administration Tool to enable locality managers to maintain updated contact information and delegation information (domains, name servers, and IP Addresses of the name servers). With this approach, Neustar will have access to the necessary Delegated Manager contact and Whois information. Over time, this tool should help to improve the quality and accuracy of the data in the usTLD Administrator databases.

Through the Delegated Manager Agreement, Neustar will implement a “Whois Registration” process. Because current data is severely incomplete and out-of-date, and also because many delegated managers do not have complete Whois information on their registrants, a publicized Whois registration process is necessary to improve current data. Current delegated managers will be required to participate in the registration period to the greatest extent possible. This process likely will not see 100% participation, but should go a long way toward updating the usTLD

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database.

6.2 Technical coordination and improvement

In addition to concerns about incomplete data in the usTLD, there also are technical concerns. As is discussed in Section 3 above, many of the delegations in the usTLD zone file contain “lame” name server delegations or exhibit other problems. The usTLD zone file and the name servers to which it points, are the critical infrastructure of the usTLD. Therefore, Neustar will develop a policy to address such errors and lame delegations.

Recommendations

As is noted above, Neustar performed a domain health check survey on the .US zone file to report on DNS issues such as lack of redundancy, configuration errors, architecture flaws, and security problems. Specifically, the domain health check survey found that 28% of the 11,441 delegations in the zone file are lame. 36% of the name servers listed had configuration errors.

Neustar will submit a proposal for eliminating all known bad records in the usTLD zone file. For example, there are over 400 records in the usTLD locality space including HINFO RRsets (obsolete record), WKS RRsets (obsolete records), and CNAME records that point to no existing domains.

Neustar also recommends that further action be taken to eliminate lame delegations. As noted, there are 3,208 lame delegations in the usTLD locality name space. This causes the usTLD root DNS name servers to experience significant volumes of recursive resolver queries from the lame delegations and puts an unnecessary load on the usTLD root. Therefore, Neustar recommends a Lame Delegation Policy whereby after sufficient and reasonable notice and opportunity to resolve lame delegations is given a Delegated Manager, the usTLD Administrator will remove the lame delegation DNS records from the usTLD zone file. However, the domain delegation will not be removed and the Delegated Manager will be free to provide new name servers to fix the lame delegation.

As discussed below, however, under some circumstances, continued lameness should result in cancellation of a delegation.

6.3 Registration, delegation and re-delegation policies and processes

Centralization and enhancement of the usTLD locality space raises a number of additional questions regarding the manner in which delegations and registrations are handled within the usTLD. Several issues are of particular importance, including cancellation of delegations, new delegations/re-delegations, and whether there should be a fee for delegations or registrations.

Recommendations

Cancellation of delegations

Since accepting responsibility for the usTLD, Neustar has received a small number of complaints regarding completely non-responsive delegated managers. In some cases we have tracked the

problem to out-of-date contact information. A number of them, however, remain unresponsive. Non-responsiveness may be caused by a number of factors including bankruptcy, network problems, attrition, etc. As non-responsiveness on the part of a delegated manager is a violation of basic usTLD policy, Neustar recommends the implementation of a “Delegation Cancellation Policy” to permit the usTLD Administrator to suspend or even cancel a delegation and transition it back to the usTLD Administrator. Such a policy must, of course, be carefully developed to ensure that a delegation is not mistakenly or wrongly taken away. However, Neustar submits that such centralized authority is necessary to ensure the proper functioning of the usTLD.

Another important part of such a policy will be cancellation of a delegation for non-compliance with usTLD requirements and policies. For example, refusal by a delegated manager to require U.S. Nexus for its registrants should be grounds for cancellation. Failure or refusal to abide by the basic requirements of the space ultimately injures the usTLD and must not be permitted.

Cancellation of delegations is a cause for serious concern among many delegated managers. It is Neustar’s position that most delegated managers have nothing to fear, as they have provided services in a professional manner, often free of charge, and should be allowed to continue doing so. Neustar does not propose broad cancellation of delegations, only the authority for cancellation of specific delegations when necessary.

New delegations/re-delegations

Under the government contract, new delegations in the usTLD currently are frozen. The question of whether to continue to allow new delegations is a difficult one. However, it is clear that if the government of a given locality desires to assume the responsibility of running its locality, and that that locality is not currently delegated, then it should be allowed to do so.

The question of whether a government should be allowed to request the transfer of a locality to its care for a delegation granted before July 1, 1997, raise difficult issues and should be considered further. We recommend that this question be submitted to the .US Policy Council for consideration and publishing for public comment.

Therefore, Neustar recommends that only governments or their designees may become the delegated managers of undelegated localities in the future. For localities in which the usTLD Administrator already has registered fourth-level or higher names directly, the locality shall not be considered undelegated and the Administrator shall act as the Delegated Manager unless the appropriate government entity seeks transfer to an alternate designee. The process for registering names should be consistent with the process outlined in the Interim Undelegated Name policy approved by the Department of Commerce (<http://www.ntia.doc.gov/ntiahome/domainname/usrfp/SB1335-02-W-0175-0002.htm>). The process should be modified to cover new delegations as well as CI, CO, and other registrations by the usTLD Administrators. Delegated Managers, of course, would continue to follow their own procedures and policies consistent with the policies and requirements of the usTLD. Neustar would develop the registration policy document for final approval and implementation after consultation with the Department of Commerce.

Delegation and registration fees

Neustar has determined that base registration fees will not be sought by the Administrator for existing locality space registrations. Although management of the locality space clearly is a labor-intensive activity, Neustar believes that this decision best adheres to the spirit of our commitment to enhance the space in a positive manner. If, in the future, it becomes necessary to conduct additional cost recovery activities in this space, Neustar will submit the appropriate request for DoC approval.

6.4 usTLD Administrator-delegated manager Terms and Conditions

The Neustar proposal contained a draft usTLD Administrator-Delegated Manager Agreement that would serve as the basis for the obligations and rights of the parties under with respect to locality delegations and the operation of the usTLD. This agreement would serve as one of the vehicles for implementation of the proposal and requirements discussed in this report. To date, many delegated managers have argued that the draft agreement is not appropriate for the relationship between the delegated managers and the usTLD Administrator. Neustar agrees and recommends that the draft be revisited and revised. Neustar is in the process of finalizing a usTLD Administrator-Delegated Manager Terms and Conditions document.

Appendix A: Timeline of the usTLD

December 31, 1992: Signing of *the Cooperative Agreement for the Management of Internet Names and Addresses* between NSF and NSI (NCR-9218742)

The National Science Foundation (NSF) and Network Solutions (NSI) sign a Cooperative Agreement for NSI to Manage Internet Names and Addresses.

December 1992: Release of RFC 1386 entitled “The US Domain” written by Dr. Postel and Ann Cooper

<http://www.isi.edu/in-notes/rfc1386.txt>

RFC 1386 establishes the original structure and administrative mechanisms for the US Top Level Domain (usTLD) creating the US locality domain namespace. The Information Sciences Institute of the University of Southern California (ISI) becomes the usTLD administrator, under the Internet Assigned Numbers Authority (IANA).

June 1993: Release of RFC 1480 entitled “The US Domain” written by Dr. Postel and Ann Cooper

<http://www.isi.edu/in-notes/rfc1480.txt>

Replacing RFC 1386, RFC 1480 updates and clarifies the original structure and administrative mechanisms for the US Top Level Domain (usTLD). RFC 1480 is still the basis of the US locality domain namespace today.

June 1993-June 1997: Delegation of .US locality domains by Dr. Postel and ISI

(see Appendix A)

Over the next four years Dr. Postel and ISI review delegation requests from individuals and organizations volunteering to manage one or more locality domains. To promote diversity the “50/500 Rule” is established whereby no single domain manager (individual or organization) can be responsible for more than 50 localities in one state, or 500 localities in total.

July 1997: The “July 1997 Rule” Established

(see Appendix A)

Dr. Postel and ISI establish the “July 1997 Rule,” a usTLD policy requiring prospective subdomain managers to submit written authorization from the relevant local public authority for the delegation.

January 30, 1998: Request for Comments on a Proposal for Improvement of Technical Management of Internet Names and Addresses (“Green Paper”)

<http://www.ntia.doc.gov/ntiahome/domainname/dnsdrft.htm>

The NTIA “Green Paper” includes brief discussion of the opportunity for enhancing and expanding the usTLD. This paper solicits a request for comments from the public. Comments are received through May 28, 1998.

June 5, 1998: Release of a Statement of Policy on the Management of Internet Names and Addresses (“White Paper”)

http://www.ntia.doc.gov/ntiahome/domainname/6_5_98dns.htm

The NTIA “White Paper” includes brief discussion of the opportunity for enhancing and expanding the usTLD. This paper indicates the U.S. government will further explore and seek public input through a separate Request for Comment on the evolution of the usTLD.

August 3, 1998: Request for Comments on the Enhancement of the .US Domain Space (<http://www.ntia.doc.gov/ntiahome/domainname/usrfc/dotusrfc.htm>)

NTIA releases a “Request for Comments on the Enhancement of the .US Domain Space” (#980212036-8172-03). The request seeks comments regarding the future administration and management of the .US domain space. The comment period closes on October 5, 1998.

September 9, 1998: Signing of a Memorandum of Agreement Between the National Science Foundation and the Department of Commerce

A memorandum is signed whereby the National Science Foundation officially transfers authority for oversight and administration of all Internet issues and policies to the Department of Commerce.

October 1, 1998: *Transfer of Cooperative Agreement with NSI from NSF to DoC*

<http://www.ntia.doc.gov/ntiahome/domainname/amends/amend10.htm>

The Cooperative Agreement for the Management of Internet Names and Addresses with NSI is formally transferred from the National Science Foundation to the Department of Commerce.

October 16, 1998: The untimely passing of Dr. Jon Postel (<http://www.postel.org/jonpostel.html>)

Dr. Postel is no longer with us, however, the Internet legacy he helped create lives on.

March 9, 1999: NTIA Holds a Meeting on the “*Future Management and Administration of the .US Domain*” (<http://www.ntia.doc.gov/ntiahome/domainname/dotusagenda.htm>)

NTIA hosted a public meeting regarding the future management and administration of the .US domain that attracted approximately 60 participants. The discussions focused on four main topics: 1) the current administration of the .US domain space, 2) issues and opportunities facing the current and future management of .US, 3) possible models for future .US management, and 4) possible next steps for going forward. The meeting resulted in a thoughtful and constructive exchange of ideas about range of issues regarding current and future .US management. Meeting participants were strongly in favor of engaging in further discussions and requested that NTIA establish an electronic mailing list to help facilitate the interchange. NTIA announces that will set up the electronic mailing list.

May 10, 1999: *NTIA Establishes an Open Electronic Mailing List for Public Discussion Regarding the Enhancement of the .US Domain Space*

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

Enhancement of the .US Domain Space, Open Electronic Mailing List for Public Discussions

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Regarding the Future Management and Administration of the .US Domain Space is established.

Participation in the mailing list was open to all members of the public interested in discussing the issue until August 12, 1999.

August 17, 2000: NTIA Requests Comments on a Draft SOW for Management and Administration of the .US Domain Space

<http://www.ntia.doc.gov/ntiahome/domainname/usrfc2/dotusrfc2.htm>

NTIA requested comments on a draft statement of work and draft methods and procedure section (the "Draft SOW"), expecting to incorporate them in a request for proposals for management and administration of the .US domain space. Interested parties are invited to submit comments on the Draft SOW no later than October 6, 2000.

November 2, 2000: *Signing of Amendment 21 to the NSI Cooperative Agreement*

<http://www.ntia.doc.gov/ntiahome/domainname/agreements/amendment21.htm>

Until such time as the Department of Commerce ("Department") designates a successor registry for the .US top level domain, or November 10, 2001, whichever comes first, NSI shall continue to provide administrative services, including Registry and, as appropriate, Registrar services, for this domain.

December 2000: *Administration of the US Domain Returned to NSI (VeriSign) by ISI, (see Appendix B)*

Information Sciences Institute of the University of Southern California (ISI), administrator of the usTLD by agreement with NSI (VeriSign) since the creation of the US Locality Name Space announces they will no longer serve as the administrator of the usTLD. NSI (VeriSign) assumes all responsibility for administering the usTLD .

May 25, 2001: *Release of Notice of Intent for Request for Quotations of Management and Coordination of the usTLD*

<http://www.ntia.doc.gov/ntiahome/domainname/usrfp/cbd52501.txt>

National Institute of Standards and Technology (NIST) posts notice in the Commerce Business Daily on behalf of the NTIA of the intent to release a Request for Quotations (RFQ) for management and coordination of the usTLD.

June 13, 2001: NTIA Issues a Request for Quotations (RFQ) for Management and Coordination of the usTLD.

<http://www.ntia.doc.gov/ntiahome/domainname/usrfp/SB1335-01-Q-0740.doc>

The NTIA issues a request for quotations for management and coordination of the usTLD including the expansion of the usTLD by opening the second level to registrations. The final date for responses to the RFQ was July 27.

October 26, 2001: *NTIA Awards Purchase Order for Management of the usTLD*

<http://www.ntia.doc.gov/ntiahome/domainname/usca/uspo.pdf>

NTIA awards purchase order to manage the .US Internet domain name space to Neustar, Inc.

April 24, 2002: Neustar, Inc. Launches the usTLD Expanded Space.

November 2002: Neustar launches a three-phase plan to improve and automate the locality space

February 2003: Neustar launches phase 1 of the us locality automation plan. All contacts known to us are added to public Whois. In addition, US Locality is added to the dynamic Whois infrastructure allowing for 15 minute updates.

May 2003: Neustar launches phase 2 of the us locality automation plan. Manual modification of the usTLD zone file is no longer necessary. This change makes the usTLD a more modern TLD similar to the gTLDs governed by ICANN. 99.9% of updates now occur within 15 minutes. The only manual intervention is for MX (Mail Exchange) and CNAME (Canonical Name) records which are extremely rare. Because use of these types of records are special cases in the usTLD root zone file, administration for these will remain a manual, exception based process.

Appendix B: Overview of .US Domain Structure and Policy

While RFC 1480 remains the primary basis for the administration of the .US Locality Name Space today, Dr. Postel did implement a few policy and structural changes during his tenure as the .US Domain Administrator. He maintained these in a document on the .US Domain website at ISI titled "Overview of US Domain Structure and Policy" that included a general overview of the current structure of the .US domain and included information on any policies that were not included as part of RFC 1480. While this document remained unchanged after his death in October 1998, it remained on the .US Domain website at ISI until administration of the .US Domain was assumed by NSI (VeriSign Global Registry Services) in December of 2000. The text of this document follows:

About the US domain

The US Domain is an official top-level domain in the DNS of the Internet community. It is administered by the US Domain Registry at the Information Sciences Institute of the University of Southern California (ISI), under the Internet Assigned Numbers Authority (IANA). US is the ISO-3166 2-letter country code for the United States and thus the .US Domain is established as a top-level domain and registered with the Internic the same way other country domains are. Figure 1 shows the relationship between the .US domain and other top-level domains.

Who can register

Anyone can register under the US Domain as long as the naming structure is followed.

The US Domain currently registers hosts of businesses, individuals, federal government agencies, state government agencies, K12 schools, community colleges, technical/vocational schools, private schools, libraries, museums, city and county government agencies.

Any computer in the United States may be registered in the US Domain hierarchy. Generally, computers outside the United States are expected to register in other domains, however, there may be exceptions when a computer is used as part of a project or in a community with other computers in the US Domain.

Naming structure

The US Domain hierarchy is based on political geography. The basic namespace under US is the state name space, then the "locality" name space, (like a city, or county) then organization or computer names and so on. The state codes are those assigned by the U.S. Postal Service. For example: "CA" California. Figure 2 shows a view of second level domains under US.

In addition to strictly geographical names, some special affinity names are used, such as FED, STATE, K12, LIB, CC, TEC, GEN, DST, COG, MUS, ISA and NSN. Under the name space are CI and CO sub-domains, and under K12 is PVT.

Generally, it is expected that a name will correspond to a physical computer and that a computer will have exactly one name.

Locality names

Within the state name space there are "locality" names, which may be cities, or counties (parishes or townships), or local names.

For small entities like individuals or small businesses there is usually no problem with selecting locality based names. For example:

Quake.Sylmar.CA.US.

For large entities like large corporations with multiple facilities in several cities or states this often seems like an unreasonable constraint (especially when compared with the alternative of registering directly in the COM domain). However, a company does have a head office in a particular locality and so could register with that name. For example:

IBM.Armonk.NY.US

Microsoft.Redmond.WA.US

The locality based domain names are the fundamental concept for naming in the US Domain. All other subdomains or branches are exceptions. See Figure 3 for locality view. Registered names under "locality" would include:

<agencyname>.CI.<locality>.<state>.US (city government agency)

<agencyname>.CO.<locality>.<state>.US (county government agency)

<agencyname>.<locality>.<state>.US (businesses, private schools)

In the cases where the locality name is a county, there is a branch under the locality name, called "CO", that is used by the county government. Businesses are registered directly under the locality name.

Under the city locality name space there is a "CI" branch for city government agencies (some localities may use other names such as "town", "village", "borough", or "parish"). As usual, businesses and private schools may register directly under the city name.

In the case where there is both a county and a city with the same locality name there is no problem, since the names will be unique with the "CO" or "CI" For example, when the county has a fire department and the city has its own fire department, they could have names like:

Fire-Dept.CI.Ventura.CA.US

Fire-Dept.CO.Ventura.CA.US

Cities are named (designated) by their full name (spelled out with hyphens replacing spaces (e.g., Santa-Monica or Fort-Collins). In a few cases in the past, a well-known city abbreviation known throughout a locality was allowed, eventually these abbreviated names will be replaced with the fully spelled out versions. It is very desirable that all users in the same city use the same designator for the city. That is, any particular locality should have just one Domain name.

Acceptable locality names are those listed in the US Postal Service ZIP Code Directory or a well-known atlas.

There is no requirement, as far as the overall US domain administration is concerned, that the user of a "locality" US domain name actually be in or have any connection with that locality.

K12 schools under the US domain

K12 schools are connecting to the Internet and registering in the Internet Domain Name System. A decision has been made by the Internet Assigned Numbers Authority (after consultation with the new INTERNIC Internet Registry and the Federal Network Council (FNC)) to direct these school registrations to the US domain using the naming structure described here. See Figure 4. Only four year colleges and universities may now be added to the EDU domain. K12 schools are registered in the US Domain with names of the general form:

`<school-name>.<district>.K12.<state-code>.US`

Generally school names are unique within a district, and this provides two points at which to delegate a branch of the database to distinct administrators -- the K12 administrator for each state, and the district administrator for each school district within a state.

Examples of K12 Public School Names and Districts Clinton-

Hs.Acsd.K12.TN.US	(Clinton High School) Riverdale-
Hs.Rcsd.K12.TN.US	(Riverdale High School)
Northstar.K12.AK.US	(North Star School District)
Prs.K12.NJ.US	(Princeton Regional School District)

Schools connected through network providers

Schools should be named in the K12 branch rather than having names under the name of a network consortium or service provider. Deriving a school name from a service provider is like having the name of your telephone company as part of your organization name.

Summary of entities that go under K12

- Schools public and private
- School districts
- School boards
- Special Education Service Units
- State Departments of Education
- City and County Departments of Education
- Consortiums connecting school districts and schools
- State Agencies connecting K12 schools
- School Networks providing connectivity to school districts

School related entities in other US domain branches

□ **FED - Military Schools Overseas**—For example: K12.DODDS.FED.US

- **STATE - State Departments of Education** – For example:
IND.DOE.STATE.IN.US
- **LOCALITY - City or County Departments of Education** – For example:
ED.CO.TULARE.CA.US
- **Private K12 schools** – For example: CCDS.CINCINNATI.OH.US

Private schools

To accommodate both public and private schools, in each state's K12 branch, we've added an artificial district called private or "PVT". This gives a private school the option of registering like a business under "locality" or in the PVT.K12.<state-code>.US branch.

Community college and technical vocational schools

To distinguish colleges and Technical/Vocational schools, the keywords CC and TEC have been created. Figure 5 shows a view of these schools. Community colleges and Junior colleges are generally two-year colleges sometimes offering an Associate of Arts degree. The courses offered at Community and Junior colleges are usually the equivalent of the first two years of a four-year college.

Technical and Vocational schools usually offer courses and training leading to specific specialized skills in a particular subject or technology. The naming structure for community colleges and technical/vocational schools in the form:

<school-name>.CC.<state-code>.US

<school-name>.TEC.<state-code>.US

State agencies

Many states are setting up networks to interconnect the offices of state government agencies. The hosts in such networks should be registered under the STATE.<state-code>.US branch. See RFC 2146 US Government Internet Domain Names and how government agencies should register. Figure 6 shows a state view.

Special domain names

Name space within the states

- **LOCALITY - Cities, Counties, Parishes, and Townships** – Basic naming structure of the US Domain (i.e., businesses, individuals, private schools, city and county agencies). For example:
<host-name>.<locality>.<state-code>.US.
- **CI - City Government Agencies** – The "CI" branch is a subdomain under the <locality> name (like Santa-Monica) for the city government. For example: Fire-Dept.CI.Santa-Monica.CA.US.
- **CO - County Government Agencies** – The "CO" branch is a subdomain under the <locality> name (like San-Bernardino) for the county government. For example: Fire-Dept.CO.San-Bernardino.CA.US

- **K12 - Public Schools, Districts** – This branch is used for Kindergarten through 12th grade schools and districts. A special name "PVT" may be used in the place of a school district name for private schools. For example: <school-name>.<district>.K12.<state-code>.US> and <school-name>.PVT.K12.<state-code>.US.
- **CC - Community Colleges** – This branch was established for all statewide community colleges. For example: <school-name>.CC.<state-code>.US.
- **TEC - Technical and Vocational Schools** – The "TEC" branch was established for technical and vocational schools and colleges. For example: <school-name>.TEC.<state-code>.US.
- **LIB -Libraries (State, Regional, City, County)** – This branch is used for public and private libraries, as well as library networks, consortiums, and systems. For example: <library-name>.LIB.<state-code>.US. ,<library-network>.LIB.<state-code>.US.
- **STATE -State Government Agencies** – This branch may be used for state agencies. For example: <org-name>.STATE.<state-code>.US.
- **GEN -General Independent Entities** – This branch is used for such things as state-wide organizations, clubs, BBS's. For example: <org-name>.GEN.<state-code>.US.
- **COG - Councils of Government** – This branch is used for federations of cities or counties or their sub-agencies to work on particular issues on a regional basis forming councils of government. For example: <council-name>.COG.<state-code>.US.
- **MUS - Museums** – This branch is used for museums. For example: <museum-name>.MUS.<state-code>.US.
- **DST - Districts (DST replaces District)** – This branch is for governmental agencies in districts that may or may not have common boundaries with cities or counties, general administrative districts, such as water supply, and resource management. For example: <org-name>.DST.<state-code>.US.

Names parallel to the states

- **FED - Federal Government** – This branch is used for agencies of the federal government. For example: <org-name>.FED.US.
- **NSN - Native Sovereign Nations** – This branch is to be used for North American Indian Nations; comprised of Indian tribes, villages, rancherias, colonies, and other Indian communities that can span state, regional and national boundaries. For example:<indian-nation>.NSN.US.
- **ISA - Interstate Authority** – This branch is used for joint governmental authorities that are multi-state. For example, the Port Authority of New York and New Jersey.<org-name>.ISA.US.

Registration

Registrations are by delegation, where a branch of the US Domain is delegated to an organization running name servers to support that branch.

All K12 schools, community colleges/technical schools, state and local government agencies are required to register under the US Domain. For registration in other top-level domains such as COM, EDU, NET, ORG, GOV send a message to: Hostmaster@internic.net and request their template.

To request a copy of the US Domain Template, send a message to the us-domain@isi.edu, or use template available online.

If you are registering a name in a delegated zone, please mail your registration directly to the contact for the subdomain you want to register in. The contact list for the subdomains delegated is available at Delegated Domains and Contacts.

Delegation

Most branches of the US Domain are delegated. Typical delegations are localities (cities or counties), companies within cities, k12 schools, community colleges, libraries, state and federal government agencies. Examples of delegations are K12.TX.US for K through 12th grade public schools, in Texas, a locality "BERKELEY.CA.US", or LIB.MN.US for the libraries in Minnesota.

There must be a knowledgeable and competent technical contact, familiar with the Internet Domain Name System. We do not provide technical support. We only register the domain names.

Organizations requesting delegations must provide at least two independent (robust and reliable) DNS name servers in physically separate locations on the Internet. The servers should be active and responsive to DNS queries BEFORE the application is submitted. Incomplete information about the servers and IP addresses or inactive servers will result in delay of the registration. The subdomain administrator must accept all applicants on an equal basis and provide timely processing of requests.

The subdomain manager must notify the US Domain Registrar immediately about any changes in the name servers that should be reflected in the US Domain zone files, or changes in the administrative and technical contact information. Administrators must follow the guidelines in the current US Domain RFC and assist applicants in selecting a domain name.

The contact phone number given to US Domain Registrar should be answered during the business hours. All messages received after business hours should be answered the next working day. This is required to resolve problems either by US Domain or by the customer directly. If we receive many complaints or experience any problems ourselves in getting touch with the delegated manager the delegation may be revoked.

Some domain managers have taken on the responsibility for managing a large number of locality domains. To promote diversity, no single domain manager (person or company) should be responsible for more than 50 localities in one state, or 500 localities in total.

As of 1-Jul-97, it is assumed by the US Domain Administrator that every applicant for the delegation (or redelegation) of a locality name has the written agreement of the legitimate government for that locality for the applicant to manage the domain name of that locality.

Evidence of such an agreement does not need to be presented at the time of delegation (except that the administrative contact on the application template must be the government representative).

However, if the delegation is later challenged or contested, the manager of the locality domain must produce the agreement. Failure to do so will most likely result in the transfer of the management of the locality domain to another manager that does have such an agreement.

If there is a dispute as to what is the legitimate government for a locality is and who may act for it, the league of cities or association of municipalities that each state (as recognized by the National League of Cities) may be asked to assist in resolving such disputes.

In some places there are overlapping jurisdictions with the same name (for example, the city of Los Angeles and the county of Los Angeles). In such cases, the higher-level government should have priority.

Delegation of the special domains

The special domains (K12, CC, TEC, LIB, MUS, STATE, DST, COG and GEN) under each state are established for special purposes (defined in RFC 1480).

In addition to the constraint to use them only for the defined purpose, each of these special domains is also delegated only to a manager within the state, and the operation of the delegated registry should be non-profit.

The LIB and MUS domains should be managed by a governmental or educational institution.

Further, it is most appropriate for the K12, CC, and TEC, domains to be managed by an educational organization (for example, a university or a department of education).

The STATE domain is most appropriately managed by an agency of the state government. DST and COG should be managed by a government agency.

The GEN domain may be delegated to any organization that will provide the registration service for free (and remember the purpose of the GEN domain is to register statewide non-profit organizations).

Whois

The Internic has developed the RWHOIS program which supports distributed databases of WHOIS information. This allows for the reduction of queries and referral of information to be closer to the maintainer of the information.

The US Domain Registry has installed a client/server RWhois protocol to support the US Domain WHOIS information. We request that the administrator of a sub-domain of the US Domain should also operate a RWHOIS server for those sub-domains under them. Contact rwhois@isi.edu. The data from the information you supplied on your application will be used for your WHOIS entry. Currently, we are adding the third level delegations to the US Domain WHOIS database. For example, K12.IL.US would have an entry in the US WHOIS database.

```
venera 37% whois -h nii.isi.edu k12.il.US
```

```
%RWhois V-1.0: nii-server.isi.edu (by InterNIC
Registration
Services
V-1.0B9)
```

```
Illinois K12 Schools (K12-IL-US-DOM)
  CICNet
  2901 Hubbard Dr.
  Ann Arbor, MI 48105
```

Domain Name: K12.IL.US

```
Administrative Contact:
  Systems, CICNet (CIC-NS-US) ns@cic.net
  (313) 998-6520
```

```
Technical Contact:
  Systems, CICNet (CIC-NS-US) ns@cic.net
  (313) 998-6520
```

Record Last Updated on 09-1-95.

Domain servers in listed order:

```
spruce.cic.net. 35.42.1.100
infoserv.illinois.net 192.217.65.102
```

Cost

Currently, there is no cost charged by the US Domain administrator for delegating a locality or other branch of the US Domain at that level.

Most managers of delegated branches do not charge for registering a host in the US domain in their localities, though some do. There is no requirement that domain names be free, only that any charges be fair and applied equally to all customers.

In the past, managers provided the name servers and registration services for localities (and other branches of the US domain) for free. Some people came forward to provide this public service, and it is very much appreciated.

Many locality names in the US domain are delegated to small companies. These companies need to charge a small fee to set up and maintain the database and run the name servers to support this service.

In the current environment of the Internet, it is reasonable for locality managers to charge a small fee for domain name service under the US domain delegations.

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While each locality domain manager is responsible for setting his own fees or billing practices and deciding what is "small", it does seem that what the Internic charges should be considered to be "large". Some of these companies are charging \$10 per year.

In a few instances a fourth level domain name previously allocated by the US Domain administrator may be passed on to a new locality manager during delegation. The new administrator of the locality has to notify such name holders one year in advance before charging for those domains.

Appendix C: Policies Implemented by NSI (VeriSign Global Registry Services)

When ISI ceased operations as the administration of the US domain, the responsibility for that administration fell to NSI (who had since become VeriSign Global Registry Services (VS GRS)) in December of 2000, VS GRS unilaterally imposed a number of new policies on delegated managers and registrants, including the requirement that all registrants and delegated managers agree to “.US Interim Service Agreement Version Number 1.1” (full text of this agreement is included below).

New requirements

VS GRS created several new policies including the following for registrants:

- Registrants were subjected to the 50/500 rule (i.e., no single person or entity could hold more than 500 .US Locality domains or more than 50 .US Locality domains in any state).
- The domain name requested must match the name of registrant organization name exactly.
- The locality and state in the address must locality and state in the requested domain name.
- Provide contact information and name server information to VS GRS.

VS GRS also required delegated managers to:

- Allow VS GRS to perform zone transfers of all delegated zones.
- Obtain and provide contact information and name server information for all registrants to be displayed via “publicly accessible registration database.”

.US interim service agreement version number 1.1

1. INTRODUCTION. In this Interim Service Agreement ("Agreement"), "we", "us" and "our" refer to Network Solutions, Inc., doing business as VeriSign Global Registry Services ("VERISIGN GRS"), a Delaware corporation and "you" and "your" refer to any person for whom we maintain the .US domain name registration record ("Registrant"). This Agreement explains our obligations to you, and your obligations to us in relation to our .US domain registration services. If you have submitted an application for .US domain name registration services, any acceptance of your application and the performance of our services will occur at our offices in Dulles, Virginia. If your .US domain name registration services for a particular domain name previously were provided under arrangement with our predecessor, the Information Sciences Institute, University of Southern California ("ISI"), your continued registration of that domain name and the use of our .US domain name registration services constitutes your assent to the terms of this Agreement. If you submitted an application for our .US domain name registration services, the Effective Date of this Agreement shall be the date of our acceptance of your application. If you previously received .US domain name registration services from ISI, the Effective Date of this Agreement is November 28, 2000.

2. TERM. The term of this Agreement is from the Effective Date to the date on which VERISIGN GRS has no further obligation to render .US Top Level Domain ("TLD") administration

services under any agreement with the United States government, or until earlier terminated pursuant to Section 18 hereof (the "Initial Term").

3. **COMPLIANCE WITH RFC 1480.** You are responsible for knowing and agree to abide by the requirements for naming structure, registration and database information specified in the third party document known as RFC 1480, The US Domain, as supplemented by the rules and procedures on the .US Domain Web site at <http://www.nic.US>, which may be amended from time to time. In addition, a registrant that intends to re-delegate a locality name must adhere to the rules located at <http://www.nic/us/register/locality.html>, as may be amended from time to time.
4. **NAME SERVERS.** You agree to maintain two operational name servers for the specified domain name. In addition, the two name servers must be on separate networks.
5. **ZONE TRANSFERS.** You or your Internet Service Provider authorizes us to perform .US zone transfers through your servers. You or your Internet Service Provider are required to take all steps necessary to enable the hosts at VERISIGN GRS (198.41.3.86 and 198.41.3.87) to perform .US zone transfers.
6. **SUB-DELEGATION RESPONSIBILITIES.** In the event sub-delegation records exist for the domain name you are registering, you agree to accept and manage the sub-delegation records and place the zone file we provide to you on your servers. You must complete this task within seven (7) calendar days from your receipt of our zone file.
7. **ACCURATE INFORMATION.** As further consideration for the VERISIGN GRS service(s), you agree to: (1) provide certain current, complete and accurate information about you as required by the application process; and (2) maintain and update this information as needed to keep it current, complete and accurate. We rely on this information to send you important information and notices regarding your domain name registration. Our privacy statement, located on our Web site at <http://www.networksolutions.com/legal/privacy-policy.html> and incorporated herein by reference, sets forth your and our rights and responsibilities with regard to your personal information. You agree that we, in our sole discretion, may modify our privacy statement. We will post such revisions on our Web site at least thirty (30) calendar days before they become effective. You agree that, by using our services after modifications to the privacy statement become effective, you have agreed to these modifications. You acknowledge that if you do not agree to any such modification, you may terminate this Agreement. We will not process the personal data that we collect from you in a way incompatible with the purposes and other limitations described in our privacy statement. You represent and warrant that you have provided notice to, and obtained consent from, any third party individuals whose personal data you supply to us as part of our services with regard to: (i) the purposes for which such third party's personal data has been collected, (ii) the intended recipients or categories of recipients of the third party's personal data, (iii) which parts of the third party's data are obligatory and which parts, if any, are voluntary; and (iv) how the third party can access and, if necessary, rectify the data held about him. You further agree to provide such notice and obtain such consent with regard to any third party personal data you supply to us in the future. We are not responsible for any consequences resulting from your failure to provide notice! or receive consent from such individuals nor for your providing outdated, incomplete or inaccurate information. Even if you intend to use our domain name registration services for the benefit of a third party, you will remain our registrant and you are responsible for

complying with all terms and conditions of this Agreement. Subject to the requirements of our privacy statement, in order for us to comply with the current rules and policies for the domain name system, you hereby grant to VERISIGN GRS the right to disclose to third parties through an interactive publicly accessible registration database the registration information that you provide when registering a domain name, including: (i) the domain name(s) registered by you; (ii) your

name and postal address; (iii) the name(s), postal address(es), e-mail address(es), voice telephone number and, where available, the fax number(s) of the technical and administrative contacts for your domain name(s); (iv) the Internet protocol numbers of the primary name server and secondary name server(s) for such domain name(s); (v) the corresponding names of those name servers.

8. **MODIFICATIONS TO AGREEMENT.** Except as otherwise provided in this Agreement, you agree, during the term of this Agreement, that we may: (1) revise the terms and conditions of this Agreement; and/or (2) change any part of the services provided under this Agreement at any time. We will attempt to post any such modification on the US Web site at least thirty (30) calendar days before it becomes effective. Any such revision or change will be binding and effective upon the date specified. You agree to periodically review our Web sites, including the current version of this Agreement available on our Web sites, to be aware of any such revisions. If you do not agree with any revision to the Agreement, you may terminate this Agreement at any time by providing us with notice by e-mail to usdomreg@nic.US or United States mail addressed as follows, Attention: VeriSign Global Registry Services, Business Affairs Office, 21345 Ridgeway Circle, Dulles, VA 20166-6503. Notice of your termination will be effective on receipt by us. By continuing to use VERISIGN GRS services after any revision to this Agreement or change in service(s), you agree to abide by and be bound by any such revisions or changes. We are not bound by nor should you rely on any representation by (i) any agent, representative or employee of any third party that you may use to apply for our services; or in (ii) information posted on our Web site of a general informational nature. No customer service employee, contractor, agent or representative of VERISIGN GRS is authorized to alter or amend the terms and conditions of this Agreement.

9. **DOMAIN NAME DISPUTES.** If you registered a domain name through us, you agree to be bound by our current domain name dispute policy that is incorporated herein and made a part of this Agreement by reference. The current version of the dispute policy may be found at our Web site: <http://www.networksolutions.com/legal/dispute-policy.html>. Please take the time to familiarize yourself with that policy. Further, you agree that in the event a domain name dispute arises with any third party, you will indemnify and hold us harmless pursuant to the terms and conditions set forth in this Agreement to the extent not prohibited by law. If you or we are notified that a complaint has been filed with a judicial or administrative body regarding your use of our domain name registration services, you agree not to make any changes to your domain name record without our prior approval. We may prevent changes to such domain name record until (i) we are directed to do so by the judicial or administrative body, or (ii) we receive notification by you and the other party contesting your registration and use of our domain name registration services that the dispute has been settled. Furthermore, you agree that if you are subject to litigation, arbitration or administrative proceeding regarding your registration and use of our domain name registration services, we may deposit control of your domain name record into the registry of the judicial, arbitration or administrative body by supplying a party with a registrar certificate from us. In the

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event such control is deposited with the judicial, arbitration or administrative body, you may not be

able to either (i) make changes to your domain name record, and/or (ii) use your domain name during the pendency of the dispute. We will abide by the outcome of the judicial, arbitration or administrative proceeding upon receipt of a final order or award.

10. AGENTS. You agree that, if your agent (e.g., an Internet Service Provider, employee, etc.) purchased our service(s) on your behalf, you are nonetheless bound as a principal by all terms and conditions herein. Your continued use of our services shall ratify any unauthorized actions of your agent. By acting on your behalf, your agent certifies that he or she is authorized to apply for our services on your behalf, that he or she is authorized to bind you to the terms and conditions of this Agreement and that he or she has apprised you of the terms and conditions of this Agreement. In addition, you are responsible for any errors made by your agent.

11. NOTICES AND ANNOUNCEMENTS. You authorize us to notify you, as our registrant, of information that we deem is of potential interest to you. Notices and announcements may include e-mails sent to the administrative and technical contacts, and other notices describing changes, upgrades, new products and services or other information pertaining to Internet security or to enhance your identity on the Internet and/or other relevant matters.

12. LIMITATION OF LIABILITY. You agree that our entire liability, and your exclusive remedy, with respect to any VERISIGN GRS service(s) provided under this Agreement and/or for any breach of this Agreement and assigns is solely limited to the amount of \$100.00 USD. VERISIGN GRS, its employees, agents, contractors, officers, directors, shareholders, and affiliates, shall not be liable for any direct, indirect, incidental, special or consequential damages resulting from the use or inability to use any of the VERISIGN GRS services or for the cost of procurement of substitute services. Some states do not allow the exclusion or limitation of liability for consequential or incidental damages; in such states, our liability is limited to the extent permitted by law. We disclaim any and all loss or liability resulting from, but not limited to: (1) loss or liability resulting from access delays or access interruptions; (2) loss or liability resulting from data non-delivery or data mis-delivery; (3) loss or liability resulting from acts of God; (4) loss or liability resulting from errors, omissions, or misstatements in any and all information or service(s) provided under this Agreement; (5) loss or liability that you may incur in connection with our processing of your application for our services, our processing of any authorized modification to your domain name record; or (6) loss or liability as a result of the application of our dispute procedures described in Section 9, DOMAIN NAME DISPUTES.

13. INDEMNITY. To the extent not prohibited by law, you agree to release, indemnify, and hold VERISIGN GRS, and its contractors, agents, employees, officers, directors, shareholders, affiliates and assigns harmless from all liabilities, claims, damages, costs and expenses, including reasonable attorneys' fees and expenses, of third parties relating to or arising under this Agreement, the VERISIGN GRS services provided hereunder or your use of the VERISIGN GRS services, including without limitation infringement or dilution by you, or someone else using our service(s) from your computer, of any intellectual property or other proprietary right of any person or entity, or a violation of any of our operating rules or policies relating to the service(s) provided. When we are threatened with suit, or sued by a third party, we may seek written assurances from you concerning your promise to indemnify us; your failure to provide those assurances may be considered by us to be a material breach of this Agreement.

14. **BREACH.** You agree that your failure to abide by any provision of this Agreement, any VERISIGN GRS operating rule or policy, or your willful provision of inaccurate or unreliable information as part of the application process, or your failure to update your information to keep it current, complete or accurate, or your failure to respond for over fifteen (15) calendar days to inquiries from us regarding your domain name registration may be considered by us to be a material breach and that we may provide a written notice, describing the breach, to you. If within ten (10) calendar days of the date of such notice, you fail to provide evidence, which is reasonably satisfactory to us, that you have not breached your obligations under the Agreement, then we may delete the registration or reservation of your domain name and/or terminate the other VERISIGN GRS service(s) you are using without further notice. Any such breach by you shall not be deemed to be excused simply because we did not act earlier in response to that, or any other breach, by you.

15. **NO GUARANTY.** You agree that, by registration of your chosen domain name, such registration does not confer immunity from objection to either the registration or use of your domain name.

16. **REPRESENTATIONS AND WARRANTIES.** You agree and warrant that: (i) the information that you or your agent on your behalf provide to us during the application process to register your domain name or to apply for other VERISIGN GRS service(s) is, to the best of your knowledge and belief, accurate and complete, and that any future changes to this information will be provided to us in a timely manner according to the modification procedures in place at that time, (ii) to the best of your knowledge and belief neither the registration of your domain name nor the manner in which you intend to use such domain name directly or indirectly infringes the legal rights of a third party, (iii) you have all requisite power and authority to execute this Agreement and to perform your obligations hereunder, and (iv) you are of legal age to enter into this Agreement. You agree that your use of our service(s) is solely at your own risk. You agree that all of our services are provided on an "as is" and "as available" basis.

17. **DISCLAIMER OF WARRANTIES.** WE EXPRESSLY DISCLAIM ALL WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. WE MAKE NO WARRANTY THAT OUR SERVICE(S) WILL MEET YOUR REQUIREMENTS, OR THAT THE SERVICE(S) WILL BE UNINTERRUPTED, TIMELY, SECURE, OR ERROR FREE; NOR DO WE MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM THE USE OF THE SERVICE(S) OR AS TO THE ACCURACY OR RELIABILITY OF ANY INFORMATION OBTAINED THROUGH OUR .US DOMAIN NAME REGISTRATION SERVICE.

18. **TERMINATION.** We may terminate this Agreement at any time for any reason by giving you 15 days prior notice. You agree that we may terminate this Agreement if the information that you are obligated to provide to register your domain name or register for other VERISIGN GRS service(s), or that you subsequently modify, contains false or misleading information, or conceals or omits any information we would consider material to our decision to register your domain name or to continue to provide you with domain name registration services. Furthermore, you agree that we may suspend, cancel or transfer your domain name registration services in order to: (i) correct mistakes made by us, a delegated domain manager, or the registry in registering your chosen

domain name, (ii) resolve a dispute under Section 9, DOMAIN NAME DISPUTES, (iii) enforce the guidelines of the .US Domain Registry as set forth in Section 3, COMPLIANCE WITH RFC 1480, or (iv) in the event a successor .US Domain Registry is chosen. We may terminate this Agreement if the third-level domain name under which your domain name is registered is re-delegated to a third- party in accordance with Section 3, COMPLIANCE WITH RFC 1480.

19. NO THIRD-PARTY BENEFICIARIES. This Agreement shall not be construed to create any obligation by VERISIGN GRS to any non-party to this Agreement.

20. RIGHT OF REFUSAL. We, in our sole discretion, reserve the right to refuse to register your chosen domain name. You agree that we shall not be liable to you for loss or damages that may result from our refusal to register your domain name.

21. SEVERABILITY. You agree that the terms of this Agreement are severable. If any term or provision is declared invalid or unenforceable, that term or provision will be construed consistent with applicable law as nearly as possible to reflect the original intentions of the parties, and the remaining terms and provisions will remain in full force and effect.

22. ENTIRETY. You agree that this Agreement, the domain name application, the rules and policies published by us, and the privacy statement is the complete and exclusive agreement between you and us regarding our services. This Agreement, our rules and policies, the dispute policy and the privacy statement supersede all prior agreements and understandings, whether established by custom, practice, policy or precedent.

23. GOVERNING LAW. To the extent not prohibited by law, you agree that this Agreement and any disputes hereunder shall be governed in all respects by and construed in accordance with the laws of the Commonwealth of Virginia, United States of America, excluding its conflict of laws rules. Except for disputes concerning or arising from your use of a domain name registered with us, you and we each submit to exclusive subject matter jurisdiction, personal jurisdiction and venue of the United States District Court for the Eastern District of Virginia, Alexandria Division, except to the extent prohibited by law. If there is no jurisdiction in the United States District Court for the Eastern District of Virginia, Alexandria Division, then jurisdiction shall be in the Circuit Court of Fairfax County, Fairfax, Virginia. Only for disputes concerning or arising from your use of a domain name registered with us, you agree to submit to subject matter jurisdiction, personal jurisdiction and venue of the United States District Court for the Eastern District of Virginia, Alexandria Division and the courts of your domicile.

24. AGREEMENT TO BE BOUND. By applying for and registering a domain name as part of our application process or by using the service(s) provided by VERISIGN GRS under this Agreement, you acknowledge that you have read and agree to be bound by all terms and conditions of this Agreement and any pertinent rules or policies that are or may be published by VERISIGN GRS.

REGISTRANT _____

Signature _____

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Print Name _____

Title _____

Date _____

END OF AGREEMENT

Appendix D: .US Compliance Questionnaire

The .US Compliance Questionnaire form was Web-enabled and placed on the Neustar .US web site with userID and password access control.

Section I: Contact and delegation information

Unfortunately, the contact and delegation information received by Neustar from the previous usTLD administrator is grossly out of date. We need your assistance to ensure that the information we have on file for all delegated managers is up to date. The information provided here will assist in the creation of the delegated manager database as required by the US DoC and, more importantly, will provide Neustar with a mechanism for communicating with the locality managers.

Personal contact information (of the person completing the survey)

Name	
Organization	
Address1	
Address2	
Address3	
City	
State	
Postal Code	
Telephone Number	
Fax Number	
Email Address	

Delegated manager information

Check here if same as PERSONAL CONTACT INFORMATION

Name	
Organization	
Address1	
Address2	
Address3	

City	
State	
Postal Code	
Telephone Number	
Fax Number	
Email Address	

Administrative contact

Δ Check here if same as PERSONAL CONTACT INFORMATION

Name	
Organization	
Address1	
Address2	
Address3	
City	
State	
Postal Code	
Telephone Number	
Fax Number	
Email Address	

Technical and zone contact

Δ Check here if same as PERSONAL CONTACT

Δ Check here if same as ADMINISTRATIVE CONTACT

Name	
Organization	
Address1	
Address2	
Address3	

City	
State	
Postal Code	
Telephone Number	
Fax Number	
Email Address	

Check whether your organization is:

- Δ A state or local government entity
- Δ A state or local government agency (e.g.-school district, public library, etc.)
- Δ A not-for-profit organization
- Δ An individual
- Δ An Internet Service Provider
- Δ An Internet Domain Registrar
- Δ Other Internet Company
- Δ Other (please provide details): _____

Registration information

Enter a registration email address (this is the address to which a registrant submits a usTLD locality domain template and to which correspondence can be sent to contact the locality manager):

_____ @ _____

Delegation information

Please list the locality domains delegated to an organization (or individual), the dates these domains were delegated, and the name server information for these domains. If the domains were delegated on more than one date and/or are hosted on different name servers, click on the “Add More Delegations Button”.

Locality domains	Date of domain delegation
<locality>.<state>.US	yyyy-mm-dd
<locality>.<state>.US	yyyy-mm-dd
Note for Developer: Please note this delegated domains list can grow to 700, Thus the delegated manager needs to be able to easily add lines and match domains to name servers. Please provide a “Continue” Button to add more domains.	

If the next set of domains are hosted on different name servers, Please enter the name servers associated with the above domains and provide a "Add More Delegations" button.	
<locality>.<state>.US	yyyy-mm-dd
Name server	IP Address
Primary Host Name	IP Address
Secondary Host Name	IP Address
Additional Host Name	IP Address
Note for the Developer: The delegated manager must enter the name and IP address of each name server hosting the above listed domains. Up to 13 total name servers can be entered. Please provide a "Continue" button to add more name servers up to 13. After all name servers have been entered for the group of domains, provide an "Add More Delegations" button for the Delegated Manager to add an additional group of domains and their associated name servers.	

[NOTE: In the date of domain delegation format yyyy-mm-dd, please note that the "dd" is optional.]

Section II: Current requirements

While many "requirements" were proposed and indiscriminately imposed over the years, the current requirements for the usTLD locality namespace are based on RFC 1480 written by Dr. Postel and Ann Cooper of the Information Studies Institute of the University of Southern California released in June of 1993 and several subsequent policies implemented by Dr. Postel.

Before answering the following questions, usTLD locality managers should be aware that answering the questions below truthfully to the best of your knowledge will NOT result in your removal as a locality manager, even if you are not in compliance with all of the current requirements. Based on your responses, these policies will either be modified, eliminated, or you will be provided ample opportunity to address any remaining issues. However, if you fail to complete the survey or you knowingly provide false or misleading information, your delegation may be affected. So, PLEASE do your best to provide accurate and complete answers.

RFC 1480

This is the document on which most of the .US locality name space is based. Some of the policies, rules, and suggestions in the document are clearly obsolete, so this RFC will be updated based largely on your responses to this survey. While the document does contain some formal policies and rules, it contains many more suggestions for use of the information.

Locality names

- a) Are you the delegated manager for any Locality Names (i.e. - <locality>.<state>.US)?
< Yes < No (if no, skip to "School Names")

- b) Do you currently have any registrations under your delegated locality?
< Yes < No (if no, skip to "School Names")
- c) Do you subdelegate CI (City) and CO (County) to municipalities?
< CI (City)
< CO (County)
< we allow both
- d) What form of authorization do you require to grant subdelegations to municipalities?
< None
< The municipality is the delegated locality manager.
< Signed authorization is maintained on the municipalities letterhead.
< Other (please provide details): _____
- e) While not a requirement under RFC 1480, some locality managers have reserved names for other municipal "types" such as Parish, Town, Township, Borough, and Village. Do you reserve any such municipal "types" in any of the localities that you manage?
< Yes < No
If yes, please list the names you have reserved (comma separated):

- f) Do you support officially reserving additional municipal types?
< Yes < No

School names

- g) Are you the delegated manager for any School Names (i.e. - <school name>.<school district>.k12.<state>.US or <school name>.pvt.k12.<state>.US)?
< Yes < No (if no, skip to "Community College Names")
- h) Do you currently have any registrations under your .k12 delegation?
< Yes < No (if no, skip to "Community College Names")
- i) What form of authorization do you require to register names under your .k12 delegation?
< None
< Signed authorization is maintained on the school district's or private school's letterhead.
< Other (please provide details): _____
- j) Is the delegated manager a school, school district, private school, or state education agency?
< Yes, a school
< Yes, a school district
< Yes, a private school
< No

Community college names

- k) Are you the delegated manager for any Community College Names (i.e. - <community college name>.cc.<state>.US)?
< Yes < No (if no, skip to “Technical School Names”)
- l) Do you currently have any registrations under your .cc delegation?
< Yes < No (if no, skip to “Technical School Names”)
- m) What form of authorization do you require to register names under your .cc delegation?
< None
< Signed authorization is maintained on the Community College’s letterhead.
< Other (please provide details): _____
- n) Is the delegated manager a community college?
< Yes < No

Technical school names

- o) Are you the delegated manager for any Technical School Names (i.e. - <technical school name>.tec.<state>.US)?
< Yes < No (if no, skip to “Library Names”)
- p) Do you currently have any registrations under your TEC delegation(s)?
< Yes < No (if no, skip to “Library Names”)
- q) What form of authorization do you require to register names under your .tec delegation?
< None
< Signed authorization is maintained on the Technical School’s letterhead.
< Other (please provide details): _____

Library names

- r) Are you the delegated manager for any Library Names (i.e. - <library name>.lib.<state>.US)?
< Yes < No (if no, skip to “General Independent Entity Names”)
- s) Do you currently have any registrations under your .lib delegation?
< Yes < No (if no, skip to “General Independent Entity Names”)
- t) What form of authorization do you require to register names under your .lib delegation?
< None
< Signed authorization is maintained on the Library’s letterhead.
< Other (please provide details): _____

General independent entity names

- u) Are you the delegated manager for any General Independent Entity Names (i.e. - <state agency>.gen.<state>.US)?
< Yes < No (if no, skip to “State Agency Names”)

- v) Do you currently have any registrations under your .gen delegation?
< Yes < No (if no, skip to "State Agency Names")
- w) What form of authorization do you require to register names under your .gen delegation?
< None
< Signed authorization is maintained on the General Independent Entity's letterhead.
< Other (please provide details): _____

State agency names

- x) Are you the delegated manager for any State Agency Names (i.e. - <state agency>.state.<state>.US)?
< Yes < No (if no, skip to "Other Names")
- y) Do you currently have any registrations under your .state delegation?
< Yes < No (if no, skip to "Other Names")
- z) What form of authorization do you require to register names under your .state delegation?
< None
< The state is the delegated locality manager.
< Signed authorization is maintained on the State Agency letterhead.
< Other (please provide details): _____

Other names

- aa) Are you the delegated manager for any names not mentioned above; for example, <.isa> (inter-state-authority), <.nsn> (native sovereign nation), <.fed> (federal agency), .dni (distributed national institutes) ?
< Yes < No (if no, skip to "Operational Requirements below")
- bb) Please list the delegated names here (comma separated): _____
- cc) Do you currently have any registrations under your delegation?
< Yes < No
- dd) What form of authorization do you require to register names under your this delegation?
< None
< Signed authorization is maintained on the registrant's letterhead.
< Other (please provide details): _____

Operational requirements

Anyone requesting to register a domain under a delegated locality name space is required to complete the current US Domain template (found at http://www.nic.US/register/locality_template.txt) and to email it to the delegated locality manager (found at http://www.nic.US/register/delegated_subdomains.txt).

- ee) Is the email address listed on the US nic website for submission of US Domain templates and other correspondence from registrants valid and working?
< Yes < No, it should be _____@_____
- ff) Do you require that all registrations be submitted via this form?
< Yes < No
If no, what other format(s) do you receive registrations:

- gg) Do you verify that all required information in the US Domain template has been completed before delegating a domain?
< Yes < No
- hh) Do you verify that at least two independent name servers are provided and that they are in physically separate locations on the Internet?
< Yes, I verify the name servers provided follow proper convention
< Yes, I verify the existence of these name servers
< No
- ii) Do you verify the registrant and not a third party (without the registrant's knowledge) submitted the request?
< Yes < No
If yes, the verification method I use is: _____
- jj) To ensure timely processing of all requests is there always someone available to process requests (i.e.-if the primary contact goes on vacation, is there someone else to process the requests?)?
< Yes < No
- kk) Do your administrative and technical contacts have a valid working email address?
< Yes < No
- ll) Is your technical contact familiar with the technical details of the Internet?
< Yes < No
- mm) Do you have a designated manager for supervising your locality name space?
< Yes < No
- nn) Has the US Domain Administrator ever been required to resolve a dispute between you and a registrant?
< Yes < No
If yes, please explain:

- oo) Has the US Domain Administrator ever removed you as the delegated manager of a US domain?
< Yes < No
If yes, please explain: _____

pp) Do you have at least a primary and secondary name server for each domain?

< Yes < No

qq) Are your name servers in distinctly separate physical locations?

< Yes < No

rr) Do you apply the same rules to all registration requests (except for requests for restricted domains)?

< Yes < No

If no, please explain why not:

ss) For transfers from of registered names from one organization to another, do you receive authorization from both organizations before completing the transfer?

< Yes < No < We've never received a transfer request

If yes, the verification method I use is: _____

“Postel’s policies”

During his tenure of operating the US domain space, Dr. Postel implemented a variety of policies, some well documented, others not so well documented.

50/500 rule

Domains delegated prior to July of 1997 fall under the “50/500 rule” (i.e.-Dr. Postel’s rule that any locality manager can only be delegated a maximum of 500 localities and no more than 50 in any state).

tt) Do any of the domains delegated to your organization fall under this rule?

< Yes < No (if no, skip to “July 1997 Rule”)

uu) How many domains were delegated to you under this rule? _____

vv) When delegating domains under this rule, Jon often reached special agreements with individual locality managers before delegating the domains to them.

Please provide the details of any such agreements here:

ww) If yes, do you have these agreements in written form?

< Yes < No

July 1997 rule

Domains delegated from July of 1997 to the present require that someone from the local municipality grant approval to the delegated managers

xx) Do any of the domains delegated to your organization fall under this rule?

< Yes < No (if no, skip to “Miscellaneous Policies”)

yy) How many domains were delegated to you under this rule? _____

- zz) What form of authorization did you receive from the municipality to become the delegated manager of the locality?
- < None
 - < The municipality is the delegated locality manager.
 - < Signed authorization is maintained on the municipalities letterhead.
 - < Other (please provide details): _____

Miscellaneous policies

Some usTLD locality managers do not charge for registrations while some so. The only requirement for those who do charge is that the charges be reasonable and fair.

- aaa) Do you charge for registrations under any localities that you manage?
- < Yes < No
- If yes, please provide your pricing structure here: _____
- bbb) Are there any additional policies, rules, or regulations that have not been mentioned here?
- < Yes < No
- If yes, please provide details: _____

Section III: Your registration policies and procedures

While the current policies and procedures cover some aspects of the managing the usTLD locality name space, many aspects of operating as a delegated locality manager were left to each manager. Before Neustar can determine how best to continue supporting the delegated managers we need to learn more about your own registration policies and procedures.

Web site

- a. Do you currently maintain a website (or page off of a website) for managing your delegated localities?
 - < Yes < No (if no, skip to Item 2) REGISTRATION)
- b. What is the URL of your website: _____
- c. Do you provide the US Domain Template on your website?
 - < Yes < No
- d. Do you provide a web form for submitting registrations for your delegations?
 - < Yes < No
- e. Do you provide information on how registrants can contact you on your website?
 - < Yes < No
- f. If yes, which of the following contact information do you supply:
 - < Email address for submitting registration templates and other correspondence
 - < A contact telephone number

- < A contact address
- < Other, please specify: _____
- g. Do you provide an online privacy policy?
 - < Yes < No
 - If yes, please provide a link to your agreement: _____
- h. Do you offer any special services specifically related to the locality domains?
 - < Yes < No
 - If yes, please provide details: _____
- i. Do you offer any other services to registrants through your website?
 - < Yes < No
 - If yes, please provide details: _____

Registration

- j. Do you require registrants to agree to a "Registration Agreement"?
 - < Yes < No
 - If yes, please specify how the registration agreement is provided (check all that apply):
 - < Registration agreement is emailed to registrant
 - < Registration agreement is posted on our website at: _____
 - < Other, please specify: _____
- k. On average, how long do you take to respond to a registration request?
 - < within 24 hours
 - < 1-3 business days
 - < 4-5 business days
 - < more than 5 business days
- l. Do you provide a phone number where customers may reach you?
 - < Yes < No
- m. Do you provide a mailing address where customers may reach you?
 - < Yes < No
- n. After a registration request has been approved, how long until the domain is added and activated in your zone files?
 - < within 24 hours
 - < 1-3 business days
 - < 4-5 business days
 - < more than 5 business days
- o. Do you charge for registrations?
 - < Yes < No
- p. If yes, do you offer multi-year registrations?
 - < Yes < No
 - If yes, what is your maximum registration period: __ year(s)

- q. How do you handle renewals?
 - < Renewals are not required
 - < Registrant must remember to renew
 - < Registrant is sent an email reminder
 - < Other, please provide details: _____
- r. How do you allow modifications to be submitted (check all that apply)?
 - < Emailed from the administrative contact
 - < Emailed from the technical contact
 - < Via fax or snail mail with the registrants signature
 - < Via telephone request
 - < Via third party request
 - < Other, please specify: _____

Section IV: New and proposed requirements

The DoC has issued several mandates for the US locality name space affecting both the locality managers and Neustar, the new US Domain Administrator.

Delegated manager database and Whois

The DoC requires Neustar to create and maintain a database of all delegated managers and to provide this information via Whois.

- a. Do you have any objections to any of the contact data you provided in Section I being made publicly available via Whois?
 - < Yes < NoIf yes, please specify which information you want to see withheld:

- b. Is there any additional information regarding the delegated managers that you would like provide to the public via Whois?
 - < Yes < NoIf yes, what additional information do you want provided:

- c. Under what circumstances should a delegated manager's delegation be removed?

- a. Please describe your recommended process for removal of a delegation from a manger:

Registrant database and Whois

The DoC requires Neustar to create and maintain a database of all registrants in the locality name space.

- a. How do you maintain registration records?
 - < Paper format

- < Saved copies of the email template
- < Electronic format (Please specify format: _____)
- < Other (Please specify: _____)
- b. When granted a delegation, locality managers were required to maintain and support existing entries in the zone files, however, contact information for these existing zones were not provided to the delegated manager.
Do you have contact information for these zone entries?
< Yes < No
- c. The DoC requires that all delegated managers obtain and provide complete registrant data to the usTLD administrator.
How do you propose providing your registrant contact data to Neustar for inclusion in the Registrant database?

Modernization and automation of usTLD delegation process

To address the DoC requirement that Neustar modernize and automate the usTLD delegation process, Neustar expects to provide an area off the US nic website password accessible only by current delegated managers. The site will allow current delegated managers to maintain and modify their current information as well as configure and manage their locality domains.

- d. Current delegated managers may continue to manage their current delegations for as long as they remain in compliance with current rules and regulations.
Should the process of delegating localities to individuals and organizations that are currently served directly by the usTLD administrator be continued?
< Yes < No < No Opinion
- e. If yes, should there be a maximum number of domains delegated to any individual or organization (such as the current “50/500 Rule”)?
< Yes The maximum number should be: __ < No
- f. Locality delegations prior to the “July 1997 Rule” did not require the approval of the local municipality to be delegated.
Should a municipality have the right to request the redelegation of a localities delegated prior to July 1997 even if the current delegated manager has satisfactorily operated the locality since receiving the delegation?
< Yes < No

Modernization and automation of usTLD registration process

The DoC requires Neustar to modernize and automate the registration process. This includes determining how to automate and manage the interface between the registrant, registry, and delegated managers, to ensure all registrant data is collected by the registry, and to provide registrants with an automated registration process.

- a. The current procedure for submitting registration requests is for the registrant to email a completed US Domain template to the delegated manager for processing.
Should registration requests continue to be emailed to the delegated manager for processing?
< Yes < No
If no, what method of notification do you prefer:

- b. To guarantee that all registration requests are processed in a timely fashion, the delegated manager will be required to respond to a registration request within a specified period of time or the zone will automatically be added to the usTLD zones files. How many days should delegated managers have to initially respond to a registration request (Please note that this requires the delegated manager to respond to the request within this time period, not complete the registration – for example, the delegate manager may change the status to “pending receipt of authorization”)?
____ days
- c. In the event the registry must collect a registration fee from registrants, how should this fee be collected from the registrant?
< The registry should collect the fees.
< The locality manager should collect the fees.
< The locality manager should collect fees imposed by them and the registry should collect all other fees.
< Other, please specify how you would like to see any fees collected:

- d. Please provide your suggestions and insight on how Neustar can modernize and automate the registration process in a manner that best allows delegated managers to continue administering their localities:

US Nexus requirements

All registration under the usTLD from this point forward are required to meet US Nexus requirements, including registrants under the usTLD locality name space. Locality managers are required to ask registrants under which Nexus category they qualify and to maintain this information as part of the registrant data.

The US Nexus requirement specify that registrants in the usTLD must be:

1. (1) A natural person (i) who is a United States Citizen or (ii) who is a permanent resident of the United States of America or any of its possessions or territories.
2. (2) A U.S. organization incorporated within one of the fifty (50) U.S. states, the District of Columbia, or any of the United States possessions or territories or organized or otherwise

.US compliance report



constituted under the laws of the United States of America, the District of Columbia or any of its

possessions or territories or a U.S. federal, state, or local government entity or political subdivision thereof.

3. (3) An entity of organization that has a bona fide presence in the United States of America or any of its possessions or territories that (i) Regularly engages in lawful activities (sales of goods or services or other business, commercial or non-commercial, including not-for-profit relations in the United States or (ii) has an office or other facility in the U.S. Further details of the US Nexus requirements can be found at http://www.nic.US/policies/docs/ustld_nexus_requirements.pdf.
 - g. Do all registrants under your delegations meet the US Nexus requirements?
< Yes < No < Not Sure
 - h. How long should registrants who do not meet the US Nexus requirements be allowed to maintain their registration without compliance?
< They should be required to comply immediately
< 1 year
< Forever
< Other, please specify: _____

Trademark issues

The launch of the expanded usTLD name space will commence with a Sunrise period where holder of US Federal Trademarks will have an opportunity to register and protect their mark.

- d. Do you anticipate any trademark issues with any domains registered in your delegation(s)?
< Yes < No < Not Sure
- e. Do you believe that a Uniform Dispute Resolution Policy (UDRP) like process should apply in the locality space
< Yes < No

Dispute Resolution

The DoC requires the implementation of a “Uniform Dispute Resolution Policy” for the usTLD, including the locality domain name space.

- i. Do you support a policy similar to ICANN’s UDRP for the gTLDs?
< Yes < No
If no, please specify how you propose disputes be resolved:

Discussion of administrative, technical, and policy issues

The DoC requires Neustar to create a mechanism or mechanisms whereby delegated managers of the usTLD, users of the locality-based usTLD, traditional usTLD user groups (such as state and local governments, the library community and educational institutions, among others), and other

interested parties, to coordinate discussion of usTLD administrative, technical, and policy issues related to the operation and management of locality-based usTLD structure.

- j. John Levine, a current delegated locality manager, operates a listserv open to all of the above constituencies and providing an excellent forum for discussion of administrative, technical, and policy issues.

Do you support the continuation of this forum (or one similar to it operated by Neustar should John choose to no longer run the list)?

< Yes < No

- k. Are there additional ways you would like to see this requirement addressed?

< Yes < No

If yes, please specify how: _____

usTLD administrator-delegated manager agreement

The DoC requires that Neustar create a “usTLD Administrator-Delegated Manager Agreement” which must be approved by the DoC and then signed by each of the delegated managers. We realize no single item on this survey is likely to create more concern among the delegated managers! As part of the application process Neustar was required to provide a draft agreement, which can be found at <http://www.neustar.US/>. We understand that many areas of the draft agreement may require major revision. Neustar asks that you review the draft agreement and make note of anything that you would like to see changed, deleted, or added. Of primary concern are requirement such as those mentioned above that would prevent you from continuing as the delegated manager. Please email your comments to jim.casey@neustar.US or mail them to:

James A. Casey
Director, Policy and Business Development
Neustar, Inc.
1120 Vermont Avenue, NW
Suite 400
Washington DC 20005

Based on your comments and input, we will formulate a new agreement which will be posted to the website for you to review.



Section V: Your comments

The future success of the usTLD locality name space depends on the ability to make this a trusted name space and to find new, creative uses for this space. Your input, suggestions, and comments will make a difference in this space. Your responses to the following questions are optional.

Do you have any additional comments or suggestions which have not been addressed?

Suggestions:

Please feel free to email any additional comments or suggestions now or in the future to:

support.US@neustar.US