

C. Description of Services (C.1, C.1.1)

NeuStar will perform the required services as prime Contractor. In certain limited areas and with the prior approval of the DoC, NeuStar will continue to provide the required services by coordinating the services of subcontractors. NeuStar was founded and is based in the United States.

NeuStar is a leading provider of essential clearinghouse services to the global communications and Internet industry. Incorporated in Delaware and traded on the NYSE (NSR), NeuStar's corporate headquarters and primary operations are based out of Sterling, Virginia.

NeuStar was founded in 1996, and provides the North American communications industry with essential clearinghouse services. We operate the authoritative directories that manage virtually all telephone area codes and numbers, and enable the dynamic routing of calls among thousands of competing communications service providers (CSPs) in the United States and Canada. All telecommunications service providers (TSPs), as well as CSPs that offer telecommunications services to the public at large, must access our clearinghouse as one of our customers to properly route virtually all of their calls. We also provide clearinghouse services to emerging CSPs, including Internet service providers, cable television operators, and voice over Internet protocol, or VoIP, service providers. In addition, we manage the authoritative directories for the .us and .biz Internet domains, as well as for Common Short Codes, part of the short messaging service (SMS) relied upon by the U.S. wireless industry.

NeuStar provides all of the primary usTLD domain name registry services in the United States.

Based on our knowledge and as of the date of the writing of this response, NeuStar and the .com/.net registry operator are the only two domain name registry operators with both physical addresses and all primary registry services operations in the United States. Additionally, NeuStar is also one of only two domain name registry providers that can affirmatively state that all of its primary registry operations are currently provided "in-house".

As it relates to subcontractors, a Quoter that cannot demonstrate prior to selection that it already has all relationships and contracts in place at the time of its proposal cannot adequately transition the usTLD in a secure or reliable fashion and would place the usTLD and its community of millions of Internet users at risk.

Listed below are the subcontractors NeuStar will use in the performance of usTLD administration and registry operations as set forth in this Response.

- **American Arbitration Association (AAA)** – The AAA provides administrative services in the U.S., as well as abroad through its International Centre for Dispute Resolution® (ICDR). The AAA's and ICDR's administrative services include assisting in the appointment of mediators and arbitrators, setting hearings, and providing users with information on dispute resolution options, including settlement through mediation. The AAA provides domain name dispute resolution services related to the registration or use of a usTLD domain name in violation of the usDRP or the usTLD Nexus policy and rules.
- **National Arbitration Forum (NAF)** – The National Arbitration Forum, an industry leader in arbitration and mediation services for over 20 years, is an expert in the resolution of Internet-

based disputes. An innovator in the industry, the National Arbitration Forum serves as one of three primary providers of the ICANN domain name dispute resolution program, resolving issues involving disputed trademarks. The NAF provides domain name dispute resolution services related to the registration or use of a usTLD domain name in violation of the usDRP or the usTLD Nexus policy. In addition, NAF also offers content dispute resolution services for the kids.us domain name space.

- **Kidsnet, Inc.** – Based in Jacksonville, Florida, Kidsnet is a subsidiary of BluePrint Data that provides Internet web filtering, content management, and security services. On March 3, 2004, NeuStar announced the selection of Kidsnet, Inc as the Content Manager for the kids.us domain space. NeuStar and Kidsnet have teamed to ensure that the kids.us web sites that children experience online are safe, age appropriate, and meet all kids.us content guidelines, requirements, and restrictions. Established in 1997, Kidsnet, Inc. has developed the world's largest database of reviewed web pages containing over 193,000,000 reviewed web pages and continues to grow. The company utilizes the Internet Content Rating Association System (ICRA) standards and augments those with types of specific content parents are concerned about such as Alcohol Promotion and Weapons.
- **Iron Mountain** – Iron Mountain Incorporated (NYSE:IRM) helps organizations around the world reduce the costs and risks associated with information protection and storage. The Company offers comprehensive records management, data protection, and information destruction solutions along with the expertise and experience to address complex information challenges such as rising storage costs, litigation, regulatory compliance and disaster recovery. They will continue to provide third-party data escrow services for usTLD administration.
- **Firstlook** (originally Vendare) – Firstlook is a wholly owned subsidiary of Connexus, and is focused on acquiring, developing, and optimizing niche websites. Connexus, founded in 1999, is the union of Vendare Media and Netblue. It is headquartered in El Segundo and Mountain View, CA, with an additional presence in New York City. First look has offices in both location.

Each month, over 50 million users visit Firstlook's network of targeted websites, generating over 25 million searches. Due to Firstlook's business strength within the Internet search and navigation arena, and the breadth of their business, technical, and creative experience, NeuStar selected and partnered with Firstlook to fulfill the mission of marketing the usTLD postal code domain space.

Our joint mission is to create a reliable, sustainable, targeted, and robust portal experience for United States citizens, residents, companies, local governments, consumers, small business, and others who wish to find local results when they navigate to a "postalcode.us" domain name on the Internet.

- **Packet Clearinghouse (PCH)** – is non-profit research institute that supports operations and analysis in Internet traffic exchange. PCH has assisted in the establishment of Internet exchange points (IXPs) in the U.S. and the developing world and, as a consequence, maintains operating infrastructure in these locations. Originally formed in 1994 to provide efficient regional and local network interconnection alternatives for the west coast of the United States, PCH has since grown to become the leading proponent of neutral independent network interconnection and provider of route-servers at major exchange points worldwide.



Today, PCH provides equipment, training, data, and operational support to organizations and individual researchers seeking to improve the quality, robustness, and accessibility of the Internet.

C.2 Operation of the usTLD

NeuStar will continue to provide the necessary personnel, materials, equipment, services, and facilities to perform the usTLD Administrator function without any cost to the U.S. Government and with no change to the existing fee structure.

Maintaining the integrity and viability of the usTLD requires the Administrator to provide a useful, comprehensive service at a fair and reasonable price to all relevant stakeholders while managing all usTLD policies. It is crucial that the fees remain reasonable and that the usTLD administration is continually reviewed for any necessary improvements or changes to policy, administrative, or technical infrastructure. NeuStar understands the established process for submitting proposals for possible contract modification and we will continue to work closely with the Contracting Officer (CO) and the COTR.

C.2.1 NeuStar Provides Service at Fair and Reasonable Fees

NeuStar as the usTLD Administrator has successfully managed the usTLD domain under the DoC's supervision at no cost to the U.S. Government. We have a proven track record of providing usTLD registration and resolution services, including deploying all necessary personnel, equipment, services and facilities while covering operational expenses through the collection of fees from usTLD registrars. NeuStar's fees, detailed in Section M of this proposal, are reasonable and comparable to the fees charged for other TLDs. Considering that the usTLD is rich in policy and administration and therefore is recognized as a quality space, NeuStar believes that the fees associated with the level of service are extremely competitive.

In September 2005, following a financial analysis of the usTLD, NeuStar determined that an increase in the per-domain registry fee was necessary to ensure both reasonable profitability of the business and the capacity for future investment in registry infrastructure. As a result, we submitted a price adjustment proposal to NTIA requesting an increase in the annual wholesale registration fee of \$0.50. This price increase was submitted on September 5, 2005, approved on October 12, and went into effect on December 1 after the required 30-day advance notice to accredited registrars.

Before submitting our price adjustment proposal, we compared usTLD pricing to other ccTLDs in the marketplace and determined that the usTLD was priced very aggressively, despite the fact that the usTLD is governed by the highest standards of any ccTLD, including the most stringent service level requirements (SLR). Our proposal also was compared to the TLD market as a whole to ensure our proposed adjustment would not negatively impact the uptake and usage of the usTLD.

Highlights

As the usTLD Administrator, NeuStar will continue to:

- **Provide service that is delivered at no cost to the U.S. government and is priced fairly and reasonably to the usTLD Registrars**
- **Serve as a partner to the DoC, working in collaboration with the Contracting Officer and the COTR**
- **Minimize the effort required by the DoC while maximizing value to the DoC and the overall usTLD community**
- **Leverage our expertise and strong working relationship with the COTR to ensure that improvements are made to the space quickly and with quality as required.**

ccTLD	Price per Year	Managed Names	Approximate Annual Revenue
.DE	\$4.50/\$3.50*	11,000,000	\$44,000,000
.UK	\$4.50	6,000,000	\$87,080,000
.NL	\$12.00	2,500,000	\$30,000,000
.IT	\$6.00	1,400,000	\$8,400,000
.AR	\$0.00	1,000,000	Unknown – government subsidized
.US	\$6.00	1,300,000	\$7,800,000
.BR	\$12.00	900,000	\$10,800,000
.JP	\$20.00	900,000	\$18,000,000
.CH	\$40.00	950,000	\$38,000,000
.CN	\$13	6,000,000	\$780,000
.DK	\$10.00	800,000	\$8,000,000
.AU	\$8.00	800,000	\$6,400,000
Average Price:	\$10.22		

*Depending on registrar volumes

NeuStar also determined that the annually recurring \$1,000 fee to registrars might be a deterrent to increasing the number of .US-accredited registrars. Therefore, it was proposed to impose only a one-time registration fee. Eliminating the \$1,000 ongoing annual fee for all years after the initial year promotes competition and allows all registrars to compete on a more level playing field. Smaller registrars, who have made the initial start-up investment, will no longer be in a situation where they must increase their retail domain fees in order to recover the annual fee, which in turn would make them less competitive in the marketplace.

The September 2005 adjustments to the usTLD fee structure helped to ensure the reasonable profitability of the usTLD domain registry, the capacity for future capital investment in registry infrastructure, and competition in the .US domain space by allowing smaller registrars to compete more fairly with the larger more established industry leaders. Our experience in managing the usTLD and understanding the market enabled us to propose a reasonable adjustment that helped to better secure the usTLD.

C.2.2 Cooperative Relationship with the COTR and U.S. Department of Commerce

NeuStar has maintained a close relationship with the COTR and other DoC staff. Although NeuStar's designated point of contact with the COTR has changed three times during the life of the contract, it is worth noting that each of those designated contacts still remains employed with NeuStar, most of whom are directly involved with the management and operation of the usTLD, and can be consulted for context, institutional knowledge, and expertise at any time.

Beginning in April 2005, Keith Drazek, NeuStar's Senior Manager of Industry and Government Relations was designated as the primary point of contact with NTIA, NOAA, the ccNSO, and ICANN staff on behalf of the usTLD. Mr. Drazek brings years of experience in management of the usTLD, including its critical and unique policies. Mr. Drazek is responsible and accountable within NeuStar for ensuring our service meets and exceeds every obligation. In addition to directly and personally managing these key relationships, Mr. Drazek is responsible for coordinating and

ensuring NeuStar's compliance with our contractual obligations under the usTLD Administrator agreement.

Mr. Drazek serves as the primary point of contact for the usTLD, however, management of the usTLD is a team effort and relies on a number of functional areas within NeuStar to achieve its goals in serving as a steward for the United States and global Internet communities. This team includes the following:

Key usTLD Personnel

Person	Title	Functional Area
Keith Drazek	Sr. Manager, Industry and Government Relations	DoC and ICANN Relations
Richard Wilhelm	Vice President, Software Engineering	Systems Engineering and Support
Jeff Neuman	Sr. Director, Law, Advanced Services and Business Development	Law and Policy Development
Eric Brown	Director, Product Management	Product Development and Business Operations
Ed Lewis	Director, Member of Technical Staff	Technical Industry Liaison

All of these individuals, including Mr. Drazek, report to Richard Tindal, Vice President of Registry Services on matters relating to the usTLD. Each of the above individuals has at various times met with members of the DoC on issues related to their expertise and are available to consult further with the DoC at any time.

NeuStar as the usTLD Administrator has a demonstrated track record of coordination, consultation and cooperation with the CO and the COTR before implementing or changing policies, procedures, rules, mechanisms, or executing any agreements or subcontracts in fulfillment of the contract's requirements. During the last six years, 19 modifications were made to the original 2001 usTLD Administrator agreement and all were first submitted to the CO for approval. Further, we provide progress reports to the DoC as required and discussed in Proposal Section B, Sub-section D Reporting Requirements, and the NeuStar staff is focused on maintaining a strong, effective relationship with the CO and the COTR.

The relevant, material modifications to the existing usTLD agreement follow, with the remainder being administrative in nature (e.g. changes in COTR, etc.):

- **Modification 001** dated February 4, 2002 modified Section J in NeuStar's original proposal and amended certain terms related to our land-rush and launch processes. Specifically, Modification 001 required that NeuStar delete the batch-based Landrush process originally proposed, implement increased monitoring of the system loads to ensure equality among its customers, and proceed with a first-come-first-served ("FCFS") registration approach following Sunrise.
- **Modification 004** dated September 6, 2002 established a list of reserved second-level domain names that corresponded with Federal, State and Local names to preserve the U.S. Government presence in the new expanded .us space. Modification 0004 described the process that NeuStar used for registration of these names by the appropriate entities with the ultimate goal of providing a streamlined method for Federal, State and Local government entities to obtain access to the reserved names.

- **Modification 005** dated December 23, 2002 established an additional list of governmental reserved second-level domain names to be added to the list outlined in Modification 0004. It also established a process for distributing those names. Representatives from Federal, State and Local government agencies requested that additional names be registered under the Reserved Name Process.
- **Modification 007** dated February 14, 2003 set forth the implementation and operation of a second level domain in the .us domain pursuant to the "Dot Kids Implementation and Efficiency Act of 2002," Public Law No. 107-317. On December 4, 2002, President George W. Bush signed this law requiring NTIA to establish a second level domain within the .us domain to provide access to material that is suitable for and not harmful to minors.
- **Modification 008** dated May 1, 2003 further described the Contractor requirements to establish, operate and maintain a second level domain within the United States country code top level domain as required by Section 4 of Pub. Law No. 107-317.
- **Modification 009** dated August 19, 2003 extended the date for the usTLD Reserved Name Registration Process until September 30, 2003 and changed the U.S. Department of Commerce COTR name.
- **Modification 010** dated September 30, 2003 extended the Reserve Name program and established requirement for NeuStar to act as content manager for kids.us.
- **Modification 0013** dated June 1, 2004 authorized the implementation of an EPP-based Redemption Grace Period (RGP) for the usTLD.
- **Modification 015** dated October 12, 2005 implemented various service enhancements and measurable objectives and milestones designed to introduce in the .us domain new applications and technical innovations, thereby enhancing the domain's visibility, utility, and value to the American public. It included the development of services for certain public resource second level domains, the development of a .us-specific directory search engine and the development of a secure platform for e-government initiatives that would allow citizens to communicate and to interact with the U.S. Government in a direct and safe forum. It also authorized a price increase of \$0.50 per annual usTLD domain registration.
- **Modification 016** dated October 25, 2005 executed the first of two 1-year contract extension options and changed the U.S. Department of Commerce COTR name.
- **Modification 018** dated October 20, 2006 executed the second of two 1-year contract extension options.
- **Modification 0019** dated March 16, 2007 executed the kids.us price change and marketing program, specifically reducing the wholesale annual kids.us domain fee from \$65.00 to \$6.00 and the annual Content Management Subscription (CMS) fee from \$250.00 to \$125.00.

The establishment and maintenance of a clear and consistent line of communication between the Contractor, the DoC, and other key stakeholders in the industry is critical for the success and longevity of the usTLD. Such stakeholders include the Internet Corporation for Assigned Names and Numbers ("ICANN") staff and the Country Code Names Supporting Organization ("ccNSO"), which represents the policy-making body within ICANN.

NeuStar as the usTLD Administrator has a responsibility to maintain consistent communication between the COTR and other DoC staff as appropriate. Despite various changes in personnel at NTIA and NOAA, NeuStar has maintained relationships with personnel within these organizations and maintain the necessary lines of communications to ensure the smooth and efficient



administration of the usTLD. NeuStar's focus and mission has always been to serve as a reliable partner in the management of the usTLD. Such partnership not only includes the reporting of the state of the usTLD, but also advising all parties on the details of administrating the usTLD from a technical, operational, policy and business perspective, and working through issues and disputes to avoid potential risks and possible litigation.

Conclusion

NeuStar has maintained regular, reliable and consistent communication over the last six years through numerous changes in personnel at NTIA, NOAA and ICANN. NeuStar remains a constant and reliable partner in the management of the usTLD with significant institutional knowledge, experience and policy expertise. NeuStar provides the DoC with irreplaceable institutional knowledge and an intimate understanding of critical and unique usTLD policies.

C.3 Core Registry Functions (C.3.1, C.3.2)

As the existing usTLD Administrator, NeuStar currently provides all of the services listed in Exhibit C, Section C.3 of the RFQ. We provide all systems, software, hardware, facilities, infrastructure and operations for the key Administrator functions of SRS, DNS, WHOIS, Escrow, kids.us, and Locality-based structure support.

i. Primary Authoritative Server for the usTLD

Public Internet services are in operation and use 24 hours a day, every day of the year. Users expect to be able to access Web sites and send/receive Email on a moment's notice. Interactive voice and video traffic, as well as instant messaging, are increasing. The livelihoods of many people have come to rely on on-line businesses, commercial enterprises that offer their goods and services over the Public Internet. Behind all of this activity is the Domain Name System (DNS).

At the heart of the DNS for usTLD is the primary authoritative server. The primary authoritative server, as well as the secondary authoritative server, is an internal DNS server responsible for keeping the publicly available DNS constellation up to date. For security, these servers are not publicly available and are protected from the Internet by firewalls. They are geographically dispersed in our primary and secondary core registry data centers.

Under the current contract, we enhanced the operation of the usTLD authoritative server in three key ways. First, we consolidated the 50+ zones files used by the prior operator (to administer the locality space) into a single zone. Second, we provisioned the locality names into the Shared Registry System (SRS) and moved from data file-oriented management of the authoritative server to database-oriented management of the primary authoritative server. These changes made a considerable improvement over the previous operators approach because they allowed greater consistency and reliability of zone management. And third, we added dynamic update to usTLD, meaning that every SRS change that resulted in a DNS change would happen in 15 minutes.

As part of the dynamic update technology, we have architected the interface between the SRS and the Primary Authoritative Server to provide exceptional operational control and visibility into the changes that are going into the cloud. Our solution in this regard allows registration (SRS) operations to proceed without impact to DNS updates.

Highlights

- **NeuStar has a history of providing stable, reliable and robust DNS. We have a track record of 100% availability.**
- **NeuStar's platform offers a flexible, stable and robust WHOIS which not only provides standard enhanced usTLD WHOIS but also US Locality/DM WHOIS. We have a track record of 100% availability.**
- **WHOIS Accuracy Program to ensure the data provided in our WHOIS is correct.**
- **NeuStar will provide enhanced US Locality sub-delegee compliance and WHOIS.**
- **NeuStar vigilantly reviews kids.us for compliance with all content policies and takes corrective action to ensure that the space remains a safe location on the Internet for children.**

We presently operate usTLD under a dynamic update SLA of "95% of all updates are accomplished in 15 minutes or less." We have met this SLA for the last 33 months consecutively.

During the upcoming contract term, we propose to continue operating our authoritative server in a way that is both highly reliable and accurate.

ii. Constellation of Secondary Servers for usTLD.

The resolution capabilities of a domain name registry must be available 7x24x365. Having an "always up" DNS is critical to the usTLD. The DNS must also be of an appropriate scale to serve all the needs of this Internet activity, even when it is being attacked by DoS traffic. Stability in performance is also essential along with the ability to weather infrastructure attacks (sometime simultaneously). Consequently, it is imperative to have sufficient secondary servers to ensure appropriate performance, reliability and stability. This is made more challenging by needing to satisfy competing needs within budgetary constraints.

As the incumbent provider of critical DNS services for usTLD we have a track record of 100% availability on our current infrastructure over our 60+ months of usTLD DNS operations. (The track record of our performance for the other domains in our care is equally high.) In the following description of the usTLD DNS constellation will explain the original composition of the constellation, how we have enhanced it during the contract term, and proposed enhancements to ensure the continuation of a stable, high-performance, and accurate DNS.

Initial DNS configuration

Our initial DNS constellation consisted of three geographically dispersed sites. All sites were located within the United States (as per contract requirements). Each site was advertised with a unicast IP address and consisted of multiple load balanced servers configured for high availability. Our publicly accessible nameserver sites were and continue to be located at our main data center in [REDACTED], in our secondary data center in [REDACTED] and in a dedicated DNS site in [REDACTED]. This constellation typically ran at extremely low utilization, thus demonstrating its adequate capacity.

Upgrades to the DNS constellation

During the contract term, usTLD DNS load has grown gradually, at rates roughly proportional to the number of registered names. While the original nameserver configuration would be sufficient to support standard load, we have made three upgrades to the nameserver constellation:

- **Added a new unicast site in [REDACTED]** – Like the other three unicast sites, it contains multiple, load-balanced servers.
- **Added an anycast cloud** – With servers in [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], and [REDACTED], this cloud provides localized performance and exceptional reliability. The use of anycast directs traffic to the site that is closest to the source of the traffic, and absorbs malicious attacks near their sources, before they can affect the general population of users.
- **Added IPv6 support** – Deployed in [REDACTED], [REDACTED], and [REDACTED].



With these changes, there are now six NS resource records for usTLD in the Root. Exhibit B-1 below shows our current DNS constellation.

[EXHIBIT B-1 HAS BEEN REDACTED]

With these changes we now have ten nameserver sites distributed in the following cities:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

This configuration has supported the growth of usTLD DNS queries by over 20x from 2002 to 2007 and, discounting denial of service attacks, could accommodate as many as 2 trillion queries per month without further expansion

Proposed future enhancements

Our current DNS constellation discussed above has more than adequately served the query demands of the usTLD domain. However, NeuStar is vigilant in its protection of the usTLD and we

believe that broadening the usTLD DNS constellation would improve the overall level of security for the space. This is important for multiple reasons:

- Query growth through normal growth of the space
- Bot-net use of the DNS for command and control
- Protection against distributed DDoS attacks that are perpetrated throughout the Internet.

Given the high quality of coverage that we have in the U.S., we propose expanding the DNS infrastructure in two key ways:

- Locate servers at secure global facilities
- Locate servers within ISPs

Both separately and in combination, these additions will add new levels of robustness and resiliency to usTLD DNS resolution capability.

When considering servers in foreign countries, we examined the present usTLD policy, formulated prior to the present contract term, which considered the security of the zone data to be primary. At that time in history, DNS threats were largely oriented around the integrity of the data and the greatest concern was that the data be kept uncorrupted. This was also of considerable importance because typical DNS architectures were oriented around smaller numbers of high-capacity sites. Hence, the policy of keeping the sites on U.S. soil so as to provide greater operational security.

However, in the years since the original policy was formed, the ability to monitor and control DNS data integrity have greatly increased. Consequently, DNS attack techniques shifted to a weaker link in the resolution chain: capacity. Initially, capacity was bounded by the capacity of a server. However, load balancers (capable of distributing load over large numbers of servers) prevented server overload attacks, so attack volumes grew to actually be attacks on *bandwidth*. And so the defense for these attacks is to have more bandwidth, leading to the conclusion that more sites (each with more bandwidth) are the best approach. Additionally, anycast (with its ability to localize responses to queries) have proven effective in reducing the breadth of impact from attacks.

Given the number, location, and connectivity of sites that we presently have active in the US, we offer that adding additional sites (anycast or unicast) in the U.S. would not appreciably help resolution quality. However, the use of secondary authoritative DNS servers that are globally distributed in an anycast network will help protect against traffic-based attacks. The use of anycast directs attack traffic to the site that is closest to the source. So traffic attacks from overseas countries would be localized at sites closer to those countries rather than sites within the United States. For this reason, we propose to add anycast infrastructure in foreign countries by leveraging existing locations that are already providing service and protection to the other TLDs in our care.

We recommend broadening the deployment of the usTLD DNS constellation by making use of NeuStar locations presently operating around the globe. To achieve our goals for globalization and geographic diversity we are leveraging a solution that we currently use with success for bizTLD that includes many nameserver sites located in Internet Exchange Points (IXPs). The nameservers have more than 1200 direct peering sessions with more than 600 different carriers and Internet service providers who connect to these exchanges around the world.. In many of those exchanges, the nameservers peer in native IPv6. This allows us to encourage the growth of the Internet into new and emerging markets and to provide the best service possible to ISPs and Internet users.



Additionally, we recommend adding two existing NeuStar overseas locations to house a pair of unicast nodes.

Our DNS enhancements will expand the usTLD DNS constellation to globally distributed nameserver sites each with multiple load-balanced DNS authoritative servers (Exhibit B-2):

[EXHIBIT B-2 HAS BEEN REDACTED]



Continent	City, Country
Africa	[REDACTED]
Asia	[REDACTED]
Australia/Oceania	[REDACTED]
Europe	[REDACTED]
North America	[REDACTED]

This change will bring additional diversity of servers and networks to provide greater assurance that the users of this critical resource achieve optimal performance and the continuation of 100% availability. This will also enhance the stability and performance of the usTLD and benefit the registrants of the usTLD by making their investments in domain names more valuable via faster resolution times. It is important to note that all of the DNS nameserver sites have local copies of the zone data that reflect the core registry data source that is always maintained in our core registry database at our primary and backup data centers in the U.S.

[REDACTED]

[REDACTED]

Summary

DNS is a critical resource in the maintaining and operation of a stable usTLD. As such, NeuStar takes operation of the DNS extremely seriously. We feel to leave the operation of the DNS to a third party is inappropriate and therefore we run our own DNS constellation. NeuStar has a continuing

track record of 100% availability since we began providing DNS for the usTLD. We are able to provide a 100% quality of service because of the breadth of our DNS constellation. As discussed above, we currently are operating ten secondary nameserver sites geographically distributed in ten cities around the United States. We would like to broaden that reach to provide for DNS globally and thereby offer an even greater level of security for the usTLD.

iii. usTLD Zone File(s) Compilation, Generation, and Propagation

As described above, NeuStar added dynamic update to usTLD as part of the initial contract term, meaning that every SRS change that resulted in a DNS change would occur within 15 minutes.

As part of the dynamic update technology, we have architected the interface between the SRS and the primary authoritative server to provide exceptional operational control and visibility into the changes that are going into the cloud. Our solution in this regard allows SRS registration operations to proceed without impact to DNS updates.

The benefits of dynamic updates of the DNS zone are significant. Given the high amount of growth and change in the Internet, the ability for registrants to register or update a domain and see those changes propagated to DNS in near real-time is of great advantage. NeuStar has been providing near-real time updates to our DNS constellation since we began operations for the usTLD in 2001. There are essentially two components in the processing of dynamic updates, each described in greater detail on the subsequent pages:

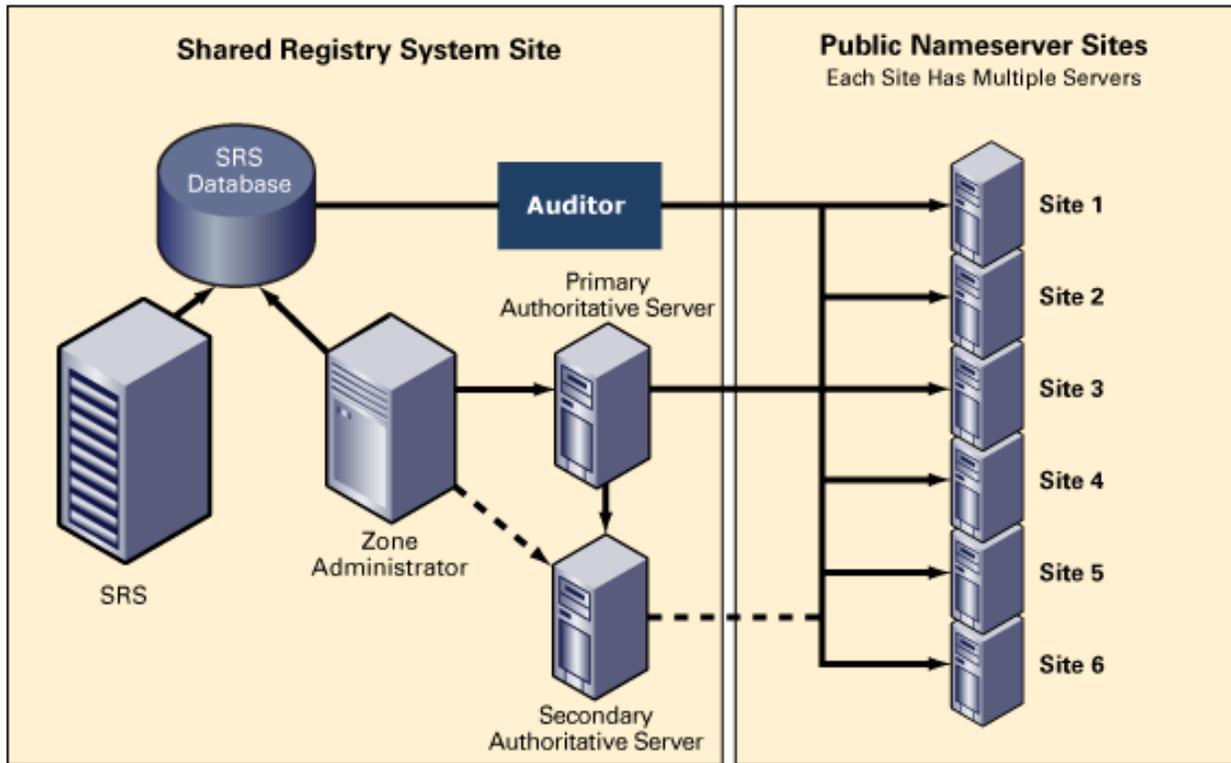
1. compilation and generation of the zone
2. propagation of the zone updates.

Compilation and Generation of the Zone

Unlike traditional approaches to zone generation, that result in the authoritative servers being loaded with a zone file, our approach generates the zone dynamically. The compilation and generation of the DNS zone is a decoupled process from the SRS that uses a combination of the SRS, Zone Administrator (ZA) processes and primary and secondary authoritative servers. As registrars process adds, updates and deletes through EPP to the SRS our ZA is periodically checks for updates to the database. The ZA collects these updates and then generates a dynamic update transaction to be sent to the primary authoritative server. When the primary authoritative server receives an update it loads it into its local zone, validates it, increments the zones serial number and then notifies the secondary nameservers, as well as the secondary authoritative server.

Exhibit B-3 depicts the zone generation and propagation process.

DNS Zone File Generation and Propagation



005.us2

Exhibit B-3. NeuStar's zone file generation process utilizes a specialized application called a Zone Administrator to query the usTLD database for updates and generate an updated zone.

There are many benefits to this process. The primary authoritative server ensures that all changes are accurately processed in exactly the same order in which registrars submitted transactions to the SRS (ensuring accuracy of the zone). The secondary authoritative server receives the updates in the process to be prepared in case of an emergency.

During the upcoming contract term, we will use this process for the compilation and generation of zone information. Additionally, to ensure the accuracy of the zone we propose to enhance our auditing to include a DNS auditor tool. This will, on a daily basis, query the authoritative servers for domain names and hosts. The query results will be compared to the data in the registry database. This tool will serve to validate the integrity of the dynamic DNS update process. The set of domain names will be primarily composed of those changed during the previous 24 hours, with additional domain names determined at random from the inventory of names under management.

Propagation of Zone Updates

NeuStar uses the Incremental Zone Transfer (IXFR) mechanism, as described in RFC 1995, to distribute incremental updates throughout the DNS constellation. Our DNS constellation is made up of a ZA, primary and secondary authoritative servers, and public nameservers. The ZA inspects the SRS to discover needed DNS changes. The primary (and secondary) authoritative server updates the public nameservers. The public nameservers remain updated and receive and respond to queries from the Internet.

As discussed above, the ZA inspects the SRS for changes that need to be propagated to DNS. These updates are sent to the primary authoritative server. The primary authoritative server builds an incremental update, assigns it a serial number and then notifies the secondary authoritative server and all the public nameservers that a zone update is available. The public nameservers and the secondary authoritative server then, when ready, request the incremental update from the primary authoritative server. If at any time the primary authoritative server is not available the ZA sends the SRS updates to the secondary authoritative server instead of the primary. The secondary authoritative server performs all of the actions of the primary, including the notifying and updating the public nameservers.

The primary authoritative server is a nameserver that operates in the SRS site in [REDACTED]. It is a *hidden* DNS server (i.e., unlisted in the name server list seen on the Internet) that is protected by firewalls from the Internet and protected from queries from the Internet. The primary authoritative server receives incremental updates from the ZA, loads the increment, and sends notifications to the secondary authoritative server and all public nameservers in the constellation. The secondary authoritative server receives its updates over redundant internal dedicated links to NeuStar's secondary disaster recovery data center in [REDACTED]. It is also protected behind firewalls from the Internet. Should the primary authoritative server become unavailable, the secondary will begin to receive updates directly from the ZA.

The public nameservers receive their updates from the primary or secondary authoritative server via private, back-end IP Addresses over secure IPsec VPN links, each of which is provisioned over multiple redundant transit paths. The public nameservers are configured to first try the primary authoritative server for an incremental update. If the primary authoritative server is unavailable the public nameservers will then try the secondary authoritative server. Exhibit B-3, DNS Zone File generation and propagation, shows this process of zone distribution.

iv. WHOIS Database for All usTLD Registrations

NeuStar presently provides a publicly accessible, accurate and up-to-date WHOIS database for all usTLD registrations. Our WHOIS infrastructure is production-proven to be distributed, flexible, scalable, and stable and is in full compliance with the requirement.

We currently provide WHOIS service from our two main data centers in [REDACTED] and [REDACTED]. At both sites we operate multiple load balanced servers. Each of these servers operate independently from each other and from the rest of the SRS system to ensure performance of WHOIS queries while isolating the core SRS from load. This also ensures the availability of the WHOIS by protecting it from any single point of failure.

With this proven architecture we have never missed our SLA for processing of queries within our contractual limit of 95% of all queries within 1500ms. Our WHOIS service has been available 100% of the time for the last 58 months. We push new updates to this cluster in near real-time as updates are performed by registrars. We have met our 95% within 15 minute SLA for the last 33 months consecutively.

The following discussion will explain how we provide for both web and command line queries ensure that our WHOIS data is accurate and current.

Public Accessibility

We provide access to WHOIS service via the traditional “command line” interface and a more modern web-based interface. The command line interface is also known as “port 43” access and is named after the TCP port number reserved for the protocol. As required by the existing contract, we provide both types, with command line port 43 access at whois.nic.us and web queries at www.whois.us.

Our WHOIS is fully featured and is optimized for speed using an in-memory database. This architecture was developed to exceed our current SLA of 95% of all query responses in less than 1.5 seconds. We support domain name, registrar, IP address, and registrant queries. For each of these query types we support string (“wildcard”) searches. In support of possible future broadening of the .US space we also have built in support for internationalized domain names (IDNs). (See Proposal Section D for information on IDNs.) This includes the display of the domain name language, the Unicode HEX representation, as well as its HTML encoding.

Our web-based WHOIS interface includes all the capabilities of command line access plus others that are only possible using the richness of an HTML based display. Additional internationalization support includes the ability to search on the Unicode domain name, display of the actual Unicode representation, and display of the ACE (ASCII-compatible encoding) version.

In addition to these core web-based capabilities, we also provide an extensive FAQ, a list of upcoming domain name deletions and multi-string registrant search.

Accuracy and Integrity

NeuStar fully understands that in order for any the WHOIS database to be useful it must be accurate and and recognized as accurate. To ensure the highest levels of WHOIS accuracy and integrity of the database at various levels, we are proposing a new WHOIS accuracy program (“WAP”). It is comprised of:

- WHOIS/Nexus Data Reminder Policy;
- WHOIS/Nexus Data Problem Report System (“WDPRS”)
- WHOIS data accuracy audit;
- Semi-annual large random sampling of WHOIS records;
- Inspection of registrars’ WHOIS functionality, and
- WAP Annual Report.

This program is described fully in Proposal Section B, Sub-section C.4.1.v.6.

WHOIS Update Frequency

We provide for near real-time updates to our WHOIS cluster through a robust mechanism of guaranteed messaging between the SRS and the WHOIS servers. This is accomplished through the use of several components (described below) that are designed to be flexible enough to grow with the space, offload processing power from the core SRS, and ensure updates are processed as fast as possible.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Exhibit B-4 shows graphically our dynamic update architecture.

This architecture has proven to be highly scalable and highly reliable. We propose to continue its use during the upcoming contract term.



[EXHIBIT B-4 HAS BEEN REDACTED]

WHOIS Data

Our WHOIS database contains and reports full WHOIS information including DNS data and contact data. For example, here is the WHOIS output for neustar.us:

Domain Name	NEUSTAR.US
Domain ID	D670499-US
Sponsoring Registrar	REGISTRY REGISTRAR
Domain Status	clientDeleteProhibited
Domain Status	clientTransferProhibited
Domain Status	serverDeleteProhibited
Domain Status	serverTransferProhibited
Domain Status	serverUpdateProhibited
Registrant ID	NEUSTAR
Registrant Name	NEUSTAR
Registrant Address1	Loudoun Tech Center
Registrant Address2	45980 Center Oak Plaza
Registrant City	Sterling
Registrant State/Province	VA
Registrant Postal Code	20166
Registrant Country	United States
Registrant Country Code	US
Registrant Phone Number	+1.5714345757
Registrant Facsimile Number	+1.5714345758
Registrant Email	support@neustar.us
Registrant Application Purpose	P1
Registrant Nexus Category	C21
Administrative Contact ID	NEUSTAR
Administrative Contact Name	NEUSTAR
Administrative Contact Address1	Loudoun Tech Center
Administrative Contact Address2	45980 Center Oak Plaza
Administrative Contact City	Sterling
Administrative Contact State/Province	VA
Administrative Contact Postal Code	20166
Administrative Contact Country	United States
Administrative Contact Country Code	US
Administrative Contact Phone Number	+1.5714345757
Administrative Contact Facsimile Number	+1.5714345758
Administrative Contact Email	support@neustar.us
Administrative Application Purpose	P1



Administrative Nexus Category	C21
Billing Contact ID	NEUSTAR
Billing Contact Name	NEUSTAR
Billing Contact Address1	Loudoun Tech Center
Billing Contact Address2	45980 Center Oak Plaza
Billing Contact City	Sterling
Billing Contact State/Province	VA
Billing Contact Postal Code	20166
Billing Contact Country	United States
Billing Contact Country Code	US
Billing Contact Phone Number	+1.5714345757
Billing Contact Facsimile Number	+1.5714345758
Billing Contact Email	support@neustar.us
Billing Application Purpose	P1
Billing Nexus Category	C21
Technical Contact ID	NEUSTAR
Technical Contact Name	NEUSTAR
Technical Contact Address1	Loudoun Tech Center
Technical Contact Address2	45980 Center Oak Plaza
Technical Contact City	Sterling
Technical Contact State/Province	VA
Technical Contact Postal Code	20166
Technical Contact Country	United States
Technical Contact Country Code	US
Technical Contact Phone Number	+1.5714345757
Technical Contact Facsimile Number	+1.5714345758
Technical Contact Email	support@neustar.us
Technical Application Purpose	P1
Technical Nexus Category	C21
Nameserver	GDNS1.ULTRADNS.NET
Nameserver	GDNS2.ULTRADNS.NET
Created by Registrar	REGISTRY REGISTRAR
Last Updated by Registrar	NMUTONYI
Domain Registration Date	Thu Apr 18 19:21:55 GMT 2002
Domain Expiration Date	Thu Apr 17 23:59:59 GMT 2008
Domain Last Updated Date	Thu Apr 19 17:27:29 GMT 2007

During the upcoming contract term, we propose to continue providing this set of WHOIS response data. Additionally, should other registry changes dictate, we will enhance the WHOIS contents/output accordingly.

Summary

Our WHOIS architecture and implementation has provided a fully compliant, high performance, extremely reliable WHOIS for usTLD during the current contract term. During the upcoming contract term, we propose to continue its operation as well as include additional enhancements.

In addition to the management of a highly successful WHOIS infrastructure we also take a very active role in working groups involved in WHOIS-related issues. Jeff Neuman, NeuStar's Senior Director of Law, Advanced Services, and Business Development, was co-chair of the WHOIS task force and a contributor and active participant in the development of the current WHOIS process.

Mr. Neuman is an integral part of our internal product and engineering processes. He provides considerable direction and guidance to ensure the overall quality of our WHOIS solution.

v. WHOIS Database of usTLD Delegated Managers and Associated Delegated Locality Registrations

NeuStar has continually improved the locality space since we became the administrator for the usTLD. Our first improvement was the merging of the 50+ zone files and integration of all associated contact data into the core registry, including it in the database along with the second level enhanced space. This also brought dynamic updates and WHOIS to the locality space for the first time. Since then we have continually been reaching out to thousands of Delegated Managers ("DMs") via phone, email and postal mail and have verified over 1,500 to further improve the quality of locality WHOIS data.

These updates to the WHOIS information were applied manually. More recently we have provided DMs a web tool that they can use to maintain their contact and delegation data. This tool feeds directly into the registry and the WHOIS system.

Regardless of the method of entry, the output for the WHOIS service of usTLD DMs and locality registrations is essentially the same as the expanded space WHOIS. (The only material difference being that the "Registrar" contact data is replaced by the "Delegated Manager" contact data.

vi. Data Escrow for usTLD data

Proper data escrow arrangements, including adequate insurance, must be outlined and adhered to prevent the loss of registry data. This is for the protection of the DoC and the usTLD community, which would be harmed by data loss. Data escrow must be performed in a manner which:

- Protects against data loss;
- Follows industry best practices
- Ensures easy, accurate and timely retrieval and restore capability in the event of a hardware failure
- Minimizes the impact of software or business failure.

In this section, we describe our approach to data escrow and our use of a well-respected off-site escrow provider. Our present solution for data escrow fully complies with existing contractual procedures. As usTLD has been well-served by these arrangements, we propose to continue them in substantially the same form during the upcoming contract term. The data included in escrow includes usTLD Zone File and Domain Name Registration Information, including all registration and delegated manager data

Arrangements for Data Escrow

NeuStar has contracted with Iron Mountain, Inc. the world's largest records and information management company to provide neutral escrow services. NeuStar prepares a full data set for one day of the week, and incremental data sets for all seven days of each week. Full and incremental data sets are up-to-date and coherent as of 1200 UTC on the day to which they relate.

NeuStar prepares and transfers the escrow deposit file by taking the following steps, in sequence:

1. The file making up the escrow deposit is created according to the format specification shown below. The file is named according to the following format: "usSEQN" where "SEQN" is a four digit decimal number that is incremented as each report is prepared. (Example: US0001 US0002 US0003 etc.)
2. The file is processed by a program that: verifies it complies with the format specification and contains reports of the same date/time (for a full deposit), counts the number of objects of the various types in the deposit, and appends to the file a report of the program's results. If the file is large, it is split using the UNIX "split" command (or equivalent) to produce files no less than 1 GB each (except the final file). If the file deposit is split, an MD5 checksum file (produced with MD5SUM or equivalent) is included with the resulting files to isolate errors.
3. The file is then encrypted using GNU PGP and digitally signed.
4. The file is transmitted to Iron Mountain using SSH via a secure FTP server at NeuStar to a secure FTP server at Iron Mountain.
5. Iron Mountain sends a notification that the file was received, digitally signed, and moved to a non-publicly accessible directory. If these are multiple files, they will be concatenated in sequence.
6. Iron Mountain then decrypts the file, runs a program on the deposited file that; splits it in to its constituent reports, checks its format, counts the number of objects of each type, and verifies that the data set is internally consistent. This program will also compare its results



with the results of a registry-generated format report and will generate a file deposit format and completeness report.

7. The decrypted deposit file will be encrypted using GNU PGP, and the decrypted file is destroyed to reduce the likelihood of data loss to intruders in case of partial security failure.
8. These data sets are available for download no later than 2000 UTC on the day to which they relate.

Escrow Data Format

Each full and incremental data set consists of an XML document meeting the content and format requirements outlined in the table below.

.US Escrow Data Format

Domain object	<ul style="list-style-type: none"> • Domain ID • Domain Name • Sponsoring Registrar • Domain Status • Registrant Identifier • Contact Identifiers for Administrative, Technical, and Billing Contacts • Nameservers associated with This Domain • Child Nameservers Registered in This Domain • Domain Created by Registrar • Domain Last Updated by Registrar • Domain Registration Date • Domain Expiration Date • Domain Last updated date • Domain Last Transfer Date • Domain Authorization Information • Additional Fields (Registrar Specified)
Nameserver Object	<ul style="list-style-type: none"> • Nameserver ID • Nameserver Name • Nameserver Status • Nameserver Association Status • Nameserver IP Addresses (if applicable) • Sponsoring Registrar • Created by Registrar • Nameserver Creation Date • Nameserver Last Updated Date • Nameserver Last Transfer Date • Additional Fields (Registrar Specified) • Nameserver Authorization Information
Contact Object	<ul style="list-style-type: none"> • Contact ID • Contact Name • Contact Status • Contact Association Status • Contact Organization • Contact Address, City, State/Province, Country

	<ul style="list-style-type: none"> • Contact Postal Code • Contact Phone, Fax, E-mail • Sponsoring Registrar • Created by Registrar • Contact Creation Date • Contact Last Updated Date • Contact Last Transfer Date • Contact Authorization Information • Additional Fields (Registrar Specified)
Registrar Object	<ul style="list-style-type: none"> • Registrar ID (registry specific) • Registrar Object Identifier (Unique object identifier) • Registrar ID (conforming to the IANA registrar-ids registry) • Contact of Registrar • Registrar Name • Registrar Address, City, State/Province, Country • Registrar Administrative Contacts • Registrar Technical Contacts • Registrar Billing Contacts • Registrar URL • Registrar Creation Date • Registrar Last Updated Date • Registrar Authorization Information • Registrar Account Information

Once the XML document is generated, it is placed in a file named according to the following convention:

- For full data sets: "wfYYMMDD" where "YYMMDD" is replaced with the date (YY=last two digits of year; MM=number of month; DD=day; in all cases, a single-digit number is left-padded with a zero).
- For incremental data sets: "wiYYMMDD" where "YYMMDD" follows the same format as for full data set.

Notations of Object Deletions

In addition, incremental data sets contain notations of deletion of objects since the last incremental data sets.

Del-domain:	domain:sNameType
Del-nameserver:	host:sNameType
Del-contact:	contact:sIDType
Del-Registrar:	WHOISdb:registrarIDType

Data Set Contents

Full data sets include one domain object for each domain name within the registry TLD; and nameserver, contact, and registrar object for each nameserver, contact, and registrar referred to in any domain object. Incremental data sets consist of:

- Those of objects constituting a full data set that have been added or updated since the last incremental data set; and
- Notations of deletion of any objects since the last incremental data set.

Both full and incremental data sets are in XML version 1.0, UTF-8 encoded documents.

Backup Plans for Data Recovery

It is important to point out that as a “thick” registry, NeuStar's escrow data will ensure the most safe and secure solution in the unlikely event the registry should cease operations. In this instance, the DoC will have all the data necessary, including registrant information, to guarantee that the registrant-to-domain name relationship is not lost. In a thin registry, if a registrar were to cease operations prior to transferring the domain names to a new registrar, it would be impossible for the registry or DoC to associate these domain names with their rightful registrants. However, under a “thick” registry model where registrant data is held in a secure central database at the registry level, there are three copies of the registry database available for data recovery:

1. Online backup – there will be an online backup at the [REDACTED] site which can be loaded into the production database in minutes if there is a need for data recovery.
2. Secondary SRS site – there is a database that is constantly being replicated at the secondary SRS site in [REDACTED], USA. In the event that the production database is impacted, all SRS transactions can be performed on the [REDACTED] database with no reduction in service. This allows adequate time to restore the database at the [REDACTED] site.
3. Escrow – As mentioned in this section, the registry has access to a copy of the database at Iron Mountain, Inc's escrow site. In the unlikely event that the first two options for data recovery are not available, we can use the escrow database to restore the production database.

It is also important to point out that NeuStar has over five years experience operating a thick registry, engaging in thick data escrow activities, and managing escrow content change in a “thick data” environment.

vii. Compliance with IETF and ICANN Standards and Policies

NeuStar has a rich legacy of active participation and leadership in both organizations and a deep commitment to ensuring our compliance with the applicable standards and policies promulgated therein. Throughout the term of the current contract, NeuStar has worked to grow the usTLD space while adhering to stringent quality and content requirements.

In addition to the usTLD policies required by the U.S. Department of Commerce, the Administrator must be prepared to comply with applicable policies and standards of the two primary standards and policy bodies that govern the operation, administration, and policies of a top-level domain name registry. These bodies are the Internet Engineering Task Force (“IETF”) and the Internet Corporation for Assigned Names and Numbers (“ICANN”).

- The IETF is an international community of network designers, operators, vendors, and researchers who define the evolution of the Internet architecture and ensure the smooth operation of the Internet. The IETF Mission Statement is documented in [RFC 3935](http://www.ietf.org/rfc/rfc3935.txt) (See <http://www.ietf.org/rfc/rfc3935.txt>).

- ICANN is an internationally organized, non-profit corporation that has responsibility for Internet Protocol (IP) address space allocation, protocol identifier assignment, generic (gTLD) and country code (ccTLD) Top-Level Domain name system management, and root server system management functions.

The policies and standards produced by the IETF and ICANN form the basis for effective functioning of the global Internet and are followed by all reasonable Internet operators. NeuStar complies with all such applicable policies and standards in its operation of the usTLD and we will continue to do so throughout the term of the contract.

In NeuStar's opinion, mere compliance with these policies alone is not sufficient. The usTLD Administrator must work closely with policy, standards, and technology bodies to ensure the domain remains compliant with all applicable policies and standards. In that regard, NeuStar has worked and will continue to work with the Department of Commerce, ICANN, IETF, and other standards organizations in the Internet community to develop and introduce improvements not only for the usTLD specifically, but for DNS activities and the Internet in general. NeuStar team members participate in the development of privacy, security, encryption, multilingual domains, and other important policies and technologies for DNS operations.

NeuStar staff currently participates in a number of IETF and ICANN working groups that directly impact the operations and administration of the usTLD, including, but not limited to:

- IETF Working Groups on IDNs (Internationalized Domain Names), DNSSEC, DNS Operations, etc.;
- Security and Stability Advisory Committee of ICANN;
- ccNSO Council and ccNSO IANA Working Group (ICANN);
- ICANN gTLD Policy Working Groups on domain tasting, new gTLDs, Whois, and IDNs (ICANN); and
- NeuStar also supports all administrative and logistical functions of IETF.

Through our participation in these groups, NeuStar is well positioned to contribute to the overall evolution of the usTLD space as new standards and requirements are introduced. The following subsections highlight key IETF standards and ICANN policies that NeuStar, as the usTLD Administrator, is in compliance with.

Compliance with IETF Standards

A number of IETF standards have been developed that relate operation and administration of an Internet top-level domain name registry such as .us. These include standards dealing with the communication between registries and registrars, operation of DNS, WHOIS, IDNs, EPP, IPv6, and DNSSEC.

usTLD Administration (RFC 1480)

NeuStar believes that RFC 1480 remains the foundation of the current usTLD locality space. As such, it is critical that the Administrator adhere to the provisions in the RFC in its administration of this important segment of the usTLD space, and require that all delegated managers and locality registrants comply with the applicable provisions of RFC 1480. See Proposal Section C.5 of the Response. NeuStar is firmly committed to abiding by, and requiring other to abide by, all provisions

in RFC 1480. If appropriate, NeuStar will work closely with the Department of Commerce, where necessary, to propose updates to the RFC.

Registry-Registrar Model and Protocol

The registry-registrar model NeuStar utilizes, EPP v. 1.0, does not deviate in any way from current industry practices. The registry-registrar model, while not defined completely by any one document, is described and embodied in a number of IETF RFCs, ICANN contracts and practices, and registry-registrar agreements. NeuStar's Shared Registration System supports EPP 1.0 as defined in IETF 4930, 4931, 4932, 4933, 4934, and 3735. NeuStar played an active role in the development of EPP and, was the first Internet domain name registry to launch a production deployment of the official EPP 1.0 standard in October 2004.

Domain Name Service ("DNS")

NeuStar's DNS infrastructure is in full compliance with all DNS RFCs. Each nameserver correctly implements the IETF standards for the DNS (RFC1035, RFC1995, RFC1996, RFC2136, RFC2181). We have also implemented all applicable best-practice recommendations contained in RFC 2870 and RFC2182.

WHOIS

In September of 2004, the IETF published RFC3912, which replaced RFC 954 and defines the final form of the WHOIS protocol. NeuStar is, and will continue to be, in compliance with this RFC.

DNSSEC

DNSSEC is a protocol extension to the DNS recently approved by the IETF. It provides protection against some threats to the DNS. Ed Lewis, a NeuStar employee, is one of the originators of the requirements for DNSSEC. He has worked on the protocol for over 10 years and is one of the most well respected members of the DNSSEC community. In Proposal Section D, NeuStar discusses in greater detail its proposed plans regarding DNSSEC.

IPv6

NeuStar is a pioneer in the deployment of robust global IPv6 DNS service, providing robust DNS infrastructure and supporting IPv6 in the SRS.

Compliance with ICANN policies

Although ICANN does not have a formal role with respect to the technical management of a ccTLD operator, there are a number of principles that can be extrapolated from ICANN's oversight over the gTLD domain name registries (including .biz, .com, .net and .org) as well as from the Government Advisory Committee of ICANN as contained in the document entitled "Principles and Guidelines for the Delegation and Administration of Country-Code Top Level Domains." This document is available at http://gac.icann.org/web/home/ccTLD_Principles.rtf.

For example, on June 1, 2007, ICANN published a document entitled "Building Towards a Comprehensive Registry Failure Plan (<http://www.icann.org/announcements/announcement-4-01jun07.htm>), the first deliverable for its registry failure project to provide guidance to ICANN and the Internet community in the event of registry failure. As part of the report, ICANN identified a list of critical registry functions, along with establishment of best practices by registries to assist ICANN

in the event that a registry failure occurs. In its operation of the usTLD, NeuStar complies with each and every one of the requirements.

Among the key Registry Services requirements defined in this document include:

- Compliance with RFCs 1034, 1035, 1101, 2181, and 2182 for nameserver operations;
- The receipt of data from registrars concerning registrations of domain names and name servers;
- Provision to registrars of status information relating to the zone servers for the TLD;
- Dissemination of TLD zone files;
- Operation of the registry zone servers; and
- Dissemination of contact and other information concerning domain name server registrations in the TLD as required by this Agreement.

Again, NeuStar's management and operation of the usTLD is consistent with the ICANN's requirements and specifications for DNS technical management.

The ICANN gTLD registry agreements also contain provisions on functional and performance specifications that includes requirements for the operation of nameservers, registry systems, Whois, data escrow, reporting requirements, DNS service availability, performance levels, location of data centers and, in some registry agreements, fail over practice requirements and use of Extensible Provisioning Protocol (EPP).

NeuStar meets or exceeds these requirements and continues to remain current on the specifications and requirements released by ICANN.

DNS Data, Zone File, and Nameserver Maintenance

The maintenance of nameservers and DNS for domains is the most critical function of a registry. The DNS enables domain names that are registered to resolve on the Internet. NeuStar's team includes industry-experts in DNS and we leverage this experience and knowledge to meet all DNS Data, zone file and nameserver maintenance specifications.

ICANN's Security and Stability Advisory Committee released a DNS Infrastructure recommendation on 1 November 2003 (see <http://www.icann.org/committees/security/dns-recommendation-01nov03.htm>) to address stability of DNS infrastructure. The paper provides two recommendations on the delegation of zones in the DNS:

- Zone Administrators should adopt a policy that ensures that referral information for their sub-zones is updated upon request and in a timely fashion.
- Zone Administrators should adopt a policy that requires multiple independent servers for their zone when it delegates sub-zones to more than one responsible party.

At a minimum, ICANN recommends that registries should implement geographic diversity of DNS services. Geographic diversity serves two purposes:

- Increases the security and stability of a TLD by reducing the number of potential failure points between a user and the nameserver .
- Increases the performance of a TLD by locating name servers closer to local communities, helping users resolve domain names more quickly.

As part of its geo-diversity strategy, NeuStar uses Packet Clearing House (see www.pch.net) to provide secondary DNS service to allow it to distribute its DNS services across the United States and Internet exchange points.

ICANN also recommends that registries implement anycast services (see, BCP 126, [ftp://ftp.rfc-editor.org/in-notes/bcp/bcp126.txt](http://ftp.rfc-editor.org/in-notes/bcp/bcp126.txt)) to increase the availability and improve response times for queries of records in their TLD zones. Anycast is a service that increases the redundancy of DNS servers through multiple, discrete, autonomous locations. As described above, NeuStar has implemented this as well for the usTLD. Anycast provides additional mechanisms to isolate attacks to their originating region. For example, if a bad actor launched a DDoS attack from machines in Asia, it would hit the DNS servers closest to the machines used in the attack.

As a business partner with PCH, one of two originators of the ICANN anycast initiative, the acquirer of UltraDNS, an aggressive commercial deployer of anycast technology, and with extensive IPv6 TLD deployments, we are leading the market and providing examples for ICANN as recommendations are being formed

Shared Registration System

Similar to the registry-registrar model used in the gTLD space governed by ICANN, NeuStar operates the usTLD on an identical Shared Registration System (SRS) platform. The SRS is the software (clients and servers) provided by a registry to facilitate the registration of domain names, updates to nameservers, contact information and overall management of a registry. The SRS is used by registrars to connect to the registry, and must be implemented in such a manner as create an environment conducive to the development of robust competition among domain name registrars.

Data Security and Data Escrow

In its operation and management of the usTLD, NeuStar also complies with ICANN's requirement for gTLD registries to escrow registry data. Registry data escrow helps to ensure continuity of service for registrants in the event of a registry failure. As ICANN states, a registry should implement measures to mitigate "the unauthorized disclosure, alteration, insertion or destruction of Registry Data", that is not compliant with applicable relevant standards published by the IETF, or that "creates a condition that adversely affects the throughput, response time, consistency or coherence of responses to Internet servers or end systems, operating in accordance with applicable relevant standards." See <http://www.icann.org/tlds/agreements/biz/registry-agmt-08dec06.htm>, Section 3.1(d)(iv)(G).

In response to the registry data escrow report and the draft Registrar Data Escrow specifications published on 17 May 2007, SSAC, data escrow providers and gTLD registries suggested improvements to the escrow requirements and recommended best practices such as:

- Escrow of all information that would be required to recreate the registration and restore service to registrants;
- Escrow of all data fields specified in EPP 1.0 (Extensible Provisioning Protocol, see RFC 4930);
- Status of the name registration;
- Any registration "features" (locks, domain proxy, etc.);
- Transactional data ;
- Use of a standard, non-proprietary electronic file format, such as XML;

- Stored data encryption and data transmission encrypted;
- Data signing;
- Digitally signed deposits;
- Verification of incoming data deposits;
- Escrow agent certification and annual certification test;
- A requirement in the data escrow agreement that escrow agent notify the registry (and registry services provider, if applicable) if an escrow deposit is not received; and
- Data placed in escrow should be tested to ensure that the data can be used to restore registry operations.

As these recommendations are finalized by the ICANN community, NeuStar, with the approval of the Department of Commerce, proposes to ensure that the recommendations of ICANN in this area are applied to the usTLD.

viii. Promoting Awareness and Increasing Registrations in the usTLD

NeuStar will further promote awareness of and increase registrations in the usTLD, including kids.us, and will continue to maintain a website with up-to-date policy and registration information. In addition to our ongoing outreach activities, NeuStar will introduce a suite of enhanced web communication services which will streamline the dissemination of information and improve outreach and solicitation of public input. This will be done in a manner that ensures the continued quality of the space in accordance with all required policies and restrictions.

NeuStar's usTLD Brand Vision

NeuStar's vision for the future of the usTLD is based on the fundamental principles of reliability, security, stability, integrity, innovation, and responsible growth. With these values, NeuStar will continue to administer and promote the usTLD so it becomes the Internet address of choice for every American Internet user who demands an environment of lawful, legitimate, and reliable content. We look forward to building upon the existing foundation of trust in the usTLD to responsibly attract new customers, and to bring increased utility to our existing beneficiaries – the American Internet user.

Marketing a Public Resource

As discussed throughout this proposal, NeuStar recognizes that the usTLD is a unique space with rich policy elements and complex requirements that set it apart from any other TLD. Unlike typical commercial gTLDs, the usTLD is a national asset of the United States and as such must be managed in a manner that preserves and protects the integrity and the quality of the domain space. Therefore, many traditional domain space marketing tactics are ineffective in regards to the usTLD as they do not take into account the significant complexities and intricacies of the usTLD policies and regulations. The Administrator of the usTLD is responsible for growing usage of the space on behalf of the U.S. Government. Therefore, any marketing strategies utilized must be appropriate and in accordance with the standards and objectives of the U.S. Government and the Department of Commerce.

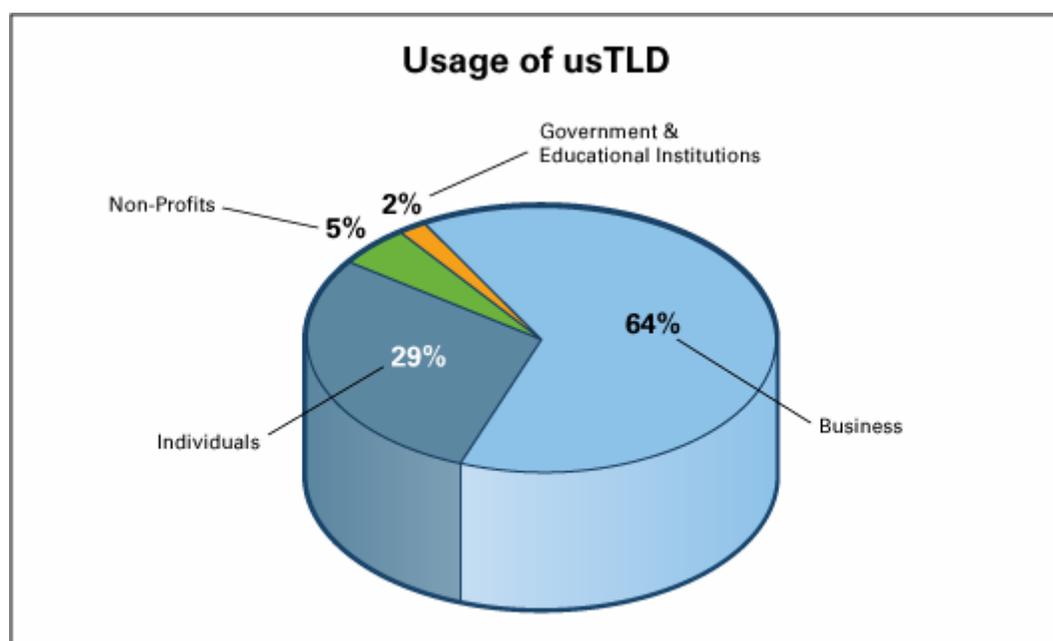
Strictly commercial TLD registry operators are not always concerned with the appropriateness of their marketing tactics or the resulting names that come under their management. Many TLDs have limited or no policy elements and, as such, growth of domain names is the sole arbiter of success. To these, integrity of the domain space becomes, at best, a secondary consideration. Because of these limited policy requirements, unscrupulous registrars and registrants are able to take advantage of an uncontrolled space. Phishing, pharming, the distribution of malware and other illegitimate uses are rife in such spaces. The usTLD cannot be allowed to devolve into such a state.

NeuStar is the only provider with the experience and understanding of all of the policies that govern the usTLD. In order for this space to maintain its unparalleled level of quality and integrity, it must be carefully administered. While growing the space is indeed important, facilitating growth in a manner consistent with the policies of the usTLD is paramount. NeuStar is committed to the protection of this space. Over the past six years, we have worked diligently to ensure that the usTLD remains a pinnacle representation of a quality space. Our past marketing programs have focused on this and our future plans are designed to expand the space in this responsible manner.

Growth of the usTLD - Yesterday and Today

Since assuming responsibility for the usTLD in October 2001, NeuStar has overseen steady and responsible growth while ensuring the long-term integrity of the domain. NeuStar launched the expanded second-level space in April 2002 and has since increased usTLD second-level registrations from zero to over 1.26 million names. Over the last three years, the usTLD has grown an average of 14% per year, and is forecast to grow 19% for the year ending Dec 2007. This compares favorably to average ccTLD growth (e.g. .DE and .UK) at 15% annually, and compares well to gTLD growth (e.g. COM) which averages 28% annually but has a significantly larger addressable market and is beset with volume-inflating speculation and domain tasting activities. As of June 2007, with 1.26 million names under management, an upward trending renewal rate of 70%, and a growth rate of 19%, the usTLD is a strong performer in the TLD market place and a reliable choice for American consumers.

NeuStar's marketing programs are designed to stimulate responsible registrations that support actual website and email usage. The current mix is: American businesses (64% of all .us domains), individuals, (29% of domains), non-profits (5%), and Government and educational institutions (2%).



019.us2

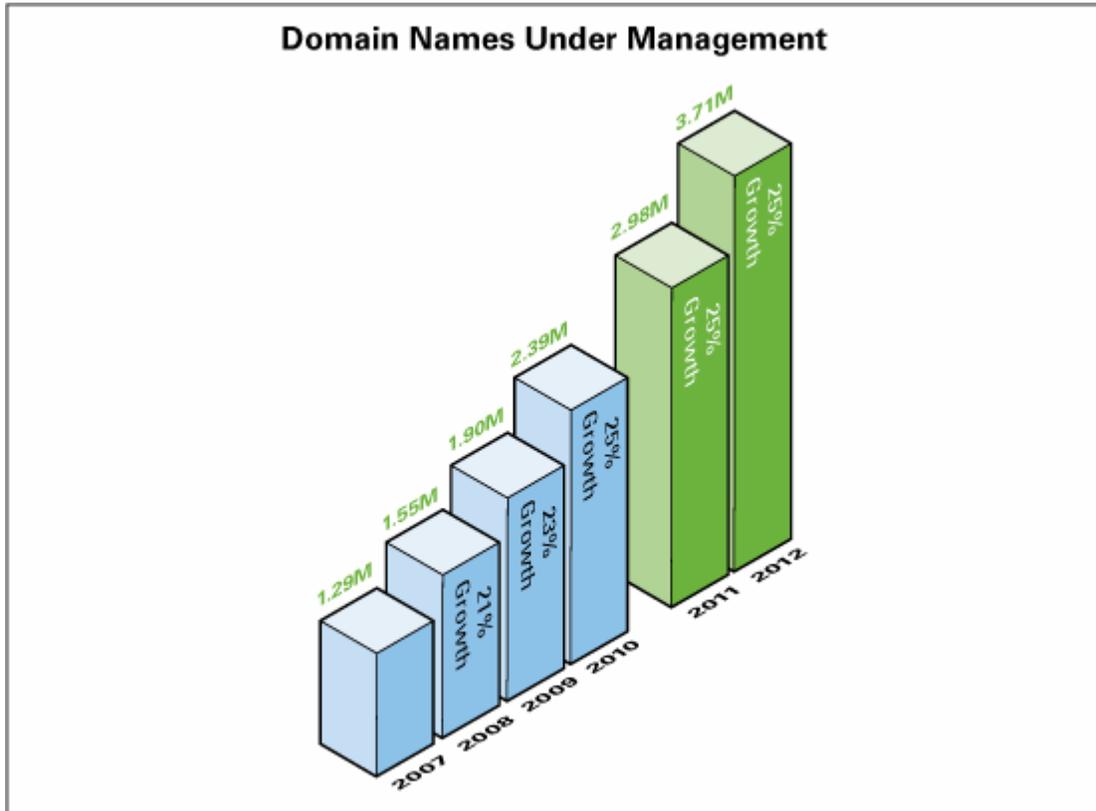
Exhibit B-5. NeuStar's marketing programs are targeted at attracting usage from four key market segments.

A key component of our successful management has been the development, implementation and enforcement of unique usTLD policies and procedures that support the steady, responsible growth of registrations in the second-level expanded space, while ensuring compliance with all required policies and registration procedures. This accountability framework is critical to ensuring both responsible growth and long-term integrity and it remains the foundation of our vision for the usTLD.

NeuStar's Plans to Maximize Responsible Growth

NeuStar has a six-year track record of excellence operating the usTLD. We have ensured the stability and security of the usTLD infrastructure, the integrity of usTLD registrant data, and guaranteed

equitable treatment to all our customers. From this foundation, NeuStar will manage a growth rate averaging 22-25% during the next contract term. This represents strong but responsible growth in the usTLD. More specifically, our vision for the next three years projects an average renewal rate of 75%, an average annual growth rate of 23%, and 2.39 million names under management by the end of 2010 (growing to 3.7 million by the end of 2012).



020.us2

Exhibit B-6. NeuStar's marketing plans are projected to aggressively increase the Domain Names under management while maintaining and improving the quality and integrity of the space.

During the next three years, NeuStar will build on the solid foundation established by our existing administration of the usTLD to protect the valuable usTLD brand. Using our experience, expertise and strong financial position, we will continue to:

- invest in the usTLD registry infrastructure to ensure its stability and security in an increasingly risky online environment;
- enforce unique and critical policies and procedures that ensure the reliability and integrity of the usTLD;
- invest in successful and responsible marketing and outreach programs to raise awareness and usage of the usTLD and kids.us without undermining their integrity;
- participate in policy and technology development processes to ensure the usTLD remains at the forefront of all TLDs; and
- develop new and enhanced features that provide greater utility and inclusiveness to American Internet users.

We will leverage our advantage of "lessons learned" from the first contract term and build on the programs we know are effective, including the new marketing programs and services specified below. NeuStar will run these programs in a responsible way, with a watchful eye, to ensure that we do not compromise the quality of the space in our efforts to increase registration volumes. We will pay particular attention to managing our programs, enforcing the current usTLD policies, and recommending new procedures as appropriate, to discourage spam, speculation, tasting, and other unwanted activities.

NeuStar Will Increase usTLD Inclusiveness

In addition to our marketing and sales efforts, we plan to implement certain Enhanced Services (see sections D and B.1.2) that will further the exchange of information and inclusiveness of the space. NeuStar will submit detailed proposals to the DoC for prior approval before launching these new services, including:

- Internationalized Domain Name (IDN) Registrations - As non-English speaking communities in the United States continue to flourish IDNs provide the means of making the usTLD more inclusive to all Americans.
- Really Simple Syndication (RSS) Feeds - We will implement an RSS feed to provide registrars with information about registry events.
- usTLD Blog and usTLD Message Board: After exploring numerous options, NeuStar believes that the best solution involves the creation of a usTLD Blog aimed at the dissemination of current events and news related to the usTLD space coupled with the establishment of an interactive usTLD Message Board. Together, the blog and message board would create an efficient and interactive forum in which all usTLD registrants could participate, including a special section for the locality users. The .US Message Board would allow all usTLD registrants to post their ideas, comments, questions and concerns on anything related to the usTLD, including a special section for locality users.

We view both the usTLD Blog and Message Board as key outreach tools to help promote awareness and consumer involvement in the development and refinement of usTLD policies and procedures, particularly in the usTLD locality-based structure.

NeuStar Maintains the Official usTLD Website

NeuStar maintains three informational websites containing up-to-date policies and general registration information:

- usTLD Registry Website (www.neustar.us) – the official usTLD website
- Kids.us Website (www.kids.us) – the primary kids.us website
- Registrar Extranet – a secure password protected registrar portal

The official usTLD website is an information-rich site containing information for registrars, registrants, and the general public. Visitors can find information about registrars, delegated managers, usTLD policies, and general FAQs. In addition, we provide a link to our WHOIS website (www.whois.us), where Internet users can query WHOIS data about any usTLD domains.

The Kids.us website is dedicated to the kids.us space. The site includes a directory of all live kids websites. In addition it provides general information about the space, including how to activate content and report violations of the content policy.

Our registrar extranet is a secure password protected portal intended for the exclusive use of usTLD accredited registrars. The extranet contains important technical information and documentation, including the Registrar Toolkit, Development Guide, User Guides, and other various announcements. In addition, registrars are provided with information about all of marketing programs.



2001-2007: Challenges, Successes, and Lessons Learned

As with any marketing endeavor – and especially so with TLDs – the initial growth phase is the most difficult. Buyers tend to remain with established brands. In the sense that domains are online real estate, there is reluctance from buyers to be first movers. This phenomenon was particularly pronounced in the United States where .com achieved dominant market presence prior to the launch of the expanded usTLD space. As a result, .com gained early acceptance and became widely viewed as the de facto domain of choice for most American businesses and consumers. In comparison, .uk and .de are uniquely the country code TLDs for the United Kingdom and Germany respectively, and also had an advantage in that they experienced high growth during the Internet boom years. This environment presented a number of prevailing challenges when NeuStar began management of the usTLD in 2001:

- The usTLD was effectively a third-level space under the control of a decentralized group of delegated managers. The space was fragmented with little central management and administration.
- The technology sector and domain/Internet market had entered a cooling off period of and was facing an industry-wide correction.
- .com had launched more than eight years earlier and, without competition, had monopolized consumer mind share in the American market.

In addition to the technical, operational, and policy initiatives undertaken by NeuStar, we also implemented a wide variety of product, promotional and sales channel programs to grow the volume, visibility, and usage of usTLD. These initiatives met with mixed success and the results of those programs helped education and inform NeuStar as we designed our current and future marketing programs.

NeuStar also understands the marketing programs that attract undesirable registrations. We purposely avoided these types of programs and will continue to avoid using them in any follow on contract for the management of the usTLD. These programs include promotional programs based on aggressive price discounting and programs targeted at the speculative, cyber-squatter or traffic monetization segments of the domain market (these market segments have seen dramatic growth in other TLDs over the last 24 months). Programs aimed at these segments, or involving aggressive price discounting have had demonstrably negative effects on the overall quality of TLDs that have run these programs. This is evidenced by the high levels of speculation and abusive practice in such TLDs as .eu, .info and .cn, and in a large number of the .com registrations that occurred in 2006-2007. Although these TLDs have achieved high growth over the past few years they have done so in a way that is damaging to the long term quality of their brands, and in a way that is exclusionary to legitimate businesses and consumers.

- Our programs maximized adherence to US policies (such as United States Nexus Requirement and WHOIS accuracy) and minimized forms of abusive registration such as traffic aggregation, cyber-squatting, spam, phishing and malware.
- Our marketing programs were successful in ensuring a much lower portion of abusive registrations (speculation, spamming, inaccurate WHOIS data) than other spaces. Studies have shown that, with some TLDs, more than 50% of all registrations fall into at least one category of abuse.

Our programs enhance the visibility and recognition of the usTLD brand.

NeuStar's Proposed Marketing Plan

NeuStar has undertaken, and will continue to implement, a four-pronged approach to marketing, promotion and awareness-building of the usTLD. It includes the following key components:

- **Registrar Incentives** – activation of sales channel activity through various financial incentives including rebates and volume discount deals.
- **Outreach and Communication** – introduction of new web-based communication tools including the usTLD Blog, usTLD Message Board, RSS Feeds, IDN, and participation in various events
- **Public Utility Branding** – significant promotion of web-based assets including the zipcode.us and other public use usTLD domains.

- **Kids.us Marketing Plan** – as described in more detail below

Since 2001, NeuStar has delivered exceptional service in meeting the technical and operational requirements of the usTLD. Our goal has been to promote increased usage of the space and to develop the space in such a way that ensures it is a preferred choice for members of the American Internet community. Unlike many other TLDs, NeuStar promotes the usTLD in a manner that ensures the quality of the space, which has resulted in a brand identity based in reliability and integrity.

NeuStar is dedicated to enhancing the usTLD space to encourage increased usage and we are proud of the accomplishments we have made during the term of the current contract. Given the complexity of the space and the unique challenges presented by a broad range of policies and market conditions, NeuStar's key objectives remain:

- a solid, operational, state-of-the art technical platform that meets or exceeds customers' and DOC's expectations;
- a quality usTLD space protected by diligent policy enforcement that protects the reputation of the space, including from nefarious market behavior that could reduce the trust of the American Internet user;
- a locality-based structure with full accountability and 100% compliance with all usTLD policies;
- execution of outreach and promotional programs to dramatically increase growth and awareness of the kids.us space;
- a steadily growing usTLD space with improved visibility and usage by a broad spectrum of American Internet users.

Over the years, in addition to the technical and operational activities NeuStar implemented a variety of product initiatives and promotional, sales, and marketing programs to grow both the second level usTLD and kids.us volumes, increase visibility, and build usage.

The following table outlines the marketing programs implemented between 2001 and 2007 and provides their relative successes, what was learned from each, and NeuStar's future plans or expectations for these programs. Programs we plan on continuing for the next term are listed first, followed by those we have learned have little or no appreciable value to the usTLD space.



usTLD Marketing Programs

Program	Summary	What We Learned	Future Plans
Event Sponsorship, Conferences, and Speaker Forums	<ul style="list-style-type: none"> • NeuStar attended a variety of events, conferences, and forums specifically as the usTLD Administrator rather than as simply NeuStar (at some of which the usTLD Administrator was a major sponsor and/or sent speakers to represent or promote usTLD. Examples included: ICANN, CCNSO, DomainRoundTable, IETF, ARIN, INTA, RIPE, APNIC, CENTR, NANOG, APRICOT, Government-sponsored cyber security, etc. • ICANN – NeuStar regularly sent a team of business and policy employees to represent and promote the usTLD. At the July 2007 ICANN meeting in Puerto Rico, NeuStar was a Platinum Sponsor to promote and publicize the usTLD. • IP Address Assignment Policy - "RIRs": ARIN (North America), RIPE (European), and APNIC (Asia/Pacific) - attended and actively participated in IPv4 and IPv6 addressing policies, representing the interests of maintaining global internetworking benefits for usTLD registrants. • Protocol Engineering - IETF - Participated in developing domain name registry protocols in the best interests of the usTLD. • Network Operations Groups - NANOG (North America), RIPE (Europe), APRICOT (Asia/Pacific), and OARC (DNS specific), monitored and participated in these meetings to determine the most effective use of the usTLD and the best practices for participation in the global public Internet. 		<p>NeuStar will continue with this program.</p> <ul style="list-style-type: none"> • As part of this program, NeuStar will sponsor or conduct at least one (1) event each year. Invitees to this event will include channel members, communities, government agencies and other groups with an interest in the usTLD. • Additionally, NeuStar will explore the interest in conducting quarterly webinars or seminars targeted at special interest groups in the United States.



usTLD Marketing Programs			
Program	Summary	What We Learned	Future Plans
Marketing/ Advertising/Sales Materials	<ul style="list-style-type: none"> NeuStar spent hundreds of thousands of dollars creating and producing marketing materials to be used in the promoting and selling of usTLD. Materials included video, radio ads, print ads, email copy, copy for press releases, banner ads, etc. 	[REDACTED]	NeuStar plans on 'refreshing' these materials and producing new ones that emphasis and expand on the .us themes and brand
Marketing and Usage	<ul style="list-style-type: none"> These programs were targeted at all registrars, received participation from a range of Resellers, including non-registrars, small and medium size registrars, and the world's largest web hosting company. Registrars agreed to specific marketing commitments and agreed to bundle .us names with paid website and/or email packages in return for rebates on each name sold. 	[REDACTED]	[REDACTED]
Showcase of .us Web Sites	NeuStar created an online showcase of attractive, real-world .us sites which we highlight at public and industry events.	[REDACTED]	<p>NeuStar will expand the use of this program.</p> <ul style="list-style-type: none"> Given the popularity of this program, we will expand the number of example sites and widen the distribution of the showcase to additional Channels and events.
U.S. Directory Service	<ul style="list-style-type: none"> In July 2007, NeuStar launched the .us Directory Service. This service gives usTLD domain name holders the opportunity to register their websites, businesses, services, and products, in a .us specific directory. 	[REDACTED]	<p>NeuStar will continue this program.</p> <p>The next phase includes implementing programs to populate the directory with .us listings.</p> <p>Work closely with zipcode.us directory to provide a marketing channel for .us domain owners to reach out to consumers</p>
.us Program to Support a Public/Charitable Cause	NeuStar has run programs in conjunction with registrars to help support different causes. One example is a program that NeuStar ran in partnership with the non-profit, Rewards for Justice, that raises money to prevent terrorism. NeuStar contributed a percentage of each .us registration towards the Rewards for Justice Fund.	[REDACTED]	[REDACTED]



usTLD Marketing Programs

Program	Summary	What We Learned	Future Plans
Volume Take and Pay	<ul style="list-style-type: none"> This program was targeted at all registrars but found highest uptake levels with medium to larger registrars. Registrars committed to minimum volumes and agreed to specific marketing commitments to promote the usTLD, in return for post-sale rebates on each name sold. 	<p>[REDACTED]</p>	<p>[REDACTED]</p>
Zipcode.us	<ul style="list-style-type: none"> In 2006, NeuStar signed a partnership agreement with Vendare (now FirstLook) to build and promote an application for the US zip codes that would be a useful, public resource for the Internet Community in the United States. The first version of the solution was launched in 2006. In June/July 2007, the zip code application was updated giving the zip code pages a "face-lift" with a new and improved look and feel, improved navigation, updated, more pertinent and helpful locality-based information, better localized search results, and better .us branding. 	<p>[REDACTED]</p>	<p>NeuStar plans to improve, expand and promote this program.</p> <ul style="list-style-type: none"> Our goal is to build zipcode.us into a useful and vibrant public and community resource. Our objectives are to: 1) Create a community where local entities (merchants, schools, churches, clubs, etc) can interact with local residents and tourists via Q&A, messageboards, blogs, chat rooms, etc....2) Become the definitive and most up to date resource on local information (demo, education, real estate, parks, libraries, famous people, recreation) by integrating both published and user contributed content.
Best Web Site Competitions	<p>NeuStar ran programs offering prizes to end businesses and/or consumers who have the best .us website (as determined by an independent panel.</p>	<p>[REDACTED]</p>	<p>NeuStar does not plan on continuing this program.</p>
Bulk Registration Program	<p>Targeted at Corporations and larger businesses that have a number of brands, products, and trademarks. Names registered in the same month by the same customer/registrant received rebates for each name registered.</p>	<p>[REDACTED]</p>	<p>NeuStar does not plan on continuing this program, unless it is in conjunction with a program that helps to build visibility and/or usage of .us</p>

usTLD Marketing Programs			
Program	Summary	What We Learned	Future Plans
Direct Mass Media Advertising	NeuStar has spent hundreds of thousands of dollars running highly visibility brand promotions programs for .us via online, radio, and print mediums. These programs were designed to drive end-user awareness of .us and to channel them to accredited registrars for sales activity.	[REDACTED]	[REDACTED]
High Profile Users Campaign	NeuStar ran several direct-mail campaigns targeted at high profile individual and corporate users, giving away expensive, signed items. For example in late 2002, NeuStar send packages of .us information with signed baseball bats and other high premium items with the .us logo to large Corporations encouraging them to use .us as their website.	[REDACTED]	[REDACTED]
Incentives to Channel Partners to Make .us Highly Visible or the Primary TLD on Web Sites	Co-marketing rebate incentives were offered to Partners to give the usTLD more prominence on their websites and in their purchase process flow.	[REDACTED]	[REDACTED]
Newsletters	NeuStar produced and issued newsletters as a means to communicate and provide information to Channel Partners	[REDACTED]	[REDACTED]



usTLD Marketing Programs			
Program	Summary	What We Learned	Future Plans
Renewal Promotions	NeuStar ran programs with the registrar channel providing them with per name rebates as an incentive to generate higher renewal rates.	[REDACTED]	[REDACTED]
Steep Price Discounts	We have not offered highly aggressive price discounting. Though we are aware this can drive significant growth (50% plus) we have researched the consequences of this action in other TLDs (notable INFO) and have seen very significant unforeseen problems with names being purchased by spammers, cyber squatters, names (at \$2.50 and below) which generated relatively strong growth, NeuStar considered offering similar campaigns to the Channel. However NeuStar never did offer any aggressive price discounted programs.	[REDACTED]	[REDACTED]

Marketing Programs That Risk the Integrity of usTLD

In the last 24 months new and aggressively growing segments of the domain market have emerged. Web-based companies and entrepreneurs purchase large portfolios of domains in some TLDs and establish basic advertising pages that capture and reroute traffic from mistypes. They also cyber-squat on trademarks (or near trademarks), hoard names for speculation, and use the names as spam sources. These buyers are especially attracted to inexpensive namespaces and to marketing programs that support, target, or legitimize their activities. Specifically, they are attracted to:

- Highly aggressive price discounting for new registrations (Adds), e.g. retail names priced below \$3.00 per year; and
- Marketing programs that focus on the speculator, trafficker, and squatter segments of the domain buyers market (e.g. presentations made at T.R.A.F.F.I.C. conferences).

TLDs that have applied these marketing practices have become havens for spammers, bots, squatters, static advertising pages, and speculation. NeuStar has specifically avoided using these programs for usTLD and will continue to avoid programs of this nature in the future. Although such programs often result in high registration volumes (in many cases 30% or greater annual

growth) they are inconsistent with the public benefit and the policy objectives of the usTLD. Additionally, the negative value of these risky and often illegitimate practices are ultimately damaging to the long-term value and credibility of the brand.

Future Growth of the usTLD Space

Six years of experience marketing usTLD, coupled with our experience in other ccTLDs and gTLDs, has uniquely positioned NeuStar to design and deliver a comprehensive marketing program to drive our four key objectives: (1) increased volumes, (2) continued adherence with usTLD policies, (3) increased usage by legitimate consumers, and (4) improved brand recognition. Over the term of the past contract, and as detailed previously in the table of 2001-2007 marketing programs, we have learned what works and what doesn't.

Based upon our lessons learned, NeuStar will continue or expand the following programs:

- Making available advertising/marketing/sales materials to the Channel
- Volume Take and Pay
- Marketing & Usage
- Joint-marketing with Public cause and/or with Charitable Organizations
- Event Sponsorship, Conferences, and Speaker Forums
- Showcase of the .us Web Sites
- Zipcode.us
- U.S. Directory Service

In addition to these programs, NeuStar has designed several new initiatives that will be implemented during the next contract term. These marketing plans are designed to target a variety of potential groups.



The following table lists NeuStar's new proposed marketing programs.

NeuStar's New Proposed Marketing Program		
Program	Summary	Program Expectations
Special Incentives for Channel Partners	<p>[REDACTED]</p> <ul style="list-style-type: none"> NeuStar will design and implement new, creative programs for registrars that incent them to give .us more prominence on their websites and in their promotional and marketing materials. NeuStar will pursue partnerships with companies with large marketing budgets, visible brands, market reach, or consumer databases that put .us "front and center" in their sales, marketing and promotional efforts. 	Our objective is to offer a program every quarter to the Channel. Our objective is to expand awareness and to drive registrations
Affinity Marketing and Marketing to Under-served Segments	<ul style="list-style-type: none"> NeuStar will focus resources on marketing awareness programs targeted at specific affinity groups such as the military, charitable groups, sports organizations, US-based or operating non-profits, business associations such as [REDACTED], and other high visibility groups. NeuStar will perform market research to identify and target additional affinity segments of the market. 	Our objective is to run at least 1 major, highly visible program each year that will help continue to build awareness and drive awareness. Affinity groups include groups [REDACTED].
Marketing and Sales Materials	<ul style="list-style-type: none"> NeuStar will design, create, and distribute new and fresh marketing materials such as advertising banners, print ads, copy for press releases, email campaigns, etc. for use by registrars to promote usTLD. 	New materials may include print ads, email copy, banner ads, etc.
Communications and Reports	<ul style="list-style-type: none"> .US Blog – a platform for dissemination of information related to the usTLD and a method for raising awareness among users. .US Message Board - a platform for the dissemination of information and for community discussion, debate and input for new or proposed usTLD policies. NeuStar will also begin to make available statistics related to usTLD to Channel and/or the public at least three times each year. 	<p>Add value to usTLD holders. Provides information to market to help them better understand usTLD.</p> <p>Provides an improved mechanism for usTLD registrants to propose new policies, procedures and other ideas for the further improvement of the usTLD.</p>



NeuStar's New Proposed Marketing Program

Program	Summary	Program Expectations
Surveys	<ul style="list-style-type: none"> • NeuStar will run a customer satisfaction survey every 12 months • In addition, NeuStar will conduct an end-user usage survey every 18 months 	<p>This program will allow NeuStar to understand the Channel's needs and to improve responses and service.</p> <p>The information will also help NeuStar assist the Channel in maximizing their sales and marketing efforts through the targeting of their programs.</p>
.us Directory Service	<p>To expand and promote the .us Directory NeuStar will:</p> <div style="background-color: black; width: 200px; height: 20px; margin-bottom: 10px;"></div> <ul style="list-style-type: none"> • Contact usTLD registrants directly and encourage them to list in directory (we will only do this if registrar support for the program is limited) . • Promote the US Directory service on our website(s), on the WHOIS, in our .us related communications, through our zip code program, and through online advertising. • Incorporate a .us directory 'sign up capability' in the API offered to registrars, allowing them to easily incorporate the option into their .us registration process 	<p>Our goal is to have a vibrant .US Directory that is filled with useful and comprehensive search results and is easily available and accessible to Internet users and the public in general.</p>
Reserved Names	<ul style="list-style-type: none"> • NeuStar will develop and make available as a public resource, at least 3 of the key reserve names over the first 18 months of the contract. • NeuStar will develop and launch these on its own or in partnership with 3rd party vendors under a framework similar to that of the .us Zip Code program. 	<p>As a start, we intend to develop the following names as a public resources within the first 18 months: vote.us, library.us, parks.us</p>
Marketing of International Domains Names (IDNs)	<ul style="list-style-type: none"> • If approved by the Department of Commerce, to better serve minority groups within the United States Internet community, NeuStar will launch non-English language domains (IDNs) in usTLD. • Each launch will be subject to DoC approval and will be implemented consistent with ICANN IDN guidelines. • The first planned IDN category will be Spanish language domains. These will be implemented in early 2008 (subject to DoC approval). 	<p>The objective is to target IDN .us to specific communities in the US to expand awareness and usage of usTLD.</p>



NeuStar's New Proposed Marketing Program

Program	Summary	Program Expectations
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Kids.us Marketing

Among the key initiatives during the last contract term was the introduction of the Dot Kids legislation in 2002. Following the launch of kids.us, NeuStar undertook a marketing campaign to begin to build the space and to establish kids.us as the premiere space for children under the age of 13 to use the Internet. In close cooperation with the U.S. Department of Commerce, NeuStar produced and distributed 70,000 copies of a kids.us promotional brochure in 2004. In April 2004, NeuStar introduced a registrar marketing campaign designed to Increase Activation of kids.us Content and Websites and domain name registrations. By creating incentives to leverage our registrar channel we attempted to encourage the development of content and activation of kids.us websites. We offered revenue sharing on content review fees and a rebate program on new kids.us domain registrations.

NeuStar also participated in the DoC's July 14, 2004 Public Forum on kids.us to help promote the kids.us space.

NeuStar continues to introduce new marketing programs and initiatives to help grow the kids.us space. Recently, we implemented a series of price reductions and other incentive programs to spur growth in this space. These programs went into effect on June 1, 2007.

To date, the implementation of the above programs, even without the participation of some of the top registrars, has generated encouraging results – a very significant percentage increases in the average number of monthly registrations and a projected 25% increase in the number of web sites. NeuStar will continue to track the progress of these programs and work with usTLD accredited registrars to offer and promote kids.us uptake.

Additionally, a number of new “jump-start” initiatives are planned for the kids.us space as described in the following table.

kids.us 'Jump-Start' Programs

Program	Summary	Program Expectations
---------	---------	----------------------



kids.us 'Jump-Start' Programs

Program	Summary	Program Expectations
Program #1: kids.us Registrar Rebate	We are currently offering a kids.us domain name rebate program to registrars who submit the first 2,500 kids.us domain registrations. Working with .us-accredited registrars, this rebate program will include the following key terms: <ul style="list-style-type: none"> • 2,500 free one-year kids.us registrations (one name per registrant); • Maximum of 200 domains per participating registrar; • Three-month program term; • NeuStar will reimburse participating registrars the \$6.00 wholesale fee, but won't control retail price; and • NeuStar will invest actual dollars in this rebate program by reimbursing participating registrars the \$6.00 annual wholesale fee on a pre-set number of domains. 	Our goal is to get greater participation from current kids.us registrars and to encourage new ones to sign up to offer kids.us
Program #2: Content Management Subscription Rebate	We are currently offering a rebate program to the first 200 content providers to develop and submit acceptable kids.us websites. This rebate program will include the following key terms: <ul style="list-style-type: none"> • Rebates offered to the first 200 content providers who activate a kids.us site; • Three-month program term; • The applicant will pay the \$125.00 annual subscription fee to establish the annual subscription account; • Once the website content is submitted, reviewed and approved, NeuStar will refund the \$125.00. Neustar will provide rebates on a first-come, first-served basis up to a pre-determined maximum total amount.; and • Because our contract with KIDSNET includes an annual hard dollar minimum, review of the additional 200 sites will be covered by existing expenses, plus some amount of incremental expense. 	Our goal is to drive usage and awareness of kids.us through an increase in the the number of live web sites
Program #3: 'Show Your School Spirit' Participation	After the initial rebate programs are complete, we will offer a special 'school spirit' promotion to the first 200 K-12 public schools to purchase a kids.us domain and submit acceptable content for review. The 'school spirit' rebate program will include the following key terms: <ul style="list-style-type: none"> • The promotion will include a free first-year annual Content Management Subscription. • The ongoing CMS fee will be \$125.00. • Six-month program term, to begin after completion of Programs 1 and 2 above. Once again we expect to invest hard dollars in this promotional program through the registrar rebate of \$6.00 for 200 domains (\$1,200) and the discount of \$125.00 for 200 CMS accounts.	Increase in awareness and the number of live web sites



In order to build awareness and encourage content development and usage of kids.us domains, NeuStar is running targeted marketing campaigns and outreach events with key target audience groups as described in the following table.

NeuStar is committed to the success of the kids.us domain space and we will continue to execute on these outreach and awareness-building programs.

kids.us Marketing Campaigns and Outreach Events		
Program	Summary	Program Expectations
Joint Outreach Events	We are working with selected key consumer/advocacy groups to raise awareness of kids.us and to utilize their existing networks of customers, members, partners, etc. to distribute kids.us brochures and discuss the kids.us opportunity. We have allocated funds to participate in joint outreach events to increase awareness of kids.us.	This is expected to lead to increased awareness of kids.us, which in turn will drive increases in registration and web site usage
Online Promotions	We are utilizing dedicated advertising space on the 'zipcode.us' directory platform to promote awareness of kids.us.	Drives awareness for kids.us
Distribution of kids.us Brochures	We will continue to distribute kids.us brochures to key consumer groups, government agencies, parent groups, schools, etc.	Drives brand awareness
Targeted Partnerships	Implement a new program initiative to explore partnerships with visible groups like non-profit organizations, elementary schools, and media, [REDACTED].	The goal is to bring awareness to child-safe communities on the Internet, which we expect will result in increased visibility and usage (web sites) in kids.us
Affiliate Program	Explore the viability of setting up a direct, online, affiliate program to try and bring more visibility to the space.	Should we offer this program, our objective would be to drive brand visibility of kids.us and increase the number of registrations, as there would be several new affiliate resellers for kids.us

Conclusion

For the past six years, NeuStar has focused on the responsible administration of the usTLD space. This includes appropriate methods of marketing to attract new registrants and domain registrations that grows the space in a manner consistent with the policies, expectations and objectives of the DoC. Our history of marketing for this space has given us an unparalleled foundational knowledge of the initiatives that work – and more importantly, those that do not work – in our overall effort to improve and grow the space.

ix. Registrars Provisioning Protocol Software, Procedures, and Support

While the provisioning protocol and software might seem to be a technical detail, we view it as a critical operational element in ensuring open access to the registry. Without robust provisioning protocol software, defined certification procedures, or ample technical support, certain registrars would be disadvantaged in their access to the usTLD expanded space. We place a priority on providing equivalent access to all accredited registrars with extensive security measures to protect the integrity of the registry database.

In this section, we describe the means by which registrars integrate their systems into the usTLD SRS infrastructure.

Provisioning Protocol Software

NeuStar currently provides provisioning protocol software to registrars, including full documentation, EPP toolkits in both Java and C++, and certification instructions. These packages are provided via our web portal. The software is standards-compliant, stable and widely used by the registrar community and has been production-proven over a long period.

Accreditation Procedures

The process by which a registrar becomes accredited in the usTLD expanded space is roughly comparable to that used by other TLDs. It is depicted in Exhibit B-7

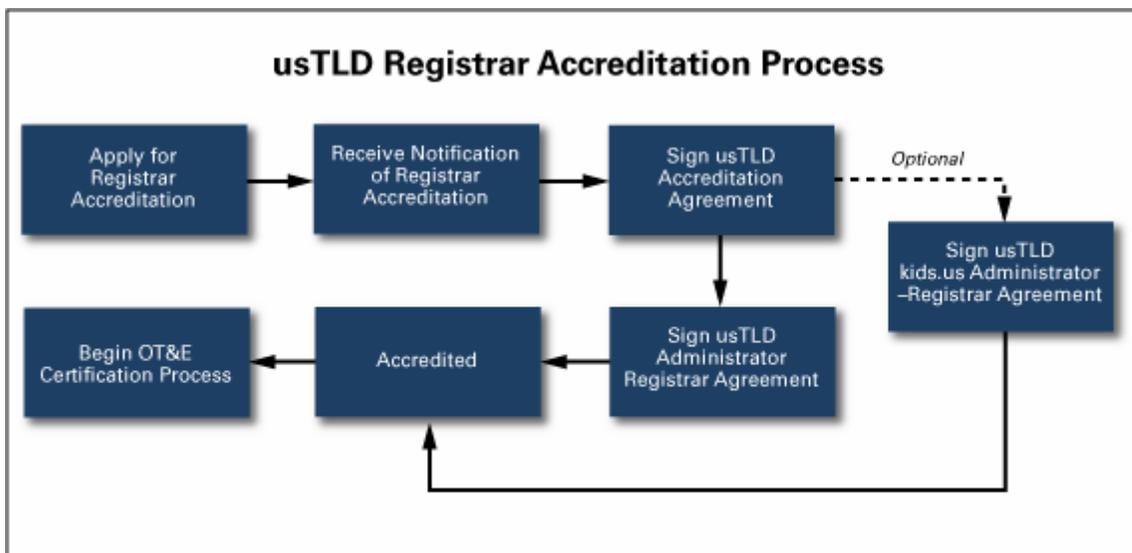


Exhibit B-7. NeuStar follows a defined accreditation process before allowing Registrar access to the SRS.

After accreditation, a registrar may perform registration operations in the registry. The immediate way that the registrar can do this is via the Registry Administration Tool (RAT), a secure web system that provides web-based access to the SRS, allowing registrars to easily manage domains, contacts, and hosts through a series of intuitive screens. The tool allows registrar personnel to more easily process transactions for themselves without needing to contact Registry Customer Support, which saves time for the registrar and enhances productivity. Given the obvious importance of high security on this facility, access to the RAT is controlled by two-factor authentication using RSA SecurID tokens and encryption of all data traffic (HTTPS). This allows registrars to closely control (by utilizing physical tokens) the accessibility of RAT.

While access is available via RAT, a registrar must complete technical certification before being able to perform registrations via EPP. The process for technical certification is depicted in Exhibit B-8

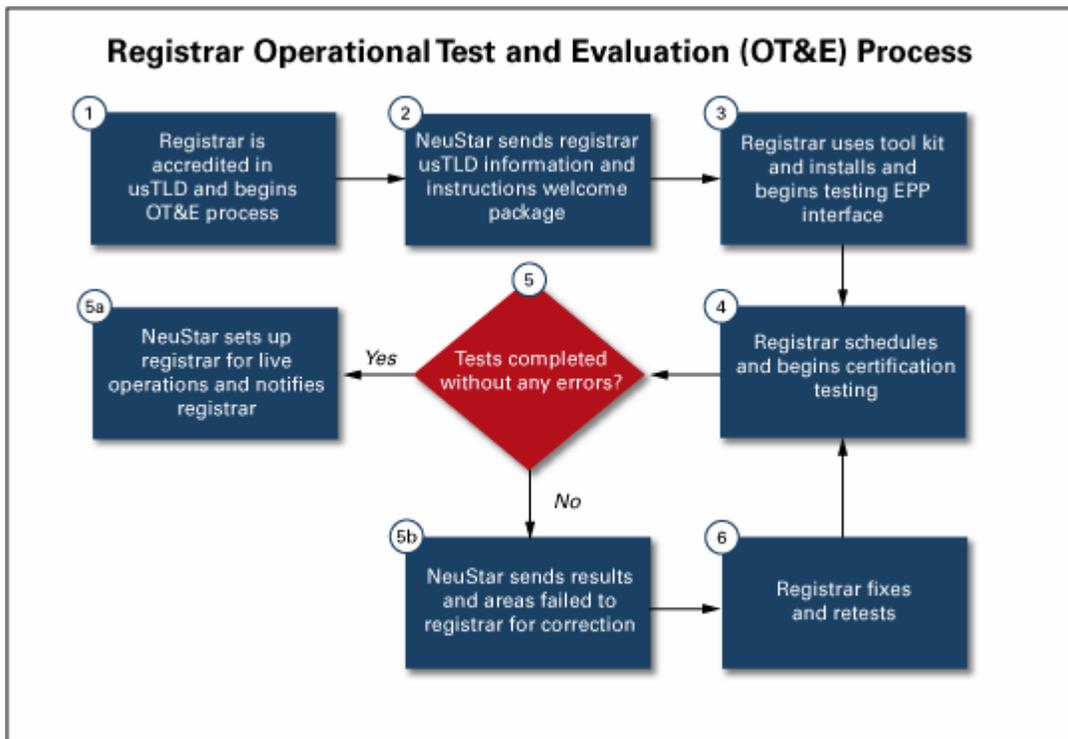


Exhibit B-8. The OT&E certification process is another measure NeuStar uses to preserve the stability of usTLD registry operations.

In addition to the Protocol Software, NeuStar also provides registrar documentation and certification instructions for all registrars. These packages are provided via our web portal and can be used to assist in their technical connectivity to the registry.

To facilitate technical certification, we provide a specialized certification environment. This environment consists of a “scripted” EPP server. It is “scripted” in that it returns default responses to properly formatted EPP requests with certain inputs. This environment provides a way for new registrars to test EPP clients in a location where we can ensure that they can easily repeat the tests without “resetting” the test environment. Registrars test here before working in a shared environment.

Once a registrar is satisfied that its system is compatible with the registry system, it schedules a formal acceptance test that will be monitored by a customer support engineer. The test is conducted in the scripted server environment and verified by checking log results. After a registrar has passed the certification test, we issue the SRS user ID, passwords, and digital certificates, and the registrar can begin operations.

Generally, after certification, a registrar will connect to the OT&E (Operational Test and Evaluation) environment. The OT&E environment is a scaled-down, but functionally equivalent version of production that provides EPP servers, application servers and a database. This environment is available 7x24x365 to provide a stable test bed where registrars can evaluate and test their systems prior to deployment into the production environment. This environment also allows registrars to test both new code and to test new features of the registry prior to promotion to production. These types of tests often include changes such as EPP updates or new business rules.

Accreditation Support

Our professional, experienced, responsive, and versatile support team provides a critical function during the accreditation process. Augmented by web-supplied documents like FAQs and the Registrar Operations Guide, the support team assists the registrar in completing the technical certification process.

We have found that certification is a particularly important period for a registrar. Often a registrar's initial experience in working with the registry sets the tone for the business and operational relationship. Consequently, we place particular emphasis on customer service during this time.

x. Delegated Manager - Technical Compliance Monitoring

The technical compliance monitoring of the Delegated Managers is an important responsibility of the usTLD Administrator to ensure the stability of the locality space. To ensure compliance we will be taking a number of steps to monitor each Delegated Manager for compliance:

- 1) Confirm that each Delegated Manager is allowing NeuStar to access their zone file
- 2) Perform continual downloads of each Delegated Manager's zone
- 3) Scan for lame delegations
- 4) We will use the zone data to create and maintain a WHOIS database.

Monitoring of Zone File Access

Delegated Managers are contractually obligated to permit the usTLD Administrator to inspect and download the zone file information of each of their delegated domains. This provision is designed to ensure that the usTLD Administrator has current information on each of the sub-delegations for the purpose of maintaining an accurate record of registrations, and to ensure continued, uninterrupted service in the even the Delegated Manager is unable or unwilling to continue providing delegation services.

To ensure that each Delegated Manager is in compliance with this requirement, NeuStar will perform frequent inspections of their zone file data to confirm that access is being permitted. We will accomplish this through the use of an automated DNS Crawler which will systematically attempt to download the zone file data. In the event the Crawler is unable to access a particular zone file, the Registry will be alerted and the Delegated Manager will be contacted and notified that they are in breach of their agreement. The Delegated Manager will be provided a reasonable time to cure the breach before Registry action is taken to take-back the delegation.

Download of Zone File Data

In addition to confirming that we have uninterrupted access to the Delegated Manager's zone file, the Crawler will also download a full copy of the zone data to be stored and archived at the Registry. In the event the Delegated Manager ceases providing delegation services, we will be able to quickly and efficiently take-back the delegation with minimal interruption to the existing sub-delegees.

Scan for Lame Delegations

In addition to the contractual requirement concerning zone file access, there is also a prohibition against lame delegations in the locality space. Delegated Managers must either use their delegations or relinquish them. To enforce this requirement, we will again use the DNS Crawler described above. While attempting to download each zone file, the Crawler will also be able to determine if the domain is lame delegated. In the event we detect a lame delegation, we will attempt to contact the Delegated Manager to verify the status of the domain. If the Delegated Manager confirms that the domain is not in use, or we are unable to communicate with the Delegated Manager after several attempts, the domain will be placed on ServerHold which will remove the domain from the TLD zone file. After six months the domain will be deleted.

Create and maintain a WHOIS database

Delegated Managers are required to provide the Registry with information on each of their sub-delegations. This data will be stored in a sub-delegee database and made available for query through a WHOIS-like service. To ensure this data remains as accurate and up to date as possible, we will take the zone file data downloaded by the Crawler and compare it to the data in the sub-delegee database. In the event data is found to be in the zone file, but not in the sub-delegee database, we will extract it from the zone file and load it into the database. As the zone file data only contains domain names and delegation information, and no contact data, the Delegated Manager will be notified that they must access the sub-delegee and update the records with the contact information through the DM Tool.

These downloaded zone files will be retained for back-up purposes, the zone file information to prevent the loss of such data by the Delegated Manager. Finally, allowing NeuStar to perform these inspections will ensure continuity of service in the event that the Delegated Manager either is unable or unwilling to continue providing DM services and the entire zone must be taken over by NeuStar.

Exhibit B-9 below depicts the zone file inspection process described above.

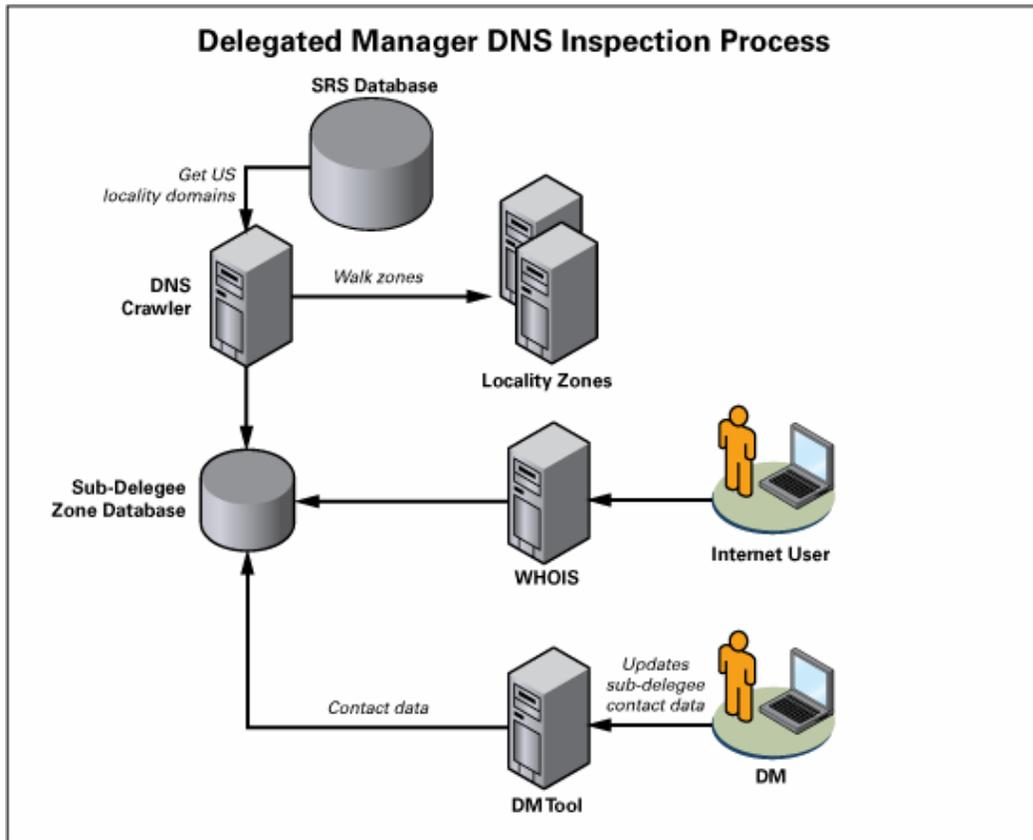


Exhibit B-9. The results of the Delegated Manager DNS Inspection Process provides a previously absent data set — contact information at the sub-delegee level — to the Registry database.

xi. Customer Support and Satisfaction

Professional, world-class support staff and support infrastructure are critical elements in order to ensure customer satisfaction. NeuStar's experienced, responsive, and versatile support team forms a critical bridge between the registry and our customers. While our infrastructure, including a flexible, reliable automated reporting mechanism, provides ample visibility into the interaction with the usTLD registry.

NeuStar is very proud of its history of performance while serving as the usTLD Administrator over the past six years. During that time, to ensure the highest levels of customer satisfaction, we have and will continue to be committed to:

This section provides details on our support procedures, guides, training and automated reporting. All of these are both key contributors to customer satisfaction.

Support Procedures

NeuStar provides 7x24x365 support for usTLD operations. We will provide the same level of support during the upcoming contract term. This round-the-clock support is available for all aspects of usTLD, including the non-commercial locality space.

We organize our support resources into three tiers. Each tier is described as follows.

Support Tiers	
Tier	Description
1	Receives customer inquiries, answers majority of questions, resolves standard issues
2	Provides infrastructure and application support, resolves necessary escalations from Tier 1
3	Provides software-troubleshooting support, resolves necessary escalations from Tier 2

Our Network Operations Center (NOC) provides for coordination between tiers and manages all system-wide infrastructure issues. Customers of all types, typically interact with Tier 1 support, which liaises to Tier 2 and Tier 3 as necessary.

Registrars, Delegated Managers, registrants, and Internet users can interact with the customer support team by various means: telephone, email, facsimile or web. NeuStar provides a toll-free number contact number, along with local contact and facsimile numbers.

All customer support personnel (across all Tiers) have access to a centralized customer relationship management (CRM) system (powered by Siebel software) for tracking service and customer issues, along with a centralized email system to monitor customer correspondence and requests. All members of the support staff (Tiers 1, 2, and 3) are equipped with laptop computers and cell phones, so they can respond to inquiries and issues no matter where they are physically located.

Our current Tier 1 support team personnel have an average of over 6 years of registry experience and includes individuals who have worked for accredited registrars in the past. The team is composed of experienced professionals, each with over 10 years of experience in roles that require technical troubleshooting, problem solving, and interpersonal skills.

When contacted by a registrar, Delegated Manager, registrant, or Internet user concerning an issue, the customer support specialist opens a ticket, and assigns one of four priorities. The ticket priority determines the process for addressing and escalation if it is not solved within defined time limits. These priorities are:

Support Priority Levels

Priority Level	Description
P4	Questions: if unable to answer in real-time, provide answer within 8 hours
P3	Service issue, with work-around, effecting one registrar: if unable to solve at Tier 1, hand off to Tier 2 for resolution; solve in 4 hours or escalate
P2	Service issue, lacking work-around, effecting one registrar: diagnose and hand off to Tier 2 for resolution; solve in 2 hours or escalate
P1	Service outage effecting overall operations: immediate page of Tier 2 and Tier 3 on-call engineers and management

While organized primarily to support registrars and Delegated Managers, the registry has an obligation to provide support for registrants and Internet users. The primary support organization for registrants and Internet users, are registrars, delegated managers or ISPs, respectively. We do not, however, seek to interfere with the registrar/delegated manager/ISP customer relationship with registrants and Internet users. Based on NeuStar experience in TLD operations, we have found that the registry serves primarily as an enabler to assist registrants and Internet users in solving particular problems or, more importantly, to provide them with accurate information so they can contact the appropriate entity to resolve their concern. Consequently, we place extensive focus on developing web-based FAQ documents and other information to help users help themselves. (See "Other Support Methods" below.)

NeuStar is committed to providing uninterrupted technical support for registry services, as well as for continuous registry operations of the registry. Our technical support is available to all usTLD accredited registrars, delegated managers, Internet users and registrants on a 7x24x365 basis in six languages.

Guides

Our experienced customer support staff has helped and will continue to help with the most complex issues such as testing, problem resolution and accreditation. In addition we provide a number of comprehensive guides to assist registrars with their implementation and interaction with the Registry:

- **Registrar Toolkit** – provides registrars with the necessary tools to connect to the Registry using EPP
- **Registrar Toolkit Companion Guide** – provides registrars with additional information to assist them in working with our toolkit. It provides information on business rules specific to the .US space.
- **Registrar Reference Guide** – provides registrars with detailed information doing business with NeuStar, including how to set up their billing accounts, .US business rules, connectivity policies, billing policies, and a detailed description of the registrar reports

- **DM Tool Guide** – provide DMs with detailed information on how to use the DM Tool to manage locality delegations and contact information.

Support Training

The Customer Support Team has developed extensive internal training processes to ensure intimate knowledge and understanding of registry operations and procedures. While staff is chosen on the basis of domain name management experience, the very nature of creating a registry with operational procedures requires that all customer support staff are provided with substantial training and accreditation for providing support in the NeuStar registry environment. In this way, the NeuStar registry will ensure extremely high levels of quality, consistent support services.

All customer support services which are provided to registrars is executed according to stringent guidelines and time frames as defined by the established SLAs between the registry and its customers. In addition, all support staff follow detailed escalation paths for unresolved issues. NeuStar works closely with Registrars, Delegated Managers, DoC and ICANN to develop service commitments and escalation paths that adequately meet the needs of registrars in providing outstanding responsiveness and service levels to their customers.

In addition, NeuStar technical personnel have an average of ten years of data-center operations experience, encompassing the high availability cluster technology, distributed database management systems, and LAN/WAN network management systems that are employed in the daily operation and recovery process. New hires and transfers to NeuStar's TLD registry operations are given a one-week "TLD Registry Overview" course. They subsequently receive on-the-job training on registry operations, including high availability cluster management, system backup/recovery, database backup/recovery, and system/network management.

NeuStar also provides a variety of corporate training programs for management and staff development activities. These also impart skills useful to customer support capabilities.

Other Support Methods

The quality of these web-based resources notwithstanding, registrants and Internet users can, and frequently do, use our email and telephone support capabilities. In most situations, we will answer a simple question and need not take any further action. If a caller identifies a problem with a particular entity, we make necessary contact with the appropriate entity and work to help solve the problem. The most common circumstances of such involvement are domain name transfers, bouncing email, or unreachable websites.

We also provide two important web-based tools to registrars: a web portal and the Registry Administration Tool (RAT). These tools are an important part of our support because they enable self-service.

Web Portal – A secure portal for registrars that includes:

- Operational notifications for planned maintenance or upgrades;
- Operational updates on incidents such as degradations or outages;
- General registrar business notices;
- Registrar Operations Guide;
- Frequently asked questions (FAQ); and



- EPP client toolkit downloads.

Access to the portal is controlled by login/password. The home page of the web portal includes notices to registrars of planned outages for maintenance or installation of upgrades. These notifications are posted 30 days prior to a maintenance event, in addition to active notification including phone calls and email to the registrars. Finally, seven days and again two days prior to the scheduled event, we use both a Web-based notification and email to remind registrars of the planned outage.

Registrar Administration Tool (RAT) – We operate a secure web system that provides web-based access to the SRS, allowing registrars to easily manage domains, contacts, and hosts through a series of intuitive screens. The tool allows registrar personnel to more easily process transactions for themselves without needing to contact Registry Customer Support, which saves time for the registrar and enhances productivity.



The screenshot displays the 'Registry Admin Tool' interface in a Microsoft Internet Explorer browser. The page title is 'Registry Admin Tool' and the address bar shows 'https://forregistrars.neulevel.biz/regadm/Query_Domain.jsp'. The interface includes a navigation menu on the left with categories like TLD, Domain Operations, Contact Operations, NameServer Operations, and CSR Operations. The main content area is titled 'Domain Info' and shows search filters for Environment (US-PRODUCTION), Domain (*), and Host Options (All Hosts). Below the search filters, a list of domain details is provided, including Domain Name, Reregistered Domain, Sponsoring Registrar ID, AuthInfo, Registrant, Created By, Client Created Date, Updated By, Last Updated Date, ROID, Domain Expiration Date, Client Transaction ID, Client Service Transaction ID, and Existing status. The Existing status is listed as 'clientDeleteProhibited', 'clientTransferProhibited', 'serverDeleteProhibited', 'serverTransferProhibited', and 'serverUpdateProhibited'. Hosts and Nameservers are also listed with their respective URLs. At the bottom of the domain info section, there are buttons for Modify, Renew, Restore, Transfer, Delete, and Move. A note at the bottom indicates that (*) indicates required fields. The footer of the page shows time zones for EST, CST, MST, PST, and AUS.

Delegated Manager Tool (DM Tool) – We operate a secure web system that provides web-based access to the SRS, allowing Delegated Managers to easily manage domains, contacts, and hosts through a series of intuitive screens. The tool allows Delegated Managers to more easily process transactions for them without needing to contact Registry Customer Support, which saves time for the Delegated Manager and enhances productivity. Access to the domains for each Delegated manager is controlled by ID and Password protection so each Manager can closely control the accessibility of the DM Tool.

Registrar Reporting

NeuStar currently provides and will continue to provide an extensive suite of reports to registrars (please see the following table). For the next contract, we have added several new, beneficial reports that will bring registrar reporting for the usTLD to a level not found in other TLD.

These reports are generated on a predetermined schedule and are currently deposited in secure shell (SSH) accounts assigned to each registrar. Going forward, as an improvement, we will incorporate an automated reporting capability into the Registrar Extranet, where registrars will be able to download the reports from within their extranet account. This will provide an alternative method of accessing the reports that particularly benefits the Registrar's non-technical personnel.

The current set of reports is provided primarily in XML format. However, some registrars find pipe delimited formatted reports to be useful in certain situations. As such, we will provide some reports in this format, as well as XML.

It is important to note that, to ensure security of customer proprietary data, registrars are only provided with data specific to the objects they manage within the registry. At no time may they receive the data of another registrar.

The following registrar reports are provided:

- Daily Transaction Report (XML format)
- Weekly Escrow Report (XML format)
- Monthly Transaction Report (XML format)
- Billing Statement Summary
- Billing Statement Detail
- Ad hoc reports (available upon request)

In addition, we will provide the following new reports to registrars:

- Daily Transaction Report - (text format)
- Daily Billable Transaction Report
- Daily Transfer Report - Gaining
- Daily Transfer Report - Losing
- Daily Auto-renewals Report
- Weekly Nameserver Report
- Expiring Domains Report

The following table provides further detail on these reports.

Registrar Reports	
Report Name	Description
Daily Transaction Report	<p>The Daily Transaction Report captures the results of processing files for a single day's activities. The results are formatted as XML documents (using XML UTF-8 format).</p> <p>This report provides each registrar with a detailed inventory of all domains under the registrar's management, and is grouped by registrant and sorted by EPP business request. It contains XML tags and values that hold all Add, Delete, Modify and Renew for domains, contacts and nameservers sent to the Registry during the reporting day.</p>
Weekly Escrow Report	<p>The Weekly Escrow Report is a weekly inventory report containing all domains, contacts and nameservers that are in the SRS databases for a particular registrar. This report combines into one XML file the data of the Weekly Domain and Nameserver Status Report, the Weekly Nameserver Report, and all contact information.</p>
Monthly Transaction Report	<p>The Monthly Transaction Report provides each registrar with a detailed inventory of all domains under management up to the last day of the reporting month. The domains are grouped by Registrant, and sorted by EPP business request. The results are formatted as XML documents, using XML UTF-8 format.</p>
Daily Transaction Report (Text Format)	<p>We will provide each registrar with a daily transaction report containing all "write" transactions, including additions, modifications, deletions, and transfers. Transactions applied to domain names, hosts, and name servers will be included in the report. The report will be in a pipe-delimited text file format and will contain, at a minimum, the following data fields:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Transaction Type • Object Type • Object ID • Term (if applicable) • Transaction Date/Time • Report Date
Daily Billable Transaction Report	<p>This report will contain all billable transactions, including domain creations, renewal/extensions, auto-renewals, transfers, and domain redemptions. We will provide each registrar with a daily report in pipe-delimited text file format. The report will contain, at a minimum, the following fields:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Transaction Type • Domain Name • Domain ID • Term (if applicable) • Transaction Date/Time • Report Date



Registrar Reports

Report Name	Description
Daily Transfer Reports	<p>Each registrar will be provided daily reports showing all domain transfer activity for the reporting day. One report will contain Gaining Transfer activity, while the second will contain Losing Transfer activity. Each report will contain pending transfer activity, and transfers that were completed during the reporting day. Each report will be in pipe-delimited text file format.</p> <p>The Gaining Transfer report will contain, at a minimum, the following fields:</p> <ul style="list-style-type: none"> • Gaining Registrar Name • Gaining Registrar ID • Losing Registrar Name • Domain Name • Domain ID • Domain Registration Date • Domain Expiration Date • Transaction Status (e.g., Completed or Pending) • Transfer Date/Time • Report Date <p>The Losing Transfer report will contain, at a minimum, the following fields:</p> <ul style="list-style-type: none"> • Losing Registrar Name • Losing Registrar ID • Gaining Registrar Name • Domain Name • Domain ID • Domain Registration Date • Domain Expiration Date • Transaction Status (e.g., Completed or Pending) • Transfer Date/Time • Report Date
Daily Auto-renewals Report	<p>This report will contain a list of all domains that auto-renewed during the reporting day. The report will be provided in a pipe-delimited text file format, and will contain, at a minimum, the following data fields:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Domain Name • Domain ID • Registration Date • Expiration Date • Transaction Date/Time • Report Date
Weekly Nameserver Report (delimited text file version)	<p>We will provide a report containing a list of all name servers and associated IP addresses under the management of the registrar. This report will be provided in a pipe-delimited text file format. Each name server will be listed once for each associated IP address. At a minimum, the following data fields will be provided:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Name Server • IP Address • Report Date



Registrar Reports

Report Name	Description
Billing Summary Report	<p>It is important to provide registrars with data to reconcile their billing transactions at the end of each month. We will provide registrars with a monthly statement that summarizes the billable transactions that were processed during the reporting month. The summary statement will include the following data:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Transaction Type • Number of Transactions per Type • Fee per Transaction • Total Fees per Transaction Type • Total Billed • Debit Account Balance • Report Date
Billing Statement Detail	<p>In addition to the billing statement, we will provide a Billing Statement Detail Report which includes a detailed account of all transactions that were processed during the month. This report will be provided in a pipe-delimited text file and will include, at a minimum, the following data fields:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Transaction Type • Domain Name • Domain ID • Term (if applicable) • Transaction Date/Time • Report Date
Expiring Domains Report	<p>To provide registrar with advance notice of expiring domains, we will provide registrars with an expiring domains report. This report will be generated on the first day of each month, and will contain a list of all domains that will expire in the subsequent 45 days. The report will be provided in a pipe-delimited text file. At a minimum, the report will contain the following data fields:</p> <ul style="list-style-type: none"> • Registrar Name • Registrar ID • Domain Name • Domain ID • Expiration Date/Time • Report Date
Ad hoc Reporting	<p>We provide ad hoc reports to registrar upon request. Our customer service staff is provided with tools to generate most ad hoc reports. In instances where the support desk can not generate the data, the request is forwarded to our full time data warehouse team who can provide any report required. Registrars may only receive data for the domains and other registry objects they sponsor.</p>

Summary

As the usTLD Administrator, we serve the DoC best by serving the usTLD stakeholders as a whole per contractual requirements and guidelines. We are successful because we leverage unmatched expertise to deliver necessary and unique services built utilizing superior registry technology and managed using industry-wide best practices. Our customer support procedures, guides, training,



and other methods, along with our automated reporting capability, are key components to delivering customer satisfaction.

xii. Security, Reliability, and Stability of the usTLD

As the present Administrator and registry operator of usTLD, NeuStar is uniquely qualified to provide the DoC with the most complete perspective on the requirement, the most appropriate solution, and the most experience in executing the solution.

Defining the Scope of Need

When defining the scope of the requirement, a less experienced Quoter would be well-inclined to focus on the most obvious perspective on security, reliability, and stability – technical infrastructure. While our definition certainly takes into account the need for secure, reliable, and stable infrastructure, NeuStar believes that this approach does not achieve the comprehensive view generated by first considering the question of security, reliability, and stability, from the perspective of the various stakeholders in usTLD. These stakeholders include:

- The United States Government – As the steward of usTLD on behalf of the U.S. Government, the DoC requires an administrator to provide exceptional services to the myriad of usTLD stakeholders both inside the U.S. Government (e.g. DHS, Congress, etc) and outside.
- Locality-space Registrants – These domain name holders, comprised overwhelmingly of community stakeholders use the services of usTLD to provide internet presence for their organizations. For most of these registrants, usTLD infrastructure is a service that operates with near invisibility, and thus security, reliability, and stability are implicit capabilities
- Expanded-space Registrants – Since the opening of expanded (second-level) space in 2002, well over 900,000 unique registrants have elected to register domain names in .US. And with a renewal rate exceeding 70%, it is clear that these registrants find usTLD to be a secure, reliable, and stable space to be the addressing foundation for internet presence.
- Delegated Managers (DMs) – This widely dispersed and diverse group of individuals manage the locality space in usTLD. Unlike accredited registrars, the DMs work on a volunteer basis and therefore require the usTLD Administrator to provide infrastructure and operating capabilities that are secure, reliable, and stable so as to provide registration services to the community of locality-space registrants.
- Registrars – Starting from zero in 2001, the community of accredited usTLD registrars has grown to over 100. These registrars, nearly all of which are also ICANN-accredited, have a clear business commitment to the domain name market, and the usTLD registry is (by definition) the sole supplier for the .us portion of their product portfolios. Consequently, these registrars require security, stability, and reliability to ensure a robust usTLD foundation for their customers and to help them manage their costs and operations.
- Internet users (domestic and global) – The large (and growing) community of Internet users rightly perceives .us, the ccTLD of the country that is the birthplace of the Internet, to be an anchor of security, reliability, and stability.
- Intellectual Property Rights holders – For holders of intellectual property rights, the Internet presents considerable opportunity and challenges. Registry policy and operations must be oriented around security, reliability, and stability so as to maximize opportunity and prevent abusive behavior.

While it is true that several among these stakeholders are conceptually similar, our experience indicates that their perspectives and requirements are sufficiently nuanced so as to warrant solutions tailored to their specific needs.

In total, we define the need in the following contexts:

- Security... of the infrastructure
- Stability... of the operation
- Reliability... of the Administrator's total service

Identifying the Areas of Consideration

Having recognized the needs of the stakeholders involved with the usTLD, it is next critical that the Quoter define the key areas of consideration. As the current Administrator, NeuStar has a unique perspective into this solution. Our approach incorporates not only the explicit and well-understood needs of the various stakeholders, but also leverages our experience as the only administrator of usTLD in its present form, and our experience as an operator of TLD registries, to incorporate implicit needs. The following offers a brief overview of the key areas of consideration present in our comprehensive approach to security, reliability, and stability of the usTLD. These include:

- Policy Enforcement;
- Technical Operations;
- Business Operations; and
- Corporate, Financial, and Experience Considerations.

We use these areas of consideration to provide structure to the various topics that have impact on security, reliability, and stability. We here analyse these topics and describe our steps to achieve this requirement.

Policy Enforcement

As described elsewhere in our Proposal, usTLD contains a considerable number of additional policies. Consequently the scope of services required for the administration of usTLD includes a variety of additional responsibilities related to the enforcement of those policies. The processes for the effective enforcement of those policies has important implications on the overall security, stability, and reliability of the service. These processes took their present shape during the current term of the usTLD contract, and thus only NeuStar has unique experience in their implementation. Each of these processes has specific implications on security, reliability, and stability. The following list describes examples, related to policy enforcement, of how we will ensure security, reliability, and stability in the context of policies related to:

- Locality-Based Structure – NeuStar will:
 - Require each DM to sign the DM Agreement
 - Serve as the “DM of last resort” when required to allow locality registrants to retain their locality names when unserved by a DM
 - Check for lame delegations to ensure the integrity of the locality space
 - Download and archive DM zone files

- Kids.us – NeuStar will:
 - Require each Registrar seeking to sell kids.us names to sign the kids.us Administrator-Registrar agreement
 - Defined content standards for kids.us web sites
 - Check the content available for each domain before inserting it into the zone
 - Execute the defined actions when inappropriate content is found on a kids.us site, including take-downs as necessary
- WHOIS Data Reminder – NeuStar will:
 - Require each registrar to present current WHOIS information to each registrant at least annually
 - Require each registrar to remind each registrant that the provision of false data can be grounds for the cancellation of a registration
 - Require each registrar to demonstrate that notices have been delivered to registrants
- WHOIS Data Accuracy – NeuStar will:
 - Provide a system to receive and track third-party complaints about inaccurate, incomplete, or proxy WHOIS data
 - Conduct a WHOIS data accuracy audit each year of the contract
 - Check the database for possible proxy registrations
 - Conduct reviews of registrar systems for WHOIS compliance
- U.S. Nexus Requirement and Intended Use – NeuStar will:
 - Collect Nexus and planned-use data for all usTLD registrations
 - Conduct Nexus/Intended-use compliance reviews
 - Administer a process for Nexus violation reports
 - Administer a process for resolving Nexus disputes
- Domain Name Review – NeuStar will:
 - Review (for possible deletion) all second-level and locality registrations that contain the “Seven Words”
 - Delete any second-level or locality registrations that contain the “Seven Words”
- Abusive Domain Name Practices – NeuStar will:
 - Maintain relationships with third-party security group to exchange information about usTLD domains being used for online abuse and illegal activities
 - Manage a process to take-down (remove from the zone) usTLD names identified to be used for online abuse and illegal activities
 - Cooperate with law enforcement and security research in active investigations of possible online abuse and illegal activity in usTLD



Technical Operations

Issues related to technical operations lay at the heart of concerns related to security, reliability, and stability. As with all TLDs, there are many threats. The following list describes examples, related to technical operations, of how we will ensure security, reliability, and stability in the context of:

- General Infrastructure - NeuStar will:

[Redacted text block]

- SRS - NeuStar will:

[Redacted text block]

- DNS - NeuStar will:

[Redacted text block]



[Redacted text block]

- WHOIS - NeuStar will:

[Redacted text block]

- Provide dynamic update to the WHOIS database
- Perform audit checks on dynamic update operations
- Include all data fields in query results
- Include all registered names in WHOIS (e.g. locality, kids.us, etc)

- Failover Preparedness - NeuStar will:

[Redacted text block]

- Escrow - NeuStar will:

- Escrow all required data with a third-party escrow provider
- Adhere to required data escrow formats
- Make incremental daily deposits
- Make full weekly deposits

Business Operations

As indicated above, NeuStar views the security, stability, and reliability to be a multi-dimensional topic, not just a technical concern. The following list describes examples, related to business

operations, of how we will ensure security, reliability, and stability in the context of activities related to:

- Registrar Failure – NeuStar will:
 - Continually monitor registrar account balances
 - Continually monitor registrar complaint rates
- Quality Growth – NeuStar will:
 - Avoid marketing programs oriented solely around price cuts
 - Institute modifications to the Add-Delete Grace Period to curtail tasting
 - Maintain high targets for renewal rates

Corporate, Financial, and Experience Considerations

We offer that corporate and financial topics are an important element of a comprehensive view of the security, reliability, and stability of usTLD administration. While corporate considerations are a broad topic, for the purposes of this section, we include: commitment to large-scale registry operations, prominence of usTLD in corporate portfolio, diversity of revenue, and integrity of results. Additionally, as it relates to experience, we include commitment to large-scale registry operations, thick registry operations, and multi-level registry operations. We will show that each of these has a role to play determining the operator which offers the best opportunity to ensure the security, reliability, and stability of usTLD.

Prominence of usTLD in corporate portfolio – While NeuStar is the operator of two globally relevant TLDs (.us and .biz), our business model provides equal prominence for both TLDs, allowing each to focus on its core market message. This approach is indicative of the importance that NeuStar places on .US and its relationship with the DoC. This prominence provides assurance to the DoC that NeuStar will not promote and invest in other TLDs at the expense usTLD. This environment for consistent investment helps to provide a stable platform on which usTLD can grow further.

Diversity of revenue – As described elsewhere in this Proposal, NeuStar's initial business revenue came from providing neutral third-party services to the telecommunications industry. Consequently, NeuStar does not depend exclusively on registry revenue streams to fund its business. This diversity of revenue is important because it provides a stable base to cushion operations in the event of a sharp discontinuity in the registry marketplace.

Integrity of results – NeuStar completed its IPO over two years ago. And in the time since the IPO our financial results have been consistently reported, fully audited, and in compliance with financial standards. As a highly successful (and awarded) IPO, NeuStar has been subject to extensive analyst scrutiny and has received several positive recommendations.

Commitment to large-scale registry operations – Since applying for and being awarded a the .biz gTLD by ICANN in 2000, NeuStar has maintained a consistent focus on the quality delivery of large-scale registry services to the TLD marketplace. In the years subsequent to our winning the competitive procurement for usTLD administration, NeuStar has a demonstrated track record of investment and innovation in the highly focused marketplace for large-scale registry operations. Our accomplishments include: development of IDNs (including the first standards-compliant offering of Chinese, Japanese, Korean (CJK) IDNs in a gTLD), a registry gateway service to provide

easy access ccTLD names to our registrar channel, and a variety of technical solutions to meet the challenges of usTLD administration. We have also made the investment necessary to develop the large-scale platform necessary to deliver these services. There are only a small number of companies with this experience set. NeuStar has demonstrated this commitment during the present term of usTLD administration and will continue to demonstrate the same during the upcoming term by making additional investments, as described elsewhere in our Proposal.

Thick Registry Experience – For a considerable period, there was considerable debate as to the relative merits of a thick registry versus a thin registry. However, in the years since the launch of thick registries in the gTLD space, operational experience has shown that a thick registry provides greater long-term stability, security, and reliability for all stakeholders. However, for the registry operator, there are considerable differences in the operational requirements for running a thick registry. These include:

- Larger database size
- More data intensive provisioning operations
- Operating a thick WHOIS (with more data and more data transfer)

As it has demonstrated during the present contract term, NeuStar is a capable operator of a thick registry and has demonstrated an ability to operate a thick registry at large registration volumes. Placing the usTLD in the hands of a registry operator without the experience of operating a thick registry at large registration volumes would unnecessarily jeopardize the security, stability, and reliability of usTLD. During the upcoming contract term, we will maintain currency with evolving practices as they relate to thick data provisioning, storage, and privacy disclosure.

Multi-level registry operator – The usTLD locality space is nearly unique on the internet in the complexity of its multi-level operations (in the locality space). While other gTLDs and ccTLDs operate at multiple levels, no other TLD operates such a complex space. NeuStar is the only registry operator with the experience operating such a rich multi-level hierarchy. (It is worth noting that when NeuStar assumed responsibility for usTLD from the previous administrator, there was not registration database; only zone data files.) We can state with certainty that there are a large number of business rule differences that must be implemented to properly manage a registration system for the space (in the same system that manages the expanded space). Therefore, we can say that our experience contributes positively to the overall stability, expandability, and reliability of usTLD by avoiding a series of challenges as it relates to building/modifying an existing registry to accommodate this set of requirements. During the upcoming contract term, we will maintain the present structure of servicing the locality space and the expanded space from the same core registration system.

When considering these corporate and financial aspects of the registrants; we do not believe there is another candidate that can provide the combination of experience, scale and flexibility. These qualities in a registry operator have direct implications on the security, stability, and reliability of the usTLD.

Summary

As this section demonstrates, only NeuStar has combination of broad and specific experience required to fully implement a comprehensive approach to the security, stability, and reliability of the usTLD. Additionally, as the incumbent administrator of usTLD, NeuStar has proven its ability to expand and adapt its solutions to changing requirements. Thus, the DoC can be assured that as



requirements evolve over the course of the upcoming contract usTLD term, NeuStar will stand ready to both work in a collaborative fashion various stakeholders and take on the responsibility of leadership as necessary to ensure the security, stability, and reliability of the usTLD.

xiii. Administrator as Registrar for Locality and Reserved Names

In order to promote robust competition within the usTLD, including registration services and ensure greater choice and improved services for usTLD users in general, it is not appropriate for the usTLD Administrator to serve as, or be affiliated with, a usTLD accredited registrar. The only time we believe that a usTLD Administrator should serve as a “registrar” or perform “registrar type functions” is under limited circumstances where it can ensure that the performance of such function is required by the very nature of the space and where its performance of such functions does not adversely affect the competition.

The very nature of the inherited legacy usTLD locality-based structure, expansion of the usTLD to the second-level, and introduction of kids.us required NeuStar, as the usTLD Administrator to also act as a ‘registrar’ in specific areas (described below).

These specific “Administrator as Registrar” responsibilities are unique and very different from the normal Administrator-Registrar model (where a registry provides wholesale domain registry services to registrars and not retail domain registration services to end users in competition with registrars) of most TLD operators and from the rest of the usTLD.

In order to successfully act as the usTLD Registrar where required, it is critical that the usTLD Administrator do so with the highest levels of impartiality and efficiencies. There is a clear difference between managing a name for a registrar and managing a name for a registrant. NeuStar understands the importance of treating these two types of registrations differently. Failure to do so could result in otherwise unnecessary complaints to the DoC from both end users and registrars. To that end, NeuStar leveraged our legacy of neutrality and impartial service delivery to successfully act as a Registrar as required, efficiently and with the highest levels of quality and impartiality. We reaffirm our support for this unique policy requirement and propose no changes to the administration of these requirements.

NeuStar as Registrar for the usTLD Locality-based Structure

As discussed in detail in Proposal Section B, Sub-section C.5, when NeuStar assumed responsibility as usTLD Administrator, we inherited the legacy hierarchal locality space from the previous operator. During the last usTLD procurement, it was estimated that there were approximately 8,000 locality names and 800 Delegated Managers in existence. However, as we worked to bring clarity, order, and contractual compliance to the space over the last five years, NeuStar identified double those numbers with over 17,000 locality names and 1,500 Delegated Managers.

On June 14, 2002 an Interim Policy was incorporated into the .US contract through contract modification 0002. This Interim Policy stated that, until completion of the compliance report process, NeuStar would assume responsibility for the operation of all of the currently undelegated name spaces identified in RFC 1480 and/or created by the prior usTLD Administrator. NeuStar thus became the interim delegated manager for all such names and now runs the nameservers for those names. NeuStar’s role as the delegated manager for this space and its operation of the corresponding nameservers is ongoing. In addition, while many existing delegated managers continue to provide registration services to registrants within their designated localities, some have ceased to provide service. In those cases, NeuStar has assumed delegated manager (or registrar) responsibilities and continues to provide delegation and resolution services to locality registrants.

Furthermore, locality registrants are responsible for providing NeuStar with contact information for each registered name so that NeuStar can update the central usTLD database and create a Whois record for the registrant. As an additional service, NeuStar hosts resource records in the usTLD zone file created at the registry. In cases where delegated managers choose to take advantage of this option, they must provide NeuStar with the appropriate resource record information.

NeuStar as Registrar for the Reserved Name Program

On April 24, 2002, the .us domain was opened to the general public for registration. To preserve the U.S. Government presence in the newly expanded, second-level .us space, the United States Department of Commerce (DoC), working through the Federal CIO Council among others, reserved second-level domain names that correspond to the names used by the U.S. Government in the .gov space, as well as the names of states and local governments. NeuStar, in consultation with the DoC, created an extensive list of reserved names which contained over 50,000 .US domain names, comprised of the names of Federal government agencies, states, cities, towns, and counties, among others. On September 6, 2002, Modification No. 0004 to Purchase Order SB1335-02-W-0175 was entered into setting forth a program for the distribution of the reserved names to the appropriate entities. As the de facto delegated manager for these locality names, NeuStar is in the process of securing the signature of each of the locality registrants of the Locality Registrant Terms and Conditions (http://www.neustar.us/policies/docs/US_LocalityRegistrationAgreementV1-0.pdf) that passes through certain requirements and obligations to the locality registrant, including the obligation that it complies with all existing applicable policies of the usTLD. The program was designed to provide the proper representative of these jurisdictions the opportunity to register or permanently reserve these domains prior to them becoming available for registration by the general public. NeuStar successfully implemented and will continue to operate this program in the future.

NeuStar as Registrar for Certain Reserved kids.us Domains

Prior to the launch of kids.us in September 2003, NeuStar developed a list of Federal, State, City, and other local kids.us domain names (e.g. registry reserved domain names and generic high visibility domain names) for reservation. NeuStar continues to successfully provide registrar services similar to the reserved names within the second-level .US name space described above to ensure federal, state, and local government agencies, in addition to national organizations, have the right to reserve names matching those of their child-friendly sites before speculators or "cyber-squatters" can register such names.

C.4.1 Core Policy Requirements

NeuStar's sound policies and processes, developed over the past six years, have established and maintained the integrity of the usTLD, and have made it a model ccTLD for the United States and global Internet communities.

The usTLD is unique, with policies and procedures not found in any other name space. These elements add complexity to the operation and administration of the space, but also serve to create a trusted resource for the American Internet community. Since 2001, NeuStar has cooperated closely with the DoC to develop, modify and enhance a number of key policies and procedures and we are committed to enforcing these integral policies throughout the next term of the agreement.

Key policies created and implemented over the past term include:

- usTLD Nexus Requirement
- usDRP and Sunrise Policy
- usTLD Registrar Accreditation and usTLD Administrator-Registrar Agreements
- Government Advisory Committee Principles
- Policies concerning data rights, WHOIS, Reserved Domain Names, Transfers, Redemption Grace Period, Domain Name Review, Registration Abuse
- usTLD Code of Conduct

Although each of the policies have been developed and implemented by NeuStar during the current term, as a standard business practice, the usTLD Team continuously reviews all policies, processes, and programs associated with the usTLD Administration for effectiveness and improvement, where appropriate.

In preparation for this procurement, NeuStar performed an exhaustive review of all of these Core Policies. Based on such assessment, NeuStar is recommending a number of modifications and entirely new policies and procedures that we believe will enhance the utility of the space and increase the use of or otherwise improve the usTLD. These can be found in the sections below.

(i) United States Nexus Requirement

Since assuming responsibility as the usTLD Administrator, NeuStar has proven our ability to successfully operate the usTLD in compliance with the U.S. Nexus requirement. We conduct regular spot-checks for Nexus compliance and also investigate specific Nexus complaints from interested third parties. The existing Nexus policy and process, properly enforced, is adequate and helps

Highlights

- **NeuStar currently manages highly unique and critical policies to protect the integrity of the usTLD, and we will continue to do so during the next term.**
- **NeuStar is proposing several new policies and procedures that will further ensure the integrity and reliability of the usTLD, and will better protect the American Internet user.**
- **NeuStar's Code of Conduct forms the basis of our customer interaction and guarantees fair and equitable treatment;**
- **NeuStar is committed to the future development, implementation, management, and enforcement of policies that protect the usTLD and its users.**

ensure that the usTLD serves the Internet community of the United States without attracting or encouraging registrations from outside the United States or from those without a bona fide connection to the United States. We reaffirm our commitment to this policy and propose no changes.

In preparation for the April 2002 launch of expanded second-level domains, NeuStar developed and implemented a unique system of Nexus requirements that compel a potential registrant to certify that he/she meets the Nexus requirement before the domain is registered. The accreditation process also requires the registrar to pass that certification to NeuStar via Extensible Provisioning Protocol (EPP) during the registration transaction. This allows us to keep a centralized record of all such certifications in the registry database.

In the event a domain name is registered but does not meet the Nexus requirement (i.e. the Nexus certification received from Registrar and Registrant was incorrect or fraudulent), third parties are able to invoke a Nexus Dispute Resolution, developed by NeuStar for the resolution of any such dispute. The official usTLD Nexus Dispute Policy can be found at: http://www.neustar.us/policies/docs/nexus_dispute_policy.pdf and Appendix G-1 of this proposal.

If a Nexus dispute is initiated pursuant to the usTLD Nexus Dispute Policy, it may be submitted to any approved Nexus Dispute Resolution Service Provider accredited by NeuStar. Each provider follows the Nexus Dispute Policy and Rules as well as its own supplemental rules (which may not conflict with the Nexus Dispute Policy and Rules). Currently, there are two Nexus Dispute Resolution Service Providers: the National Arbitration Forum and the American Arbitration Association. Any other potential bidder for the usTLD would need to either secure an agreement with at least one Dispute Resolution Service Provider (DRSP) to replace the existing relationships, take on that responsibility directly, or propose a completely different Nexus dispute resolution mechanism.

Additional information on (i) the usTLD Nexus Policy, (ii) certifications required under the policy, (iii) current and new proposed enforcement mechanisms, and (iv) WHOIS Accuracy Program, a component of which is relates to Nexus accuracy, has been provided in Proposal Section J.3.

(ii) Registrar & Registrant Agreements

In addition to the technical risks of transitioning of the usTLD to a successor provider, there is an administrative and legal risk in requiring a successor operator to establish contractual relationships with each of the existing providers of registrar services for the enhanced usTLD space. As the incumbent usTLD Administrator, NeuStar already has existing contractual relationships with the usTLD Accredited Registrars that establish clear and comprehensive parameters for the management of the enhanced usTLD space, as well as sets basic requirements and obligations binding on NeuStar, as the usTLD Administrator, and the Registrars. In addition, because the usTLD Administrator does not have a direct contractual arrangement with the registrants, these contracts include "flow through obligations", such as the Nexus requirement, the obligation to provide accurate up-to-date WHOIS data, and the requirement that Registrars enforce in its contracts with its registrants.

The two agreements that are required to be executed by all usTLD Registrars are the (1) usTLD Accreditation Agreement v. 2.0 and (2) the usTLD Administrator-Registrar Agreement. The first Agreement, the usTLD Accreditation Agreement establishes minimum criteria, requirements and obligations that all registrars have in the expanded usTLD space, including kids.us.

The usTLD Administrator-Registrar Agreement is a second agreement that must be executed by each Registrar in the enhanced usTLD space prior to the Registrar engaging in performing services for the usTLD. More specifically, the usTLD Administrator-Registrar Agreement requires registrars to comply with, and to include in their agreements with individual registrants, all the substantive requirements of the usTLD Contract. This includes, passing through the requirements relating to WHOIS, Nexus, Registration Restrictions and the usDRP. In return, NeuStar grants usTLD Registrars secure access to the registry system providing them with high level of stability reliability and security. To that end, we commit to industry's highest performance specifications and support obligations and we do so in a non-discriminatory ensures each Registrar has equivalent access to the usTLD registry system.

The only changes that we propose to make are in the usTLD Administrator-Registrar Agreement. The changes, which are discussed in more detail in Proposal Section H, involve (i) clarifying the registry's right to remove usTLD domain names that are being used for the submission of unsolicited bulk e-mail, phishing pharming, malware, bot-nets or other abusive or fraudulent purposes and (ii) removing references to the former usTLD Policy Counsel.

NeuStar has a proven track record of successfully securing contractual arrangements with all accredited usTLD registrars and subsequently enforcing those agreements. We currently have accreditation agreements in place with 101 usTLD registrars. Of those registrars, 16 have also elected to become accredited for the kids.us domain.

Additionally, NeuStar performs a unique role among TLD registry operators in that we serve as both the registrar accrediting authority and the registry operator. Because ICANN is the accrediting authority in the gTLD space, no other existing TLD registry or potential Quoter is responsible for both roles.

In addition to those registrars in the expanded second-level space, we have **934** agreements in place with Delegated Managers (**605**) and Locality Registrants (**329**). NeuStar requires that all accredited usTLD registrars and Delegated Managers also secure a registrant agreement with their respective customers requiring compliance with all applicable usTLD policies, particularly covering Nexus, WHOIS, and dispute resolution processes.

For a more detailed discussion on the two types of usTLD Registrar agreements as well as a comprehensive discussion of the proposed changes, please see Proposal Section H.

(iii) Sunrise Policy and the usDRP

As the owner of a large patent, copyright and trademark portfolio, NeuStar believes that the protection of intellectual property assets on the Internet is of fundamental importance to any entity that derives income from their use of its intellectual property. For both the expanded usTLD and kids.us spaces, the protection of intellectual property began with the implementation of a Sunrise process for qualified trademark owners. To date, the Sunrise process implemented in the expanded usTLD space in 2002, and subsequently in kids.us in 2003, was the only process of its kind to launch without any claims of fraud or wrongdoing, and unlike the launches of .info, .mobi or even .eu, the usTLD Sunrise Process was not marred by scandal or controversy.

In addition to the protections that were afforded to intellectual property owners through the Sunrise Process, NeuStar has also implemented an efficient dispute resolution process involving abusive domain names registrations that were either registered or used in bad faith.

Sunrise Policy

In early 2002, NeuStar became the first registry operator to launch a successful authenticated Sunrise process that permitted qualified trademark owners to pre-register their trademarks as domain names in the expanded usTLD space prior to the opening of the expanded usTLD space to the general population. Unlike any other "Sunrise" plans implemented or even proposed before that time, NeuStar validated the authenticity of Trademark applications and registrations with the Patent and Trademark Office. Subsequently in 2003, prior to the launch of the kids.us domain name space, NeuStar again flawlessly executed a second Sunrise process that provided trademark owners the ability to pre-register their trademarks as .kids.us domain names prior to the opening up of the kidsus space.

For a comprehensive discussion on the Sunrise Policy implemented for both the expanded usTLD and kids.us spaces along with a discussion of the specific procedures employed, please see Proposal Section J-1. As developments in the expanded usTLD space may necessitate, NeuStar will implement a sunrise period for qualified trademark owners in the same flawless and successful manner.

usTLD Dispute Resolution Policy ("usDRP")

The usDRP: A marked improvement over the UDRP -- NeuStar successfully implemented and continues to operate the usDRP in accordance with all requirements set forth in the current agreement. The usDRP sets forth the terms and conditions in regards to a dispute between usTLD registrants and any party other than the usTLD Administrator or accredited usTLD registrar. NeuStar has proven its ability to successfully administer this policy and we will continue to do so throughout the new contract term.

An important and unique aspect of the usDRP (relative to UDRP imposed by ICANN on all gTLDs) is specific language, developed by NeuStar, that allows panelists to find in favor of the trademark owner if the trademark owner can establish that the domain name was either registered or used in bad faith. In contrast, UDRP required that a trademark establish both that the domain name was registered and used in bad faith – a much tougher burden when the domain name has not been used. This difference was praised by both WIPO and the Intellectual Property Constituency of ICANN when it was adopted in NeuStar's .BIZ's Start-up Trademark Opposition Policy in 2001.

A second important and unique aspect of the usDRP deals with a flaw in most gTLD UDRP language which has led to inconsistent decisions is a paragraph dealing with "evidence of registration or use in bad faith" (Section 4(b) of the Policy). This paragraph states that bad faith can be established if a Panel finds that a registrant registered the domain name in order to prevent the owner of the trademark or service mark from reflecting the mark in a corresponding name, provided that the registrant has engaged in a pattern of such conduct. This has led to several decisions which have been in favor of cybersquatters where although it was shown that they registered the one domain name in question to intentionally prevent the trademark owner from registering the domain, it could not be shown that there was a "pattern of such conduct."

Dispute Provider Agreements -- Unlike a gTLD Registry Operator which relies on ICANN to accredit and form relationships with entities providing dispute resolution services, the usTLD Administrator is solely responsible for finding and entering into contracts with dispute providers for the usTLD. Since the launch of the enhanced usTLD space, NeuStar has accredited two dispute

resolution providers: the American Arbitration Association ("AAA") and the National Arbitration Forum ("NAF").

Proposal Section J-2 sets forth in more detail: (i) the usDRP and Rules, (ii) explanations for the differences between the usDRP and the UDRP, (iii) Agreements with the Dispute Providers, (iv) proposed changes and (v) the addition of usDRP provider reports to NeuStar and the Department of Commerce.

(iv) Government Advisory Committee Principles

Since assuming responsibility as usTLD Administrator in October 2001, NeuStar has fully complied with ICANN's Government Advisory Committee (GAC) principles and procedures.

The GAC principles state that the ultimate public policy authority over a ccTLD rests with the relevant government or public authority. NeuStar operates the usTLD under the supervision of the U.S. Department of Commerce.

The current GAC Principles reflect best practices for the delegation and administration of ccTLDs. It is intended as a framework to help define the way governments and registry operators work together. According to the GAC principles, the ccTLD Registry is a trustee for the delegated ccTLD, and has a duty to serve the local Internet community as well as the global Internet community. NeuStar administers the usTLD in the public interest, within the framework of its national public policy and relevant laws and regulations as determined by the U.S. Department of Commerce, and ensures effective and fair conditions of competition, at appropriate levels and scale of activity.

As the existing usTLD Administrator, NeuStar fully complies and will continue to comply with the GAC Principles and Guidelines for the Delegation and Administration of Country-Code Top Level Domains.

(v.) Implement and enforce policies concerning

(a) Data Rights and Use

Through our tenure as usTLD Administrator, NeuStar has developed and implemented clear policies regarding Data Rights and Use and incorporated those policies into the usTLD Administrator-Registrar agreement and NeuStar's usTLD Code of Conduct. We reaffirm our commitment to this policy and recommend no changes.

NeuStar's neutrality helps to maintain the trust of registrars, delegated managers, and end users of the usTLD. A key component of NeuStar's neutrality is our commitment to protection of privacy and the recognition that we do not own our customers' data or data provided to us through our administration of the usTLD registry. We recognize that data provided by usTLD Registrars and Delegated Managers belong exclusively to the U.S. Department of Commerce.

NeuStar's Code of Conduct prohibits the use of data obtained from Registrars and Delegated managers, other than for purposes of providing usTLD services and as set forth in the Registry-Registrar Agreement. NeuStar will continue to abide by our Code of Conduct, the strictest in the industry.

(b) WHOIS Database

Compelling Interest in a complete, accurate WHOIS -- The U.S. Government has a compelling interest in ensuring that its national country-code top-level domain, the usTLD, is administered in a

secure manner and that the information contained within the usTLD is accurate, reliable and up-to date. One of the mechanisms to ensure the integrity of the usTLD is the maintenance of a complete and accurate WHOIS database.

In addition, a complete and accurate WHOIS database promotes the U.S. Government's interest in preventing identity theft, fraud and other on-line crime, in promoting the public's ability to police its rights against unlawful copyright and trademark infringement, and avoiding technical mishaps. This includes ensuring a smooth transition of domain name holders in the event that registrar goes bankrupt or otherwise becomes incapable of performing its obligations under the usTLD Registrar Accreditation Agreement and the usTLD Administrator Registrar Agreement. The government also has a compelling interest in accounting to itself and the public for the use of public assets, and ensuring that those assets are used by U.S. citizens and companies, or others with an appropriate connection to the United States, in accordance with the U.S. nexus requirement.

Finally, an accurate up-to date WHOIS database promotes the U.S. Government's compelling interest in abiding by its treaty obligations. In fact, the United States has entered into treaties with several foreign governments, including those of Australia, Singapore, and others in which each country has agreed to maintain an accurate, searchable database of personal contact information for registrants in its respective country TLD.

NeuStar operates a compliant WHOIS -- Since April 2002, NeuStar has operated an accurate, up-to-date, and publicly accessible WHOIS database and we reaffirm our commitment to this key policy requirement.

NeuStar's WHOIS service is based on a "thick data" registry model where all domain registration data is kept in the central, authoritative registry SRS database. This ensures a unified, openly accessible system for usTLD registrant data. To accommodate the widest range of users, NeuStar offers both a web-based and Port 43 WHOIS interface which can also be linked to by each usTLD Registrar that is a party to a usTLD Administrator-Registrar Agreement with NeuStar.

As required in the RFQ, NeuStar's WHOIS service allows for multiple string and field searching through a free, public, web-based interface. To thwart attempts at WHOIS data mining, NeuStar's web-based interface will provide up to seventy-five (75) responses to any given query.

The usTLD Public WHOIS Output

The WHOIS query result for domain contains the following information

- The domain name registered
- The IP address and corresponding names of the primary and secondary nameservers for the registered name
- The registrar name and URL or, where appropriate, the identity of the delegated manager that sponsors the name
- The original creation date and term of the registration
- The name and postal address of the domain name registrant
- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the billing contact for the name registered
- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the name registered

- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the administrative contact for the name registered
- Status values

Enforcement of Accurate Contact and WHOIS Information

Section 3.7.7 of the Registrar Accreditation Agreement requires that a Registrar shall require all registrants to enter into a registration agreement with a Registrar including at least the following provisions:

3.7.7.1 [Registrant] shall provide to Registrar accurate and reliable contact details and promptly correct and update them during the term of the [Registrant] registration, including: the full name, postal address, e-mail address, voice telephone number, and fax number if available of the [Registrant]; name of authorized person for contact purposes in the case of an [Registrant] that is an organization, association, or corporation; and the data elements listed in Subsections 3.3.1.2, 3.3.1.7 and 3.3.1.8.

3.7.7.2 A [Registrant]'s willful or grossly negligent provision of inaccurate or unreliable information, its willful or grossly negligent failure promptly to update information provided to Registrar, or its failure to respond for over fifteen (15) calendar days to inquiries by Registrar concerning the accuracy of contact details associated with the [Registrant]'s registration shall constitute a material breach of the [Registrant]'s Registration Agreement with the registrar and be a basis for cancellation of the [Registrant] registration.

In addition, the usTLD Accreditation Agreement was amended in early 2005 to insert a new section 3.7.7.4 that clarified and made more explicit that the provision of anonymous or proxy domain name registration services amounted to provision of inaccurate WHOIS data. The amendment provided:

“neither registrar nor any of its resellers, affiliates, partners and/or contractors shall be permitted to offer anonymous or proxy domain name registration services which prevent the Registry from having and displaying the true and accurate data elements . . . for any registered name”.

Although the requirement for accurate WHOIS information has been in ICANN's Accreditation Agreement for Registrars in the .com, .net and .org TLDs since 1998, historically, the ICANN registrar community has largely ignored these provisions. The result has been an increase in inaccurate, false or information in those WHOIS databases.

NeuStar, however, has adopted provisions in the Accreditation Agreement, the Administrator-Registrar Agreement, and the Delegated Manager Agreement that would ensure that registrars and delegated managers take affirmative steps to enforce its agreements with its own registrants. For example, NeuStar requires that registrars accept written complaints from third parties regarding false and/or inaccurate WHOIS data and requires them to investigate the accuracy of the WHOIS contact information. If the registrar determines that the information is false, inaccurate, or not up to date, the registrar is required to take action to either correct the deficiency or delete the domain name.

In addition to the above, NeuStar performs regular, weekly spot checks for valid WHOIS data and responds to allegations made by members of the public. Upon discovering a domain that appears to have invalid WHOIS data, the registrar is immediately notified and instructed to take corrective

action. This also applies to proxy registrations. We perform regular, weekly scans of the entire usTLD database searching for evidence of proxy or anonymous domain name registrations.

Proposed New WHOIS Accuracy Program ("WAP")

In addition to the above, NeuStar is proposing to launch a new WHOIS accuracy program ("WAP"), some of which has already been implemented by ICANN for gTLDs under the requirements of the Department of Commerce's Memorandum of Understanding with ICANN. NeuStar's new initiative shall include a(n):

- WHOIS/Nexus Data Reminder Policy,
- WHOIS/Nexus Data Problem Report System ("WDPRS"),
- WHOIS data accuracy audit,
- Semi-annual large random sampling of WHOIS records,
- Inspection of registrars' WHOIS functionality, and
- WAP Annual Report.

WHOIS/Nexus Data Reminder Policy. The WHOIS/Nexus Data Reminder Policy will require that a registrar present current WHOIS information to each registrant at least annually and remind the registrant that the provision of false data can be grounds for the cancellation of a registration. Registrants must review their WHOIS and Nexus data and make any necessary corrections. NeuStar shall require each registrar to demonstrate that such notices have been delivered to their registrants.

WHOIS/Nexus Data Problem Report System. The WHOIS/Nexus Data Problem Report System is a system that will be hosted by NeuStar and will be designed to receive and track third-party complaints about inaccurate, incomplete or proxy WHOIS data. The system will ask third parties to submit the basis for their belief that the WHOIS record for the applicable name is contains inaccurate, false or incomplete contact or Nexus information. In addition, the system will collect the name and e-mail address of the third party making the complaint and will confirm the third party's intent by asking the third party to confirm its complaint. All data received by NeuStar through this system will be forwarded to the registrar that sponsors the domain that is alleged to contain false or inaccurate.

Consistent with the registrars requirement under the usTLD Accreditation Agreement as more fully described above, after 30 days NeuStar will examine the current WHOIS data for names that were previously alleged to be inaccurate to determine if the information was corrected, the domain name was deleted, or there was some other disposition.

WHOIS Data Accuracy Audit and Report. NeuStar will commence a WHOIS data accuracy audit during each year of the contract that will test whether usTLD Accredited Registrars are investigating and correcting WHOIS and Nexus related contact details in response to inaccuracies reported through WHOIS Data Problem Report System. NeuStar will present this report to the DoC.

Semi-Annual Sampling of Domain Names by the Registry. On our own initiative, no less than twice per year, NeuStar will perform a manual review of a random sampling of at least 2500 usTLD domain names to test the accuracy of the WHOIS information. Although this will not include verifying the actual information in the WHOIS record, we will be examining the WHOIS data for prima facie evidence on its face of inaccuracies.

Inspection of Registrars' WHOIS functionality. In addition to all of the above, no less than once per year, NeuStar will perform a test of a significant number of registrars, to ensure that each registrar is complying with the WHOIS functionality required in the usTLD Accreditation and Registrar Agreements. This will include verifying that the Registrar is either providing a WHOIS interface directly or linking to NeuStar's authoritative WHOIS service.

WAP Annual Report. NeuStar shall present to the DoC an annual report summarizing the results of the WAP initiatives described above.

(c) Reserved Domain Names

NeuStar has a demonstrated track record of successfully managing various groups of usTLD reserved names. Consistent with existing usTLD and ICANN policies, NeuStar maintains and administers a list of certain second-level usTLD domain names reserved from registration, including the program to manage names set aside for local, state, and Federal use, for kids.us, and the program to develop specific reserve names for public benefit.

Government Reserved Name Program

Prior to the expansion of the usTLD, certain reserved names were set aside for use by local, state, and Federal use. A special program was initiated to offer designated entities within these groups the first right of refusal to register domains corresponding to their locality or Federal agency. For example, nasa.us was reserved for use by the National Aeronautics and Space Administration. An example at the local level is marincounty.us, reserved for Marin County in California. Each local and Federal entity was provided the opportunity to register their domains for terms of 3 years, 5 years, or lifetime. In addition, these entities had an option to permanently reserve the domains. At the conclusion of the program, any domain that was not registered or permanently reserved was released from the registry and made available for registration by the general public.

The Administrator of the usTLD is responsible for acting as the registrar these domains, including providing ongoing customer support, delegation support, and administering various processes such as renewals

Kids.us Reserved Names

In conjunction with the launch of the kids.us name space, NeuStar has worked with the DoC to reserve several categories of domain names specifically for kids.us.

Federal websites related to children. Our research indicated there are approximately 175 websites maintained by federal government agencies that contain content for children. We reserved names that were potentially confusingly similar to these sites, and reserved them for the appropriate agency. The intent was to make sure government agencies have the right to reserve names matching those of their own child-friendly sites before speculators or "cyber-squatters" could register such names. Our methodology for creation of this list was to include all sites that we found on the KIDS.GOV web portal maintained by the GSA.

State websites related to children. Most state governments operate web pages that include content for children. As such, NeuStar believed that domain names matching state names and abbreviations should be reserved for registration by state governments. The intent was to make sure government agencies had the right to reserve names matching those of their child-friendly sites before

speculators or “cyber-squatters” can register such names. All U.S. state and territory names, as well as their corresponding two-letter abbreviations, were included on the reserved list.

City websites related to children. Our research showed that most city governments serving a large population have web pages devoted to child-friendly material. We reserved the top 100 city names registration by city governments who wished to publish information related to children’s activities in their city. We requested that the top 100 city names be reserved, as these are prime targets for domain name speculation. The intent was to assure government agencies that they had the right to reserve names matching their child-friendly sites before speculators or “cyber-squatters” could register such names.

Registry reserved domain names. NeuStar reserved a list of domain names that are to be used by the Registry to provide services to our Registrars and distribution channel. The names are to stay with the Registry and increase the utility of the name space.

Generic high visibility domain names. NeuStar conducted research and determined the top 100 key words (domains) related to child-friendly sites on the Internet today. These untrademarked, generic names have the highest likelihood of being targeted by domain name speculators. In order to discourage speculators and increase the brand value and usability of the name space, NeuStar reserved these names and assigned them to organizations that agreed to use and promote these kids.us domain names.

All single-character labels

All two-character ISO 3166 country codes or United States Postal codes in addition to the state codes already reserved, shall be initially reserved to avoid conflict with the other country codes and the states.

Public Good Reserved Names

A second reserve name program involves developing certain generic domains for the good of the general public. At the time the space was expanded a number of generic domain names were set aside with the intention of developing them into websites for the benefit of public internet community. Administration of the reserved name development program requires specific skills and operations not normally performed by a Registry operator. We have focused on developing the zip code domains (e.g. 22314.us) into a community of sites containing localized content specific to the area surrounding the zip code. These community sites contain a number of unique features, including a usTLD domain directory of user contributed information.

Additional information on the Reserve Name Program has been provided in Proposal Section B, Sub-section C.3.2.xiii.

(d) Domain Name Transfers

After consultation with the DoC in early 2005, NeuStar undertook a careful review of the then-existing usTLD inter-registrar transfer policy that had existed since the usTLD second-level launch in April of 2002. Our recent review was undertaken as a regular review of our contractual documentation and also in response to consumer inquiries about the implementation of the .US transfer policy by certain usTLD-accredited registrars.

Upon completion of our review, NeuStar determined that Registrars had generally followed both the intent and letter of the existing policy, but that in a few instances certain business policies

implemented by some Registrars led to minor conflicts with the existing policy. While these conflicts were rare and generally had minimal impact on the .US consumer, we felt it was important and appropriate to address them in a proactive and straightforward manner that will help to prevent similar situations in the future.

In order to address these concerns, NeuStar developed and implemented an amended Transfer Policy (See Proposal Section I), including a Standard Form of Authorization that a Registrar must use in obtaining consent to transfer (See Proposal Section I). In addition, see Section B, Sub-section C.4.1(v)(d) for a summary of the details of the transfer policy.

As further set forth in the policies, both the Administrative Contact and the registrant, as listed in the usTLD Administrator's publicly accessible WHOIS service, are the only parties that have the authority to approve or deny a transfer request to the Gaining Registrar. In the event of a dispute, the registrant's authority supersedes that of the Administrative Contact. In this Proposal Section, the registrant and the Administrative Contact are collectively referred to as the "Registered Name Holder."

Through accredited usTLD registrars, NeuStar collects a unique "AuthInfo" code from Registered Name Holders. The "AuthInfo" code is the usTLD domain registrant's unique identifier that verifies they are the actual owner and that the transfer request is legitimate.

- Registrars must provide all Registered Name Holders with their unique "AuthInfo" code within five (5) calendar days of the Registered Name Holder's initial request if the Registrar does not provide facilities for the Registered Name Holder to generate and manage their own unique "AuthInfo" code.
- In addition, Registrars may not employ any mechanism for complying with a Registered Name Holder's request to obtain the applicable "AuthInfo" code that is more restrictive than the mechanisms used for changing any aspect of the Registered Name Holder's contact or name server information.
- The Registrar must not refuse to release an "AuthInfo" code to the Registered Name Holder solely because there is a dispute between the Registered Name Holder and the Registrar over payment.
- Registrar-generated "AuthInfo" codes must be unique on a per-domain basis. The "AuthInfo" codes must be used solely to identify a Registered Name Holder.

NeuStar has determined that ongoing evaluation of the transfer policy would be beneficial to ensure that the interests of the American consumer continue to be served. As such, we will commit to regular reviews of the usTLD transfer policy in close coordination with DoC and the usTLD-accredited registrars to ensure an efficient and straightforward process. Our goal is to develop and refine a transfer policy that takes into consideration the legitimate operational and business concerns of the registrars while protecting the needs and interests of the American consumer by ensuring the portability of usTLD domains, the enhancement of competition at the registrar level, and the maximization of consumer choice.

Bulk Transfer After Partial Portfolio Acquisition

Bulk Transfer After Partial Portfolio Acquisition (BTAPPA) is a registry service available to consenting Registrars where one accredited usTLD Registrar purchases, by means of a stock or asset purchase, merger, or similar transaction, a portion, but not all, of another accredited usTLD registrar's domain name portfolio.

For more detail on this new proposed service in the usTLD, please refer to Proposal Section J.4.

(e) Redemption Grace Period (RGP)

In May 2004, NeuStar proposed a policy that allows registrants to restore expired or deleted domain registrations within a reasonable time period. The following proposal was approved by the U.S. Department of Commerce through Contract Amendment 013 on June 1, 2004. We reaffirm our commitment to this policy and recommend no changes.

NeuStar's 2004 implementation is a fully automated, EPP-compliant Redemption Grace Period (RGP) for .US domain names. The NeuStar RGP will enable registrars to restore registered usTLD domain names that have been inadvertently deleted through registrant or registrar error, but which are still within a designated 30-day Redemption Period. Here are the key highlights of our RGP implementation:

- In order to remain EPP-compliant, NeuStar only uses domain statuses defined in the current EPP specifications. As such, a domain slated for deletion will remain in PendingDelete status for 35 days or until it is restored.
- All domains deleted outside the Add Grace Period will be placed on PendingDelete status for a total of 35 days, after which time, the names will be purged from the Registry database and made available again for registration.
- During this PendingDelete timeframe, a domain name is only redeemable for the first 30 days, and cannot be otherwise modified. The only action allowed by the registrar is the restoration of the domain name.
- Upon being placed in PendingDelete status, a domain name will be immediately removed from the DNS, but will remain in the WHOIS with a notation about their dates of deletion in the "Last Updated Date" field.
- At the conclusion of the 30-day restoration period, the domain will remain on PendingDelete for an additional five days. During this time, the domain cannot be restored, modified, deleted, or transferred. At the conclusion of this five-day period, the domain will be purged from the Registry database.
- NeuStar will use the existing EPP Renew command as the basis for the Restore command. In addition, EPP extensions will be used to capture additional required information as described below.
- Registrars may only restore a domain in order to correct unintentional deletions caused by the registrant or registrar. Restoring registered domains in order to assume the rights to use or sell them will be considered a violation of the Registry-Registrar Agreement.
- Registrars must verify their compliance with the intention of the RGP service by submitting a Registrar Restore Report to the Registry. The primary purpose of the report is to identify the circumstance that led to the Restore request. NeuStar will take advantage of its "thick data" registry to collect the reporting data at the time the Restore command is submitted.

In addition, the following information must be submitted by the registrar to NeuStar as part of the Restore command. Failure to provide all of the following data at the time the command is submitted will result in a failure to restore the domain name.

- Written explanation and corresponding reason code as to why registered name was restored (e.g., registrar error, dispute resolution, etc.);

- Written statement affirming that registrar has not, unless required by law, restored the .US domain name in question in order to assume the rights to use or sell the name for itself or for any third party;
- Written statement affirming that information in report is factually accurate to the best of the registrar's knowledge;

NeuStar will retain copies of all Registrar Restore and will provide the United States Department of Commerce with such reports as requested. For the first five (5) days of the RGP, a domain name that has been unintentionally deleted can be restored for a one-time fee of \$6.00; The cost of restoring an accidentally deleted name will be raised to a one-time fee of \$40.00 for the remaining 25 days of the RGP.

Please also note that fees associated with the restoration of a domain name through the RGP are separate and apart from the fees that are due and payable to NeuStar for the registration or renewal of a domain name. Thus, if a domain name is deleted within five (5) days of the expiration of a domain name registration and a domain name registrant would like to restore the name through the RGP, the registry would charge the registrar the \$6 for the restoration plus \$6.00 for the renewal of the domain name. If the restoration occurs more than five (5) days after the expiration of the domain name, the registry would charge the registrar \$40 for the restoration of the domain name plus \$6.00 for the one (1) year renewal of the domain name registration.

(f) Domain Name Review

In April 2002, NeuStar developed and implemented the following usTLD Domain Review policy. We reaffirm our commitment to this policy and propose no changes.

The usTLD Administrator will follow a policy to preserve and enhance the value of the .US Internet address to all users, including, in particular, state and local governments, libraries, and K-12 schools. Given the importance of as a national public resource, certain guidelines must apply. Therefore, NeuStar reviews, for possible deletion, all registered second-level and locality domain names that contain, within the characters of the domain name registration, any of the seven words identified in *Federal Communications Commission v. Pacifica Foundation*, 438 U.S. 726, 98 S. Ct. 3026, 57 L.Ed.2d 1073 (1978), the "Seven Words".

(g) Registration Abuse & Internet Security

NeuStar believes that the role of the usTLD Administrator is similar to that of a trustee of an important public resource. Indeed, NeuStar submits that this should be the role of the administrator for any ccTLD. Given this role, the usTLD Administrator is responsible for the development of sound policies and procedures designed to ensure that the Administrator's operations serve the public interest.

To properly serve the public interest in the usTLD context, the usTLD Administrator must implement a policy that combats abuses of the usTLD registration system including practices that harm, mislead, or confuse consumers and that misuse intellectual property.

In addition to implementing the usDRP as set forth above and in Proposal Section J.2 which has the effect of curbing the misuse of domain names that are registered or used in bad faith, NeuStar has already implemented programs specifically aimed at improving the integrity of the usTLD and curbing abusive domain name practices. This includes, but is not limited to:

4. implementing an aggressive enforcement program of accurate contact, Nexus, and other WHOIS information,
5. the combating of phishing, bot-nets, malware and other abusive behaviors that leverage the DNS, and
6. curbing or eliminating the abuse of the add-grace period, which was originally intended to protect registrants.

1. Enforcement of Accurate Contact, Nexus, and WHOIS Information

An aggressive WHOIS enforcement program is one of the best ways to deter abusive registration practices. A complete and accurate WHOIS database promotes the U.S. government's interest in preventing identity theft, fraud and other on-line crime, in promoting the public's ability to police its rights against unlawful copyright and trademark infringement, and avoiding technical mishaps.

As further discussed in Section B, Subsection C.4.1.v.b above, NeuStar is proposing to launch the WHOIS Accuracy Program. As part of the WAP, NeuStar recommends implementing the following proven successful programs implemented by ICANN, including:

WHOIS/Nexus Data Reminder Policy which will require that a registrar present current WHOIS information to each registrant at least annually and remind the registrant that the provision of false data can be grounds for the cancellation of a registration;

WHOIS/Nexus Data Problem Report System, which will be a system designed to receive and track third party complaints about inaccurate, incomplete or proxy WHOIS data;

WHOIS Data Accuracy Audit and Report, where NeuStar will commence a WHOIS data accuracy audit during each year of the contract that will test whether usTLD Accredited Registrars are investigating and correcting WHOIS and Nexus related contact details in response to inaccuracies reported through WHOIS Data Problem Report System;

Semi-Annual Sampling of Domain Names, whereby NeuStar will perform a manual review of a large number of domain names, randomly selected, to test the prima facie accuracy of WHOIS records;

Inspection of Registrar WHOIS Functionality, where NeuStar will enforce a Registrar's requirement to either provide a WHOIS interface or link to NeuStar's authoritative WHOIS service; and

WAP Annual Report, presented to the DoC, describing the results of the WAP initiatives described above.

2. Prevention of Phishing, Malware, Bot-nets and other abusive DNS practices

NeuStar believes that the usTLD Administrator must not only aim for the highest standards of technical and operational competence, but also needs to act as a steward of the space on behalf of the U.S. government in promoting the public interest.

One of those public interest functions for a responsible domain name registry includes working towards the elimination of fraud and identity theft that result from phishing, pharming, and email spoofing of all types involving the DNS. In addition, although traditionally bot nets have used Internet relay chat (IRC) servers to control registry and the compromised PCs, or bots, for DDoS attacks and the theft of personal information, an increasingly popular technique, known as fast-flux



DNS, allows botnets to use a multitude of servers to hide a key host or to create a highly-available control network. This ability to shift the attackers infrastructure over a multitude of servers in various countries creates an obstacle for law enforcement and security researchers to mitigate the effects of these botnets. But a point of weakness in this scheme is its dependence on DNS for its translation services. By taking an active role in researching and monitoring these sorts of botnets, NeuStar has developed the ability to efficiently work with various law enforcement and security communities to begin a new phase of mitigation of these types of threats.

A usTLD Administrator must have the policies, resources, personnel, and expertise in place to combat such abusive DNS practices. NeuStar, as the usTLD Administrator, is at the forefront of the prevention of such abusive practices and is the only known registry operator to have actually developed and implemented an active "domain takedown" policy. No other registry operator has been known to implement processes to effectively combat these issues.

NeuStar's active prevention policies stem from the notion that registrants in the usTLD have a reasonable expectation that they are in control of the data associated with their domains, especially its presence in the DNS zone. Because domain names are sometimes used as a mechanism to enable various illegitimate activities on the Internet (including malware, bot command and control (C&C), pharming, and phishing) oftentimes the best preventative measure to thwart these attacks is to remove the names completely from the DNS before they can impart harm, not only to the domain name registrant, but also to millions of unsuspecting Internet users.

Removing the domain name from the zone has the effect of shutting down all activity associated with the domain name, including the use of all websites and e-mail. Thus, the use of this technique should not be entered into lightly. NeuStar, therefore, has an extensive, defined, and documented process for taking the necessary action of removing a domain from the zone when its presence in the zone poses a threat to the security and stability of the infrastructure of the Internet or the NeuStar registry. NeuStar has been successfully implementing this first-of-its kind program since 2006.

Need for Confidentiality

The takedown or potential takedown of domain name registrations is an extremely sensitive topic that NeuStar does not take lightly. The practices and procedures described in this section are deemed highly confidential and have not been disclosed to any entity other than the Department of Commerce and select security organizations under a non-disclosure agreement. Although NeuStar's program is the most aggressive in the industry, it prefers to keep this information confidential to prevent those "bad actors" from acquiring this knowledge and developing new practices that circumvent the processes implemented by NeuStar.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Proposed Change to usTLD Administrator-Registrar Agreement

Although we believe the current usTLD Agreement allows the usTLD Administrator to “take down” domain names that are used for phishing pharming, malware, bot-nets or other abusive or fraudulent purposes, we believe there is value is explicitly spelling this out in the agreement. The proposed new section IV of Exhibit E states:

IV. Reservation

usTLD Administrator reserves the right to deny, cancel, or transfer any registration that it deems necessary, in its discretion; (1) to protect the integrity and stability of the registry; (2) to comply with any applicable laws, government rules or requirements, requests of law

enforcement, in compliance with any dispute resolution process; (3) to avoid any liability, civil or criminal, on the part of usTLD Administrator, as well as its affiliates, subsidiaries, officers, directors, representatives, employees, and stockholders; (4) for violations of this Agreement (including its Exhibits); ~~or~~ (5) to correct mistakes made by usTLD Administrator or any registrar in connection with a domain name registration or (6) to prevent the use of a domain name for the submission of unsolicited bulk e-mail, phishing, pharming, malware, bot-nets or other abusive or fraudulent purposes. usTLD Administrator also reserves the right to freeze a domain name during resolution of a dispute. (*emphasis added*).

3. Abusive Use of Add Grace Period: Domain Name Tasting

The Problem

By way of background, the Add Grace Period (AGP) is used by most prominent ccTLD and gTLD registries, including .us, .uk, .biz, .com, .net and .org. The original intent of the AGP was to allow the no-cost cancellation of a domain registration when registrants or registrars mistyped or misspelled domain names during the registration process. In addition, AGP can also be used by registrars to correct system errors. For example, if names are erroneously added at the registry, the fees can be refunded to the registrar if the names are deleted during the AGP. AGP may help registrars recover some losses from failed payment transactions or fraud cases, although many of these types of scenarios extend beyond the first five days of registration.

Recently, the growth of Internet advertising and overall Internet usage has helped the emergence of "traffic" businesses that make heavy use of domain names. By registering many domain names, generating many websites, and attracting users ("traffic"), registrants can profit.

"Domain tasting" is the first step in a monetization practice employed by registrants to use the five day add-drop grace period ("AGP") to register domain names in order to test their profitability. During this "tasting" period, registrants conduct a cost-benefit analysis to determine if the tested domain names return enough traffic that can be monetized to offset the registration fee paid to the registry over the course of the registration period. Critics of domain tasting argue, however, that such practice amounts to the "systematic exploitation" of the AGP to gain access to domain names without cost. In addition to domain tasting is a phenomena known as "Domain Kiting" in which a registrant is continuously able to register a domain name, drop it within the five-day AGP, and re-register the domain name at no net cost.

The usTLD did not experience a significant amount of domain tasting prior to November 2006. However, since that time, we have noticed that registrars that have been "known gTLD tasters" have begun to participate in this practice in the usTLD. In November 2006, we observed an increase in the amount of deletions from approximately 9% to 25%. This number has been increasing every month. In fact, in June 2007, we estimate that approximately 42% of all domain name registered that month were deleted during the 5 day AGP. Of that amount, we estimate that approximately 3-5% of new registrations were deleted in connection with a legitimate use of the AGP.

According to the Domain Tasting Issues Reports submitted by the At-Large Advisory Committee of ICANN (<http://gnso.icann.org/mailing-lists/archives/council/msg03474.html>), "[n]ames to be registered for Domain Tasting can generally come from several sources:

- Variations of existing names taking advantage of spelling mistakes (typosquatting), company name/abbreviation confusion and gTLD/ccTLD confusion.

- Names not renewed by previous owners.
- Domain names composed of a recently registered second-level domains with other TLDs.”

Critics have argued that the negative consequences associated with domain tasting/kiting, include:

- **Threatening Destabilization of the Domain Name System** – The tremendous volume and rate of registrations and deletions associated with tasting and kiting is described as placing operational loads on Registry systems that are orders of magnitude above steady-state operations.
- **Facilitation of Trademark Abuse** - Automated registration systems permit registration of virtually every typographical permutation of a trademark in order to test for traffic, facilitating trademark infringement on a massive level. Further, by the time the trademark owner discovers that a domain name identical or similar to its trademark has been registered, it is often too late for the trademark owner to act, as the domain name has already been deleted, along with the WHOIS data.
- **Facilitation of Criminal Activity** – Due to the transient nature of AGP-deleted registrations, it is difficult for law enforcement to trace the registrant of tasted domains, which makes these domains ideal candidates for phishing, pharming, and other forms of internet fraud.

See <http://gns0.icann.org/mailing-lists/archives/council/msg03474.html> for the complete list.

NeuStar's Proposal to Eliminate Abuse of the Add/Drop Period

A number of proposals on dealing with domain tasting and the abuse of the AGP have been circulating around both the gTLD and ccTLD communities. One option advocated by the most aggressive intellectual property holders is to eliminate the Add Grace Period completely. NeuStar does not recommend this solution because it completely ignores the benefits provided by the AGP to “well-intentioned” registrants; namely, to allow registrants to receive a refund for an accidental registration of a .us domain name. In addition, registrars have used the AGP as a five-day period to detect credit card fraud and reduce their own exposure by deleting these domain names.

A second option, which NeuStar believes preserves the integrity and intent of the original rationale behind the AGP is to allow a number of “free” deletes during the AGP per registrar relative to the size of that registrar, and then issuing no refunds to the registrar for any deletes above that number, except in extraordinary circumstances. In other words, NeuStar would allow a registrar each month to delete up to (i) 10% of its new registrations or (ii) fifty (50) domain names, whichever is greater. NeuStar bases the limit of 10% on observations of known, legitimate registrars deleting up to 8 or 9% of new registrations each month.

For example, if a registrar registers 1,000 new domain name registrations in a given month and deletes 150 names, at the end of the month, the registrar would receive a credit from NeuStar for the deletion of 100 of those domain names (10% of 1000), but not for the additional 50 names. Recognizing that a small number of deletions by a registrar that does a smaller volume of new registrations could be adversely impacted by the percentages, we allow each registrar to delete up to 50 .us domain names during AGP regardless of the registrar’s size. Thus, a registrar that registers 250 .us domain names in a given month would be able to delete up to 50 domain names during AGP at no charge despite the fact that this would be 20% of its total monthly registrations.



NeuStar believes that requiring domain name tasters to pay full price for any domain names deleted above the 10% threshold will increase the costs of domain tasting so much that it will greatly exceed any potential benefits to the domain tasters.

NeuStar will formally present this proposal to the DoC for its approval.

(v.h) Other Policies

With the exceptions of what we have described elsewhere in Proposal Section B, Subsections C.3.2.viii, C.4.1, or in Proposal Sections J-1 through J-7, we do not have any further policies to fulfill our requirements and increase the use of or otherwise improve the usTLD.

(v.i) Code of Conduct

Since assuming responsibility as usTLD Administrator in October 2001, NeuStar has abided by the following usTLD Administrator Code of Conduct. We reaffirm our commitment to this Code of Conduct and propose no changes.

usTLD Administrator Code of Conduct

To ensure the provision of neutral usTLD administrative services, NeuStar will comply with this Code of Conduct.

1. NeuStar will conduct periodic reviews of its policy and operation structures to ensure continuing operation of the usTLD in the public interest.
2. NeuStar will ensure that improvements and enhancements developed for the usTLD will benefit both the expanded and locality-based spaces of the usTLD.
3. NeuStar will not, and will require that its subcontractors do not, directly or indirectly, improperly show preference or provide special consideration to any usTLD Accredited Registrar, Delegated Manager or usTLD Registrant versus any other usTLD Accredited Registrar, Delegated Manager, or usTLD Registrant.
4. All usTLD Accredited Registrars, Delegated Managers, Locality Registrants and expanded usTLD Registrants (collectively referred to as "usTLD Users") shall have equal access to Administration Services provided by NeuStar.
5. NeuStar will ensure that no data or proprietary information from any usTLD User is disclosed to its affiliates, subsidiaries, or other related entities, or to other usTLD Users, except as necessary for usTLD Administrator management and operations.
6. Registry Operator will not disclose Confidential information about its Registry Services to employees of any usTLD User with the intent of putting them at an advantage in obtaining usTLD Administration Services from NeuStar, except as necessary for usTLD Administrator management and operations.
7. NeuStar will conduct internal neutrality reviews on a regular basis. In addition, NeuStar and DoC may mutually agree on an independent party to conduct a neutrality review of NeuStar, ensuring that NeuStar and its owners comply with all the provisions of this Code of Conduct. The neutrality review may be conducted as often as once per year. NeuStar will provide the analyst with reasonable access to information and records appropriate to complete the review. The results of the review will be provided to DoC and shall be deemed to be confidential and proprietary information of NeuStar and its owners.

C.5 Locality-based usTLD Structure Functions

NeuStar's administration of the usTLD guarantees uninterrupted administrative, operational and technical support of the usTLD locality-based structure, including no-cost service for Delegated Managers and locality registrants. We are committed to securing agreements with every user of a usTLD locality name to ensure and enforce all usTLD policies and to bring greater accountability to the legacy space.

Introduction

When NeuStar assumed responsibility for the management and administration of the usTLD in October 2001, we inherited the legacy Locality-based usTLD Structure from the previous operator. During the last usTLD procurement, it was estimated that approximately 8,000 locality names and 800 Delegated Managers existed. Over the last six years, NeuStar has identified over 17,000 locality names and 1,500 Delegated Managers and we continue to work diligently to bring order to this space.

NeuStar has worked closely with the DoC to develop a framework for the management of the usTLD including unique and specific policies, procedures and agreements covering the Locality-based usTLD Structure.

The current usTLD Administrator contract required that NeuStar conduct an investigation and submit a report evaluating the compliance of existing locality sub-domain managers with the requirements of RFC 1480 and other documented usTLD policies. In addition, we were required to recommend structural, procedural, or policy changes designed to enhance such compliance and increase the value of the locality-based structure to local communities.

On June 14, 2002 an Interim Policy was incorporated into the usTLD contract through Contract Modification 002. This Interim Policy stated that, until completion of the compliance report process, NeuStar would assume responsibility for the operation of all of the currently undelegated name spaces identified in RFC 1480 and created by the prior operator. NeuStar thus became the interim Delegated Manager for all such names and now runs the nameservers for those names. NeuStar's role as the Delegated Manager for this space and its operation of the corresponding nameservers was intended to be an interim role until completion of the usTLD locality space compliance report process. Please see Proposal Section B, C.3.2.xiii for more information on NeuStar's operation as a registrar in the locality space.

Highlights

- **Since 2001, NeuStar has identified over 17,000 locality domains and over 1,500 Delegated Managers.**
- **NeuStar currently supports 9,630 third-level sub-domains, including 4,331 for which NeuStar is the de facto Delegated Manager.**
- **NeuStar has secured agreements with 605 Delegated Managers and 329 locality registrants.**
- **NeuStar continues to identify and work with Delegated Managers and locality registrants to secure agreements and to transition delegations.**
- **NeuStar is executing a locality compliance program and has re-delegated approximately 4,700 lame-delegated locality names.**
- **Any change in usTLD Administrator would negatively impact the progress made to date, and any potential for a completion of the compliance program.**

In 2003, in accordance with contractual requirements, NeuStar conducted an in-depth investigation of the locality space and in April 2004 submitted a comprehensive report on our findings. This report has been included as Appendix C and is also available online at http://www.neustar.us/delegated_managers/usLocCompReport.html.

The report describes:

- Methodology of the study;
- Review of the creation and structure of the locality space of usTLD; and
- Description of the existing locality space usage.

Based on this investigation, NeuStar determined that the absence of a contractual framework among relevant parties (usTLD Administrator, Delegated Managers, Locality Registrants) contributed to confusion, litigation, and a lack of accountability. This lack of accountability fostered inadequate compliance with usTLD policies among existing users and managers of the Locality space and an inadequate enforcement mechanism to the usTLD Administrator and the DoC. The following actions were recommended in order to increase the functionality, utility, reliability of the locality space:

- The development and introduction of a Lame 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.

In furtherance of these recommendations, NeuStar submitted a proposal to the DoC recommending a comprehensive Delegated Manager policy covering each of the above items, including a proposed standard agreement for all Delegated Managers. Subsequently, we submitted a proposed Locality Registrant agreement that was ultimately approved on August 24, 2006. A copy of each of these agreements can be found in Appendix D. In addition, an in depth analysis of these agreements and a discussion of their implementation is described in Proposal Section G.

Those agreements state that Delegated Managers will continue to receive ongoing technical support by the usTLD Administrator and that support shall be defined and implemented. The Locality space delegation WHOIS data must be maintained and recorded so that the current usTLD Administrator, the DoC, and any future usTLD Administrator can transition the space with confidence that all contact data is accurate and up-to-date. Further, the DoC, and the U.S. law enforcement community must be able to rely upon accurate WHOIS data for the all domains in the usTLD space, including for Delegated Managers.

As of June 30, 2007 NeuStar has secured a total of **934** agreements (**605** Delegated Manager agreements and **329** Locality Registrant). We are continuing our efforts to secure agreements covering all other locality domains that are in use, and to re-delegate those names that are not in use.

Negotiations with Locality Governments

To ensure full compliance with all usTLD policies, we continue to work with state and local governments to secure Delegated Manager and locality registrant agreements. The usTLD Administrator must have the legal expertise in U.S. Government contract law to effectively and

responsibly deal with state and local government officials on negotiations related to the relevant locality agreements. Only through this knowledge and experience can the usTLD Administrator balance the needs of the states and localities to comply with their own statutes and regulations, while also ensuring the effective administration and operation of the locality-based structure and the U.S. Government need for the usTLD Administrator to modify its policies governing the operation of the usTLD. **NeuStar is the only registry operator with such experience.**

Services for Existing Delegated Managers and Registrants

NeuStar is currently providing service for all known existing Delegated Managers and registrants which includes SRS, DNS, WHOIS and customer support. We are committed to our continued support of managers and users of the locality-based usTLD structure.

In close cooperation with the DoC, NeuStar has developed and implemented a contractual framework that ensures all Delegated Managers abide by usTLD polices and maintain minimum technical and service requirements. The procedure and mechanism to secure these agreements from Delegated Managers and locality registrants was submitted by NeuStar to the COTR on March 16, 2007. NeuStar currently serves as de facto Delegated Manager for 9,673 locality domains, including those domains for which there is no known alternate Delegated Manager.

As the incumbent usTLD Administrator, NeuStar is best positioned to ensure continued service and support for existing locality-based Delegated Managers and locality registrants under current practice. Any new bidder for the usTLD will have a significant learning curve and will require significant training, education and oversight from the COTR.

Notable Delegated Manager Policies

The following key policies have been incorporated into the usTLD Administrator-Delegated Manager Agreement.

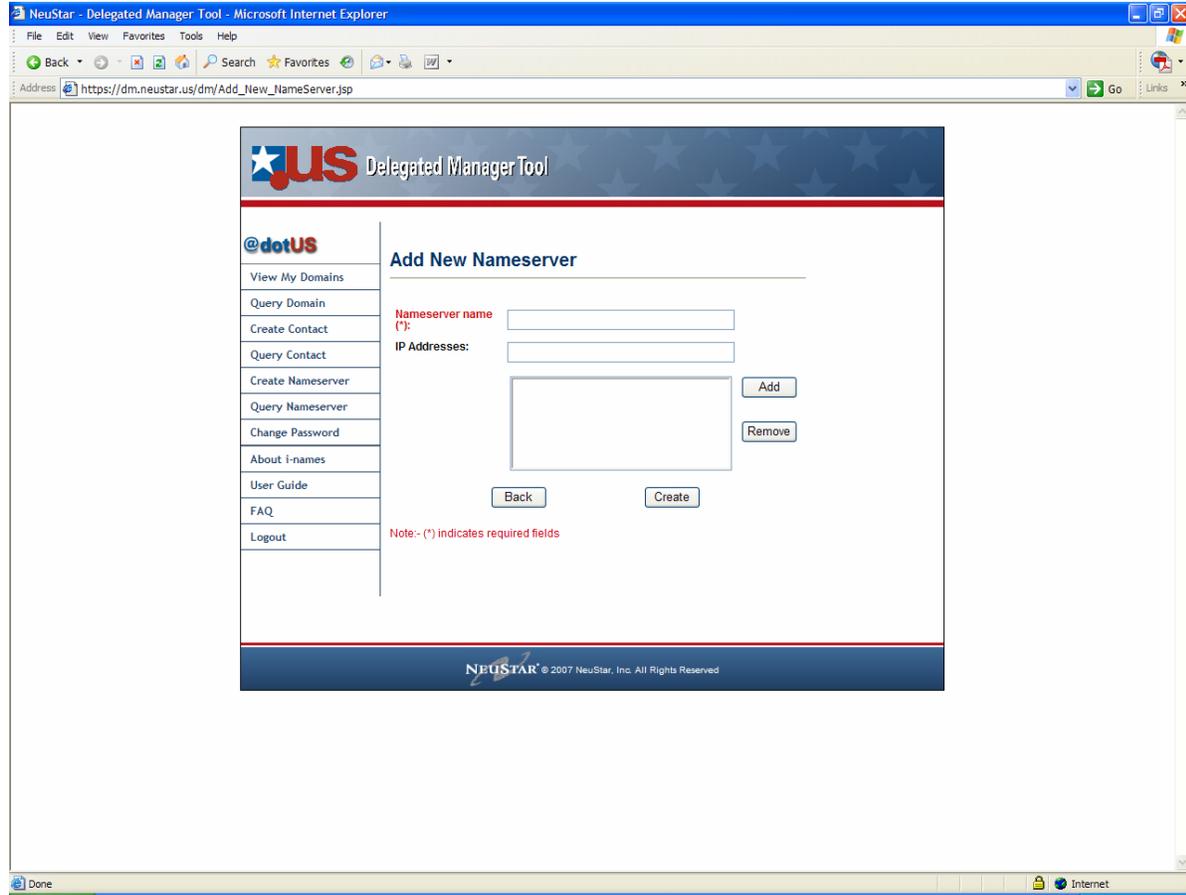
- No new Delegated Managers will be authorized in the .US Locality space. While the existing Delegated Managers perform a valuable function that has historical significance, there is no benefit to be gained by adding new Delegated Managers.
- For existing Delegated Managers, a contractual relationship is required between each Delegated Manager and the usTLD Administrator outlining obligations and rights of both parties. Also, a contractual relationship is required between each Delegated Manager and the registrants of locality domains outlining obligations and rights of both parties.
- As a component of that agreement, Delegated Managers are required to provide explicit levels of customer service that can be enforced, including fair and reasonable customer service response times for updates and changes to the domain record. To ensure performance levels are being met, the usTLD Administrator has enabled a customer support reporting mechanism so that users of the locality space can report a Delegated Manager that has not met its contractual obligations. In the event a Delegated Manager is not responsive, the usTLD Administrator retains the right to take back delegations if and when Delegated Managers do not meet their contractual obligations, and after defined cure periods have passed.
- As the registrant of the legacy domains, state and local governments has the right to take direct control of their locality delegations, if they so choose.

- Delegated Managers will be required to report every new sub-delegation to the usTLD administrator and added to a master list of all delegations, and that each Delegated Manager maintain accurate and up-to-date information in the WHOIS database. Further, Delegated Managers are required to use their delegations or give them up. In other words, a prohibition against “lame delegations” that do not resolve for a specified period of time. The usTLD Administrator also supports a process for transferring locality delegations between existing Delegated Managers, provided such transfers are coordinated directly with and approved by the usTLD Administrator in advance of the actual transfer of responsibility. Any fees charged by Delegated Managers must be fair and reasonable.
- To the extent not inconsistent with other usTLD policies, Delegated Managers are required to comply with RFC 1480, and any successor document.
- Delegated Managers are required to agree to provide equal access and support to all registrants of locality names.
- Delegated Managers are required to comply with US Nexus and other usTLD policies, and to comply with all DoC-mandated requirements.
- Delegated Manager must have a “registration agreement” with the localities that require the locality registrants to agree to (a) usTLD Dispute Resolution Policy and Rules, (b) usTLD Nexus Requirements, (c) Nexus Dispute Policy and Rules, and (d) Registration Review Policy (April 22, 2002)
- Delegated Managers shall obtain and supply accurate and up-to-date contact information from locality registrants, and the Delegated Manager must follow specific enforcement provisions to ensure registrant accurate information.
- Delegated Managers shall agree, and shall require registrants to agree, to allow their information to be publicly displayed in the central WHOIS database operated by the usTLD Administrator.
- Delegated Managers must agree to submit to usDRP. In addition, in the event of a dispute between the Delegated Manager and the registrant of a locality domain, the Delegated Manager gives the usTLD Administrator permission to take back the delegation until the dispute is resolved.
- The usTLD Administrator reserves the right to deny, cancel or transfer any registration that it deems necessary, in its discretion, and the usTLD Administrator is given rights to terminate the agreement (take back the delegations) in certain events.
- The Delegated Manager Agreement contains express provisions stating that there are no third party beneficiaries.
- Any fees charged by Delegated Managers must be fair and reasonable and, in the event Delegated Managers elect to transfer delegations to one another, the usTLD Administrator must be notified in advance and must authorize the transfer.

Delegated Manager Tool

In addition to the contractual obligations specified in the Delegated Manager Agreement, NeuStar has also introduced a web-based “Delegated Manager Tool” (DMT) that provides a secure access point to the usTLD Administrator SRS database. The DMT allows those Delegated Managers who have executed the required Delegated Manager Agreement to directly update their locality domain records in the usTLD registry. Specifically, the DMT [REDACTED] is a simple-to-use web

application that provides a means for Delegated Managers to manage WHOIS and DNS changes in real time. Through this tool, Delegated Managers will be able to manage nameservers and contacts associated to their domains without have to go through a manual request to NeuStar's customer support team.



Process for Rescinding Delegation

In close coordination with the DoC, NeuStar has developed a process for rescinding the delegation of any Delegated Manager that does not execute the required Delegated Manager Agreement abide by usTLD policies and minimum technical and service requirements.

Additionally, NeuStar has a process in place to help identify unknown Delegated Managers and locality registrants including targeted outreach and communication by postal mail, email, phone and media. We are currently executing on that plan. Since taking over responsibility for usTLD in 2001, NeuStar has allocated significant resources to the usTLD locality compliance project. There are currently a number of NeuStar employees from a variety of functional areas (including External Relations, Legal, Support and Operations) assigned to work with Delegated Managers and .US Locality registrants to move the compliance project to completion.

NeuStar is confident that the existing process, as approved by the DoC, is working and we reaffirm our commitment to bringing order to the locality space. We will continue to evaluate our progress and, as necessary, propose additional procedures and/or mechanisms to facilitate the continued

improvement of the locality space. As this work is ongoing and often involves negotiations with state and local governments, a transition of these functions at this time may negate the significant progress made to date in bringing integrity, confidence and contractual compliance to the space.

Services for Undelegated Third Level Sub-Domains

NeuStar currently provides direct registry and registrar services for all undelegated third-level locality sub-domains. In the event a third-level locality domain is not administered by a separate Delegated Manager, NeuStar is the de facto Delegated Manager. By providing DNS resolution, SRS registration, and WHOIS service for the locality-based structure, NeuStar currently supports 9,630 third-level sub-domains, including 4,331 for which NeuStar is the de facto Delegated Manager.

Locality-Based usTLD Processes

NeuStar maintains and updates the existing automated locality-based usTLD delegation and registration process, including the electronic database of historical usTLD registration data.

Coordinate Locality-Based usTLD Users

NeuStar maintains a website for Delegated Managers, locality registrants, and other interested parties about the usTLD and to facilitate discussion of issues related to the operation and management of the locality-based usTLD structure. In addition to the existing usTLD website, NeuStar has developed and will introduce a usTLD blog page and bulletin board to further facilitate coordination of locality based usTLD users. This is discussed further in Proposal Section L.

WHOIS Database of usTLD Delegated Managers and usTLD Registrants

NeuStar currently maintains and updates the available public WHOIS database of usTLD Delegated Managers. We are continually adding new domain record contact data and updating existing data to ensure accuracy and compliance with all usTLD policies.

NeuStar is currently executing the usTLD locality compliance project to identify, locate and secure accurate contact data for every existing locality registrant and Delegated Manager. NeuStar's plan requires that each Delegated Manager and locality registrant execute an agreement and provide accurate and current data to populate the usTLD WHOIS database.

NeuStar's existing usTLD WHOIS database supports multiple string and field searching through a reliable, free, public, web-based interface.

Ensuring the Accuracy of Data: Take-Back

NeuStar has established a set of mechanisms to ensure the accuracy of data obtained from Delegated Managers and locality registrants. We conduct periodic reviews and enforce the requirements in the Delegated Manager and Locality Registrant agreements. Throughout the contract we have provided annual compliance reports to the COTR and we will continue to do so throughout the term of the new contract.

NeuStar's investigation into the accuracy of the locality-space uncovered more than 9,000 locality names and 700 Delegated Managers that were previously unknown. Further, our investigation indicated that the large majority of locality names were not currently in use ("lame delegations"). In addition, many Delegated Managers have ceased providing service to their locality registrants. As a result, NeuStar has assumed responsibility as the default and de facto Delegated Manager to these registrants.

In order to bring order to the locality-based structure, NeuStar implemented a Take-Back process that facilitates the reclamation of delegations that fall into any of the following categories:

- Locality domain is not in use;
- Delegated manager has ceased providing service; or
- Delegated manager is unwilling or unable to sign the required Delegated Manager Agreement.

Take-Back Scenarios

NeuStar has identified five possible take-back scenarios that require varying approaches for completing a take-back. The scenarios are identified by the nature of cooperation received from the Delegated Manager (DM) of record. The take-back scenarios as proposed on January 25, 2007 were:

1. Cooperative
2. Uncooperative
3. Unresponsive
4. Unknown
5. Government.

usTLD Take-Back Activities (High-Level)

Since taking over responsibility for the usTLD in 2001, NeuStar has allocated significant resources to the usTLD locality compliance project. There are currently a number of NeuStar employees working almost exclusively with Delegated Managers and locality registrants to move the compliance project to completion. Further, in 2007 NeuStar hired six temporary employees to assist with the highly manual and time-consuming back-office investigation process and the data entry required to conduct a 'take-back', or re-delegation of locality names to NeuStar.

Following is an overview of the process flow for each of the 17,039 locality domains identified by NeuStar. This process has been ongoing since early 2003. There are four main phases of activity: (1) Investigation; (2) Outreach; (3) Compliance; (4) Take-back.

Exhibit B-10 illustrates the high-level flow to initiate Take-back activity.

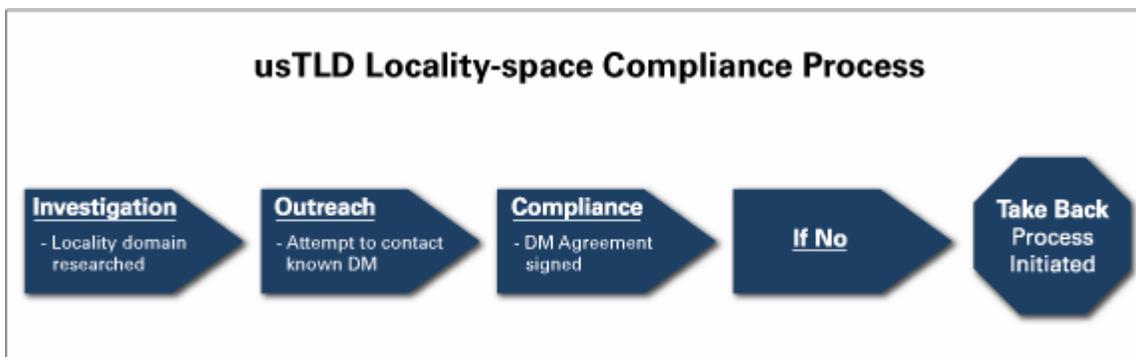


Exhibit B-10. NeuStar uses "Take Back" to maximize and enforce compliance in the locality-based structure.



NeuStar has completed the take-back of the Phase 1 locality domains - approximately 6,000 locality domains with unknown DMs. Based on NeuStar's extensive investigation of these domains, we are confident they are inactive, or 'lame delegations'. First taking back the group of lame delegations and names with unknown DMs will serve to significantly reduce the number of total locality names awaiting action and will help NeuStar better identify names that are in use but are not covered by either a Delegated Manager or Locality Registrant agreement.

Following is the chronological, phased approach currently being executed by NeuStar. Due to the highly manual and sensitive back-office work required to complete a take-back, NeuStar must use a phased approach to ensure accuracy and minimize risk.

1. Take-backs from Cooperative DMs who provide all necessary data have already begun and will continue in an ongoing process without prior notice to DoC.
2. Take-backs from Unknown DMs will be done in a batch process, grouped by State, with DoC approval.
3. Take-backs from Unresponsive DMs will be done in a batch process, grouped by State, with DoC approval.
4. Take-backs from Uncooperative DMs will be done individually with DoC approval.
5. Take-backs from State Government DMs would be done last with prior approval of DoC. We hope these will not be necessary after negotiating with such DMs about proposed language for the Delegated Manager Agreement.

The following table shows the process flow we are following to develop, submit and resolve the proposed take-back batches. We may find more or less time per batch is required and will adjust accordingly based on experience as we proceed, with prior approval of DoC.

- In this plan, each batch of names will require approximately six weeks (from the State Government notification letter being sent to the change of nameservers). We will do this on a rolling basis.
- Following the timeline below, we expect to submit the first proposed take-back batch to DoC during the week of April 16, 2007 after all the necessary final letters have been sent to State Government officials and Delegated Managers.

Take-back Process Flow		
Phase	Steps	Day
Pre-Take-Back	NeuStar Finalizes Take-back Candidate Batch	1
Pre-Take-Back	NeuStar notifies internal team of take-back batch determination.	1
Pre-Take-Back	Letter is sent to State Government with list of locality names that will be proposed for take-back.	1-5
Pre-Take-Back	Review any Response from State Governments	5-20
Pre-Take-Back	Final notice letters sent to known DMs indicating the locality name in question is queued for take-back.	20-25
Pre-Take-Back	Submit proposed take-back batch to DoC for review	25-30
Pre-Take-Back	Coordinate with DoC to finalize approved for take-back list.	31-35

Take-back Process Flow

Phase	Steps	Day
Take-Back	Begin systematic take-back of approved locality domains	40
Take-Back	Provide Bi-Weekly Progress Report to DoC	45-50
Clean-up	Respond to incoming inquiries and/or support requests	0-180
Clean-up	Delete any domains for which there was no response from an end-user. We assume these to be unused domains	180
Clean-up	Provide 6-month Progress Report to DoC	180

Phase 1 - Investigation (2003 to present)

- Locality domain is checked against the .us locality data inherited from Network Solutions, Inc. in an attempt to identify any known Delegated Manager or Locality Registrant contact data. That inherited data file was incomplete and often had inaccurate or out-of-date information.
- Locality domain is researched on-line in an attempt to locate and/or verify any known contact data that can be used in Phase 2 – Outreach.
- If the domain has any contact data listed, including name, phone number, email address, postal address, etc., we attempt to verify the accuracy of the contact data. If we are able to verify the contact data for either Delegated Manager or Locality Registrant, we have a point of contact to reach in Phase 2 – Outreach.
- If there is no contact data listed, or the contact data can not be verified (inaccurate or out-of-date) we do not have a point of contact to reach in Phase 2 – Outreach and the name is categorized as “Unknown”.

Phase 2 – Outreach (2004 to present)

- To better define the universe of .US locality names, NeuStar attempted to contact all known Delegated Managers. This was a group of approximately 1,500 Delegated Managers that are in turn responsible for approximately 7,500 of the 17,039 known locality names.
- The balance is mostly lame delegations or the DM and/or Locality Registrant is unknown.

Phase 3 – Compliance (2005 to present)

- NeuStar submitted a .US Locality Space Delegated Manager Policy proposal in September 2005, which was approved in Contract Modification 015 dated October 12, 2005.
- In April 2006, NeuStar distributed the Delegated Manager Agreement to all know DMs via postal mail and email.
- NeuStar sent the 1,500 known DMs seven communications from April 2006 to January 2007, including numerous reminders and four extensions of the deadline. The final deadline for signing an agreement was January 30, 2007 but we continue to receive additional agreements.



- NeuStar also created a Locality Registrant agreement for our use with locality registrants for whom NeuStar is acting as Delegated Manager.

Phase 4 – Take-back (2001 to present)

- NeuStar has been conducting voluntary take-backs from Delegated Manager since we took over the usTLD in 2001. In those early cases, some DMs elected to give up responsibility or they simply stopped providing service to the locality users.
- The high-level process for conducting a take-back is as follows:

Take-back Process Plan	
Delegated Manager	Process
Cooperative	<ul style="list-style-type: none"> • DM elects to cease operating as DM • DM gives NeuStar all the necessary zone file data • NeuStar loads zone file data into registry database • DM notifies locality registrants of change • NeuStar takes on DM role and provides customer support.
Unknown	<ul style="list-style-type: none"> • NeuStar attempts to identify DM or Locality User • NeuStar contacts State Government officials with prior notice of a pending take-back. • NeuStar submits proposed list to DoC for take-back approval • DoC responds with approval/disapproval. • For approved take-backs, NeuStar changes nameservers to point to a NeuStar Customer Support landing page with instructions for contacting NeuStar. This action will cause live sites and email to stop functioning. • NeuStar takes on DM role and provides customer support.
Unresponsive	<ul style="list-style-type: none"> • NeuStar attempts to contact known DM or Locality User • DM or Locality User does not respond and has not executed an agreement. • NeuStar contacts State Government officials with prior notice of a pending take-back. • NeuStar submits proposed list to DoC for take-back approval • DoC responds with approval/disapproval. • For approved take-backs, NeuStar changes nameservers to point to a NeuStar Customer Support landing page with instructions for contacting NeuStar. This action will cause live sites and email to stop functioning. • NeuStar takes on DM role and provides customer support.
Uncooperative	<ul style="list-style-type: none"> • NeuStar contacts known DM or Locality User • Known DM or Locality User refuses to cooperate and states unwillingness to comply with .US locality space requirements, including execution of the applicable agreement. • NeuStar contacts State Government officials with prior notice of a pending take-back. • NeuStar submits proposed list to DoC for take-back approval • DoC responds with approval/disapproval. • For approved take-backs, NeuStar changes nameservers to point to a NeuStar Customer Support landing page with instructions for contacting NeuStar. This action will cause live sites and email to stop functioning. • NeuStar takes on DM role and provides customer support.
State Government	<ul style="list-style-type: none"> • NeuStar contacts known DM or Locality User • State Government proposes amended language. • NeuStar reviews proposed amended language and negotiates with State Government to reach



Take-back Process Plan

Delegated Manager

Process

mutually acceptable language.

- NeuStar submits proposed amended language to DoC.
- If accepted by DoC, the State Government signs the agreement and becomes the DM for their locality names.
- If not accepted, we reach an impasse.
- NeuStar submits proposed list of names to DoC for take-back approval
- DoC responds with approval/disapproval.
- For approved take-backs, NeuStar changes nameservers to point to a NeuStar Customer Support landing page with instructions for contacting NeuStar. This action will cause live sites and email to stop functioning.
- NeuStar takes on DM role and provides customer support.
- If not approved, the names remain in the current state and are pending further action.

C.6 Expanded usTLD Space Functions

NeuStar's core functions for the expanded usTLD namespace support an unlimited number of competitive registrars and encourage second-level registrations in the namespace.

The functions highlighted below include the core requirements of the expanded usTLD space. In these sections, we emphasize our commitment to work with registrars throughout the accreditation and certification process, and our understanding of the need to develop a registry that the Internet community considers to be responsible, reliable and secure. We recognize the importance of a robust and accurate WHOIS database. In the following sections we elaborate on each of these requirements.

usTLD Shared Registration System—NeuStar uses the Extensible Provisioning Protocol (EPP) for interfacing registrars to our Shared Registration System (SRS). Our SRS supports an unlimited number of competitive registrars for the expanded space, and provides equivalent access to the system for all registrars to register, transfer, and update domain registrations.

Accreditation Process for usTLD

Registrars—NeuStar's registrar accreditation process is designed to ensure consistency in quality and service within the usTLD, while at the same time promoting stability and competition for domain name registration services.

usTLD Technical Certification Process—NeuStar's Operational Test and Evaluation (OT&E) process verifies the correct operation and performance of a registrar's client system before access to the live SRS is granted. This OT&E Certification allows NeuStar to maintain the integrity of the usTLD and of the DNS as a whole.

WHOIS Database—NeuStar's centralized WHOIS database accommodates port 43 and Web-based, free, public searches for registrant and registrar contact information.

WHOIS Accuracy Mechanisms—NeuStar manages key mechanisms to ensure the accuracy of WHOIS data including periodic automated and manual reviews, and an automated WHOIS complaint tool. In addition, we will provide an annual WHOIS Accuracy report to the COTR and CO as a contract deliverable.

Registration Compliance Checks - We also check for compliance of other key registration policies including proxy registration prevention, and domain name review.

Highlights

- NeuStar currently operates all expanded usTLD space functions as required by the RFQ
- NeuStar's Shared Registry System (SRS) provides a centralized, authoritative registry for the usTLD including a WHOIS database
- NeuStar conducts a comprehensive registrar accreditation and certification process to ensure compliance with all usTLD policies and procedures.
- NeuStar does not operate as a registrar in the usTLD expanded space unless otherwise required by the usTLD contract.
- As required by our NeuStar's usTLD Code of Conduct, we are committed to neutrality and do not compete with our customers.

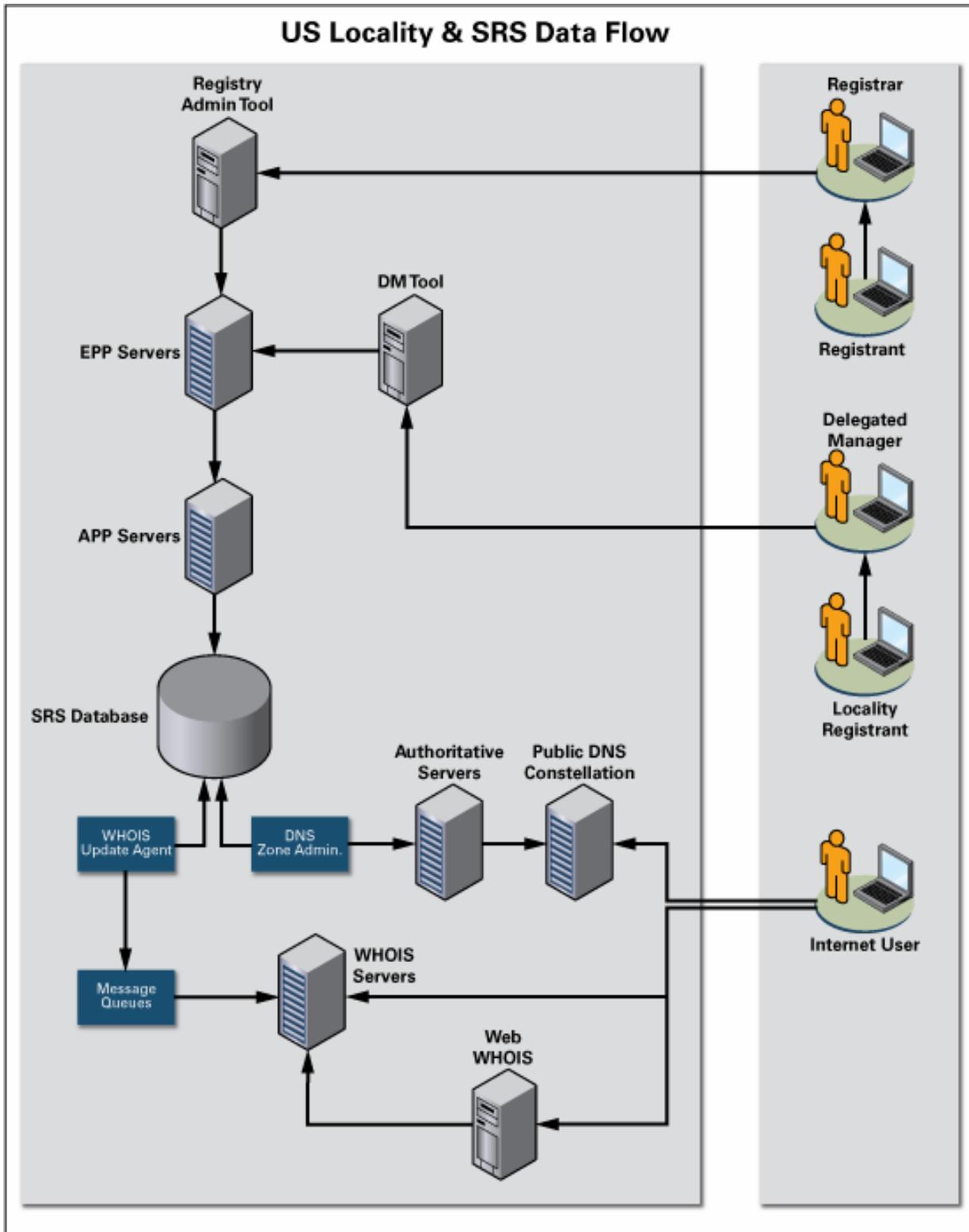
Prohibition from Acting as a Registrar—NeuStar has not and will not serve as a registrar in the usTLD space.

C.6.1.i . usTLD Shared Registration System

NeuStar maintains a Shared Registration System (SRS) by which an unlimited number of accredited competing registrars may register, transfer, and update domain names for their customers in the expanded usTLD space, as well as obtain technical support.

NeuStar's SRS is designed as a three-level architecture consisting of protocol servers, application servers, and database servers (the centralized usTLD database).

Exhibit B-11 displays a high-level view of our SRS architecture.



025.us2

Exhibit B-11. SRS architecture accommodates requirements of locality space.

The SRS lies at the heart of a registry operation and its quality and capability are essential to the overall stability of usTLD. Our SRS, with its operation experience, meets the demanding requirements for a high volume registry platform.

Registrars interface to the SRS over the Internet to the protocol servers located at redundant data centers in [REDACTED]. Registrars are able to interface with either data center, and in the unlikely event of an outage to one data center, registrars will still be able to interface to the other. This redundancy ensures that the SRS will be for handling queries, registrations, and modifications.

[REDACTED] For each registrar, a profile dictates the access rights that will be provided. This ensures that one registrar is not allowed to view customer-sensitive information for any other registrar or to modify registration data for another registrar's registrant.

Our SRS architecture is highly scalable and has the capacity to handle an unlimited number of registrars. We utilize special traffic shaping hardware that permits us to precisely control the number of connections each registrar may open. This allows us to fine tune the performance of the system and to adequately handle unusually high loads on the system in a manner that provides equal access to all registrars.

Our SRS uses EPP an IETF-approved standard, and the industry accepted protocol for registry-registrar transactions. As an XML-based protocol, it is easy to extend the functionality of EPP to include specific capabilities. In fact, NeuStar has already extended the protocol to accommodate several unique requirements in the usTLD space.

The protocol was extended to include Nexus codes allowing a registrant to self-certify Nexus status. Additionally, the protocol was expanded to accommodate the submission of "intended usage codes." Another key extension of the protocol was implemented in 2004 to accommodate the process for restoring a deleted domain while in the redemption grace period (RGP). This extension is unique to the NeuStar SRS, and is currently deployed for both .us and .biz. The extension allows registrars to complete the restoration of a domain in a fully automatic fashion, without the need to submit additional documentation through a secondary process.

NeuStar's application servers contain the business rules that manage the registration data between the registrar and the registry. Simply stated, it acts as the interface between the protocol server, which interfaces to the registrars, and the centralized usTLD database. It is the most complex element of the registry due to the complexity of the usTLD policies and the need for real-time efficiency.

NeuStar presently provides toolkits to registrars for interfacing with the SRS. We provide both Java and C++ toolkits, along with the accompanying documentation. The Registrar Tool Kit (RTK) is a software development kit (SDK) that supports the development of a registrar software system for registering domain names in the usTLD registry using EPP. The SDK consists of software and documentation as described below.

The software consists of working Java and C++ EPP common APIs and samples that implement the EPP core functions and EPP extensions used to communicate between the registry and registrar. The RTK illustrates how XML requests (registration events) can be assembled and forwarded to the registry for processing. The software provides the registrar with the basis for a reference implementation that conforms to the EPP registry-registrar protocol. The software component of the

SDK also includes XML schema definition files for all Registry EPP objects and EPP object extensions. The RTK also includes a “dummy” server to aid in the testing of EPP clients.

The accompanying documentation describes the EPP software package hierarchy, the object data model, and the defined objects and methods (including calling parameter lists and expected response behavior). New versions of the RTK are made available from time to time to provide support for additional features as they become available and support for other platforms and languages.

We provide registrars technical support on a 7x24x365 basis. Registrars may receive support via email, telephone, and from documentation on the web site. Our customer support is described in detail in Section B, Sub-Section C.3.2.xi.

C.6.1.ii. Accreditation Process for usTLD Registrars

NeuStar will implement a process for accrediting registrars to register names in the expanded usTLD. This process will include a contract with each accredited registrar prohibiting proxy and anonymous registration services

In order to promote strong competition among registrars, and ensure the continued neutrality of the registry, NeuStar uses a straightforward, fair and efficient accreditation process for all usTLD registrars. Eligibility to access the registry is subject only to an accreditation application process and technical testing and approval by NeuStar technical staff, payment of a registrar accreditation fee, and the execution of a usTLD Registrar Accreditation and usTLD Registry-Registrar Agreements.

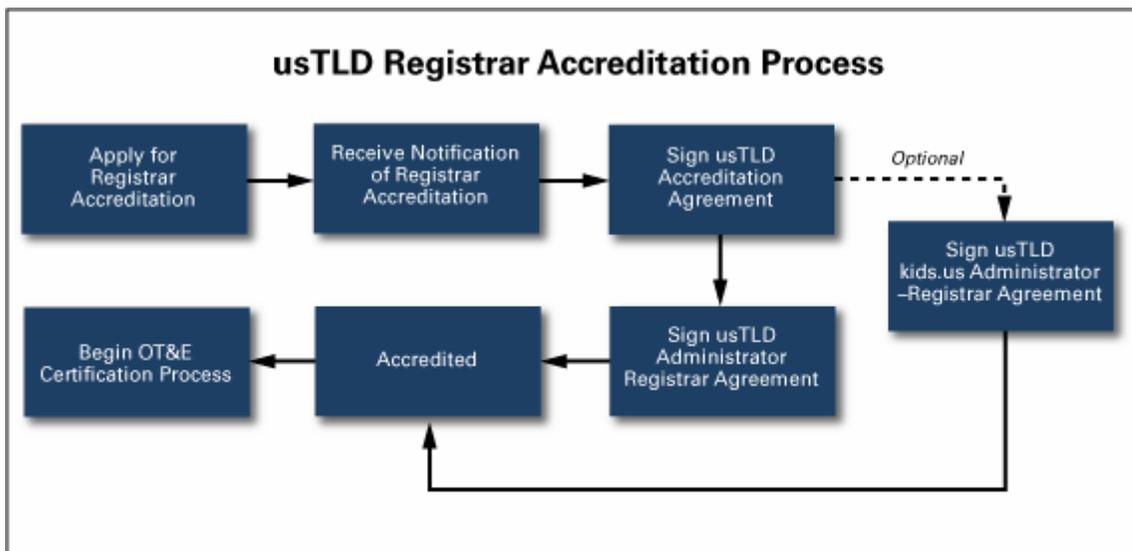
Prior to December 2005, registrars were required to pay an annual accreditation fee. In 2005, the usTLD contract was amended to eliminate the annual recurring fee, retaining only the initial accreditation fee. This contract amendment was an important step to facilitating competition among registrars, in particular creating an environment that did not disadvantage the smaller registrars, for which an annual fee was a significant burden.

It is important that all registrars applying for accreditation in the usTLD space fully understand and comprehend the policies and restrictions that are unique to the space. As such, we include various provisions in our accreditation documentation to specifically require the registrar to comply with, and where appropriate, require their registrants to comply. Of note, registrars are not permitted to register proxy or anonymous registrations, where the intent is to mask the identity of the true registrant. We strictly prohibit this and routinely perform searches for proxy violations.

The accreditation process is mandatory for all registrars, including those who may already be ICANN-Accredited. However, a registrar need not be an ICANN-accredited registrar to become a usTLD registrar. The usTLD Registrar Accreditation Process is illustrated in Exhibit B-8. The following bullets outline the basic process:

- **Apply for Registrar Accreditation**— All registrars must complete and submit to NeuStar a usTLD Registrar Accreditation Application. They must also review the Application Instructions and the current usTLD Registrar Accreditation Agreement and Administrator-Registrar Agreement.
- **Receive Notification of Registrar Accreditation**— After completing its review of the accreditation application and conducting any necessary follow-up inquiries, NeuStar will inform the applicant by e-mail of its decision.

- **Sign a usTLD Accreditation Agreement**—Once NeuStar has approved the applicant for accreditation, the applicant must execute a usTLD Registrar Accreditation Agreement with NeuStar.
- **Sign a usTLD Administrator-Registrar Agreement**— Each applicant must also execute a usTLD Registry-Registrar Agreement.
- **Technical Certification Process**— Upon execution of the necessary agreements, the usTLD Accredited registrar begins operational testing and evaluation utilizing the NeuStar provided Registrar Tool Kit. Upon receipt of approval from the NeuStar Technical Evaluation Team, the new registrar is eligible to access and register domain names in the usTLD registry system. This process is described in detail below.
- **Announcement of Accreditation**— NeuStar announces the accreditation, along with contact information for the newly accredited usTLD registrar on its Web site, unless the registrar specifies that it would prefer, for business reasons, to postpone the announcement of accreditation.



012 442

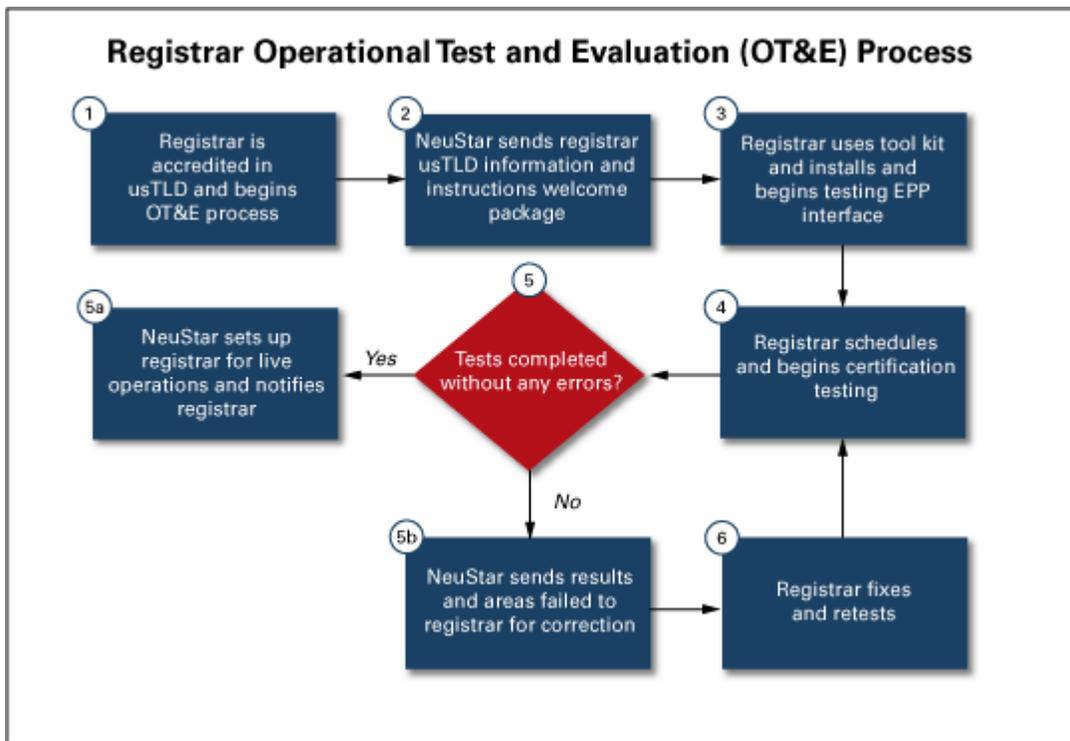
Exhibit B-7. NeuStar follows a defined accreditation process before allowing Registrar access to the SRS.

C.6.1.iii. usTLD Technical Certification Process

NeuStar's process for Operational Test and Evaluation certification will test the capabilities of registrar systems before access to the live Enhanced Shared Registry System is granted.

In order to maintain the integrity of the usTLD and of the DNS as a whole, it is necessary to ensure that registrars are technically competent and that their systems, which will interface with the usTLD Shared Registration System (SRS), are capable of operating and performing the required functions. To fill this need, NeuStar requires registrars to successfully complete a technical certification process highlighted in Exhibit B-8.

Before a registrar is permitted to access the production SRS, it must first pass NeuStar's usTLD Technical Certification Process, called Operational Test and Evaluation (OT&E) certification. The purpose of this OT&E certification is to verify the correct operation and performance of a registrar's client system.



017us2

Exhibit B-8. *The OT&E certification process is another measure NeuStar uses to preserve the stability of usTLD registry operations.*

Preparations for OT&E Certification

The OT&E certification process begins when a registrar becomes accredited by NeuStar to register names in the usTLD, at which point the registrar enters the usTLD registry provisioning process. NeuStar sends the registrar a usTLD welcome package that includes information to help implement its EPP client application for connecting to the SRS. This package includes the following:

- Username and password to access the Registrar Extranet
- The OT&E test bed server information and username/password for two accounts to access the usTLD OT&E test bed for registrar client testing. Two accounts are provided to allow the registrar to test the domain transfer process.
- Instructions for downloading the EPP Registrar Toolkit.
- Instructions for downloading the documentation for the EPP Registrar Toolkit. This tool kit is available to any interested party that would like to implement registrar client applications.
- Instructions on how to proceed with the OT&E certification process.
- Instructions on how to obtain an SSL certificate from an approved Certificate Authority.
- Instructions on how to provide the registry with the list of subnets that will be used to access the Certification Test Server.

The registrar is responsible for installing the client application that will interface to the registry using the EPP. The registrar interfaces the EPP client to the back-office systems and accesses the SRS via the EPP APIs.

Because the registry-registrar communication channel is encrypted, an SSL certificate from an approved Certificate Authority is required to establish an SSL encrypted channel. The username/password and subnet list provide additional security; only a valid combination of an SSL certificate, username/password, and subnet allow the registrar to access the live SRS.

During EPP client implementation, the registrar has access to the Registry OT&E test bed environment. In the OT&E test bed, the registrar may test the operation of its software to verify the correct handling of EPP commands, their responses, and notification messages. Operations performed in the OT&E environment are free of charge and do not have any impact on the live SRS. Registrars continue to have access to the OT&E environment after certification, so that they may continue to test their back-office software systems. The OT&E environment is an important tool for registrars as long as they are operational in the usTLD space. Any new service or modified functionality is first released into the OT&E environment allowing registrars to test their systems, before the functionality is released into production.

When a registrar has completed the testing of its EPP client and back-office systems and would like to proceed with OT&E certification, it contacts usTLD customer service to schedule a time slot for an acceptance test. Time slots are scheduled on a first-come-first-served basis. At the scheduled time, the registrar contacts the customer service to initiate the certification.

OT&E Certification Test Cases

During OT&E certification, a registrar's client application is required to demonstrate the proper execution of the following operations:

- SSL connection establishment

- EPP <login> command
- Change of <login> password
- EPP <logout> command
- Domain name operations
 - a. Create domain without nameservers and without contacts (EPP Transform <create>)
 - b. Create domain with nameservers
 - c. Create domain with contacts
 - d. Create domain with maximum registration period
 - e. Create domain with maximum number of nameservers
 - f. Create domain with maximum number of contacts
 - g. Create domain with maximum length domain name (63 characters + .US)
 - h. Create domain with invalid name
 - i. Check domain (EPP Query <check>) – domain not available
 - j. Check domain (EPP Query <check>) – domain available
 - k. Check domain – maximum length domain name (63 characters + .US) not available
 - l. Query domain (EPP Query <info>)
 - m. Query domain transfer status (EPP Query <transfer>)
 - n. Delete domain (EPP Transform <delete>)
 - o. Renew domain (EPP Transform <renew>)
 - p. Transfer domain (EPP Transform <transfer>)
 - q. Change domain (EPP Transform <update>) – nameservers
 - r. Change domain (EPP Transform <update>) – contact
 - s. Change domain (EPP Transform <update>) – status
- Nameserver operations
 - a. Create nameserver (EPP Transform <create>)
 - b. Create nameserver with maximum length host name (80 characters)
 - c. Check nameserver (EPP Query <check>) – nameserver known
 - d. Check nameserver (EPP Query <check>) – nameserver unknown
 - e. Query nameserver (EPP Query <info>)
 - f. Delete nameserver (EPP Transform <delete>)
 - g. Change nameserver (EPP Transform <update>) – add IP address
 - h. Change nameserver (EPP Transform <update>) – remove IP address
- Contact operations
 - a. Create contact (EPP Transform <create>)
 - b. Check contact (EPP Query <check>) – contact known
 - c. Check contact (EPP Query <check>) – contact unknown

- d. Query contact (EPP Query <info>)
- e. Query contact transfer status (EPP Query <transfer>)
- f. Delete contact (EPP Transform <delete>)
- g. Transfer contact (EPP Transform <transfer>)
- h. Change contact (EPP Transform <update>) – change element
- i. Change contact (EPP Transform <update>) – remove element
- Registrant account operations
 - a. Create registrant account (EPP Transform <create>)
 - b. Check registrant account (EPP Query <check>) – contact known
 - c. Check registrant account (EPP Query <check>) – contact unknown
 - d. Query registrant account (EPP Query <info>)
 - e. Query registrant account transfer status (EPP Query <transfer>)
 - f. Delete registrant account (EPP Transform <delete>)
 - g. Transfer registrant account (EPP Transform <transfer>)
 - h. Change registrant account (EPP Transform <update>) – change element
 - i. Change registrant account (EPP Transform <update>) – remove element
- Effectiveness and utility of client session management and information exchange
- Performance of client session management and information exchange throughput.

Post OT&E Certification

All tests performed during OT&E certification must be completed without errors. Customer support provides the certification results in a timely manner and provides feedback for those registrars that failed to successfully complete the tests. Those registrars may correct their systems and reschedule for certification. Registrars are not limited in the number of attempts at OT&E certification. Our experience shows that most registrars successfully complete the tests on their first or second attempt.

Upon successful OT&E certification, the registrar is eligible to being operations in the live SRS. The registrar is assigned a username and password for the production environment, and we configure the live system to recognize the SSL certificate, username, password, and subnet blocks for the registrar.

C.6.1.iv. Maintain and Update the WHOIS Database

NeuStar's centralized WHOIS database facilitates public searches for registrant and registrar contact information and will ensure the accuracy of data throughout the usTLD namespace.

NeuStar currently operates a sophisticated and robust WHOIS database containing information about all usTLD registrations, registrants, and registrars active in the usTLD namespace, including those in the kids.us and locality spaces. Our WHOIS service is free of charge and available publicly through our website and through the standard port 43 command line interface.

In accordance with the RFQ, the WHOIS database will allow for multiple string and field searches through a publicly available, web-based interface. Query returns indicate the WHOIS database being accessed, and whether the record is for a registrant or a registrar.

Populating the WHOIS information in the expanded space is done at the time of registration. Registrations will not complete without all of the appropriate information being provided.

WHOIS data is collected as part of the registration process. The registration of a domain and the creation of a contact or nameserver may not be completed unless all of the required data is provided during the transaction. The WHOIS database is updated in near-real time, within minutes of the transaction being submitted to the Registry.

At a minimum, NeuStar will collect and update the information provided below for each type of WHOIS record in the expanded space:

Registrant WHOIS information in the expanded namespace includes the following required information:

- The name of the domain registered;
- The IP address of the primary nameserver and secondary nameserver(s) for the registered domain name;
- The corresponding names of those nameservers;
- The creation date of the registration;
- The name and postal address of the domain name holder;
- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the domain name holder; and
- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the administrative contact for the domain name holder.
- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the domain name holder.
- The Nexus category of the domain holder and each of the other contacts above.
- Registrar contact record

It should be noted that the Nexus category is only collected for the registrant contact. Per the requirement we will collect the Nexus category for each of the contacts above on an ongoing process, however, existing contacts in the database will not have an associated Nexus code until such time the contact is updated for any reason.

In addition to the information above our WHOIS also provides the following data:

- The name of the sponsoring registrar
- All statuses associated with the domain name
- The expiration date of the domain
- The date the domain record was last updated
- The name of the registrar who created the domain record
- The name of the registrar who last updated the domain record

Detailed descriptions of how the database will be populated, how it will be kept up to date and accurate, and the structure of the WHOIS responses are provided in Proposal Section F.

C.6.1.v. WHOIS Accuracy Mechanisms

NeuStar will establish a set of mechanisms to ensure the accuracy of WHOIS data obtained from registrants. Such mechanisms shall include, at a minimum, periodic Contractor reviews, enforcement procedures, and an annual report provided to the COTR and CO.

NeuStar believes that accurate WHOIS database is very important for maintaining the integrity of the space. WHOIS data is frequently required by law enforcement and other investigative bodies as a tool for investigating internet crime. We are committed to providing the best WHOIS service possible by taking all necessary steps to ensure the data remains accurate at all times.

To achieve that objective we have created the WHOIS Accuracy Program (WAP). This program includes several new processes:

WHOIS/Nexus Reminder Policy - requires registrars to remind registrants to update their WHOIS data at least once per year

WHOIS/Nexus Data Problem Report System (WDPRS) - an web tool to allow the public to submit WHOIS/NEXUS complaints

WHOIS data accuracy audit - monitoring to ensure Registrar have taken action to correct WHOIS data that has been reported to them as inaccurate

Semi-Annual sampling of domains - manual review of a random sampling of at least 2500 domains, performed at least twice per year

Inspection of WHOIS functionality - an annual review of each registrar to ensure compliance with their obligation to offer a WHOIS service

WAP Annual Report - an annual report to the DoC summarizing the initiatives of this program

A detailed description of the WHOIS Accuracy Program can be found in Section B, Sub-Section C.4.1.v.b

For any domains found to have inaccurate data, the sponsoring registrar will be notified and required to take corrective action. Domains that are not corrected within a specified response time will be first placed on serverhold and then deleted.

The results of the manual reviews and the data from the automated complaint tool will be compiled into an annual WHOIS Accuracy Report to be provided to the COTR and to the CO as a contract deliverable.

C.6.1.vi. Prohibition from Serving as a Registrar

NeuStar will not serve as a registrar in the expanded usTLD space, unless otherwise noted in this Statement of Work.

NeuStar is unique amongst many registry operators in that we have never served as a commercial registrar for any TLD, including .us. We are committed to preserving our neutral status, which we take very seriously. We believe any operator who serves as a registrar or has a vested interest in a registrar has an inherent conflict of interest. This sort of conflict will at the very least create conflict amongst the registrar channel, but will likely also damage the integrity of the space.

C.7 Enhanced usTLD Functions

NeuStar currently maintains several enhanced usTLD functions and will continue to develop new enhanced services including: public resource second-level usTLD domains, usTLD directory services, a usTLD search engine, and other functional enhancements to increase the visibility, utility, and value of the usTLD to its users.

In the six years since assuming responsibility for the Administration of the usTLD space, we have developed and deployed a number of enhancements to the space. All of these enhancements were specifically designed to increase the visibility, utility and the value of the space to its users and other stakeholders.

The following section describes the applications and enhancements that were implemented over the past six years, as well as additional services that we are proposing. The following applications are described:

- Public Resource Second Level Domains
- usTLD Directory Service
- usTLD Search Engine
- Community Web Site, including a usTLD Blog and Message Board

Public Resource Second Level Domains

In 2002, prior to the launch of the expanded space, a select group of second level domains were reserved as public resource domains. These domains are intended to be developed into websites that directly benefit the usTLD Internet community.

Included in the list of reserved public resource domains, are all of the zip codes (e.g. 20166.us). In 2006, we initiated a program to develop each zip code domain into active websites containing locally and regionally focused content. There are currently over 42,000 active zip codes. To generate the local content for each of these sites, we have contracted with Firstlook (formerly Vendare Media) to design the sites, develop relevant content, and provide the web hosting services. The design and content have undergone several revisions over the past year, and they continue to be updated with new information.

All of the zip code sites are uniformly presented, and include specific data elements. The current data elements are:

- Area information -includes links to other sources of information
- Area statistics - key statistics about the region
- Map of the region
- Local school information (where available)
- Search box - Internet search capability with results limited to the particular region
- usTLD Directory - a directory of usTLD websites

The above elements comprise the core content of each website. These elements will be refined as needed and new data will be added over time. We believe the development of the zip codes sites is an important component of our plan to further increase the visibility of the usTLD. It offers

significant benefit to registrants and the U.S. Internet community as a whole by providing a platform for all registrants to list their domain in the usTLD Directory, and introduces over 42,000 active websites into the usTLD space, providing greatly increased awareness and branding of the usTLD.

We believe that developing additional public resource domains is important to the continual growth of the space; as such, we are committed to developing at least three new public resource domains within the first 18 months of the contract, and, where appropriate, we will work to identify partners who are most qualified to develop these domains into public resource websites. Detailed proposals will be submitted to the DoC for prior approval of any new agreement or program.

While we will actively work to develop all of the public resource domains, we believe certain domains have the potential to be more attractive and useful to the public. It is these domains that we will initially work to develop into live websites. These include:

- Library.us – an area of the Internet where users can obtain information about libraries
- Parks.us – an information site about national and local parks in the United States
- Vote.us – information about national and local elections and locations of polling sites

.US Directory Service

NeuStar has developed a searchable directory of usTLD registrant submitted listings of usTLD domain names. The directory serves as a vehicle for .us registrants to list and showcase their domain names and provide information about their businesses and interests. Entries into the directory are restricted to usTLD domain holders only, although searches in the directory are open to any user on the Internet.

Registrants may submit directory data for their domains only. This is controlled via the domain's auth-info code. Currently, data is submitted through a website provided by NeuStar, however we have plans to create an API which will allow registrars to collect and submit this data at the time of registration. Each directory entry includes the domain name, URL, description of the site, search key words, and several zip codes associated with the domain name. Over time we intend to collect additional data with each listing to make that directory richer, more attractive, and more useful.

The directory entry is tied directly to one or more of the zip code domains based on the zip codes selected by the registrant at the time of registration. The directory listings provided on each zip code site are limited to those listings that are tied to that particular zip code. It should be noted that registrants may elect to associate their listing with "all" zip codes, however by doing so their listing will be displayed after the listings tied to a specific zip code.

We believe the directory has the potential to greatly increase the visibility of the usTLD space, while providing additional value to all usTLD registrants. We realize that it will take some time to fully populate the directory, however over time it will become an exciting and useful enhancement to the space.

usTLD Search Engine

To further provide increased visibility of usTLD websites, we have created a search engine tool that allows users to search the Internet using a commercial search engine for usTLD sites. Users submit search criteria just as they would with any search engine, however all of the results are filtered to only provide usTLD websites. This search capability has been added to our WHOIS web page (www.whois.us).

Community Web Site

To further enhance our interaction and communication with usTLD stakeholders and to create a sense of community, we are proposing to create two new interactive tools: a usTLD blog and a usTLD Message Board. We view both the Blog and Message Board as key outreach tools to help promote awareness and consumer involvement in the development and refinement of usTLD policies and procedures.

usTLD Blog

Blogs have become one of the most popular communication tools for the dissemination of information and for stimulating discussions among communities of users. Blogs are no longer the exclusive domain of individuals; in recent years blogs have become commonplace among businesses and other commercial entities. It is estimated that 40% of all fortune 500 companies now have blogs.

We will create a usTLD Blog to provide updated information about the space, and to solicit comments and feedback from the community. While any person will be able to view the Blog, only registered usTLD domain holders will be permitted to submit comments. NeuStar will serve as Board Administrator and will establish a strict terms of use for the boards.

NeuStar anticipates that posts in the Blog will include a variety of topics such as (a) usTLD websites in use, (b) FAQ answers, (c) Customer Support issues, (d) new services in the usTLD, (e) events or (f) other announcements.

Please see Section L for a full description of the usTLD Blog

usTLD Message Board

In order to establish open communication with and among users of the usTLD, NeuStar will establish a usTLD Message Board.

As with the usTLD Blog, only registered users will be allowed to post information to the message board. Select members of the Registry team will monitor the discussions on the message board and will respond to legitimate questions when appropriate. In addition, we will collect any relevant or constructive policy ideas for consideration.

Please see Section L for a full description of the Message Board

Additional Services and Enhancements

In addition to the enhancements described above, we will be implementing a number of additional services and functions which are described in Section D.

- IPv6
- Internationalized Domain Names (IDNs)
- DNSSEC
- RSS Feeds
- Domain Usage Surveys

C.8 Kids.us Second Level Domain Functions

Kids.us is a unique component of the usTLD requiring a special skill set only NeuStar possesses. In addition to increased marketing and promotion of the kids.us opportunity, NeuStar will continue to diligently manage and enforce the critical process of content management to ensure a safe online environment for American children aged 13 and under.

C.8.1 Introduction

On December 4, 2002, President George W. Bush signed into law the Dot Kids Implementation and Efficiency Act of 2002, Public Law 107-317, (Dot Kids Act). This Act requires that NeuStar, “as the administrator of the .us country code top-level domain (ccTLD), establish a kids.us domain to serve as a haven for material that promotes positive experiences for children and families using the Internet, provides a safe online environment for children, and helps to prevent children from being exposed to harmful material on the Internet.” This legislation was the culmination of years of effort by several members of the United States Congress.

Pursuant to the Dot Kids Act, the usTLD Administrator has responsibility for creating a process for removing from the kids.us domain any content that is not in accordance with the [content] standards and requirements of the registry. This enforcement power, though severe, is not absolute and finite, as the Administrator is also required to create a process to provide registrants to the new domain with an opportunity for a prompt, expeditious, and impartial dispute resolution process regarding any material of the registrant excluded from the new domain. This enforcement power strengthens a core objective of the Dot Kids Act, which is both to create an online arena that is free from material that is harmful to minors and to ensure that the kids.us domain remains safe from such harmful material.

Before launching kids.us domain registrations on September 4, 2003, NeuStar developed and implemented a number of crucial policies and procedures that support a more robust, certain, and reliable kids.us experience. During the last four years, NeuStar has administered the kids.us domain space and the content review system that ensures a safe online environment devoid of harmful material for children aged 13 or younger. Our enforcement of the following policies has directly contributed to the safety and reliability of the kids.us space.

C.8.2 Content Standards

The kids.us space is intended to provide a safe place on the Internet for children aged 13 or younger. Since undergoing the design and launch of kids.us, NeuStar has worked diligently to ensure that the proper controls, rules, procedures, and policies are in place to achieve this.

Highlights

- **NeuStar operates kids.us in full compliance with the Dot Kids Act and all applicable policies and guidelines.**
- **NeuStar developed the kids.us content guidelines and all associated agreements and policies.**
- **To ensure the integrity of kids.us, NeuStar manages and administrates the space in accordance with all of these policies and guidelines.**
- **NeuStar is committed to responsibly growing the kids.us space through a variety of marketing programs and initiatives.**

In anticipation of the Dot Kids legislation, in 2002 NeuStar began a public outreach campaign to seek input and advice from members of the children's content community, child advocacy groups, parents, educators, law enforcement organizations, and other interested individuals to create an initial draft of Guidelines and Requirements, which were published on the Internet in August 2002. The comments we received were instrumental in finalizing that document.

Using this information as a guide, NeuStar established and maintains written content standards and guidelines for the kids.us domain. The following are the specific guidelines for determining what content is "suitable for minors" and therefore acceptable for resolution using a kids.us-approved domain name. Each of these standards are currently used or accepted in a variety of public communications and media forums. Aggregating existing standards and integrating them into the kids.us domain provides a means of defining what is acceptable content in a domain for children, and also acts as a notice to kids.us registrants of some existing standards and laws that are applicable to children online.

In addition, these content guidelines and restrictions are applicable to all domains within the kids.us domain, whether at the third, fourth, or higher level, which is defined herein as any web page that is associated with a domain name ending in kids.us and all pages "behind" the primary URL and all pages associated with domains "to the left" of kids.us. Thus, although domain names with four or more levels (e.g., registry.neustar.kids.us) are permitted and can be managed at the discretion of the registrant, those pages are considered part of the kids.us domain and are therefore subject to all guidelines, restrictions, and policies of the kids.us space.

Compliance with existing laws, regulations, and relevant voluntary standards

In addition to the guidelines and requirements contained herein, all content that resides within a kids.us-approved domain must be in compliance with existing laws, widely adopted children's online protection policies, advertising policies, privacy requirements and other policies, restrictions and guidelines approved by NeuStar and the DoC. These include, but are not limited to several key legal, regulatory, and voluntary standards that impact multimedia children's content today.

Compliance with existing rules and regulations regarding indecency on the airwaves

In light of the public significance of both the usTLD and the kids.us second level domain, NeuStar already reviews for possible deletion all registered .us domain names that contain, within the characters of the domain name registration, any of the seven words identified in *Federal Communications Commission v. Pacifica Foundation*. An expanded version of this policy was also extended to the kids.us registrations.

A commitment to offer some educational and informational content

Pursuant to the Children's Television Act and the FCC's rules implementing this statute, broadcasters have a public interest obligation to air a specific number of hours of programming that offers some educational and informational content targeted to children under 13. These rules are consistent with the spirit of the "suitable for minors" clause in the Dot Kids Act and thus, all registrants within the kids.us domain are encouraged to have some component of educational and informational content for children on their respective domains.

Compliance with the children's online privacy protection act (COPPA) requirements

The Children's Online Privacy Protection Act (COPPA) requires the Federal Trade Commission (FTC) to issue and enforce rules concerning children's online privacy. In doing so, the FTC stated its

primary goal as placing parents in control over the information that may be collected from their children online. Specifically, the COPPA rules apply to three groups of website operators:

- operators of commercial websites or online services directed to children under 13 that collect personal information from children;
- operators of general audience sites that collect personal information from children under 13; and
- operators of general audience sites that have a separate children's area and that collect personal information from children.

These three groups of operators are required to perform certain tasks. First, these operators must post a privacy policy, provide notice to parents about the site's information collection practices, and in many instances, obtain parental consent prior to collecting personal information from children. In addition, the operators must provide parents access to their child's information and the opportunity to delete information, they may not condition a child's participation in an activity on the disclosure of more information than is reasonably necessary, and they must maintain the confidentiality, security and integrity of the personal information collected from children.

Compliance with children's advertising review unit (CARU) advertising standards

One example of widely adopted policies relating to advertising includes the efforts of the Children's Advertising Review Unit (CARU) of the Better Business Bureau. The CARU reviews and evaluates advertising in all media directed to children under 12. This includes print, broadcast and cable television, radio, video, CD-ROM, 900/976 telegrams, and interactive electronic media. CARU reviews advertising to determine consistency with its guidelines. If advertising is found to be misleading, inaccurate, or inconsistent with the guidelines, CARU works to achieve voluntary cooperation from the relevant parties to ensure compliance. All kids.us registrants are encouraged to be in compliance with the CARU Guidelines.

Restrictions within the kids.us domain

In addition to the proposed general standards identified above, below is a core list of content restrictions enforced by NeuStar within the kids.us domain.



Mature Content	<ul style="list-style-type: none"> • Actual and/or simulated normal or perverted sexual acts or sexual contact; • Sexually explicit information that is not of medical or scientific nature which includes • Discussion or descriptions of sexual techniques or exercises; • Sexual paraphernalia; • Explicit discussions of sex and sexuality; and • Lewd clothing sales.
Pornography	<p>Content that is sexually explicit and/or has a purpose of arousing a sexual or prurient interest which includes:</p> <ul style="list-style-type: none"> • Lewd exhibitions of genitals or post-pubescent female breasts; • Pornographic fiction or erotica; • Sex-related phone and video information; • Adult services (e.g., escort services, exotic dancers); • Personals or dating services; • Fetish information or clothing; and • Sex toys.
Inappropriate Language	<p>Use of profane, indecent, pornographic, or sexually-related language, including the seven words identified in <i>Federal Communications Commission v. Pacifica Foundation</i>, 438 U.S. 726, 98 S. Ct. 3026, 57 L.Ed.2d 1073 (1978) in the domain name or content of any kids.us website</p>
Violence	<p>Content which advocates or provides instructions for causing physical harm to people, animals or property which includes:</p> <ul style="list-style-type: none"> • Information or instructions for injuring or killing people or animals; • Explosives and bombs – manufacturing, obtaining materials, transport and detonation; • Graphic images of blood and gore with no medical or scientific purpose; • Destructive mischief, pranks or practical jokes; and • Dangerous chemistry, physics and engineering.
Hate Speech	<p>Content with hostility or aggression toward an individual or group on the basis of race, religion, gender, nationality, ethnic origin, or other involuntary characteristics OR denigrates others on the basis of these characteristics or justifies inequality on the basis of those characteristics. This includes:</p> <ul style="list-style-type: none"> • Racism; • Religious-based hate speech, such as anti-Semitism; • Misogyny; • Race-based separatism; and • Ageism.
Drugs	<p>Content that advocates the illegal use of drugs, or abuse of over-the-counter or prescription medications. This includes:</p> <ul style="list-style-type: none"> • Direct or indirect sale of illegal substances; • Narcotic paraphernalia; • Manufacture of illegal substances (organic or chemical); • Abuse of over-the-counter or prescription drugs or medical treatments; • Direct or indirect distribution of illegal substances; and • Use of illegal substances.
Alcohol	<p>Content that advocates or contemplates alcohol consumption which includes:</p> <ul style="list-style-type: none"> • Offers for sale; • Supplies recipes for creating, encouraging or guidance on consumption; • Paraphernalia to make or consume; and • Drinking games or other recreational displays.
Tobacco	<p>Content that features smoking or use of other tobacco products, which includes:</p>

	<ul style="list-style-type: none"> • Retailers or other means of acquiring; • Tobacco products and paraphernalia; • Instructions for using tobacco products; and • Glamorization of tobacco use.
Gambling	Content that advocates legal or illegal gambling, which includes: <ul style="list-style-type: none"> • Online Casinos, lotteries, gaming, or online betting sites; • Information or tips for placing bets of handicapping; and • Fundraisers that use gambling.
Weapons	Content that sells or advocates the use of weapons, which includes: <ul style="list-style-type: none"> • Direct sale or information on the procurement of firearms, ammunition, any firearm accessories, sport knives, and martial arts weapons; and • Information on use or modification of firearms, ammunition, any firearm accessories, sport knives, and martial arts weapons.
Criminal Activities	Content that advocates or provides information or instruction for engaging criminal activity, which includes: <ul style="list-style-type: none"> • Theft; • Bodily harm; • Property damage; and • Computer-related crimes.

Notwithstanding the list contained above, all content will be reviewed by the Content Manager(s) on the whole prior to being approved for display on a kids.us domain. If such content is deemed by the Content Manager(s) and/or NeuStar as having serious educational, informational, intellectual, literary, artistic, political, or scientific value for minors we believe that exceptions can be made to allow this content to appear in the kids.us domain.

Technology restrictions

Because there is no foolproof method for protecting children online at this time, the Dot Kids Act specifies limitations put on specific technologies commonly used on the Internet today. These technologies are prohibited from use in any kids.us domains:

- Two-way and multi-user interactive services, which includes: e-mail, chat, instant messaging, Usenet, Message Boards of like user forum, and peer-to-peer connections, place “unless the registrant certifies to the registrar that such service will be offered in compliance with content standards established ... and is designed to reduce the risk of exploitation of minors using such two-way and multi-user interactive services”; and
- Hyperlinks that take a user outside of the kids.us domain.

C.8.3 Content Management Activities

On March 3, 2004, NeuStar announced the selection of Kidsnet, Inc. an Internet security company based in Jacksonville, Florida, known for its Internet parental control products, as subcontractor for content management services for the kids.us domain space. NeuStar and Kidsnet have teamed to ensure that the kids.us web sites children are experiencing online are safe and age appropriate and meet all kids.us content guidelines, requirements, and restrictions.

NeuStar's agreement with Kidsnet governing content management subcontract services can be found in Appendix I.4. The Content Manager Agreement (“CMA”) is designed as a subcontract

between NeuStar and Kidsnet to perform "Content Management Services". In short, Kidsnet enforces the Content Policy by tailoring their filtering process to the Content Policy for searching all potential and active kids.us websites. Based on a list of kids.us domains supplied by NeuStar, Kidsnet "crawls" all proposed and active kids.us registrations on a regular schedule. The CMA defines the schedule of review and operating schedule that must be followed. In addition, the CMA defines the filtering parameters and establishes service levels.

Further, in July 2007, NeuStar and Kidsnet executed a letter of intent to extend the term of the CMA for the term of the next usTLD agreement, should NeuStar be selected as Administrator. That draft contract amendment is located at Appendix I.6 pending prior approval from the DoC.

Kidsnet operates a parental control software system exclusively based on automated and manual reviews by trained and certified website content specialists. It is the most thorough and effective method for screening online content, more reliable than the automated technology currently in use by blocking and filtering companies. Kidsnet's trained and certified Web content review specialists have reviewed over 193,000,000 URLs/Web pages making Kidsnet's database of safe Web sites the largest in the world.

Kidsnet has a demonstrated track record of creating and refining technology and systems to keep the Web safe for children. Kidsnet's reviewers, technologies, and experience in Web site content are a tremendous benefit and asset to the kids.us space. Selecting Kidsnet as subcontractor for content management services has strengthened NeuStar's ability to maintain the kids.us space in the safest manner possible.

Established in 1997, Kidsnet, Inc. has developed the world's largest database of reviewed web pages. The Kidsnet database contains over 193,000,000 reviewed web pages and continues to grow. The patent-pending software is marketed to parents, educators, librarians, and businesses in the U.S. Web sites are rated by sex, nudity, language and violence on a scale of 1 to 5 and classified into 22 restrictive categories. Parents and educators can then decide the best level of access for their family of users. Kidsnet utilizes the Internet Content Rating Association System (ICRA) standards and augments those with types of specific content parents are concerned about such as Alcohol Promotion and Weapons. The Kidsnet system is easily understandable to parents and children, and contains classifications similar to the ones in the entertainment industry. For more information, visit: <http://www.kidsnetinc.com>.

At the time of Initial Content Review, and before any content may be activated within the kids.us domain, all potential websites must completely adhere to the Dot Kids Act Content Policy. Once content is active, NeuStar, through several mechanisms including multiple weekly reviews, is alerted to actual or alleged content infractions. For security and operational stability, NeuStar maintains the On-going Content Review process in a highly secure and confidential manner. The On-going Content Review includes multiple automated reviews of all active websites each week.

"Kidsnet" began its automated operations in April of 2004. NeuStar continues to monitor the performance of the On-going Review process to ensure quality and to conduct performance evaluation.

A "severity level" is assigned to each of the content restrictions identified in the Dot Kids Act Content Policy. The severity level dictates the process for the Registry Operator to address content violations and establishes the time period in which the registrant has to cure its violation. Because NeuStar does not have direct access to the content within a website, we are limited to removing a

domain name from the usTLD zone file, thereby blocking the website from resolving, until the violation can be cured.

The combination of regularly scheduled automated and manual reviews provided by NeuStar and Kidsnet has proven to be an effective means of ensuring that the kids.us domain is free of content inappropriate for minors. NeuStar will continue to apply the procedures identified here in an effort to promote the goals of Congress as stated in the Dot Kids Act and provide a child-friendly on-line environment.

C.8.4, C.8.10 Process for Removing Content

While the established policies and procedures have proven effective in managing the content on kids.us, it is necessary to have an established process to remove any content that violates the standards and requirements, as may be necessary or required by the Dot Kids Act, as amended.

NeuStar developed, implemented, and enforces the following kids.us take-down policy and we reaffirm our commitment to this policy and propose no changes.

Pursuant to the Dot Kids Act, the registry operator has responsibility for creating *"a process for removing from the new domain any content that is not in accordance with the [content] standards and requirements of the registry."* This enforcement power, though severe, is not absolute and finite, as the registry is also required to create *"a process to provide registrants to the new domain with an opportunity for a prompt, expeditious, and impartial dispute resolution process regarding any material of the registrant excluded from the new domain."* The purpose of providing this enforcement power to the registry operator is to strengthen a core objective of the Dot Kids Act, which is both to create an online arena that is free from material that is harmful to minors and to ensure that the kids.us domain remains safe from such harmful material.

At the time of initial content review, all potential websites must completely abide by the kids.us Content Guidelines and Restrictions before any content may reside within the kids.us domain. Once content is available, NeuStar can be made aware of any true or alleged content infractions from the Content Manager or through feedback received directly from the Internet community. On an on-going basis, NeuStar follows a defined process for removing appropriate content from the kids.us domain. This process is designed to balance the needs of maintaining a stable domain space as well as ensuring a timely and expeditious means for registrants to resolve any true or alleged content infractions.

NeuStar developed specific content restrictions and a corresponding "severity level" that guide the registry in addressing content violations. Because the registry does not have direct access to the content within a website, actions by the registry are limited to removing a domain name from the zone file, thereby blocking the site in its entirety. Although complete removal of a domain name may appear to be an extreme course of action in some instances, the objective of protecting children is paramount and must be the guiding factor in the enforcement process.

Content Restriction Severity Levels and Guidelines

Level 1

Level 2

Level 3

Mature content	Hate speech	Hyperlinks to acceptable content
Pornography	Drugs	
Inappropriate language	Weapons	
Violence	Hyperlinks to Level 2 or Level 3 content	
Hyperlinks to Level 1 content	Gambling	
Interactive or multi-user communication	Alcohol	
	Tobacco	

When the Registry is notified of an alleged violation, each site is reviewed within a reasonable time period and categorized pursuant to the table above. If the Content Manager and/or the registry operator determines that a violation has occurred, the following actions will be taken for each of the categories:

Level 1 – Registry immediately removes the domain name from the Zone file, contact the Registrar and Registrant and provide them notification of removal. The registrant will be required to repeat the content review process before the name can be re-established in the zone.

Level 2 – Registry notifies the Registrar and Registrant of the infraction and provides 4 hours for the error to be modified. The registrant is subject to an additional review.

Level 3 – Registry notifies the Registrar or Registrant of the infraction and provide 12 hours for the error to be modified.

Registrants found in violation of the content standards desiring to be reinstated within the kids.us domain are subject to a new review and re-activation fee each time a domain name is removed from the zone file and then re-entered. This fee is designed to recover the operational expense associated with manual removal and insertion into the Registry zone file, the additional content reviews, and other administrative expenses.

Registrants found repeatedly violating the content policy may be subject to permanent loss of their domain name, at the sole discretion of the registry.

C.8.5 Dispute Resolution Policy

As included in Section I, the kids.us Accreditation agreement provides for prompt, expedition and impartial dispute resolution regarding any registrant material excluded from the kids.us domain. As included in Section I.6, usTLD Contract Modification 7 covers CONTENT REMOVAL CHALLENGE POLICY AND RULES and states that NeuStar “shall establish a process to provide registrants in the kids.us domain with an opportunity for a prompt, expeditious, and impartial dispute resolution process regarding any material of the registrant excluded from the kids.us domain.”

In order to carry out this contractual as well as legislative requirement, NeuStar leveraged its existing relationship with the National Arbitration Forum (“NAF”) to (1) assist in developing prompt, expeditious, and impartial dispute resolution process and (2) develop a Dispute Provider Agreement in which NAF (a neutral third party) would agree to provide such dispute services. It was through these discussions that we were able to work together to develop a dispute resolution process that we believe is fair and equitable to those challengers who are unhappy with NeuStar’s decision to take down (or refuse to accept) a Kids.us Site.

According to the Kids.us Content Removal Policy and Rules developed and administered by NeuStar ("Policy"), any Kids.us domain name registrant is entitled to initiate an administrative proceeding ("Challenge") in the event that usTLD Administrator has either (i) taken any action to remove a Registrant's registered Kids.us domain name from the zone file or (ii) issued a Content Violation Notice of Intent to Remove a registrant's Kids.us domain name from the zone file (the "Removal Notice") for violation of the Content Policy.

There are two types of possible disputes relating to the Content Policy. The first will occur if either (i) a Kids.us Active Registrant's content is not approved by the usTLD Administrator to resolve on its Kids.Site or (ii) a Kids.us Active Registrant's content is taken down by the Registry under the Takedown Procedures. The second type of dispute, although treated similarly as the above disputes under the Content Policy, occurs when the usTLD Administrator mandates that certain content be removed from the Kids.us Site, the Kids.us Active Registrant complies and therefore still has a resolving Kids.us Site, but the Registrant would like to appeal the decision requiring him to take down such content or risk the whole Kids.us Site being taken down.

In both types of disputes, the Kids.us registrant will be the complainant and NeuStar will be the Respondent. Like the usDRP and the Nexus Dispute Policy, the burden will be on the Complainant to demonstrate that the content that was removed (or the Kids.us Site that was taken down) by NeuStar was not in violation of the Content Policy and therefore should never have been removed. Unlike the usDRP or Nexus Dispute Policy, NeuStar as the Respondent does not need to respond specifically to the individual assertions made by the Complainant, but must merely provide the Dispute Provider with enough information about the content that was taken down, the supporting documentation, and the reasons justifying the take down of the content.

The rationale for not requiring the usTLD Administrator to respond specifically to the Complaint is obvious. Such a requirement would be highly burdensome, require several full time employees and increase the costs of the Kids.us space by a significant amount. To illustrate, it is possible (if not likely) that a Complainant would claim that NeuStar's taking down of a particular website was in violation of the first amendment, breach of contract, negligent, etc. (as these types of causes of action are common in a usDRP). That being said, the Dispute Provider must be given enough information from NeuStar to make an independent determination about whether NeuStar was acting within the scope of the Content Policy in taking down a name (or content). Therefore, by providing the general information about precisely why a site was taken down (along with the back-up documentation), this should enable the Dispute Provider in making its determination.

C.8.6 Kids.us WHOIS Database

NeuStar currently ensures the accuracy of all contact information submitted by registrants and retained by registrars in the kids.us domain by maintaining and updating the WHOIS database. The kids.us WHOIS database is the same database maintained for all usTLD domains and includes all the required data fields.

C.8.7 Kids.us Administrator-Registrar Agreement

NeuStar developed, maintains and enforces the kids.us Administrator-Registrar agreement. The Kids.us Administrator-Registrar Agreement ("KARA") is the primary agreement that governs the relationship between NeuStar, as the Registry Operator of the kids.us second-level domain name

space, and each individual kids.us Accredited Registrar. All Registrars offering Kids.us domain name registrations must sign the KARA in addition to the usTLD Accreditation Agreement v. 2.0.

Copies of all of the kids.us agreements have been included in Appendix F.

There are some significant differences between the KARA and the usTLD Administrator/Registrar Agreement as discussed in Section I.2 of the Response. The primary differences relate to specific details about the unique kids.us registration process, including the (1) registration of kids.us domain names ("Registered Names"), (2) activation of the kids.us domain names ("Active Registrations") through NeuStar, enabling the owner of the Registered Name to have content and (3) process of reviewing websites that contain kids content ("Kids.us Sites"). In addition, other changes relate to the fact that registrations in the kids.us domain are for the third, and not, second-level as in the general expanded usTLD space. Only registrars that have executed the kids.us Accreditation Agreement may offer kids.us domains.

Content Review "Lessons Learned"

Multimedia Downloads and Third Party Software Applications

During the course of 2004, NeuStar staff learned certain lessons from the day-to-day management of our content review process and procedures. By working closely with Kidsnet, the approved subcontractor for content review services, and the content providers themselves, NeuStar identified certain challenges and issues that had been unforeseen during the design and launch phases of the kids.us domain - particularly related to the interaction of software installed on end-user computers and common web design software incorporated into websites submitted for content review.

One particular case involved the "hard-coded" behavior of certain software products from Macromedia, including "Flash" and "Shockwave" web design products. These Macromedia products account for a significant percentage of installed end-user software that enables the viewing of rich Internet content, interactive games and animation - Flash users are over 90% and Shockwave users are over 50% of all internet users worldwide. See http://www.macromedia.com/software/player_census/ for further details.

The challenge presented by these ubiquitous software programs is that some are hard-coded to prompt end-users to download the program if it is not already installed on an end-user's computer. In addition, if the end-user has an out-dated version of such software, the end-user may be prompted to update to the latest version of the software. When end-users receive this prompt, it has the potential of forcing the end-user out of the kids.us domain name space for the sole purpose of downloading the latest version of the software. Because children under thirteen can be forced to exit the kids.us space, NeuStar has elected to prohibit the software from being incorporated into the site by the content provider when the software is hard-coded to take end-users outside of the kids.us domain. It does, however, allow the software to be incorporated into kids.us websites, when the software is modified to remove the "forced hyperlink."

In situations where the end-user does not have the latest version of the software, authorized end users (parents, guardians) are informed that they need to download the software directly from the software provider, in this case Macromedia. In other words, kids.us site content providers are not allowed to incorporate software that will prompt an end-user to leave the kids.us domain to go get a software upgrade or update. However, in order to experience the rich functionality of the website, a parent or guardian will need to download that software directly from Macromedia. The

responsibility of downloading such software, that otherwise could prompt a user to leave the kids.us domain, rest with parents or guardians, not the sites' content providers.

To properly explain this situation to parents and guardians, NeuStar updated the kids.us website on May 12, 2004 as can be found at: http://www.kids.us/kids_notice_0512.html and as follows:

Important notice to parents and guardians:

Advisory Concerning Multimedia Downloads (5/12/04)

Many kids.us websites require browser downloads and plug-ins to view content that utilize sound, video, or other multimedia that enhance your child's experience when visiting the website. Examples of these are Macromedia Flash and Macromedia Shockwave. If these browser downloads and plug-ins have not already been installed on your computer, your browser will be unable to view such content. We encourage parents and guardians to install these browser applications prior to your child's visit to any of the kids.us sites. For more information on these applications, please consult the developers' websites.

Advisory Concerning Third Party Applications (5/12/04)

Please be advised that if you have downloaded certain third party applications onto your computer from outside the kids.us domain name space, these applications may contain links to websites outside of kids.us. These links are contained in the infrastructure of the applications and/or in your operating system's environment and are not part of a particular kids.us website. The functionality of these applications can not be controlled by the operators of kids.us websites. Examples of such applications include, but are not limited to, various browser enhancements (i.e., Microsoft and Adobe Plug-ins), search engine applications (such as the Google toolbar), media players (including Macromedia Flash players, Real Audio and Microsoft media players), and other third party plug-ins and downloads. We encourage all parents and guardians to review the functionality of any of third party applications to determine the suitability for use by children under the age of 13.

Third Party Content Providers

Another lesson learned by NeuStar during the first full year of operation is that a significant amount of content developed and submitted for review in the kids.us space is not developed directly by the kids.us domain registrant, but rather by third-party entities that specialize in producing rich, animated or interactive content such as games, cartoons, etc. on behalf of the kids.us domain registrant. This is true for some of the larger, name-brand entertainment sites as well as the small or mid-size enterprises.

Because NeuStar has no direct relationship with the actual third-party producer of such material, a challenge exists for NeuStar in communicating the Content Restrictions to that third-party developer. Unless the kids.us domain and website owner each has a clear understanding of the Content Restrictions that are integral to the kids.us domain and can also communicate those restrictions clearly to a third-party content providers, there is a risk of content being submitted that does not comply with the restrictions. This is particularly true as sites are updated with new content after the initial review process has been completed.

To address this concern, NeuStar has taken steps to improve communication with kids.us domain name registrants so they can better communicate with any third-party software providers. NeuStar also updated the www.kids.us website to include a notification and explanation of these issues. Finally, NeuStar has made it clear to kids.us domain registrants that NeuStar staff are available to discuss, explain and clarify any questions that might arise during the entire process of turning up a

new kids.us website. On more than one occasion, NeuStar staff members have worked closely with content providers, both the domain registrant and third-party developers, to ensure that the content submitted meets the requirements of the Dot Kids Act.

To monitor and address the ongoing concern of unacceptable content, and continue to improve the operation of the kids.us domain, NeuStar and Kidsnet conduct frequent and regular automated and manual reviews of kids.us sites to ensure that inappropriate content is detected and addressed immediately. This process is already starting to show results. In April of 2004 an internal NeuStar review identified a problem with an animated game on a particular site. It was determined by NeuStar that the content was not acceptable under the Content Restrictions, and therefore, NeuStar immediately contacted the site owner to cure the violation. The investigation into the inappropriate material revealed to NeuStar that the material had been added to the Website after the initial Content Review process. In addition, the actual producer of the content was, in this case, not the domain name registrant, but rather a third party developer that was contracted by the registrant to provide the material for that particular kids.us Website. Unbeknownst to the domain name registrant, the content was added to the Website, but was subsequently removed after notification of the violation.

C.8.8 Annual Kids.us Compliance Report to Congress

Section H of the Dot Kids Implementation and Efficiency Act of 2002, Public Law 107-317, requires that the registry shall prepare, on an annual basis, a report on the registry's monitoring and enforcement procedures for the new domain. The law states the usTLD Administrator shall submit each such report, setting forth the results of the review of its monitoring and enforcement procedures for the new domain, to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

Since the launch of kids.us in September 2003, NeuStar has submitted an annual report on monitoring and enforcement procedures for the kids.us domain. Every report has been submitted on time since the launch of kids.us. Reports were submitted in December 2003, December 2004, December 2005 and December 2006.

C.8.9 Kids.us Reserved List

NeuStar maintains the current kids.us Reserved List and provides registrar services as needed for such names.

C.8.11 Marketing and Promotion of Kids.us

Among the key initiatives during the last contract term was the introduction of the Dot Kids legislation in 2002. Following the launch of kids.us, NeuStar undertook a marketing campaign to begin to build the space and to establish kids.us as the premiere space for children under the age of 13 to use the Internet. In close cooperation with the U.S. Department of Commerce, NeuStar produced and distributed 70,000 copies of a kids.us promotional brochure in 2004. In April 2004, NeuStar introduced a registrar marketing campaign designed to Increase Activation of kids.us Content and Websites and domain name registrations. By creating incentives to leverage our registrar channel we attempted to encourage the development of content and activation of kids.us



websites. We offered revenue sharing on content review fees and a rebate program on new kids.us domain registrations.

NeuStar also participated in the U.S. Department of Commerce's July 14, 2004 Public Forum on kids.us to help promote the kids.us space.

NeuStar continues to introduce new marketing programs and initiatives to help grow the kids.us space. Recently, we implemented a series of price reductions and other incentive programs to spur growth in this space. These programs went into effect on June 1, 2007.

To date, the implementation of the above programs, even without the participation of some of the top registrars, has generated extremely encouraging results - nearly triple digit percentage increases in the numbers of registrations and web sites. NeuStar will continue to track the progress of these programs.

Additionally, a number of new "jump-start" initiatives are planned for the kids.us space as described in Table XXX below:



kids.us 'Jump-Start' Programs

Program	Summary	Program Expectations
<p>Program #1: kids.us Registrar Rebate</p>	<p>We are currently offering a kids.us domain name rebate program to registrars who submit the first 2,500 kids.us domain registrations. Working with .us-accredited registrars, this rebate program will include the following key terms:</p> <ul style="list-style-type: none"> • 2,500 free one-year kids.us registrations (one name per registrant); • Maximum of 200 domains per participating registrar; • Three-month program term; • NeuStar will reimburse participating registrars the \$6.00 wholesale fee, but won't control retail price; and • NeuStar will invest actual dollars in this rebate program by reimbursing participating registrars the \$6.00 annual wholesale fee on a pre-set number of domains. 	<p>Our goal is to get greater participation from current kids.us registrars and to encourage new ones to sign up to offer kids.us</p>
<p>Program #2: Content Management Subscription Rebate</p>	<p>We are currently offering a rebate program to the first 200 content providers to develop and submit acceptable kids.us websites. This rebate program will include the following key terms:</p> <ul style="list-style-type: none"> • Rebates offered to the first 200 content providers who activate a kids.us site; • Three-month program term; • The applicant will pay the \$125.00 annual subscription fee to establish the annual subscription account; • Once the website content is submitted, reviewed and approved, NeuStar will refund the \$125.00, Neustar will provide rebates on a first-come, first-served basis up to a pre-determined maximum total amount.; and • Because our contract with KIDSNET includes an annual hard dollar minimum, review of the additional 200 sites will be covered by existing expenses, plus some amount of incremental expense. 	<p>Our goal is to drive usage and awareness of kids.us through an increase in the the number of live web sites</p>



kids.us 'Jump-Start' Programs

Program	Summary	Program Expectations
Program #3: 'Show Your School Spirit' Participation	<p>After the initial rebate programs are complete, we will offer a special 'school spirit' promotion to the first 200 K-12 public schools to purchase a kids.us domain and submit acceptable content for review. The 'school spirit' rebate program will include the following key terms:</p> <ul style="list-style-type: none"> • The promotion will include a free first-year annual Content Management Subscription. • The ongoing CMS fee will be \$125.00. • Six-month program term, to begin after completion of Programs 1 and 2 above. <p>Once again we expect to invest hard dollars in this promotional program through the registrar rebate of \$6.00 for 200 domains (\$1,200) and the discount of \$125.00 for 200 CMS accounts.</p>	Increase in awareness and the number of live web sites

In order to build awareness and encourage content development and usage of kids.us domains, NeuStar is running targeted marketing campaigns and outreach events with key target audience groups as described in the following table.

NeuStar is committed to the success of the kids.us domain space and we will continue to execute on these outreach and awareness-building programs.

kids.us Marketing Campaigns and Outreach Events

Program	Summary	Program Expectations
Joint Outreach Events	We are working with selected key consumer/advocacy groups to raise awareness of kids.us and to utilize their existing networks of customers, members, partners, etc. to distribute kids.us brochures and discuss the kids.us opportunity. We have allocated funds to participate in joint outreach events to increase awareness of kids.us.	This is expected to lead to increased awareness of kids.us, which in turn will drive increases in registration and web site usage
Online Promotions	We are utilizing dedicated advertising space on the 'zipcode.us' directory platform to promote awareness of kids.us.	Drives awareness for kids.us
Distribution of kids.us Brochures	We will continue to distribute kids.us brochures to key consumer groups, government agencies, parent groups, schools, etc.	Drives brand awareness
Targeted Partnerships	Implement a new program initiative to explore partnerships with visible groups like non-profit organizations, elementary schools, and media, such as Discovery Channel, PBS for kids, Cable-in-the-Classroom.	The goal is to bring awareness to child-safe communities on the Internet, which we expect will result in increased visibility and usage (web sites) in kids.us



kids.us Marketing Campaigns and Outreach Events

Program	Summary	Program Expectations
Affiliate Program	Explore the viability of setting up a direct, online affiliate program to try and bring more visibility to the space.	Should we offer this program, our objective would be to drive brand visibility of kids.us and increase the number of registrations, as there would be several new affiliate resellers for kids.us

C.9 License to Use usTLD and kids.us Promotional Marks

Based on our experience as the kids.us Administrator, NeuStar will grant the DoC a worldwide, non-exclusive, non-transferable, right to use any of the usTLD and kids.us logos, slogans, or other promotional marks developed by NeuStar in performance of this contract. We will also provide any other assistance the DoC deems necessary to promote the U.S. Government's exclusive online environment for children under the age of 13.

NeuStar believes that the promotion and marketing of the kids.us domain by the DoC, including banner advertisements on the www.ntia.doc.gov home page and the joint development of the official kids.us promotional brochure, has given kids.us visibility it would not otherwise achieve on its own (especially with the U.S. Government agencies, legislators and other entities that interact with the DoC). NeuStar looks forward to continuing to develop its partnership with the DoC to promote and market the kids.us domain.

C.10. Transition to Successor Contractor

Selecting NeuStar to continue service as the usTLD eliminates all risks associated with transition to a new provider.

During the term of the new contract, and in the event a successor contractor is selected, NeuStar will submit, for the DoC's approval, a plan for the transition from the existing registry and the transition to a successor registry.

No transition can be guaranteed to be risk free; by its very nature, any transition introduces the possibility of disrupting service for millions of users. As such, the most prudent course of action is to not transition at all. However, if, for some reason a transition is required, NeuStar will work closely with the DoC and will make reasonable efforts to ensure an orderly transition. We believe it is our obligation to the Internet community to assist in making any transition as successful as possible. Our primary focus would be on timeliness, security, and stability.

While the overall burden for a successful transition would be the responsibility of the successor, we would work closely with the successor to minimize negative impacts on the usTLD community. To this end, elements of our transition plan may include:

- Providing feedback to the successor contractor and feedback to the DoC regarding the viability and quality of the successor contractor's transition plan and suggestions on improving the same;
- Assigning a project manager to interface with successor contractor;
- Providing periodic, current copies of escrowed data to allow successor contractor to test conversion/import programs;
- Participating in transition status meetings;
- Providing required contact information for various entities (e.g. accredited registrars);
- A detailed plan to sustain DNS resolution during successor's DNS ramp-up period;
- A plan to transition registrar funds to the successor;
- A communications plan for keeping the community apprised of our transition activities; and
- A plan for NeuStar to resume services should the transition not be successful.

Depending on the particulars of the successor's transition plan, we may be able to provide additional assistance, provided it did not require the release of proprietary information.

One type of assistance would be our experience in risk analysis. As an example, based on our experience the types of transition risks can be categorized as follows:

Highlights

- **Reselecting NeuStar as usTLD Administrator eliminates the need for transition and all associated risks to the integrity, security, and stability of the usTLD**
- **Should it become necessary, NeuStar will work cooperatively with the DoC and other entities to implement a smooth transition.**

- **Data Corruption** – Includes loss of data during transition, inaccurate transition of data, unexpected behavior from the new systems that result in data loss or corruption;
- **Disruption in service to registrars and Delegated Managers** – Includes unplanned unavailability or degradation to SRS, SRS web interface, extranet, report server, billing capabilities, DM Tool, etc.;
- **Disruption in service to registrants** – Includes unplanned unavailability or degradation to SRS, SRS web interface, DM Tool, billing capabilities, DNS, WHOIS, WHOIS web site, web sites, etc
- **Disruptions in service to usTLD users** – Includes unplanned unavailability or degradation in accuracy, capacity, or performance of DNS and WHOIS
- **Violation of usTLD policies** – Includes policies and procedures around Locality and Delegated Managers, domain review, domain take down, kids.us, nexus and reserved names are complex and unique. Any new operator will require months or years to develop the expertise to capably manage these policies. Transition errors are likely and could cause a variety of problems including customer support, legal, financial, quality of service and policy violation.

The usTLD is a complex and unique national asset. In order to smoothly transition services from NeuStar, any reasonable transition plan must include consideration of those types of risk factors. We would consider these types of risks as they relate to functions that could be (broadly) categorized as:

- **Standard TLD registry functions** – Most experienced registry operators should be capable of producing a plan to mitigate, although not remove, transition risk for these standard functions. For example all registries provide DNS, a Shared Registry System, WHOIS, and registrar support systems such as billing and collections. Any transition plan must take into account the need for 100% DNS and WHOIS availability, registrar conversion to new systems, billing account set-up, registrar turn-up and data loading and conversion. Anything less than flawless execution in any of these areas could cause data corruption, service disruption or violation of policies.
- **usTLD-specific functions** -- These functions are unique to usTLD and more complex than standard registry functions. Each requires an in-depth knowledge and experience with the intricacies of usTLD policy, as well as applications to support the processes that enforce these policies. For example, the usTLD registry needs to understand and build supporting systems for the locality space and Delegated Managers, transition data for these locality registrants, assume contractual relationships, and manage accreditations that are in progress.

Using this categorization and our experience administrating the usTLD has given us deep insight into the complex elements that must be considered in order to ensure the successful transition of the space, we first provide an risk analysis of the standard registry functions in Exhibit B-12a.



Transition Elements: Standard Registry Functions	Areas of High Risk			
	Service Disruption			
	Registrars /DMs	Registrants	usTLD Users	Data Corruption
Development of SRS Business Rules	⚠	⚠		⚠
Migration of DNS	⚠	⚠	⚠	⚠
Migration of Data	⚠	⚠	⚠	⚠
Migration of WHOIS Data		⚠	⚠	⚠
Development of Dynamic DNS Update Process		⚠	⚠	⚠
Development of Dynamic WHOIS Update Process		⚠	⚠	⚠
Migration of Billing Processes and Procedures	⚠			
Migration of Registrar Debit Accounts	⚠			⚠
Creation of Registry Websites	⚠	⚠		
Implementation of EPP	⚠	⚠		⚠
Creation of Registrar Reports	⚠			
Implementation of Data Escrow				⚠
Training of Customer Service	⚠	⚠	⚠	
Registrar Relations	⚠			
Development of Registry Admin Tool	⚠			⚠
Account of Transactions "in flight" (ie transfers)		⚠		⚠
Transition Ongoing Marketing Programs	⚠			
Account for Different Auto-renew Billing Process	⚠	⚠		⚠
Account for Grace Periods	⚠	⚠		⚠

U2/a.m2

Exhibit B-12a. In order to avoid service disruption, TLD registry transition requires detailed planning to mitigate areas of high risk.

While this is a formidable list of functions, we offer that the challenge presented by the second category, usTLD-specific functions is even greater, as shown in Exhibit B-12b.

Any responsible transition plan must include detailed procedures to mitigate the significant risks associated with each of these critical elements.



Transition Elements: Functions Unique to usTLD	Areas of High Risk				
	Service Disruption			Data Corruption	Violation of Policies
	Registrars /DMs	Registrants	usTLD Users		
Creation of Expanded Space Accreditation Process	⚠				⚠
Implementation of Expanded Space Accreditation Process	⚠	⚠			
Implementation of EPP Extensions (DM contact, Nexus, Locality, RGP)	⚠	⚠		⚠	
Participation in ccNSO Council					⚠
Creation of Agreements with Dispute Providers	⚠	⚠			⚠
Creation of Escrow Provider Agreement		⚠		⚠	⚠
Implementation of AXFR Zone Transfer Process				⚠	⚠
Development of Content Management System (Kids.us)	⚠	⚠	⚠	⚠	⚠
Creation of usDRP Agreement		⚠			⚠
Creation of usTLD Accreditation Agreement	⚠	⚠			⚠
Creation of usTLD Administrator-Registrar Agreements	⚠	⚠			⚠
Implementation of WHOIS Accuracy Checks	⚠	⚠	⚠		⚠
Development of Multi Record WHOIS		⚠	⚠	⚠	
Implementation of Nexus Checks	⚠	⚠	⚠		⚠
Creation of Nexus Dispute Provider Agreement	⚠		⚠		⚠
Creation of Delegated Manager Agreements	⚠	⚠			⚠
Development of Delegated Manager Tool	⚠	⚠		⚠	
Creation of Domain Review Policy		⚠	⚠		
Implementation of Domain Takedown Policy			⚠	⚠	
Enforcement of Locality Compliance Process	⚠				⚠
Migration of Locality Database	⚠			⚠	
Locality DM/Registrant Agreements (in process)	⚠	⚠			⚠
Locality Registrant Agreements		⚠			⚠
Development of Kids.us Directory		⚠	⚠	⚠	
Creation of Kids.us Content Removal Challenge Policy and Rules		⚠	⚠		⚠
Creation of Kids.us Content Guidelines		⚠	⚠		⚠
Development and Implementation Kids.us Content Review (Automatic)		⚠	⚠	⚠	⚠
Implementation Kids.us Content Review (Manual)		⚠	⚠		⚠
Creation of Kids.us Administrator-Registrar Agreements	⚠				⚠
Creation of Kids.us Content Terms of Use		⚠			⚠
Kids.us Dispute Provider Agreement		⚠	⚠		⚠
Kids.us Take-down Procedures		⚠	⚠		⚠
Implementation of Reserve Name Validation Process		⚠			⚠
Implementation of Reserve Name Renewal Process		⚠			⚠
Development of US Directory Provisioning System		⚠	⚠		
Creation of Zip Code Web Page Content		⚠	⚠	⚠	

027b.us2

Exhibit B-12b. The transition of usTLD would introduce numerous risks that are difficult to mitigate due to the unique requirements of complex usTLD policies and processes.

C.11. Secure Systems

NeuStar utilizes industry-best security practices and protects the usTLD platform through a combination of physical, network, server, and application security elements.

NeuStar's role as the usTLD administrator has led it to install and operate computing and communications systems in accordance with best business and security practices. In this section of the Proposal, we provide information on our security practices, including information on our approach to authenticated communications.

Our approach to information security starts with our comprehensive information security policies. These are based on the SANS Institute's best practices for security and are reviewed annually by our information security team. The SANS Institute (www.sans.org) is the largest and most trusted source

for information security training, certification and research in the world. The policies include topics on:

- User responsibilities
- Network security
- Windows security
- UNIX security
- Database security
- Telecommunications security
- Remote access
- Lab security
- Digital certificate architecture
- Encryption
- Perimeter security
- Extranet security
- Handling security violations
- Audit policy
- Risk assessment policy
- Peer to peer networking

The document is revised periodically, with its most recent revision in May, 2007, and its most material upgrade for enhancements related Sarbanes-Oxley (SOX).

We recognize that personnel are a critical component of any security strategy, so a key part of these policies is the user education process. Consequently, information security training is a key part of new hire orientation. We also have mandatory information security awareness training. Additionally, our internal help desk issues periodic security bulletins, as warranted by security threats.

We also recognize that security is not a static element of our infrastructure. Consequently, we have, during the tenure of our present usTLD contract, made extensive investments in our security capabilities. These include:

- [REDACTED]
- [REDACTED]

Highlights

- NeuStar deploys a comprehensive security program that addresses physical facilities, equipment, applications, network and communications.**
- NeuStar's security procedures are based on best practices developed by the SANS Institute.**
- NeuStar employs a number of mechanisms to secure customer communications including authentication and encryption.**



- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

In this section, we discuss:

- Physical security,
- Network security,
- Server security,
- Application security, and
- Customer communications.

Physical Security

[Redacted]

SRS Data Centers

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

Network Security

[Redacted]

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

[Redacted]

• [Redacted]

• [Redacted]

• [Redacted]

• [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Server Security

[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted text block]

- [Redacted list item]
- [Redacted list item]
- [Redacted list item]

[Redacted text block]

- [Redacted list item]
- [Redacted list item]
- [Redacted list item]
- [Redacted list item]

- [Redacted list item]
- [Redacted list item]
- [Redacted list item]

[Redacted text block]

Application Security

[Redacted text block]



[Redacted text block containing multiple paragraphs and bulleted points]



Customer Communications

[Redacted]

Customer Communication Security	
Channel	Security Mechanism
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

[Redacted]

[Redacted]

[Redacted]



Conclusion

NeuStar has extensive experience in designing, deploying and operating a secure system for the delivery of customer solutions. Our platforms are managed in accordance with industry best practices and are architected using accepted standards and technologies.



C.12. Secure Data

NeuStar ensures security of data through a holistic approach that considers data input, data output and data storage.

[Redacted]

[Redacted]

Inputs

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

- [Redacted]

- [Redacted]

[Redacted]

- [Redacted]

- [Redacted]

[Redacted]

- [Redacted]

- [Redacted]

[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

[Redacted]

Management of Storage

[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

[Redacted]

Outputs

[Redacted]

- [Redacted]

[Redacted]

[Redacted]

[Redacted]

- [Redacted]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]

Summary

As an experienced operator of registry infrastructure, NeuStar has deep and detailed knowledge of the security challenges and constraints of a TLD environment. In this section, we have provided a discussion of authentication, integrity, and reliability of the data in the usTLD.

Before closing this section, we wish to highlight a specific expansion in capabilities that NeuStar has undergone during our tenure as the usTLD administrator: operating under Sarbanes Oxley (SOX) compliance. As a public company, NeuStar is subject to the requirements of SOX. Some of the constraints imposed as part of SOX compliance relate to revenue integrity.

To this end, there are a number of specific process and access controls that have been installed on the operations environment for usTLD. These include:

- All system testing done by a test team that is independent and separate from engineering
- All changes to the production environment done by an operations team that is independent and separate from engineering



- Traceability from source code change through the deployment mechanism
- Full auditing from registrar transaction to accounting systems

As a result, NeuStar's operations of the usTLD have extraordinary transparency to our independent auditors. And while expensive to implement (at NeuStar's sole cost) there are substantial intangible benefits to the DoC, registrants, and registrars.

C.13 Computer Security Plan

NeuStar presently has in-place a corporate computer security plan that covers our entire enterprise, including usTLD platform and operations. This plan includes a published set of comprehensive information security policies that are based on security best practices as defined by the SANS Institute (www.sans.org). The SANS Institute is the largest and most trusted source for information security training, certification and research in the world. NeuStar's plan addresses Physical Security Policies based on ASIS best practices (www.asisonline.org) for securing a data center and provide for mandatory annual Information Security Awareness Training for all employees.

As part of the usTLD renewal, NeuStar will develop and implement a distinct computer security plan specifically for usTLD systems that will be maintained in conjunction with our corporate security plan. We will update the usTLD plan annually and will deliver the plan to the DoC's CO and COTR upon request.

NeuStar will leverage our six years experience in administering usTLD and our experience providing similarly scoped computer security plans for other U.S. Government procurements to develop and deliver this plan in accordance with all requirements.

C.14 Director of Security

NeuStar has designated Bob Strouts as the Director of Security for the contract. Mr. Strouts has more than 20 years of experience in advanced technologies and has served as Vice President, Network Operations at NeuStar since 2003. In this role, Mr. Strouts has responsibility for the overall security of NeuStar's infrastructure and data center. The NeuStar registry has never suffered an outage or degradation due to security or attack issues. Along with his team of dedicated and responsible managers and technician, Mr. Strouts oversees NeuStar's corporate security programs.

In the event that a change of personnel becomes necessary, NeuStar will notify and consult with the DoC COTR before such a change is made.

Mr. Strouts' resume has been included in Proposal Section A.

D. Reporting Requirements

NeuStar will continue to provide on-time and accurate reporting to the DoC, as required, including additional reports not required by the SOW.

Reports, discussed below, are an important tool for providing the DoC and Registrars with insight into the operations of the Registry as a whole and specific to registrars respectively. The progress reports include key metrics that demonstrate whether the usTLD space is being managed to the high standards expected by the DoC and usTLD, in terms of technical performance, overall growth, and the quality of the space.

We are proposing additional new elements, including posting aggregated, high-level data for the public, to bring this type of reporting in line with other industry standard reports (e.g. ICANN reports); to provide the DoC with greater visibility into the Registry, in particular the activities of individual registrars, and to increase our transparency by providing the public with high level statistics.

NeuStar's reporting solution includes an enterprise-strength, high availability database system capable of managing high transaction-processing loads reliably and with scalable growth to accommodate fluctuations of transactional and registry volumes. This database system is the foundation of our reporting capabilities. The reporting database is used to create both internal and external reports, primarily to support registrar billing and contractual reporting requirements.

All reports will continue to be generated on a pre-determined schedule, and include data for the reporting period based on UTC times. Reports will continue to be published in predetermined formats depending upon the requirements of the specific report being provided. Reports submitted to the DoC will continue to be provided in Word and PDF formats.

Over the past six years, NeuStar has provided the DoC with regular progress reports, both formally and informally. At a minimum, NeuStar will continue to provide the required *Periodic Progress Reports*.

As required, we will also submit the following reports:

- *An Uncertified Financial Report* within 30 days of the conclusion of the base period of the contract and each subsequent extension;
- A "*Final Report*" at the conclusion of the contract;
- *Security Audit Data and Reports*; and
- *Annual WHOIS Accuracy Report*.

In addition to these "Contract Deliverables" (set forth in Request For Quotation, Exhibit C, Section E, Deliverables) reports, we have provided and will continue to provide various reports specific to

Highlights

- **Since NeuStar presently provides reports in DoC-approved format and frequency no re-design or training by the DoC or COTR is necessary.**
- **New elements added to DoC progress reports increase the value of and visibility on usTLD administration**
- **NeuStar has added registrar reporting to secure web portal for greater ease of use and accessibility**
- **NeuStar will make snapshot statistics available to the public.**



certain issue or programs (e.g., the Annual Kids.us Compliance Report and weekly status updates on our efforts to clean up the locality space).

We also propose (as described in D.5) to provide certain reports to the public.

D.1 Periodic Progress Reports

The following table highlights the elements that NeuStar will continue to include in the usTLD Progress Report to the DoC currently sent on a quarterly basis. As required we will submit the reports on a monthly basis for the base period of the contract, and thereafter on a quarterly basis.

The table also highlights the new registrar-related elements that we will send to the DoC as part of the Progress Report but in a separate CSV file. We believe these new data elements will provide even greater visibility for the DoC into the operations of the registry, and, in particular, to the activities of individual registrars.

These reports will continue to be submitted within 15 days of the close of the reporting period.

Progress Report Element	Data Provided
Currently Provided	
Summary of Major Events During Reporting Period	<ul style="list-style-type: none"> Contract Modifications Technical/Operational Issues Service Releases and Upgrades
Performance Data	<ul style="list-style-type: none"> Performance statistics by SLA
Transaction Statistics	<ul style="list-style-type: none"> Billable transactions EPP transactions (Creates, Deletes, Renewals, Transfers, Updates, Infos and Checks) WHOIS Queries DNS Queries
Monthly Registration Data	<ul style="list-style-type: none"> Second-level registrations, per registrar Kids.us registrations, per registrar Total names under management, per registrar
kids.us Statistics	<ul style="list-style-type: none"> Domains registered during reporting period Total domains under management Active websites Websites pending review Number of kids.us accredited registrars Number of violations Number of takedowns
Website statistics for www.neustar.us and www.kids.us	<ul style="list-style-type: none"> Page views Visits Average visit length
Accredited registrar status	<ul style="list-style-type: none"> Number of operational accredited registrars Number of non-operational accredited registrars Total number of accredited registrars
Locality Statistics	<ul style="list-style-type: none"> Number of delegated managers Number of changes in delegated managers Number of updates to the locality space

Progress Report Element	Data Provided
Additional Report Elements Proposed	
Registrar Transactions	<ul style="list-style-type: none"> • Number of transactions per registrar during the reporting period • All transaction types, including adds, renewals, and transfers, broken down by term • Number of Deletes per registrar • Number of gaining transfers per registrar • Number of losing transfers per registrar • Number of domain redemptions • Total number of domains under management, per registrar • Total number of name servers under management, per registrar • Number of WHOIS data complaints lodged against registrar
Daily EPP Transaction Ranges	<ul style="list-style-type: none"> • Maximum daily transactions • Minimum daily transactions • Average daily transactions
WHOIS Data Accuracy Audit Report	<ul style="list-style-type: none"> • Number of WHOIS Accuracy Complaints Received • Number of Domains Reviewed for Accuracy • Breakdown of Actions Taken

D.2 Final Report

As required, we will submit a *Final Report* within 60 days of the conclusion of the contract. This report will document the standard operating procedures deployed during the course of the contract including a description of:

- The techniques and methods used to manage usTLD;
- All hardware and software deployed to support usTLD; and
- Any other tools deployed in support of usTLD.

D.3 Security Audit Data and Reports

As required we will generate and retain security process audit data. As a Sarbanes-Oxley compliant corporation, we generate and analyze audit data as a part of our routine operating procedures. This data is compiled into reports that must be reviewed by appropriate managers. The data we generate includes:

- Assessments of user access to systems, including appropriateness of the access
- Reviews of failed privileged account logins
- Reviews of database logs
- Reviews of CSR activity
- Investigations of any erroneous or suspicious activity

We will submit an annual audit report to the DoC's CO and the COTR containing a review and analysis of our security audit data and procedures.

D.4 Annual WHOIS Accuracy Report

NeuStar will submit an *Annual WHOIS Accuracy Report* to the COTR. The report will contain statistical data on the number of whois inaccuracies as the result of internal reviews or reported inaccuracies. The report will include a breakdown of reported inaccuracies by registrar. In addition, it will include a summary of the actions taken as a result of reviews.

D.5 Additional Reports to the Public

In our experience as an administrator of the usTLD and other U.S. public resources such as the North American Numbering Plan, we have found that the public has a vested interest in the state of the national assets being managed by companies such as NeuStar. We have also found the public is equally interested in the usTLD space particularly as awareness for the usTLD space increases.

To that end, to provide even greater, but appropriate, visibility into the usTLD space, we propose to post "usTLD Space At a Glance" progress data on our website. This data will provide the public with aggregated data on the growth of the usTLD space. This data will not be registrar-proprietary data. Data elements include:

- Total number of domains under management at the end of the reporting month;
- Total number of usTLD nameservers under management at the end of the reporting month;
- Number of new registrations;
- Number of renewals;
- Number of transfers;
- Number of deletions;
- Six-month trend data for the data above; and
- Number of accredited registrars.

E. Deliverables

E.1 Required Deliverables

NeuStar has diligently provided all reports as required in accordance with all contractual service levels. We will continue to do so throughout the next contract term. Among the reports that will be provided are:

Periodic Progress Report: NeuStar will deliver Periodic Progress Reports as described in Proposal Section B, Sub-section D.1. Each Periodic Progress Report will be submitted to the COTR on a monthly basis and within 15 days of the close of the reporting period. Each Monthly Progress Report will include all the data elements described in Proposal Section B, Sub-section D.1.

Final Report: NeuStar will deliver a Final Report as described in Proposal Section B, Sub-section D.2 within 60 days of the conclusion of the contract. This report will document the procedures deployed during the course of the contract, including the techniques, methods, hardware, software and other tools used to support the usTLD space.

Security Audit Data and Reports: Annually and upon request, NeuStar will deliver Security and Audit Data Reports as described in Proposal Section B, Sub-section D.3. This requires generating and retaining security process audit data.

Annual WHOIS Accuracy Report: NeuStar will deliver Annual WHOIS Accuracy Reports as described in Proposal Section B, Sub-section D.4. The report will contain statistical data on the number of WHOIS inaccuracies resulting from internal reviews or external reports, a breakdown of reported by each registrar, and actions taken.

Revenue Financial Report: As described in Proposal Section B, Sub-section D.1.4, within thirty days of the conclusion of the contract's base period and each option period, NeuStar shall submit an uncertified financial report of the revenues received and expenses incurred under the contract.

E.2 Deliverables Format

NeuStar shall submit all deliverables in Microsoft Word and such other formats as the Contracting Officer or COTR may require.