K. Registration Process

NeuStar has a proven record of providing secure and reliable registration services both during land rush periods and during normal daily operations.

Our history of successfully launching new TLDs with no adverse operational impacts to registrars and registrants is unparalleled among the major TLD registry operators.

Highlights

- **NeuStar uses a standardized RPP registration process to streamline and speed the manner in which registrations are handled.**
- **NeuStar's platform has the capacity to handle massive volumes of transactions.**

The following section describes the key elements of the registration process today, including the process for handling of large volumes of registrations in the event there is a requirement to expand the existing usTLD space. The elements described are:

- High Volume Registration Capabilities
- Registration Process
- Enforcement of Registration Requirements
- Appeal Process
- Procedures for Canceling Registrations

K.1 High Volume Registration Capabilities

The launch of any new TLD space has the potential to create an initial rush of registrations. An administrator inexperienced in the complexities of the usTLD policies exposes the DoC, registrars and other stakeholders to significant risks trying to accommodate all of the requested registrations. NeuStar has proven experience handling land rush periods.

In 2002, NeuStar employed an innovative (in fact, the industry's first ever) "first-come, first-served" land rush for the expanded usTLD space. We provided a highly robust registry-registrar system that allowed all accredited registrars to connect to the SRS simultaneously and to submit registrations in real-time using EPP transactions. Previous to this launch, all other major registries had implemented a land rush using processes that involved submitting applications in non real-time. However, we proved that a real-time land rush was not only possible, but also advantageous to all parties involved.

Our ability to successfully process this initial rush of registrations was based on several important factors:

- Deployment of a highly robust and scalable registry infrastructure
- Utilization of sophisticated hardware to manage network connections and traffic from registrars

- A thorough test plan that incorporated the participation of registrars

The foundation of a successful first-come, first-served land rush is a secure, robust and scalable registry infrastructure. It is critical that the infrastructure is designed to accommodate large volumes of transactions for a period of many hours. From the onset, our systems have been designed to support high transaction loads all within specified service levels. Our platform is capable of handling a massive number of simultaneous requests.

Detailed descriptions of NeuStar's system design has been provided in Section B, Sub-section C.3 of this proposal.

NeuStar also utilizes sophisticated traffic shaper hardware that allows us to easily manage the number of connections of each registrar. The traffic shaper is an intelligent connection management device that enables us to throttle registrar connections and traffic in a fair and equitable manner. For example, during a land rush launch we could utilize the traffic shaper to set the maximum number of connections any registrar may open and control the bandwidth utilized by all registrars. This allows us to fine tune the performance of the system by adjusting various parameter that impact all registrars equally.

Prior to any land rush event, our systems undergo numerous tests to ensure that they function as designed and can handle the projected loads. In addition to the normal system tests, we also perform another very important pre-launch test: we allow all registrars to connect to the production SRS to verify that our firewalls are properly configured to allow access and that their software is properly set up to transmit transactions. This test period serves to provide the registrars with a high level of confidence that all systems are ready to go, and just as importantly, it ensures the registry that all registrars have been configured properly and none will be disadvantaged at the start.

These three factors have proved to be the key to a successful first -come, first-served launch and would remain the foundation of any future land rush. Over the last six years we have continued to upgrade and expand our infrastructure to meet the growing needs of the usTLD space, and we are confident that our existing platform is capable of supporting a new land rush period on a scale even greater than those of 2001 and 2002.

K.2 The Registration Process Today

Today, the second-level (expanded space) usTLD space is administered under a Registry-Registrar model. All registrations are submitted through accredited Registrars using an EPP (Extensible Provisioning Protocol) interface to the Registry. All transactions are processed in real time, on a first come, first-served basis.

NeuStar operates a thick registry database, where all of the contact and delegation information for the registrations is stored at the registry in a centralized location. This is in contrast to registries such as .net or .com, where the WHOIS contact information is maintained by each sponsoring registrar. A thick registry offers an authoritative database that maintains the integrity of the usTLD, and allows the registry to properly enforce all registration restrictions, including Nexus requirements and WHOIS accuracy.

Domain names may be registered for terms from 1 to 10 years, inclusive. A domain may never have a term exceeding 10 years. Each domain name must contain contact data for the registrant, administrative, technical, and billing contacts. In addition, to be in the .us zone, a domain must have at least two name servers. Domain names may be renewed for terms of 1 to 10 years, so long as the overall term of the domain does not exceed 10 years.

After selecting an accredited registrar, registrants follow the registration procedures of the selected registrar. While registrars may offer different direct user experiences, certain aspects of the registration process are mandatory and all registrars must follow these processes.

All registrars must be technically certified in the submission of EPP transactions to the registry. The use of EPP as the provisioning protocol provides for a number of benefits. EPP is a very flexible protocol that allows the Registry to collect additional data with each transaction. In addition, EPP enforces the registration data to be submitted in a standardized format. The requirement for all data to be submitted in standard formats is the first level of data accuracy enforcement.

The registration and ongoing management of domains is accomplished using the following core transactions:

- Create – used to created domain names, contacts, and name servers
- Renew – used to renew domain names
- Transfer – used to transfer domain names between two sponsoring registrars
- Update – used to modify domain names, contacts, and name servers
- Check – used to check the existence (availability) of domain names, contacts, and name servers
- Info – use to query domain names, contacts, and name servers

Registrars submit these transactions via EPP, or alternatively they may use the Registry Admin Tool (website) we provide to all registrars.

The usTLD currently receives about 4 million transactions per day with bursts of 700 transactions per second.

K.3 Enforcement of Registration Requirements

The usTLD space contains certain registrations requirements that must be addressed by the Administrator. These requirements are unique to the usTLD space and NeuStar is the only provider with experience managing and enforcing these elements.

All registrants must meet certain Nexus requirements designed to ensure the registrant has an appropriate degree of connection to the United States. We have successfully implemented a self-certification procedure coupled with ongoing monitoring and spot checks of all registrations. This self-certification procedure has proven to work very well and the number of violations has been small. Furthermore, the process can be fully integrated with the EPP "add domain" command, and allows for the processing of non-interrupted real-time transactions, providing for a fully satisfactory

registrant experience. Our process has been specifically designed to maintain the high quality of the space, while not unduly hindering the registration process and thereby limiting the growth of the space.

As previously described in Section B, Sub-section C.4, the U.S. Nexus compliance process incorporates a self certification process completed by the registrant, an ongoing monitoring program and periodic checks by NeuStar. To register a domain name, the registrant must indicate which of five potential Nexus categories he/she complies with. These categories are defined as:

- C11: United States citizen
- C12: Permanent resident of the United States of America, or any of its insular areas
- C21: A U.S.-based organization or company formed within one of the fifty (50) U.S. states, the District of Columbia, or any of the United States insular areas, or organized or otherwise constituted under the laws of a state of the United States of America, the District of Columbia or any of its insular areas, a U.S. federal, state, or local government entity or a political subdivision thereof.
- C31: A foreign entity or organization that has a bona fide presence in the United States of America or any of its insular areas who regularly engages in lawful activities (e.g., sales of goods or services or other business, commercial or non-commercial, including not-for-profit relations in the United States).
- C32: Entity has an office or other facility in the United States

The category is assigned a corresponding code which is then submitted to the Registry as part of the EPP transaction to add the domain. The domain may not be registered unless a correct Nexus code is submitted. Furthermore, each Nexus code is shown in the WHOIS record for anyone to view.

In addition to the self-certification registration process, NeuStar also proactively monitors registrations for violations of the Nexus policy. This includes weekly reviews of a random list of .us registrations, and investigations into violations reported by the public. During the review process, registrants are sent multiple emails asking them to provide further evidence of their Nexus eligibility. If a registrant fails to respond or provide adequate documentation within a reasonable period of time, we delete the domain from the SRS.

In addition to the Nexus compliance program, NeuStar investigates all reports of invalid WHOIS data. Upon discovering WHOIS data that appears to be invalid, we contact the registrar and request that they investigate and report back their findings. Any domain that contains invalid WHOIS data that is not corrected in a reasonable time is deleted from the SRS. We are proposing a comprehensive WHOIS Accuracy Program that is described in detail in Section B, Sub-section C.4.1.v.b.

K.4 Appeal Process

It is important to ensure fairness and neutrality in operations, and to provide registrants with adequate opportunity to provide evidence that they have met the Nexus and WHOIS accuracy requirements. In order to streamline the registration process, the burden of proving compliance is

only required as a result of our post-registration monitoring or as the result of a complaint from the public. As a general matter, NeuStar does not intend to deny initial registrations. However, we are cognizant of the importance of the Nexus requirements and are vigilant in our monitoring responsibilities. In the event that a registrant contacts us after having failed to respond to a Nexus or WHOIS compliance check, and they are able to sufficiently prove their compliance, we will restore the domain if the domain is still within the redemption grace period.

K.5 Registration Cancellation

Third parties will have the opportunity to challenge registrations, for example for lack of proper US Nexus and WHOIS compliance. Any domain found not to be compliance with Nexus or not updated with correct WHOIS data will be cancelled (deleted) by the Registry.