C. NeuStar's Vision of the usTLD

NeuStar will elevate the usTLD to be as widely relied upon and responsive to demand as all other US public resources.

By its very nature, a ccTLD denotes a sense of nationalism, generates a mental image in ones mind of that country, and establishes an impression about that country's relative position in technological advancement. A ccTLD can only do this, however, if it is managed and developed to benefit the needs of its user community – the citizens and government bodies of that country. This takes more than a nexus requirement, more than random newspaper advertisements, more than a commonplace central administrator. It requires a comprehensive business plan that will fulfill the vision of elevating that ccTLD into the next generation of the Internet – a place where people communicate with one another, with their government, with their local businesses, in a stable, secure and readily accessible environment. NeuStar has such a vision for the usTLD.

HIGHLIGHTS

- **NeuStar will position the usTLD as a citizen-centric name space**

- **Functional attributes of NeuStar's registry will enable numerous applications and services to meet the needs of its constituency**

- **NeuStar is uniquely qualified to administer the usTLD in a responsible and even-handed manner**

- **Combined, these measures will ensure integrity and wide adoption of the usTLD**

The body of NeuStar's response enumerates the tools we will use to fulfill this vision – a thick registry architecture that operates at the highest levels of availability and security, the coordination of disparate user communities under a stable, centralized umbrella, a phased and customer-focused outreach program to propagate the need for dot-us domain names, the introduction of enhanced services and the enablement of new advanced applications. The response also illustrates NeuStar's commitment to operate the usTLD in a responsible manner – open communication between the administrator and the DOC, willingness to seek user feedback, the formation of a representative policy council to act as a check point in the development of policy and introduction of various applications and services, an advisory team representative of multiple constituency interests and consisting of pioneers in Internet technology and user constituencies.

NeuStar's ability to perform each of the prescribed mission critical public resource functions is reinforced time and again – experience transitioning the North American Numbering Plan and coordinating over 3,000 carriers, creation of the Number Portability Administration Center and integration of hundreds of users, and the design for a next generation Internet registry.

This section of NeuStar's response is dedicated to describing our vision for the usTLD and illustrating how our infrastructure, our position as a neutral third party, and our experience will execute that vision. This section describes the image of the usTLD today, tomorrow and years from now. It is a roadmap for successful evolution of the usTLD into a revered domain name space.

Representation of the usTLD

The repurposing of ccTLDs has become almost commonplace - efforts that ignore the needs of a country citizenry in order to take a name space into the realm of the gTLDs. The reasons behind the moves are purely commercial, and serve only the economic interests of the participants. Promoting the utility of the usTLD in an effort to drive registrations should not be confused with administering the space like a gTLD, something akin to repurposing. While a ccTLD deserves to have the technical and operational functionality of a gTLD, it has a very different

purpose. A ccTLD must have fulfilling the needs of its user community, its citizens, as its top priority.

NeuStar will implement a US nexus requirement to encourage all registrations be made by registrants with a valid US address or bona fide presence in the U.S. Additionally, by requiring proof of delegation in the current locality-based structure, we can promote the use of locality hierarchies by their rightful community. This is the first step in representing the usTLD as truly being the name space of its citizens.

Once the user community is defined, the next phase of proper representation of the usTLD is enabling applications and services that benefit those constituencies. These services can serve a subset, a superset, or the entire user base. There should be no limitation on the application areas, no limit on the benefit from the usTLD. (Examples of services and applications can be found in Section D of NeuStar's response.) By enabling applications that serve the public interest within a ccTLD, the space inherently becomes citizen-centered. NeuStar's proposed enhancements reflect a commitment to enhance the usTLD to serve its unique user community.

NeuStar's vision for the representation of the usTLD has a strong constituency focus; a name space with the needs of the user community at the core of its design and operational philosophies. The usTLD should be revered as the most innovative ccTLDs and a vital U.S. public resource.

Integrity of the Infrastructure

NeuStar's response highlights our commitment to providing a next generation registry architecture. Simply, what this means, is that NeuStar has actively reviewed the current legacy systems, the similar registry work we perform as a part our existing businesses and balanced that with the needs of registrars and the end-user community to scope a platform that is more stable and more flexible than what is known today. This sort of evolution is natural in every industry, and the Internet is at a migration point; the usTLD must utilize a next generation design and lead the progression.

There are many technical facets of the NeuStar design that qualify it as 'next gen', but it is *how* these facets will enable advancement in the space that is truly visionary. One feature represents the shard dimension of our registry – a 'thick' registry model that utilizes an extensible protocol based on XML, standardizes and centralizes Whois information and requirements, supports numerous data fields 'objects', and provides near real-time DNS and Whois updates. A second technical feature is that NeuStar is using a database structure that treats data fields not as independent, stationary pieces of information, but as 'objects', dynamic components that can be integrated at any point of the database lifecycle, that demonstrate ever-changing relationships between data and maximize scalability.

To the end-user, the technical design of the registry is not as relevant as the way they can utilize it. The benefits to the end-user include:

- Assurance that a query to a name within the usTLD will resolve to its appropriate site, regardless of its level in the hierarchy, i.e., any domain name with a .us extension is resolvable;

- Any information registrants provide to the registry (either directly or indirectly through a registrar) will be secure and follow guidelines for confidentiality, i.e., data will be collected on an opt-in basis;

- Enhanced services can be introduced to serve a variety of public interest initiatives, i.e., including creation of public interest hierarchies and directories that can assist in identification of desired information;

- Digital security and trust initiatives at a local level, i.e., user-prescribed permissioning and authentication; and,

- New protocols and changes to the DNS will be supported and are less likely to have adverse affects on the registry, i.e., the progression to IPv6 addressing.

NeuStar's Internet registry architecture is flexible and scalable by design, and based on an open protocol standard available to developers across the US. The usTLD should be open to any applications that will benefit the user community, as long as they maintain the integrity of the overall infrastructure. The responsible introduction of enhanced applications is facilitated by utilizing standards created by subject matter experts. The usTLD should become a space for continued evolution of Internet technology, further strengthening the U.S. perception in the world as Internet pioneers. The NeuStar design enables this evolution.

NeuStar's vision of the usTLD infrastructure is that of a platform renown for its high standards of technological excellence. The security, stability, and reliability of the architecture will foster the introduction of numerous applications and services on the open protocol platform.

Integrity of the usTLD Administrator

Selection of an administrator is a multi-faceted analysis of technical and operational capabilities, as determined by past performance and the specifications defined for the usTLD, the commitment to protecting IP and personal information, as well as the standard the administrator will set for the usTLD in general. The usTLD administrator must be a trusted entity that is known for coordinating numerous interests with proprietary systems into single platform, protecting confidential data, taking efforts to promote competition – effectively, being a trusted neutral third party.

The reputation of the usTLD administrator will have a role in shaping the overall image of the usTLD, and therefore the selected administrator must be a responsible member of the Internet community. NeuStar is uniquely qualified to fit this role through our past and present performance:

- Committing to not directly compete with our customers, specifically here, to be a registry operator and not a registrar in the expanded space;

- Openly supporting a single authoritative root, managed by ICANN, whereby all TLDs are used for their intended purposes; and,

- Participation in the IETF, specifically leading efforts to shape more flexible and less burdensome registry-registrar protocols.

These are more than a list of random guidelines; they represent a commitment to being a neutral, trusted third party. This represents a starting framework that the administrator of the usTLD should live by. An administrator must be a respected member of its community to effectively, coordinate and manage the usTLD in such a way as to create a valuable public asset for the United States.

To alleviate administrative burdens on the DOC, NeuStar do proposes the formation of an advisory council that can make recommendations on issues and new enhancements that have a material impact on the policy of the usTLD. Part of this group's function is to offer an additional level of checks and balances to ensure the administrator is abiding by its code of conduct in the introduction of policies and changes to the usTLD.

NeuStar's vision of itself as administrator of the usTLD is as an enabler, that is, the facilitator for introducing applications and services all the while monitoring the needs of its constituencies.

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