Minimizing the Impact of Internet Stakeholders in connection with a gTLD Registry Financial/Business Failure

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I. Executive Summary

This paper is not intended to be a comprehensive document to address ever aspect of a registry's financial/business failure, but a first attempt to stimulate dialog within the Internet community about this inevitability and how to minimize the impact on Internet stakeholders. Although ICANN's current registry contracts have in place safeguards to minimize interruption of service to registrants and registrars in the event of a registry's technical failure, there are minimum safeguards and procedures in place to minimize the interruption of service in connection with a registry's financial/business failure.

The purpose of this paper is to put forward for discussion within the community[2] proposed contractual provisions to be incorporated into future ICANN registry contracts, as well as proposed internal ICANN procedures, to help minimize the impact on Internet stakeholders in connection with the financial/business failure of a gTLD registry.

II. ICANN's Mission and Core Values

One of the important aspects to be considered in connection with a gTLD registry failure is in the impact on Internet stakeholders, most importantly domain name registrants within that TLD. Article 1 of the ICANN bylaws clearly establish it's role as a technical coordinating body, and not a consumer protection agency[3]. Notwithstanding these limitations, there are times in which policy development reasonably and appropriately related to these technical functions can intersect with consumer protection, i.e. redemption grace period, UDRP, etc.

III. Different Philosophical Approaches Regarding a Registry Failure

Although there can be an extensive discussion on the rights of domain name registrants in connection with a gTLD registry failure, for the purposes of providing a framework for this initial discussion, two diametrically opposed philosophies will initially be considered: caveat emptor and governmental/regulator intervention. In a caveat emptor

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[1] The views contained in this paper are my own, and are not made on behalf or at the direction of any organization or client.

[2] As an original founder and long time participant within the ICANN gTLD Support Organization, this document is submitted in the spirit of the bottoms-up consensus development process upon which ICANN is founded. Given my current role on the ICANN Board, I believe it is necessary to reiterate this fact, as I do not want my contribution as an Internet stakeholder to be interpreted as top-down intervention.

[3] http://www.icann.org/committees/reconsideration/rc02-2.htm, "**ICANN does not resolve individual customer complaints.** ICANN is a technical-coordination body. Its primary objective is to coordinate the Internet's system of assigned names and numbers to promote stable operation."

(buyer-beware) model, the domain name registrant is assumed to be in the best position to determine the risks (potential registry failure) associated with registering a domain name within a specific TLD. In a governmental/regulator model ICANN, either directly or through an intermediary, would be required to step in and provide registry operational services for an extended/indefinite period of time.

Each of these philosophical approaches has their respective strengths and weakness. However, it is hoped the concepts contained in this White Paper may perhaps offer the foundation for a third philosophical approach to addressing a registry failure that seeks to borrow the respective strengths of each philosophy while minimizing the respective weaknesses of each.

IV. Proposed Contractual Requirements

The proposed contractual provisions listed below are a first attempt to try to balance the following key objectives:

- ?? minimizing the disruption to registrants in the case of registry failure;
- ?? minimizing the barrier to entry for future qualified registry operators; and
- ?? minimizing the involvement and financial impact ICANN needs to play in the case of registry failure.

A) All Registry Operators Shall Be Required To Operate On The Current EPP Standard

One of the bigger obstacles in transitioning a TLD between registry operators is software compatibility, particularly in a registry-registrar model. By contractually requiring all ICANN registries to operate on the current EPP version will help minimize the transition costs. Although this contractual requirement is currently contained in most ICANN registry contracts, it is critical that it continue to be contained in all future ICANN registry agreements.

B) ICANN Shall Continue To Be Listed As A Direct Beneficiary Of The Registry Escrow Contract, With Active Script Verification, And Periodic Download

ICANN accredited registry operators are required to enter into an escrow contract with a third party escrow agent. ICANN shall continue to be listed as a direct beneficiary of this contract, thus providing ICANN timely access to the registry thick data in the event of a registry failure. Currently it is believed that ICANN has no software scripts in place to verify escrow submissions, and to date has never pulled the data for verification.

C) ICANN Access To Zone Files

Although ICANN currently has contractual access to all gTLD registry zone files (Appendix A/Attachment 3), it is believed that due to a lack of technical staff ICANN has not been able to regularly pull the zone files. The failure to have regular and timely access to the zone files, impede the ability of ICANN to assist the propagation of the

zone file in the case of registry failure. Timely access to these zone files are critical as there are built in time delays (5 days) into the ability of ICANN to access to escrowed data.

D) ICANN, Registries And Registrars Must Educate Registrants As To The Existence And Function Of EPP Authorization Codes (Auth Codes)

One of the features of EPP is an Authorization Code (Auth Code) that is a security feature to prevent unauthorized changes to the domain name at the registry level. The Auth Code is analogous to a PIN (personal identification number) number which one needs to access their financial account with a bankcard. Historically there has been little outreach and education to the registrant community. In fact some registrars, have previously used the same Auth Code for their entire registrant customer base. However, in connection with the recent registrar transfer consensus policy, registrants are empowered to have access to their auth code. In any unplanned transition, the Auth Code will provide the Trustee or new registry operator the ability to verify the authenticity of the registrant in connection with any domain name changes or updates.

E) Bonding Requirement

Although ensuring timely and accurate access to TLD's zone files and escrowed data are critical to minimize any interruption in the event of registry insolvency, equally important is access to the necessary financial resources for ICANN to maintain the registry in a caretaker roll until a successor operator can be designated or the registry is wound down.

This proposed bonding requirement is intended to serve several proposes. First, and most importantly, the registry failure should not negatively impact ICANN's other financial and operational obligations. Second, the proposed bond ensures that the registry operator place aside current financial resources to protect against future business failure.

Depending upon the registry operator, there is a high likelihood that this bonding requirement will in fact be a cash bond due to the financial sector's uncertainty with the risks associated with registry operations. Therefore, the specific amount of the bond may represent a barrier to entry depending upon the size of the bonding requirement. Calculating the exact amount of a bond to help ensure the transition of registry operations with minimum interrupts is a subject likely to garner much further attention. Factors that will need to be considered in this discussion include: the size of the registry (i.e. number of domain name registered), structure of the registry (2^{nd} level or 3^{rd} level domain name registrations), and verification or character restrictions such as in (.PRO, .NAME and .AERO).

Although this discussion is likely to result in a wide disparity of figures, ranging from the extreme high to the extreme low. A reasonable starting point for registry transition cost can be estimated by looking at the expenses incurred in connection with the migration of the .AU, .ORG and .US TLDs that have occurred within the past couple of years. Even these estimates are likely to involve some disparity in range, as AusRegistry was new

registry start-up, whereas NeuStar and PIR (through Afilias) had already had in place existing registry software and operations. Although further consultation with Afilias and NeuStar may be required, it is not unreasonable to estimate the transition costs for an existing registry operator to be in the $250,000 to $500,000 range for a mid-sized TLD. [4]

F) "Thick" versus "Thin" Registries[5]

This specific recommendation proved to be a point of contention within the registration authority community. The original draft White Paper had proposed requiring all new registries to provide a "thick" database. However, dialog within the registration authority community believed that the proper focus needed to be on the importance of guaranteeing the escrow of data, and not specifying whether it happen at either a registrar or registry level.

To date, ICANN has been unsuccessful in implementing and policing a registrar data escrow program. Currently there are an estimated 45 million (.COM and .NET) domain names sponsored by over 400 ICANN accredited registrars in which there is no ICANN documented and enforced escrow program.

In the interest of consensus building, it is recommended that this decision be left to the discretion of the registry operator in electing either a thick or thin format. Although VeriSign (formerly NSI) originally operated all of their TLDs (.com, .net and .org) in a thin RRP format, all of the new registry operators since the 2000 proof of concept round, as well as PIR in connection with the .ORG migration, have operated in a thick EPP environment.[6]

IV. Registry Failure Scenarios

Registry failures will most likely fall into one of two general scenarios. The first involves a situation where a new registry operator will be identified to assume registry operations after completing the necessary contractual negotiations with ICANN. The second involves a situation where no suitable registry operator can be found and the only alternative is to wind down registry operations.

In the scenario where a registry is transitioned, further complications may rise in the case of sponsored TLDs where policy formulation is delegated to a third party, or in the case of a restrictive TLD where registrant verification/qualifications are outsourced to a third party. Each of these different scenarios is discussed below, in an attempt to formulate proposed ICANN procedures for transiting a failed registry. As mentioned above this

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[4] During the circulation of a draft version of this White Paper several comments from within the registration authority community suggested that the proposed bonding requirement levels were insufficient and should be increased.

[5] In a thick format, the registry has all the Whois data associated with the domain names, as oppose to a thin format where just the basic information is stored (domain name, registration date, registrar, and primary and secondary name servers).

[6] The only expection is .JOBS which will be running a thin registry. However they have committed to incorporate IRIS upon its completion as a standard,

discussion is not meant to be an exhaustive analysis that accounts for every permutation, but instead a first step toward a more thorough discussion of how ICANN and the Internet community should handle a registry failure.

A) Failure of Registry Operator with Transition

Although ICANN indisputably has an important role in connection with a failed registry, the first line of responsibility must lie with the registry operator. Specifically, the registry operator through its board of directors/trustees has a fiduciary duty to act in the best interest of that organization. In the case of pending failed registry operations, that fiduciary duty would therefore include seeking potential viable successor registry operators prior to failure. If the current registry operator is able to find a qualified successor, ICANN should then work with that entity to verify its qualifications and timely transition the registry prior to failure.

In the case where the current registry operator is unable to find a successor prior to failure, ICANN must step in to ensure a minimum service level of operation during the transition period for the benefit of the registrants and all Internet stakeholders. This is one of the reasons that having a bonding requirement would greatly facilitate the ability of ICANN to step into action without impacting its other operational objectives and/or funding requirements.

Following a registry failure, the most critical first step is ensuring the continued resolution of that TLD's zone file. In addressing this first important step, ICANN's role in connection with the operation of the Root L server may provide an important failsafe mechanism, since the former registry operator or its contractor may not be able to provide this critical service. It is also important to note that it is highly likely following the initial registry failure, registrants will be unable to make immediate name server updates in connection with domain names within the failed TLD. However, timely implementation of the steps outline below will hopefully narrow this window of inaction.

Although ICANN staff could directly oversee the transitioning of the failed registry to a third party, it is probably best to have a third party perform this function with ICANN providing an oversight/audit function. Although ICANN and the Internet community would be best served by having a standing group of individuals/organizations (caretakers) to utilize on short notice, similar to the new Registry Services Standing Panel. It is hopeful that the number of registry failures will be a minimum and thus not require a standing panel. Notwithstanding this optimistic approach, ICANN would be encouraged to have an open ended call for expressions of interests to identify potential caretakers to serve this function.

Following the selection of a caretaker, that individual or organization needs to work with ICANN in communicating with registrants through their registrars about the proposed process and projected timeline. Concurrent with the notification to the registrants, ICANN and the caretaker need to expedite the posting of a Request for Proposal (RFP)

for interested parties that might seek to operate the failed registry. Any fee associated with the RFP should be set to maximize the number of qualified applicants.

Assuming ICANN will have designated in-house staff or outside consultants to handle new registry applications, these individuals would be re-tasked to expedite the review of any responses to the RFP. In the circumstance where one of the bidders is the existing or former backend registry infrastructure provider of the registry, some preference should be given to that bidder, as they would likely represent the most smoothest transition scenario.

Once the caretaker has been able to gain access to the registry escrow files, it would be proposed that it be permitted to begin making changes to the registry's authoritative database.[7] Although it would be preferred that these changes be forward through and done in conjunction with the registrar of record, it is possible that some registrars may no longer wish to provide registration services in that TLD. Accordingly, a mechanism should be provided for that would allow for registry-registrant interaction.

It would be proposed that the caretaker be permitted to charge on a cost recovery basis for any registrant change services that it provides, although the actual fees will largely be determined by the size of the registry and bond amount. However, ICANN will need to ensure that registry registrar agreement is properly drafted to allow for this possibility.

Following the selection of a successor registry, ICANN and the caretaker will work with the new successor registry to transition the authoritative database to the new registry operator. Although proposing a timeframe for this process is high speculative, it is hoped that it could be accomplished within a three month time frame to minimize the inconvenience to the registrants and other Internet stakeholders.

B) Failure of Registry Operator with Wind Down of Operations

In the scenario where no registry successor can be found for a failed registry, the first steps as outlines above (zone file, selection of caretaker, publication of RFP) would all take place in a similar fashion. The only difference being that the RFP would produce no viable successor registry operator. In this case, it is proposed that ICANN undertake through the caretaker to provide a minimum-level of registry services during an extended period of time while registry operations are wound down.

Some people might reasonably argue that setting fixed timetables for the winding down of registry operations is totally speculative, and would therefore jeopardize additional harm to registrants and Internet stakeholders. However, it is proposed that experience from large corporations and brand holders in connection migrating between domain names would provide invaluable data. Although this is not meant to discount valuable experience that small business and individuals might have in similar situations, large

[7] During this "quiet period" (no changes), registrants would not have to fear about their domain names being deleted for non-payment as there would be a prohibition against the deletion of domain names during the caretaker transition period.

corporations and brand holders are likely to have much more detailed analysis that could prove valuable.

V. Conclusion

Finding the proper balance between the potentially conflicting objectives in connection with a registry failure will not be easy. Hopefully this paper will provide a framework for all Internet stakeholders to continue this discussion.