

Delegation of International Top Level Domains (iTLDs)

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0. Abstract

This document describes policies and procedures to

- o allow open competition in domain name registration in the iTLDs,
- o allow multiple registries for the COM and other iTLDs,
- o and provide the IANA with a legal and financial umbrella

1. Introduction

For the purpose of delegation, the top level domains (TLDs) fall into the categories listed below. While all are described to provide context, only the last is the subject of this document.

1.1. National TLDs

National TLDs such as AF, FR, US, ... ZW are named in accordance

with ISO 3166, and have, in the major part, been delegated to national naming registries. Any further delegation of these TLDs is undertaken by the Internet Assigned Number Authority (IANA), in accordance with the policies described in [RFC 1591](#).

It is good practice for these delegated TLD registries to publicly document the applicable management policies and further delegation procedures for these national domains, as, for example, [RFC 1480](#) does for the US domain.

1.2. US Governmental TLDs

1.2.1. Delegation of the GOV zone is described by [RFC 1816](#), and is under the authority of the US Federal Networking Council (FNC).

1.2.2. Delegation of the MIL domain is under the authority of the DDN NIC. [is there a descriptive or governing document?]

1.3. Infrastructure TLDs

TLDs such as IN-ADDR.ARPA and INT are under the authority of the IANA and may be delegated to others, e.g. IN-ADDR.ARPA is currently delegated to the InterNIC for day-to-day management. They are created for technical needs internal to the operation of the internet at the discretion of the IANA in consultation with the IETF.

1.4 The EDU TLD

Delegation of the EDU domain is under the authority of the FNC and is currently delegated to the NSF which has contracted to the InterNIC for registration.

Over time, the FNC and NSF may decide to use other delegation models, such as those described below for non-governmental zones.

Some people (Americans and non-) feel that EDU should be restricted to US institutions. That is outside the scope of this discussion.

1.5 The International Top Level Domains (iTLDs) COM, ORG, and NET

The iTLDs are generic top level domains which are open to general registration. They are currently delegated to the InterNIC by the authority of the IANA.

1.5.1. The intent for these iTLDs is discussed in [RFC 1591](#). Generally, COM is for commercial entities, NET is for the internal infrastructure of service providers, and ORG is for miscellaneous

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entities.

1.5.2. There is a perceived need to open the market in commercial iTLDs to allow competition, differentiation, and change.

1.5.3. As the net becomes larger and more commercial, the IANA needs a formal body to accept indemnity for the touchy legal issues which arise surrounding DNS policy and its implementation.

2. Goals

To facilitate administration of the domain name subsystem within the Internet by ensuring that there is an open and competitive marketplace for clients to obtain and subsequently maintain delegation of sub-domains within the iTLDs, while preserving the operational integrity of the Internet DNS itself.

The specific measures to achieve this objective are as follows:

2.1. Provide the IANA with the international legal and financial umbrella of the Internet Society (ISOC),

2.2. Allow open competition in domain name registration in the iTLDs, which will then allow registries to charge for their services,

2.3. Allow multiple registries to operate cooperatively and fairly in the COM domain and/or other multi-registry iTLDs which may be created,

2.4. Facilitate creation of new iTLDs in a fair and useful, but reliable, fashion,

2.5. Provide for reliable maintenance of the registrants of an iTLD should the current delegatee no longer wish to maintain it, and

2.6. Define iTLD policies and procedures by open methods, modeled on the IETF process and/or using IETF mechanisms when appropriate.

3.0 Scope of this Document

This document describes the administrative structure for the operation of the iTLDs. While other administrative issues may exist within the broader domain of the DNS, they are not addressed in this document.

Specifically:

3.1. Only those relationships between the IANA, IETF, ISOC, etc. which are specifically necessary for responsible maintenance of the iTLDs

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are described.

3.2. It would not be reasonable for this document to specify what particular agent, board, or committee of the ISOC, IANA, or IETF acts for each. Hence, they are described in generic terms, and left for each organization to specify. This specification may change from time to time.

At this writing, the Board of Trustees acts for the ISOC, the IAB for the IETF, and the IANA for itself.

3.3. Long range maintenance of the IANA is not described; although it is believed that the IANA could draw financial support from a wider community.

3.4. The IETF is not directly involved in operation of the net. Hence it serves the iTLD administrative work mainly in a technical capacity, such as the formalization of new protocols and handling of technical appeals.

3.5. The ISOC does not directly operate the net. But it takes legal responsibility, provides ad hoc group members, manages funds, and participates in the appeals process.

3.6. The IANA and any necessary ad hoc groups deal with operational details.

3.7. The ISOC, the IETF, and the IANA are not legally or financially responsible for the registries. The registries must be responsible for themselves.

3.8. Creation of permanent bureaucracy is not desired.

4. Technical Assumptions

Further growth within the iTLDs can be accommodated technically, and tools are in evidence to automate much of the process of registration and maintenance of entries within the DNS as well as multiple administrative access to a single delegated domain.

4.1. The size of current zones such as COM, while large, is not really a burden on servers, nor is it expected to become so in the near future.

4.2. Procedures which allow mutual exclusion for the creation of names within a single zone are being developed within the IETF's dnsind and dnssec WGs, and a test implementation is available.

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4.3. Tools are being developed to ease the processes of registration and running the information servers which are expected of registries.

5. The Process

5.1. The IANA continues to supervise and control all operational aspects of the iTLDs, and is the first level of the appeals process after that of the registries. It appoints members to the ad hoc iTLD group(s).

5.2. The IETF, as part of its normal procedures, publishes documents which describe technical and operational aspects of the domain space including the iTLDs. It also provides an appeals procedure for technical issues and appoints members to the ad hoc iTLD group(s).

5.3. The ISOC provides the legal and financial umbrella, and the final level of the appeal process. It provides an appeals procedure for procedural issues and appoints members to the ad hoc iTLD group(s). The ISOC assumes legal liability for the process and the iTLDs.

5.4. Ad hoc working groups, for developing procedures and deciding creation of new iTLDs and chartering of registries, consist of seven members appointed by the IANA, the IETF, and the ISOC.

5.5. Note that 'ad hoc' means 'for this purpose only.' In this case, an ad hoc group is created and convened on a periodic basis when needed to change procedures or to review iTLD applications.

5.6. Some may feel that this is too informal. Should this opinion prevail, a permanent panel would be created, with two members each appointed by the IANA, the IETF, and the ISOC and one member mutually chosen from the general community. Members would serve two year staggered terms.

5.7. The process/policy development may take three to six months, and initial chartering another six. It is estimated that approximately five new iTLDs will be created a year.

5.8. The policies and procedures to be used by the ad hoc working group will be decided by the zeroeth ad hoc group in an open process and will be clearly documented. This group will be appointed and convene in March or April 1996. It is expected that these policies and procedures will mature over time.

5.9. Multiple registries for the COM zone, and registries for new iTLDs will be created.

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5.10. New iTLDs will be created over time. This is a direct change to RFC 1591. New iTLDs may be created with a non-exclusive administration arrangement, i.e. multiple operators for any further iTLDs may be within the provisions of creation of an iTLD.

5.11. The intent is similar to the licensing of radio stations in some countries, a few commercial ones and a few public service ones.

5.12. Registries pay for charters, and the fees collected are kept in a fund managed by the ISOC and used solely for the iTLD process, insurance against an iTLD registry withdrawal or collapse, and possibly to support an evolved future funding model for the IANA.

6. Selection of iTLDs and Registries

6.1. There are useful proposals for registries and iTLDs which are not able to demonstrate solid financial stability and/or raise sufficient funding to ensure continued operation to protect the registrants should their efforts fail. Yet it is desirable that these technical and social experiments be conducted.

Hence, two types of charter are provided, commercial and public service, with the understanding that fees from commercial registry charters cross-subsidize low fees from public service efforts.

This is intended to provide, among other benefits, a path for migration of the EDU and other TLDs.

iTLD and registry charter applications specify whether they are commercial or public service.

6.2 An application is for chartering a new registry for an existing iTLD, or for creation of a new iTLD and creation of one or more registries.

If a new iTLD is proposed, then it is assumed to allow chartering of multiple registries unless exclusive registration charter is specified in the application. Request for exclusive registration must be well motivated and well justified.

6.3. Financial and business aspects of proposals are kept confidential during the evaluation process, as a bidding war is not desirable.

Charter approval does not necessarily go to the highest bidder. Reliability, quality of service, sustainability, etc. are more important criteria.

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6.4. When a registry which has provided good quality and reliable service comes up for charter renewal, barring unusual circumstances, the charter renewal application should be approved.

6.5. All applications are judged on

- 6.5.1. a clear statement of charter, policies, and procedures, including whether the iTLD is to have shared registries or be exclusive,
- 6.5.2. organizational and technical competence to run a registry and the expected accompanying information services,
- 6.5.3. innovation in type of service, audience, or technology,
- 6.5.4. a statement of registrant qualification procedures and a statement that they will be non-discriminatory,
- 6.5.5. a clear description of the appeals mechanism within the registry, including its guaranteed response time,
- 6.5.6. a statement that the registry will abide by the results of the appeals process and the direction of the IANA,
- 6.5.7. indemnification of ISOC, IANA, IETF, ad hoc committees, and all others believed to be at risk from this process, as well as the usual prudent insurance, and
- 6.5.8. guaranteed availability of the registration data in a useful form should transfer of responsibility become necessary, e.g. regular publication of the information, or regular deposits of copies of the information with a reputable escrow agent instructed to release the information to the IANA.

6.6. In addition, commercial applications are judged on

- 6.6.1. a business and financial plan which shows sufficient viability that the registry is likely to operate successfully for at least five years,
- 6.6.2. a bid to be paid to the iTLD fund if charter is awarded, and
- 6.6.3. a bid to be paid annually to the iTLD fund.

6.7. In addition, public service applications are judged on

- 6.7.1. clear demonstration of goals and means which are in the public good and which have not been or might not be satisfied by a commercial applicant,
- 6.7.2. a business and financial plan which need only show viability and cost recovery, and which might even rely on income from donor agencies, and
- 6.7.3. a minimal annual fee of USD5,000 to the iTLD fund.

6.8. Charters are for a period of five years, but annual progress reports are submitted for review by IANA and the ad hoc group. Only in exceptional cases of radical change or abuse of a charter may the IANA or the ad hoc group recommend to the IANA and ISOC that the charter be reevaluated before the charter period is reached (see appeals process).

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7. Finances

7.1. A registry may charge as it sees fit, within the bounds of the policy published when it is chartered.

7.2. iTLD registries may decide they no longer wish to operate their registry. Likely, the operation will not be profitable when this occurs, yet the registrants under the iTLD may need to be supported for a considerable time.

A significant amount of the chartering fees in the ISOC-managed iTLD fund are reserved to pay for some other entity to operate the failing iTLD or registry until it again becomes viable or until the registrants have safely migrated elsewhere.

The iTLD process must be prepared for the case where a very popular, possibly because it is low cost, iTLD or registry fails. Bailing out the registrants of a failing domain could be very expensive, even on the order of a million USD (remember, a likely failure mode may be because someone thought they could do it for less). So prudent reserves must be kept.

7.3. The ISOC manages all finances in a separate iTLD fund with open reporting and published budgets. Agreement of the ISOC, the IANA, and the IETF is required on all budgets.

7.4. Charter fee income is used to pay legal costs of the IANA, IETF, ISOC, and ad hoc groups when serious legal disputes arise from the iTLDs.

7.5. Charter fee income is also used to pay modest and publicly visible costs of the chartering process, e.g. the costs of the ad hoc committee.

7.6. Charter fee income may also be used to fund the IANA if and when the IANA becomes more openly funded.

7.7. Should the reserves be embarrassingly large, a consensus of the IANA, IETF, and ISOC Board would allow disbursements for the general network good, e.g. scholarships for engineers from developing countries, etc.

7.8. The ISOC charges a modest amount for administering the iTLD account.

8. Appeals

Arbitration to resolve conflicts is encouraged. That an appeals process is specified should not preclude use of arbitration. The appeals process described here is for when arbitration has failed or when the parties decide not to use arbitration, yet they do not wish to exercise recourse to lawyers and the courts.

8.1. The appeals process does not apply to disputes over Intellectual Property Rights on names (trademark, service mark, copyright). These disputes are best left to arbitration or the courts. Registries may require appropriate waivers from registrants.

8.2. The appeals process does not apply to charging and billing. This is left to market forces, arbitration, and the courts.

8.3. The appeals process applies to all other aspect of registry processing of registration requests.

8.4. A registrant's first recourse is to the registry which has denied them registration or otherwise annoyed them.

8.5. All registries must specify in their applications an entry point and a process for appeals, as well as a response time, and must subsequently conform to them.

8.6. If appellant is dissatisfied with the registry response, appeal may be escalated to the IANA.

8.7. The IANA must define its entry point for appeals and must respond to appeals within four weeks.

8.8. If appellant is dissatisfied with the IANA response, and the appeal has nontrivial technical aspects, the appeal may be escalated to the IETF. The IETF hears appeals based only on technical issues.

8.9. If appellant is dissatisfied with the IANA and, if invoked, the IETF response, appeal may be escalated to the ISOC. The ISOC appeals process hears appeals only against breach of appeals procedure. I.e. the decision of IANA and/or IETF is final, unless there is an appeal against breach of appeals procedure.

8.10. The appeals process works by email. Appellant must provide concise history of the case and summarize grounds of appeal. The IANA, The IETF, or the ISOC may ask for information from third parties. All information is normally treated as nonconfidential and may be made publicly available. Confidential information is considered only in special circumstances.

8.11. The IANA, the IETF and the ISOC establish appeals sub-committees

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chosen either from their own membership or outside of it by whatever means each deems reasonable for their procedures and purposes.

9. Appendix A - A Thousand Domains Experiment

It has been suggested that the root domain be opened up to a fairly arbitrary registration of new iTLDs. While the idea has its social appeal,

- o it would be an irreversible decision with no prior experience and
- o some argue that TLDs, like global variables, should be few and created with great care.

Therefore we suggest that one of the early public service proposals that should be seriously considered would be one which proposes a shared iTLD which would have very open creation of sub-registries; thereby conducting the 1,000 domain experiment one level down.

10. Security Considerations

There are no known security considerations beyond those already extant in the DNS.

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