Network Working Group
Request for Comments: 2352
Obsoletes: 2240
Category: Informational

O. Vaughan
Vaughan Enterprises

May 1998

A Convention For Using Legal Names as Domain Names

Status of this Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Copyright Notice

RFC Editor's Note

This RFC is an independent submission that discusses a possible convention for allocating domain names based on corporate and other names as registered by law.

It appears to depend on corporations changing their domain names from their present form to more cumbersome handles, such as changing cisco.com to cisco-systems.co.ca.us or ibm.com to international-business-machines.co.ny.us, without giving them an incentive to do so, such as deprecating the .com and .net gTLDs. It also appears to legislate the structure each national registry applies to its name space, something which the document itself asserts is within national purview and not for global standardization.

It may not be politically feasible to implement as described.

Table of Contents

1. Introduction

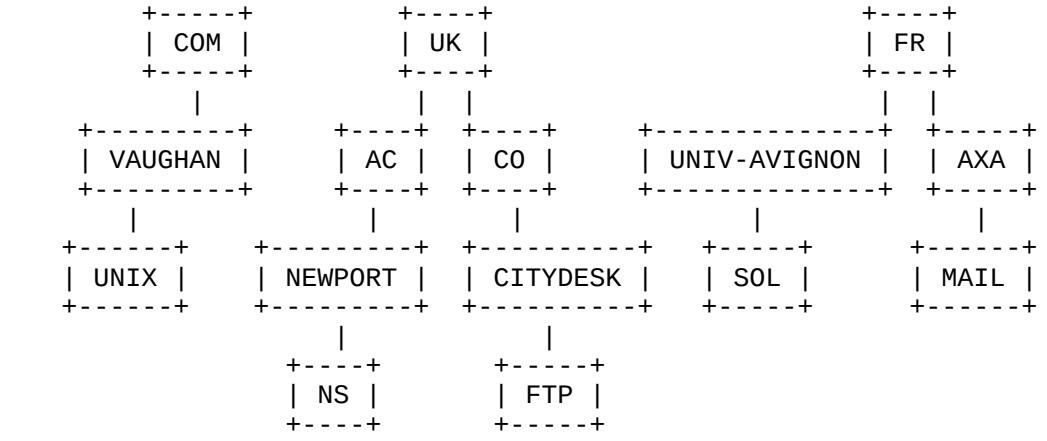
The purpose of this memo is to focus discussion on the particular problems with the exhaustion of the top level domain space in the Internet and the possible conflicts that can occur when multiple organisations are vying for the same name. The proposed solutions in this document are intended as a framework for development, such that a general consensus will emerge as to the appropriate solution to the problems in each case, leading eventually to the adoption of standards.

2. Overview of the domain space

Presently the domain space is organised as a heirarchical tree-structured namespace with several top level domains (TLDs), and sub-domains beneath them. The initial TLDs allocated and rationale are documented in RFC 920 [1].

The TLDs are functionally split up into 'generic' top-level domains (gTLDs) and two-letter ISO 3166 country domains for every country in which Internet connectivity is provided. The allocation of sub-domains under these TLDs is entirely up to the registry for that TLD. The registry may decide to allocate further levels of structure or merely allocate domains in a 'flat' manner.

Example:



1. Flat gTLD 2. Heirarchical country 3. Flat country

In the example we see that the gTLDs are inherently flat, as organisations are allocated domain names directly under the TLD. With the country domains however, the domain allocation policy can vary widely from country to country, and it does. Some may choose to implement a functional sub-structure mirroring the gTLDs, some may choose to implement a geographical sub-structure, and some may choose to have no sub-structure at all.

In the first case the organisation is clearly a commercial one, as it is allocatged under the "COM" TLD. However, there is no information as to the country the organisation is based in. In the third case, we know that the organisation is based in France (FR), but without studying the actual organisation name we do not know what type of organisation it is. In the second case, we know the country that both organisations are based in (UK), and by following the heirarchy, we can deduce that the first is an academic organisation (AC), and the second is commercial (CO).

While the system is flexible in not enforcing a strict heirarchy, it can lead to exhaustion of domain names in the generic space and lead to conflicts between organisations who may both have a legitimate claim to have a particular name.

3. Possible solutions to name exhaustion

With such a flexible system, there are many ways of preventing the name space being exhausted. A solution proposed by [2] is to create more gTLDs to allow organisations with the same name to be registered uniquely under different TLDs (FIRM, STORE, WEB, ARTS, REC, INFO and NOM). However, this has several disadvantages as discussed below:

a) It creates confusion in users mind as to what TLD refers to a particular organisation. For example, MCDONALDS.COM maybe the fast food corporation and MCDONALDS.FIRM maybe a firm of lawyers, but how is the user supposed to know which is which?

b) To prevent the above confusion, big corporations will simply reserve all the different variations of the name, ie. IBM.COM, IBM.FIRM, IBM.STORE etc. Thus we haven't solved the name exhaustion or conflict problems, in fact we have made it worse.

c) Names of legitimate trade mark holders or other legally held names can still be acquired by anybody, leading to potential conflicts.

Another set of possible solutions are discussed by The World Intellectual Property Organisation [4] but this only addresses dispute resolution when trademarks are used as domain names under gTLDs, and not in the full legal context of their origin of registration.

4. Proposed solution

With the aforementioned problems in mind, it is not a good idea to create new gTLDs which merely overlap the existing ones. As the domain name system is heirarchical it would seem a good idea to expand on the existing structure rather than creating several duplicate structures.

4.1 The world is not flat so why should domains be?

With the expansion of the Internet to a truly global medium, the notion that there can only be one commercial entity, one orgnisation, and one network provider etc. with the same name seems impossible. This is the situation that the present system finds itself in. There is a constantly spiralling number of disputes over who 'owns' or 'deserves' a certain name, with an increasing number ending in unnecessary and costly legal action. This is not something that the providers of a domain name service should concern themselves with, but yet with the present system, this seems inevitable.

4.2 The case for legal names

This proposal allows for country-code-based domain names that are related to legally registered names in the country (or locality, state or province within that country) that they are based in, by creating a functional heirarchy beneath the country TLD.

This proposal does not seek to do away with gTLDs, but rather suggests that a legal name should be sought first and then, if desired, a generic name could be used alongside it. The organisation would then, in case of any disputes, have a legally-held name which no other organisation could have any claim to.

This proposal has several advantages:

a) The process of deciding what names belong to which organisation is no longer a function of the domain name registry, but of the company name or trade mark registration authority in the given locality. This means that disputes over names cannot arise as all names are unique within the context of the legal name.

b) As all names are unique, there should be no exhaustion (deliberately or otherwise) of 'desirable' names by other concerns, as all the owners of legally-held names will automatically have the right to the relevant domain name.

4.3 Allocation of legal sub-domains

The sub-domain identifiers should be created from the existing indentifiers for company names and trade marks within the given locality, state, province or country.

The general form of such a sub-domain is:

<legal-token>.<locality-identifier(s)>.<iso3166-country>

For example:

LTD.UK	for limited companies in the UK
PLC.UK	for public limited companies in the UK
TM.FR	for trademarks in France
INC.<state>.US	}
LTD.<state>.US	} for incorpated bodies in the US
CO.<state>.US	} (each is equivalent)
CORP.<state>.US	}
LLC.<state>.US	for limited liability companies in the US
GMBH.DE	for German companies

The registry for the appropriate upper level country, state, province or locality domain should create entries in these sub-domains based on the laws for allocating such legal names in that particular country, state, province or locality. Specifically, the full legal name should be used, but omitting the legal token (eg. Ltd, Corp, etc.) as this will be determined by the choice of upper level domain. ALL spaces within the name should be converted to hyphens '-' and other punctuation either disregarded or also converted into hyphens.

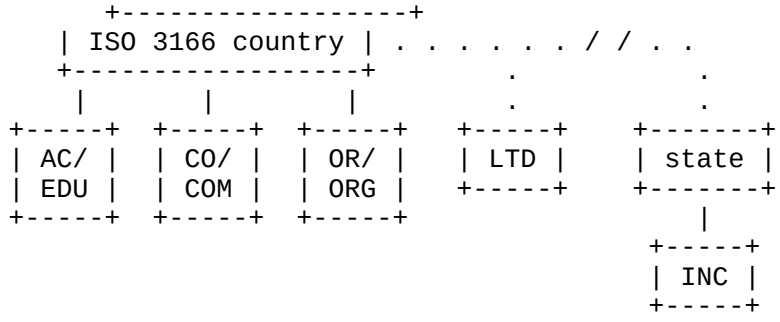
For holders of international trademarks and other international names, the gTLD "INT" can be used in place of the country identifier. For example:

TM.INT } for international trademarks
REG.INT }

4.4 Allocation of miscellaneous sub-domains

In countries that do not have existing sub-structure it is strongly recommended that along with the creation of legal sub-domains described here, that other sub-domains be created for commercial entities, organisations, and academic entities to reduce remaining conflicts from organisations that are not legally-registered.

For example:



4.5 Identifiers in non-ASCII languages

The representation of any domain element is limited to the ASCII character set of alphabetic characters, digits and the hyphen, as described in RFC 1035 [3]. The representation of names in languages that use other character sets is limited by that definition or any future update.

4.6 Non-textual identifiers

The registration of non-textual trade marks such as logos or three dimensional shapes under this scheme is beyond the scope of this document. It is unlikely that these marks will need to be used in the way that domain names are used presently, but their use is not explicitly prohibited.

5. Security Considerations

This memo raises no issues relating to network security. However, when delegating entries in sub-domains, the registries must ensure that the application contains sufficient evidence of the legal rights to a given name.

6. References

[1] Postel J., and J. Reynolds , "Domain Requirements", RFC 920, October 1984.

[2] "Generic Top Level Domains - Memoranding of Understanding", <URL:http://www.gtld-mou.org/>

[3] Mockapetris, P., "Domain names - Implementation and Specification", STD 13, RFC 1035, November 1987.

[4] "Trademarks and Internet Domain Names", <URL:http://www.wipo.int/eng/internet/domains/>

7. Author's Address

Owain Vaughan
Vaughan Enterprises
PO Box 155
Newport NP9 6YX
UK

Phone: +44 1633 677849/822164
Fax: +44 1633 663706
EMail: owain@vaughan.com

8. Full Copyright Statement