December 2000

Will domain problems split the Internet?

Jay Forder

Bond University, jay_forder@bond.edu.au

Follow this and additional works at: http://epublications.bond.edu.au/law_pubs

Recommended Citation

Introduction
The biggest news in the Internet community over the last few months has been the Internet Corporation for Assigned Names and Numbers (ICANN) move to increase the number of generic top-level domains (gTLDs). ICANN has also implemented support for Chinese characters in domain names and suggested a number of administrative changes. These activities have not met with universal approval. There have been threats of legal action. Some reports even suggest there might be a move to form an alternative Internet. This article notes what ICANN has been doing and some of the reactions.

The pressure on gTLDs
A few words of explanation might be advisable for the uninitiated. A top-level domain (TLD) is that part of a domain name that appears after the last dot. There are some 244 regional top-level domains, known as the country code top-level domains (ccTLDs). Examples include .au (Australia) and .uk (United Kingdom). They are designed for net activity within each country or region, and are generally administered by bodies within the country. The more popular top-level domains, at least for e-commerce and other global activities, are the generic ones, since they do not give the impression of being limited to a particular region. The main gTLDs are .com (for commercial entities), .org (for non-profit organisations), .net (for network organisations), .edu (for educational organisations), .gov (for government bodies) and .mil (for the military). They are administered by an increasing number of registrars around the world, supervised by ICANN.

The most popular category – and the only one for general commercial use – is .com. Over the years net users have become familiar with it. It is convenient to be able to assume that all commercial entities will be in this category. It is intuitive to be able to type the name of an international business, such as IBM or Microsoft, followed by “.com”, knowing that this is most likely to find their website. We have even begun to use the term “dot coms” to describe the new breed of information businesses. You might well ask - why the need for change?

There are two main problems. One is that the .com category is getting too big – there are over 20 million entries. The bigger a category becomes, the more unwieldy it is, and the slower the lookup service becomes. This is because each time you use a domain name, it is necessary to look it up in the domain name system's database and translate it into an IP number. These databases, hosted on 13 "root servers" around the globe, are the official master lists of where Internet addresses are to be found.

Even if we could overcome the overcrowding problem, each domain name has to be unique, so there are only a limited number of names available in the .com category. If International Bicycle Manufacturers had already registered
IBM, it would no longer be available for IBM. There have been moves to increase the number of generic top-level domain categories to alleviate this pressure since the mid-1990s. Despite the implementation of some unofficial alternative TLDs, nothing has been done about the official domain name system until now.

Expanding the number of gTLDs

On 16 July 2000, ICANN announced that it had decided to develop a policy for the introduction of new TLDs. It contemplated successful applicants being the controlling registrars and collecting fees from registrants in their categories. It invited proposals, and charged a US$50,000 non-refundable application fee. When applications closed on 2 October, there were 47 applicants who, between them, proposed another 188 gTLDs. Suggestions included .web, .shop, .kids, .travel, and the inevitable .sex. ICANN reviewed the applications, and on 16 November announced that it would proceed with seven of them. The next step is for ICANN to negotiate suitable policies with the applicants before getting the final approval of the US Department of Commerce.

The successful applicants were:

<table>
<thead>
<tr>
<th>gTLD</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>.biz</td>
<td>businesses</td>
</tr>
<tr>
<td>.coop</td>
<td>business cooperatives</td>
</tr>
<tr>
<td>.info</td>
<td>general use</td>
</tr>
<tr>
<td>.name</td>
<td>Individuals</td>
</tr>
<tr>
<td>.pro</td>
<td>accountants, doctors and lawyers</td>
</tr>
<tr>
<td>.museum</td>
<td>museums</td>
</tr>
<tr>
<td>.aero</td>
<td>aviation industry</td>
</tr>
</tbody>
</table>

They were chosen on the basis of the need for their proposal and their financial ability to support the proposed domain name infrastructure. ICANN has said it will consider some of the other names again if these changes prove to be successful.

Complaints and problems

Many of the unsuccessful applicants have complained, and some are even considering lawsuits based on alleged faulty processes and misleading statements. One notably worthwhile application was rejected – the World Health Organisation applied for the .health category. They specifically wanted to address the problem of quality control of health-related websites (a topic we referred to in the last newsletter). ICANN’s reason for rejecting this, and the .kids, .sex and .xxx categories, appears to be based on a reluctance to allow registrars to exercise any form of content control.

Some suggest the new gTLDs will exacerbate the cybersquatting problem — there will be many more domains for squatters to inhabit. ICANN is leaving it up to each applicant to propose suitable policies, and there will certainly be differences. For example, Afilias, who will be in control of the .info domain, propose to allow only companies with a trademark to register in the first 30 to 60 days. Neulevel, which has been chosen to operate the .biz category, suggests allowing trademark or intellectual property owners to record an interest in a name so that they can be notified when someone else tries to register it. It will be interesting to see what policies are actually implemented, and how efficiently they work.

The new .biz category will itself cause collisions with existing domain names. This is because there is already a .biz category in the unofficial gTLDs. To use these unofficial categories, you would need to deflect your computer from the official root servers, and point it at the alternative databases. There are apparently about 1000 existing .biz names in this alternative system, and the suggestion is that ICANN ought to be accepting some responsibility for protecting their rights, not encouraging confusion. Allowing a new .biz category in the official domain name system has been likened to allowing the same phone number to connect you to two different people, depending on which telecom supplier you use.

The China syndrome

Perhaps a more fundamental issue has arisen over the use of Chinese characters in domain names. In November, ICANN and VeriSign announced that they were now able to allow the use of Chinese characters within the .com, .net and .org top-level domains. At about the same time, the Chinese government introduced rules that require all Chinese language addresses to be issued by its China Internet Network Information Centre (CINIC).

The Chinese threatened to block all Chinese language sites that are not registered through CINIC. Within two days of announcing its service, CINIC had apparently received half a million applications. With its large population and rapidly growing Internet presence, China’s claim to control the use of Chinese names might become a major issue. The demand appears to be based on a number of imperatives: the desire for political and economic sovereignty, part of which involves a desire to control China’s push towards the use of the Internet; a perception that Western Internet bodies do not cater for Chinese needs; and a desire to impose tighter censorship. Whatever the reason, it raises fundamental questions about whether national governments can or should be able to control parts of the Internet, even in the generic or international zones.

Internet breakaways?

Other recent ICANN activities have provoked equally extreme reactions in the more established Internet community. In July, a number of important managers of country code TLDs objected to ICANN’s attempt to raise funds by charging them 33% of its budget. The charge was ostensibly for the work ICANN does in maintaining the root server system. Instead of paying the bill, many country code organisations, led by the Council of European National Top-Level Domain Registries (CENTR), made a “donation”. They objected on the basis that a large part of the funds were going towards the cost of sorting out problems that arose before ICANN even took over the domain name system, and they felt they had no responsibility for these difficulties. They demanded more representation on ICANN, and guarantees that it would do better at maintaining and enhancing the root servers.

The problems came to a head at an ICANN meeting in November. The renegades suggested three possible solutions:

- they get better representation within ICANN, perhaps by forming their own support organisation within ICANN’s structures, or
- they set up as an autonomous group, looking after their own country codes, but using the existing domain name system, or
they break away from ICANN and set up their own system of root servers, perhaps in association with some of the alternative domain name systems mentioned above.

Since the November meeting, conciliatory statements have been made, and it is clear that the third option is not the preferred one at this stage.12

Conclusion

There seem to be at least four distinct groups who are disaffected by ICANN at the moment: the unsuccessful applicants for new gTLDs, the operators of existing alternative gTLDs (especially .biz), the Chinese government, and managers of ccTLDs. Each has their reason for investigating or encouraging an alternative domain name system. On their own, each might not favour breaking away, but there might be enough synergy between them to overcome their reluctance. Is the Internet in danger of breaking up?

1 For more information, see ICANN’s website at http://www.icann.org/.
6 For information on reconfiguring your browser to use alternative root servers, see http://www.youcann.org/.
8 Declan McCullagh, “Is Dot-Biz Really a New Domain?”, referred to above.
9 VeriSign recently bought Network Solutions Inc (NSI), the original, and still one of the most important, US-based domain name registrars.