

The Proposal for Internationalizing ccTLD Names

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Introduction

The Internet from its birth was in English. In its early years in the United States of America, it has produced tremendous social and economical wealth. Not for long before it had grown into other countries of the globe, and people speaking languages other than English had also enjoyed some wealth the new technology had brought. However, the language barrier has gradually shown its limitation on the further expansion of the Internet usage in non-English speaking countries.

There are multiple approaches to solve the problem, fully internationalize the domain name system is one of the most critical element for domain name is the key element in locating the resource on the Internet. Internet users have longed for a domain name system in their native language and expect one day they can fully overcome the problem they are now facing.

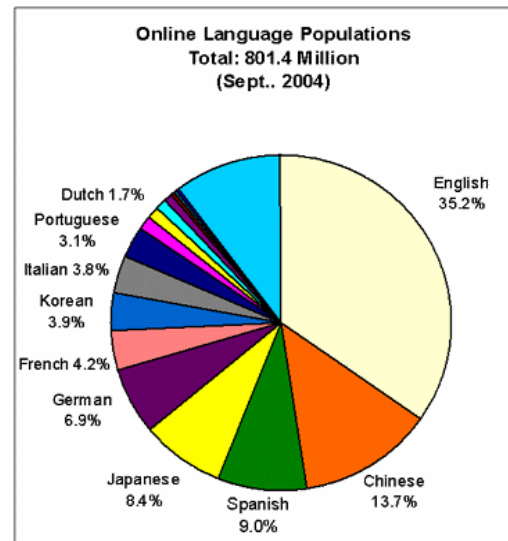
Chinese Domain Name Consortium (CDNC) has seen the needs and has explored means to fulfill the need. After careful consideration, CDNC determined that Internationalized Domain Name (IDN) is the solution and there is adequate technical resource to achieve it. CDNC also consider it is the right time to start internationalizing the Country Code Top Level Domain (ccTLD) names. In this paper, CDNC has presented its principles and suggestions on internationalizing the domain names systems.

Necessity of IDN

From its research, CDNC has summarized prerequisites, advantages and necessities in implementing fully internationalized domain name system. The prerequisites are:

Market Needs

As the statistics shows, as of September 2004, over 64.8% of the global Internet users are not English speakers, and their countries and regions build up over 66% of the world economy (<http://glreach.com/globstats/>). Take China for example, its Internet user population has grown up to more than 104 million by the end of June, 2005 (CNNIC Statistical Survey Report, published in July 2005). Statistics also



shows that about 90% of the Internet users prefer to access the content in their native languages. Language barrier has become a major drawback on Internet's popularization in non-English speaking countries, and its impact is more significant in countries which language is non-alphabetical, such as China, Japan, and Korea.

Domain name is the single most important way to locate resources on the Internet. To date, there are over 240 country specified Top Level Domains in the world, represents over 240 countries and regions. Most of these ccTLD users are non-English speakers. Although these countries and regions had accelerated their development in ccTLDs, their users are longed for surfing Internet fully using their native language. Thus, internationalizing the domain name system is in urgent need, the IDN is in high market demand. And with the rapid growth of Internet users in countries like China, Japan and Korea, the IDN market grows tremendously and becomes enormous.

Adequate Technology Resources

Engineers in these countries recognized the importance of IDN and allocated their effort to develop technical solutions to meet the need. CDNC is the frontier in this field, and achieved many breakthroughs in the research. From 2003 to 2004, IETF

published a series of RFCs, namely RFC3490, RFC3491, RFC3492, RFC3454 and RFC3743. They all perfectly proved that implementing IDN is stable and feasible. Especially, RFC3743 addressed the potential risk of “phishing” in IDNs, and set up the standard to resolve the problem. When registries follow the respective guideline, it will dramatically reduce the number of similar-looking IDNs, which will in turn reduce the possibility of phishing– use of IDNs.

Nowadays, the technology is mature and stable, and there are abundant technical forces to ensure its workability and stability, all of these have ensured that there is no negative impact on the current domain name system.

Governmental Support

Governments in these countries and regions are fully aware of the importance of IDN and are very supportive in the research and deployment. With sufficient negotiation with local governments, most ccTLD registries may obtain official supports when submit their proposals to ICANN.

Advantages of IDN

There are four major advantages in implementing IDN.

- IDN makes the Internet more friendly to non-English speakers;
- More achievement in applications of Email, FTP, and etc.;
- It is the most effective way to popularize the use of the Internet in non-English speaking communities;
- There is a need for respecting and guaranteeing the culture diverseness and special interests of people in different regions.

What if we don't strike while the iron is hot?

If we do not take chance to push forward the project now, potential IDN users with exigent needs may choose other uncertain solutions, and they may threaten the consolidation of the Internet standards and the operational stability of the Internet.

The Principles

CDNC strongly recommend the following five principles to ICANN when deploying IDN:

- Give the priority to internationalizing ccTLDs. To ensure the system stability, it's recommended to internationalize ccTLD before internationalize gTLD.
- For convenience purpose, only one form of language character variant of internationalized ccTLD is accepted. Considering that some countries or regions may have character variants, only one form of character sets shall be chosen for IDN use by each sponsored registry.
- Supported by their own governments, ccTLD registries or authorized agencies make their own choice of which IDN character sets for their ccTLDs.
- Clearly state the necessity, pros and cons for implementing internationalized ccTLDs in each proposal that submitted to ICANN.
- Register and operate the Internationalized ccTLDs in the root DNS server in the form of IDNA Punycode.

Suggestions

CDNC suggest ICANN to form an evaluation committee on internationalizing ccTLDs. The committee shall compose of representatives from gNSO and ccNSO, experienced DNS engineers, if possible, even directors of ICANN board. The whole process shall be transparent and open for public inputs.

The main tasks of the committee should be:

Control the Sponsor's Qualification

The proposal shall be submitted by corresponding ccTLD registry or government accredited institution/agency which meets the following criteria:

- The country/region it serves has certain market needs;
- Possessing abundant technical force in staff, equipment and operation;
- Having broad support from the local government and Internet community;
- Possessing adequate financial resources.

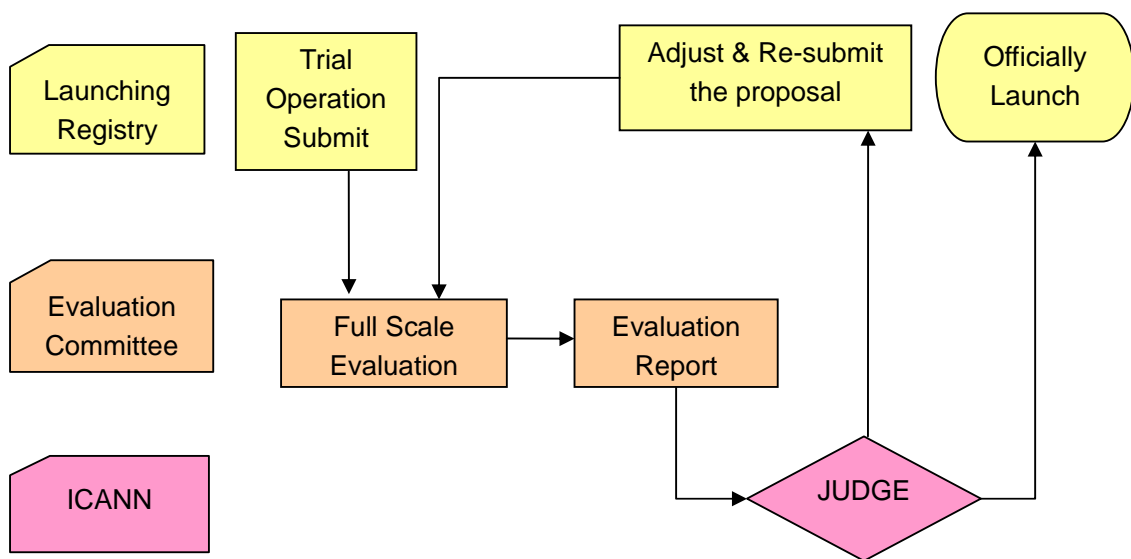
Ask for Government's Approval

- The IDN ccTLD proposal shall be fully supported by the corresponding government;
- The committee shall request the sponsor to provide the approval documentaries issued by the government before its approval.

Draft the Test Bed Evaluation Report

The committee is recommended to set certain Benchmarks and conduct a full scale evaluation on the proposed internationalized ccTLD during its initial operation, and then submit the evaluation report to ICANN board for its final approval. The sponsored registry shall officially launch the registration service only after obtaining the approval of ICANN. If the report shows that the performance is not eligible, the evaluation committee shall reject the application and ask the sponsored registry to make improvement and resubmit the proposal afterwards.

Follow is the procedure CDNC recommends:



Conclusion

In conclusion, CDNC consider with all the market needs, governmental supports, and the adequate technology resources, it is the right time to internationalize ccTLDs. IDN makes the Internet more accessible; it enables more achievement in applications of Email, FTP, and etc.; it helps Internet usage popularize further into every corner of the globe, especially in the non-English speaking communities; It helps to preserve culture diverseness and protect special interests of people in different regions.