Efforts and Lessons on Improving Usability and Acceptance of IDNs in China

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564 million Internet users by Dec. 2012, with 50 million annual increase
42.1% Internet penetration rate, a growth of 3.8% compared with the end of 2011
420 million mobile Internet users, 64.4 million annual increase
74.5% Internet access by mobile users
The rural Internet users accounted for 27.6% of the total in China, with an annual increase of 19.6 million
The ratio of Internet users using desktops dropped to 70.6% by nearly 3% over the end of last year
China had a total of 13.41 million domain names, including 7.51 million “.CN” domain names, proportion of 56.0%, and 280,000 “中国” domain names.
The total number of websites reaching 2.68 million.

Source: CNNIC 31st Survey Report
Chinese Language Usage on the Internet

- Chinese is the second most popular online language and the number of Chinese Internet users is predicted to overtake the number of Internet users predominantly using English by 2015.

- The vibrant Chinese online content industry:
  - Instant messaging (e.g. QQ): 470 million users.
  - Searching Engine (e.g. Baidu): 450 million users
  - Microblogging (e.g. Weibo): 308 million users
  - Social media (e.g. Renren): 275 million users

Source: www.internetworldstats.com/stats7.htm
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In 2000, CNNIC was one of the first registries in the world to implement internationalised domain names (experimental operation under .cn).

In 2004, RFC3743 Joint Engineering Team (JET) Guidelines for Internationalised Domain Names (IDN) Registration and Administration for Chinese, Japanese, and Korean was published.

In 2000, CDNC (Chinese Domain Name Consortium) was initiated by CNNIC, TWNIC, HKNIC, MONIC to coordinate Chinese domain name technology development.

In 2005, IANA publishes the Chinese IDN table.

In 2010, the IDN ccTLD 中国 launched. In the first month of registration over 380,000 domains were registered.

In 2010 RFC 4713, the Chinese Domain Name Registration Standard was published.
- 22.3% names have no variant names, 77.7% have variants
- 37.2% names are not delegated to a NS, not resolvable
Data are from Feb. 10th to Feb. 16th
CDN are mainly used by domestic users
22% users are from USA
More oversea users use .中國, the percentage of .中國 oversea usage is higher than percentage of .中国 oversea usage
Mainland users also are querying TC
Chinese variants have the same pronunciation and the same meaning as its official form, Chinese users regard them as interchangeable.

CNNIC experiences with .中国/.中國 shows over 10% of the DNS queries are for variant form

For example, 清华大学 清 - > {清，清，清}
华 - > {华，華，華}
学 - > {学，學，孛}

IDL package :
清华大學；清華大學；清华大学；
清华大学；清华大學；清華大學；
清华大學；清華大学；...

An important constructor, operator and administrator of Chinese Internet infrastructure
.中国 and .中國 comply with RFC3743 (for CJK) and RFC4713 (for Chinese)

- Chinese domain name labels and their variants under .中国 and .中國 must be delegated to the same registrant

- One original domain name can be in mixed traditional Chinese and simplified Chinese characters.
- One domain name in simplified Chinese characters totally
- One domain name in traditional Chinese characters totally
- Other combination of mixed TC and SC characters are reserved for the registrant
- The registration of Chinese domain names under .中國 and .中国 are bundled
- Mostly, only two will be added into Zonefile
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On June 19, 2012 CNNIC, through the newly established internationalized Email demonstration platform and in conjunction with multiple Internet information centers in the Asian-Pacific region, held a ceremony in Beijing in celebration of the successful sending of the first internationalized Email. The history when only English was used for Email addresses was ended by the issuance of the Standard for Internationalized Email Addresses RFC6531.
The 47th Meeting of the APEC Telecommunications Conference (APEC TEL 47) was held in Bali, Indonesia. At the meeting the proposal submitted by CNNIC to promote internationalized Email address technology in the Asia-Pacific region was widely supported by APEC economies and was approved by voting. It is known as the first APEC project successfully applied for by a CAS-affiliated organization ever since the foundation of APEC. This means that the internationalized Email address technology has gained government-level support and recognition in the APEC region.
Currently 90% of the mainstream PC browsers in China are compatible with Chinese domain name. Users can input http://***.中国 in the browser to visit the website directly. We estimate that by the end of this year, users can achieve 100% free-barrier access via Chinese domain names.
Users can input “.中国” domain name on the Android iOS, Symbian and other mainstream platforms with the top ranking mobile browser apps in China, including UC, 360, 3G, Opera, QQ etc.
But Chinese IDN domain names are still not “widely and fully” supported. CNNIC is still pushing the universal acceptance of CDN as an ongoing process.
Ideas and Issues to share:

*IETF standards do help improve acceptance of IDN, e.g. RFC 3492
*Government’s attitude and policies clarify the role of IDN. e.g. 《中国互联网网络域名管理办法》(China Internet Domain Name Regulations)
*Instant and sufficient communication with software suppliers and developers help them “move fast”
*End-user is the most important drive to promote IDN acceptance. e.g.,
direct mapping between IDN and trademarks
--Browser plug-in are not yet well developed
--IDN phishing
--We need more support from search engines, especially local search engine providers.
Voice recognition of IDNs will transform the mobile IDN experience.

SNS users can utilize IDNs to set up personalized webpage and application access point.
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Thank you for your questions and listening.

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