



Joint UNESCO and ITU
Global Symposium on Promoting the Multilingual Internet



CJK Experiences and CNNIC's Contribution to the Multilingual Internet

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Geneva, 9-11 May 2006



CJK Experiences

Geneva, 9-11 May 2006

About CJK (1)

- CJK, short for Chinese, Japanese and Korean
 - Close culture relationship
 - Some Chinese characters overlapped among countries/economies and some characters are/should be considered to be identical in some countries.
 - To solve many CJK characters related problems such as overlapping Chinese character problems

Korean

鍊石補天

Japanese

全地球測位システム

About CJK (2)

- CJK share the similar culture, languages and characters
- CJK face the similar problems in multi-language internet
- CJK can be unified together to tackle many problems
- Based on CJK, we can easily make our voice heard all over the world

JET and its work(1)

- o CNNIC and other Asia Pacific ccTLD registries initiated an organization named JET and the other countries and experts joined it
 - July, 2000 to work for the early, solid and cost-effective introduction of standardized Internationalized Domain Name (IDN) system and other related issues
 - Aug. 2000, discuss on implementation, test and policy of multilingual domain name
 - From 2001-2004, JET cooperate with Internationalized Domain Name

JET and its work(2)

- Evaluation of proposed ACE algorithms using real-world IDNs (practically registered and used)
 - Led AMC-ACE-Z (later named Punycode) to the final selection
- Raising TC/SC issues
 - There are cases where 2 or multiple characters should be regarded as the same
 - e.g., 國 & 国
 - IETF recognized the importance and difficulties of the issue

JET and its work(3)

- o Language table for C/J/K defined by each NIC
 - E.g., <http://www.ietf.org/internet-drafts/draft-xdlee-idn-cdnadmin-06.txt>
- o Considering the background of IDN-admin, IESG published a statement on IDN
 - Language information associated to IDN
 - Set of characters to be used as an IDN declared
 - Equivalency among characters concerned
 - Conversion between display format and wire format of characters

JET and its work(4)

- o April 2004, publish an IDN related IETF RFC:
“Joint Engineering Team (JET) Guidelines for Internationalized Domain Names (IDN) Registration and Administration for Chinese, Japanese, and Korean”
- o 2005, JET meets in Kyoto and Beijing to promote the development of Email Address Internationalization



CNNIC Contributes

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About CNNIC

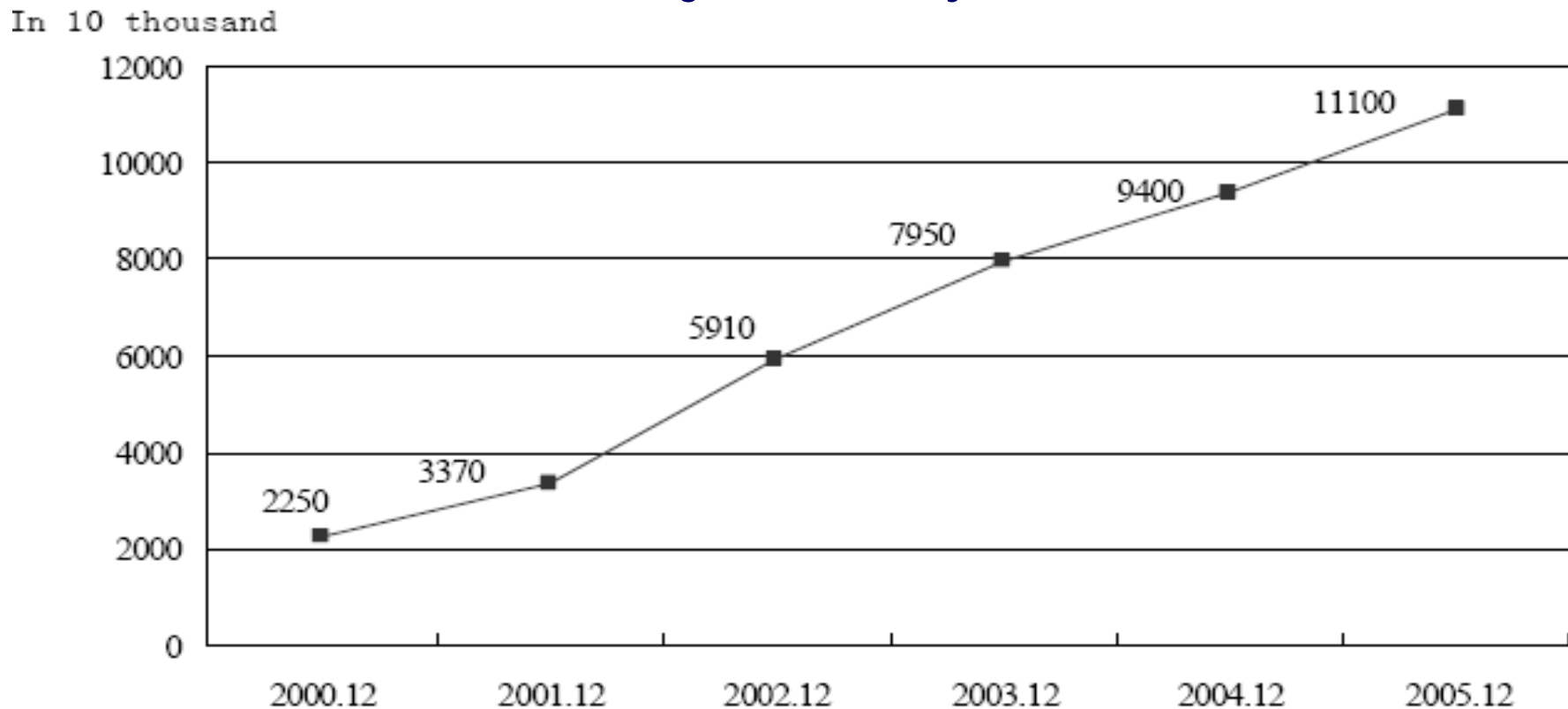
- CNNIC
 - Established in 1997 as a non-profit organization, authorized by the State Council as the national NIC.
 - Deputed by Ministry of Information Industry (MII) as the registry of .CN ccTLD
- Mission
 - Serve Chinese Internet users, facilitate the sound and orderly development of Internet in China
- Role
 - CNNIC is the constructor and operator of the information society infrastructure in China

Main Responsibilities of CNNIC

- Manage Internet address resources in China -- a NIR function
 - .CN ccTLD registry and management, Chinese domain name
 - IP/AS number allocation
- Internet Stats. and relevant information services
 - Internet resource stats., track down main developments and events, trace hot issues
- Whois
 - National level root server setting and maintenance

Demand of Multilingual Internet

- o Rapid Growth of Internet in China
 - **111 million** Internet Users by Jan. 2006, from the newest Statistical Survey Report of CNNIC
 - More than 5 folds growth, in 5 years



Source: China Internet Network Information Center (CNNIC)

- o The Need for Multilingual Internet in China
 - Behavior and Consciousness of China Internet Users
 - 99.8% access Internet Content in Chinese
 - Over 70% of the users are Chinese only Internet users



新闻 网页 贴吧 知道 MP3 图片

Baidu 百度

把百度设为首页

[中国互联网络信息中心 \(CNNIC\)](#)
 加入CNNIC联盟,申请IP地址、自治系统号码及反向域名解析。 我要申请 用户FAQ 无线互联网应用的最新...CNNIC公布“服务质量承诺”,提升国家域名服务性能 [01/24] CNNIC 招募通用网址注册服务机构 [01/17] ...
www.cnnic.net.cn/ 62K 2006-4-23 - [百度快照](#)




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邮箱	视频	手机	读书	F1	饮食	理财	拍卖	教育	广东	高尔夫	黄页	彩信	同盟
天气	论坛	下载	军事	招聘	聊天	博客	商城	星座	搜索	招贴栏	分类	WAP	点歌

Contributes of CNNIC

o Multilingual Products of CNNIC



.CN Domain Name

. No. 1 ccTLD in Asia



Registration to Month
1,125,283
as of 2006-3-31



Chinese Domain Name

中国互联网信息中心.cn



Internet Keyword



Wireless Keyword

o Internet Keyword

- A **keyword** can be composed of Chinese characters, alphabets, numeric or symbols ('-'), without exceeding 31 characters length
 - Mapping a keyword to an Internet URL
 - Keyword-enabled plugin for IE

百度



<http://www.baidu.cn>

o Wireless keyword

- Viewed as Internet Keyword implemented over Mobile network
 - Mapping a keyword to a WAP URL
- Launched the commercial wireless Keyword in March 2006

Push implementation of IDN

- Chinese Domain Name (CDN), a localized implementation of Internationalized Domain Name
- Pioneer in IDN Development
 - Started R&D on IDN in 1998
 - Formal launch of commercial IDN.cn names in 2000
 - Join founders of Chinese Domain Name Consortium (CDNC) and Joint Engineering Team (JET)
 - JPNIC, KRNIC, CNNIC, TWNIC, HKNIC, MONIC
 - JET **Open Letter** to Microsoft in April, 2005
 - Rich hands-on experiences and expertise with IDNs: IETF RFC3490, RFC3743 and etc.

Push implementation of IDN

- o Solve CDN Key problems
 - label separator “。”(U+3002) equals to “.”(U+002E) in Chinese Language Definition
 - Simplified-Chinese (SC) and Traditional-Chinese (TC) characters equivalence

for example

‘国’=‘國’

‘华’=‘華’

- Chinese character variants, some Chinese characters has many variants but they are same in meaning

for example

- Build a comp { 国, 國, 圀, 囯 } e between SC and TC characters

Push implementation of IDN

- o Commercial Implementation
 - CDN.CN
 - Free CDN/Punycode bidirectional conversion tool
 - Easy to use for Chinese Internet users
 - CDN-enabled plugin for IE browser (Before IE7)

<http://古城热线.cn>



<http://xn--7oRy4Gi33AmuM.cn>

Push Standardization of IDN

- o Nine IETF Drafts from CNNIC
 - *Evaluation of various ACEs with existing Chinese Domain Names*
 - *The Implementation of Chinese character in IDN*
 - *The Selective Module for The Conversion Between Traditional/Simplified Characters in DNS*
 - *Traditional and Simplified Chinese Conversion*
 - *Keywords Systems - Definition and Requirements*

Push Standardization of IDN

- Nine IETF Drafts from CNNIC (Contd.)
 - *Chinese Name String in Search-based access model for the DNS*
 - *Internationalized Domain Names Registration and Administration Guideline for Chinese, Japanese, and Korean*
 - *Joint Engineering Team (JET) guidelines for Internationalized Domain Names (IDN) Registration and Administration for Chinese, Japanese, and Korean*
 - *Accepted as RFC3743*
 - *Registration and Administration Guideline for Chinese Domain Names*

Push Standardization of IDN

- o Domestic Standardization
 - Two China Communications Standards Association (CCSA) Drafts
 - *General Technical Specification for Chinese Domain Names*
 - *Coding Standards for Chinese Domain Names*

- o One of the major force in Internationalized Email Application (IMA) development
 - Started R&D in 2004 and helped to create IMA mailing list within CDNC
 - Hosted JET meeting at Beijing in fall 2005
 - In Nov. 2005, CNNIC together with JET created IMA BOF in IETF
 - Mar. 2006, IETF had created IMA work group – EAI
 - CNNIC as Co-Chair
 - EAI has posted 7 IETF Internet drafts:
 - o *draft-klensin-ima-framework*
 - o *draft-yao-ima-smtpext*
 - o *draft-newman-ima-pop*
 - o and etc.

- o Core problems
 - Current Email protocols don't support IDN Email
 - Current Email client software don't support IDN Email
- o Experimental implementation
 - MTA (Mail Transfer Agent)
 - Negotiating layer of protocol to recognize the IDN Email address
 - MUA (Mail User Agent)
 - Email client software, not harming current Email protocol
 - Microsoft Outlook/Outlook Express plugin, supporting IDN Email address like the form of

技术部@中国互联网络信息中心.cn

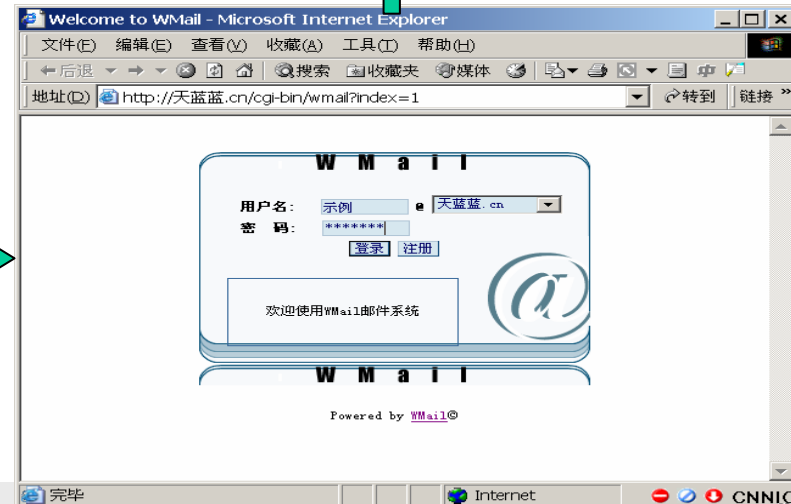
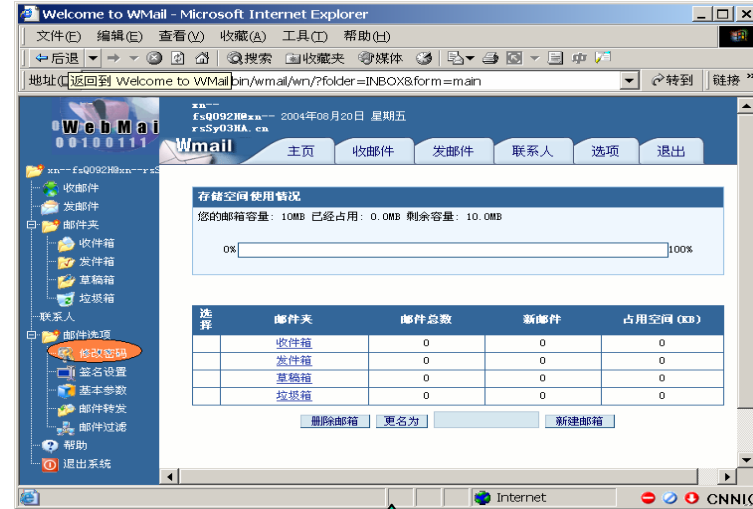
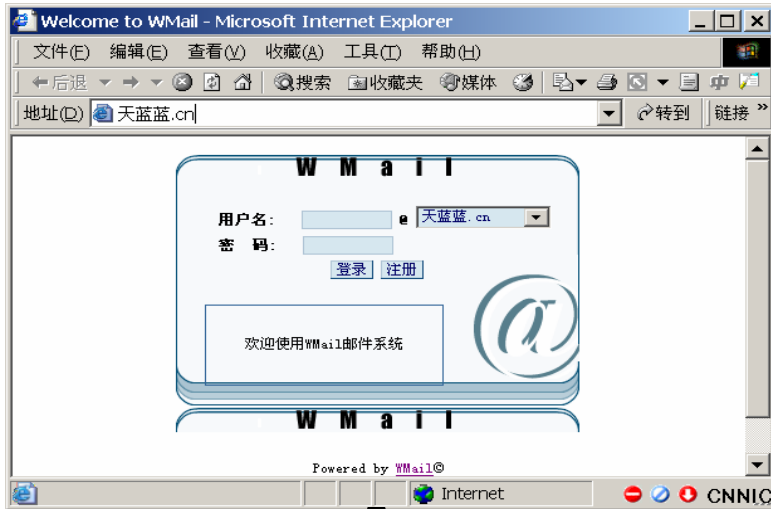


ITU-T

Chinese Email Address Example



0 From registration to use



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- o Various Multilingual Applications
 - Email
 - Instant Messaging — improved communication
 - Online Services
 - Information search, online news, online forum, blog, and etc.
 - E-Government, on-line education, e-banking, e-stock market, and etc.
 - E-commerce
 - Online Gaming, Multi-medias
 - P2P(IP phones, BT, etc.)

- o Many of Chinese Internet users can not understand English, so CDN and Chinese email address are Chinese favorite
- o Since CDN is already internationalized, why not CDN email address, or even ftp, telnet, and etc.?
- o CNNIC is trying to promote the IMA development via international co-operation with many interested organizations and experts
- o CNNIC hopes that more and more experts and engineers from all over the world can contribute to Multilingual Internet



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Thanks

fengw at cnic.cn

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