Multilingual Domain Names

MSU, Telecom Summer School

Geneva, July 16 2002

Avita Dodoo

Strategy and Policy Unit

avita.dodoo@itu.int

The views expressed in this paper are those of the author and may not necessarily reflect the opinions of the ITU or its membership.

Outline

- Origins of the internet
- Growth of the internet
- What is a domain name?
- Internationalized domain names

Outline

- Technical solutions
- Benefits
- Challenges
- Policy issues

Internationalized domain names (IDN)

- If the internet was invented in Thailand, would you be able to read this:

ทีเอชนิค.พาณิชย์.ไทย

Origins of the Internet

- Origin: United States
- Technology based on English language
- ASCII codes used at the core of computing and the internet

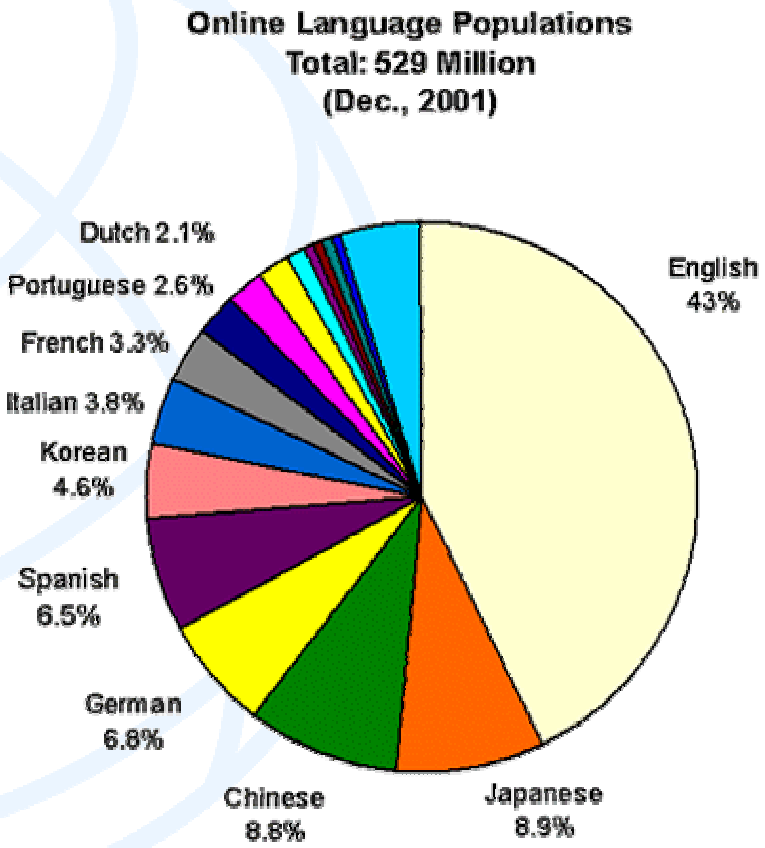
ASCII, stands for American Standard Code for Information Interchange and is a standard seven-bit code. The code is used for encoding letters (A-Z,a-z), numerals (0-9) and special characters (e.g. @, #, &,+)

Growth of the Internet

- 2001: 513 million people online (source Nua Internet Surveys)
- 2003, two-thirds of Internet users non-English speakers (source Walid.com)
- 2007: Chinese number 1 web language (source Walid.com)

Growth of the Internet

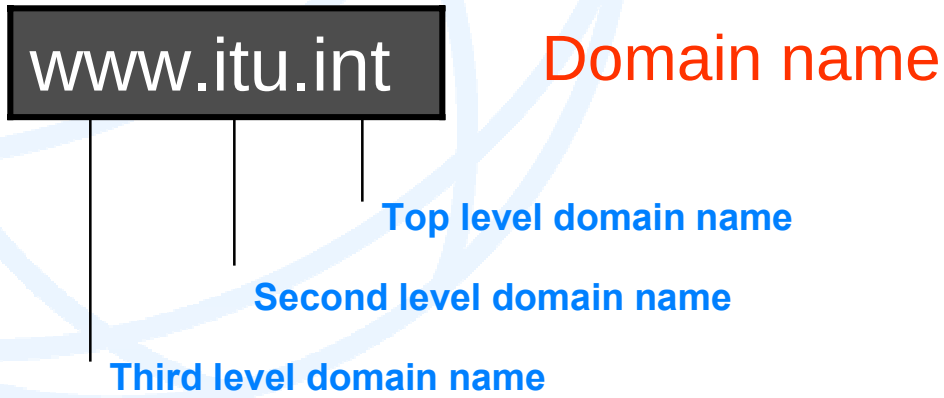
Online languages



Source: Global Internet Statistics

What is a domain name?

- The domain name: is a string of characters, such as “www.microsoft.com”
- Substitute for an Internet Protocol address,e.g. 198.105.232.6



What are Internationalized domain names? (IDN)

- Internet addresses that use non-English based characters.

ทีเอชนิค.พาณิชย์.ไทย

Why IDN?

- 90 percent of world population does not speak English
- Difficulty for non-native English speakers
  - to remember and
  - spell addresses

博文, 博史, 宏史 - Hirofumi

Examples

华人.公司.cn

Samsung.com

ישראל.קום

三星.회사.kr

genève.ch

- Case 1: ASCII : Samsung.COM (ASCII.ASCII)
- Case 2: Non-ASCII.ASCII (IDN.ASCII)
- Case 3: Non-ASCII.Non-ASCII: 삼성.기업 (IDN.IDN)

Technical solutions

- **Client-side solution**
  - Translation is performed in the user application
  - Domain names are processed as ASCII domain names all over the Internet
- **Server-side solution**
  - Domain names are sent over the Internet in local encoding
  - Applications and services communicate with each other using non-ASCII domain names all the way

Benefits of IDN

- Internet accessible to all
- Bridge the digital divide
- Promote local content
- Growth of the internet

Challenges

- Finding acceptable solution
  e.g. scripts vs languages
- Internet governance
  - Local level
  - Global level
- Traditional Chinese vrs Simplified Chinese

Policy issues

- Who is the language authority for multilingual domain names?
- Role of ICANN – is there one?
  - International standard or local coordination?

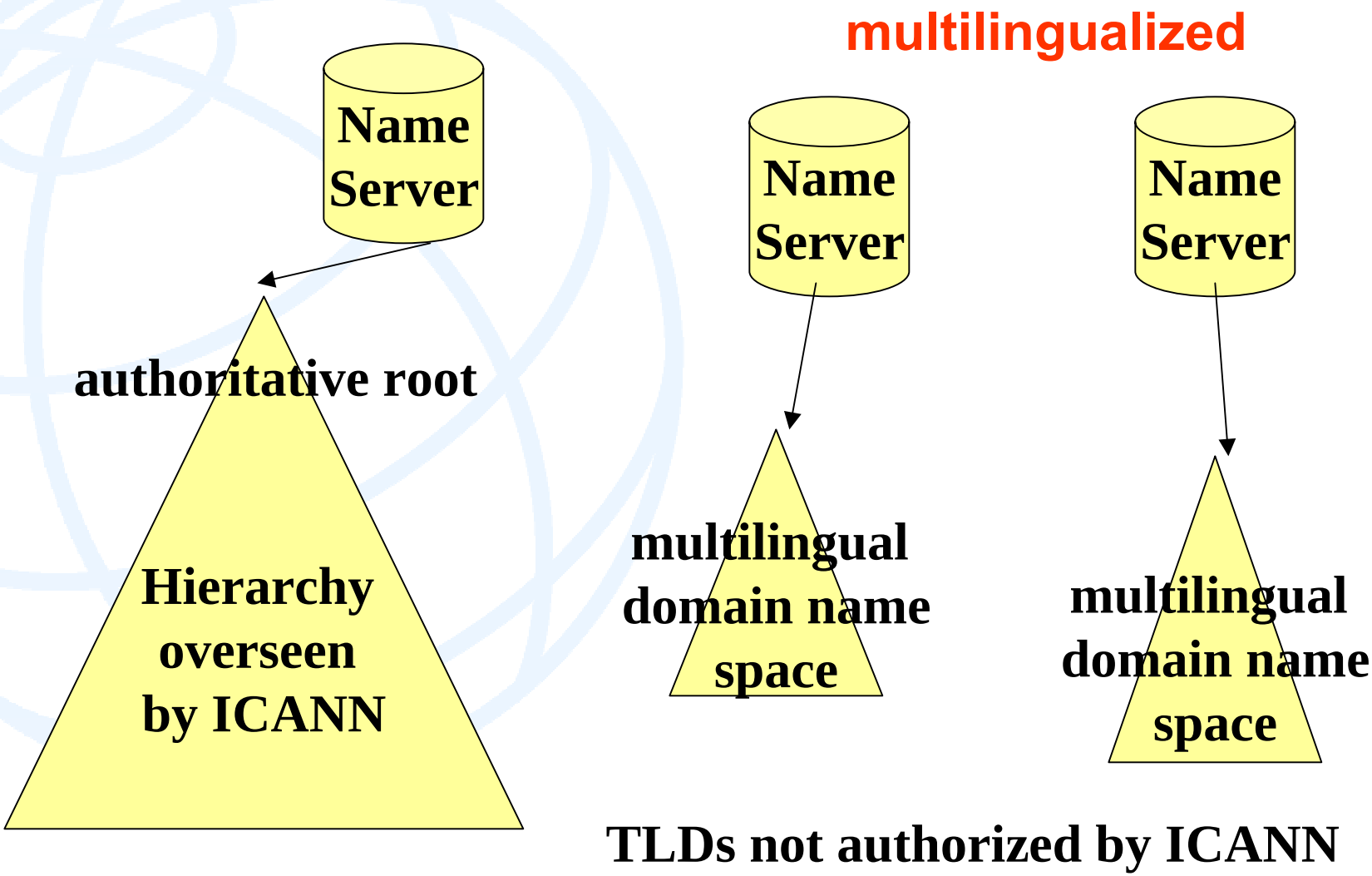
Policy issues

- **Classification of potential TLD strings, oriented around semantic meaning**
  - Geographic units
  - Languages
  - Cultural Groups or Ethnicities
  - Existing sponsored gTLDs e.g. .areo, .museum, .coop
  - Existing unsponsored gTLDs e.g .com, .net, .org, .biz, .info, .name

Conclusion

- Many policy issues to be resolved
- Split root if IDN not accepted

Alternate root…



The Internet is like a pot of soup…

One Internet, many voices!

Thank you!

Merci!

Danke!

Gracias!

ありがとう!

Further information

- www.itu.int/mdns

Multilingual Domain Names: Joint ITU / WIPO Symposium
International Conference Center of Geneva (CICG)
December 6-7, 2001

Home | Agenda | Briefing Paper | Background Resources | List of Participants | Presentations

NEW! **Now available: ITU Briefing paper, WIPO Briefing paper, Symposium presentations, Chairman's Day One remarks, Information Note to the Press.**

Overview

The International Telecommunication Union (ITU) and the World Intellectual Property Organization (WIPO) hosted a Joint Symposium on Multilingual Domain Names from 6-7 December 2001, at the International Conference Center of Geneva (CICG).

Day one of the Symposium was led by ITU and dealt with technology and policy issues. Day two was led by WIPO and dealt with intellectual property and dispute resolution issues.

Español

Français

Objective

As background, domain names, on which internet mail and web addresses are based, currently use a restricted subset of Latin (ASCII) characters – even for countries that do not use Latin characters in their written language. While Internet content such as web pages have been internationalized and made available in many languages, it is only recently that there have been a number of initiatives to similarly internationalize the internet's domain name system.

The implementation of multilingual domain names raises a number of complex issues. Besides technical and interoperability issues, these include, inter alia, the appropriate administrative arrangements for multilingual domains and top level domains, competition policy and market access, intellectual property and dispute resolution,