

JPRS JAPAN REGISTRY SERVICES

## Technical Considerations for .IDN

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APTLD Meeting

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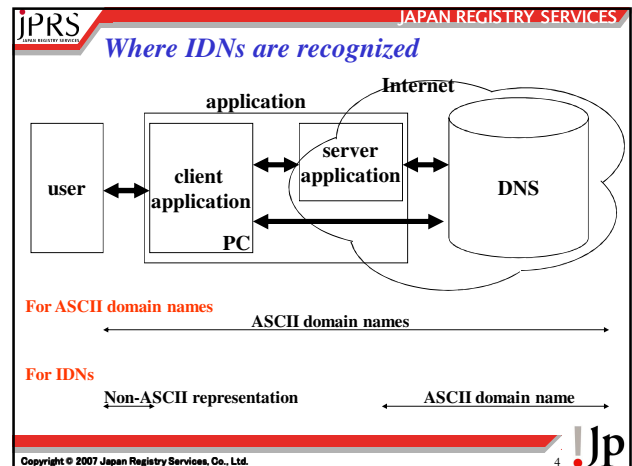
*Hello, this is me.*

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## Technical Issues in General

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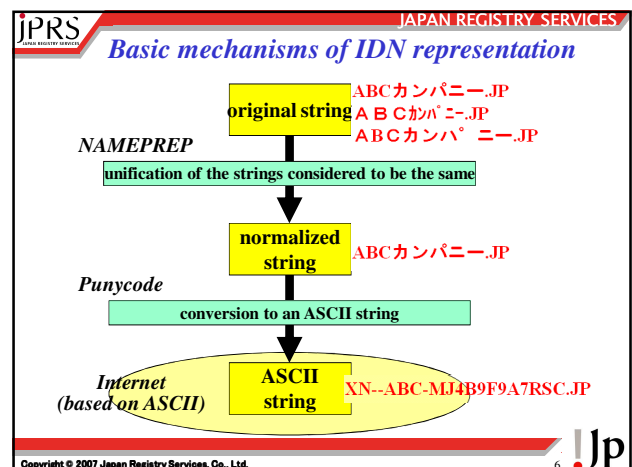
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### NAMEPREP and ACE

<Q3>

- NAMEPREP (Preparation of Internationalized Host Names)
  - Non-ASCII IDN string representations which should be regarded as the same string are converted into one representation
    - Case folding
    - Normalization
    - Prohibition
- ACE (ASCII Compatible Encoding)
  - Non-ASCII IDN string is converted into an appropriate ASCII domain name
  - Punycode

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### IDN TLD space in early days

authoritative root  
Hierarchy overseen by ICANN

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### Alternate root

internationalized  
Name Server Name Server

authoritative root  
Hierarchy overseen by ICANN

IDN TLD space IDN TLD space

TLDs not authorized by ICANN

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### Inclusive root (variation of alternate root)

inject unauthorized IDN TLDs into the apparent name server

authoritative root  
Hierarchy overseen by ICANN

IDN TLD space

unauthorized TLDs can be seen together with ICANN's

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### Pseudo-root (zero level domain)

Name Server

銀行.企業.jp

append ".jp" to "銀行.企業"

Hierarchy overseen by ICANN

- jp
- 企業
- 銀行

multilingual domain name space

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### Now it's coming : IDNs in a single authoritative root

Name Server

.com .jp .ae ... IDN TLDs

All are authorized to be added to the root

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### Technical Options for Internationalized TLDs

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## IDN TLD

- **Technical Issues**
  - Into the root zone
    - NS records
      - New Space
    - DNAME records
      - Equivalent space to existing ASCII TLD space
- **Policy issues**
  - How to decide TLD Strings?
  - Who will run the TLD registries?
  - Mapping between ASCII TLD and IDN TLD?
  - :

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## NS Records and DNAME Records

- **Technical tests of two approaches**
  - NS records
    - allow the creation of a new TLD space that can be proposed by any entity regardless of whether it is currently operating a top-level domain or not
  - DNAME records
    - imply a situation where the operator of an existing ASCII TLD would map it into a non-ASCII TLD which is equivalent to the ASCII version, either synonymous to or a transliteration of the original TLD

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