IDN Whois Challenges
-- TWNIC’s Case study

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Oct. 29, 2003
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- Current ASCII-Whois Policy
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- IDN Whois Display
- IDN Whois Challenges
Whois++ and rwhois can support other language and charset.

- Whois++ client is more popular than rwhois and whois++ client.
## TWNIC WHOIS Current Elements

<table>
<thead>
<tr>
<th></th>
<th>Company/Organization Registrant</th>
<th>Individual Registrant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DB Element</td>
<td>Whois Display</td>
</tr>
<tr>
<td>Domain Name</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Company ID</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Company Name -- Chinese</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Company Name-- English</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrant ID</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Registrant Chinese Name</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Registrant English Name</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrant Company Address</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Registrant English Address</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrant Chinese Address</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Registrant TEL</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrant FAX</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrant E-mail</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>DN Application Date</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>DN Expire Date</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>DNS Record</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Registrar</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>
Domain Name Registration Agreement

TWNIC shall have the right, based on international Internet community practice and in consideration of public interests such as protection of consumers, protection of intellectual property rights, enforcement of laws etc., to establish a WHOIS database and to provide to the public through entry-specific online query the information (domain name, name, telephone number, fax number, e-mail address, of applicant, date of application, expiry date, DNS setup information), either in Chinese or in English, as provided by the Applicant and stored in the WHOIS database. To protect the privacy of the Applicant, TWNIC and the Registrar may appoint several items of information provided by Applicant, depending on whether or not the Applicant is an individual, such that the items are subject to public query under the consent of the Applicant.
## Chinese Variant Table

- Character for Registration (CR)
- TW Corresponding Character (TW)
- CN Corresponding Character (CN)
- Relevant Character (RC)

<table>
<thead>
<tr>
<th>CR</th>
<th>TW</th>
<th>CN</th>
<th>RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>台</td>
<td>台</td>
<td>台</td>
<td>台檯薹臺颱</td>
</tr>
<tr>
<td>網</td>
<td>網</td>
<td>網</td>
<td>網网</td>
</tr>
<tr>
<td>中</td>
<td>中</td>
<td>中</td>
<td>中</td>
</tr>
<tr>
<td>心</td>
<td>心</td>
<td>心</td>
<td>心</td>
</tr>
<tr>
<td>.....</td>
<td>.....</td>
<td>.....</td>
<td>.....</td>
</tr>
</tbody>
</table>

[Chinese Variant Table => http://cdns.twnic.net.tw/cjktable/ietf-draft/](http://cdns.twnic.net.tw/cjktable/ietf-draft/)
Chinese IDN Registration Policy

Chinese IDN Example

Original form: 台網中心.tw (punycode: xn--fiq43lrrlz83a.tw)

Traditional form: 台網中心.tw (punycode: xn--fiq43lrrlz83a.tw)

Simplified form: 台网中心.tw (punycode: xn--fiq43lrrlfy5a.tw)

Relevant DN: 檯網中心.tw  檯网中心.tw  簡網中心.tw  簡网中心.tw  臺網中心.tw  臺网中心.tw  颱網中心.tw  颱网中心.tw
IDN Registration Policy

Register IDN → 台網中心.tw

Traditional Character
台網中心.tw

Simplified Character
台网中心.tw

Relevant IDNs
Reserved by TWNIC
For assistance-resolving

Zone File

Assistance-Resolving
Each registered Chinese Domain Name will be assigned the three domain names: (1) One original domain name, (2) One traditional character, and (3) One simplified domain name.

Relevant domain names will be reserved by TWNIC for assistance-resolving not allowed others to register. But those who have a registered trademark and provide document can claim to apply reserved domain name (Exception Case).
Query: 台網中心.tw
IDN Package Information:
Original form: 台網中心.tw (punycode: xn--fiq43lrlz83a.tw)
Traditional form: 台網中心.tw (punycode: xn--fiq43lrlz83a.tw)
Simplified form: 台网中心.tw (punycode: xn--fiq43lrlfy5a.tw)
Relevant DN: (Following Relevant Character’s Combinations)
台 檯 籠 臺 颱
網 網
中
心

Exception Case: 颱網中心.tw
Regular Information:
......................
Exception Case Query:

Query: 颱網中心.tw

IDN Package Information:
Original form: 颩網中心.tw (punycode: xn--fiqq24b10v24x.tw)
Traditional form: 颩網中心.tw (punycode: xn--fiqq24b10v24x.tw)
Simplified form: No
Relevant DN: No

Regular Whois Information:

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IDN Registration Practices Challenges

- Character Variant Table
- Registry/Registrars Implementations
  -- IDN-EPP support (standard?)
- Registration policy
- Dispute Resolution Policy
IDN Whois Challenges

- Check variant table at Whois Query
- Display IDN package elements
- Handle exception case
- Lack of IDN Whois standard
- Query/Display with Punycode or other Encoding?
- Depends on How to implement IDN Registration Policy?
Thank You!