Internationalized Registration Data Working Group (IRD-WG) Interim Report

ICANN Meeting, Cartagena, Colombia

Edmon Chung

Working Group Co-chair
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Agenda

• Introduction
• IRD-WG Objectives
• Summary of IRD-WG Discussion
• Preliminary Recommendations for Community Consideration
• Questions for Community Discussion
Introduction

- Internationalized domain name (IDN) guidelines exist for domain labels and names.
- No standards exist for submission and display of domain registration data in directory services.
IRD-WG Objectives

• How to internationalize domain registration data?
• How to specify how to internationalize the WHOIS protocol?
Summary of IRD-WG Discussion

- Is the WHOIS Protocol Able To Support Internationalized Registration Data?
- Query and Display of Variants in Internationalized Registration Data
- What Capabilities Are Needed for Directory Services in the IDN Environment?
- How to Accommodate Users Who Want To Submit and Have Registration Data Displayed in Local Scripts?
- Models for Internationalizing Registration Contact Data
- Preliminary Recommendations for Community Consideration
How to Accommodate Users Who Want To Submit and Have Registration Data Displayed in Local Scripts

Various elements of registration data could be separately internationalized as follows:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Possible Ways to Internationalize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain Names</td>
<td>Both A-label and U-label</td>
</tr>
<tr>
<td>Name Server Names</td>
<td>A-label, and optionally U-label</td>
</tr>
<tr>
<td>Sponsoring Registrar</td>
<td>US-ASCII</td>
</tr>
<tr>
<td>Telephone/fax</td>
<td>UPC E.123</td>
</tr>
<tr>
<td>Email</td>
<td>RFC 5335</td>
</tr>
<tr>
<td>Registration Status</td>
<td>Publish exact EPP code</td>
</tr>
<tr>
<td>Dates</td>
<td>Not discussed yet by the IRD-WG</td>
</tr>
</tbody>
</table>
Four Models for Internationalizing Registration Contact Data

The IRD-WG members discussed four possible models but did not endorse any particular model. They are seeking comment from the community on which model, if any, is appropriate.

Model 1: Registrants provide domain contact data in “Must Be Present” script.

Model 2: Registrants provide data in any registrar-accepted script and registrars provide point of contact for transliteration or translation.

Model 3: Registrants provide data in script accepted by the registrar and registrars provide transliteration tools to publish in “Must be Present” script.

Model 4: Registrants provide data in language accepted by the registrar and registrars provide translation tools to publish in “Must be Present” language.
### Model 1

<table>
<thead>
<tr>
<th>Models</th>
<th>Russian Example</th>
<th>Chinese Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Registrants provide domain contact data in “Must Be Present” script</td>
<td><em>(Showing Translation)</em>&lt;br&gt;contact: Petr Ivanov (Петр Иванов)&lt;br&gt;organisation: ОАО «Cicle»&lt;br&gt;address: Office 1, Lenin st., Kovrov&lt;br&gt;address: Vladimir region, 601900&lt;br&gt;address: Russia</td>
<td><em>(Showing Translation)</em>&lt;br&gt;contact: Zhang, San (张三)&lt;br&gt;Organisation: Apt 13-203, Ludan Village&lt;br&gt;address: Shenzhen, Guandong Province&lt;br&gt;address: P.R.China</td>
</tr>
<tr>
<td></td>
<td><em>(Showing Transliteration)</em>&lt;br&gt;contact: Petr Ivanov&lt;br&gt;organisation: ОАО «Tsirkul»&lt;br&gt;address: Office 1, Ulitsa Lenina, Kovrov&lt;br&gt;address: Vladimirskaya oblast, 601900&lt;br&gt;address: Rossiya</td>
<td><em>(Showing Transliteration)</em>&lt;br&gt;contact: Zhang, San&lt;br&gt;Organisation: Ludan cun 13 dong 203&lt;br&gt;address: Shenzhen, Guandong sheng&lt;br&gt;address: zhong guo</td>
</tr>
</tbody>
</table>
# Model 2

<table>
<thead>
<tr>
<th>Models</th>
<th>Russian Example</th>
<th>Chinese Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2: Registrants provide data in any registrar-accepted script and registrars provide point of contact</td>
<td>Registrar POC: <a href="http://nic.ru">http://nic.ru</a> phone: +7 800 234-5689 fax-no: +7 800 234-5699 email: <a href="mailto:info@nic.ru">info@nic.ru</a> contact: Петр Иванв organisation: ОАО Циркуль address: ул.Ленина, офис 1, г.Ковров address: Владимирская обл. address: Россия</td>
<td>Registrar POC: <a href="http://registrarA.com">http://registrarA.com</a> phone: +1 86 755 5555-5689 fax-no: +1 86 755 5555-5390 email: <a href="mailto:info@registraA.com">info@registraA.com</a> contact: 张三 Organisation: address: 鹿丹村13 棵 203 address: 深圳, 广东省 address: 中国</td>
</tr>
</tbody>
</table>
Model 3

Models | Russian Example | Chinese Example
--- | --- | ---
Model 3: Registrants provide data in script accepted by the registrant and registrars provide transliteration tools to publish in “Must be Present” script. | contact: Petr Ivanov organisation: OAO «Tsirkul» address: Office 1, Ulitsa Lenina, Kovrov address: Vladimirskaya oblast, 601900 address: Rossiya | contact: Zhang, San Organisation: address: Ludan cun 13 dong 203 address: Shenzhen, Guandong sheng address: zhong guo
## Model 4

<table>
<thead>
<tr>
<th>Models</th>
<th>Russian Example</th>
<th>Chinese Example</th>
</tr>
</thead>
</table>
| Model 4: Registrants provide data in language accepted by the registrars and registrars provide translation tools to publish in “Must be Present” language. | contact: Petr Ivanov  
organisation: OAO «Cicle»  
address: Office 1, Lenin st., Kovrov  
address: Vladimir region, 601900  
address: Russia | contact: Zhang, San  
Organisation:  
address: Apt 13-203, Ludan Village  
address: Shenzhen, Guandong Province  
address: P.R.China |
Query and Display of Variants in Internationalized Registration Data

- It is outside the scope of IRD-WG to define variants.
- The IRD-WG will use the categories as they are generally defined (activated vs. reserved):
  - Activated: Variants that are in the DNS; and
  - Reserved: For a given domain, these are variants that are not in DNS, but are reserved.
- Query of activated variants should return all information of the domain.
- Query of reserved variants is a matter of local policy.
What Capabilities Are Needed for Directory Services in the IDN Environment?

- WHOIS protocol clients must be able to accept a user query of domain name in either U-label or A-label format;
- WHOIS protocol clients must be able to display results of queries in both U-label and A-label for the domain names; and
- Bundled representations of a single U-label or A-label query should be returned.
What Capabilities Are Needed for Directory Services in the IDN Environment?

```
$ whois -h new.whois.registrarX.com 测试.com
$ whois -h new.whois.registrarX.com XN--0ZWM56D.com

% Registrar X WHOIS server
% This query returned 1 object

domain: 测试.com
domain-ace: XN--0ZWM56D.com
domain-variant: 测试.com
domain-v-ace: XN--G6W251D.com

organisation: Internet Assigned Numbers Authority
address: 4676 Admiralty Way
address: Suite 330
address: Marina del Rey California 90292
address: United States
```
Preliminary Recommendations for Community Consideration

**Preliminary Recommendation (1):** For a directory service in the IDN environment:
1. WHOIS protocol clients (both port 43 and web) must be able to accept a user query of domain name in either U-label or A-label format;
2. WHOIS protocol clients must be able to display result of queries in both U- and A-label for the domain names; and
3. Domain registration data should include variants of an IDN label in the response as well.
Preliminary Recommendations for Community Discussion

**Preliminary Recommendation (2):** How could each data element be separately internationalized?
1. Directory services should return both A-label and U-label representation for the given IDN domains queried;
2. Directory services should return both A-label and U-label representations for name server names (to the extent that such information is available);
3. Directory services should always make sponsoring registrar information available in US-ASCII7; and
4. Directory services should always return the exact EPP status code for Registration Status.
Questions for Community Consideration

The IRD-WG calls attention to and seeks comment on the following questions regarding internationalized registration data:

1. Which of the four models for internationalizing registration contact data is most appropriate, if any? Are there other models the IRD-WG should consider?
2. Which of the preliminary recommendations, if any, are feasible? Are there related recommendations the IRD-WG should consider?
Thank You and Questions
## Terminology

<table>
<thead>
<tr>
<th>WHOIS Could Mean:</th>
<th>Terms Used In This Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The WHOIS protocol - RFC 3912</td>
<td>WHOIS protocol</td>
</tr>
<tr>
<td>The Whois &quot;service&quot; - which provides information via both the WHOIS protocol and web-based interfaces.</td>
<td>Directory Service</td>
</tr>
<tr>
<td>The data collected at registration and made available via the Whois service.</td>
<td>Domain Registration Data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASCII Representation of Certain Registration Data:</th>
<th>Terms Used In This Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ASCII* representation of certain registration data currently must be available for all WHOIS responses</td>
<td>“Must Be Present” Script</td>
</tr>
</tbody>
</table>

*ASCII: American Standard Code for Information Interchange is a character-encoding scheme based on the ordering of the English alphabet*
According to RFC 3912:

“The WHOIS protocol has no mechanism for indicating the character set in use …. This inability to predict or express text encoding has adversely impacted the interoperability (and, therefore, usefulness) of the WHOIS protocol.”

RFC 3912 is silent about encoding other than requiring a specific end of line marker.