

CIRA IDN EPP Extension

draft-wilcox-cira-idn-eppext-00

Canadian Internet Registration Authority (CIRA)
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CIRA IDN POLICY AND BUSINESS REQUIREMENTS

- CIRA offers French character IDNs within the .CA Registry.
- French characters include:
 - é, è, ë, ê, à, â, î, ï, ù, ü, û, ö, ô, ç, œ, æ, and ÿ
- Need to support easily adding new character sets in the future – referred to as **repertoires**.
- Administrative bundling – discussed later
- Production early January 2013

About .CA

2,359,605 .CA domain names registered.

.CA Domain Features:

- IPv6 Glue Records `2620:10a:80ec::2`
- French IDN domains `viagénie.ca` ← **651**
- DNSSEC support  DS or DNSKEY
- Registry lock  ← check it out!!!

THE CIRA ADMINISTRATIVE BUNDLE

- Not a registration bundle: registered variants are registered and managed independently, and are only administratively linked by the following criteria :
 1. All registered domain variants with the **same canonical representation** make up a bundle
 2. Domains in a bundle are sponsored by the **same registrar**
 3. All domains in a bundle have the **same registrant contact id**

DOMAIN VARIANTS

- Domains having the same canonical form
- To obtain canonical form, convert Unicode character points to their ASCII equivalent
- Simple algorithm: convert to NFD form, and remove diacritics
- Example:
 - **oeuvre.ca** (canonical form)
 - **œuvre.ca** (variant)
 - **œuvré.ca** (variant)

U-Label Support

- Business requirement that CIRA web interfaces (eg. web WHOIS, registrar portal) support u-labels AND a-labels for display and input
- Business requirements that EPP optionally accept u-label on check and registration as suggested in [section 4.1 of RFC 5891 - IDNA2008 Protocol](#)

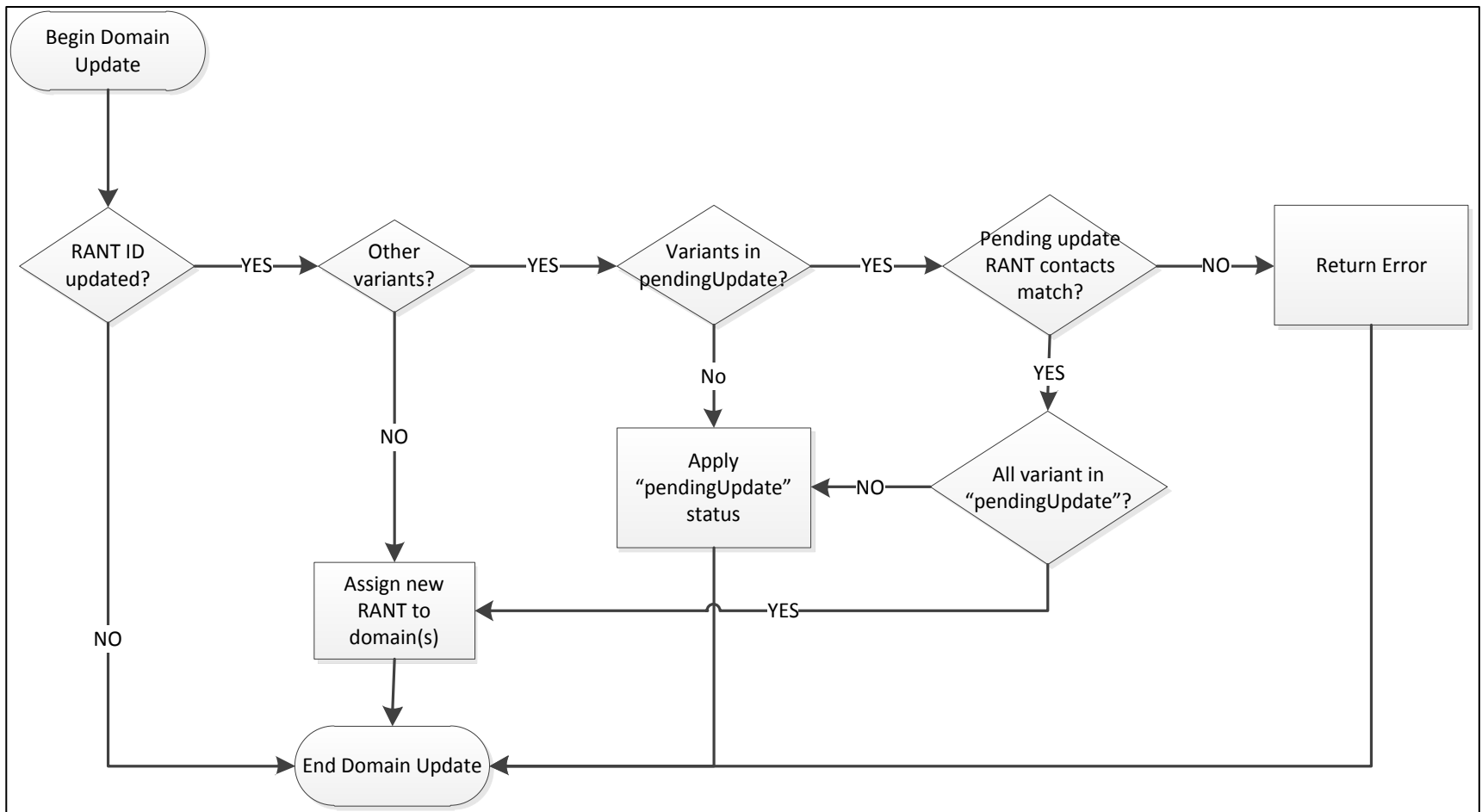
Technical Challenges – Domain Transfers and Registrant Updates

- Most significant design issue - same problem for both operations
- Requirement that all variants be registered to same registrant contact id and registrar BUT domains are managed independently

Technical Challenges – Domain Transfers and Registrant Updates

- Two options:
 1. Apply transfers and rant updates to all variants automatically
 2. Use pending actions as described in EPP RFCs 5730/5731 until all domains have been consistently transferred or registrant updated
- CIRA has selected to use option 2. This prevents data from being changed under registrar's feet.

Domain Update Logic



EPP Extensions in support of IDN

- Domain Check:
 - Repertoire ID (“fr”)
 - This is not strictly necessary to check availability but allows us to validate Unicode character points
 - Uses two-characters language code

EPP Extensions in support of IDN

- Domain Create:
 - Repertoire ID (“fr”)
 - Optional u-label for validation of user intent (as recommended in RFC 5891)
 - Recommendation has not been applied by many other registries
 - UTF-8 encoding does not render legibly on most editors. Worried about registrar confusion.

EPP Extensions in support of IDN

- Domain Info:
 - Because transfer/update actions must be carried out on all variants, registrars need a way to tell which other variants are part of a bundle.
 - Adding an extension to domain info that returns all other variants:

```
<cira-idn:ciraIdnInfo>  
  <cira-idn:repertoire>fr</cira-idn:repertoire>  
  <cira-idn:domainVariants>  
    <cira-idn:name>xn--lve-6lad.ca</cira-idn:name>  
    <cira-idn:name>xn--leve-9oa.ca</cira-idn:name>  
    <cira-idn:name>eleve.ca</cira-idn:name>  
  </cira-idn:domainVariants>  
</cira-idn:ciraIdnInfo>
```

IANA Considerations

The CIRA IDN EPP extension is to be added to the EPP extension registry as specified in [RFC7451].

Below is the registration template. (informational vs standard track?)

-----BEGIN FORM-----

Name of Extension: "CIRA IDN EPP Extension"

Document Status: Informational

Reference: draft-wilcox-cira-idn-eppext

Registrant Name and Email Address: .CA Registry Operations, regops@cira.ca

TLDs: .ca

IPR Disclosure: TBD

Status: Active

Notes: None

-----END FORM-----