Provisioning ENUM in Germany

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EPP

- Extensible Provisioning Protocol
- Outcome of the IETF's provreg working group (2001?-2004)
- Published as Proposed Standard in March 2004 (RFC 3730-3735)
- Existing extensions published: RFC 3915 and RFC4114
- "...allow multiple registrars to register and maintain domain names within multiple Top Level Domains"

RFC 4114

- E.164 Number Mapping for the Extensible Provisioning Protocol
- Published June 2005
- Basically an extension of EPP's domain name mapping (RFC 3731) with support for direct NAPTR RR provisioning
- Obvious choice when offering ENUM registration services

ENUM in Germany

- ENUM trial in Germany since September 2002
- Regular commercial operation starting before the end of this year ← Applause
- Results of the trial here:
  - http://tinyurl.com/d9ao6 (German)
- Details on the operational model and policy:
  - http://tinyurl.com/dk8qr (German)
- No EPP?

DENIC registry interface

- Registration follows a registry/registrar model, where ENUM registrars are the current DE registrars.
- DENIC didn't want to offer for ENUM a registration interface different to DE.
- We are not using EPP for DE but our proprietary RRI (Realtime Registry Interface) protocol.

DENIC registry interface (II)

- Realtime
- Multitransport
  - SMTP, TCP, BEEP
- Multisyntax
  - Key-value pairs: provided for backwards compatibility with traditional mail registration template
  - XML syntax: customized XML schemata

RRI and EPP

- XML schema is customized because RFCs 3730/3731/3733 could not have been used as-is:
  - Objects have additional fields
  - Existing fields have different value ranges
  - Registry has additional operations
  - Existing operations have different parameters
- When introducing a new protocol, it should be in order to serve the policy, not the policy to adapt to the protocol.
- But E in EPP stands for "extensible"!

RRI and EPP (II)

- EPP is indeed extensible (cf RFC 3735, Guidelines for Extending the EPP), mechanisms being:
  - core describing general protocol functions, not objects to be managed by the protocol
  - kind of "wildcard schema" allowing to inject elements from foreign, yet unknown namespaces into the core RFC 3730
  - extension negotiation

RRI and EPP (III)

- Following these mechanisms, not a single DENIC request could have been mapped without a command-response level, object level extension or protocol level extension.
- Specially problematic dealing with closed lists hardcoded in the spec, like:
  - status values, or
  - error/warning/info messages from the server to the clients

RRI and EPP (IV)

- An open realtime registration protocol working group among registrars was founded
- WG found no benefit in using EPP and that a customized XML would be easier and faster to deploy.
- Process of working group foundation + requirements gathered + base documents created + consensus reached < 6 months

Conclusion

- DENIC's RRI ist not to be considered an EPP competitor: it is proprietary and has its well-defined area of use.
- We always keep an eye on the possibility of an additional EPP adoption for DE and/or ENUM.
- If in the future there's demand for EPP from the registrars, an XSLT proxy could do good job in mapping when possible.

Thank you
Any questions?