Roadmap to implement SAC 051 Recommendations

Replacing the WHOIS protocol

27 June 2012

Agenda

09:00 - 09:05	Overview – Patrik Fältström, Chair of the SSAC
09:05 - 09:20	Roadmap to implement SAC 051 – Francisco Arias/Steve Sheng, ICANN
09:20 - 09:35	IETF WEIRDS WG update – Olaf Kolkman, NInet Labs and WG co-chair
09:35 - 09:50	SAC 054: SSAC Report on the Domain Name Registration Data Model– Jim Galvin, Vice Chair of the SSAC
09:50 - 10:00	Open Discussion – Moderated by Patrik Fältström

Overview

- WHOIS is important for the Internet Community

- SSAC has produced several advisories related to WHOIS (SAC 027, SAC 033, SAC 051)
  - Specifically, SAC051 exposes issues related to taxonomy and problems with the WHOIS protocol

- ICANN Board have tasked the staff to produce a roadmap to implement SAC 051 recommendations

Roadmap to Implement SAC 051

- **28 October 2011 Board Directs ICANN Staff to:**

- Produce, in consultation with the community, a roadmap for the coordination of the technical and policy discussions necessary to implement the recommendations outlined in SAC 051.

- Forward SAC 051 to ICANN's Advisory Committees and Supporting Organizations for their advice, if any, with regards to implementing the SSAC recommendations, and to forward SAC 051 to the Whois Review Team.

- **18 February 2012:** Draft roadmap posted for public comment

- **04 June 2012:** Revised Roadmap to Implement SAC 051 posted

SAC 051: *SSAC Report on Domain Name WHOIS Terminology and Structure*

Francisco Arias/Steve Sheng

ICANN

SSAC Report on Domain Name WHOIS Terminology and Structure

1. Clarify the taxonomy associated with WHOIS

2. Make observations in light of the taxonomy

3. Offer a set of recommendations aimed at moving efforts at improving WHOIS

WHOIS Taxonomy

- Domain Name Registration Data (DNRD)

- Domain Name Registration Data Access Protocol (DNRD-AP)

- Domain Name Registration Data Directory Service (DNRD-DS)

Observations

- No uniform data model that exists for domain name registration data

- The WHOIS protocol itself has no standard capacity for handling non-ASCII text

- Directory services do not satisfy legitimate needs for access to different granularities of data

Recommendations

The ICANN community should:

1. Adopt the terminology outlined in SAC051.

2. Evaluate and adopt a replacement domain name registration data access protocol that supports the query and display of Internationalized Domain Name Registration Data (DNRD) as well as addressing the relevant recommendations in SAC 003, SAC 027 and SAC 033.

3. Develop a uniform and standard framework for accessing DNRD that would provide mechanisms to define and implement a range of verification methods, credential services, and access control capabilities.

Revised Roadmap to Implement SAC 051

Francisco Arias/Steve Sheng, ICANN

Current environment

- GNSO's WHOIS Service Requirements Report
    - List various requirements, e.g., discoverability, structured queries, standardized replies and error messages, internationalization, security elements

- Joint GNSO-SSAC IRD WG final report
    - Similar recommendation to replace WHOIS

- AoC's Whois Policy Review Team final report
    - Includes a few recommendations (e.g., recommendations 12 to 14) that imply the need to have a protocol that supports internationalized registration data

Path Forward/ New Terminology

1. Small implementation assistance group to develop an updated proposal on terminology within a short deadline.

Path Forward/ New Terminology

2. Prepare a one-page summary of the recommended terminology to be shared within staff and stakeholders, through SO/AC chairpersons

3. Transition to the preferred terminology in documents over a period of time by incorporating them into working documents accompanied by definitions.

Path Forward/ Replacing WHOIS

- Promote participation of ccTLD and gTLD registries and registrars in the development of a protocol to replace WHOIS within the IETF

- Initiate a GNSO PDP with ccNSO, SSAC and ALAC participation to replace the WHOIS protocol

Path Forward/ Replacing WHOIS

- Negotiate the inclusion of provisions in gTLD registries and registrars' contracts, as appropriate

- Establish/contribute to a project to develop an open-source implementation of the new protocol

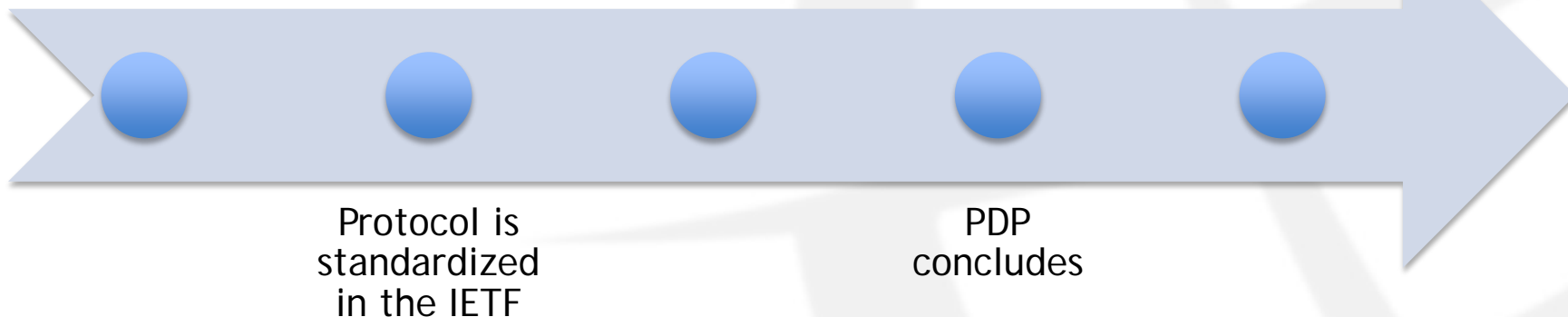- Promote adoption of the WHOIS replacement protocol within ccTLDs

Roadmap to Implement SAC 051

gTLDs start adopting provision to replace WHOIS during 2012

Deployment by first adopters starts

Remaining gTLDs deploy new protocol

Protocol is standardized in the IETF

PDP concludes

ICANN promotes ccTLD, gTLD, and registrars participation in IETF effort

Deployment by first ccTLD adopters starts

ICANN promotes adoption by ccTLDs

Next Steps

- The revised Roadmap to implement SAC 051 recommendations will be submitted to the ICANN Board for its consideration

WEIRDs
Web Extensible Internet Registration Data Service

Olaf Kolkman

(working group co-chair, with Murray Kucherawy)

No. 44 • 24 - 29 JUNE 2012

ICANN PRAGUE

Chartered to… I

- Standardize a single data framework
- Deliver objects encapsulated in that framework over a RESTful service over HTTP
- Generally following the requirements from CRISP (RFC3707) but…

Chartered to… II

- producing a simple, easy-to-implement protocol, supporting internationalized registration data and, specifically for name registries, capturing the needs of internationalized domain names in the data model.

- possibility of differential service based on client authentication

RESTful?

- Representational State TransFer
  - GET, PUT, POST, DELETE
  - Resources represented by URIs
- On top of HTTP it provides you readily available libraries to do things like
  http://whois.example.com/ip/192.0.2.0/operator/contacts/abuse
  or http://whois.example.net/domain/example.com/contacts/registrants

Working group

- (A)symmetry in Numbers and Names
  - Number space has a little number of players and existing implementations
  - Name space has a large number of stakeholders and no(?) implementations
- One protocol to serve them both seems the Good Thing ®

Numbers

- RIRs have running code
  - e.g. https://www.arin.net/resources/whoisrws/
  - more queries over the restful web service than over port 43.
  - draft-newton-et-al-weirds-rir-query and draft-newton-et-al-weirds-rir-json-response document the experience and are input to the WG

A room filled with grey breathing matter

- The data model
  - What objects need representations
  - How to fit them in the framework
    - Encoding, Internationalization, etc
- WG needs to be careful to not make policy decisions (like e.g. telephone numbers MUST be present)

State

- Promoting documents to working group document

- Figuring out ways to tackle the definition of the data framework

Please Contribute

- After 2 BOFs the working group was chartered in June 2012

- First face2face meeting at IETF84 in July 2012, Vancouver, CA

- Please Write, Review, and/or Implement

Coordinates

- http://tools.ietf.org/wg/weirds

- General Discussion: weirds@ietf.org
  - To Subscribe:
    https://www.ietf.org/mailman/listinfo/weirds

  - Archive:
    http://www.ietf.org/mail-archive/web/weirds/

SAC 054: SSAC Report on Domain Name Registration Data Model

Jim Galvin

What is it?

- The Domain Name Registration Data (DNRD) model is a straw man registration data model for community discussion and consideration and as a basis for further development

  - It takes into consideration existing data requirements from gTLD registrar and registry agreements, escrow agreements, and ongoing work on internationalized registration data requirements, and some ccTLD data requirements.

  - It makes *no policy assertions.*

Why it is important?

- There is currently no uniform data model that exists for DNRD and this unduly complicates data submission, handling, exchange, and access

- A standards-based, structured, and extensible data model could:
  - Address the variability in DNRD-DS representation
  - Improve the user experience for internationalized registration data (Final Report of the Internationalized Registration Data Working Group and the WHOIS Review Team Draft Final Report)
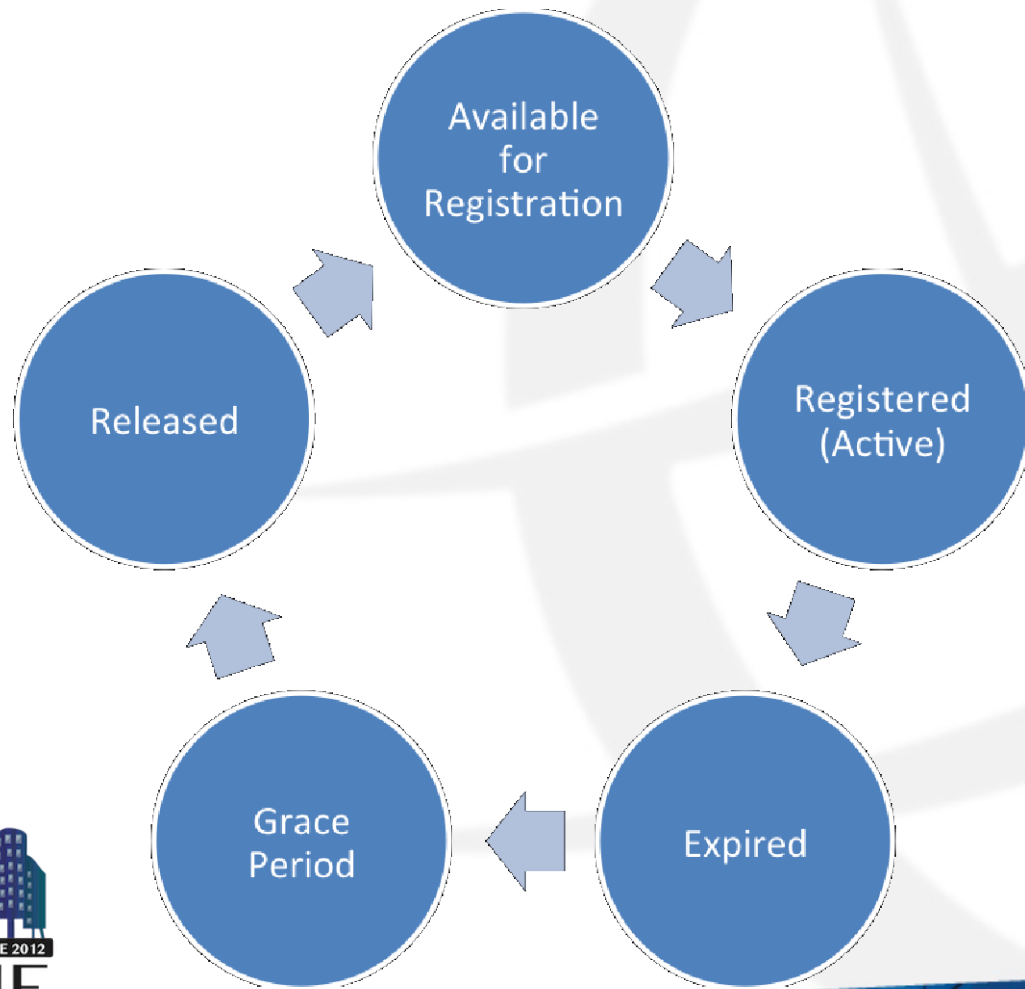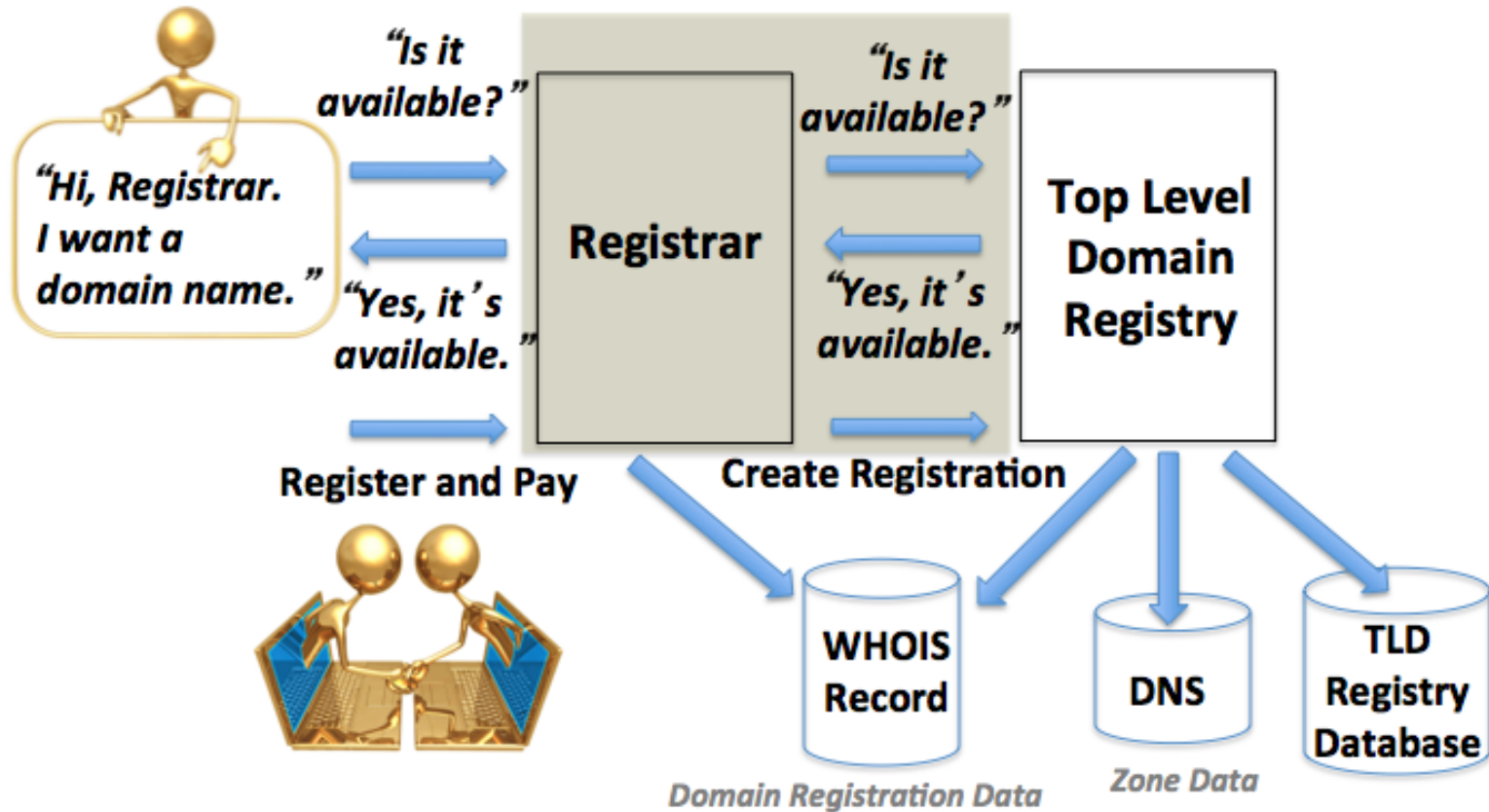
Methodology

- Document the life cycle of a domain name from registration to release

- Enumerate data elements that are needed to support the life cycle

Life Cycle of a typical Domain Name

Life Cycle: Domain Registration

Other operations include update, transfer, renew or deletion of the domain name

What is the Data Model?

- Enumeration of Data Elements (Descriptive Model)
- Data Profile: implements the data model
  - Detailed Data elements
  - Attributes: format, minimum/maximum length, language tags, cardinality, etc.
  - Profile parameters: Character encoding, mark up language, protocol used to access the data
  - Additional rules
- Relationship: one data model, but could have multiple data profiles (e.g. profile for DNRD-DS, profile for escrow)

Recommendations

- The SSAC invites all ICANN SOs/ACs and in particular registry and registrar stakeholder groups to
  - Consider this data model and comment on its completeness and
  - Comment on the utility of the model in furthering the definition of a directory service for domain name registration data as outlined in SAC 033 and SAC 051.

Potential Issues

The ccTLD and gTLD data models are different. It will be a challenge to harmonize the two models.

Next Steps

- One of WHOIS Review Team's recommendations is for ICANN to convene a working group to determine the data model.

- The SSAC is meeting with community members to explain the model and answer questions.

One World

One Internet

Questions

One World

One Internet

Thank You