MODERN notes

1. Draft-peterson-modern-problem-03

Jon presenting.

- Problem statement
- Framework
- Big collection of use cases

Changes in 03

- Terminology in-flux
- Some security, stronger needed

Actors

- Numbering authorities
- Registries
- CSPs
- Users
- Govm't entities

Henning: registrar vs. registry distinction?

Jon: CSPs can be seen as registrars

Henning: they do not provide comm services

Jon: we seem to have consensus to add registrars

Use Cases

- Acquisition
- Management
- Retrieval

Telephone-Related Information (TeRI) – logical picture

Acquisition controversy

- Concerns about acquisition use case
- 1 or 2 UCs out of 16
- MODERN takes a lifecycle approach, that's why it's in

Customer to CSP
Acquiring a range (enterprise)
CSP gets a block
Acquiring a number (from its enterprise)
Customer to Registry?

- user going directly to the registry to get a number
- not realistic say some because of regulations

Pierce: all until now looks plausible, but security issues as such methods can damage work in STIR about authenticating calling numbers

Jon: if Google is a registry they would know who is a user

Piece: they operate as CSP

Jon: we need to avoid case where user can act as CSP

Pierce: why create new protocols?

Jon: acquisition OK, management different

Henning: numbers get functionality when connected to CSP, what changes is the approach to anonymous users, we need an identifier in CALEA obligations, subpoena situations; two ways of managing scarcity of numbers, fees must be high to discourage non-use, no payment protocol is within scope

Cullen: enterprises want to get large, contiguous blocks, sometimes they work with two CSPs

Pierce: pools of numbers to individual assignments can be considered

Penn Pfautz: back to the issue of going directly to a registry rather than via registrar, some registrars may act as gatekeepers

Henning: validation problems, validation on national scale

Jon: DN model proved to work and be scalable

Henning: problem with enforcement, some entities are that vital, they cannot afford failure

Penn Pfautz: separating registries from registrars you encourage innovation in the protocol area, encourage competition

Jon: information model should cover the interaction

Richard Shockey: objects to the customer to registry concept, increases too much the power of registries, seems a bad idea, the three tier model seems to work fine

Jon: we all agree we shall have registrars

Tom: no disagreement

Eric: people follow the telephony model

Jon: STIR implications

Pierce: do not go there

Jon: in the use cases you are concerned about, no numbers allocation

Henning: cryptographic validation, subpoena case – make sure that the meta-data is correct

Next Steps

Need direction if the WG is to move forward. Do people think we are on the right track?

Pierce: if the issue of accountability for individual assignments is solved, I would be comfortable with the whole thing

Cullen: assume that a CSP has better validation capability than a registrar? Why?

Pierce: no control how it's used

Cullen: we can set policies

Pierce: we cut bills for every customer, how do domain names keep track of what people do with the names

Henning: they do not care, as people pay for this

Richard: if work goes on we need prioritization for use cases that are widely deployed, quick to get traction

Jon: we did a mistake by focusing on retrieval w/o management

Richard: DRINK, ENUM dead, the life-cycle management is not the one to start with first

Alissa: which piece in the puzzle gets to be worked first – TBD, call for adoption is the starting point

Pierce: thanks to Henning for clarifying that allocation ranges can be restricted

Jon: People cool with the path - add registrar, call for adoption and then decide on use case priorities?

No objections

2. E164.space – a MODERN experiment

Henning presenting

Experiment by two students at Columbia and himself

Not currently on-line

Pre-MODERN prototype

- Assume cooperative nodes
- PIN-based porting model
- No single point of failure

Architecture – CRUD (create, read, update, delete), distributed nodes

Phases: consensus (who allocates?), allocation, recovery

Roles: for illustration purposes, do not appear in the protocol. Subscriber, OCN admin, OCN manager, sysadmin

Paxos for distributed consensus

(lost connectivity for 2-3 minutes)

Simplified consensus

Simple porting (PIN-based)

Implementation – one month of solid work for two students to build, test, document

Jay: code open source?

Henning: can be done, we did not do it, protocol proprietary, contact Henning

3. Draft-mcgarry-nnp-use-case-00

Tom presenting

Nationwide number portability (nnp)

FCC recommendation to the industry

One solution – use a non-geographic area code for routing calls to NNP TNs

Can be use case for MODERN

Numbering in the US: area code, CO code (allocated to SP)

Non Geographic Routing Number (NGRNs) and Non-Geographic GateWays (NGGWs)

- Non-geographic Telephone numbers (NGTNs) would be assigned by CSPs
- A registry would administer the assignment of NGRNs and NGTNs

How much is covered by the already defined UCs?

CSP acquires NGRN from a Registry

User ports geographic TN to an NGRN

User acquires an NGTN from a CSP

Calls to an NGRNs

Mark Lancaster: is this a toll service in NG environments?

Tom: is this about the costs to whoever originates the call?

Mark: yes, practically toll call; multiple carriers may be involved, they may ask compensation

(call-n User 19): the VoIP case asks for a different way of charging

Tom: falls in the policies realm, no answer at this point

Mark: US problem?

NNP and MODERN – list of open questions

Jon: not likely to impact the core design, may add IEs to the IM, no impediment to implement

Henning: two-step operation in two DBs

Penn: no objection, but should look also at the other UCs and need to prioritize, plenty of work to be done

Tom: does not seem to add much extra-work

Henning: procedural issue – can be a test case, may never turn into an RFC? Or may require RFC later

Tom: probably the former

Jon: special environment UC

4. Open discussion

Tom: new iteration of the PS, registrar role, limitation of local allocations, with those changes we are on track to adoption as WG?

NWNP UC – add some extensions to baseline IM, not necessarily an RFC

Jon: what to do with Chris's work in the PS, would be happy to defer

Henning: PS should not say much more that we need to specify which multiplicity we assume, call out explicitly that the mapping can be multiple and needs to be coordinated someway, there needs to be trust relationship between entities, no malicious registry threat (rough registry)

Tom: section about distributed registries should probably be removed, but need to indicated by registry we mean any type of registry

Henning – avoid people being caught into a specific mental model

Thanks everybody!