What is this document?

- Problem statement
- Framework
  - Actor roles
  - Data types
- Use Cases
  - Acquisition
  - Management
  - Retrieval
Changes in -04

• We had an interim to review the -03
• Added a Registrar as an actor
  – Now has a more traditional registry/registrar split
• Changed a lot of end-user specific text
  – “Acquisition” of numbers controversial on the list
  – Now focuses much more on freephone RespOrg
    • This is a practical use case today
• Moved out text on distributed registries
  – Now mostly point to DRIP, beyond defining terms
• Fixed many of the use cases to conform with this
Roles of Actors

- **Numbering Authorities**
  - Regulators, etc.
  - Roots of authorities (never acquire blocks)
    - No “golden” root, all is relative

- **Registries**
  - Manages core number allocation functions, handles requests for numbers from registrars

- **Registrars**
  - *Has relationships with CSPs/Users to provide numbers – often is also a CSP*

- **Communication Service Provider (CSP)**
  - Provides services to users
  - May include traditional carriers, enterprises, OTT providers, etc.

- **Users**
  - Individuals reachable through a communications service
  - Operate clients, black phones, etc.

- **Government entities**
  - Privileged access to data
Roles are logical
A numbering authority could act as a registry
  – Or delegate that to some entity
A CSP could act as a registrar
  – One that keeps inventory
An Enterprise could acquire numbers from a CSP/ registrar
  – Then delegates down
Users get numbers through delegation
  – In other pictures, users might contract with registrars themselves, as with freephone RespOrgs
Difference between CSP and Registrar

- **CSP**
  - Manages service data
  - Knows about communications endpoints
  - Queried in real time during call setup or text message routing
  - Might be a carrier, might be an OTT provider

- **Registrar**
  - Manages administrative data
  - Contact information
  - Billing data
  - Service CSP
  - Probably fields requests from Government Entities

Both are logical roles, often played by the same administrative entity
Use Cases

• Acquisition (activating numbers)
  – User Acquires TN from a Registrar/CSP
  – Registrar/CSP Acquires TNs from either Registry or another Registrar

• Management (provisioning for numbers)
  – User to CSP, or User to Registrar
  – CSP to CSP, or CSP to Registrar
    • Broken down into Service Data and Administrative Data cases

• Retrieval (querying about numbers)
  – Retrieving public data
  – Retrieving semi-restricted data (Service or Administrative)
  – Retrieving Restricted Data

Changes with the new registrar/registry model
CSP gets a block

- **Block number case**
  - Credentials would indicate number ranges

- **CSP inventory runs low, it requests a new 1000 block from pooling admin**

- Infrequent enough that Excel-ware still might suffice for now
Acquiring a number

- The acquisition tool could let a new phone get a number from its enterprise
  - Phone gives some information, gets a number and any credential

- Similar use case for Google, or Skype, or whatever
Customer to Registrar (CSP)

- The acquisition tool could let a new phone get a number from a CSP
  - Get a new number and any credential
  - Not necessarily a new number, just provisioning the number to a new device

- You just bought a new phone at the Apple store, and want to replace an existing account
Customer to Registry?

- Nah
Eyes on the Prize

• Not presenting the TeRI work today
  – I would be happy to have agreement on this alone
• Helpful for things like STIR
  – Be great to tie this in to methods of credential distribution and access
  – Probably that is bound to acquisition interfaces
• And we ultimately do want to get this work to richer queries
Thin Registry (Retrieval)

- Registry contains largely allocation data
  - Is this TN in use?
- Perhaps Registry also points to the CSP
- Some questions about how to architect this – thoughts welcome...
Telephone-Related Information

TeRI
Records

Admin Info

Service Info

Queries

Acquisition

Management

Just a logical picture
Adopt || Die

• We do need a direction here if the working group is going to move forward
• I’m not aware anyone has proposed an alternative
  – Apart from “do nothing”
• I’m not going to keep presenting this
  – Yeah, it’s not ready for WGLC, but it’s a good enough start
• If we’re not adopting this version, I suggest we go do something else with our time than this WG