draft-peterson-modern-problems-02

MODERN WG
IETF 94 (Yokohama)
MODERN problems 02

• Many new definitions
• Reorganized the use cases around the three mechanisms
• Clarified the concept of a “delegate”
• Integrated distributed data store concept into some of the use cases
Problem statement

• Problem
  – Utilizing telephone numbers (TN) for Internet telephony

• Mission
  – IP-based mechanisms for management, administration and routing in an IP environment
New definitions

• Registry – expanded existing definition to include both:
  – Authoritative registry – single entity
  – Distributed registry – multiple entities sharing the same data

• Data types
  – Administrative data
    • Data related to the TN and actors
  – Service data
    • Data necessary to enable service
  – (Are credentials administrative data, service data or other?)
  – Public data
    • Available to the public
  – Semi-restricted data
    • Available to a relatively broad subset of actors, e.g., all CSPs
  – Restricted data
    • Available to a limited subset of actors, e.g., Govt Entity
New definitions

• Data management architectures
  – Data store
    • A service that stores and enables access to data
  – Reference address
    • A URL that dereferences to the location of a data store
  – Distributed data stores
    • The same data stored by multiple actors
  – Distributed registries
    • Multiple registries managing the same numbering resource

• Is it necessary to have separate definitions for distributed data stores and registries?
  – Registries have an acquisition component that other data stores do not
Mechanisms

• Three IP-based mechanisms for managing TNs
  – Acquisition – a protocol mechanism for acquiring TNs, including an enrollment process
  – Management – a protocol mechanism for associating data with TNs
  – Retrieval – a protocol mechanism for retrieving data about TNs

• Should “distribution” be a fourth mechanism?
Use cases – Acquisition

• CSP-Registry
• User-CSP
• Delegate CSP-Assigee CSP
  – This is new
  – For example, reseller to CSP
  – Similar to User-CSP
• User-Delegate CSP
  – Similar to User-CSP
• User-Registry
  – Similar to CSP-Registry
• Use cases focus on:
  – Transactions with Registry
  – Transactions with CSP (or Delegate of a CSP)
Use cases – Management

• Management of administrative data
  – CSP-Registry
  – User-CSP
    • Introduces the concept of a reference address
    • CSP maintains administrative data and provides a reference address to the registry for others
  – User-Registry
• Management of service data
  – CSP-CSP
  – User-CSP
• Managing change
  – Changing a CSP
  – Terminating service
Use cases – Retrieval

• Retrieval of public data
  – For example, numbering resources available for acquisition

• Retrieval of semi-restricted administrative data
  – For example, CSP contact data

• Retrieval of semi-restricted service data
  – For example, SIP URI

• Retrieval of restricted data
  – For example, User contact data

• These include the concepts of distributed data stores, distributed registries and reference addresses
Use case example – Changing CSP Distributing Registry, Distributed Data Store

• User activates service with new CSP
  – Submits credential
  – Provides contact data
• New CSP provides new credential to User
• New CSP notifies old CSP
• Old CSP deactivates service
  – Deletes service data to all other distributed data stores
  – Deletes User contact data
  – Revokes credential
  – Updates its registry
• New CSP activates service
  – Updates new service data to all other distributed data stores
  – Adds User contact data
  – Updates its registry
• Old CSP’s Registry updates all other distributed registries
• New CSP’s Registry updates all other distributed registries
Next Steps

• Further integration of distributed data stores and registries
• Add multiple scenarios for multiple CSPs providing different services to the same TN
• Integrate 94 and list feedback

• Thank you
• Questions, Comments