

URI As Service Indicator: Requirements

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Fundamental Question

- Is There a Single Mechanism for Specifying
 - Application Service
 - Network Service
- Application Service
 - Voice Mail, Unified Messaging, Pre-Paid, etc.
- Network Service
 - Announcement, Prompt & Collect, Start Script

Characteristics of an Application Service (1/2)

- Subscriber-Based
- Provided By Proxy and Application Servers
- Often Subscriber-Provisioned
- Often Different Variations
 - Busy Greetings, Internal/External Caller By
 - Call Info / History (ISUP)
 - Selected URI (RFC 3087)
 - Personal Assistant:
Subscriber vs. Caller Service

Characteristics of an Application Service (2/2)

- Number of Services Is Limitless
 - Bounded By Imagination
- Flexibility in Scheme Has Definite Value
- Interoperation Required Between
 - Proxy Servers
 - Application Servers
 - User Agent

Examples of Application Service SIP Request-URIs

- Deposit voice mail for RJS
`sip:deposit-sub-rjs@vm.provider.net`
- Deposit voice mail for RJS w/ busy greeting
`sip:deposit-busy-sub-rjs@vm.provider.net`
- Retrieve RJS' voice mail
`sip:retrieve-sub-rjs@vm.provider.net`
- Start a prepaid call session (registered)
`sip:start-fancy-prepaid-outidal@pp.provider.net`
- Do magic application; proxy figures out where (registered)
`sip:do-my-magic@provider.net`

Characteristics of a Network Service (1/2)

- Not Subscriber-Based
- Provided By Media Server
- Generally No Provisioning
- Limited Variations
 - Announcement, Conference, Script, IVR
- Flexible Scheme Has Limited Value and Definite Drawbacks

Characteristics of a Network Service (2/2)

- Interoperation Required Between
 - Proxy Servers and Media Servers
 - Application Servers and Media Servers
 - Possible, But Not Likely, to Expose Network Services to End Users

Examples of Network Service SIP Request-URIs

- **Play an Announcement**

```
sip:annc@ms.provider.net;play=\  
  http%3f//fs.provider.net/vacant-subscriber.g711
```

- **Join Leg to a Mixer (Conference)**

```
sip:conf=asj4040j@ms.provider.net
```

- **Start an IVR Session (MSCML)**

```
sip:ivr@ms.provider.net
```

- **Start a Script**

```
sip:annc@ms.provider.net;voicexml=\  
  http%3f//as.provider.net/prepaid.vxml
```


Requirements for Application Services

- Scheme Cannot Constrain Existing Services
- Scheme Cannot Constrain New Services
- Scheme Cannot Constrain Clients
- Scheme Cannot Constrain Servers
- Scheme Must Allow for User Defined Services (draft-campbell-pub-bind-reqs-00)
- Scheme Must Allow for Interoperability
- Mapping to Service Must Happen “In Human Time” (300ms – 500ms)

Requirements for Network Services

- Applications Must Be Able to Address Services
- Services Must Be REGISTER-Friendly
- Network Must Be Able to Proxy Services
- Mapping to Service Must Happen “In Machine Time” (1ms – 20ms)
 - Often Part of Multiple Interactions With User
 - User Expects “Responsive Service”
 - Cannot Have Many Round-Trips

Offering

- Applications (Application Services) Have Different Requirements Than Network Services

Is There Consensus On This Point?

Proposal: Application Services

- Naming Services Is The Name Binding Problem
 - End User / Proxy / Application Needs to Direct Call to Application Service Entity
 - Many Ways to Address Application Service Entity
 - No Single “Right Way”, As In History Discussion
- Problem Is Bigger Than SIP
 - Appropriate Technologies May Be Service Registries, *etc.*
 - Considering It For My PhD Topic...

Proposal: Network Services

- Extremely Limited Vocabulary of Network Services
- Dipping Into Service Registry Impacts Ability To Meet Lookup Constraint
- Must Have Single Mapping For Interoperation
- Use Fixed Service Indicators (LHS)

Discussion