Agenda

• Teletech's profile
• Background
• ENUM
• Teletech's Infrastructure ENUM solution
• Teletech's User ENUM solution
• Teletech's U/I ENUM
• Q&A
Teletech's profile

• Vision: to be team of experts which transfers knowledge and experiences in courageous and innovative way not only to fulfil but to exceed customer expectations!

• Culture: inter-disciplinary team, individual capabilities development, flat organization, high level of information flow, exceeding expectation care for share&stake holders

• Strategy: invest in knowledge, discover and play on new ITC playgrounds, challenge the un-challenged
Background

• NP CDB solution provider since 2006
• Active role in inter-operator problem solving
• Desire for “all E-164 number” national DB
• First question (where is the number) is not good enough in All-IP world
• One system for all forthcoming questions, like:
  − How to get to this number
  − Which services are available and how
  − Dynamic call routing paradigm
ENUM

• tElephone NUmber Mapping
• Defined in RFC-3761 and
• Uses well proven DNS hierarchical model
• New type of record: NAPTR
• E-164 number as primary key to IP services
• Part of IMS core topology
• Manly known versions are User and Infra ENUM
• One system – Teletech's combined U/I ENUM
User - ENUM

<table>
<thead>
<tr>
<th>Services</th>
<th>pstn:tel</th>
<th>voice:tel</th>
<th>voicemsg:http</th>
<th>unifmsg:http</th>
<th>ems:mailto</th>
</tr>
</thead>
<tbody>
<tr>
<td>sip</td>
<td>pstn:tel</td>
<td>voicemsg:http</td>
<td>unifmsg:https</td>
<td>xmpp</td>
<td></td>
</tr>
<tr>
<td>h323</td>
<td>pstn:sip</td>
<td>videomsg:sip</td>
<td>ical:sched</td>
<td>vcard</td>
<td></td>
</tr>
<tr>
<td>fax:tel</td>
<td>Im</td>
<td>videomsg:sips</td>
<td>ical:access</td>
<td>Pres</td>
<td></td>
</tr>
<tr>
<td>sms:tel</td>
<td>voicemsg:sip</td>
<td>unifmsg:sip</td>
<td>mms:mailto</td>
<td>web:https</td>
<td></td>
</tr>
<tr>
<td>sms:mailto</td>
<td>voicemsg:tel</td>
<td>unifmsg:sips</td>
<td>ems:tel</td>
<td>Ft:ftp</td>
<td></td>
</tr>
</tbody>
</table>

Source: http://www.iana.org/assignments/enum-services
User ENUM

Operator A

Operator B

U-ENUM

Request

Input

Internet
Infra ENUM

- Private
- Developed for operators and enterprises
- Where is the number?
- How can I get there?
- Dynamic routing of calls
- VoIP peering
- LCR – less costs for operators and enterprises
- Basic platform for new services – User ENUM in “Private” world – business customers
Teletech's specific Infra ENUM

• Basic elements:
  - Operator, entry point, protocol, phone number
• Operators announce numbers on interconnection points
• Synchronisation with number portability
• Local databases
• Vendor specific NAPTR record
• Central database of all numbers
Teletech's specific Infra ENUM
Infra part of Teletech's U/I ENUM

Central ENUM database

Web services
Web form

I-ENUM

Synchronisation

Number Portability
Central database

Replication Logic

DNS query, LDAP, any Customized interface

Query

Operator #1

Operator #2

Operator #n

Query

Client

Client

Client
U/I ENUM

• Complete solution enabling new services in proven DNS concept
• Uses established B2B processes with operators applications and systems
• User authentication, operators supervision to prevent fraud
• Freedom for all parties for new development
• Operators can define IP entry points for SME and key customers
Q/A

- Thank's