

nrenum.net

An Update

SIP.edu Call

2007-05-03

What is ENUM?

- **E.164 Number Mapping**
 - RFC3761, and many other RFC's
 - The common denominator – A number
- ONE single number for multiple voice, video and data services
 - PSTN
 - SIP
 - H.323
 - Email
 - WWW
 - ... and many more

What is ENUM?

+12531234567

tel: +1253674354

mailto: sam@sample.com

http://sample.com

sip:sam@sample.com

h323:0012539856374

...

This is an ENUM...
looks like a normal
phone number to me

Why ENUM?

- A motivating example:
 - Imagine Alice has multiple Instant Messaging (IM) Addresses, e.g. Jabber, AIM, MSN, ICQ, ...
 - Alice might change them (or add a new one) at any time
 - Is Alice really going to tell all her friends that her IM address has changed? ... Probably not...
 - How does she inform her contacts?
 - Alice can make the changes once and in one place only: **in ENUM**
 - Her contacts can always fetch the latest state from ENUM
 - With ENUM Alice just needs to tell her contacts once her number, and the DNS figures out the rest!

Why ENUM?

- We still have 12-button phones; how do you dial a SIP URI for example?
 - SMS style ??
 - Are SIP URI's really easier to remember?
 - Do you know instantly how to spell my last name?
 - Have you thought about IDN's?

How about Grandma's phone?



Why ENUM?

	H.323	SIP	PSTN	IM	Email	WWW	...
H.323							
SIP							
PSTN							
IM							
Email							
WWW							
...							

Why ENUM?

	H.323	SIP	PSTN	IM	Email	WWW	...
H.323							
SIP							
PSTN							
IM							
Email							
WWW							
...							

A seamless (dialing) interconnection between all technologies!! > and the user doesn't care about it!!

How ENUM works

- E.164 numbers are inserted into DNS
- Example for: +1-404-269 707
- Remove everything but numbers: 1404269707
- Reverse it and put dots in between the digits:
7.0.7.9.6.2.4.0.4.1
- Add the suffix “.e164.arpa”: 7.0.7.9.6.2.4.0.4.1.e164.arpa
→ This is the DNS zone
- Fill this DNS zone with NAPTR records such as:
IN NAPTR 100 1 "u" "E2U+sip" "!^.*\$!sip:info@vide.net!"

ENUM apex

- The “golden tree” has the apex **e164.arpa**.
 - Standardized by IETF
 - Interim procedures with ITU involving the national regulators
 - Brings in some trust
 - Not available everywhere :-)
- NRENs additionally use the interim tree with apex **nrenum.net**.
 - see next slides

The idea

- Provide an ENUM testbed to NREN's, who don't have access to the e164.arpa ENUM tree because:
 - e164.arpa not delegated
 - e164.arpa not usable
 - Other issues
- Similar rules as in e164.arpa apply
 - We are **NOT** competing with e164.arpa
- NREN take the role of a national Tier-1 Registry
 - NREN to sub-delegate zones to Universities / Research Institutes

The Charter

- Current V.0.8 online
 - <http://nrenum.net/nrenum-charter.txt>
- Sections:
 - Definitions
 - Membership
 - Objectives
 - Composition of nrenum.net
 - Milestones

Website / Information

- Website online at <http://nrenum.net/>
- Mailinglist up and running
- Delegation request form online
- How-to's for H.323/SIP online
 - GnuGK
 - SER/OpenSer
 - Asterisk
 - SNOM360
 - SRV records

Current status

- Six delegations (in order of first participation)
 - Netherlands (SURFNet), +31
 - Slovenia (ARNES), +386
 - Greece (GRNet), +30
 - Hungary (Hungarnet), +36
 - Belgium (Belnet), +32
 - Italy (GARR), +39

Current Status

- Currently 10 countries are participating in nrenum.net

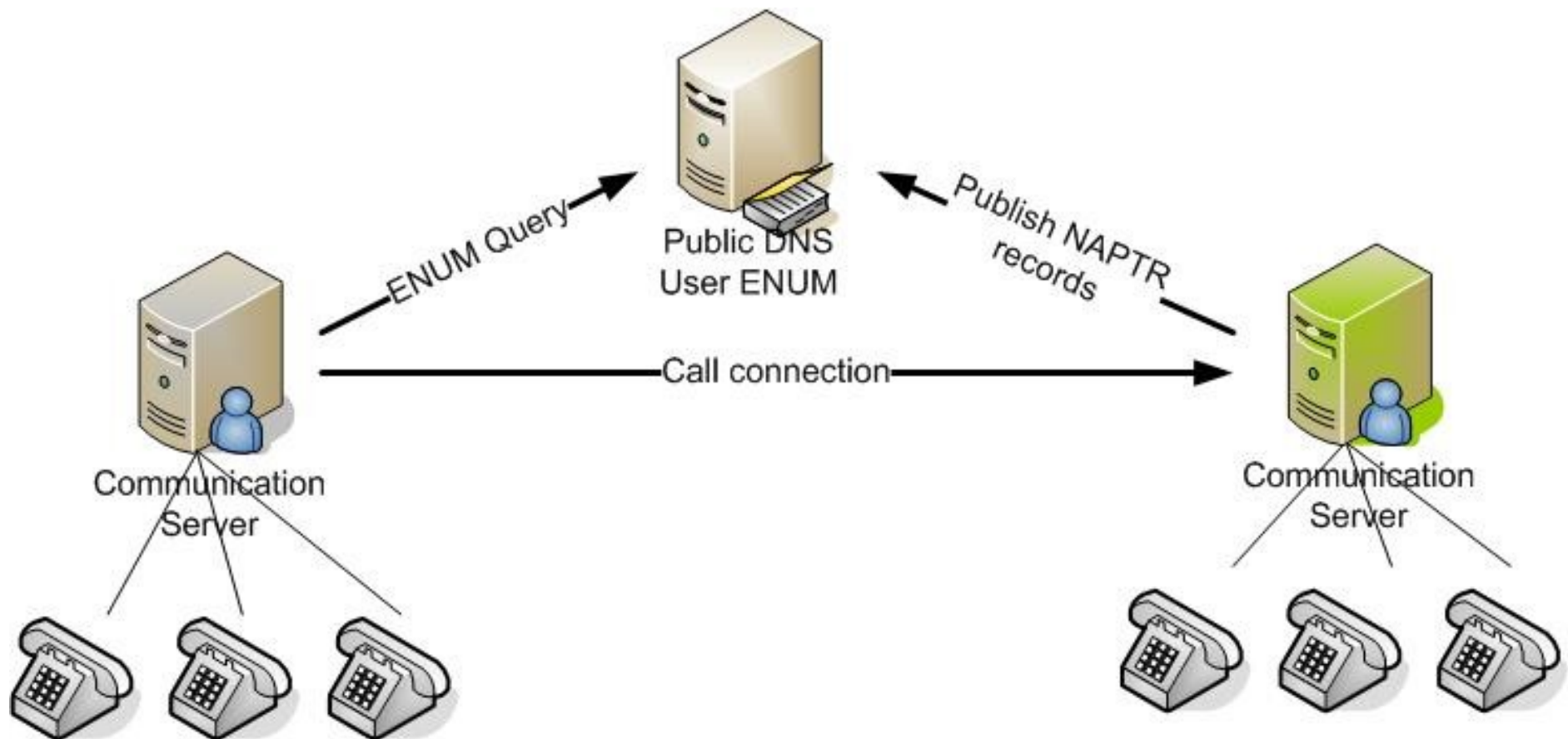
NREN	CC	Populates tree	Queries trees	Populates NAPTR types	Queries NAPTR types
GRNET	+30	nrenum.net	e164.arpa, nrenum.net	sip, h323	sip, h323
Surfnet	+31	nrenum.net	e164.arpa, nrenum.net	sip	sip
BELNET	+32	nrenum.net	e164.arpa, nrenum.net	sip (soon also h323)	sip
HUNGARNET	+36	nrenum.net	e164.arpa, nrenum.net	sip	sip
Arnes	+386	nrenum.net	?	?	?
GARR	+39	nrenum.net	e164.arpa, nrenum.net	sip, h323	sip, h323
SWITCH	+41	e164.arpa	e164.arpa, nrenum.net	sip, h323, and few others	sip, h323
CESNET	+420	e164.arpa	e164.arpa, nrenum.net	sip, h323	sip, h323
SANET	+421	e164.arpa	e164.arpa, nrenum.net	sip	sip
UNINETT	+47	e164.arpa	e164.arpa, nrenum.net	sip	sip

Current status

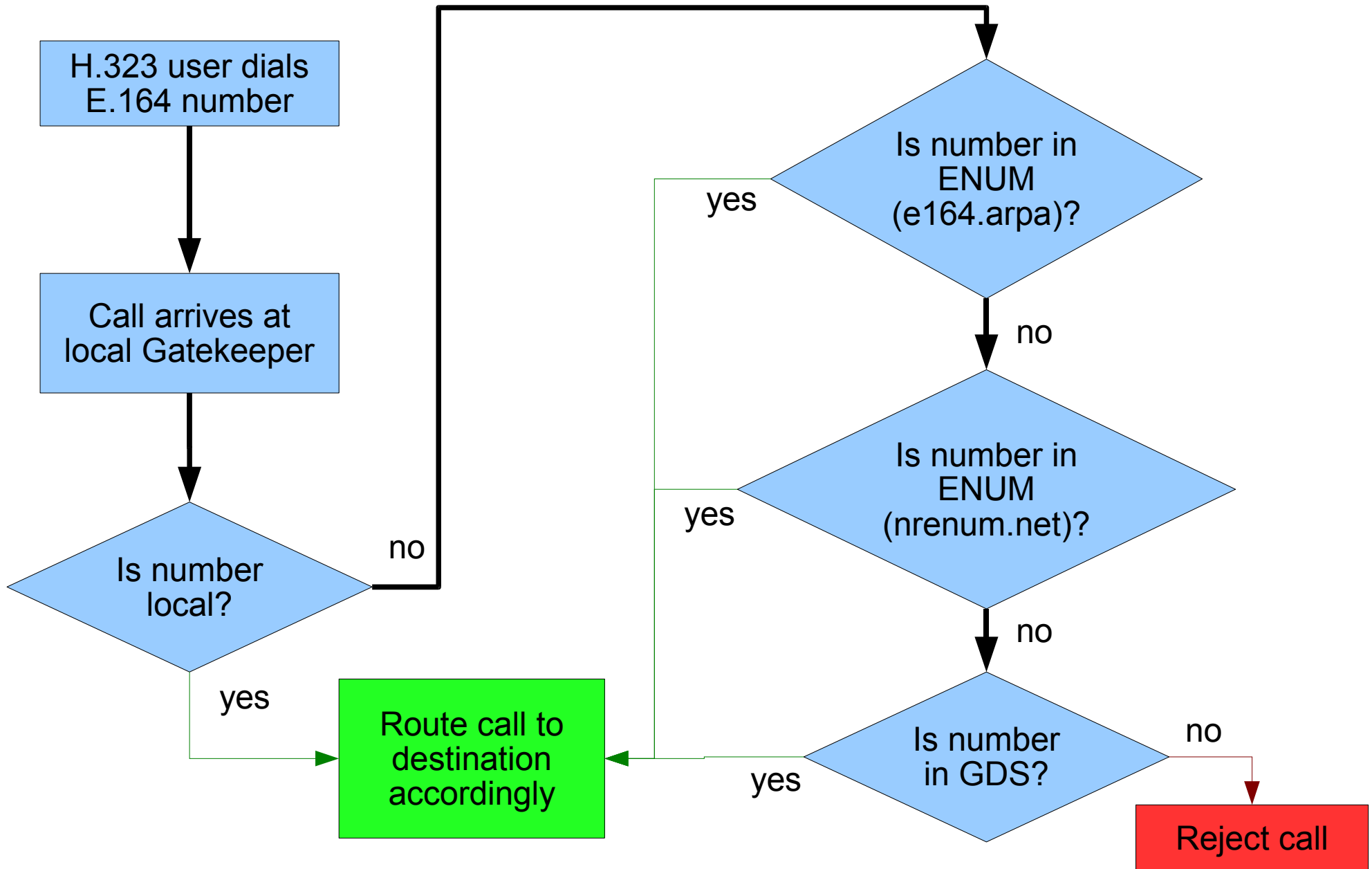
- Test numbers are available with ENUM:
 - +32 2790 3399 (Echo test)
 - +39 0503 1538 91 (Echo test)
 - +39 0503 1538 92 (Time of day)
 - +47 7355 7898 (Echo test)

Call Scenario

- Communication Server can be a SIP Server, a H.323 Gatekeeper, or any form of Gateway, e.g. VoIP2email, etc.



Possible call Scenario H.323



More information

- <http://nrenum.net>
- info@nrenum.net
- trial@lists.nrenum.net / tf-ecs@terena.org

Thank You!!