2013 Internet2 Annual Meeting
21-24 April. 2013
Arlington, VA, USA

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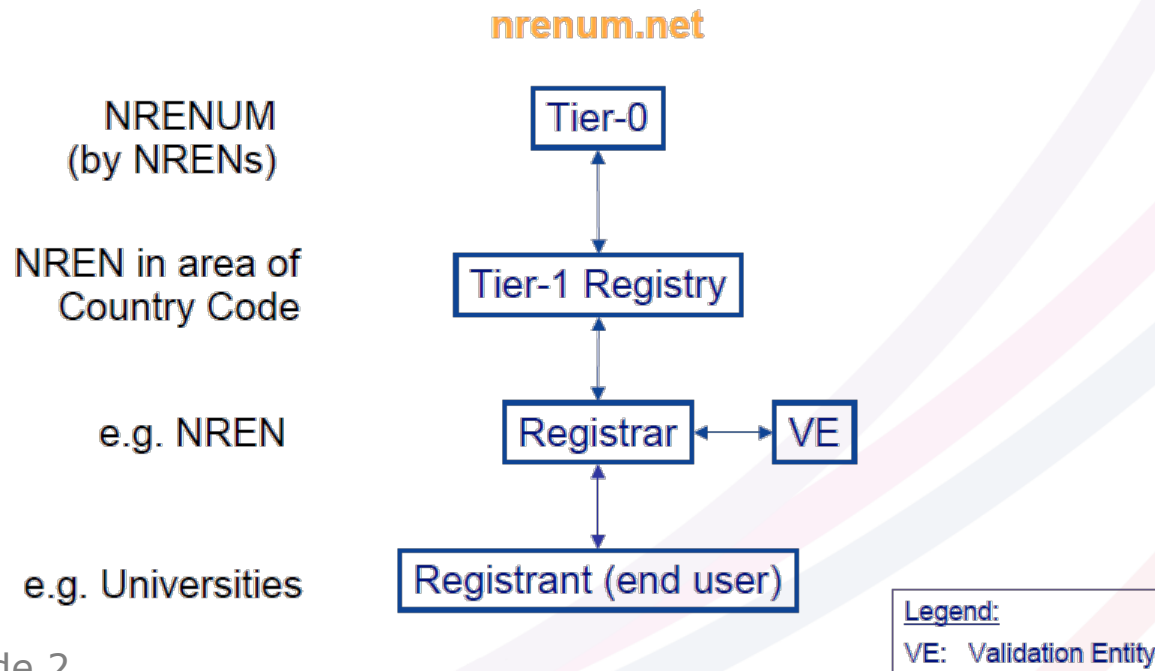# NRENum.net

Enabling Global Voice and Video Collaboration

TERENA

Global service coordinated by TERENA

- ENUM service for academia
  - Mapping E164 telephone numbers to URI using standard DNS lookup
  - Operated and governed by NRENs
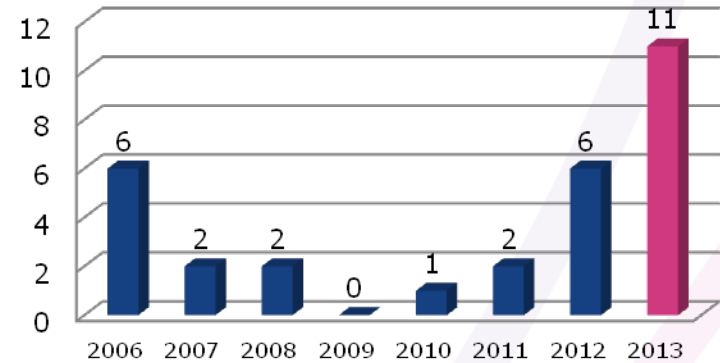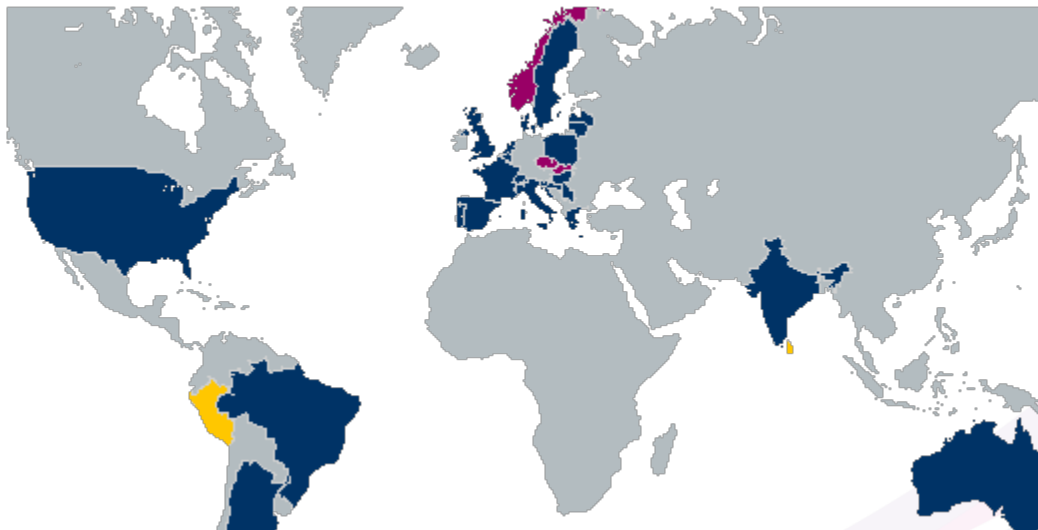 - Recognized by RIPE ENUM WG (e164.arpa)

nrenum.net

NRENUM (by NRENs)	Tier-0
NREN in area of Country Code	Tier-1 Registry
e.g. NREN	Registrar ↔ VE
e.g. Universities	Registrant (end user)

Legend:
VE: Validation Entity

NRENum.net participants

- ˘ 30 Country Codes delegated
  - ˘ 5 of them also in e164.arpa

- ˘ ~175.000 ENUM numbers
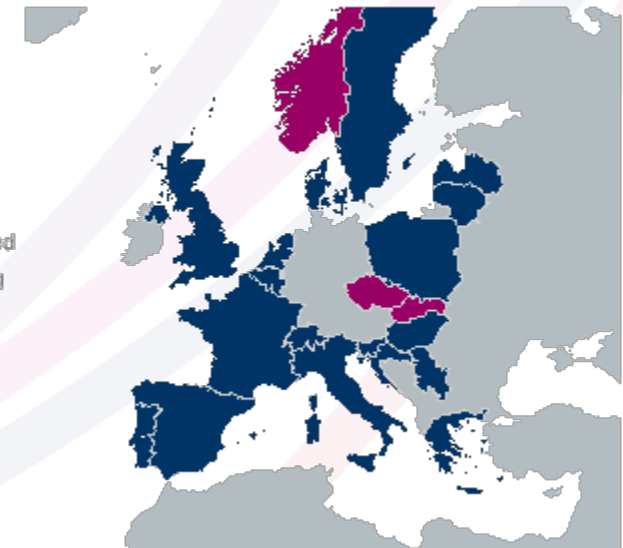 - ˘ Practically larger than e164.arpa

Number of cc delegated

NRENum.net participants

- ■ Delegated
- ■ Querying
- ■ Trial

NRENum.net in Europe

DNS Crawler results
https://crawler.nrenum.net/

searching nrenum.net for NAPTR sets

This is a DNS-based crawler which crawls trough nrenum.net, the top level domain designated to this ENUM service. Specifically, it looks for NAPTR resource records sets and tries to discover the whole NRENum.net tree.

Status: **173576** ENUM numbers (containing **174037** NAPTR records). Crawling speed: **305** numbers in the last minute.

What is the ENUM crawler?

The ENUM crawler uses certain properties of the nrenum.net namespace to discover all numbers for which ENUM entries (NAPTRs) exist. A full crawling round takes a little longer than a week, currently, so that new numbers should appear after approximately that delay. However, certain nameserver implementations might prevent the crawler to discover all enum-enabled numbers.

top country codes

#	country name	E.164	ENUMs
1.)	Hungary	+36	58048
2.)	Portugal	+351	42107
3.)	Switzerland	+41	31301
4.)	Croatia	+385	24316
5.)	Brazil	+55	10045
6.)	Argentina	+54	3255
7.)	Australia	+61	1729
8.)	Italy	+39	1508
9.)	Greece	+30	901
10.)	Spain	+34	133
11.)	North American Numbering Plan	+1	94
12.)	United Kingdom	+44	49
13.)	Netherlands	+31	27
14.)	India	+91	22
15.)	Latvia	+371	21
16.)	Belgium	+32	11
17.)	France	+33	8
18.)	Poland	+48	1

recently discovered

+39 0649623943074 (1 hour ago, 1 NAPTR)

+39 0649623943077 (1 hour ago, 1 NAPTR)

+39 0649623943076 (1 hour ago, 1 NAPTR)

+39 0649623943070 (1 hour ago, 1 NAPTR)

+39 0649623943071 (1 hour ago, 1 NAPTR)

+39 0649623943079 (1 hour ago, 1 NAPTR)

+39 0649623943078 (1 hour ago, 1 NAPTR)

+39 0649623943967 (1 hour ago, 1 NAPTR)

+39 0649623943963 (1 hour ago, 1 NAPTR)
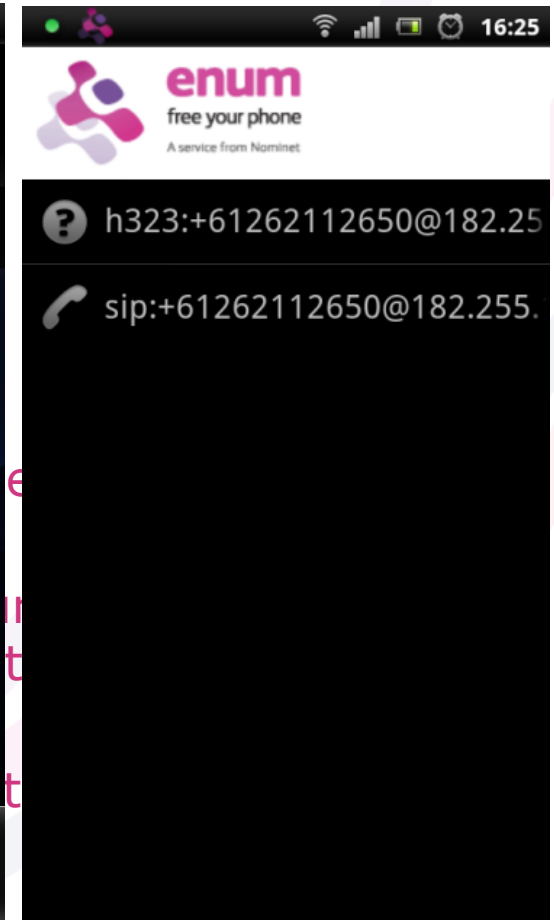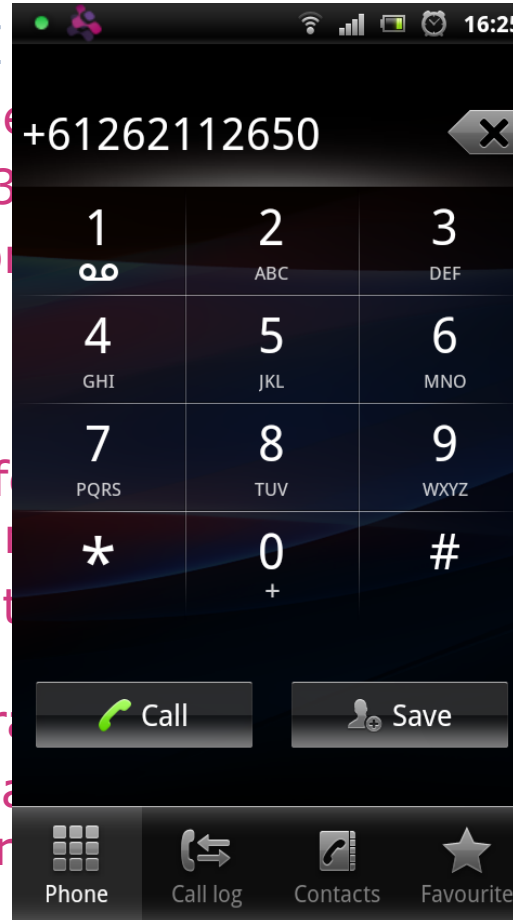
+39 0649623943976 (1 hour ago, 1 NAPTR)

Credits: Alexander Mayrhofer - enum.at GmbH

Not about free calls, but new services

˘ Get back with URI

  ˘ ENUM with SIP pe

  ˘ ENUM with H.323

  ˘ ENUM with Telep

˘ Principles:

  ˘ ENUM will not aff
    such as call routi

  ˘ ENUM facilitates t
    with a telephone
    applications opera

  ˘ ENUM will not cha
    and principles for

Global initiatives to be supported by ENUM dialling

ˇ Global Video Aliance (GVA)
  - ˇ Internet2, AARnet, RedCLARA, NORDUnet, Janet, CESNET

ˇ Global ã Unified Communications eXchange (G-UCX)
  - ˇ CEO Forum ã led by AARnet

ˇ GÉANT eduCONF
  - ˇ GN3+ - led by Janet

How to participate...

ˇ +1 is delegated to Internet2
- ˇ Talk to **Ben Fineman**
  - ˇ University of Michigan is populating numbers
    - ˇ Talk to **R.P. (Adi) Aditya**

ˇ In Latin America, talk to RedCLARA

ˇ In Asia Pacific, talk to AARnet

ˇ Want your county code to be delegated
- ˇ Talk to **Peter Szegedi**, TERENA
  - ˇ Website: http://www.nrenum.net
  - ˇ Send your request to <delegations@nrenum.net>
  - ˇ Join the mailing list <discussion@nrenum.net>

Conclusions

- Skype works fine but locks you in…
- What you need is:

  - Free, rich media calls

  - Global, interoperable, multimedia services
    - Facilitated by NRENum.net

  - Scalable, secure, trusted routing of calls
    - SBC-based next generation multimedia architecture