

INTUG

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www.INTUG.net

ENUM

a user perspective

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INTUG contents

- what is INTUG?
- user numbering issues
- instant messaging
- H.323
- user applications
- user concerns
- public policy issues
- conclusions

INTUG what is INTUG?

- members
 - national associations
 - corporations
 - individuals
- activities
 - ITU and WTO
 - OECD
 - APEC TEL, CITELE and EU

INTUG our aims

- real and effective competition
- genuine choice for users
- lower prices
- higher quality
- constructive co-operation with
 - international bodies
 - governments
 - regulators

INTUG user numbering issues

- confusion from changes
- need for simplification
- independent numbering authority
- ensuring markets are competitive
- Number Portability (NP)
- directories
- Calling Line Identification (CLI)
- demand for supra-national numbers

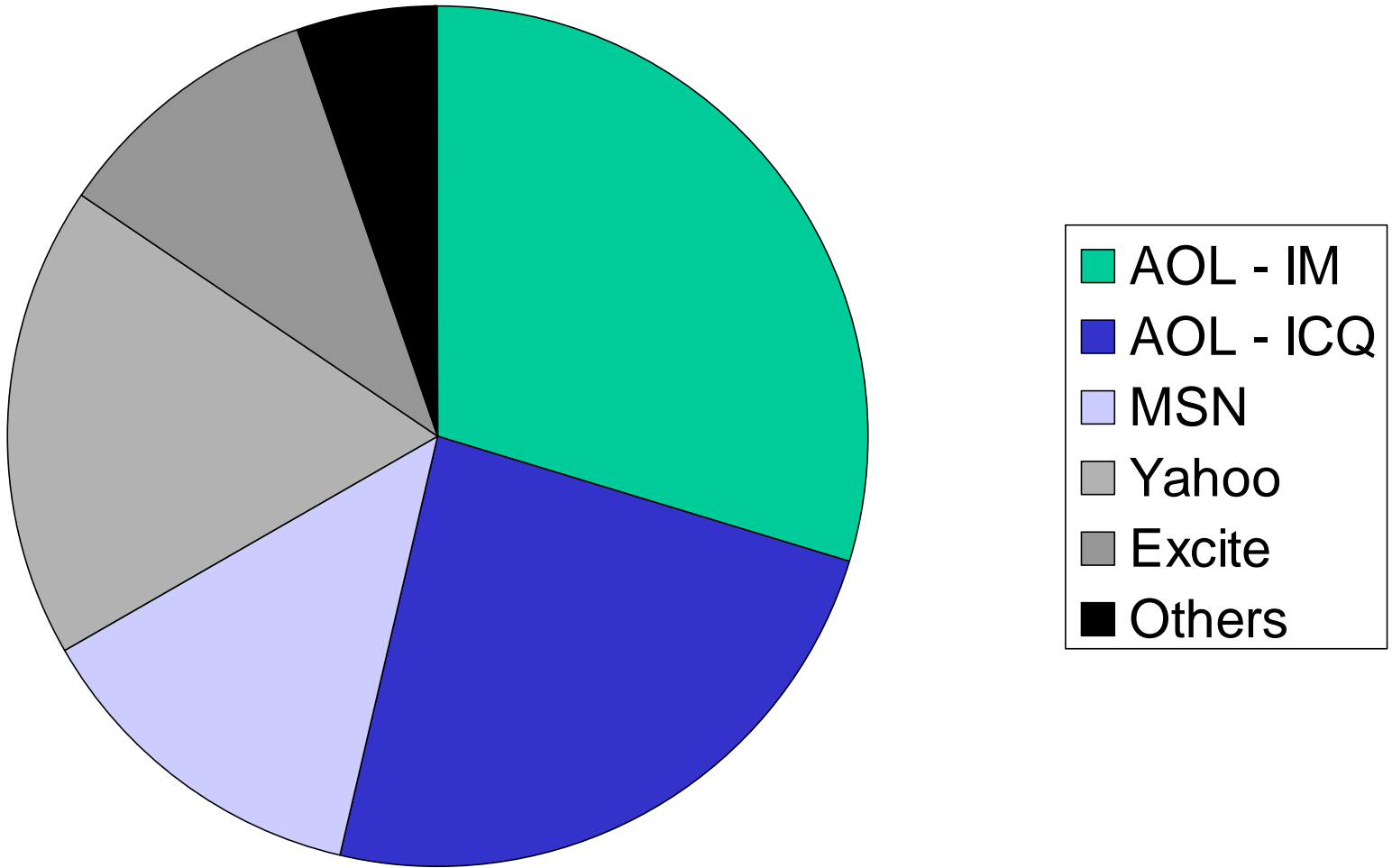
INTUG instant messaging (im)

- personal details
- availability/status
 - away, urgent msgs only, free to chat
- list of “buddies”
- IDs assigned on first-come, first-served basis
- proprietary systems
- device features/software

INTUG instant messaging (2)

- text
 - interactive
 - store + forward
 - gateways to SMS
- voice
 - VoIP
 - PSTN numbers
- video
- entertainment

INTUG IM market shares



This is not real data yet !!!

INTUG competition problems

- interconnection
- interworking
- FCC decision on entertainment services in the AOL/TW merger
- standardisation work IETF IMPP WG

INTUG H.323

- ITU-T recommendation
- real-time communications over packet-based networks:
 - audio
 - video
 - data communications
- allows vendors to develop interoperable products

INTUG H.323

- call control for
 - point-to-point
 - multi-point
- QoS through a centralized gatekeeper
- gateway for calls to/from IP network to the PSTN

INTUG ENUM

- what it does
- what it does not do
- user applications
- user concerns
- public policy issues
- measuring success

Enhancement of Numbering and Naming
tElephone NUmbering Mapping
Every Number Uselessly Mapped

INTUG what enum does

- maps E.164 to a URI
- identifies services and addresses associated with an E.164 number
- specified in IETF RFC 2916 does not provide routing information
- does not ensure the DNS is populated
- does not ensure competing services interconnect or interwork

INTUG for each user it can give

- Session Initiation Protocol (SIP)
- Simple Mail Transfer Protocol (SMTP)
- Voice Profile for Internet Mail (VPIM)
- Internet Printing Protocol (IPP)
- Short Messaging Service (SMS)
- Lightweight Directory Access Protocol (LDAP)

INTUG example

- E.164

+32-2.706.82.55

- ENUM

5.5.2.8.6.0.7.2.2.3.e164.arpa

- NAPTR (in priority listing)

- sip:ewan@intug.net

- mailto:ewan@intug.net

- http://www.intug.net/ewan.html

- tel:+32486522221

INTUG user applications

- integration of PSTN and Internet
- access to cheaper IP telephony
- an enabler for SIP
- application for IP-VPNs
- bypass for GSM bottleneck?

INTUG IP-VPNs

- on-going corporate shift to IP-VPNs
- possible applications with SIP
- also beginnings of corporate use of IP on mobile (GPRS, HSCSD and 802.11)

INTUG enum - user concerns

- when will it be available?
- how much will it cost?
- does it really work?
- where/when will it not work?
- will it be one or competing systems?
- how secure is it?
 - malicious redirection
 - denial of service attacks
- who will “own” my phone number?

INTUG enum - control

- global - tier 1
 - .e164.arpa RIPE NCC for ITU
- countries - tier 2
 - .9.4.e164.arpa (Germany) RegTP
 - DTAG
 - Vodafone
- subscribers - tier 3
 - corporations (internal data)
 - individuals (personal data)

INTUG populating the DNS

- responsibility *versus* economic interest
- possible “obligations” on:
 - regulators
 - carriers
 - users (individual and corporate)
- accuracy and updates
- avoidance of fraud
- compliance with competition law

INTUG number portability

- a right established in law
 - fixed (almost all OECD countries)
 - mobile (growing number)
- must be recognised in ENUM
- other than in special cases, will have to treat numbers individually

INTUG **privacy**

- providing information
- respecting preferences
- different national data protection regimes
- taking data across international boundaries

INTUG commercial “alternatives”

- Lucent (.e164.org)
- NetNumber (.e164.com)
- NeuStar (.enum.org)
- Stupi a/b (.e164.net)
- VeriSign (.enumworld.com)
- instant messaging services

INTUG public policy issues

- avoiding
 - fragmentation
 - private monopoly
 - leveraging into related markets
 - destruction or appropriation of E.164 numbering plans
- ensuring
 - workable service
 - privacy and conformity with data protection laws

INTUG emergency services

- legal obligation to pass the location of a 112/911/999 call to emergency services
- increases the existing problem of identifying the origin of a call

INTUG enum - measuring success

- rapid deployment
- accurate population of databases
- simplicity of use
- confidence in use
- security in use
- low cost

INTUG summary

- important in the transition to IP telephony
- has considerable potential applications
 - consumers
 - businesses
- we will know quickly if it is a success
- do not wish to destroy E.164 PSTN numbering or end up with islands of incompatible services