

nominet

Nominet and ENUM

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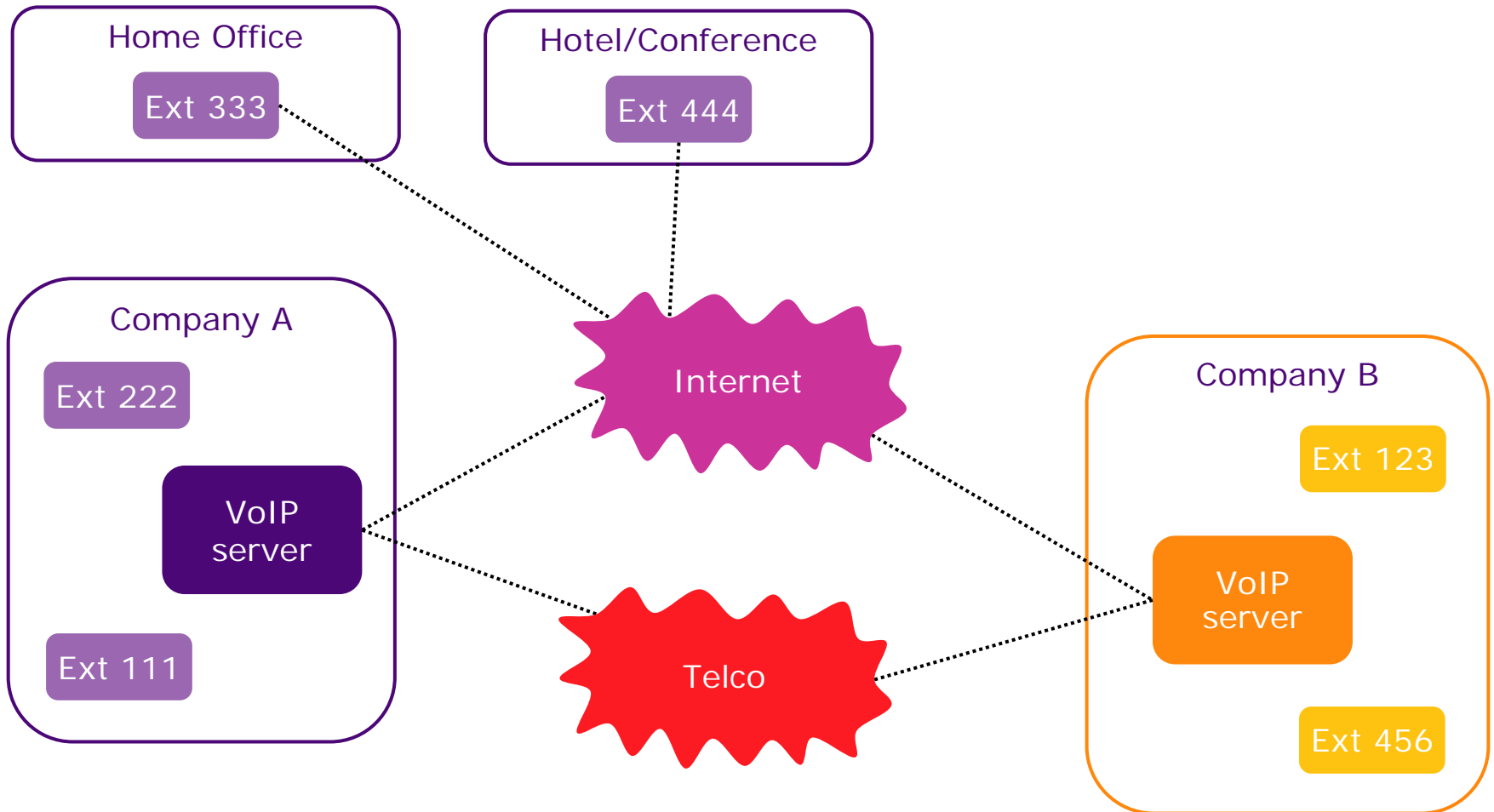
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ENUM explained

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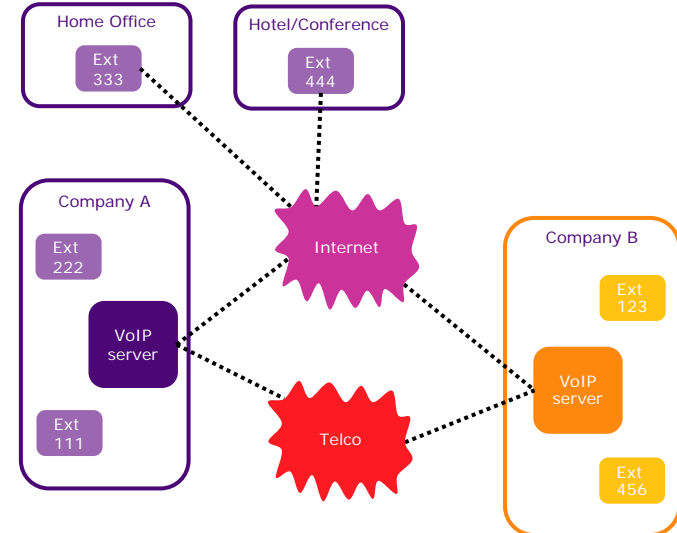


What problem does it solve?



What problem does it solve?

- Company A wants to talk VoIP to company B. It needs to know
 - Does B have a VoIP server?
 - What protocols does it support?
 - What is its IP address?
- With that info:
 - call across the Internet
 - no call charges, just line rental.
- Without it:
 - has to call via a telco
 - pays call charges
- Can pre-configure server, but does not scale.
- Need one way to look this up, for all telephone numbers.



Technical solution

- ENUM solves problem by
 - turning telephone numbers into domain names:
 - finding available services associated with those numbers
- So the number
 - 01865 332211 becomes
 - 1.1.2.2.3.3.5.6.8.1.4.4.e164.arpa
- Special DNS entries describe available services
 - So to say we have can be contacted by VoIP on this number:
 - NAPTR 10 10 "u" "E2U+sip"
"!^.*\$!sip:441865332211@nominet.org.uk!" .
- These domain names and entries are not meant to be directly used by people.

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ENUM in the UK

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UK ENUM Management

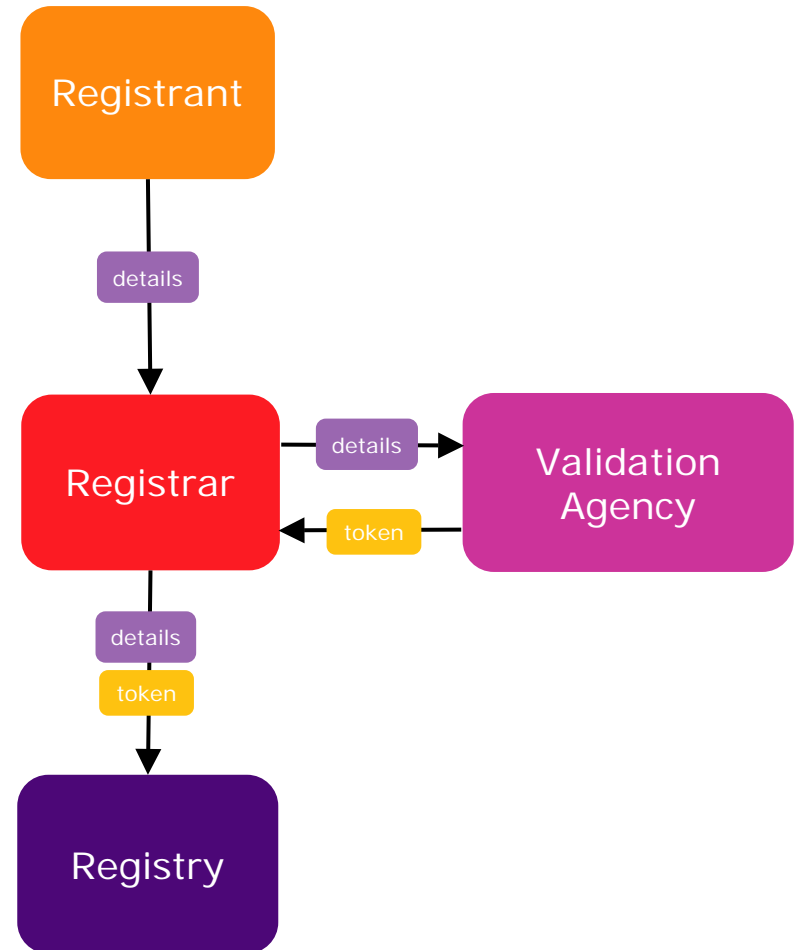
- For 3 years industry consortium (UKEG) ran trials and designed interactions and policies
- DTI issued public consultation in 2005 based on trial
- UKEC now formed
 - Overall management of UK ENUM
 - Not-for-profit, membership organisation
 - Management board and policy advisory group
 - Tendered for 4.4 registry in early 2007
 - Will accredit registrars and authentication agencies
 - Official launch in early 2008 - join and elect
- We won bid to run 4.4 registry on license from UKEC
 - UK ENUM up and running in 2008

UK Policy

- Compared to the Internet, telephony world is highly regulated
 - Two cultures coming together
- Major concerns are:
 - Privacy - Protecting personal information
 - Misuse - Cold calling, abusive calls
 - Scams - 'Slamming' customers, fake directories
- UKEC will run policy board with various representatives
 - Registry has automatic seat
- Very high profile - government/Parliamentary interest

Registration process for UK user ENUM

- Registrant supplies details to Registrar
- Registrar forwards them to Validation Agency (VA)
- VA checks ownership of number - replies with token
- Registrar sends request to Registry with VA token
- Registry creates registration - for one or more numbers
- Registry delegates numbers in 4.4.e164.arpa zone



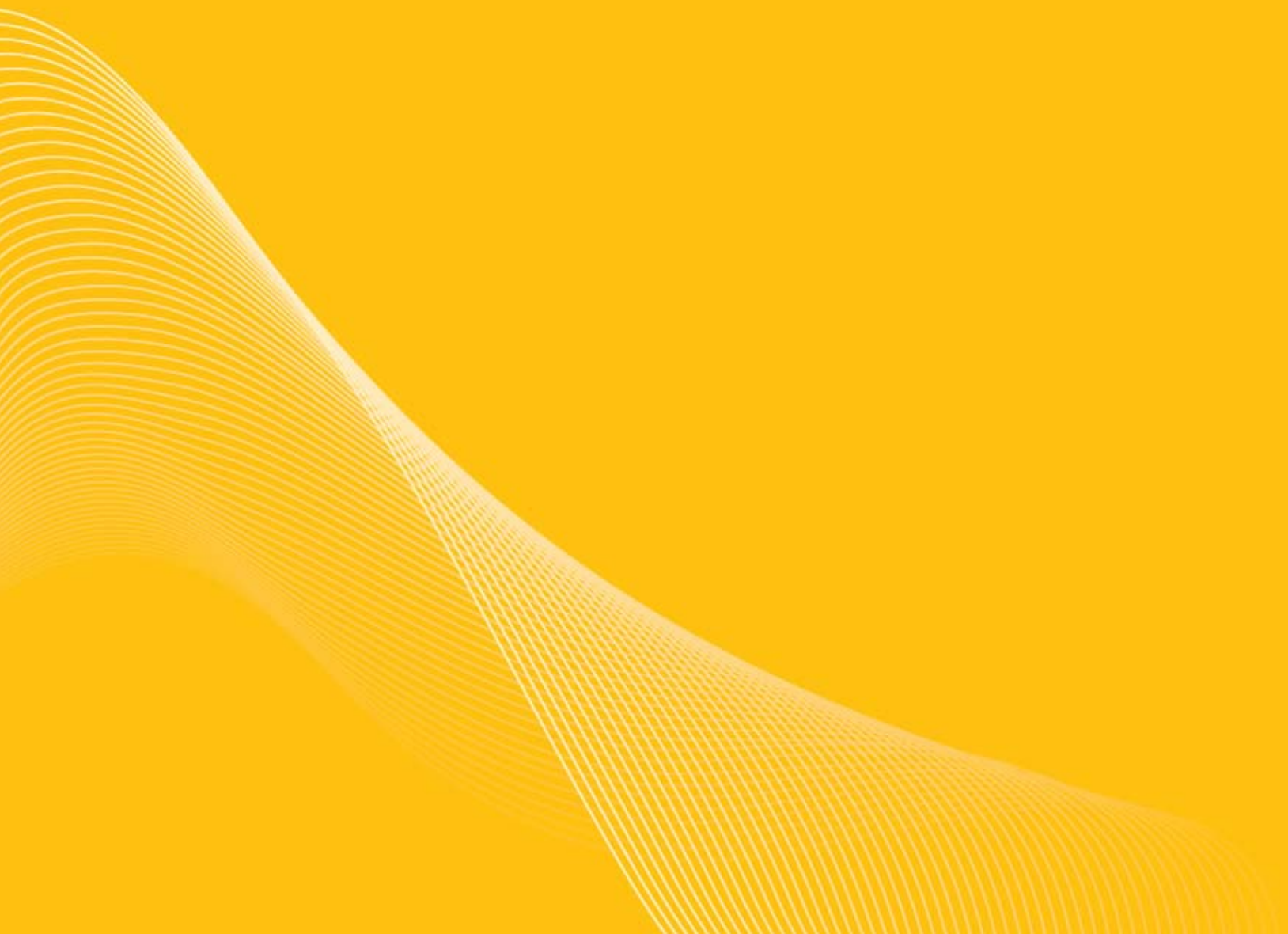
Key differences from Nominet process

- No direct contract between Registry and Registrant
 - But policy unclear on forced registrar change
- All registrations are authenticated
 - So no cyber-squatting, disputes, availability checkers etc
 - How easy to prove you 'own' your number?
 - VA will expect payment
- One registration can be for many numbers
 - More complex pricing model
- No WHOIS
 - that would be a phone book in reverse
- Data will be pushed as well as pulled
 - Server running 4.4.e164.arpa in your rack!

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Why Nominet?

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Benefits

- Benefits for registrars
 - Single provisioning channel
 - Joined up billing
 - Integrated support
 - Single online management interface
- Benefits for registrants
 - Registry representing the needs of registrants
 - Low cost pioneer
 - Focus on safe and secure domains
- Benefits for Nominet
 - Builds on our high profile policy involvement
 - Reuse existing systems
 - Protection from changes in domain name market
- For many, 4.4 is .uk for telephony

Internet usage is changing

- Convergence of Internet, voice, carriers, content
 - Carriers move to Next Generation Networks
 - One pipe, multiple services
 - Triple/quadruple play - Internet, TV, voice, mobile
 - Net neutrality
 - Last mile is the new battleground
- Hosting model is changing
 - Hosted VoIP added to the mix
 - Existing telcos need to reposition themselves
- Just how big?
 - Skype sold for \$2.6bn, ▪ small fry for this market

Registries are changing

- Domain name registries => Internet registries
 - ENUM
 - Number portability
 - Emergency call location services
- Standardised interfaces (e.g. EPP)
 - Innovators control standards
- Different business - different model
 - Pushed data (registry data to your servers)
 - Controlled access (emergency services)
- Federations (pseudo-registries)
 - Multiple registries - single interface

Summary

- ENUM is coming soon
 - Delivers real value to customer
 - Benefits for all if we do it
- Just the start
 - Internet is changing
 - Registries are changing
- Innovate and change or be surpassed

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Any questions?

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