

Carrier ENUM – An IPX Service from GSMA

ANACOM ENUM Workshop

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Agenda

- ENUM for the PT Market
- What is Carrier ENUM?
- Why carrier ENUM and it's benefits?
- IPX concept
- Number Portability
- Conclusion



ENUM for the PT Market

Do we have an **immediate and strong driver** to
deploy an ENUM solution?



ENUM for the PT Market

Workshop and Workgroup in 2006 about ENUM promoted by ANACOM

What happened since then?

NOTHING TANGIBLE, RELEVANTE AND CONCRETE

Can we conclude that there's no IMMEDIATE and STRONG DRIVE for ENUM in the PT

telecommunications market?



ENUM for the PT Market



ENUM for the PT Market

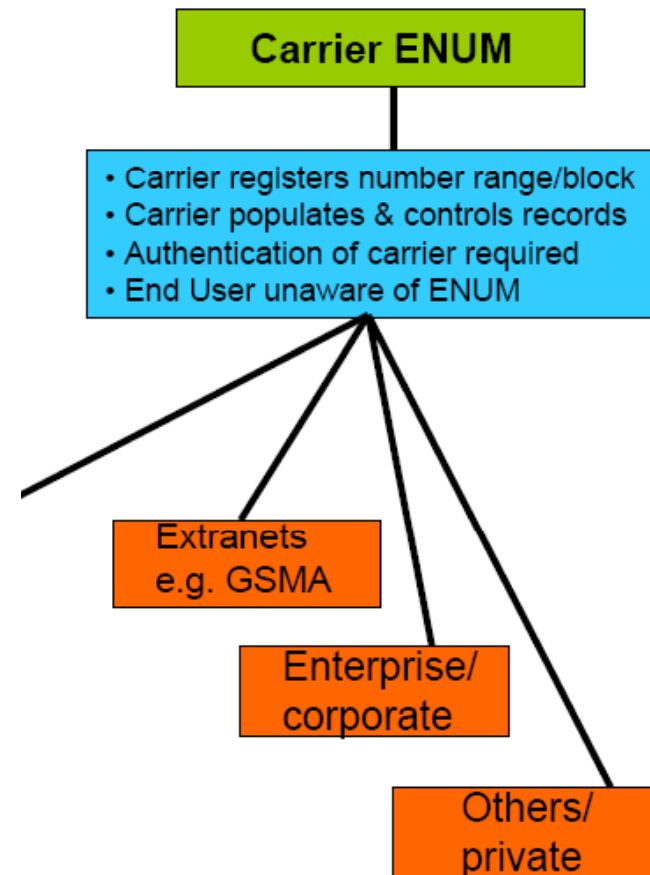
- ENUM can have a moment,... but for SIP/IMS based Telephony!!
- Other enhanced services like IM, video, Email ,...for the immediate, are rocket science.

An ENABLER for IP interconnection and a future proof solution for E2E MM services



What is Carrier ENUM?

- Telephone Number Mapping (ENUM) translates telephone numbers to IP routable addresses
- It enables the routing of IP based services using the telephone number
- It is based on the Domain Name System (DNS) that is used to route domain names
- Carrier ENUM is a private implementation of ENUM that is managed by network operators



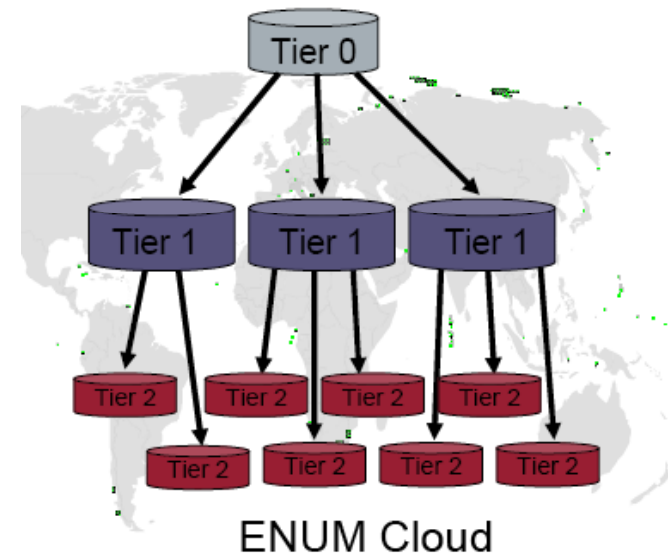
Why Carrier ENUM?

- Use of existing standards and protocols
 - Bridges between E.164 and SIP URIs
 - Can map on to existing capabilities
 - Can fit with NGN architecture
- All require information to route
- Number Portability is a must have for communications providers
- All require a secure and trusted environment
- All need to maintain control of their information
- All want a cost effective answer
- National and Global interconnectivity is a requisite



The PathFinder Solution?

- PathFinder
 - Implements the Root database
 - Links data on a global interoperable basis
 - Solves the “getting started” issue
 - May be used as a national database (Tier 1)
 - May be used as an operator database (Tier 2)
 - Allows operators to move at varying pace
 - Operated under a policy designed to assure data authority and security



Why Carrier ENUM?

The Value of Carrier ENUM

strengthen the
telephone number

It links telephone numbers to e-mail addresses, instant messaging accounts, and any other communication service.

reduces
network costs

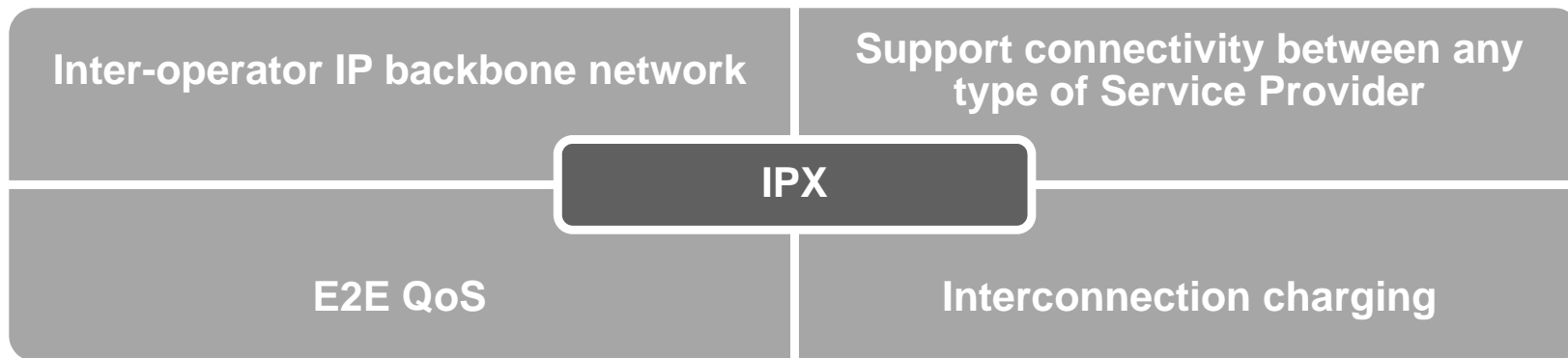
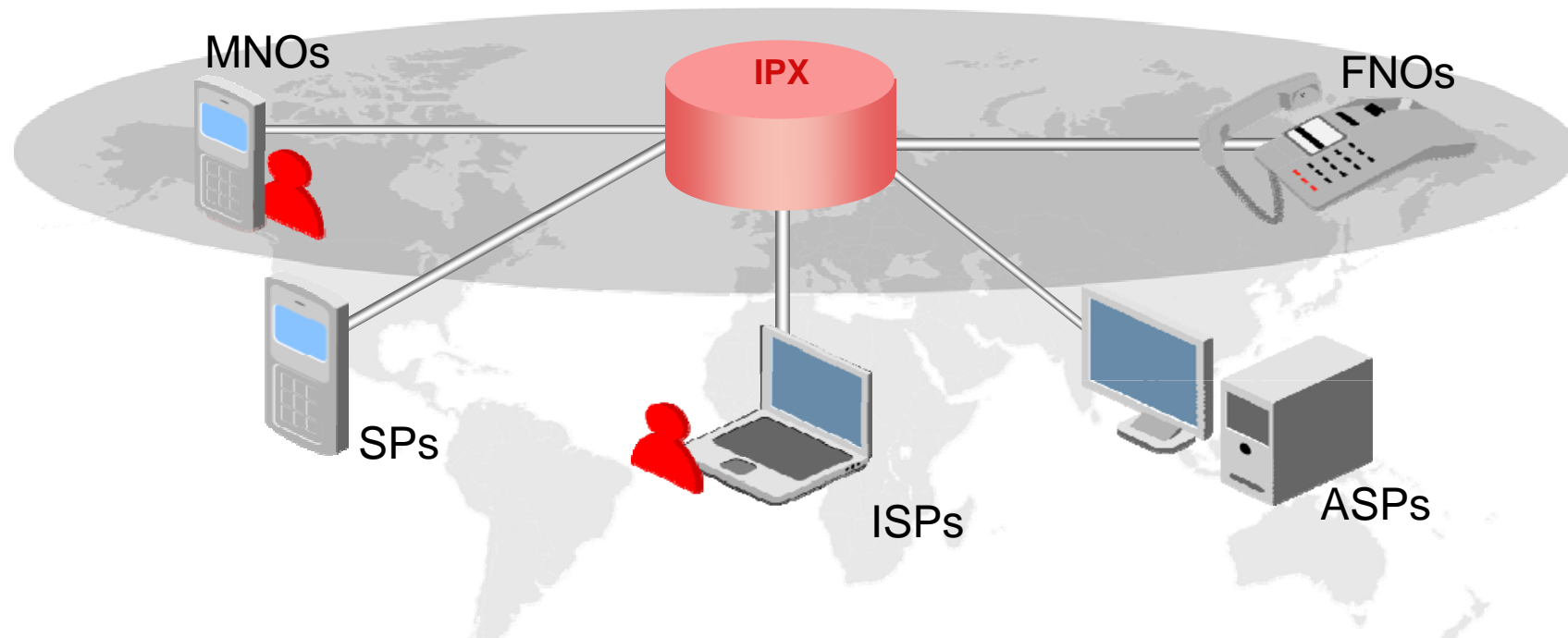
It provides a single IP-based routing mechanism that supports all services and takes out the costly routing duplication that occurs for each individual service (e.g. SMS, voice, etc).

new revenue
streams
in the service area

The barriers to set up new services are lowered through using Carrier ENUM's ready-to-use routing mechanism and gateway capabilities between IP and telephony.



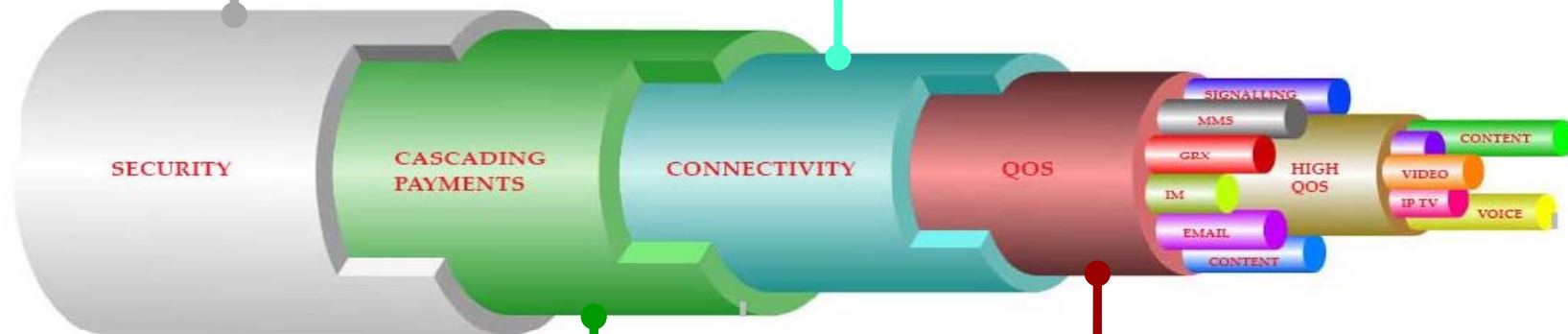
IPX High Level



IPX Concept

- Protection to all players
- IPX is not addressable from the Internet
- Spam avoidance
- End user terminals have no visibility of the IPX

- Multilateral – A Service Provider can reach a multitude of different destinations around the world
- IPX carriers can easily open interworking with new operators in a controlled way

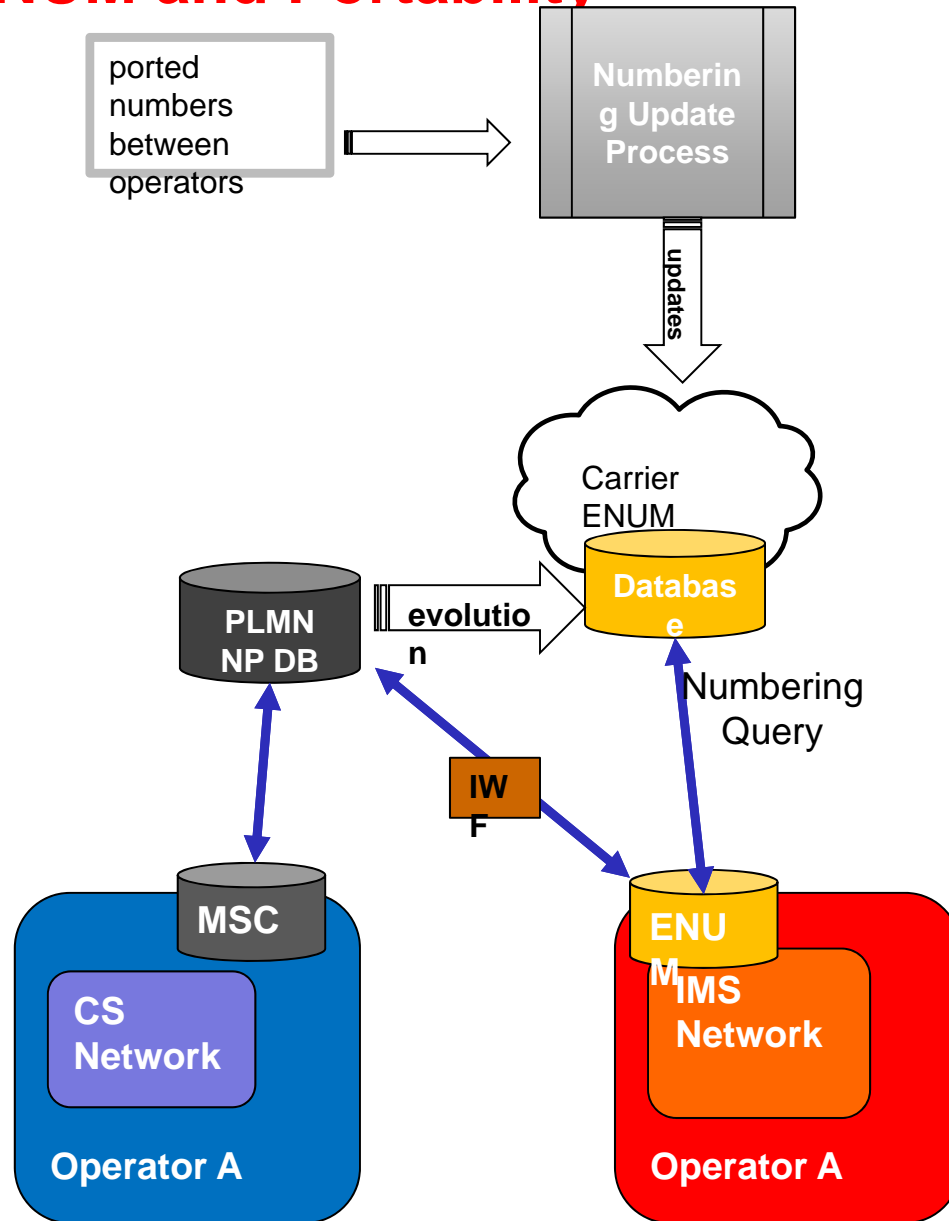


- Mutually understood and agreed business model
- Termination rate model for Service Providers
- Accounting and settlement

- Low and predictable latency
- SLA and precedence for specific services (like voice)



ENUM and Portability



- NP existing Databases should be kept to leverage investment in place
- Carrier Database as an evolution of existing NP DB with ENUM interface



Why Carrier ENUM?

Critical Success Factors

Co-operation

Multiple operators need to recognise the benefits of Carrier ENUM and co-operate to make it work

Technical capabilities

Adequate IP interconnects and a central Carrier ENUM capability should be in place and must operate with high performance and reliability

Simplicity

To ensure adoption the implementation must be simple, supported by commonly agreed interoperable business and technical frameworks

Openness and competition

Open to all operators
Operators should participate in a competitive development environment to ensure innovation in new services



Carrier ENUM Conclusions

For Carrier ENUM to flourish, **co-operation** is essential.

Third party entity to drive a multilateral framework.

Conclusions

Framework subscription from all players in order to make it a success.

Avoid technical and mainly business complexity

ANACOM's role is of paramount importance to push and drive this framework and future implementation





Thank You