

# Infrastructure ENUM with SURPASS VoIP solutions

Patrick Kleiner  
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The new company Nokia Siemens Networks is expected to start operations by Q1, 2007, subject to customary regulatory approvals, the completion of standard closing conditions, and the agreement of a number of detailed implementation steps.

## Introduction

### Infrastructure ENUM with SURPASS VoIP solutions

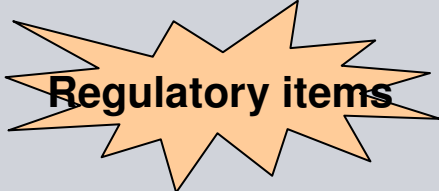
- State of the art
- The world changes
- The potential of ENUM for com services
- Suppliers pave the way to utilize ENUM
- Providers can benefit from ENUM
- Siemens makes it happen
- Service Provider's benefits
- Conclusion

## State of the art

1. SS7 based routing and LNP
2. SCP/IN features
3. Route provisioning in every single network element  
Each element has to know all routes  
-> Routing table in every single network element
4. Complex transaction system for synchronized element update



**Globalness**



**Regulatory items**



**Compatibility/  
Availability**



**Registers (HLR/VLR)**



**Ruggedness**

**A new world of ENUM related service can compete  
But the stronger focus must be miss the new services**

## The world changes

1. DHCP, DNS, IPV6...
2. Communication moves to the Internet
3. VoIP replaces TDM
4. Multimedia services will be deployed (SMS, MMS, IPTV, ...)
5. New infrastructure services replace traditional ones
  - a) DHCP/DNS for host/endpoint addressing
  - b) Trust and authentication services instead of trust by wire
  - c) Signaling/TCAP replaced by SIP, ENUM



**Common  
Addressing  
Space**



**NG-IN, VoIP, FMC,...**



**New Entrant  
Protection**



**Early Adaptor  
Advantage**



**Telephone  
Number  
Permanence**

## **The potential of ENUM for communication services**

1. Global visibility of routing information
2. Administration only required at terminating point/network element
3. Unification of services like phone, web, SMS, email, ...
4. Takes IN to the next level of Internet
5. LNP dip
  - a) Opens inter operator LNP
  - b) Intra operator LNP facilitate provisioning/administration

**These examples can be extended to enterprise interworking, DNP, VCC,....**

## Suppliers pave the way to utilize ENUM

1. All routing engines support ENUM  
(softswitch, application server, routing proxy, CSCF, ...)
2. Support of ENUM provisioning  
Single entry provisioning system for all participating elements  
(softswitch, DNS, ...)  
Example: createSubscriber goes to SURPASS hiQ 8000, billing system, DNS, ...
3. Advanced IN based services via ENUM (PABX overlay)

put the money where our mouth is 😊

## Providers can benefit from ENUM

1. address larger user-base by partner-agreement with other local operators
2. strengthen market visibility – form a virtual community with non-competitive partners
3. cut capex / opex - share central resources with others
4. save interconnect costs – share #7-resources with others
5. invest savings in next gen application environment

invest your money in the right place

**Siemens makes it happen**  
**What is ENUM used for?**



1. For peering with VoIP networks and interworking to IP-PBXs
2. Use for routing in VoIP networks (with many ported numbers)
3. Interworking to SS7/ LNP
4. Advanced services
5. 800 number translation
6. Number plan hosting

**Siemens makes it happen**

**SIEMENS**

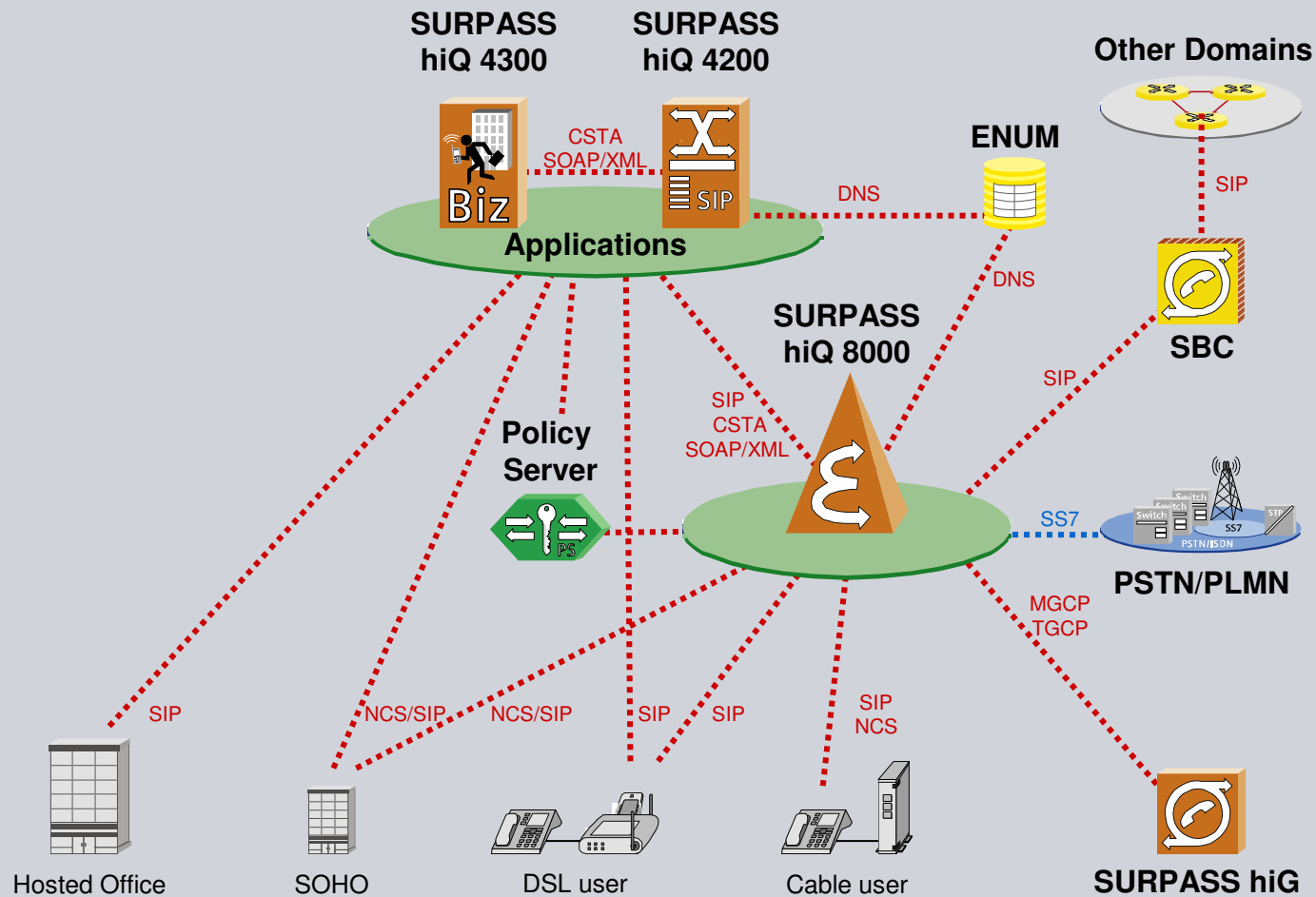
**ENUM is an integral part of the solutions Siemens provides**

1. Client resolver on Siemens softswitches for VoCable and VoDSL
2. Implementation follows IMS standard in FMC networks
3. Interfaces and mediation to LNP
4. Provisioning interfaces

# Siemens makes it happen

## ENUM supports routing and IP-Peering

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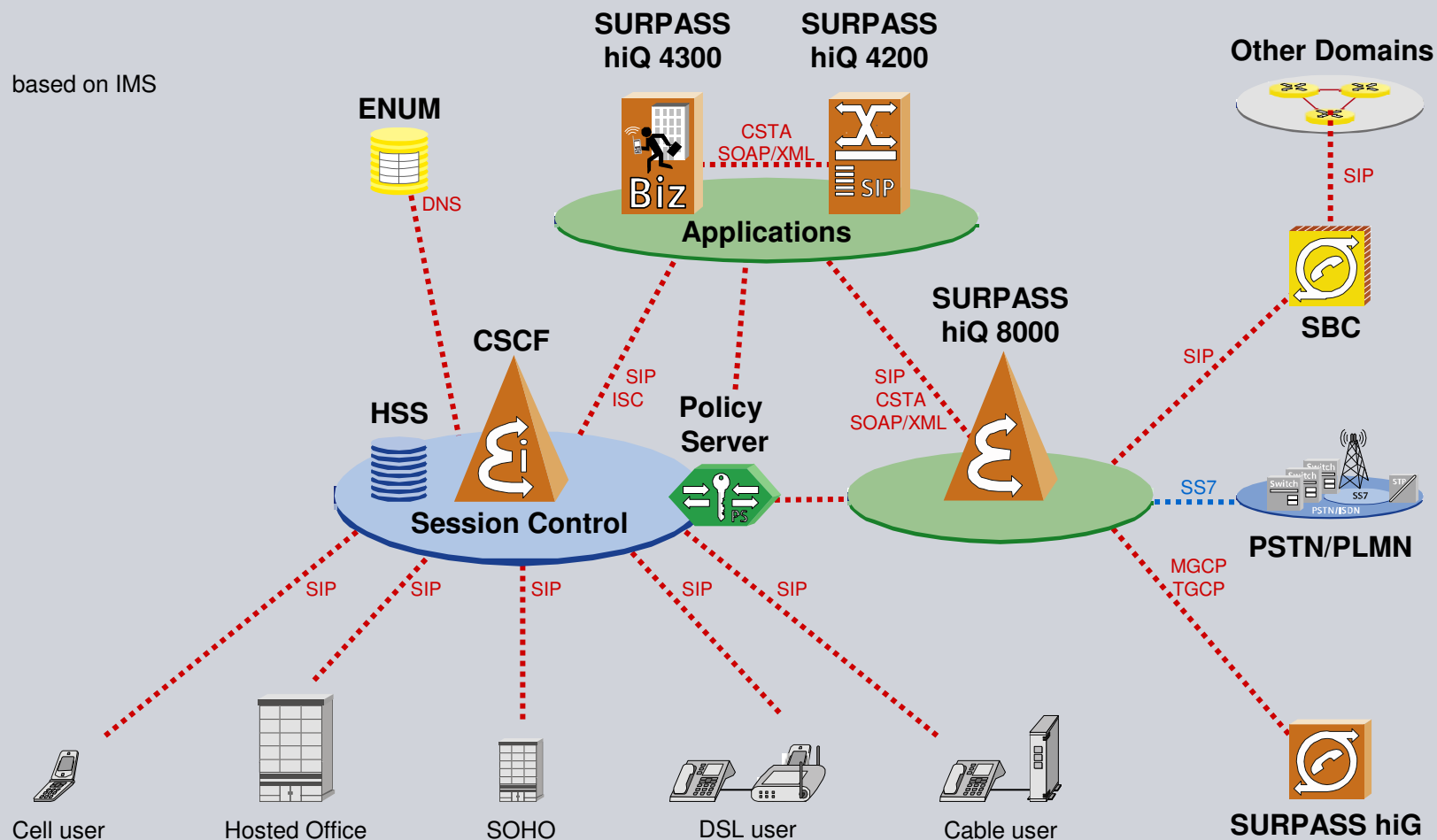


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## ENUM supports routing and IP-Peering in IMS environments

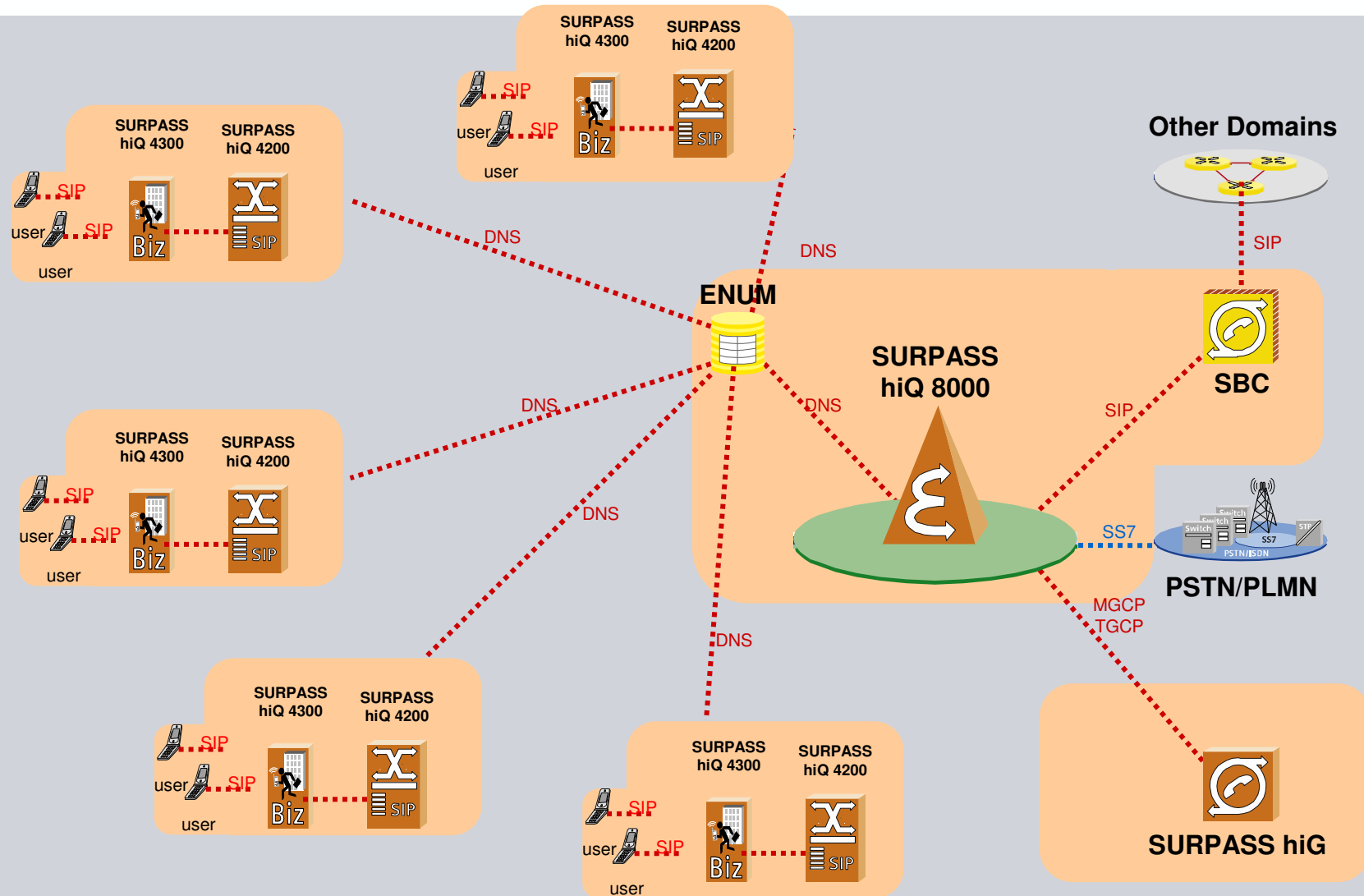


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example scenario: operator with yet isolated locations

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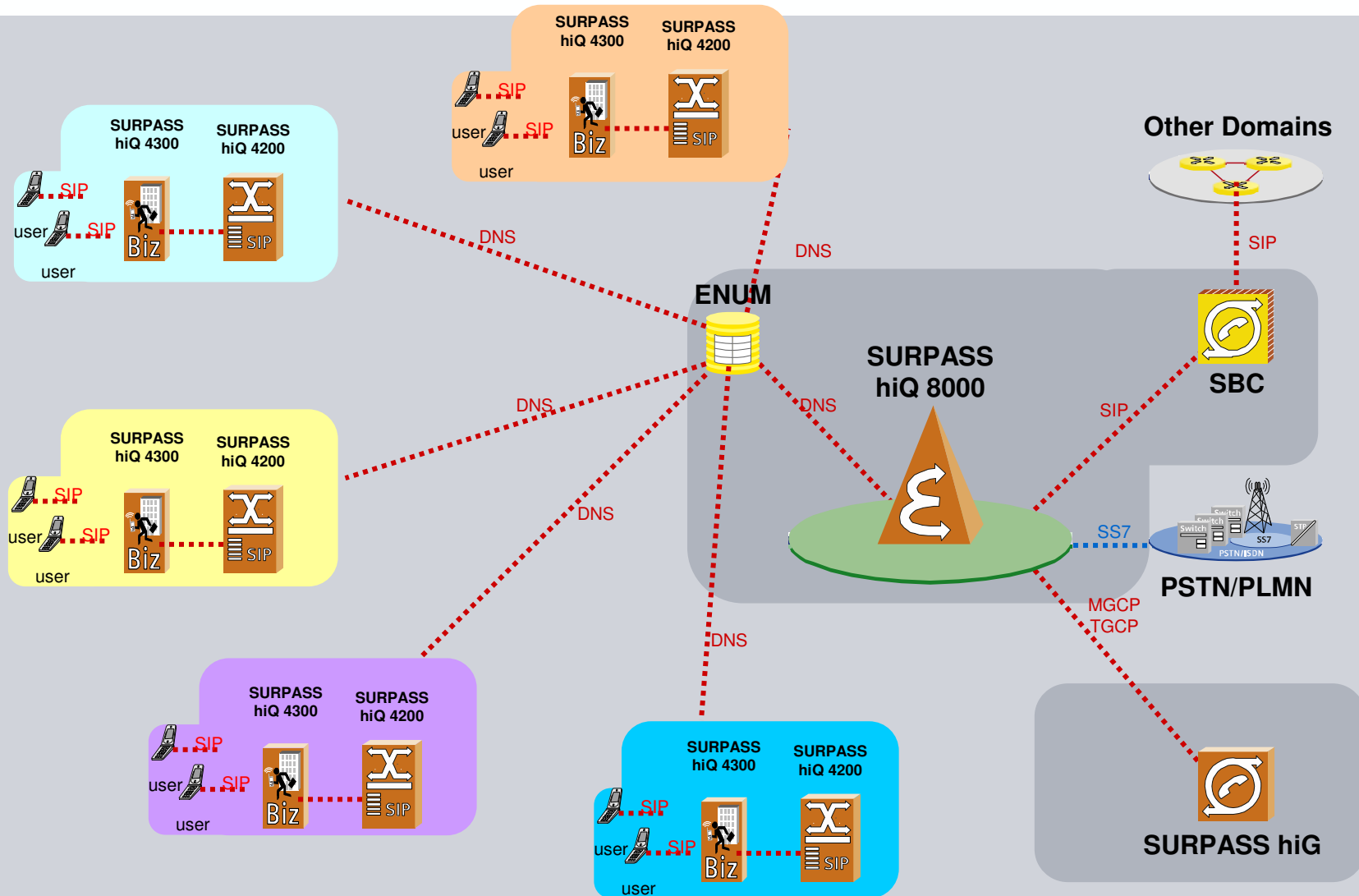


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example scenario: many operators forming a “virtual company”



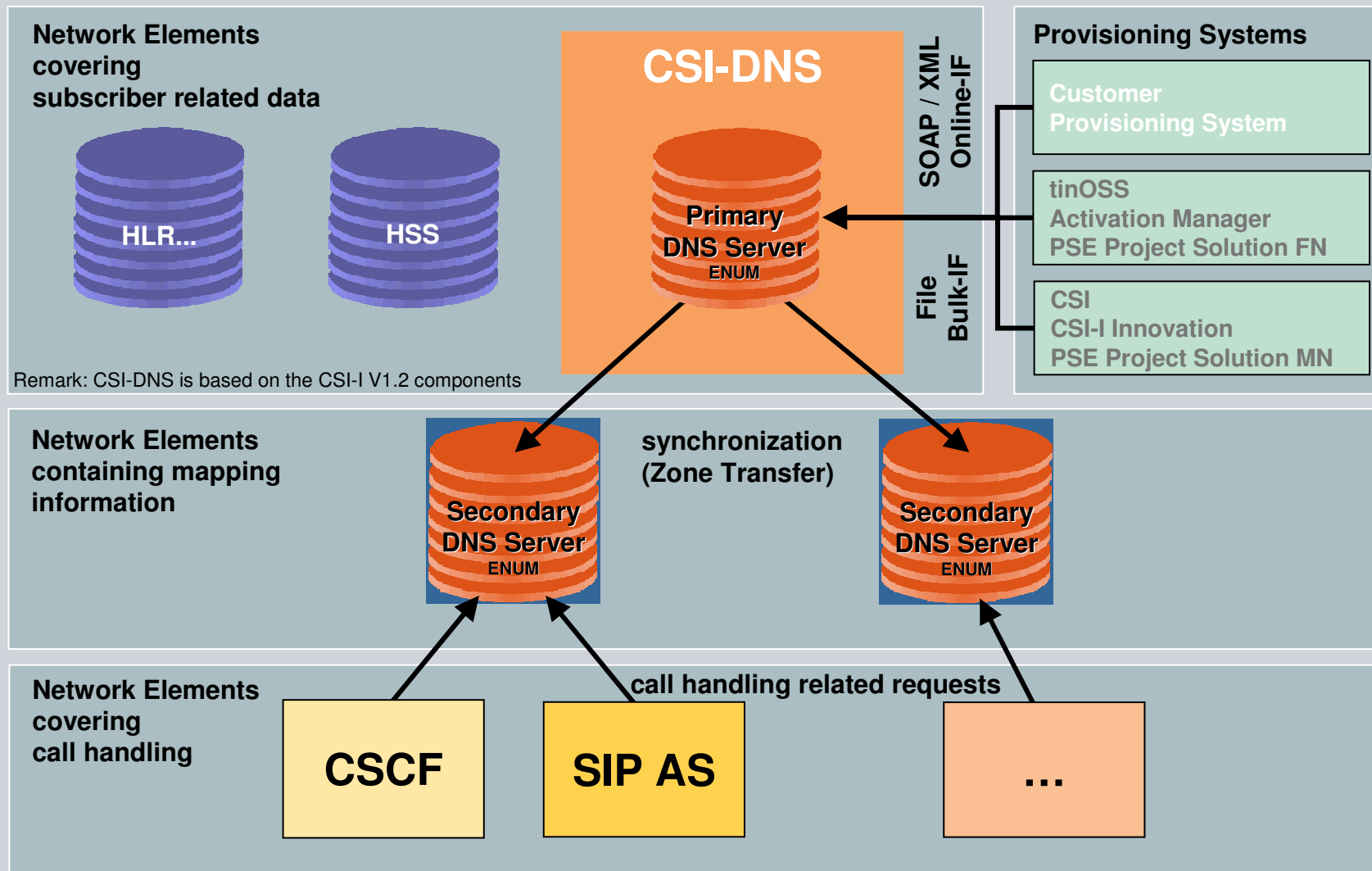
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ENUM-service provided  
by independent partner  
e.g. DENIC eG

# Siemens makes it happen ENUM in provisioning OSS Integration Component CSI – DNS Primary Server

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## **Service Provider's benefits**

1. Cost savings due to moving SS7 based transactions to DNS
2. Reduction of equipment and engineering complexity
3. Reduction of OPEX

## **Revenue Potential**

1. Today each SS7 transaction costs 0.01 cent for Service Providers
2. It is possible for a Service Provider to charge the user up to 1 Euro per month to host his ENUM entry (factor 1000, cost goes to revenue)

## Conclusion

1. ENUM is a consequent way of reducing complexity and cost
2. Time is critical and competitive market is an impending event
3. Siemens provide products and solutions today that evolve and then revolutionize exiting offerings
4. This is not a cost point market but it is a revenue point market and it is critical to recognize that you “get what you pay for”
5. Right point to start with the NGN action steps

**Thank you for your attention!**

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