Voice and Data legacy Systems - IP interworking

WL

1

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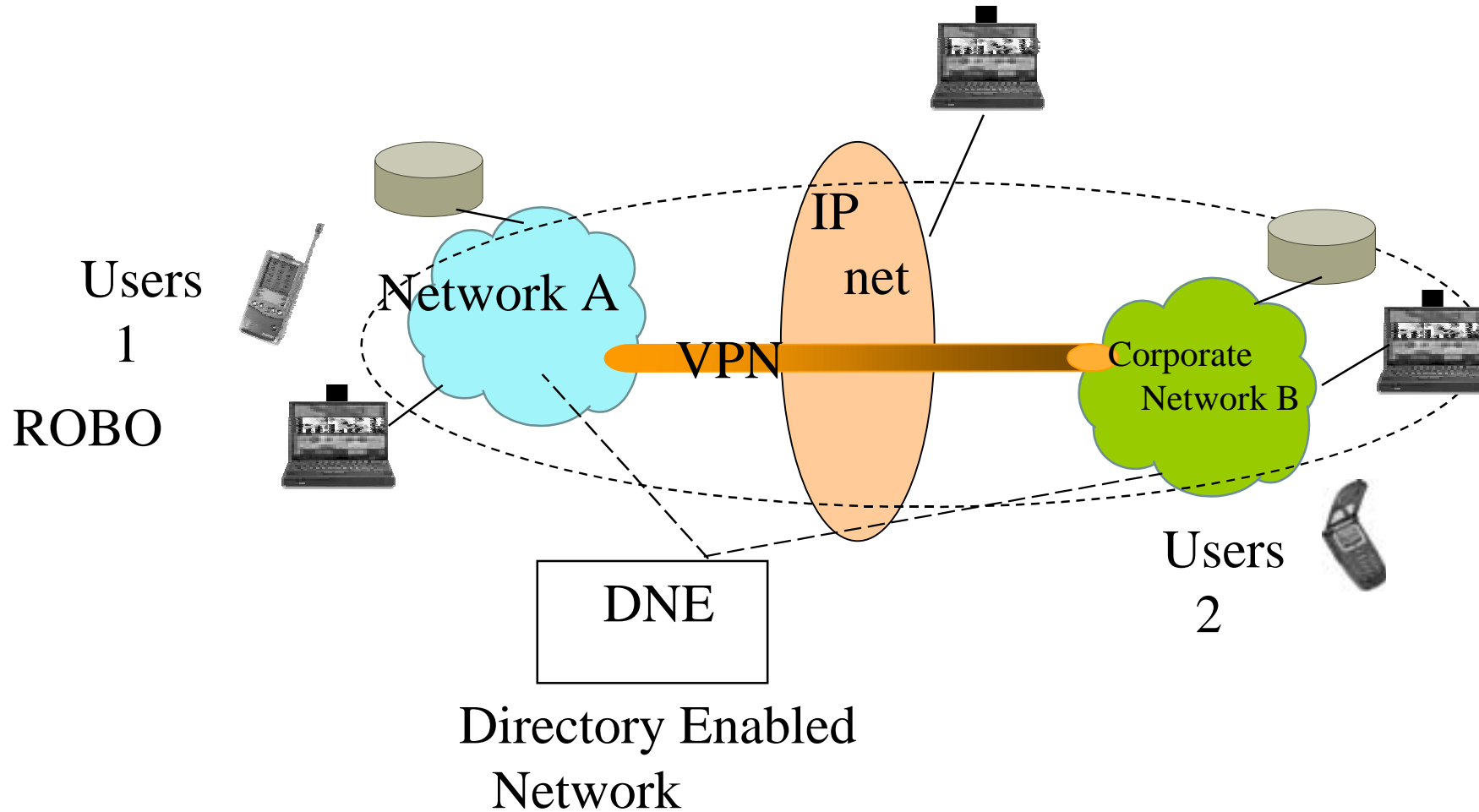
The evolution

◆ **Before:**

- ■ **Separation between Public and Private wireless networks**
    - ● **Several different wireless technologies in each case**
- ■ **Separation between PABX and Centrex functions**

◆ **Now IP standards offer:**

- ■ **Commonality**
    - ● **in term of core networks between public and private**
    - ● **in term of technologies BUT also:**
    - ● **in term of ownership**
        - **-Domain, QoS, Security, Responsibility**
        - -Different ' private ' Wireless sites interconnected (ROBO):
            - .with different levels of services and different wireless user access
            - .interworking
        - -Networks A and B can be Wireless VPN extensions(on a publicnetwork)

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Another dimension given by IP

Users
1

ROBO

Network A

IP
net

VPN

Corporate
Network B

DNE
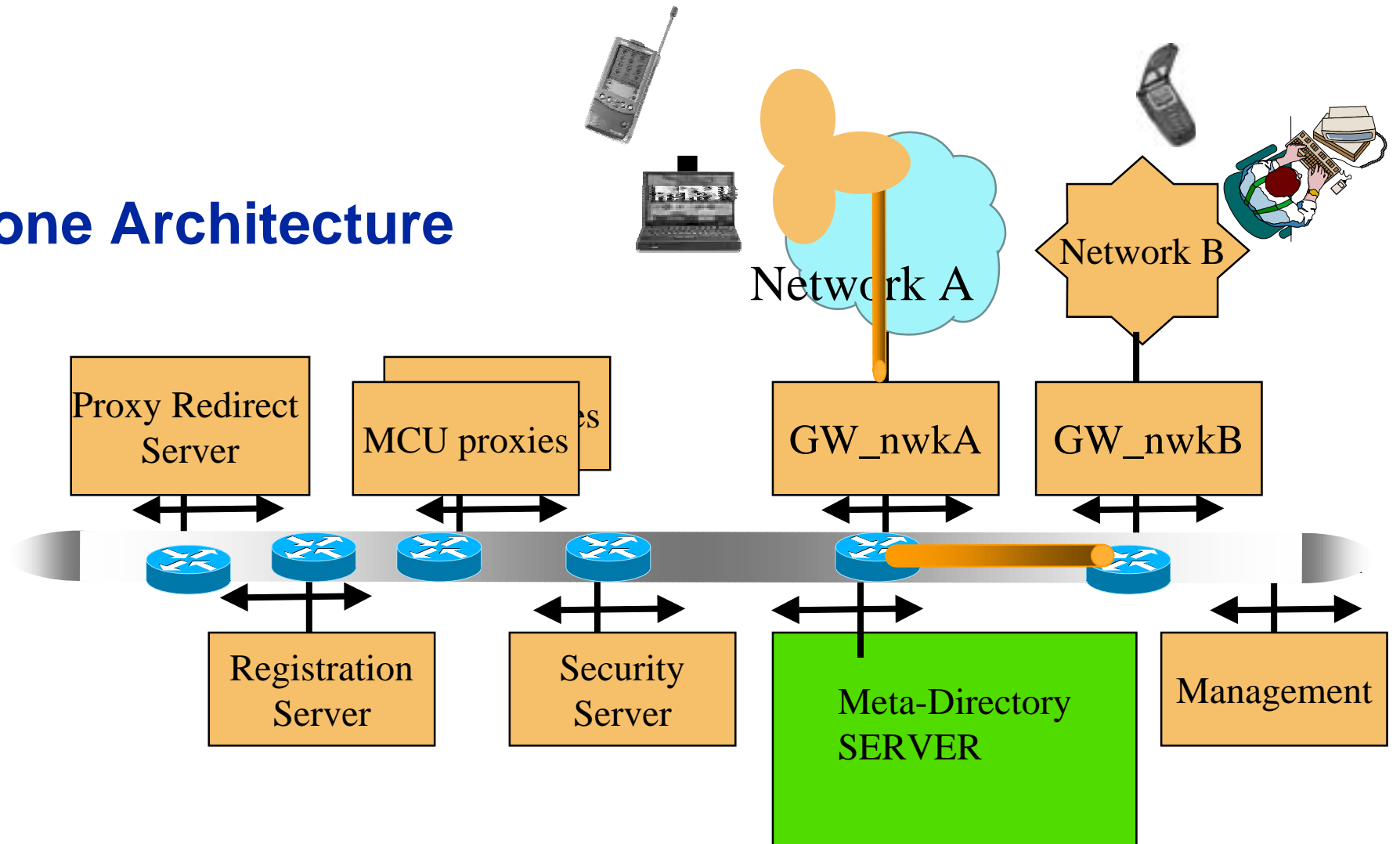
Directory Enabled
Network

Users
2

The context

◆ **Differentiate IP and non IP core networks**

◆ **Differentiate Interworking and Interoperability**

◆ **Interworking: users of two distant areas communicate but cannot roam as in interoperability**

  ■ **Users move within their own coverage**

◆ **User basic needs**

  ■ **Voice telephony interworking**

  ■ **Basic SS and addressing**

  ■ **Inter/intranet - data access (VPN type end to end)**

  ■ **Same Security policy**

  ■ **Same Quality of service**

◆ **Extension of coverage ' remotely' + access + services**

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The IP backbone

◆ **An IP VPN, with specific node(s), interconnecting the Wireless networks for Voice and Data**

   ■ **The backbone shall allow VPNs features to share resources and garantee Security (L2TP, IPSec, SocksV5, PKI…)**

   ■ **The backbone can offer new Services to the user e.g. multicast…**

   ■ **The backbone can be IP V6**

◆ **Different ' functionnal ' nodes:**

   ■ **Proxy redirect server**

   ■ **Registration server**

   ■ **Meta directory server**

   ■ **Security server**

   ■ **MCU proxy**

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Backbone Architecture

Network A

Network B

Proxy Redirect Server

MCU proxies

GW_nwkA

GW_nwkB

Registration Server

Security Server

Meta-Directory SERVER

Management

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The features

◆ **The Meta Directory (DEN)**

- ■ **HLR and VLR type information**
- ■ **Profiles and Policies**
- ■ **Interworking rules**
- ■ **Web Agents**
- ■ **Virtual images of the networks**

◆ **Global @ddressing**

- ■ **Powerful IP general addressing**
- ■ **IP V6?**

◆ **Use XML**

- ■ **interoperability**
- ■ **XML and SIP?**

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Interworking

- ◆ **Gateways**
  - ■ **VoIP interface: MGCP+…**
  - ■ **VPN gateway**
- ◆ **Security**
  - ■ **IPSec,X509, SIM...**
- ◆ **Scalability**
  - ■ **The protocol flows**
    - ● **Call control**
    - ● **Registration**
    - ● **Directory access ...**
      can be combined and the functionnal nodes merged

◆ Enable IP interworking for another dimension

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