Convergence

Presented by

Wally Hariz

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Agenda

- Long term growth opportunities
- Focus on the end user
- The operator opportunities
- Our convergence vision
  - User service convergence
  - Device convergence
  - Network convergence
- The way forward
- Summary

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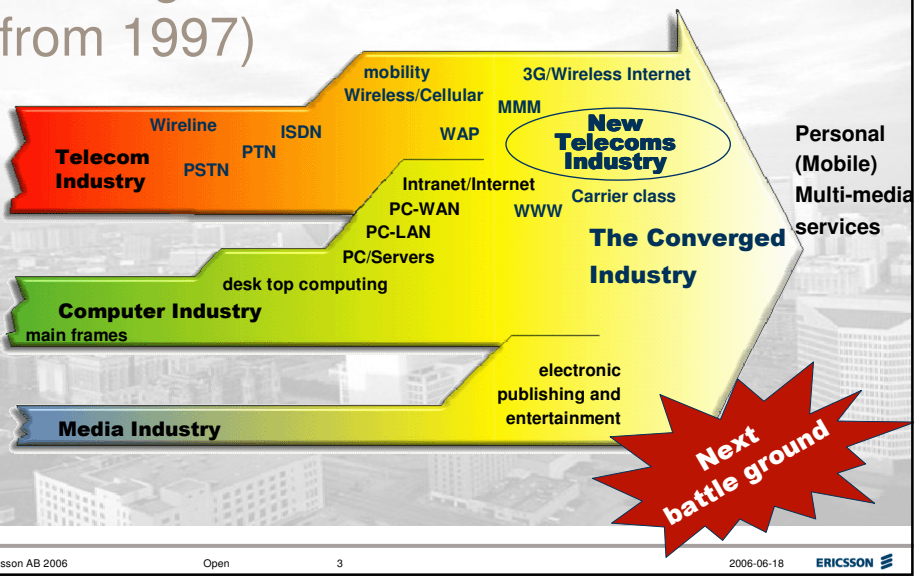
Industry transformation / Convergence (from 1997)



Convergence
It is happening today

Multi access mobile phone (UMA)

WLAN/2G/3G

Single mailbox

Bundling/ Triple play

Layered architecture

IMS

Single phone number

The telecoms industry has entered a new era of increased competitiveness, new business models and important technology shifts

Convergence is one important driver of this ongoing change.

Convergence definition

Traditionally, the term fixed-mobile convergence (FMC) has been used by the telecom industry when discussing the integration of wireline and wireless technologies. But it is not just about this particular kind of convergence, it is also about convergence between media, datacom and telecommunication industries. Convergence is considered from three viewpoints:

User service convergence;

where there are common user service delivery capabilities with access and device awareness. This means that a multitude of services (person to person, person to content and content to person) can be provided to the same user over different access networks and to different devices.

Device convergence;

common devices supporting several access types, such as CDMA2000, WCDMA, GSM, fixed broadband and WLAN. Device convergence allows multiple applications to be run, reusing the same functions for identification and authentication. Furthermore, the mobile device supports more and more functions in addition to telephony, e.g. Camera, TV/Video and email.

Network convergence;

this implies consolidation of the network to provide different user services, with telecom-grade quality of service, over several access types with an emphasis on operator cost efficiency and support to user service convergence.

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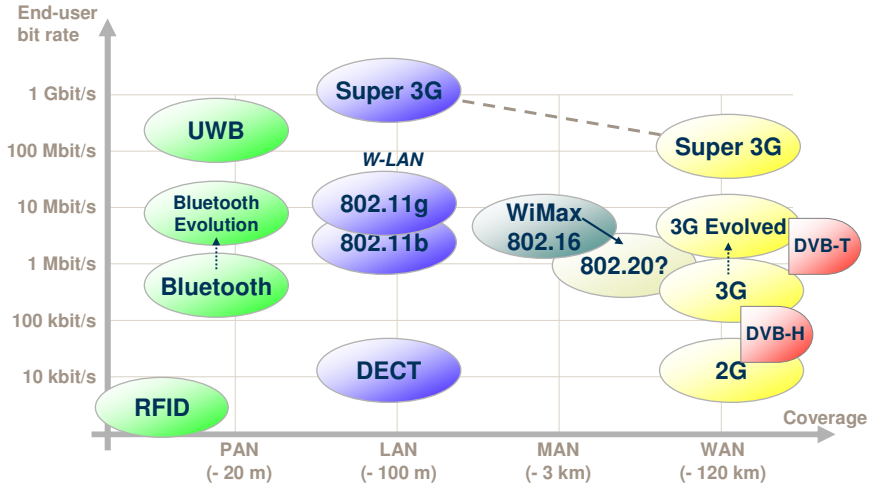
Bit rates and coverage for
Wireless Technologies



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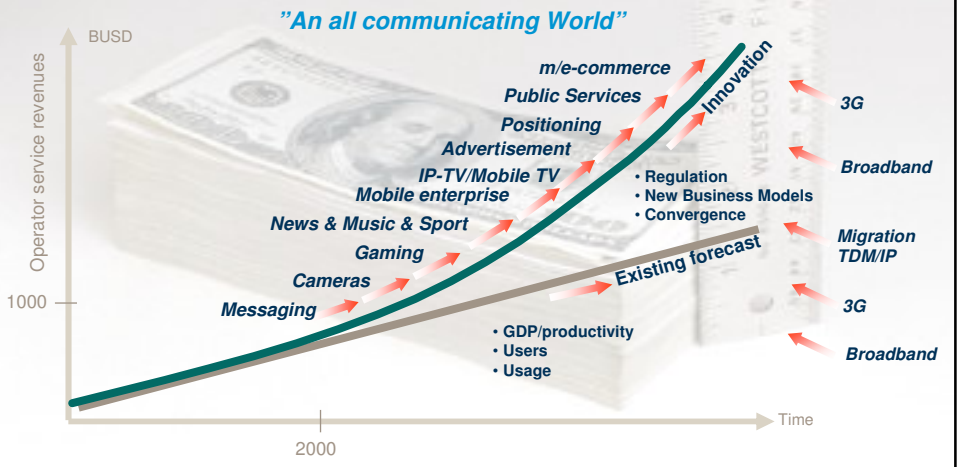
Telecom has many new

long-term growth opportunities

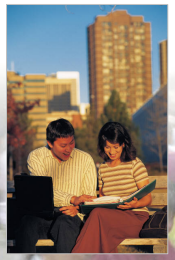
Market trends



Focus on the end user

Focus on the end user

- On the move
- At home
- In the office or working site



A qualitative study with 18 households in Sweden, U.K. and USA
March 2005

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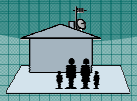
Services in the study

end user study

The mobile device as
"Connected home" remote control
- Media storage
- Video recorder
- Security
- Energy

Home communication
–Video calls
– Mobile @home

Coordination and synchronization
of family activities
– Family and presence
– Calendar



Results from the "Evolution towards Converged Services" study made by Ericsson Consumer Lab

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end user study

Some findings from the study

- Most users positive to convergent services
- High interest for Entertainment related services
- Other highlights
  - Connected home – media storage and sharing
  - Video calls between all type of devices

Results from the "Evolution towards Converged Services" study made by Ericsson Consumer Lab

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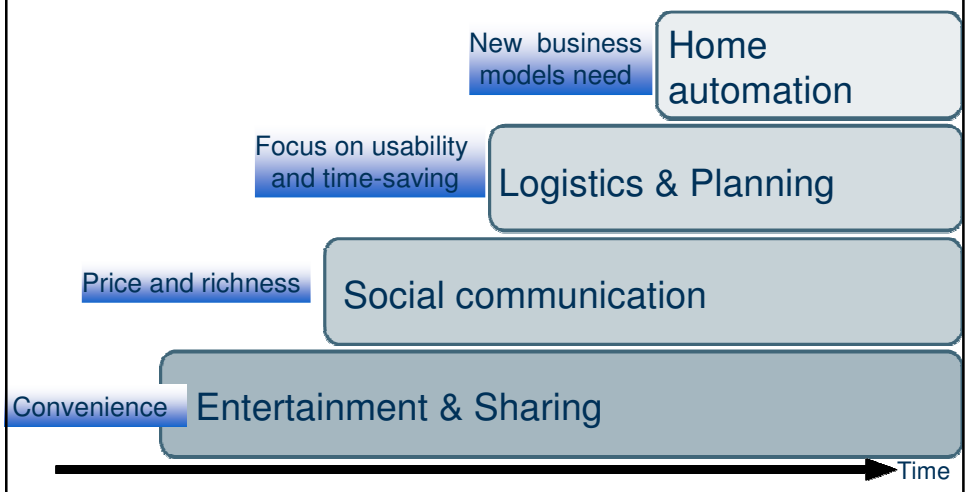
end user study



Results from the "Evolution towards Converged Services" study made by Ericsson Consumer Lab

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Convenience and ease of use

Focus on the end user

- Make life more efficient
- Simplicity in functionality e.g. similar user interfaces for most services (and across accesses)
- Communication and content services available across several networks (e.g video call from 3G phone to PC)
- Services adapted to the device and access characteristics
- Simplified processes for identification and payments (e.g single sign on)
- Easy to have cost control

consumers

enterprise

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Focus on the end user

Always Best Connected

- Able to connect
  - anywhere
  - anytime
  - by device of choice
  - when on the move.
- Best varies according to
  - user preferences
  - used service
  - quality, speed and price.
- Seamless transition between access methods for Voice/Video/Packet data (session continuity)

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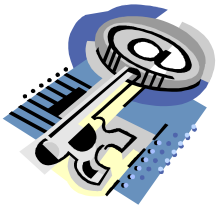
Focus on the end user

Reliability and security

- Reliability in all transactions independent of access
- Connection quality
  - voice
  - video
  - data
- Authentication and security must be reliable regardless of access
- No viruses, no worms, no fraud
- Nobody listening in
- Ability to see who's calling



Life is getting a bit challenging…

Focus on the end user

Using all kinds of devices...

All the people we want to reach...

Authorities

Business contacts

Family

Co-workers

Key operator role: provide **reachability**!
- Be reachable
- Be able to reach
- Regardless of device, bearer, location, ...
- Safe, reliable, trustworthy, adaptible!

And all the services we want to reach...

Any time, any place!

The operator opportunities

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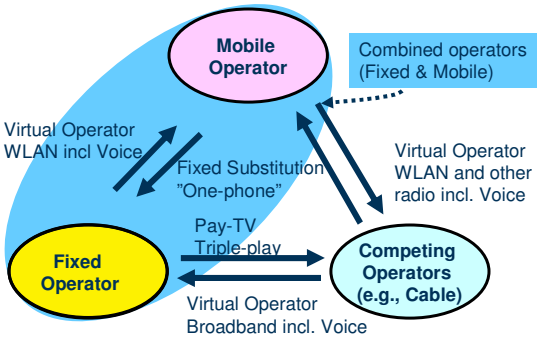
the operator opportunities

Operator Business Environment
Convergence



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Convergence drivers and actions

Increased competitiveness, new business models/partners and important technology shifts

the operator opportunities

- Mobile and Fixed Operator/Service Provider
  - To utilize the bundling possibility, increase ARPU with new converged services
  - Cost rationalization
- Mobile Operator/Service Provider
  - Pursuing fixed/enterprise customers
  - Promote Mobility advantages
  - Evaluate access alternatives (for instance BB access)
- Fixed Operator/Service Provider
  - Maximize bandwidth advantage – triple play etc.
  - Expand own business with mobile access
- CableTV Operators/Service Provider
  - Expand business with BB access and VoIP services

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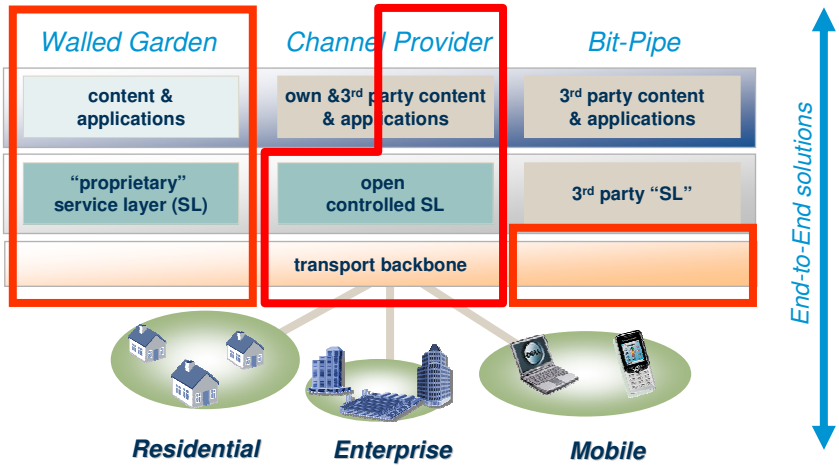
Operator Roles

New Multi-Media Business Models for P-2-P, C-2-P, Consumer / Enterprise

the operator opportunities



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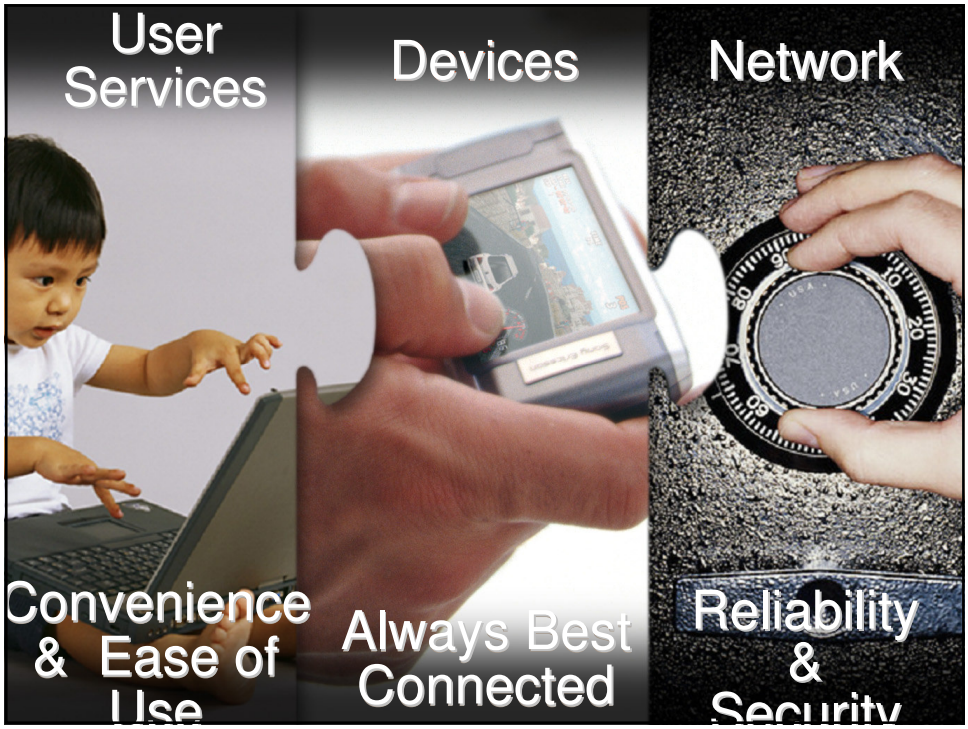

Our vision

User Services Convergence

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Common service framework

user service convergence

- Common service execution standard (IMS) for all applications
- Applications available over several accesses (Access aware service platform)
- Flexible and common charging system
- Common presence and group management functions
- Common user management
  - Different Subscription profiles for quality and speed.
- Common service management
- Common identification and authorization system (SIM card based solution)

Our vision

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Our vision

Device Convergence

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The mobile phone embraces and

connects product after product

device convergence

"Always with you"

Credit cards
TV reciever
Video camera
Game console
GPS
Digital camera
MP3 player/Walkman
Memory stick
Color Screens
Portable radio
PDA
Fax
Pager
Fixed phone

Communication, Entertainment, Transaction & Navigation center

Personal Communications & Content center: Voice, SMS, MMS, e-mail, etc

The triple play

device convergence

Internet (PC)

TV, Video, Audio

Telephony

Convenience through **convergence**

The connected home

device convergence

APPLICATIONS

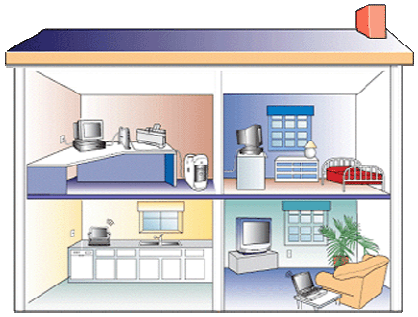
- Off-site storage
- Electronic messaging
- Presence
- Calendar synchronization
- Collaboration

ACCESS

- CPE Hardware
- Shared Internet Access
- Variable access
- Shared resources (Printers)
- Any device (PC, laptop, mobile at any location)

ADMINISTRATION

- Account administration
- Equipment Configuration
- Service Configuration
- User Privileges
- Usage Monitoring



ENTERTAINMENT

- IP TV
- Interactive TV
- Streaming music
- Video on Demand
- On-line Gaming

COMMUNICATIONS

- Wireless Telephony
- Electronic Messaging
- Instant Messaging
- Intercom
- Voice/Video Conferencing

SECURITY

- In-Home Monitoring,
- Intrusion Detection
- Remote Video Surveillance
- Parental Controls
- Access Control (Firewall)
- Anti-Virus, SPAM control

Our vision

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The Connected Home

device convergence

Our vision

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Device aspects

Summary

device convergence

- Multi-access devices with intelligence to select accesses (Always Best Connected).
- Multi- and single purpose devices
- Platform architecture in devices based on open standards
- Multi purpose use of SIM-card technology (authentication/security mechanisms)
- Home Networks (Home Gateways, Triple Play etc)

Mobile@Home

Our vision

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Our vision

Network Convergence

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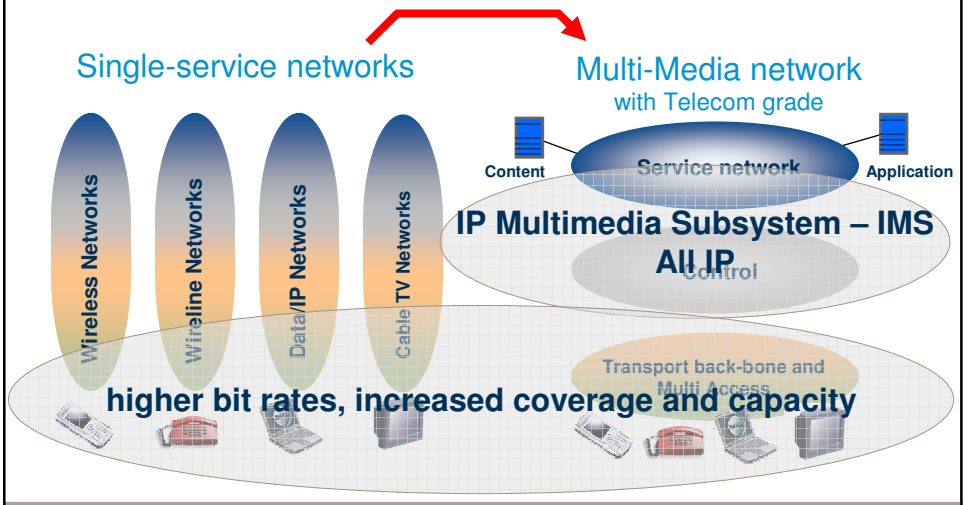
Transformation

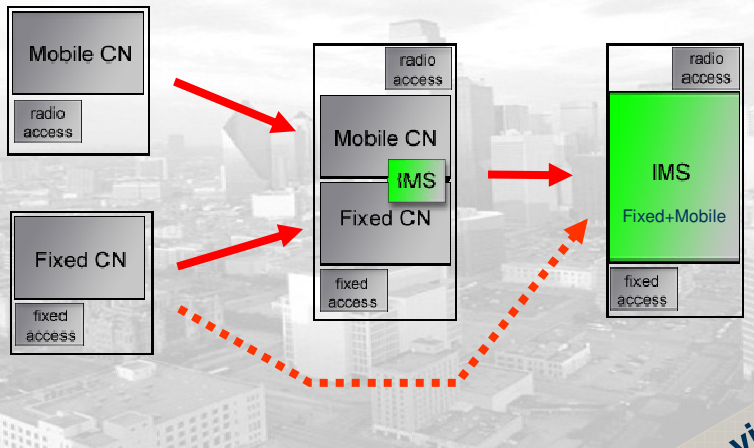
network convergence

new architecture and business models



Network evolution steps

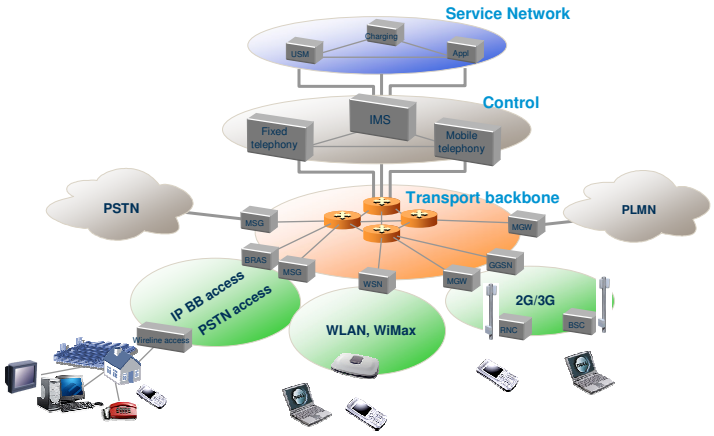
network convergence



Introducing IMS

Co-existence with existing infrastructure

network convergence



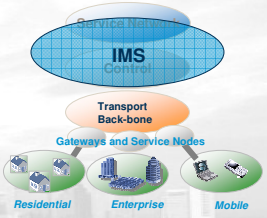
Our vision

Network Convergence

Implementation

network convergence

- The 3GPP IMS is the common base both for mobile and fixed access (even before a common backbone is implemented)
- Layered architecture
- Unified O&M
- Existing products for mobile and fixed access further developed to support interoperability between VoIP and CS voice
- Stepwise network migration according to specific operator needs.



Our vision

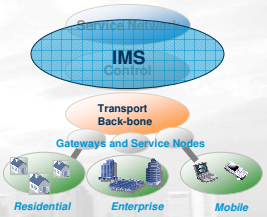
Network Convergence

Implementation

network convergence

Access

- Optimised GSM/WCDMA/CDMA radio access network for IMS (IP-telephony and Video over IP)
- High speed fixed broadband access using IMS functionality
- Growth of short/medium range radio technologies (WLAN, Wimax, Bluetooth) as an extension of fixed broadband access.



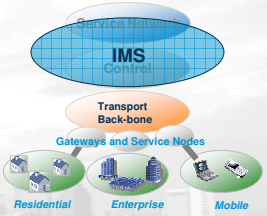
Our vision

Network Convergence

Implementation

network convergence

- Common IP based backbone
- MGW's, Session Border Gateways and other key nodes combined into the same physical nodes.



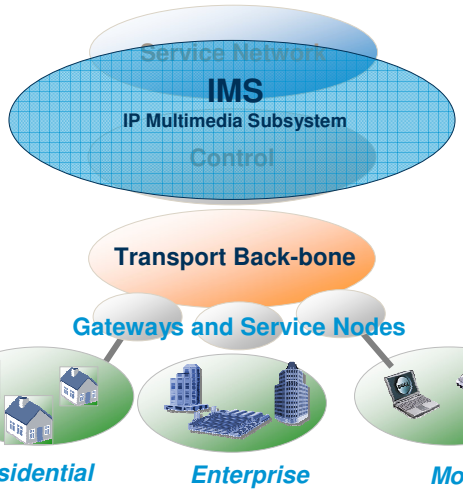
Our vision

network convergence

Target network architecture

Common foundation for fixed, mobile and enterprise services

Shared functions:
- Charging
- Presence
- Directory
- Group & List functions
- Provisioning
- Media handling
- Session control
- O&M



Shared competence
Shared O&M staff
Shared Infrastructure

Our vision

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The way forward

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Why Ericsson?

The way forward

Understanding

Prime driver

Delivery


User Services


Devices


Network

- Consumer & Enterprise Lab
- Mobility World
- Ericsson Mobile Platform
- R&D
- Experience from Installed Base
- Global Telecom Services
- Operator / Service Provider Dialogue

- Richer user services
- Secure network migration towards all IP

An all Communicating world

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summary

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Ericsson position on convergence

- Ericsson believes in growth of the telecom industry and the vision of an all communicating world.
- Ericsson believes in the significance of convergence and will actively pursue the business and technology evolution in these areas.
- Ericsson continously develops a product portfolio that leverages on the installed base.
- Based on our understanding of the specific operator and user needs Ericsson tailors converged solutions.

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Convergence summary

- Operators will explore convergence in order to grow their business and reduce cost
- Main end-user benefits are Ease of use, Always Best Connected, Reliability and Security
- Convergence is implemented in three dimensions: User Services, Devices and Network.
- The evolution starting point, requirements and needs are unique for each Operator/Service Provider.
- Ericsson supports convergence with a stepwise approach starting from the installed base

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