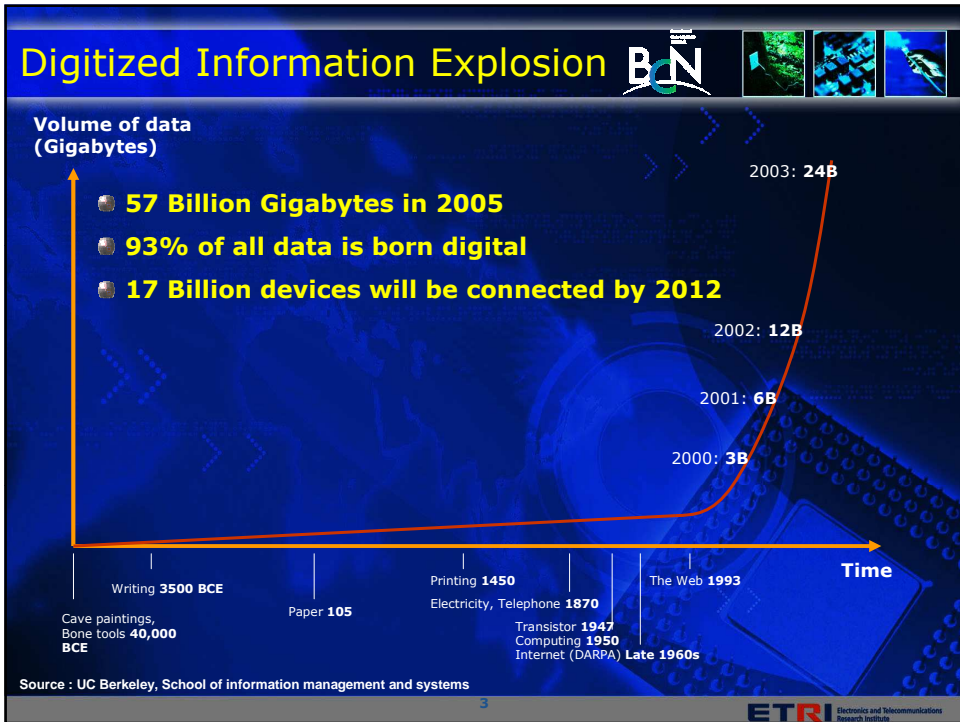
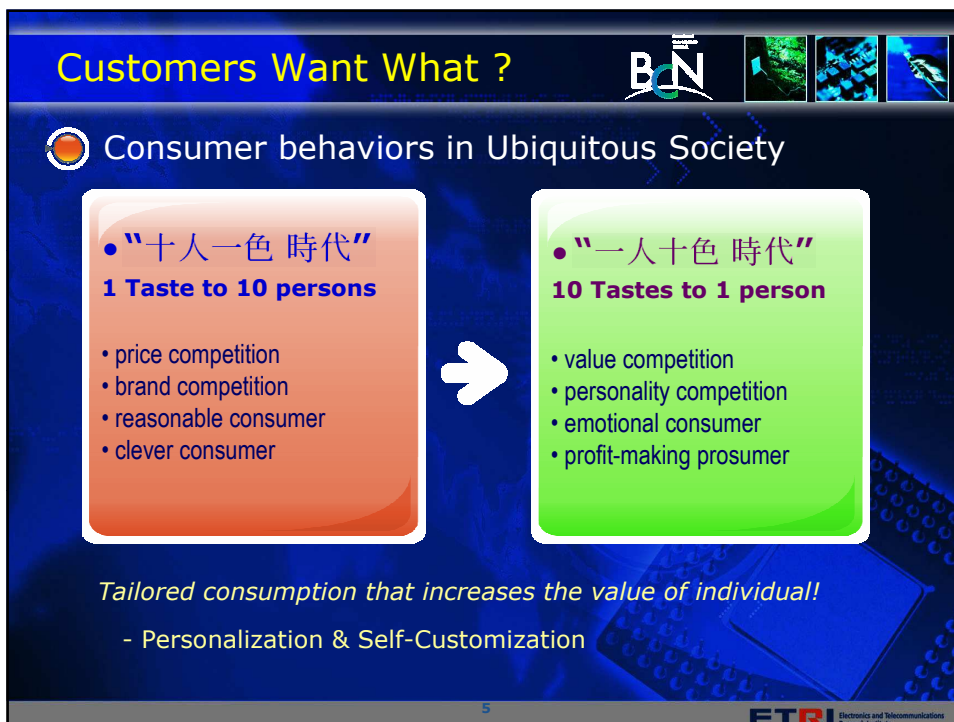
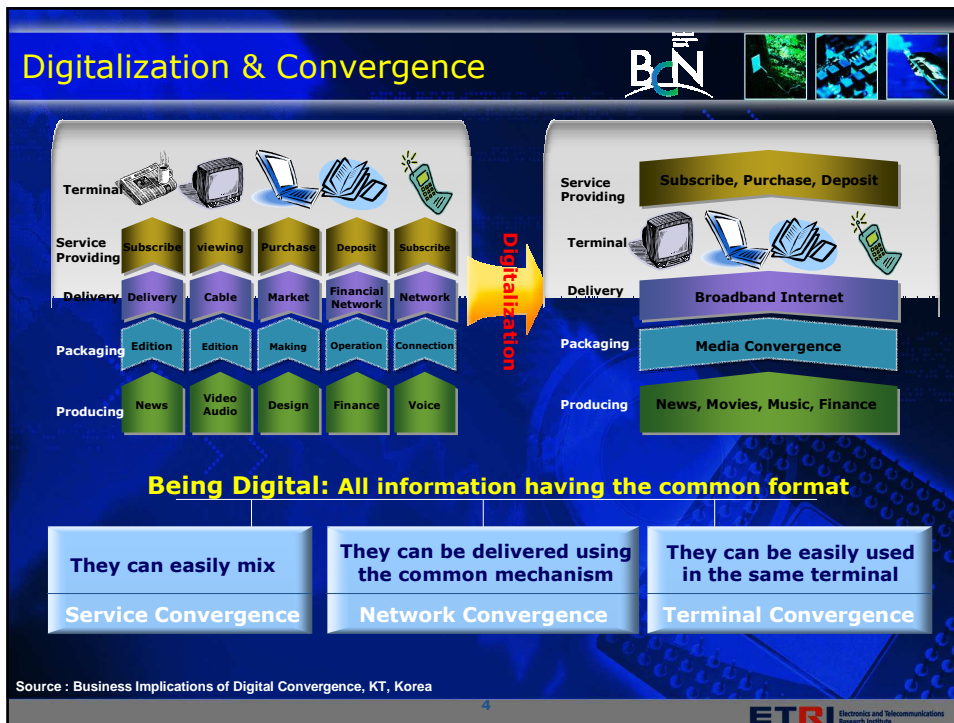


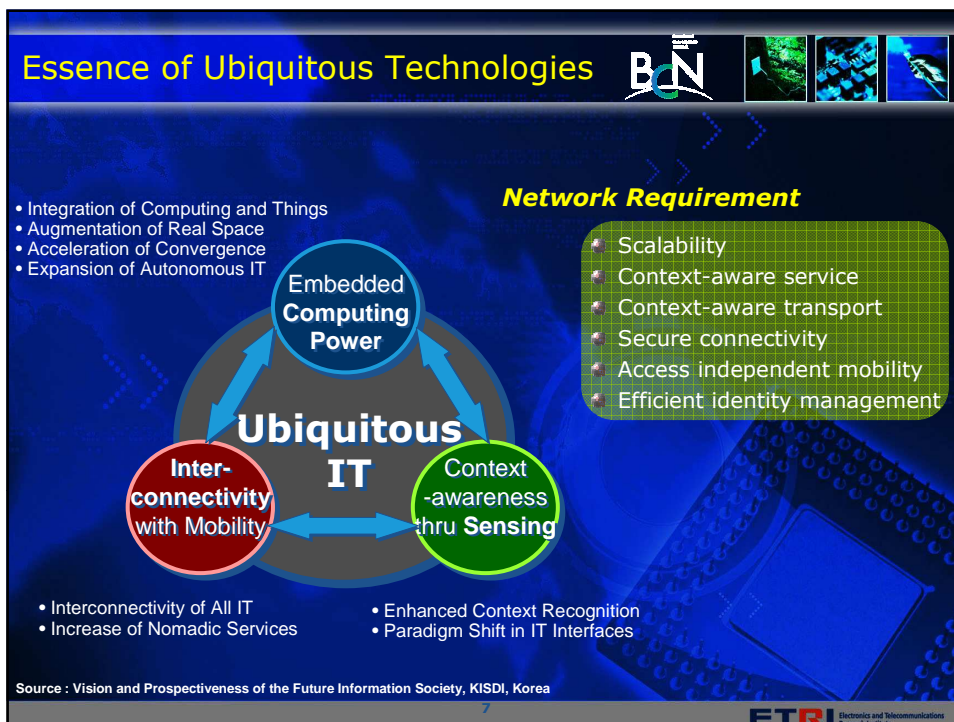
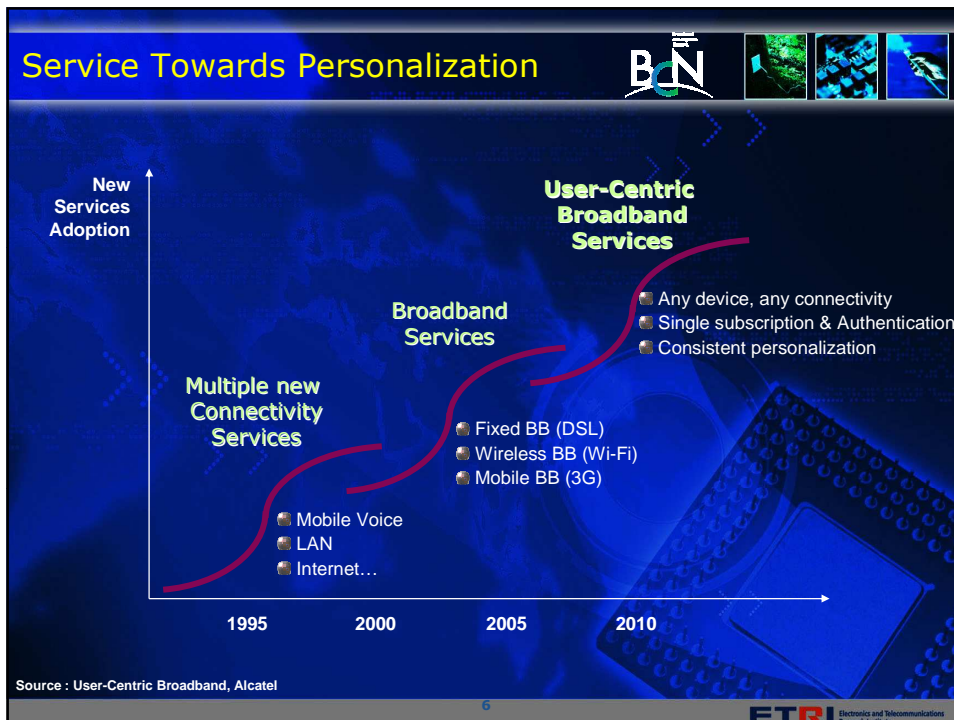
## Megatrend

- Digital Convergence
- Personalization
- Ubiquitous Computing

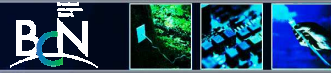
**ETRI** Electronics and Telecommunications Research Institute



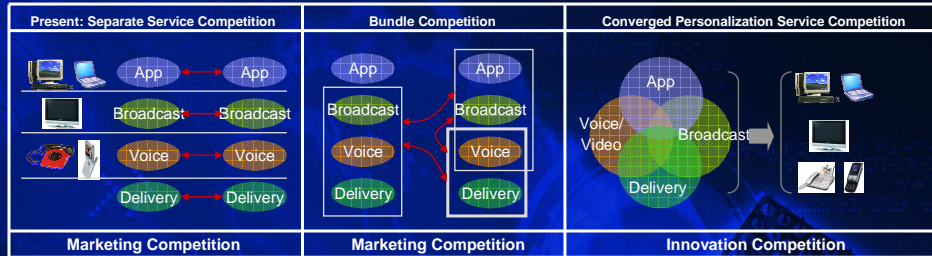




# Why the Network & Platform Again?



## Innovation Competition is awaiting



- Differentiation in the network capability
- Fast service creation/delivery platform
- Integrated platform for the upcoming converged services
- Holistic management & maintenance capability

Source : Business Implications of Digital Convergence, KT, Korea

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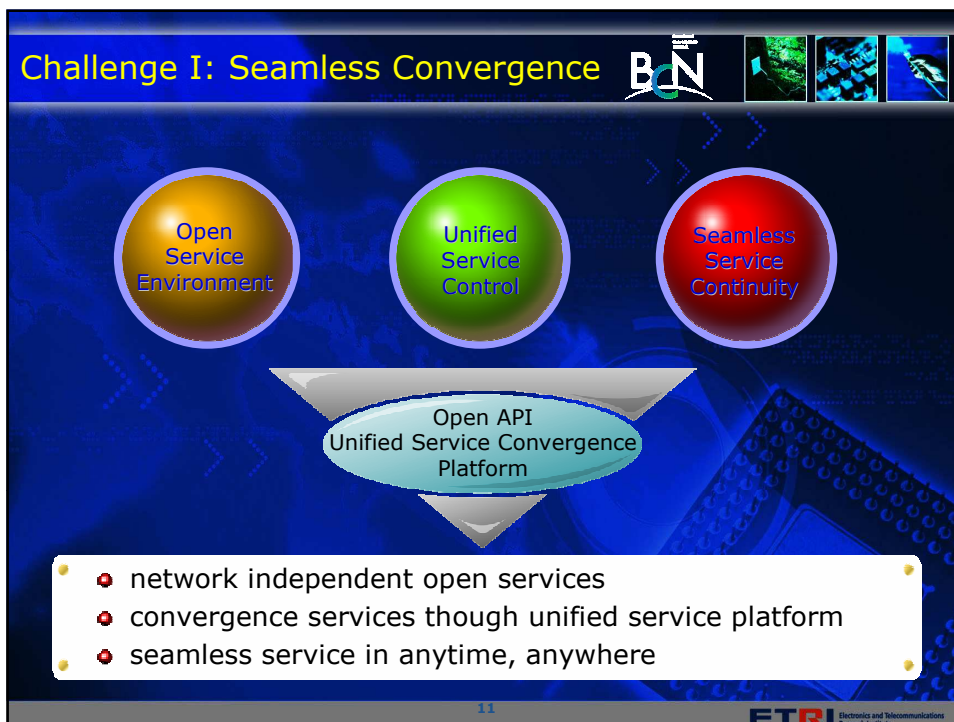
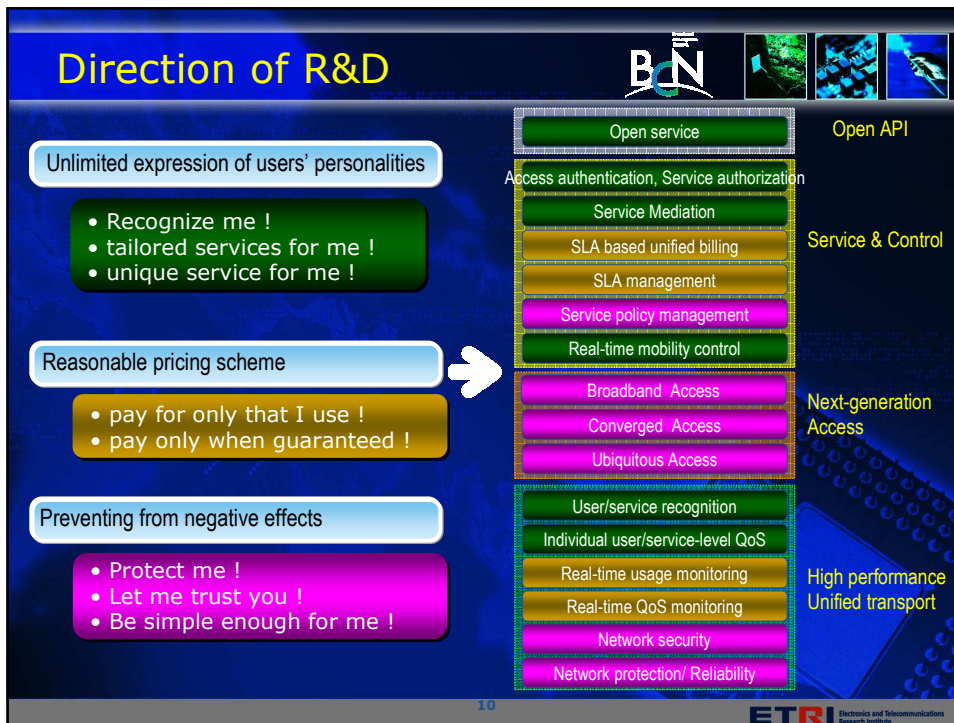
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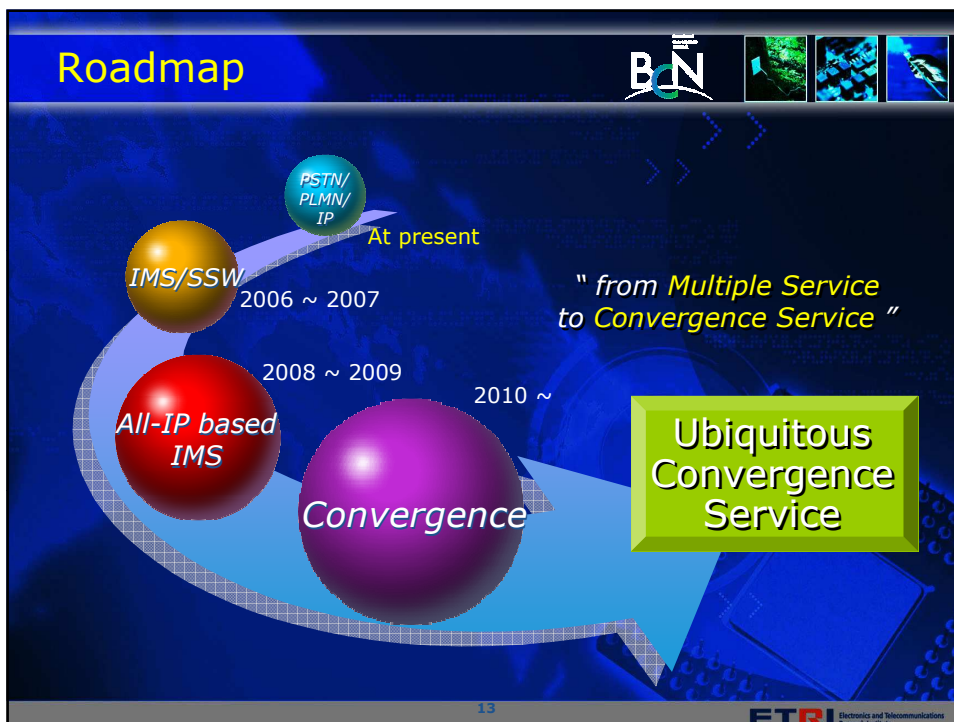
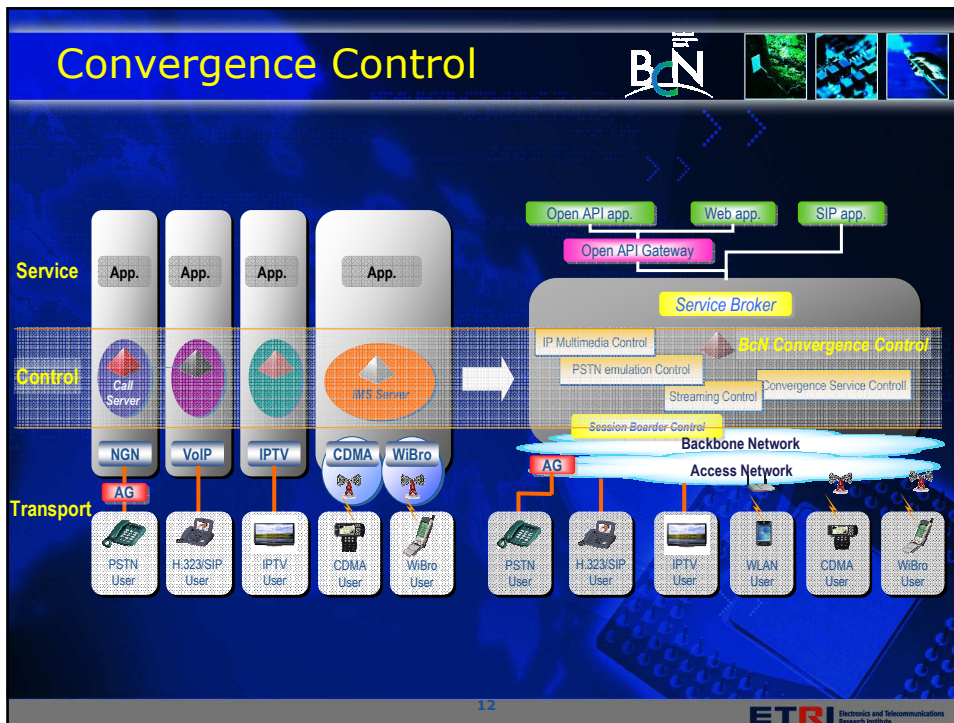
## Key Technology Development

- Direction of R&D
- Key Challenges & Roadmap
- Key Results

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## Challenge II: New IP Transport

**E-t-E QoS Service**      **Subscriber/Service-aware Transport**      **Terminal Mobility**

Flow based TE  
Network Provisioning  
Enhanced AAA  
L3 mobility

- Differentiated & personalized premium services
- E2E QoS incorporating legacy aggregation devices (IP-DSLAM, ...)
- Fast handover between different IP networks

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## Managed IP Transport

**Service**      Guaranteed Services (VLL, L2VPN, ...)      iCOD (IP-TV, VOD, ...)      Multimedia Connectivity (VoIP, MMoIP, ...)

**Transport network control**      Network Control Platform

**Transport Network**      Managed Access      Premium IP      Managed Access      Best Effort      Premium IP

**N.E**      Aggregation Switch      Access Router      Metro Switch      Service Switch      IP Core Switch

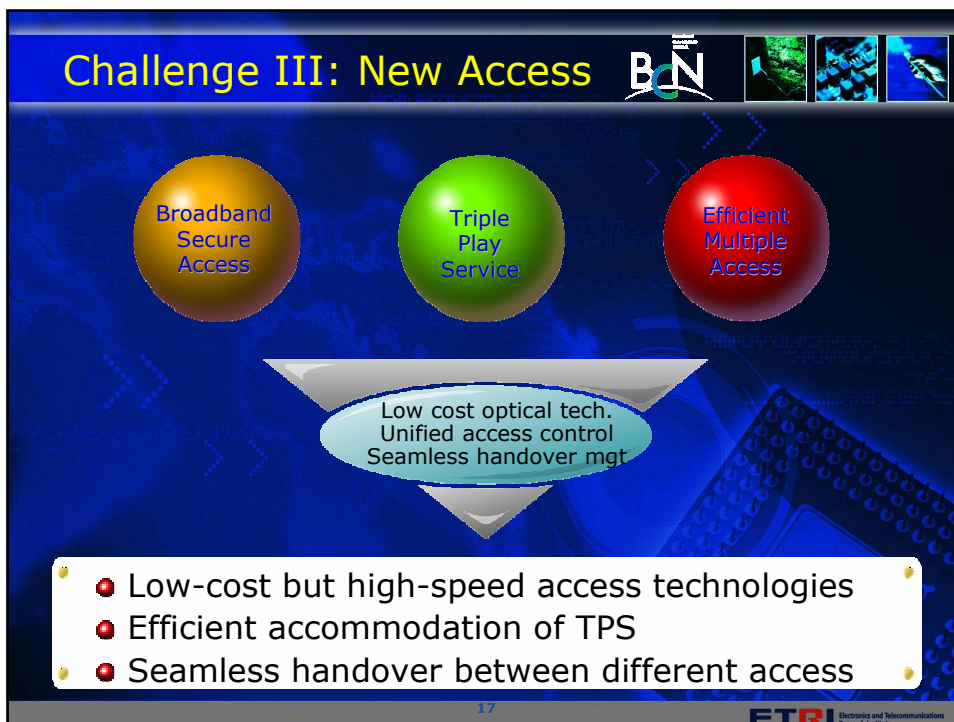
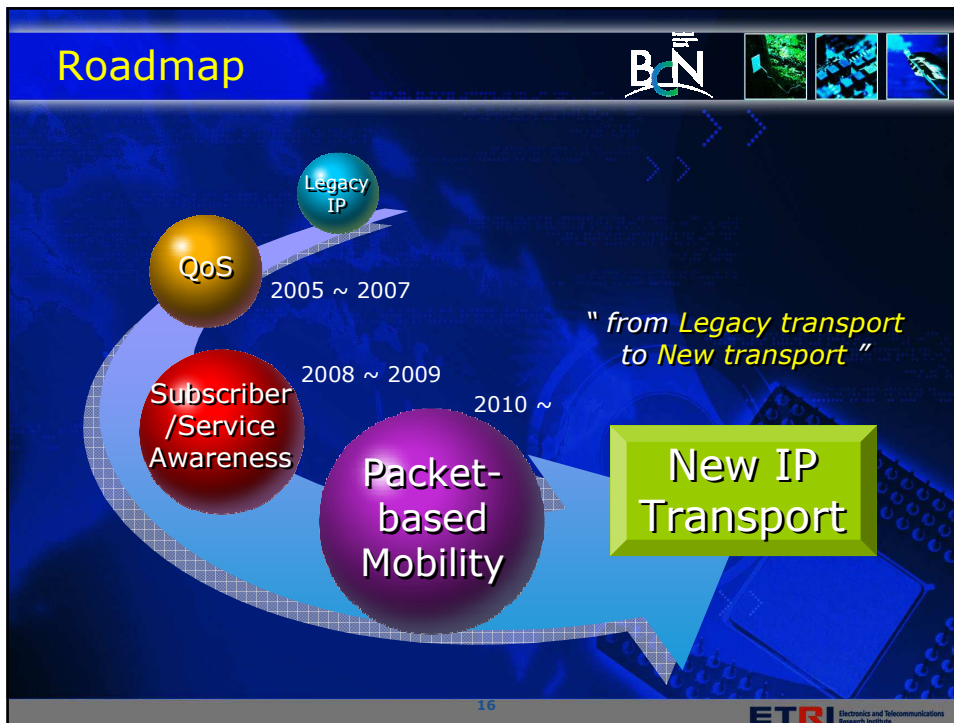
**Terminal**      [Laptop, Mobile Phone, Tablet, etc.]

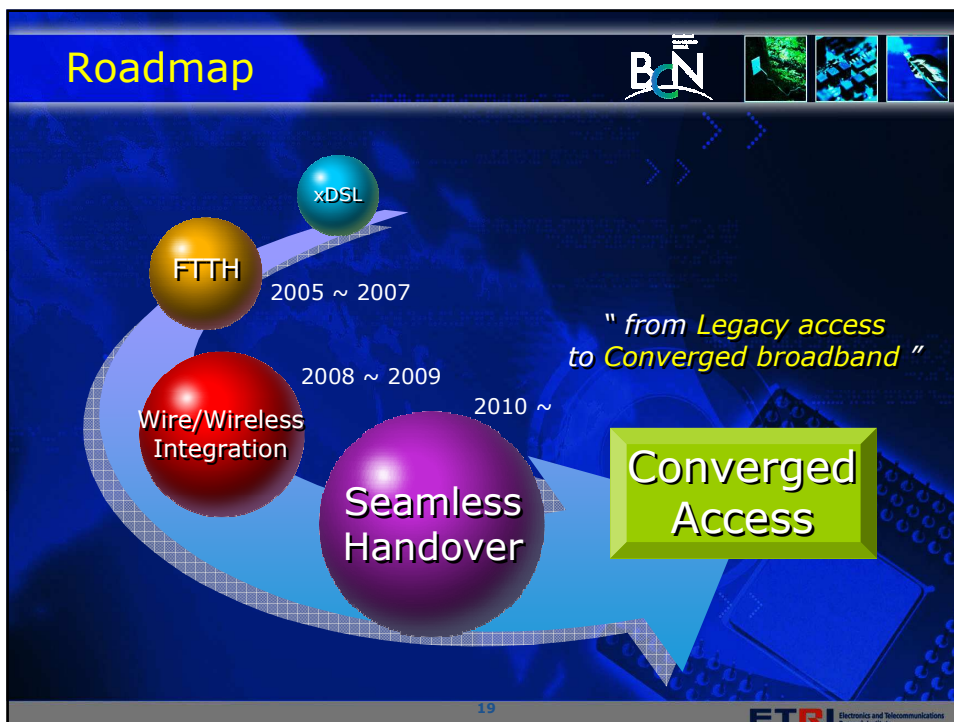
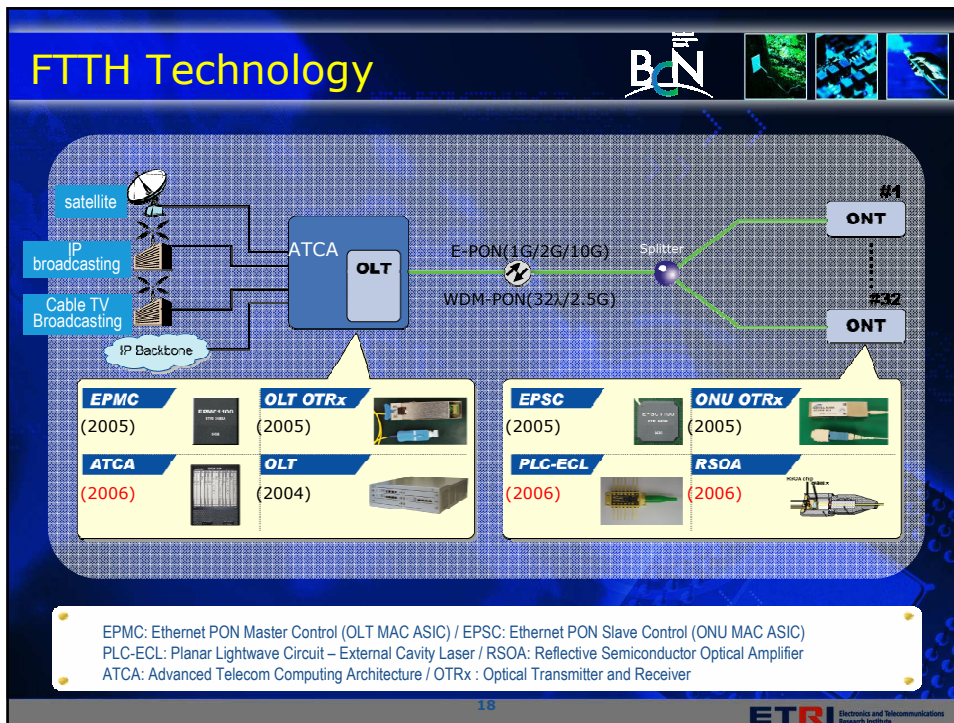
Flow-based network provisioning

Flow-based Switch/Router

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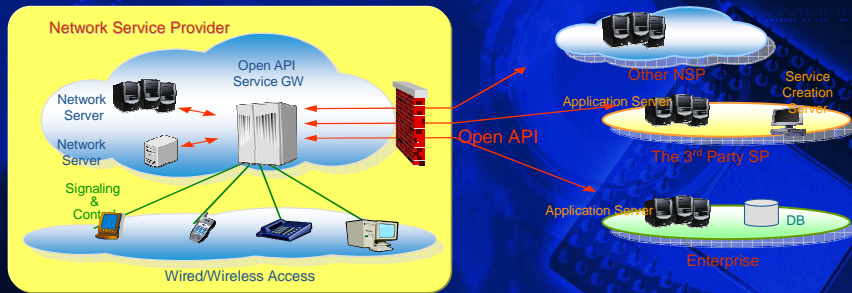




## Key Result: Open API



- Open API Interoperability Test
  - MSF GMI : '06.10
  - ETSI PlugTest : '06.9
- BcN Trial Services
  - KT : e-voting
  - LG Dacom : T-Banking Click Call,
  - Hanaro : Live Phone
- Commercial Services
  - KT : Biz- Phone ('06.6), U2Phone ('06.9.)
  - LGT : Groupware Click call ('06.11.)
  - LG Dacom : IPTV-Banking Click Call ('06. 11)



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## Key Result: NCP & QSR Series



**NCP**  
Resource Mgt.  
Per-flow control  
Monitoring

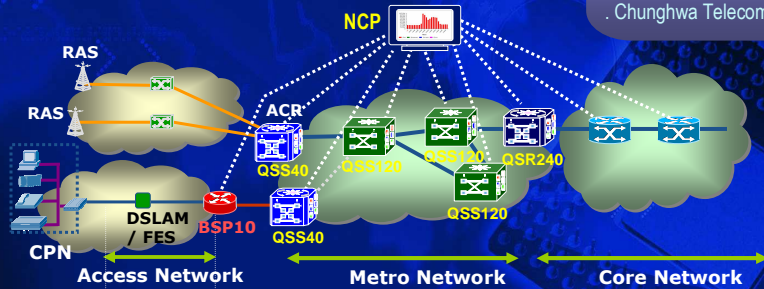
- Developed : QSR series specific NCP  
Intra-carrier NCP incorporating legacy NEs
- Planned : Inter-carrier NCP & Convergence NCP

**QSR**  
Flow-based forwarding  
Edge service function

- Developed : QSS40/120, QSR240
- Planned : BSP10, Enhancing of QSS40/QSR240

32 systems of QSRs have been installed by 2006

- e-Government Network
- ChinaNet.Com
- NEC NGN Testbed
- Chunghwa Telecom

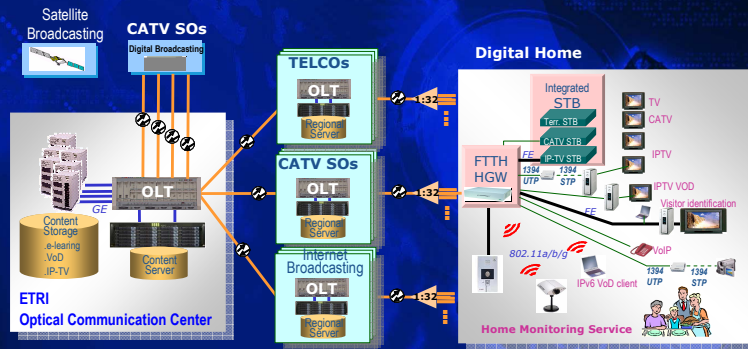


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## Key Result: PON-based FTTH



- Deploying Optical Infra (2005~2008)
  - Applying R&D products : E-PON, WDM-PON, G-PON
  - 100Mbps TPS to 20,000 subscribers
- Commercialization of FTTH equipment & services (2005~2008)
- Building of Field Test-bed Network (2005~2009)



OLT

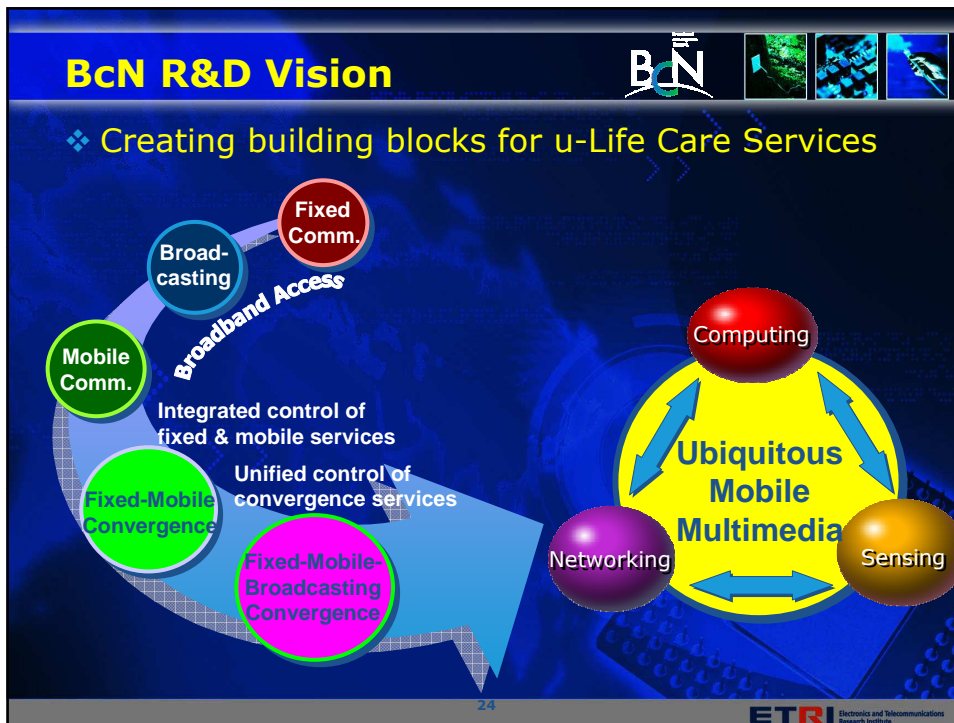
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Epilogue

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## BcN Initiative

- BcN is a key infrastructure opening the era of **Ubiquitous mobile multimedia**
- BcN initiative is an effort to make a new NGN solution for **Cost-effective and value-innovative infra**
- To achieve BcN/NGN vision efficiently and effectively, **Global Collaboration is a must**

Collaborative research topics for technology development and standardization :

- Integrated AAA
- Personalization Management
- FMC service control
- Packet based seamless mobility
- Flow-based TE
- Optical Transport

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# *Thank You !*

*kpjun@etri.re.kr*

Broadband Convergence Network  
Research Division

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Electronics and Telecommunications  
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