

# Beyond Broadband Access

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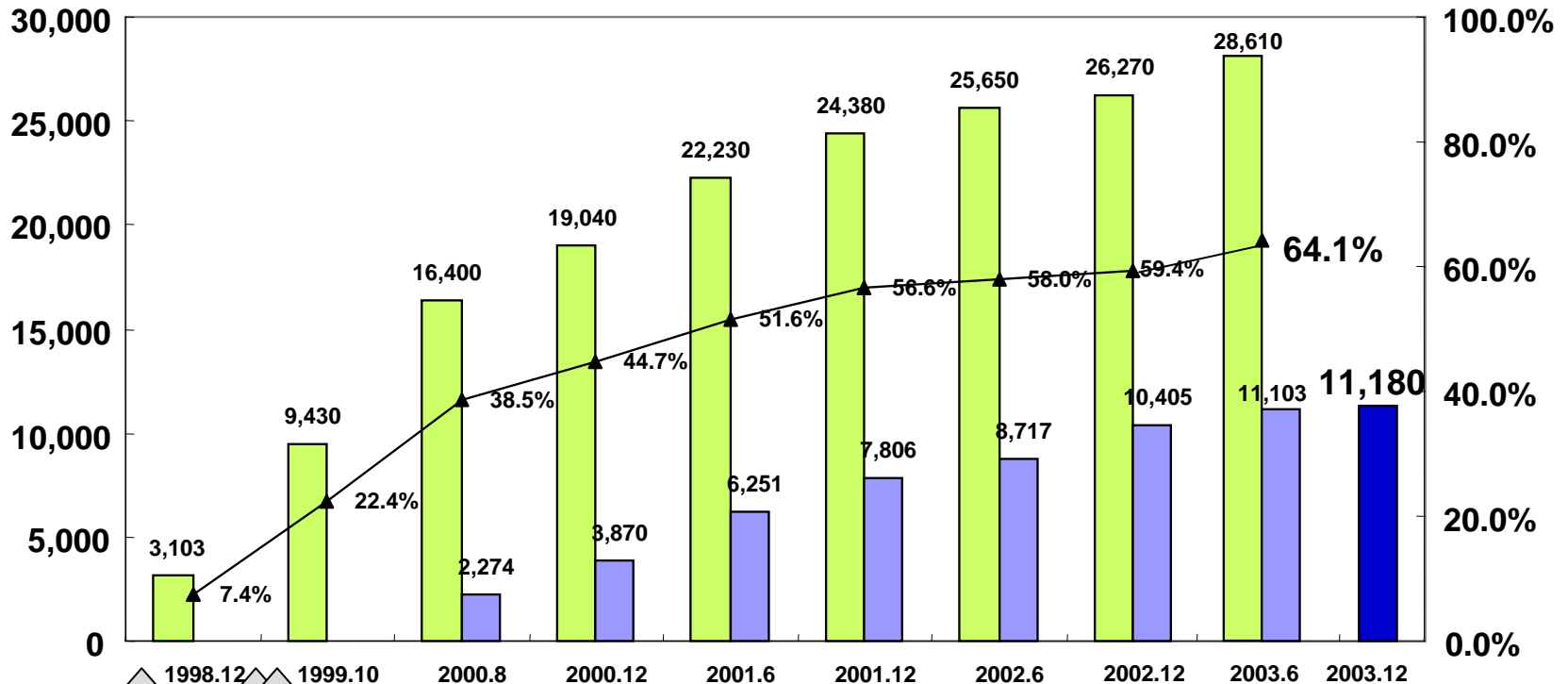
# Agenda

- ◆ **Broadband Internet in Korea**
- ◆ **Beyond Broadband Services**
- ◆ **Features and Directions**
- ◆ **Summary & Remarks**



# Broadband Internet Business in Korea

(unit: thousands)



↑ 1998.7 Thrunet  
 ↑ 1999.4 Hanaro  
 ↑ 1999.6 KT



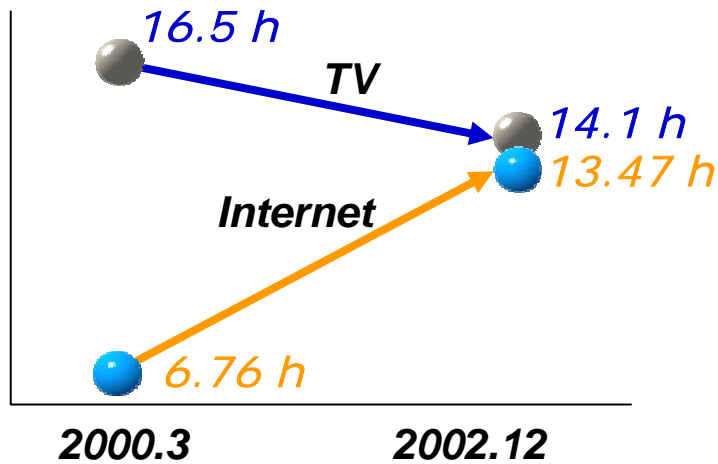
↓  
**~73% of total households**

(ref: www.krnic.or.)

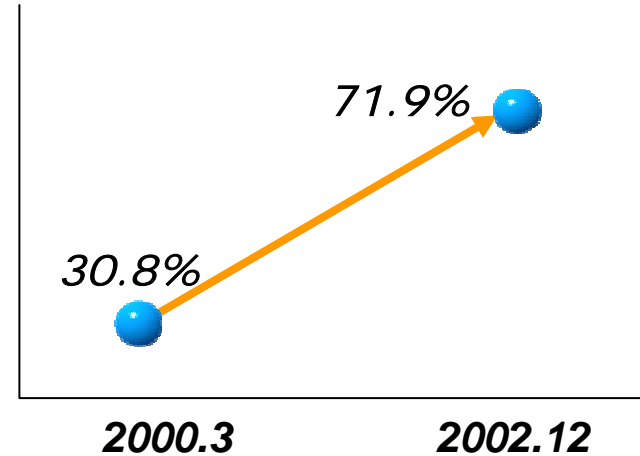
# Changing Life Style

- **Phenomenal increase of broadband Internet usage** (ref: isis.nic.or.kr)

*Weekly hours spent on Internet & TV*



*% of daily Internet users*



- **On-line banking: More than 30% of total transactions**
- **On-line stock trading: More than 50% of total transactions**
- **e-Commerce: 17% of total commerce transactions**
- **On-line gaming: Market size 2.5 times the size of console game market**  
→ **Evolving into another type of entertainment area: [game league](#)**

# Two Sides of Broadband Internet Business in Korea

## Threat



## Opportunity

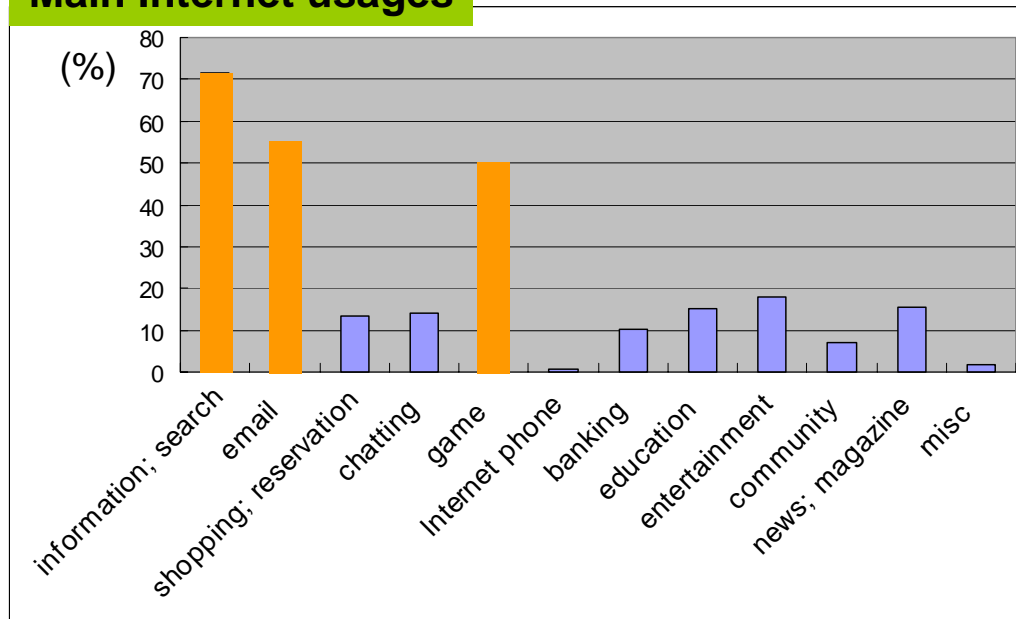
Revenue: Saturating market with flat rate  
Expenditure: Increasing CAPEX/OPEX due to doubling traffic  
High customer expectation level:  
- avr. ~4.5Mbps bandwidth per customer  
- customer sensitivity to network quality

- ◆ Has established
  - high quality infrastructure
  - Large customer base
- ◆ Opportunities in application & value-added services



# The Way Broadband is Being Used Today

## Main Internet usages



Mainly used for best-effort, data/control/file-oriented, store-&-forward applications

- seldom used for high quality, interactive/distributive media services

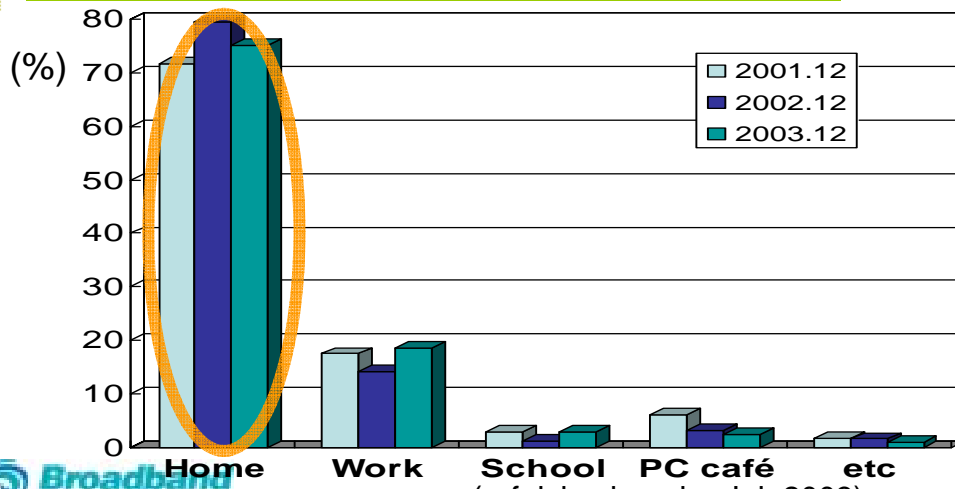
Today's broadband Internet service is limited to

- specific locations
- specific time of day
- specific terminal
- specific applications



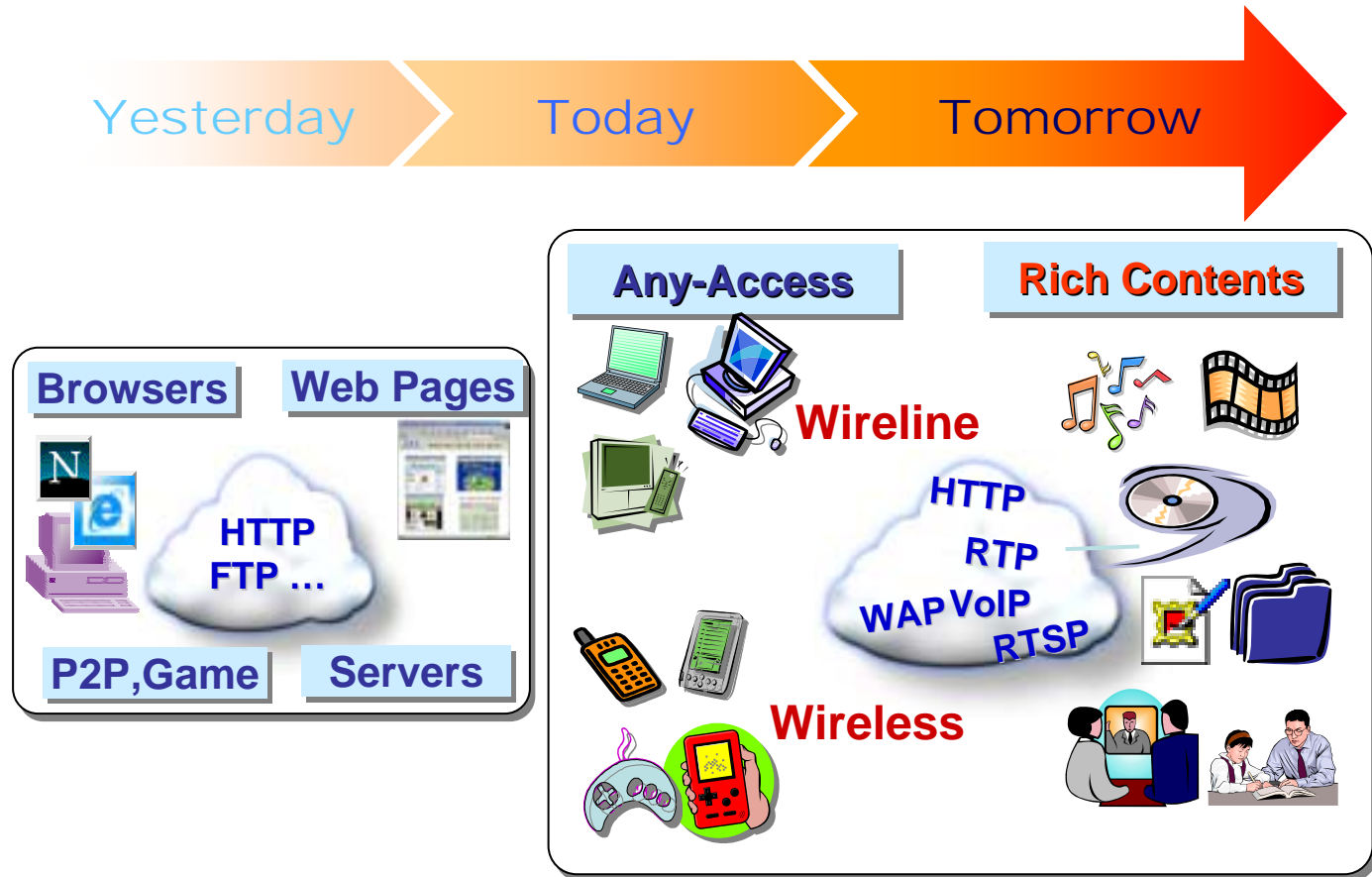
*Should overcome these barriers to generate mass application market*

## Where people are using Internet today



# Beyond Broadband Service

- From simple Internet access to “quality life/work services”

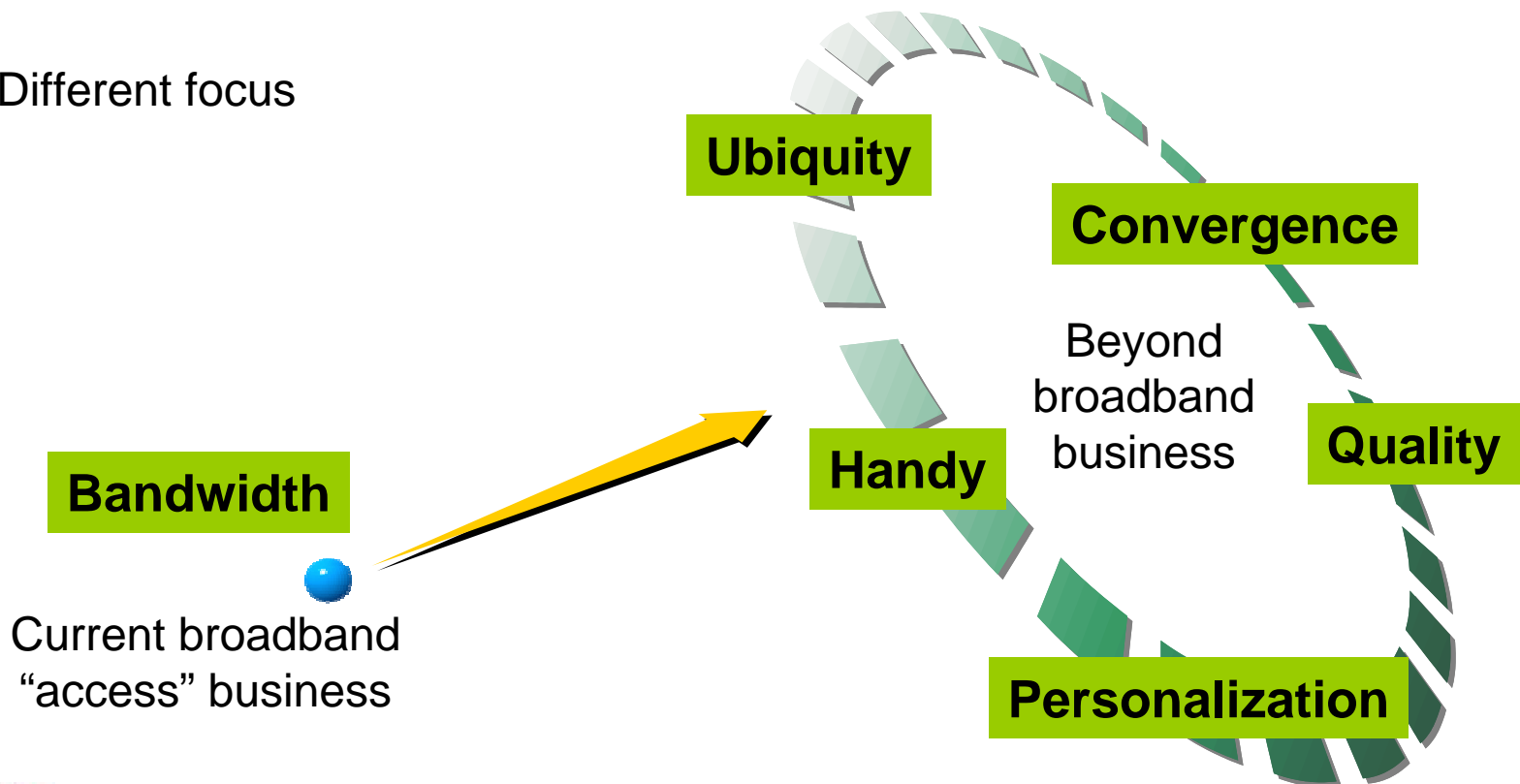


# Beyond Broadband Service: Features

## ○ Different business

- From access service to end-to-end service
- Both best-effort & quality service
- From network service to solution/application services
- Applications: from niche market to mass revenue market

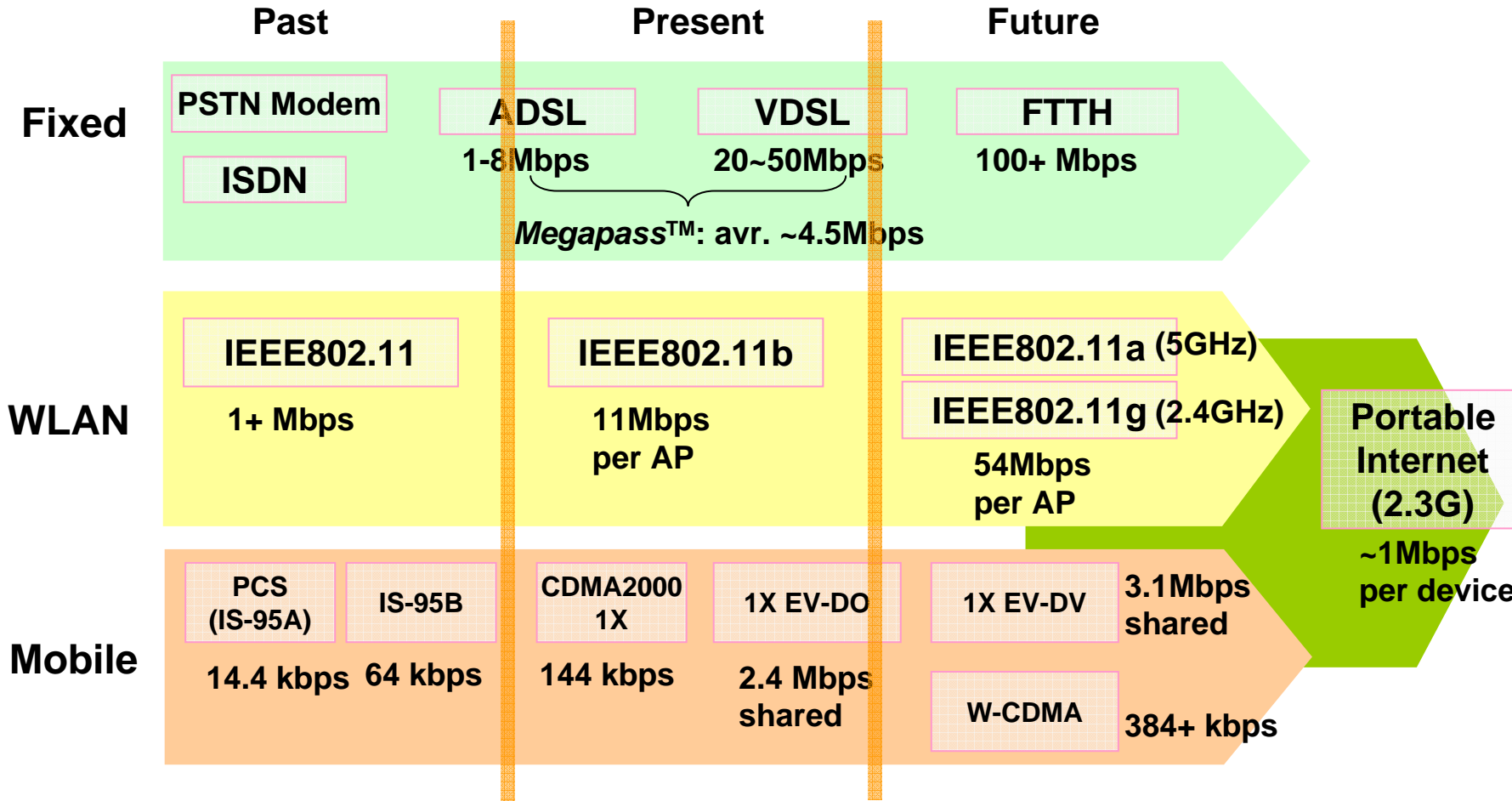
## ○ Different focus





# Bandwidth

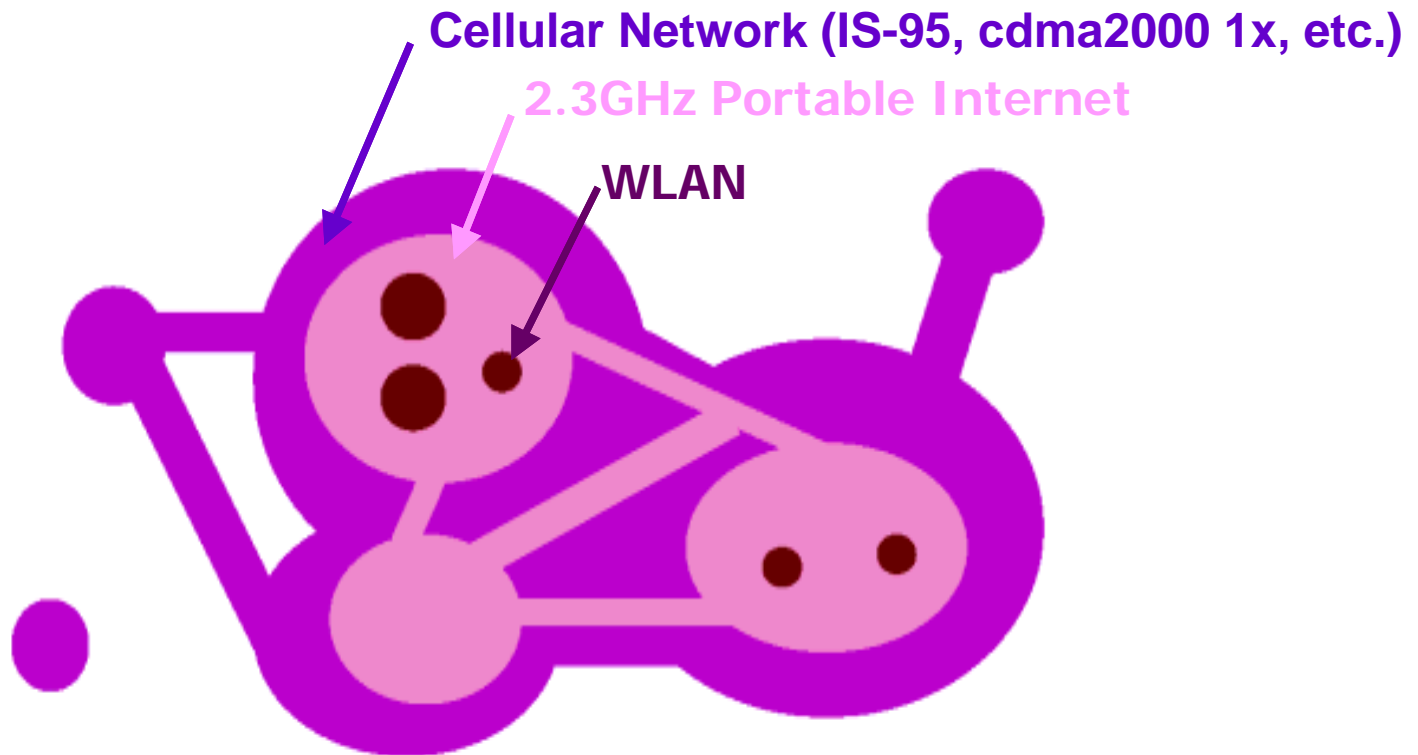
## ● Evolving access bandwidth



# Ubiquity

- Ubiquitous network connectivity

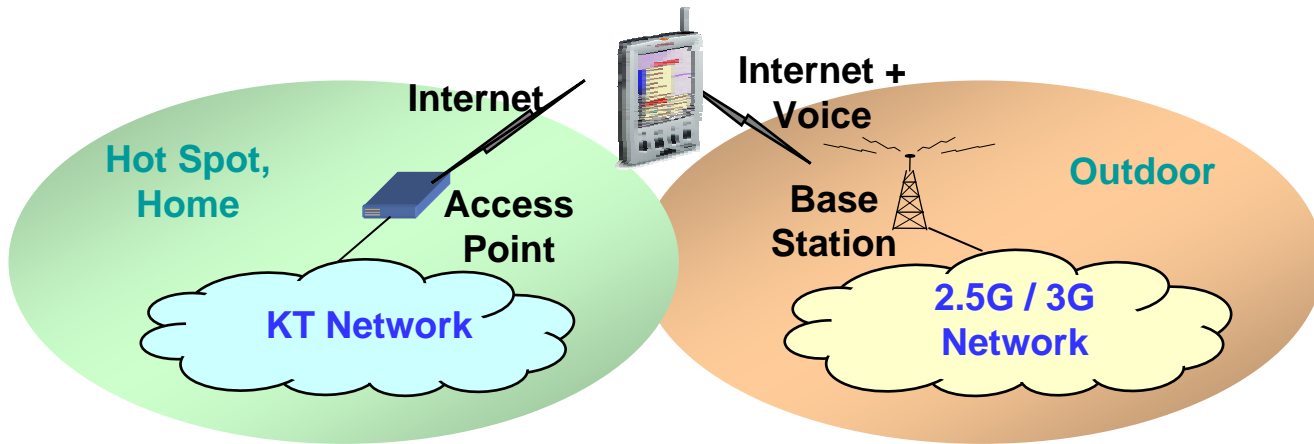
- Integrated connectivity with seamless mobility



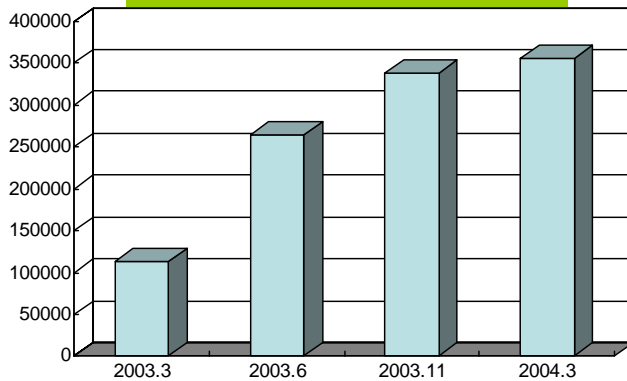
# Wireless LAN Service

## ● Nespot™ & Nespot Swing™

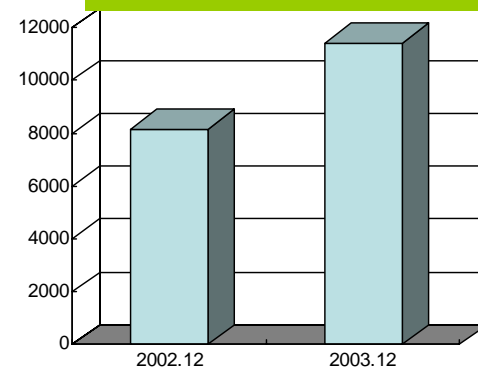
- Nespot: Wireless LAN-based access service
- Nespot Swing: Both WLAN & Cellular service



Number of Nespot users



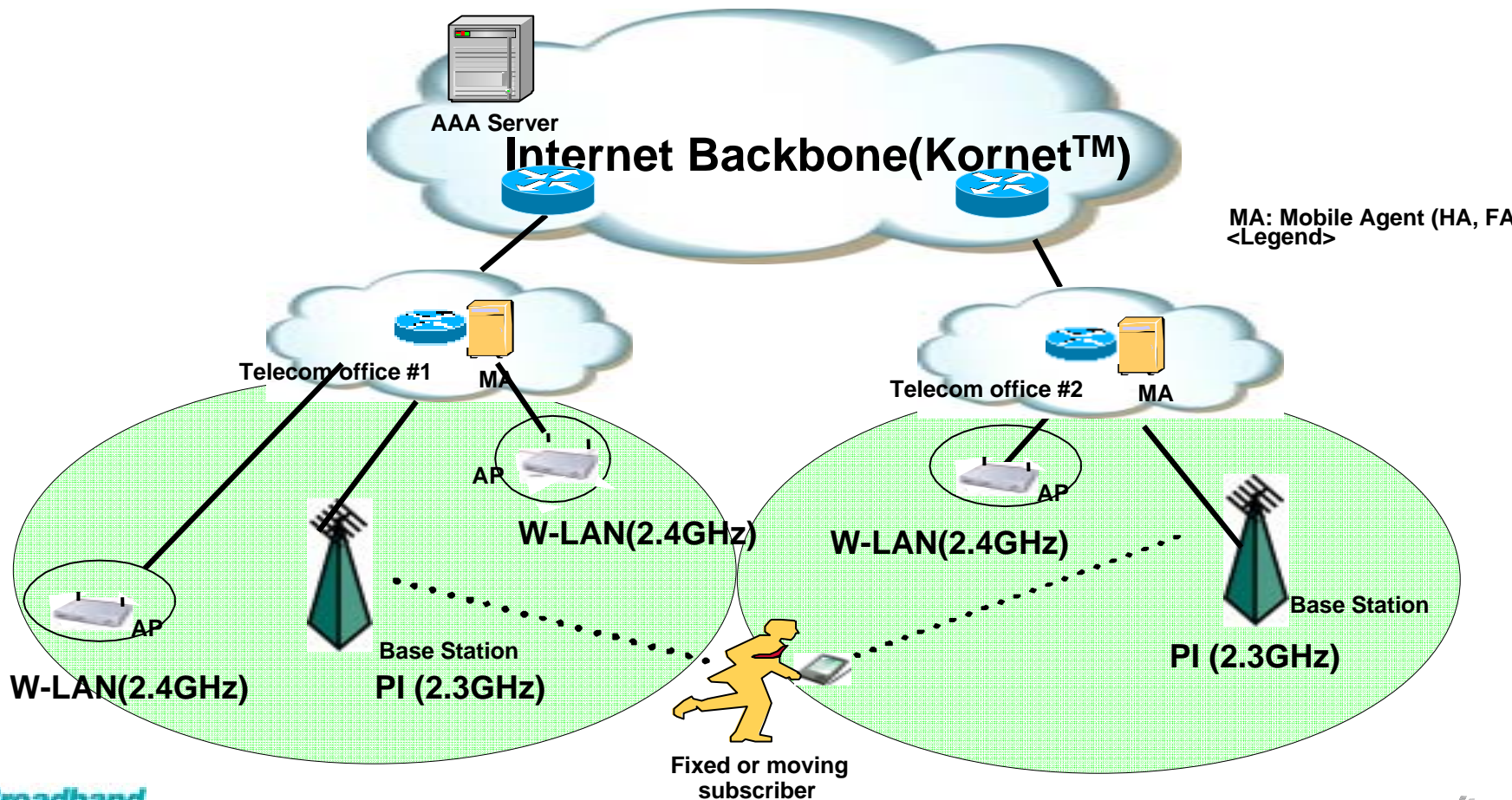
Number of KT Hotspots



# Portable Internet Service

## Portable Internet (PI)

- ~1Mbps speed, mobility > 60km/h, coverage 500m~3km
- Mobility: between WLAN and PI areas



# QoS

## Basic tool for differentiated services from Telcos

Issue

LAN

Complexity: Multiple vendor equipments with differing capabilities

Standardized QoS & Security mechanism needed

End-to-end control: premise network beyond Telco's control

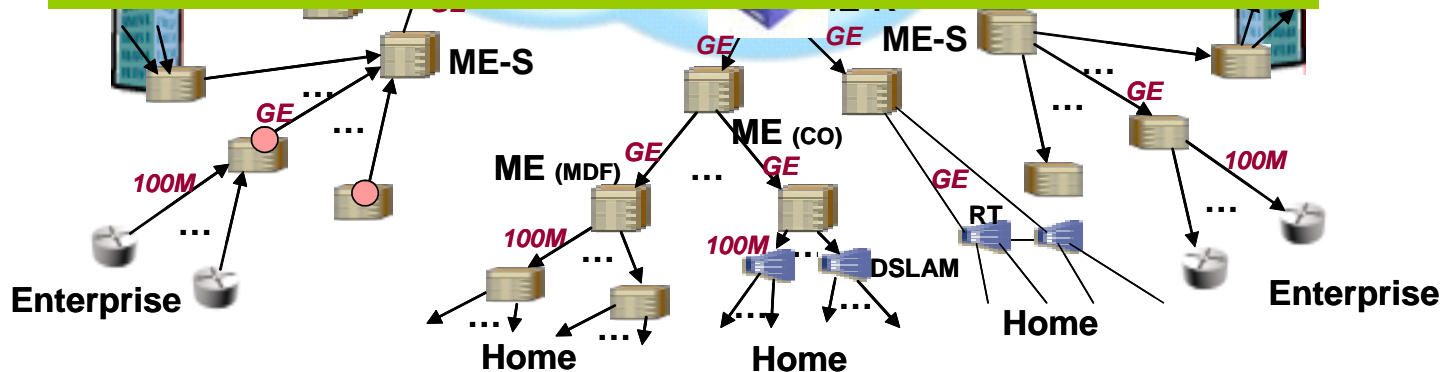
Evolution: Handling QoS-blind, QoS-weak equipments

Home

Killer App

adsl

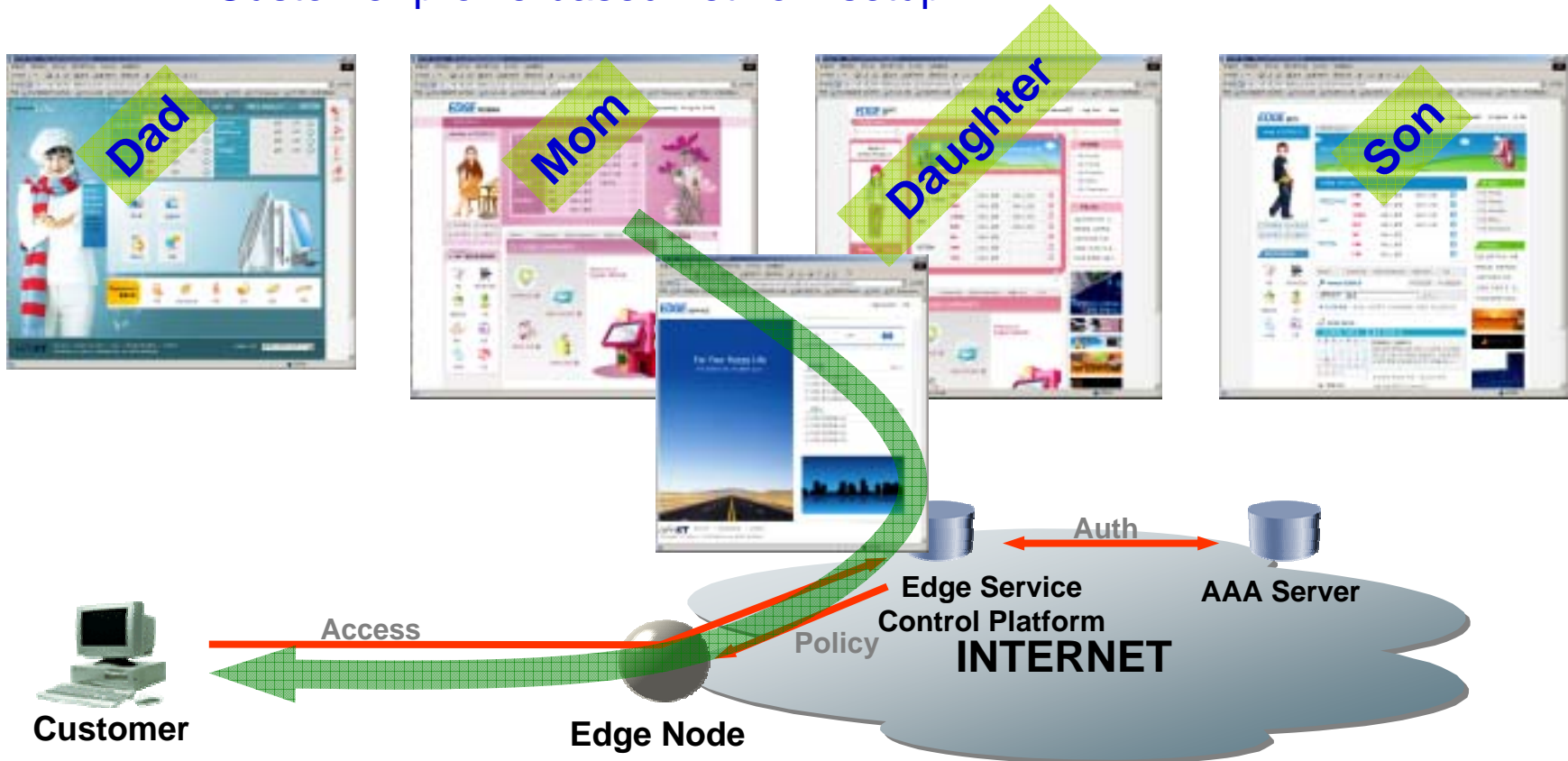
Home



# Personalization

## Features

- Personalized value-added & application services
- Site authentication → personal authentication
- Single sign-on between network login and application login
- Customer profile-based network setup





# Convergence

- Fixed & wireless  
*OnePhone service*



- Telecommunication & finance

*K-Bank service*



- Telecommunication & broadcasting  
*Digital Home service*  
(Broadband Internet + broadcasting + VoD)



**DMB**  
(Digital  
Multimedia  
Broadcast)



# Handy

- Easily accessible service through various terminals
- Easy ,simple, intuitive, consistent user interface
- From general purpose PC to appliance-type terminals
- Portable, carriable terminal



vs.



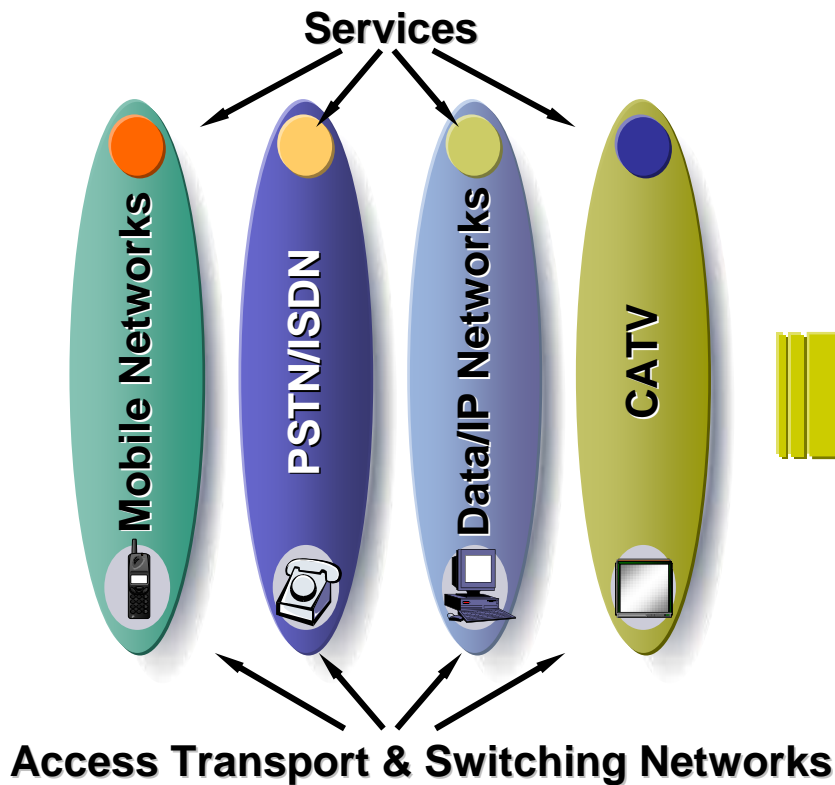


# The Next Generation Networks

- The following picture has been in place for more than 10 years

*Too costly, per-service network architecture*

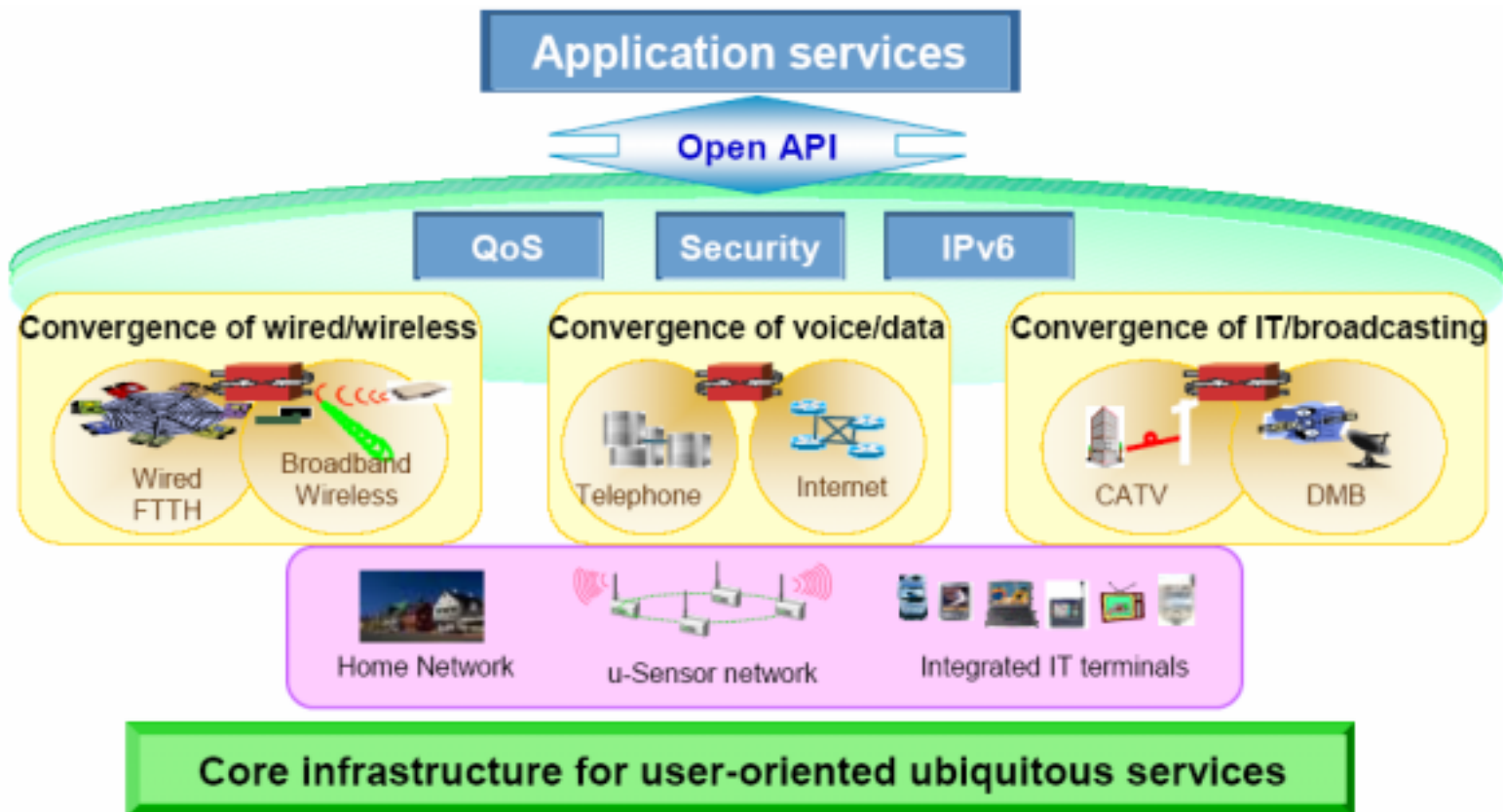
*Single/simple/cost-effective network infrastructure for existing & new services*



# NGN: From Vision to Reality

## ● BcN Initiative in Korea

*high-quality broadband multimedia services integrating telecom, broadcasting, and Internet seamlessly at anywhere, anytime, and using any devices*



# Summary & Remarks

- **Broadband business in Korea calls for new market**
- **Next generation broadband:**
  - different business & different network**
- **Networking capabilities for next generation services**
- **Broadband Convergence Network as an enabler**
- **Further considerations**
  - ✓ **Deployment cost**
  - ✓ **Services that pay off**
  - ✓ **Regulatory issues**

# Thank You



"The Value Networking Company"

by KT