

Information Security in Korea IT839 Strategy

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Republic of Korea



I **Status of IT Korea**

II **IT839 Strategy**

III **Information Security Environments**

IV **Security Policy In IT839 Strategy**

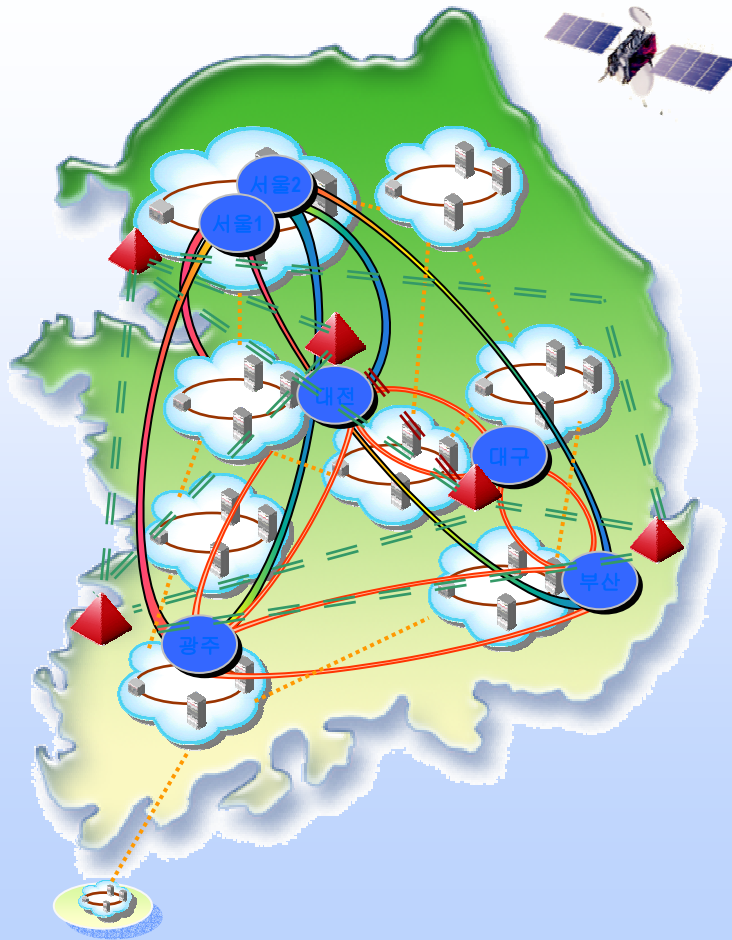
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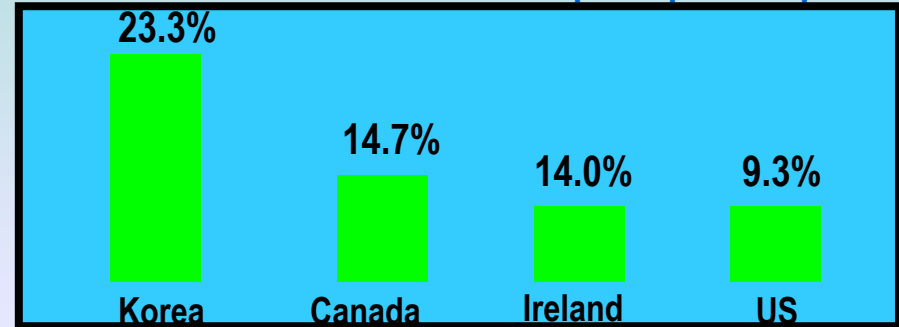
IV **Security Policy In IT839 Strategy**

Broadband Network



Global Broadband Penetration

※ subscription per 100 persons



(Source: ITU Internet Report, 2004)

Korea's Broadband Penetration

Households

- Penetration : 76.6%(Aug.2004)
- Available to over 97% of population

Schools

- All Primary & Secondary Schools Connected to Broadband (Sept.2000)

Internet Usage



Mobile Penetration



- 30.7M (68%) Users (Jun.'04)
- No.2 Usage in the world(2004, ITU DAI)
- 36M(75%) Subscribers(Aug.'04)
- 31M(65%) 3G(CDMA 2000-1x,EV/DO) Service (Aug.'04)



2004

Video On Demand (VOD)

Ring back tone service

Multimedia Message Service (MMS)

Location Based Service (LBS)

Short Message Service (SMS)

Mobile Game

Graphic image download

Ring tone download

1998



- **World's Best Technologies (% Global Market Share)**



Semiconductors (Memory) : 42%

[2001]



Mobile Phones :25%,



TFT-LCD : 30%

[2002]



Digital TV : 23%,



MP3 : 17%

[2004]

- **IT Share in National Economy: 13.5% of GDP,
30% of Total Exports**

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8 Services

- WiBro Service
- DMB Service
- Home N/W Service
- Telematics Service
- RFID-based Service
- W-CDMA Service
- Terrestrial DTV
- Internet Telephony

3 Infrastructures

- Broadband Convergence Network
- Ubiquitous Sensor Network
- Next Generation Internet Protocol[IPv6]

9 Growth Engines

- Next Generation Mobile Communications
- Digital TV
- Home Network
- System on Chip
- Next Generation PC
- Embedded S/W
- Digital Contents & S/W Solutions
- Telematics
- Intelligent Service Robot

Current Situation

Deployment

- SKT & KTF : Seoul+8 Metropolitan Cities since (8. '04)
- LGT : Service to be launched (6. '06)

- Handset : Allowing subsidies (since '04.4)
DBDM with improved performance and roaming in 2004

Market Prospect & Policy

Prospect

- Introduction of Re. 6 at Mid of 2006
- More than 4M subscribers expected in 2007

Policy Direction

- Flexible pricing scheme and Handset subsidies
- Encouraging investment : 3.2T Won by 2007

WiBro (Portable Internet) Service



Service & Market Prospect

Low Rate

\$25-28/Month

High Speed

1Mbps

Portability

Over 60km/h

**Seamless Access to
Broadband Internet on
the Move**

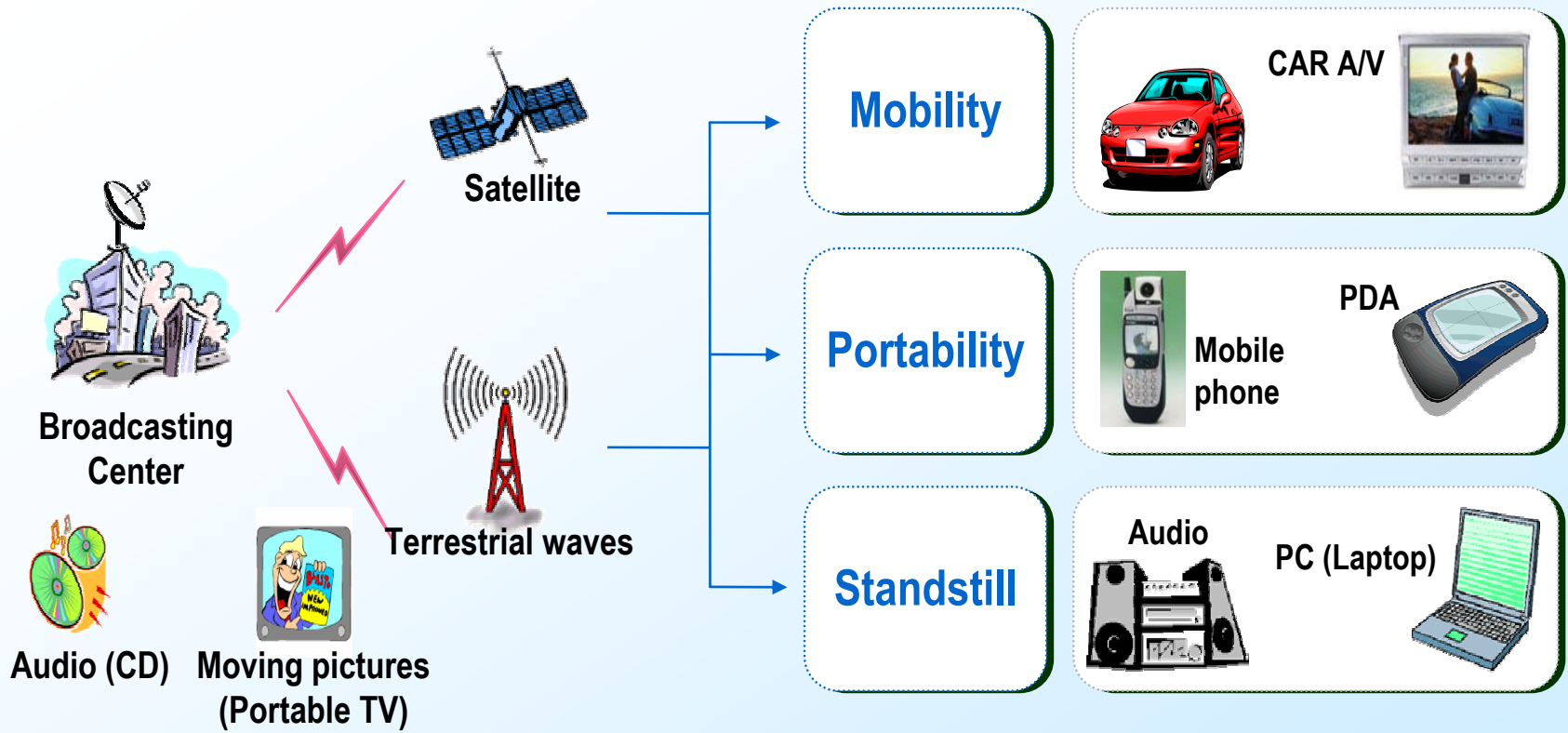


- Devices in late 2005, Commercial Service in 2006
- Estimated No. of Subscribers after 6 years : 9.45M

Licensing Plan

- Three Operators, 7years of license period
- Oct. 2004 : Spectrum Allocation Announcement
- Feb. 2005 : Licensee Selection

DMB Service



● **Satellite DMB : Nationwide Service**

● **Terrestrial DMB**

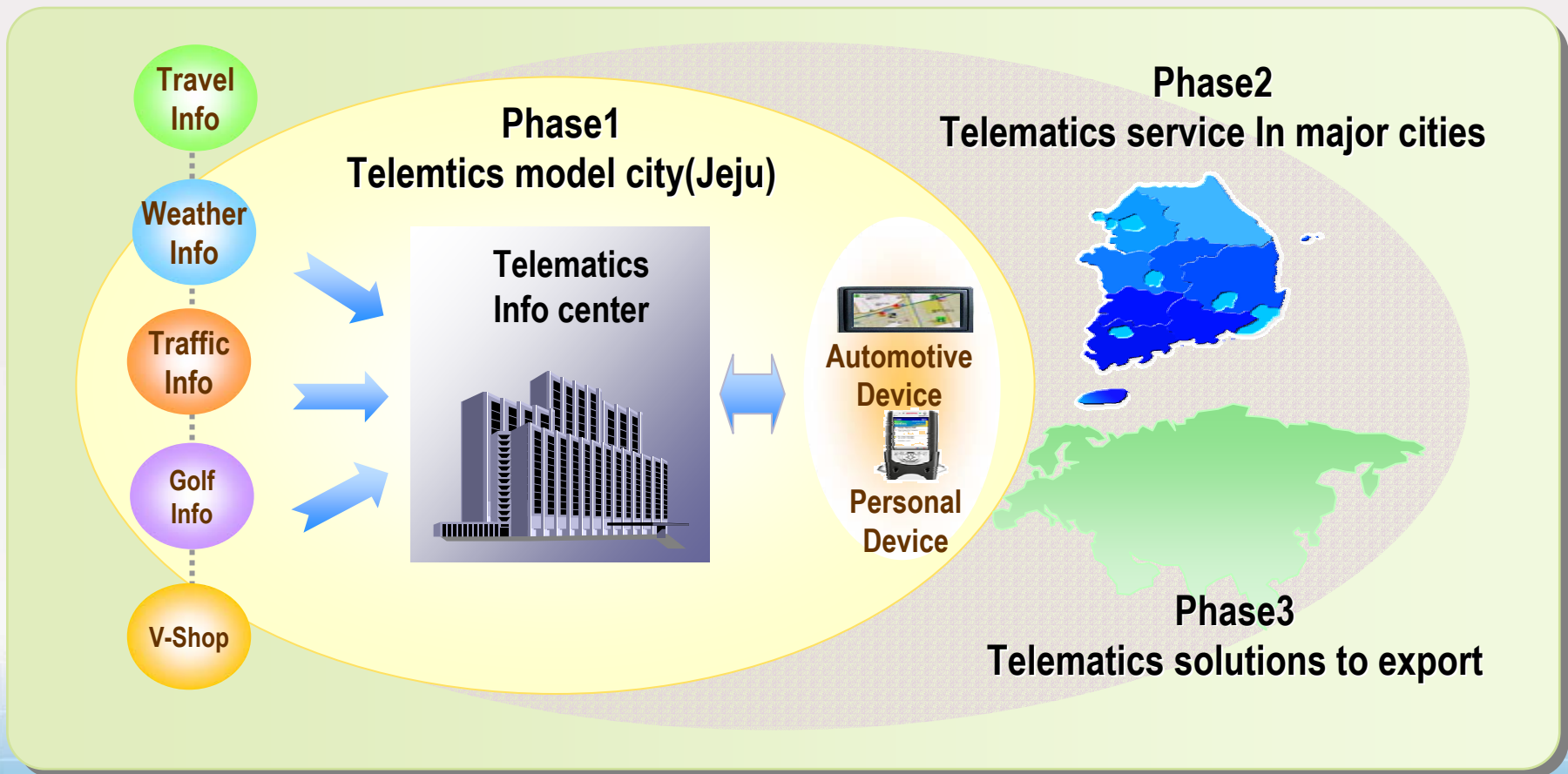
- **Seoul + Metropolitan Area : 2 channels**

- **Others : By the end of 2006 after completion of channel reallocation**

Telematics Service



- Constructing telematics model city by investing USD 9M till 2006 with a matching fund of Jeju state government



- Future home environment where consumer electronics connected to each other through networks provide digital services anytime & anywhere
- 10M Home Networked Houses by 2007
- Pilot Service to 1,300 Houses in Five Major Cities

Home NW Pilot Services

Convenient Service

Remote control of light, gas, power, water

Safety Service

Prevention of crime/disaster, telemedicine

Pleasant Service

VOD thru Digital TV, On-line game

RFID Service / u-Sensor Network



- Pilot Project for Management of Livestock, Logistics and other Areas Closely Related to Our Daily Lives to Create Market Demand



Process

- Pilot Project Tasks (June)
 - Five Tasks (3.5B Won)
- Setting Technology Standard for Pilot Projects (July)

Plan

- Project Support
 - Technical Support
 - Test & Verification by Korea Operators
- 2nd Year Project Task (Dec.)

New ICT Growth Engines



NG Mobile Communication



Global Market



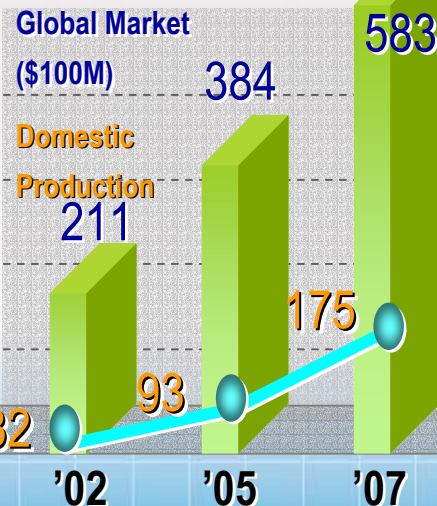
Strategic Importance

- Key product to lead the global IT Industry
- Evolution toward broadband wired & wireless convergence NW

Plan

- 4G mobile comm. prototype by 2007
- Low power source tech/core parts
- Portable Internet by 2005
- Global Standardization

Digital TV



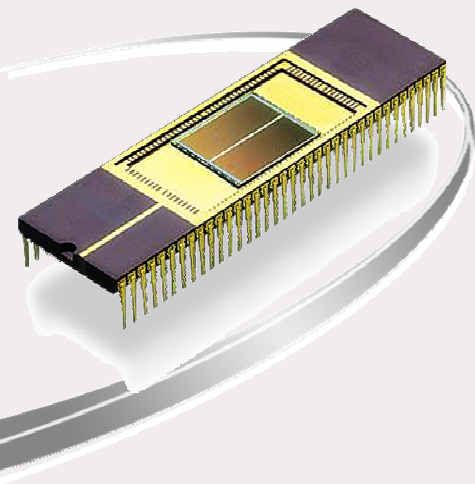
- Rapid growth of DTV market
- Core device in convergence era
- 5M DTV subscribing home in Korea ('07)

- Convergent server/terminal ('07)
- Nationwide digital broadcasting NW ('05)
- 13.5M DTV ('07)

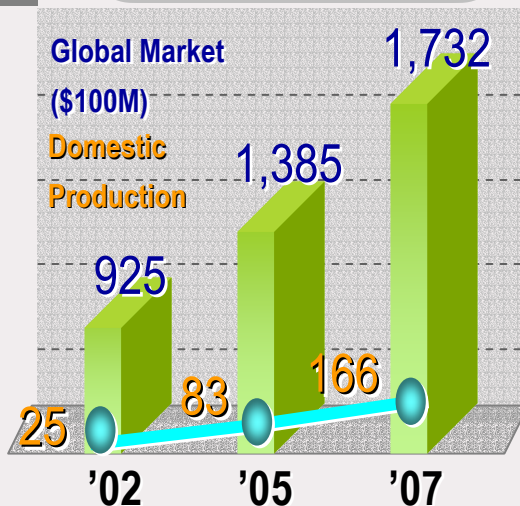
New ICT Growth Engines (Cont'd)



IT SoC



Global Market



Strategic Importance

- Huge demand led by digital convergence
- SoC technology as a key factor for competitiveness of IT products

Plan

- [Top 3 IT SoC Country \('07\)](#)
- Core SoC for each growth engine area
- Industrial infra. for low cost SoC development

DC & SW Solutions



Global Market



Strategic Importance

- Value-added industry with low marginal costs
- Strategic industry of developed countries

Plan

- [Top 5 DC Country \('07\)](#)
- Core tech. (DC developing tech.)
- DC cluster in "High-tech IT Complex"

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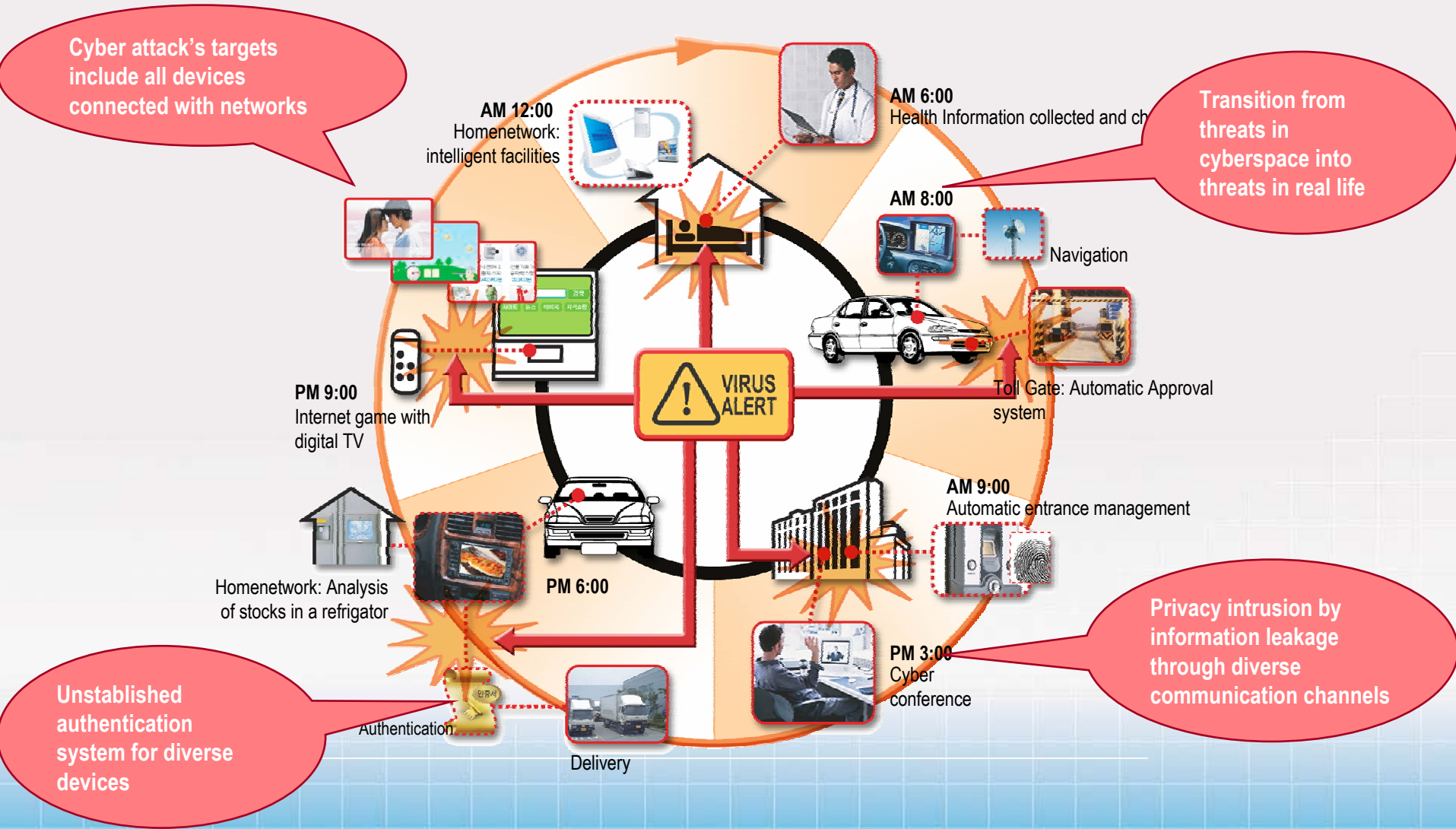
Cyber attack's Trends



Cyberattack leads to economic loss and national infrastructure's risk



Cyber Threats in ubiquitous environment





- **DHS (Department of Homeland Security) organized**
- **'National Strategy to Secure Cyberspace'(2003)**
- **Security technology developed by NIST and DARPA`**



- **ENISA(European Network Information Security) founded**
- **'Dependability Roadmap' developed by IST**
- **PAMPAS and RAPID projects performed in preparation for ubiquitous age**



- **'Information Security Master Plan' developed by Ministry of economics and Industry(2003)**
- **Security policy reinforced through e-Japan strategy II**
- **『 u-Japan Plan 』 includes security initiative**

Global Security Leader (Video Execution)

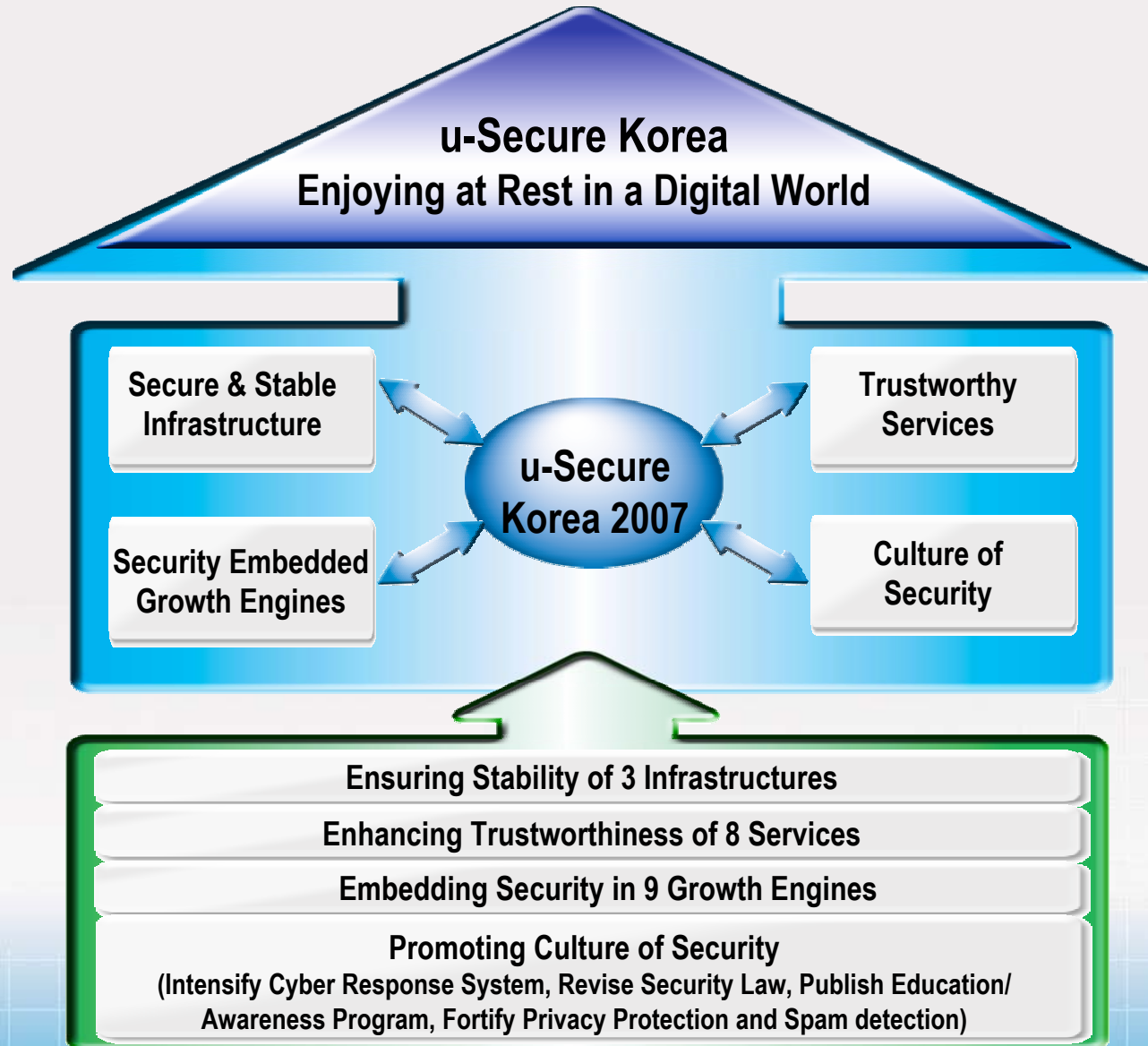


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● Security Plan in parallel with other IT839 Master Plans

- ▶ Developing Security Plan related with BcN, USN master plans
→ Increase efficiency and productivity

● From Post-Response to Prior Prevention

- ▶ Security Impact Assessment for upcoming threats
- ▶ Business Continuity Planning for seamless service

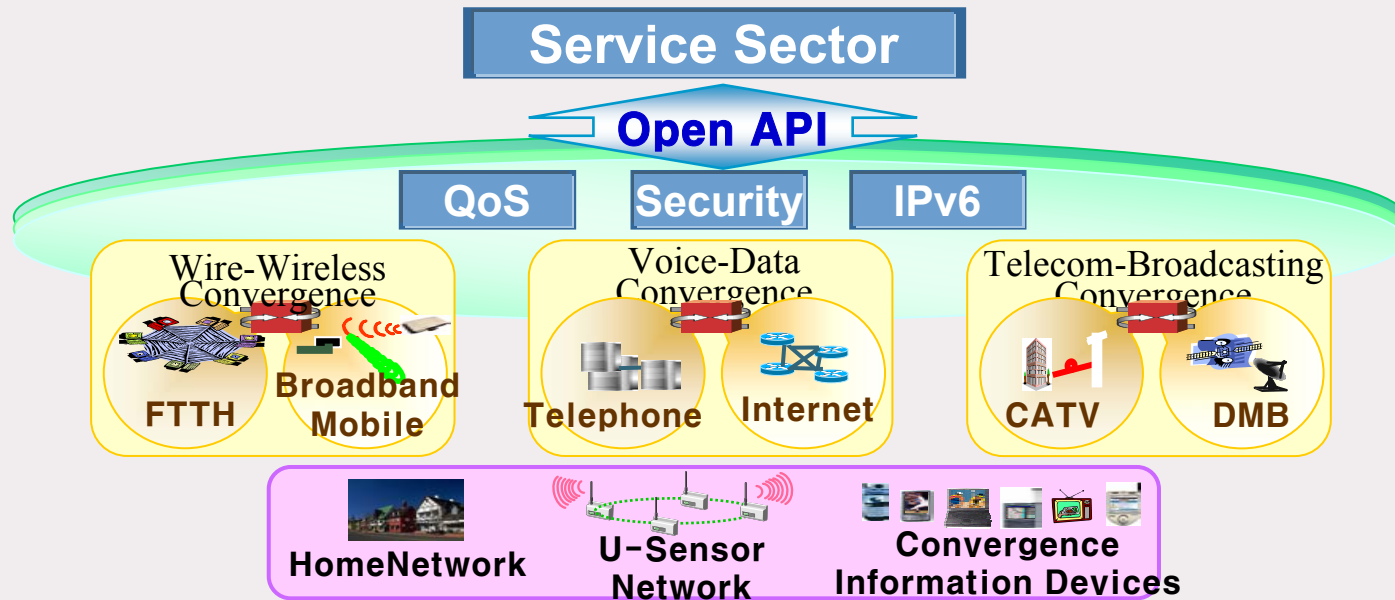
● Partnership with Enterprise in Technology Development

- ▶ Government's support competitive security hi-tech of enterprise

● Information Security Governance

- ▶ Revise information security law (government)
- ▶ Develop hi-end security technology (enterprise)
- ▶ Practice Culture of Security (individual)

Secure & Stable 3 Infrastructures



Challenges

Lack of BcN Security Technology

Diffusion of Threats through Convergence of Infrastructure

Leakage of Information in USN

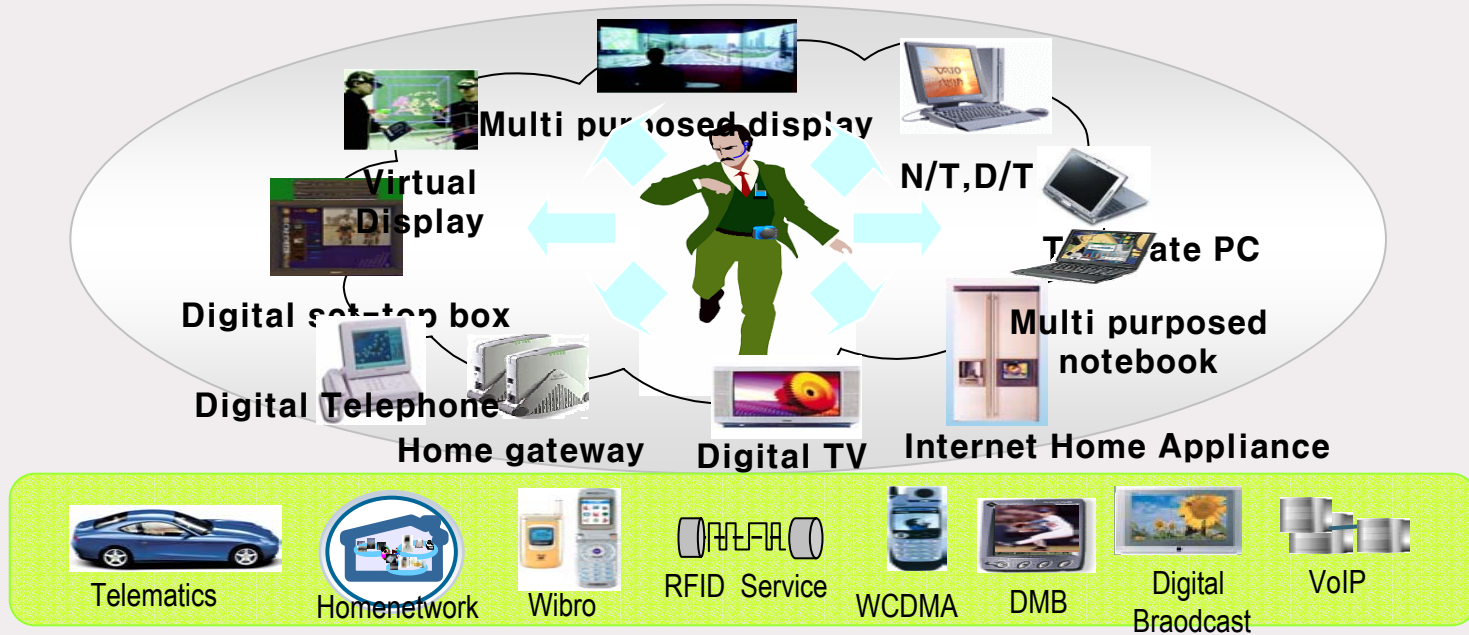
Confrontation Plans

Development of Security Enhanced Technology

Development of Network Separation Mechanism

Designing BcN Security Platform

Trustworthy 8 Services



Challenges

Lack of security in new IT Service

Disaster caused by Service Failures

Un-established Ubiquitous Authentication Scheme

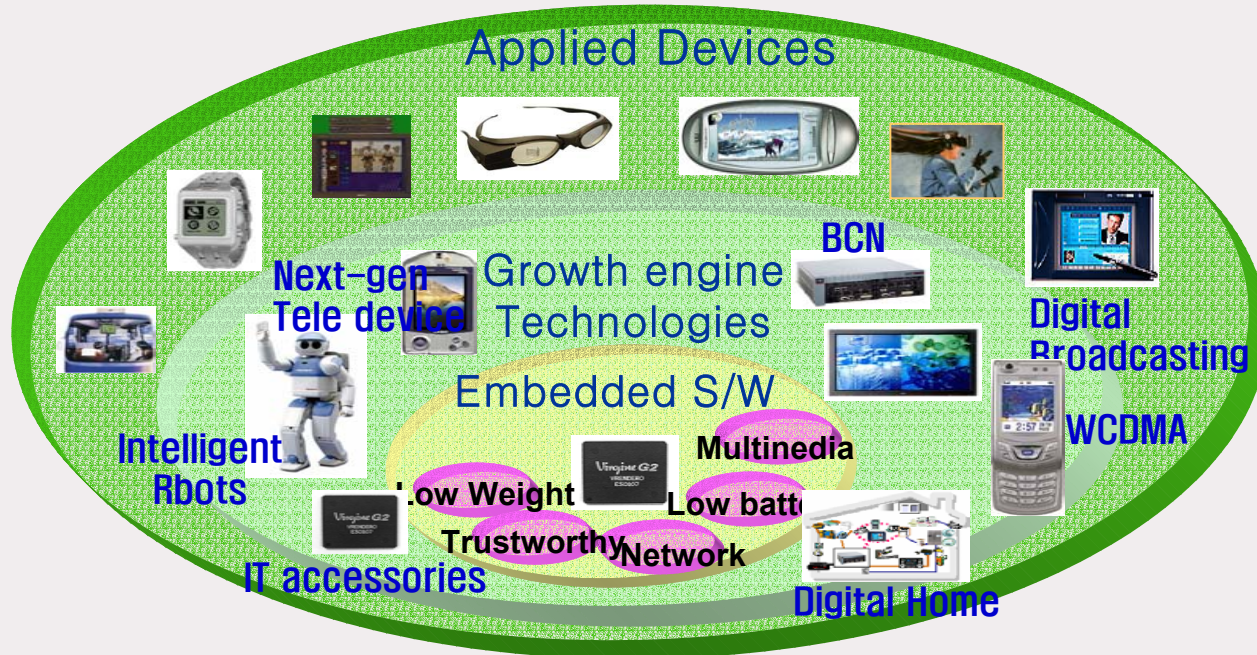
Confrontation Plans

Plan for Security Grading Scheme

Establishment of Business Continuity Plan

Plan for Ubiquitous Authentication Scheme

Security Embedded 9 Growth Engines



Challenges

Lack of security technology for HomeNetwork & Telematics Device

Privacy intrusion through Vulnerabilities in Robot & Next-gen PC

Vulnerabilities of Wireless devices

Confrontation Plans

Access Control applicable to Homenetwork & Telematics

Privacy Protection Technology applicable to Robots and Next-gen PC

Lightweight Cryptography Technology applicable to Wireless devices

Enhancing Response To Internet Incidents

Management of Korea Internet Security Center

- Management of Internet Incidents Response & Assistance Center
- Analysis of Internet Incidents & Technology Support
- Establishment of Coordination System to Respond Internet Incidents

Promoting Culture of Security

Participants

Government

Enterprise

Individual

Confrontation Plans

Revision of Security Law
Security Awareness Campaign

Developing Security Hi-Technology

Practice of Security Guideline



Thank You!

