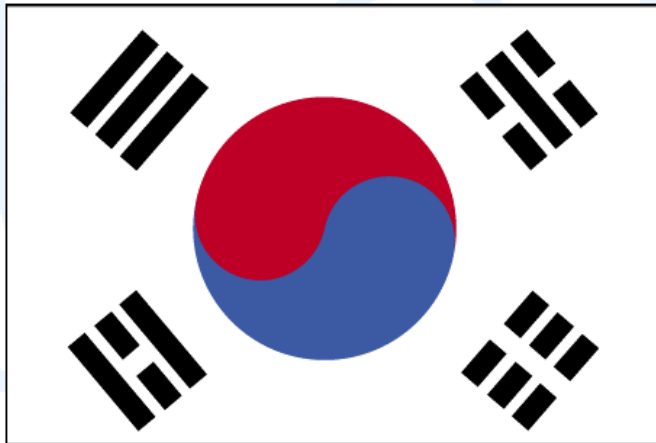




## Ubiquitous Network Societies

### Case Study of the Republic of Korea



**Dr Tim Kelly**

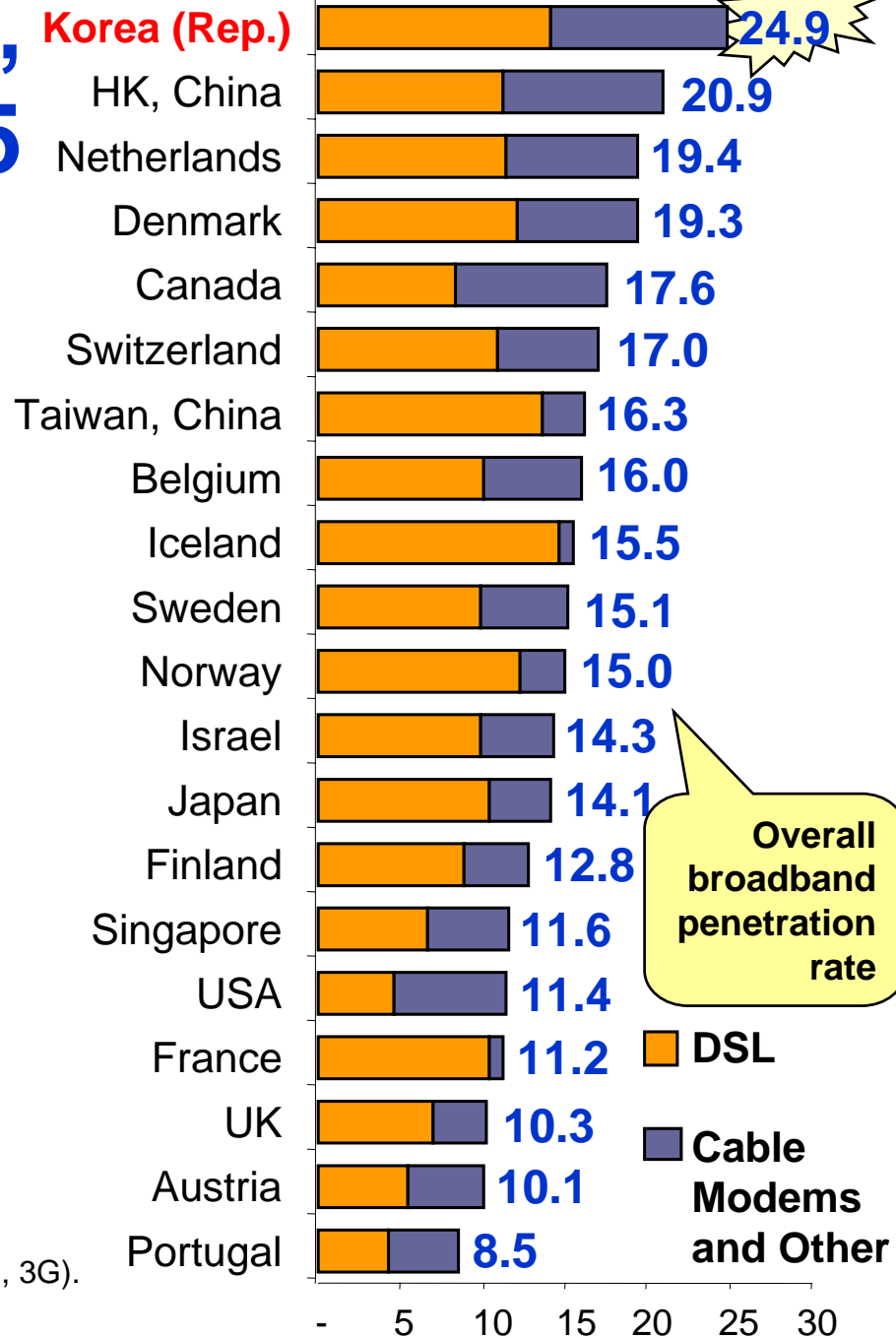
**Head, Strategy & Policy Unit,  
International  
Telecommunication Union  
(ITU)**

**New Initiatives Workshop on  
Ubiquitous Networks  
Societies**

**Geneva, Switzerland  
6-8 April 2005**

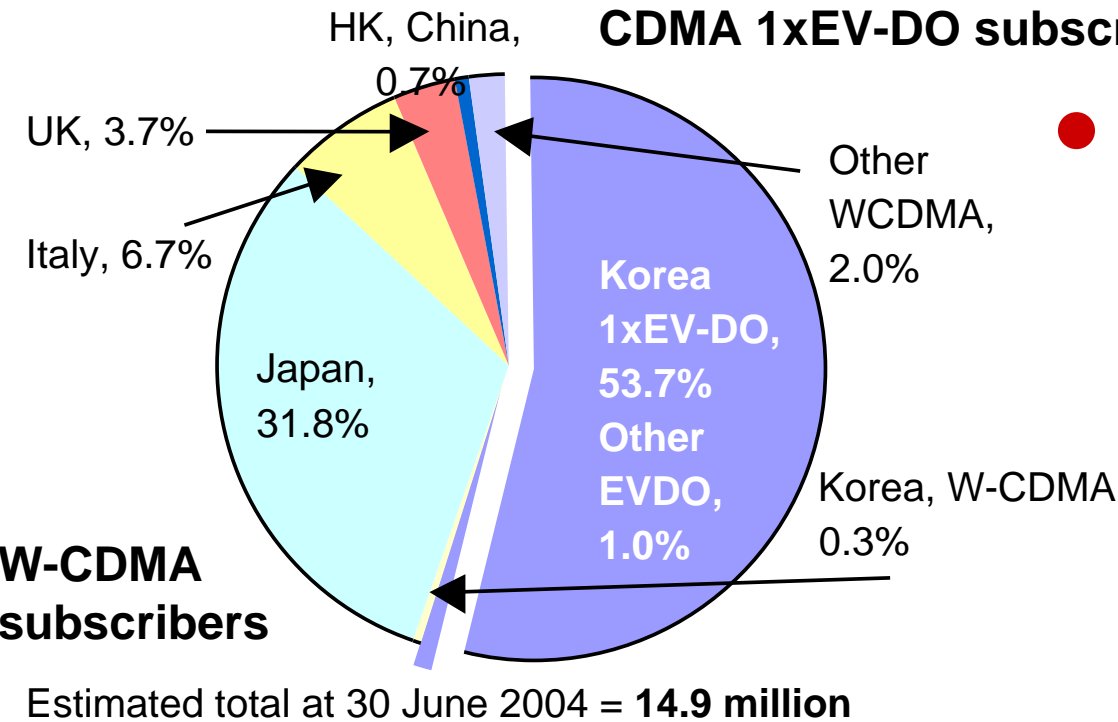
# Broadband per 100, Top 20, 1 Jan 2005

- Korea is (still) #1 worldwide in broadband penetration
- Around 80% of homes subscribe to broadband
- Korea has benefited from platform competition:
  - DSL technologies
  - Cable Modem
  - Apartment LANs
  - Wireless LANs, satellite etc
- Very low price per (e.g., <US\$25 per month for 2Mbit/s)



Note: Figures used in slide do NOT include wireless broadband (e.g., 3G).  
 Source: ITU World Telecom Indicators Database.

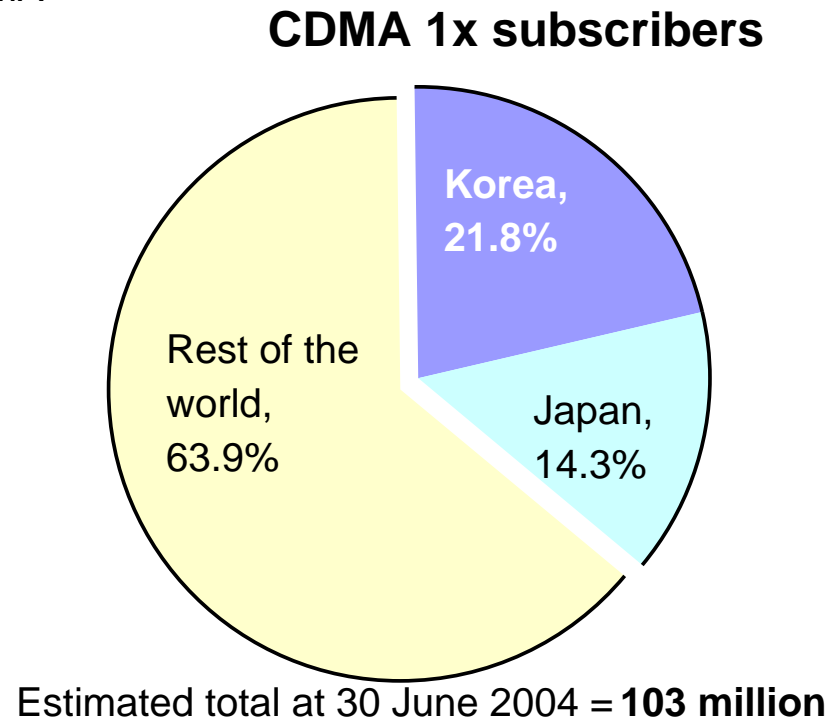
# Korea is also a world leader in 3G mobile



- **By June 2004, there were around 35m mobile handsets, of which:**

- **22m CDMA 1x**
- **8m CDMA 1x EVDO**

- **In addition to CDMA 2000, W-CDMA and WiBro have been licensed**
- **Also >360'000 WLAN subscribers at end 2003**



# Korea's unique public/private cooperation

Prepare for ubiquitous network society: improve competitiveness

**IT 839 Strategy  
(2004-07)**

Maximise ability of all citizens to use ICTs

**E-Korea Vision 2006  
(2002-2006)**

Vision of a creative knowledge-based society

**CYBER KOREA 21  
(1999-2002)**

Ten priority areas  
Annual action plans

**National Framework Plan for  
Informatization Promotion  
(1996-2000)**

National information  
superhighway

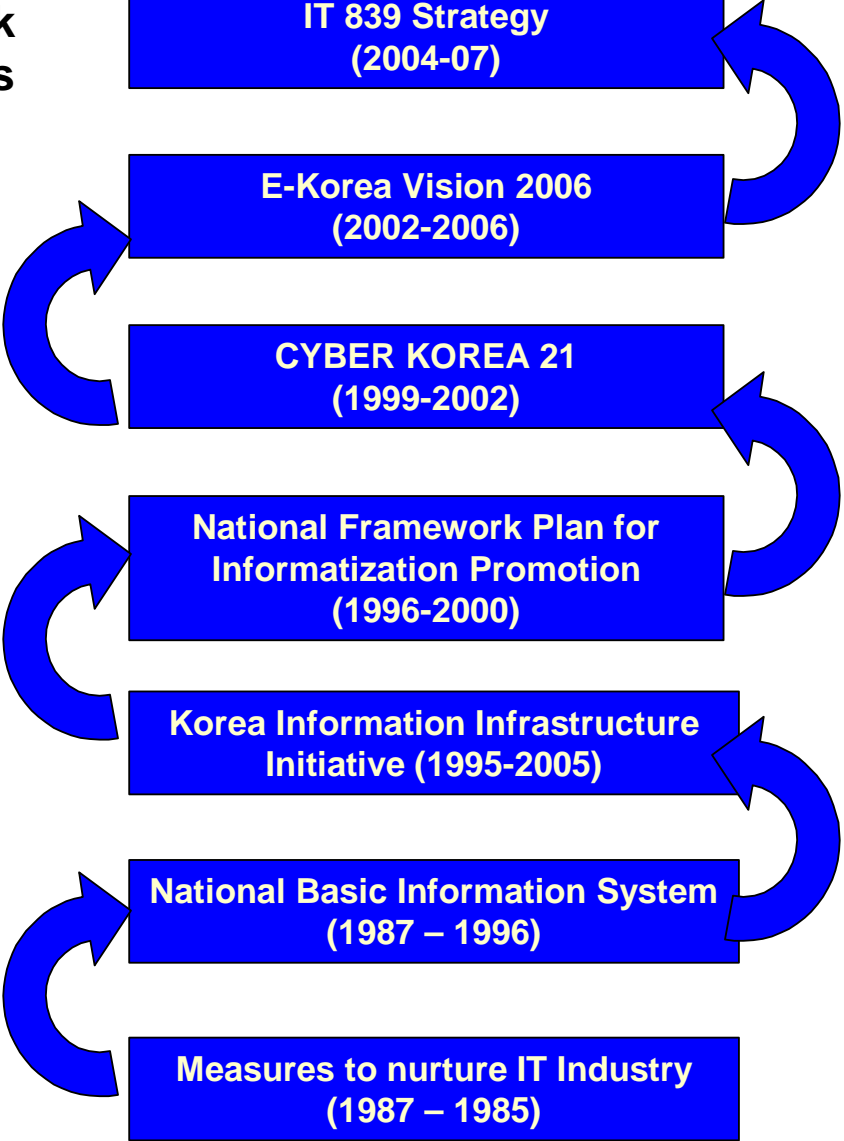
**Korea Information Infrastructure  
Initiative (1995-2005)**

Administration, defence, public  
security, finance & education

**National Basic Information System  
(1987 – 1996)**

Focus on manufacturing

**Measures to nurture IT Industry  
(1987 – 1985)**





# Korea's IT 839 Strategy

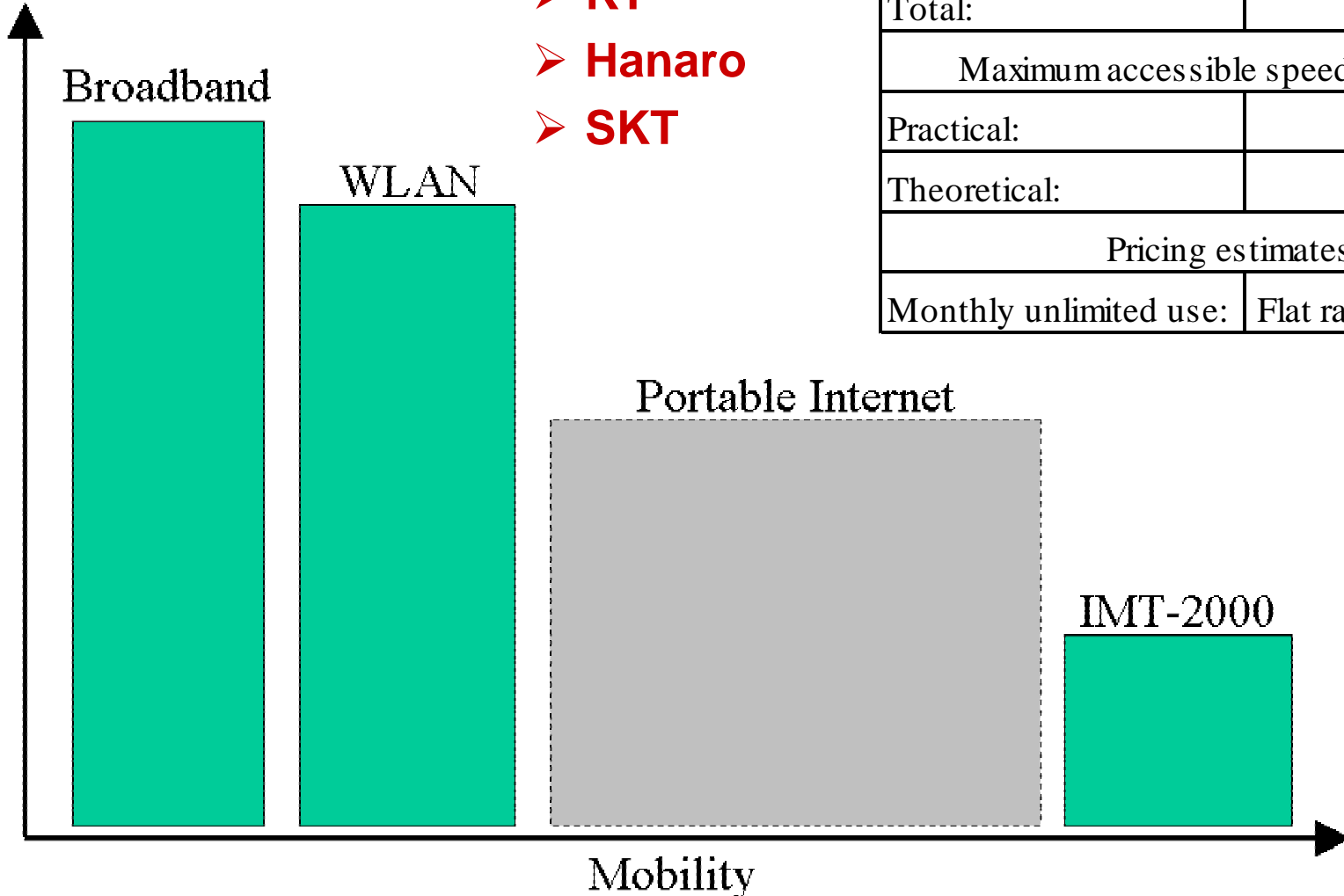
<b>8 services</b>	<b>3 infrastructures</b>	<b>9 new growth engines</b>
WiBro Service DMB Service Home Networking Telematics Service RFID based W-CDMA Service Terrest. Digital TV VoIP	Broadband Convergence Network (BcN)  Ubiquitous Sensor Network (USN)  Next-Generation Internet Protocol (IPv6)	Next-Generation Mobile Communications Digital TV Home Networking IT System on Chip Next-Generation PC Embedded Software Digital Contents Telematics Intelligent Service Robot

# Licensing WiBro

Speed

● **Licensees:**

- **KT**
- **Hanaro**
- **SKT**



Frequency:	2.3 GHz
Licenses:	3 awarded (Feb 2005)
Bandwidth	
Per user:	1-2 Mbit/s
Total:	100 MHz
Maximum accessible speed for users:	
Practical:	60 km/hour
Theoretical:	250 km/hour
Pricing estimates	
Monthly unlimited use:	Flat rate, est. 15 USD

Source: MIC Korea.

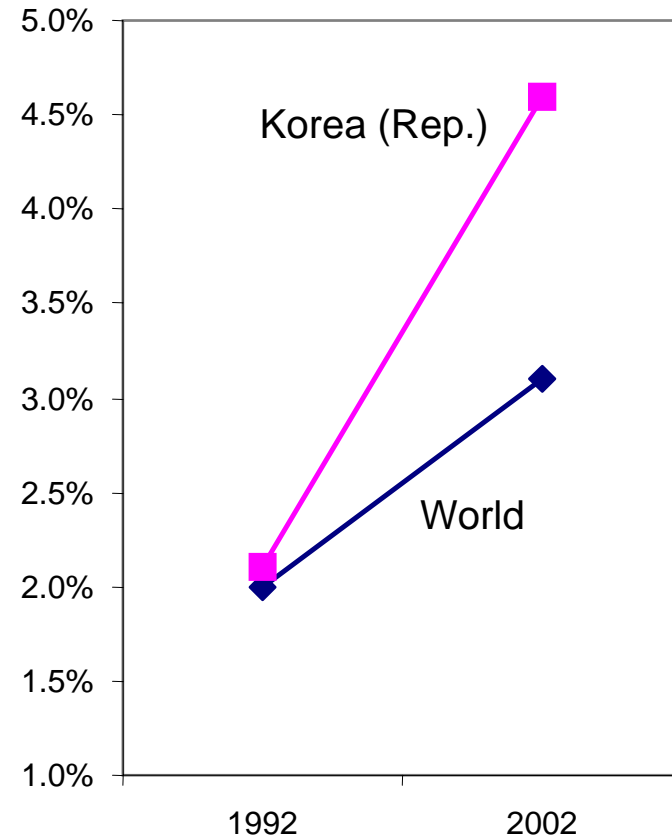
# Selected examples of ubiquitous networks in Korea

- Digital TV delivered to mobiles
  - **DMB service**
- Mobile handsets used as wallets
  - **“Moneta” service**
- Telematics (automobile/mobile)
  - **“Nate Drive”**
- Avatars in gaming
  - **Fashion wardrobes for avatars**
- Self-adaptive telephones that find the cheapest networks
  - **“Nespot SWING”, “One-Phone DU”**



# Conclusions

- **Korea as a laboratory of the future**
  - ~ Three years ahead of Europe in broadband
  - ~ Two years ahead of Europe in 3G mobile
- **Korea as an example of public/private policy partnership**
  - **Strategy of picking technological winners**
  - **Gov't reinvestment of profits from spectrum auctions**
- **Korea creating new revenue**
  - **Twice the global rate of growth in telecom spend as % of GDP**



**Telecoms revenue as a % of GDP**

Source: ITU World Telecom Indicators Database.





# Thank you

The full case study (50pp) is available at  
<http://www.itu.int/ubiquitous>

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