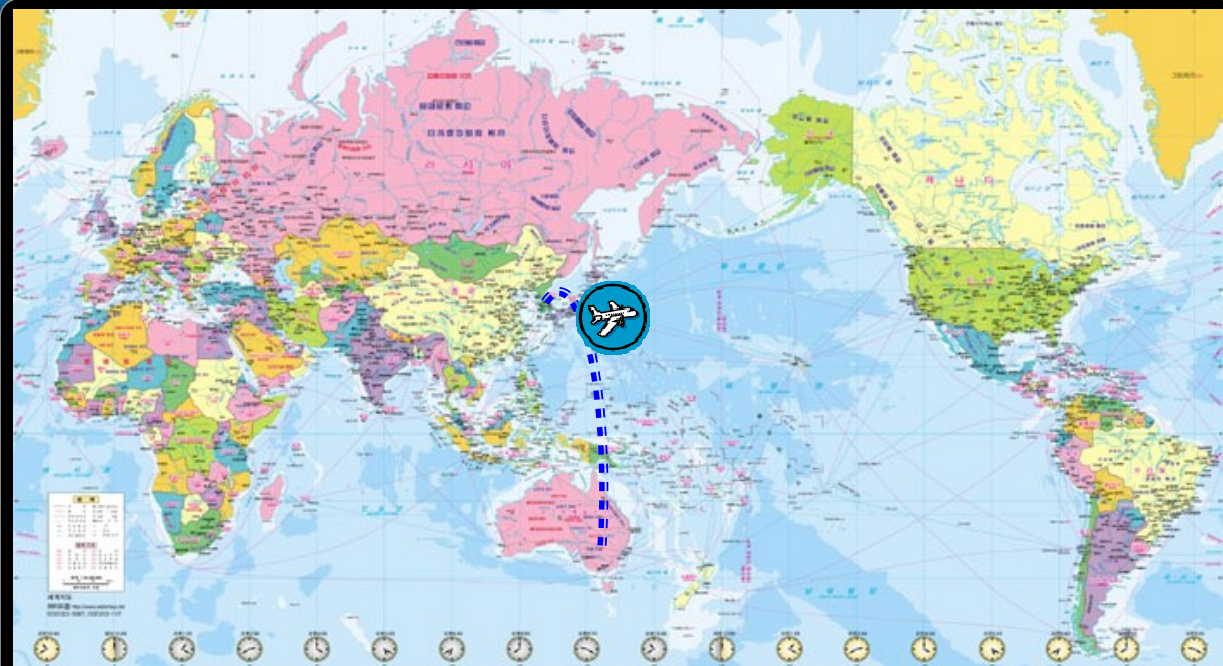


# IPv6 in Korea

Dr. Sir Jae-Chul  
KoRea Network Information Center  
National Internet Development Agency of Korea



**Seoul to Canberra : 9,100Km & 12Hours**



# Table of Contents

I. Internet Development in Korea and NIDA

II. IPv6 Status in Korea

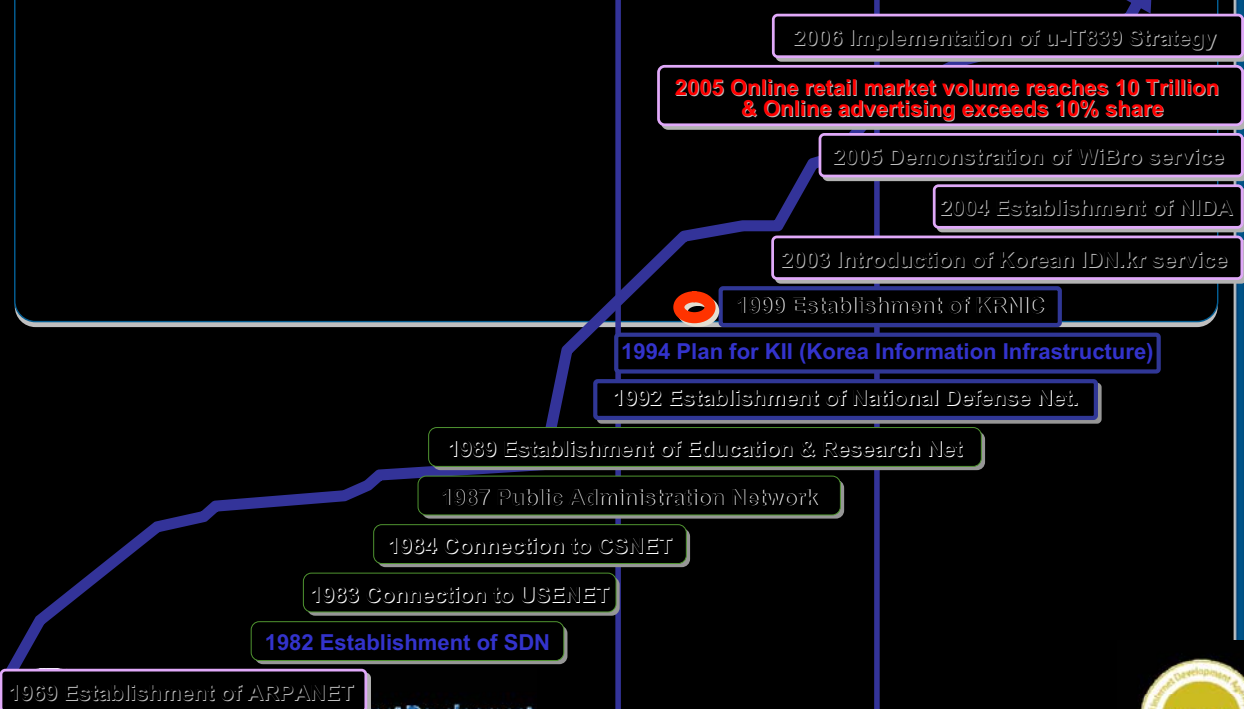
# I. Internet Development in Korea and NIDA

## History of the Internet in Korea

Introduction Period

Growing Period

Maturity Period



# IT 839 Strategy for Another Take-off

8

- 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
- U-Sensor Network
- Internet Protocol v6

9

- Next-Generation Mobile Communications
- Digital TV
- Home Network
- IT SoC
- Next-Generation PC
- Embedded SW
- Digital Contents
- Telematics
- Intelligent Service Robot

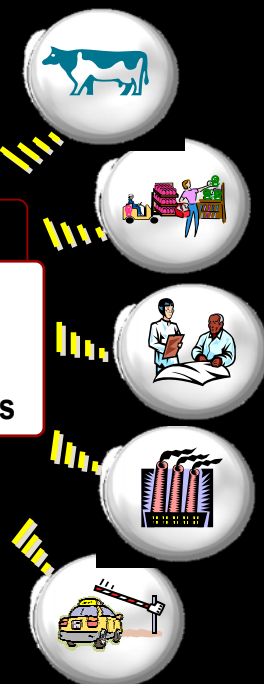


## 3 Infrastructures

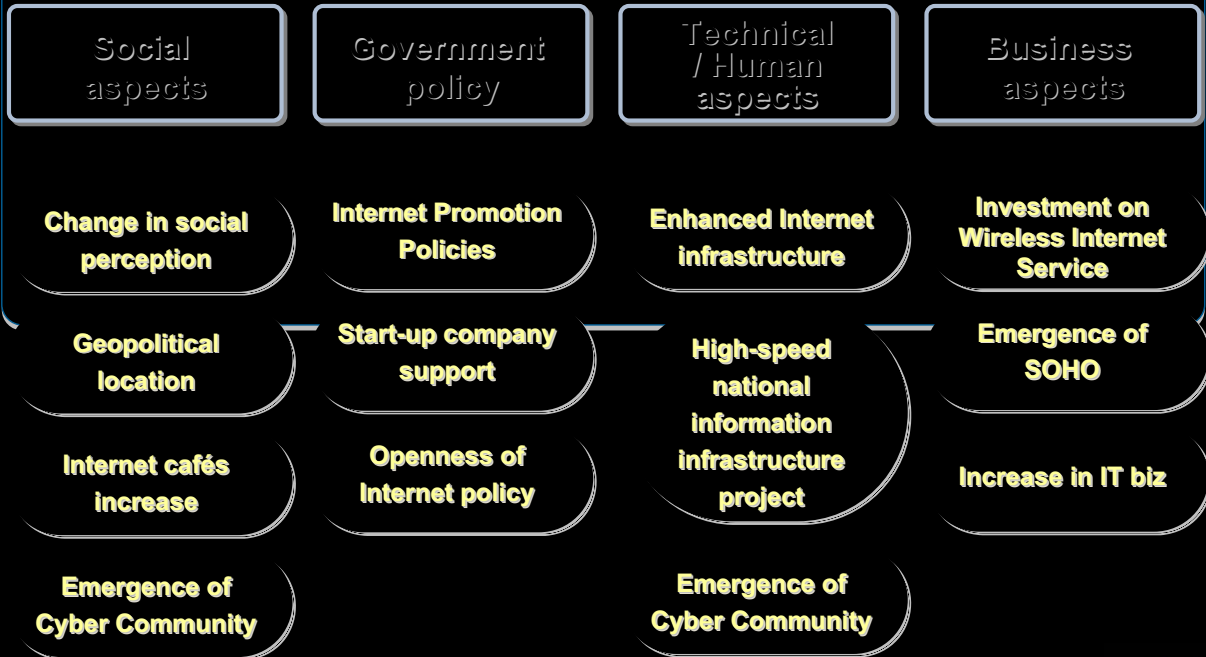


**BcN**  
High Speed  
(50~100 times faster)  
Quality Networks

**USN**  
Person-Object,  
Object-Object  
Communications



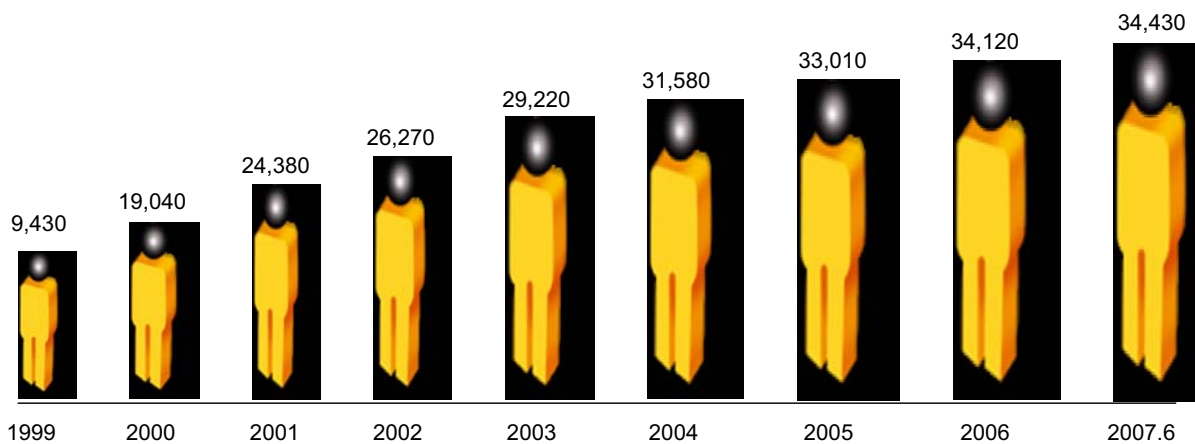
# Increasing Internet Use - Factors



# Cyber Infrastructure of Korea

## Number of Internet Users in Korea (Jun. 2007)

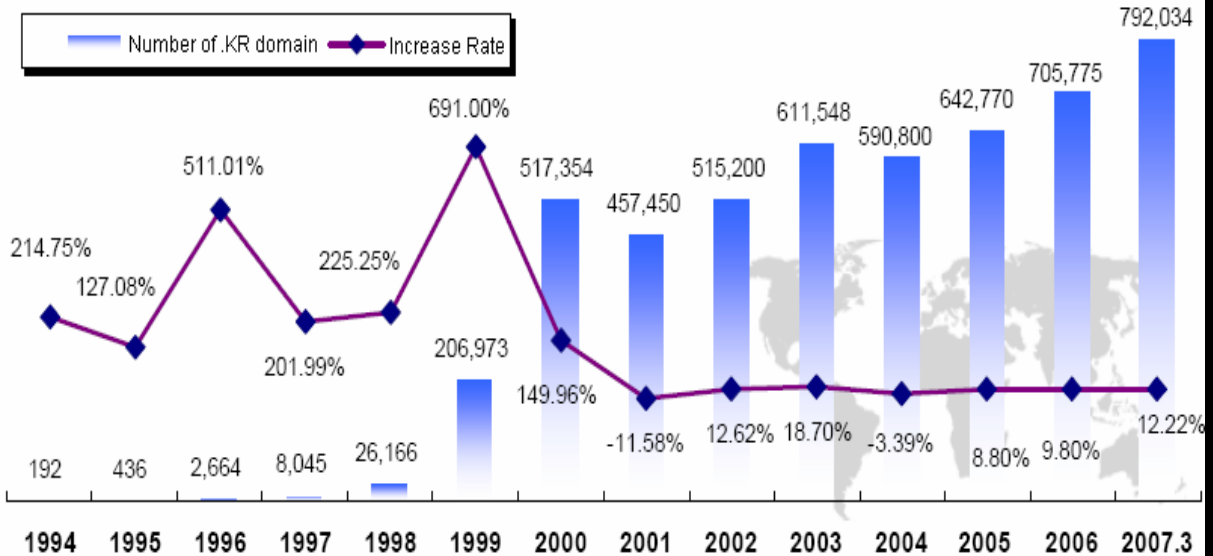
75.5% of Total Population of Korea in Jun. 2007



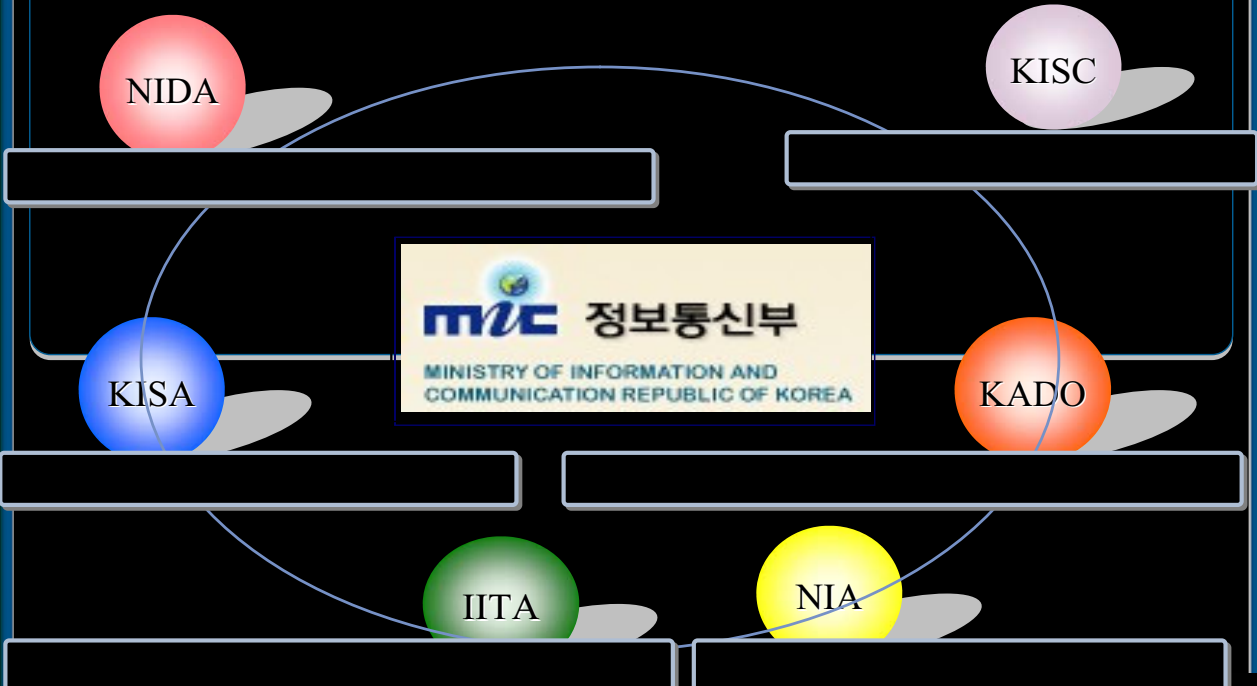
# Cyber Infrastructure of Korea

## Number of .KR Domains (Yearly)

2007.11 : 929,723

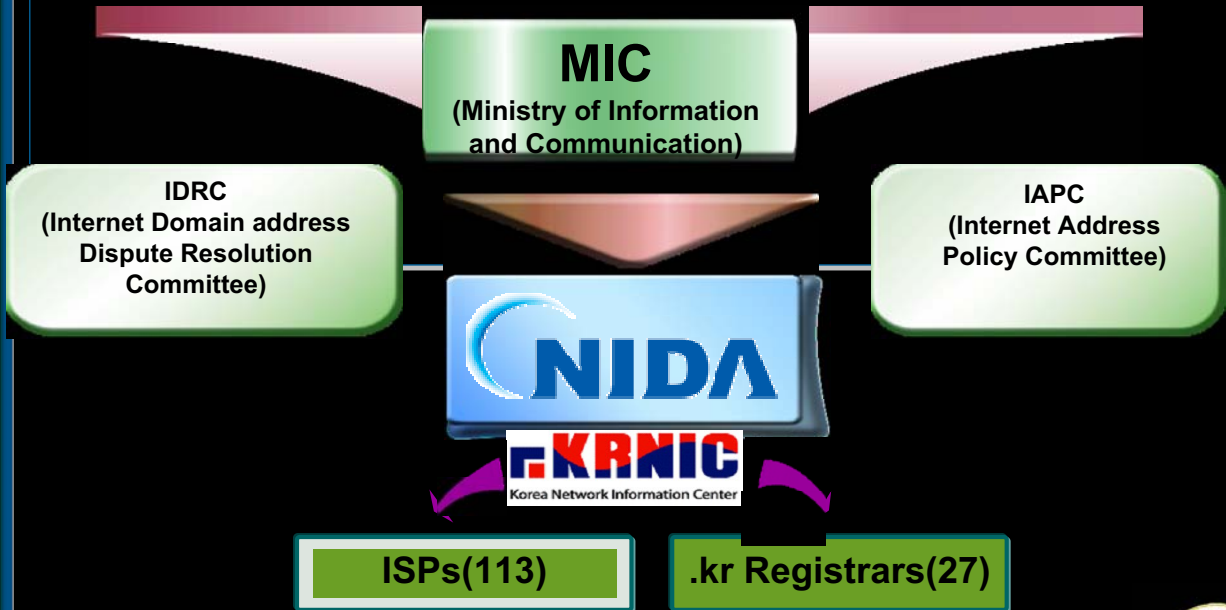


# Korean Internet Organizations



# Korean Internet Governance

## Act on Internet Address Resources



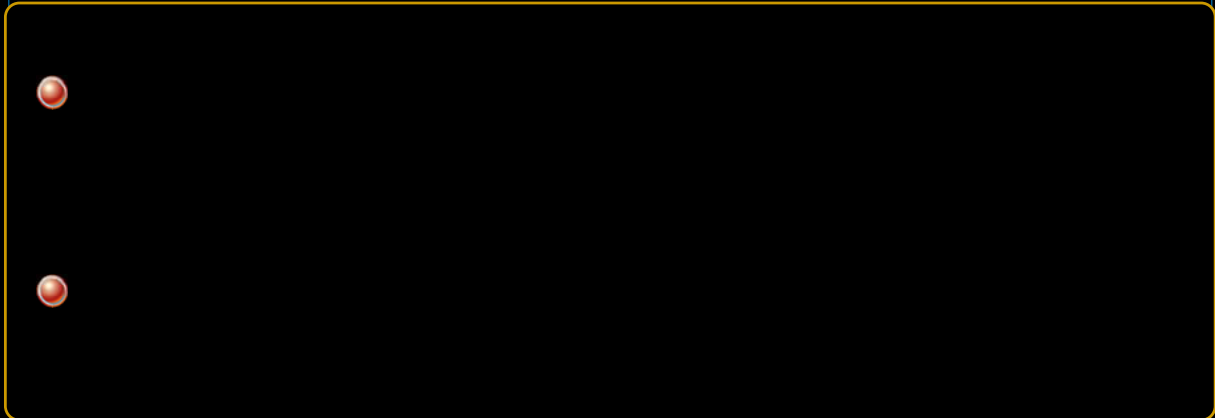
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Agency of Korea  
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# Introduction to NIDA



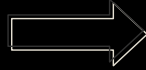
Non-profit Statutory Organization



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# History



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# Role of NIDA

- .kr DNS Service
- Allocation of IP Address as NIR
- ENUM, RFID, WINC etc

Internet Address  
Policy Committee

Internet Address Dispute  
Resolution Committee



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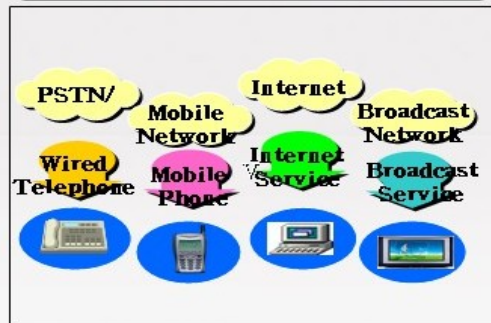
# Act on Internet Address Resource



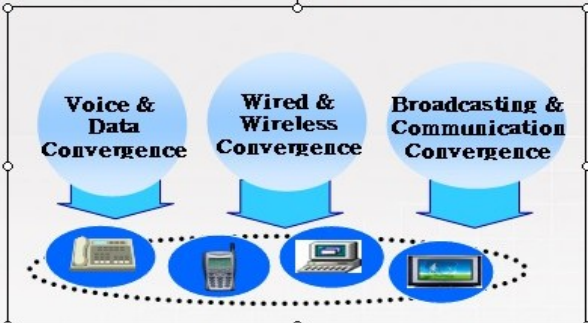
## Background of legislation



### Existing IT Environment - Individual IT Service



### Next Generation IT Environment - IP-based Convergence Service



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# R&D Activities



## RFID ODS (Object Directory Service)



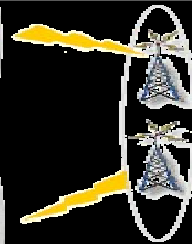
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# R&D Activities

## WINC (Wireless Internet Numbers for Contents)

Mobile Handset



011-011-0111  
011-011-0111  
011-011-0111



011-011-0111  
011-011-0111  
011-011-0111



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# R&D Activities

## ENUM (Telephone Number Mapping)

+82-2-2186-4500

E.164 number

00.54.6.8.1.2.22.8.e164.arpa

Internet e164 number  
E164num@digester.kr  
E164num@digester.kr  
www.digester.kr

ENUM (E164)



URI



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# New Activity – UCC Guideline



UCC (User Created Content)



UCC Guideline



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# Vision of Ubiquitous Korea

Anytime usage in Digital World

Digital World for Everyone

Anytime

Anyone

Anywhere usage in Digital World

Anywhere

*Digital World with Heart*

Realization of U-Korea

All-Security

Ubiquitous Intelligence in Digital World

Anything

Safe & Sound Digital World



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# Roadmap to u-Korea

•Continuous drive of IT 839 strategy  
•Realization of digital world for everyone

u-Korea  
Intro  
Stage

•Implementation of u-service for distribution, environment etc.  
•Install sensor chip in important basic facilities  
•Ubiquitous-based innovation of national system

u-Korea  
Developing  
Stage

•Generalization of u-service application to daily activities  
•Install sensor chip in every object  
•Global leader in ubiquitous innovation

u-Korea  
Mature  
Stage



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## II. IPv6 Status in Korea



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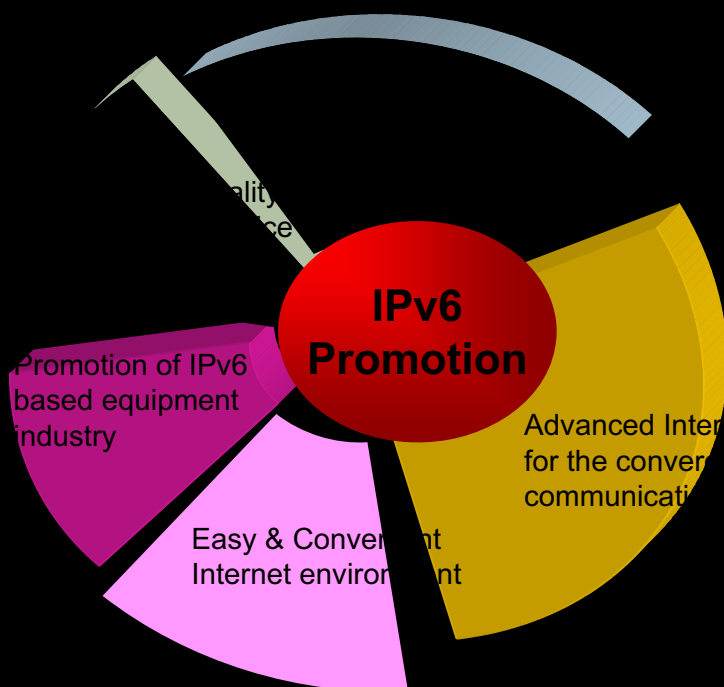
# Internet Protocol Global Statistics

1	USA	US	1,398,887,424
2	Japan	JP	157,070,336
3	China	CN	129,895,424
4	EU	EU	120,305,628
5	UK	UK	82,701,178
6	Canada	CA	73,507,328
7	Germany	DE	69,605,296
8	France	FR	65,239,328
9	S. Korea	KR	58,044,672
10	Australia	AU	32,722,432

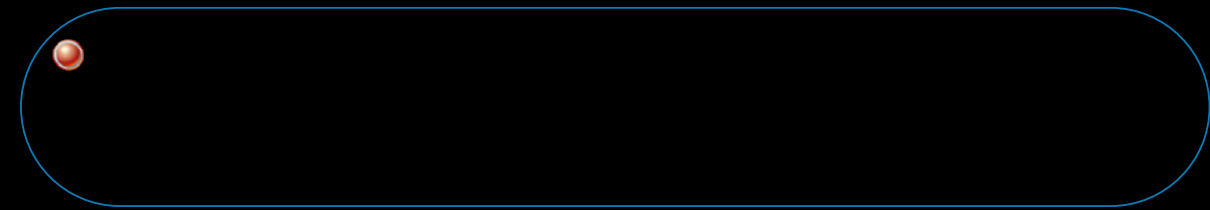
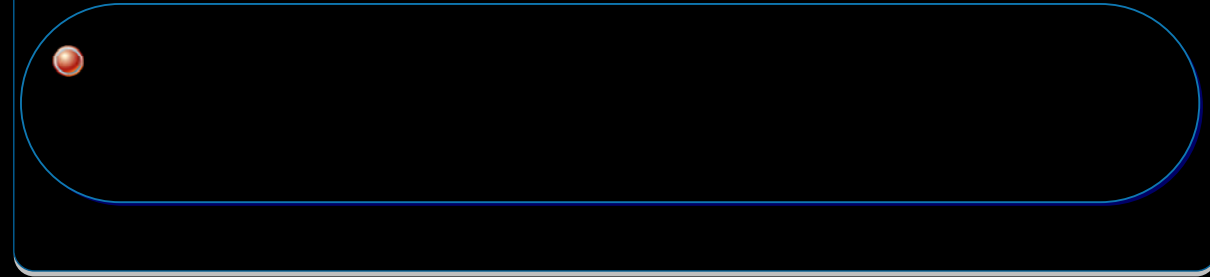
1	Germany	DE	9,579
2	France	FR	8,233
3	Australia	AU	8,206
4	Japan	JP	7,275
5	EU	EU	6,157
6	S. Korea	KR	5,191
7	Italy	IT	4,131
8	Taiwan	TW	2,309
9	Poland	PL	2,088
10	UK	UK	1,440



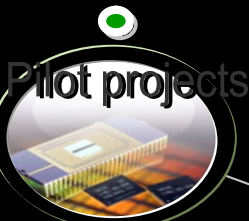
# Needs for IPv6 Promotion in Korea



# Background to IPv6 in Korea



# Outcomes from "IPv6 Promotion Plan"



Pilot projects

- VoIPv6, WiBro and IPv6 pilot projects
- IPv6 backbone (6NGIX) and IPv6 subscriber network(6KANet)



IPv6 technology

- Development of IPv6 home, small & medium sized routers
- IPv6 Local & Global standardization

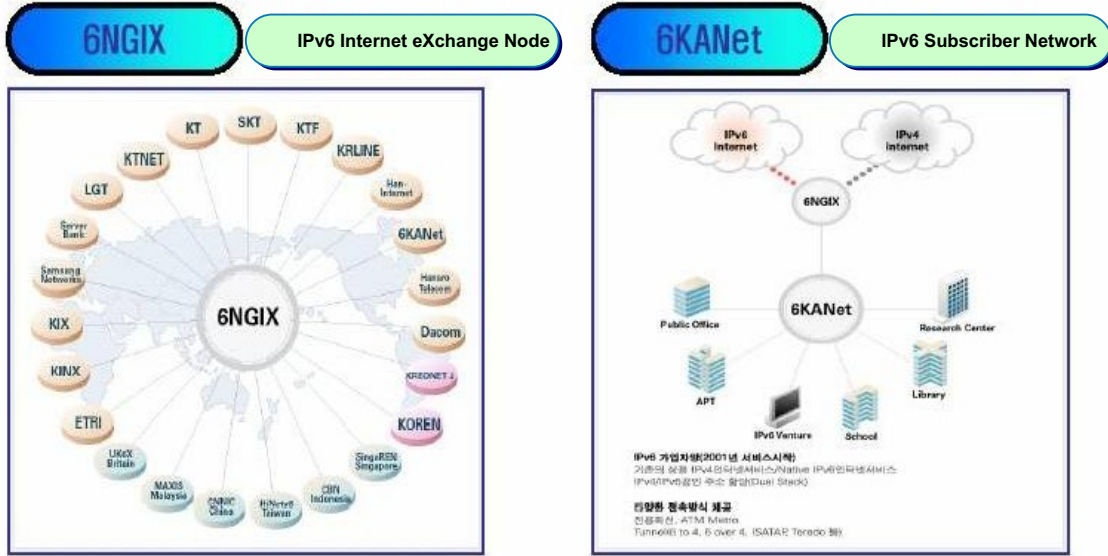


IPv6 utilization

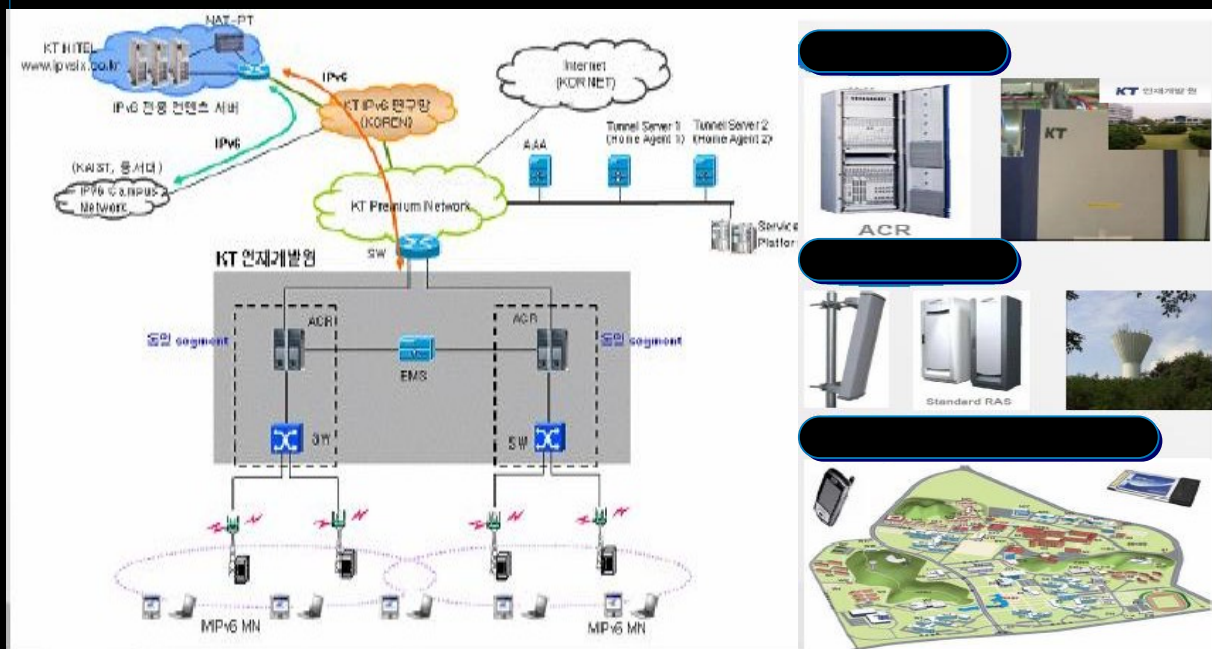
- 6<sup>th</sup> largest IPv6 country (/32 \* 5,191, '07)
- IPv6 mandatory in government projects ('06)



# Operation of IPv6 networks since 2001



# IPv6 WiBro services



# Vo IPv6 terminals



- Multi Functional IP telephone
- Model Number : IP-300



- Multi Functional IP telephone
- Model Number : IP-200



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# Homework from “IPv6 Promotion Plan”



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# Vision & Strategy in "IPv6 Promotion Plan II"

**Reinforcement of National Competitive Power  
through IPv6 Promotion**

IPv6 deployment in public sector by 2010

Drive with  
other related projects  
(IT839 strategy)

Deployment in  
government & public sector  
in advance

Provision of  
IPv6 deployment  
through legal system

Developing & providing IPv6 specialized services

Building- up IPv6 communication network

Improving legal system to promote IPv6

Creating IPv6 based environment

Technology development & standardization



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# Five Objectives in "IPv6 Promotion Plan II"

Objectives

I. Development of IPv6 services

II. Expansion of IPv6 communication network

III. Legal improvement for IPv6 deployment

IV. Fostering IPv6 friendly environment

V. IPv6 tech. development & standardization



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## **Objective One ! Development of IPv6 services**

→ IPv6 content development and distribution

⋮

→ IPv6 service distribution in public sector

⋮

## **Objective Two ! Expansion of IPv6 communication network**

→ IPv6 transition in commercial networks

⋮

→ Announcement of IPv6 transition in public sector

⋮

## Objective Two ! Expansion of IPv6 communication network

→ IPv6 transition in research & public networks

⋮

→ IPv6 Internet eXchange operation

⋮

## Objective Three ! Legal improvement for IPv6 deployment

→ Setting IPv6 as requirement

⋮

→ Legal system improvement to deploy IPv6

⋮

## Objective Four ! Fostering an IPv6 friendly environment

→ IPv6 promotion and education

⋮

→ Setting up a bridgehead to break into Global market

⋮

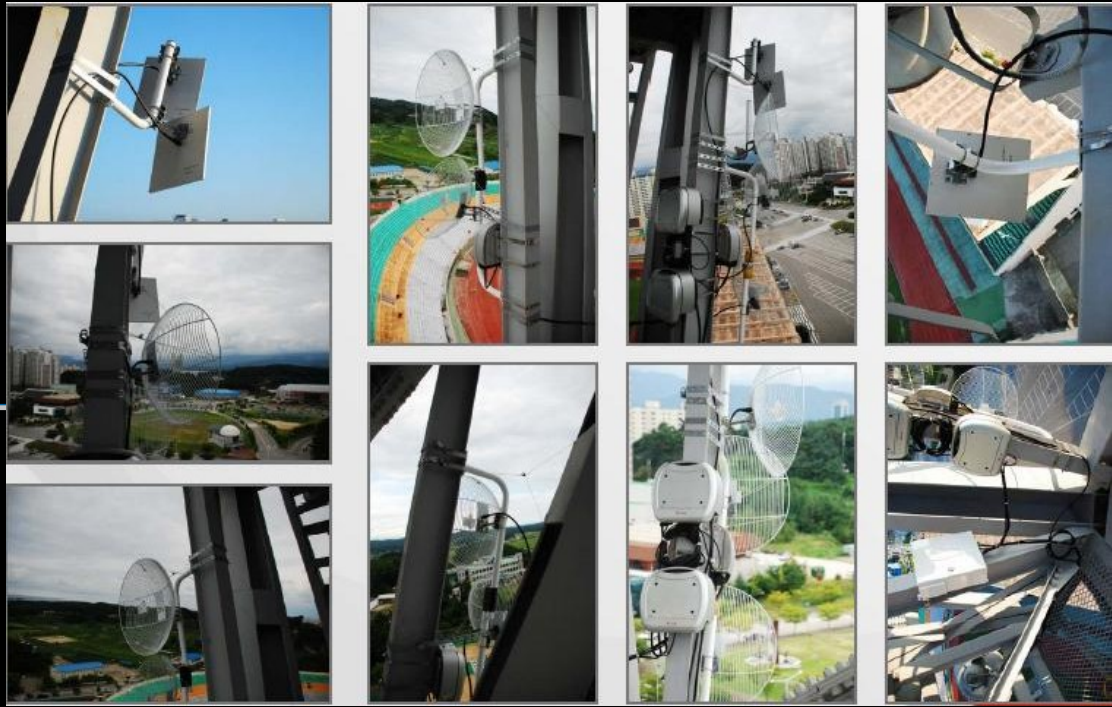
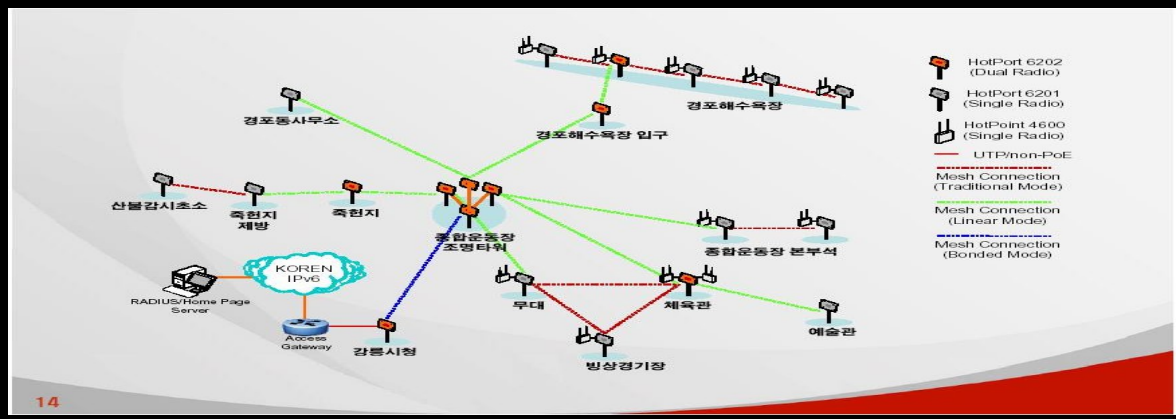
## Objective Five ! IPv6 tech. development & standardization

→ IPv6 mobility technical standardization

⋮

→ IPv6 addressing standardization

⋮





**3G-VoIP Videophone**



**Videophone Crime prevention service (Aug. 2007)**



# IPv6 deployment topology in Korea

## Policy area

- Vision & Policy development
- MIC, NIDA, NIA

## Technical area

- IPv6 deployment in communication industry

## IPv6 Strategy Council

## Promotion area

- IPv6 end-user promotion
- NIDA, NIA, IPv6 Forum Korea

## Commercial area

- IPv6 service in business
- Public & Private sector, ISP



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# Thank You



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