


KOREAv6

IPv6 Promotion probe of KOREA

2004. 8.
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N C A


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About NCA

- ↳ **Established in 1986** by the gov't & 260 staffs
- ↳ **As a leading agency for national IT strategy planning & implementation**
- ↳ **Main Activities**
 - Research, Consulting, Standard, Audit & Project Mgmt in IT area
 - Korea Information Infrastructure(KII), e-Gov't, IT839 strategy, Broadband IT Korea,...
- ↳ **Future Agendas**
 - Effective execution of IT839 strategy
 - Expand e-Gov't services
 - Setup NGN & Knowledge Information project, etc



NCA IPv6 Activities (1/2)

- Policy and Promotion
 - MIC IPv6 Policy Support
 - Secretariat office IPv6 Strategy Council(Chair : MIC Minister)
 - Set-up IPv6 National Strategy
- Network
 - Building and Operating IPv6 Network : 6NGIX, 6KANet, KOREAv6
- Application
 - Development and Deployment of IPv6 Application
 - Running Fund Support Programs for IPv6 Companies

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NCA IPv6 Activities (2/2)

- IPv6 Strategy Council
 - Established National IPv6 Policy and Roadmap
 - Intend to create Initial Market
 - Met an Agreement among Industry, Education, Research, Government
 - Chair
 - MIC Minister
 - Member(Top 20 Org./Companies)
 - CEO of NCA, ETRI, Samsung, LG, KT, Dacom, Hanaro, SKT, KTF, KAIST, etc.
 - Held 4 Times
 - 2003. 11. 19
 - 2003. 12. 24
 - 2004. 2. 20
 - 2004. 5. 19
- IPv6 will be applied to below areas from 2005
 - Home Network
 - BcN(Broadband convergence Network)
 - Network and Service in Public Sector
 - Commercial ISPs

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KOREAv6 (1/2)

KOREAv6 Program :
Accelerate IPv6 Commercialization
By Applying IPv6 Network and Service in Various Fields

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KOREAv6 (2/2)

KOREAv6 : Providing IPv6 Trial Services and testing IPv6 equipments/solutions by using national IPv6 Infrastructure

IT 8-3-9

KOREAv6 Trial Services

From July to December, 2004, 10 trial services

Area	Explanation	#
IPv6@ Gov&Office	- Realtime Nature Monitoring System	1
	- IPv6 Services for a Government Office	1
	- IPv6 Services for a Commercial Company Office	1
IPv6@Home	- IPv6 Services for FTTH Apartments	1
IPv6@ Campus	- IPv6 Services for Lab., Education	2
IPv6@ISP	- IPv6 Backbone and Access Trial Network	1
IPv6@HDTV	- HDTV Transfer over IPv6	1
IPv6@SOHO	- Wired/Wireless IPv6 Internet Gateway for SOHO	1
IPv6@Hospital	- Doctor's Round using Digital Chart System	1
IPv6@Home Network	- IPv6 Mobile Home network	1
IPv6@Telephony	- IPv6 based VoIP System Trial Service	1

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IPv6@Gov&Office

- ▶ Real-time monitoring Migratory Birds Area
 - Preservation Area
 - Local Gov. set-up IPv6 network cameras
- ▶ Changing Gov. & Office environment

< Offices >

< Nature Monitoring >

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IPv6@Campus(1/7)

- Mobile Education system using IPv6 network storage
- Providing Campus IPv6 Wireless Internet Service
- VOD based Cyber lecture system using IPv6 network

DongSeo Univ.

Seo Gang Univ.

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IPv6@Campus(2/7)

- IPv6 Network Architecture – Dong Seo Univ.

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IPv6@Campus(3/7)

- System Architecture – Dong Seo Univ.

Storage Server

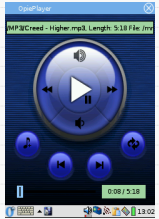
SCSI Disk 18G Byte

ISCSI Driver

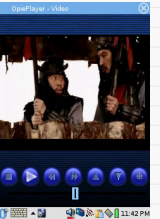
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IPv6@Campus(4/7)


Multimedia Play Example – Dong Seo Univ.



MP3 Music



Movie

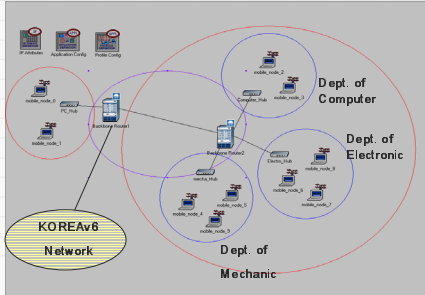


Movie

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IPv6@Campus(5/7)

- Campus IPv6 Mobile Network – Seo Kang Univ.



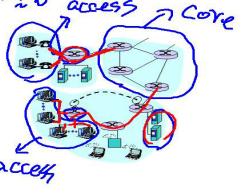
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IPv6@Campus(6/7)

By Seo Kang Univ.

네트워크 구조

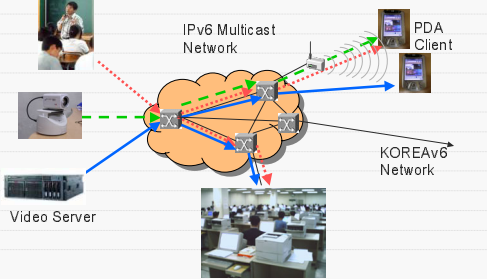
- ✓ □ 네트워크 액세스: 응용, 시스템
- ✓ □ 네트워크 코어:
 - network of networks
 - physical media: communication links
- ✓ □ 액세스 네트워크, physical media: communication links



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IPv6@Campus(7/7)

- Real-time Monitoring & VOD using IPv6 Multicast – Seo Kang Univ.



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IPv6@Home(1/4)

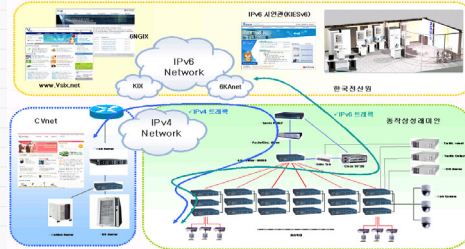
- History
 - Building IPv6 Network in FTTH Apartment in 2003
- Services
 - IPv6 Network Camera
 - IPv6 VOD Services
 - IPv6 Web, E-Mail, Community, P2P, etc



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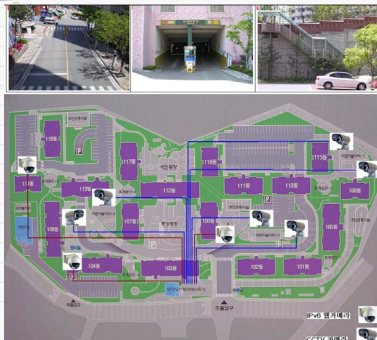
IPv6@Home(2/4)

- FTTH APT -> 100Mbps line in Every household
- Make connectivity between FTTH APT and KOREAv6 Network



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IPv6@Home(3/4)



- Building IPv6 Network Camera for Security at Public Entrance Area
- Building Web Casting using 6 CCTV Cameras in playground
- Residents can access the monitoring system from outside apartment
- Require Access control

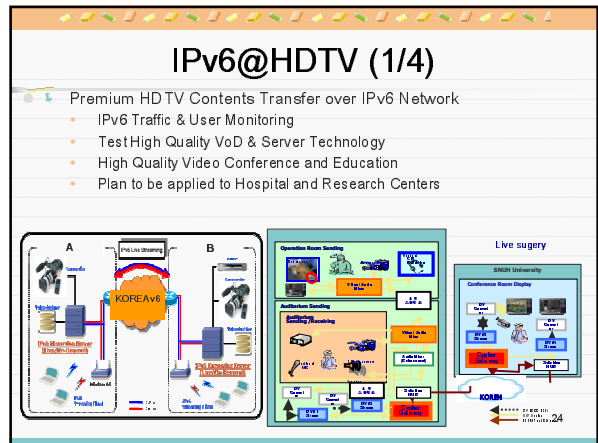
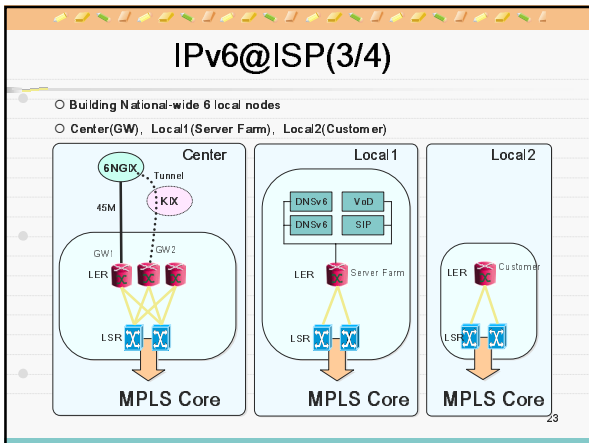
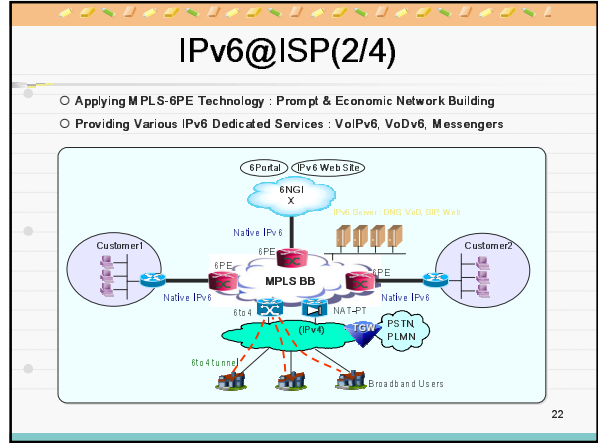
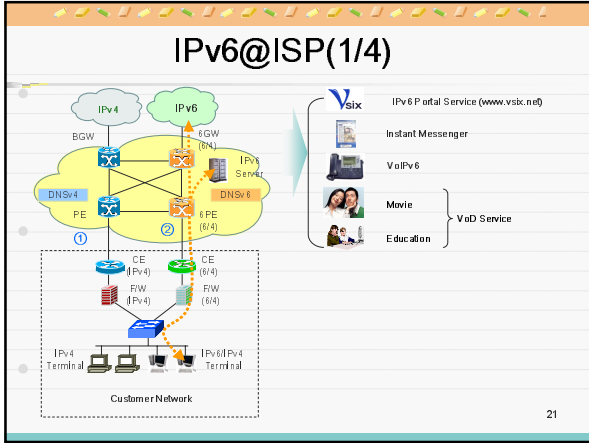
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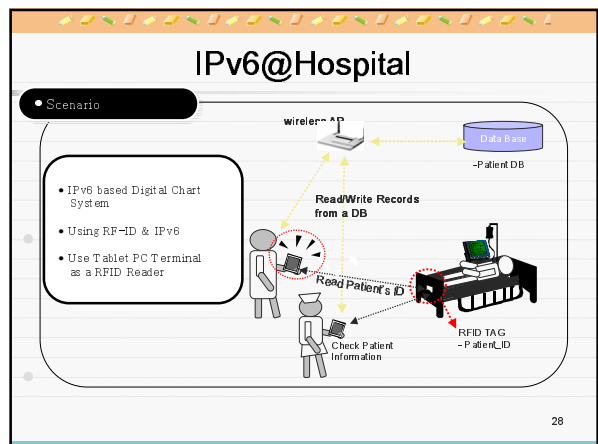
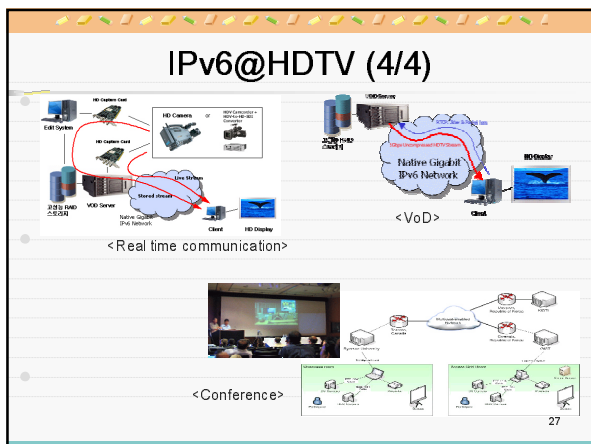
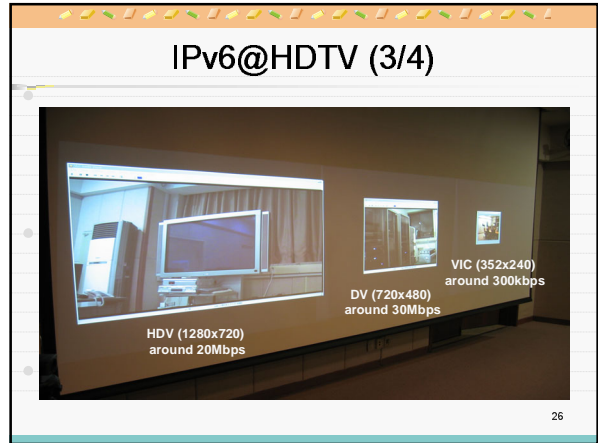
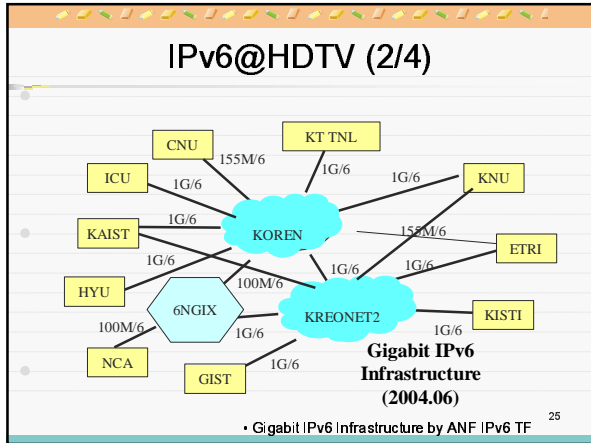
IPv6@Home(4/4)

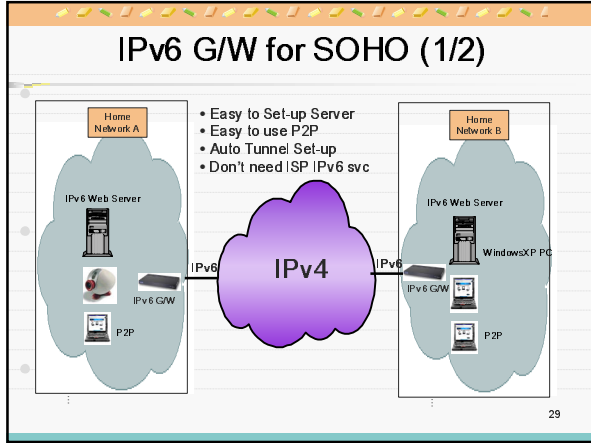
- Building VOD Media Server
- Providing Movie Contents using FTTH network
- Use Windows Media Player 9 Streaming
- Monthly update movie contents
(100 movies + 15 movies update per month)



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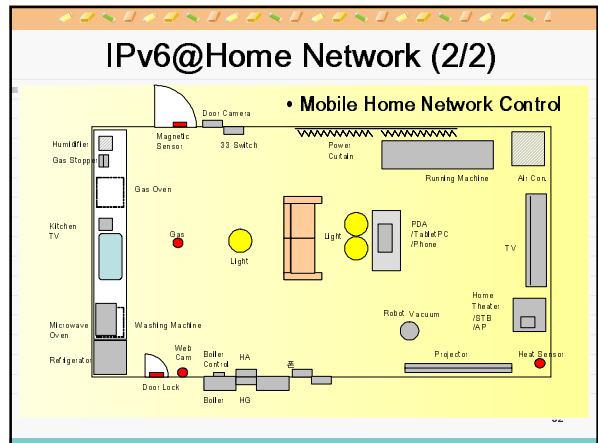
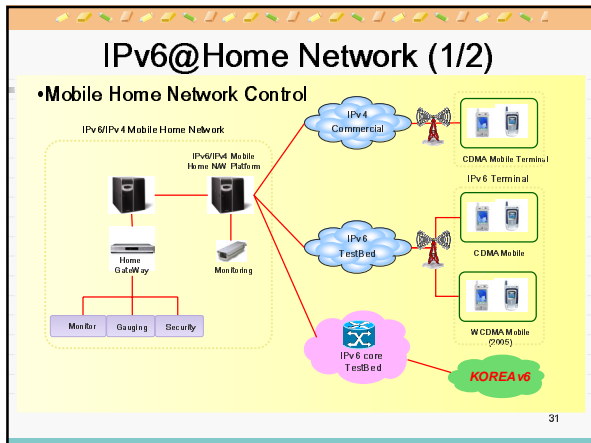




IPv6 G/W for SOHO (2/2)

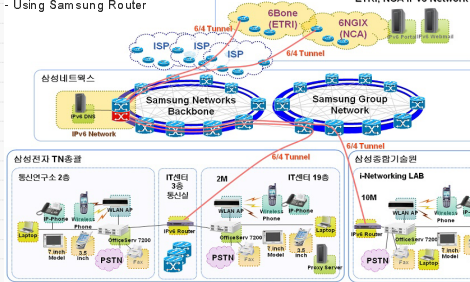
구분	Spec.
HW	- Ethernet 4 ports, WAN 1 port
	- 802.11 b/g WLAN
	- IPv4 Public/Private
	- Packet Filtering
SW	- Support IPv6 Server Network
	- DDNS
	- IPv6 Transition Mechanism
	- IPv6 Tunneling
	- IPv6 Extended Prefix Delegation
	- IPv6/N4 Application Support
	- User Friendly Interface
	- Upgradable Firmware

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IPv6@Telephony-VoIP (1/2)

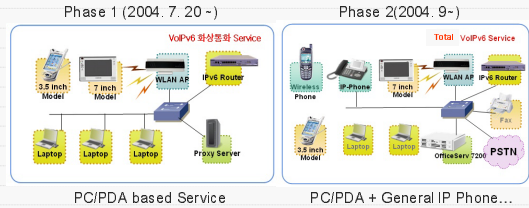
Interconnect Samsung Electronics, SAIT and 6NGIX via Samsung Network backbone
 - Using Tunnel(6in4)
 - Using Samsung Router



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IPv6@Telephony-VoIP (2/2)

People using VoIP Telephone Service
 - Also using IPv6 Portal(webhard, email, webhosting...)



PC/PDA based Service

PC/PDA + General IP Phone...

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Collaborative IPv6 Inter-Operability testing

- Test Network Equipments and Solutions
- Test Interoperability and Stability
 - July - Sep. : Define Test Scenario, Spec, Test Requirements
 - Oct - Nov. : Test
 - Dec. : Result Feedback
- 13 vendors, 52 different equipments/solutions

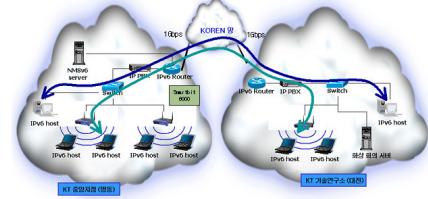
	Test Item	Objects
IPv6 Core	IPv6 Neighbor Discovery, IPv6 ICMP, etc	Router, NAT-PT, Solution, NMS, Firewall, etc
Routing Protocol	BGP4+, OSPF, RIP, etc	Router, etc
Transition Mechanism	Configured Tunnel, 6to4, etc	Router, NAT-PT, etc

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Collaborative IPv6 Inter-Operability testing

An Example

- Video streaming and Video conference System using MoIPv6
 - Wired/Wireless communication environment test
 - QoS of audio and video check under changing environment
 - QoS check on roaming



Effects

- Intend to create early market to promote IPv6
- Become infrastructures for BcN,
Home Network, RFID, and Telematics
- KOREAv6 Authentication Program will
pull up the grade of equipments and services

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Thank you.

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