

National Home Network Strategy: Case Korea

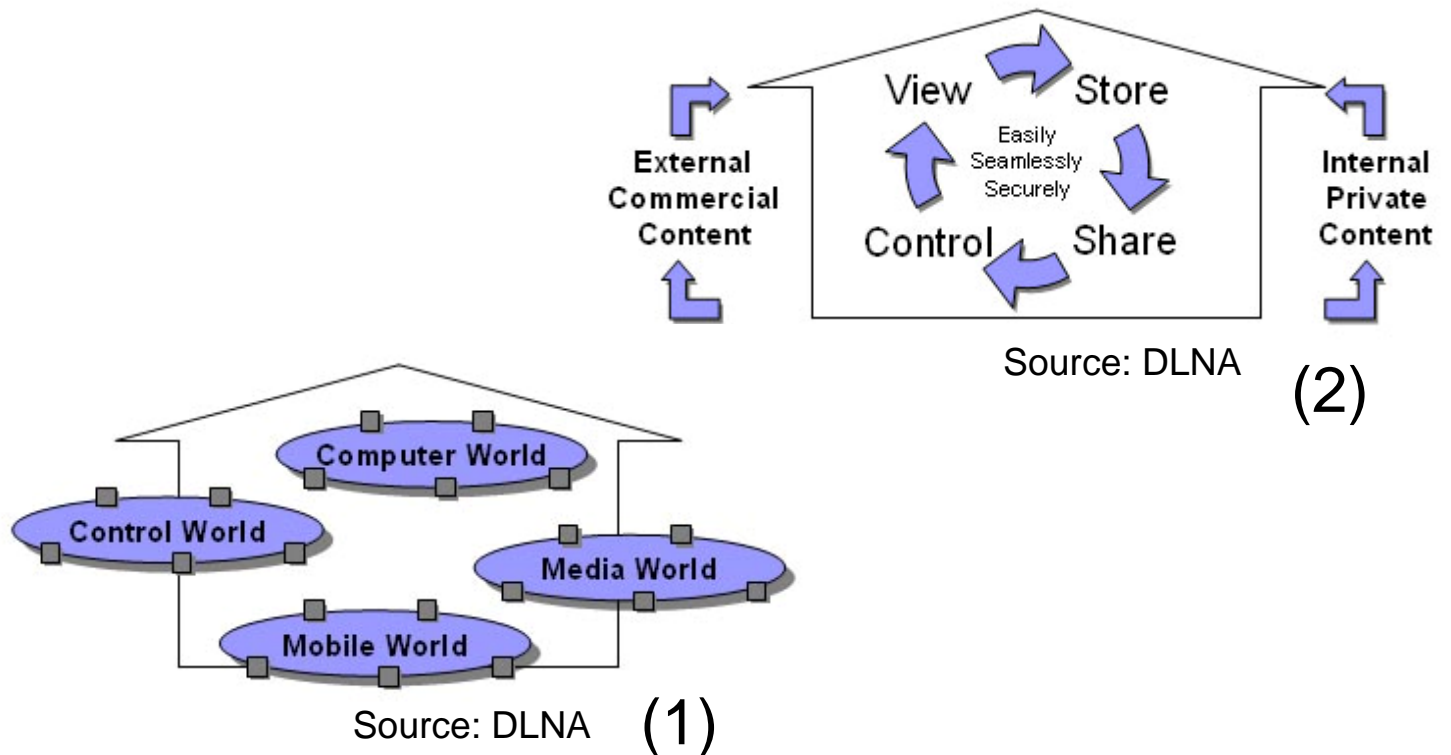
Master's Thesis:

Helsinki University of Technology – Department of Electrical and Communications Engineering

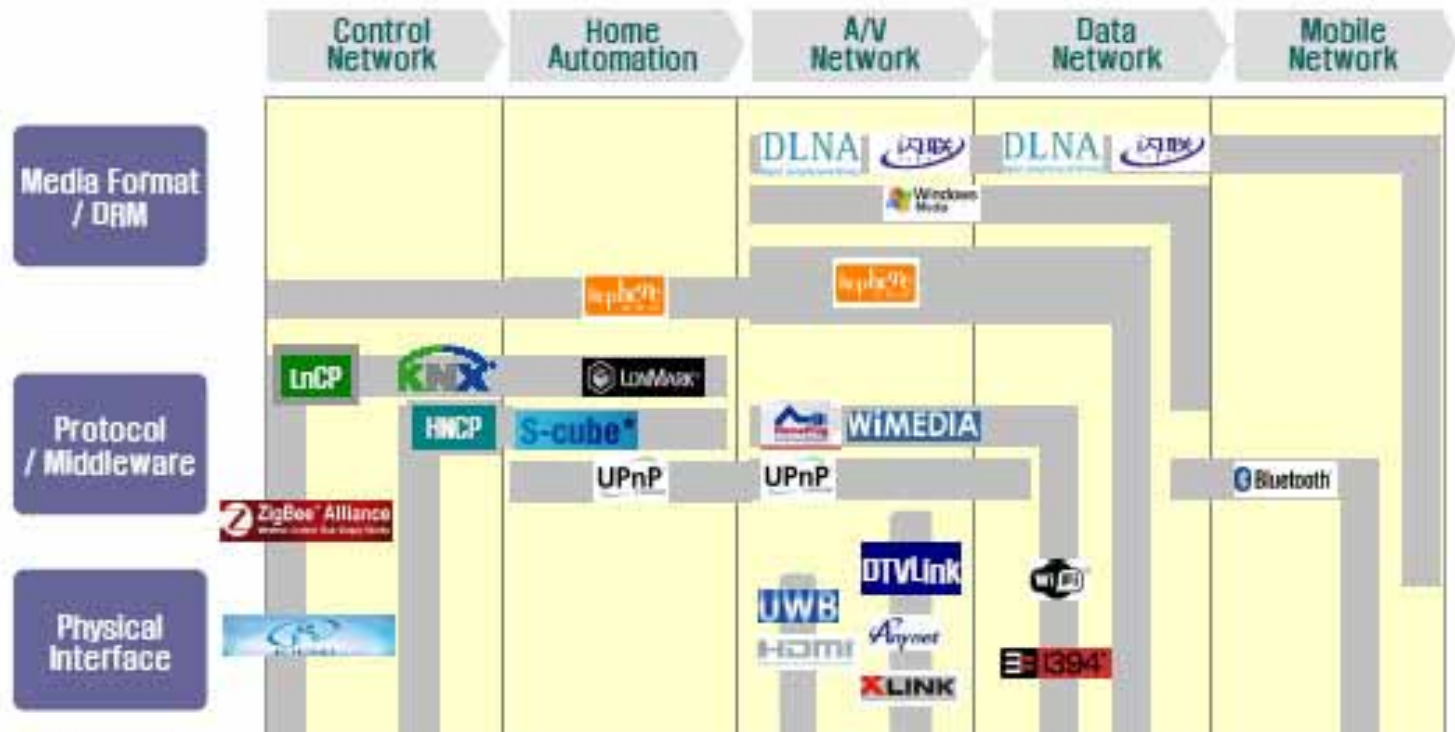


- Digital Home Standardization
- Home Networking Architectures
- Basic Facts of South Korea
- National Home Network Strategy
- A Leader in Commercialization

Digital Home – A Popular Vision

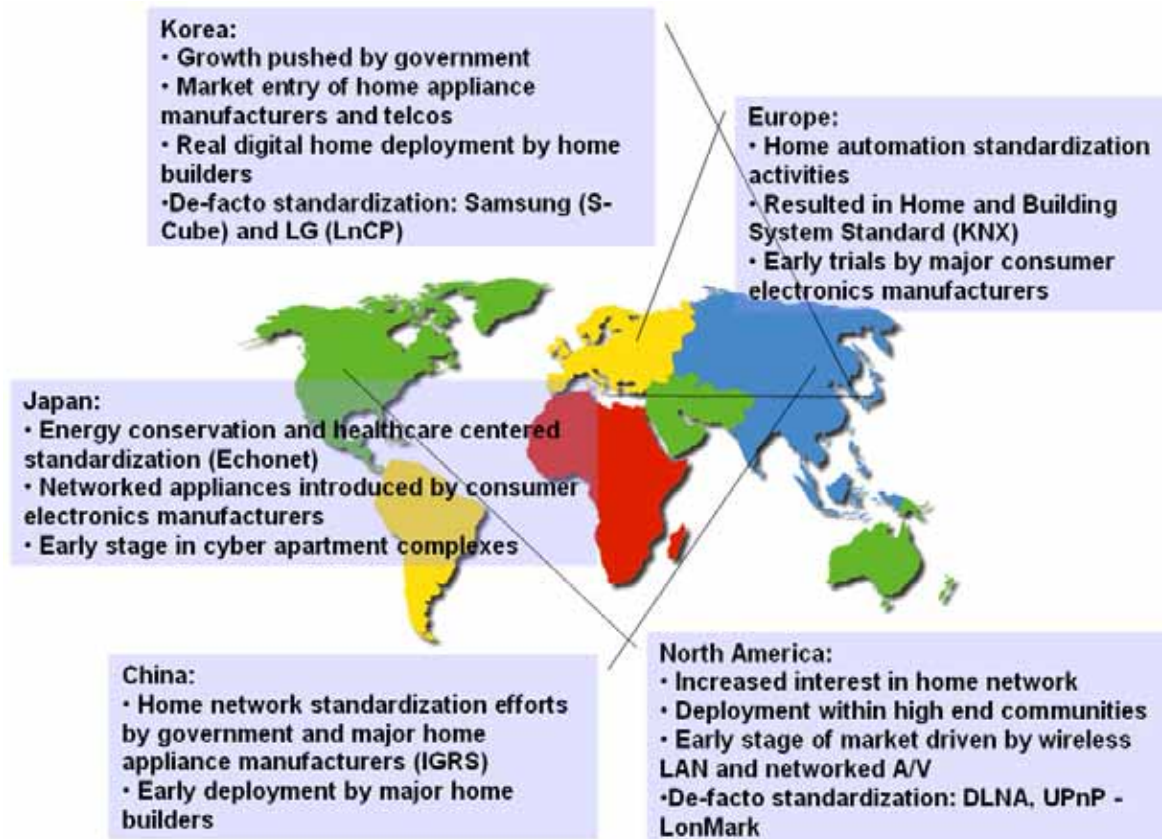


Digital Home – A Plethora of Standards

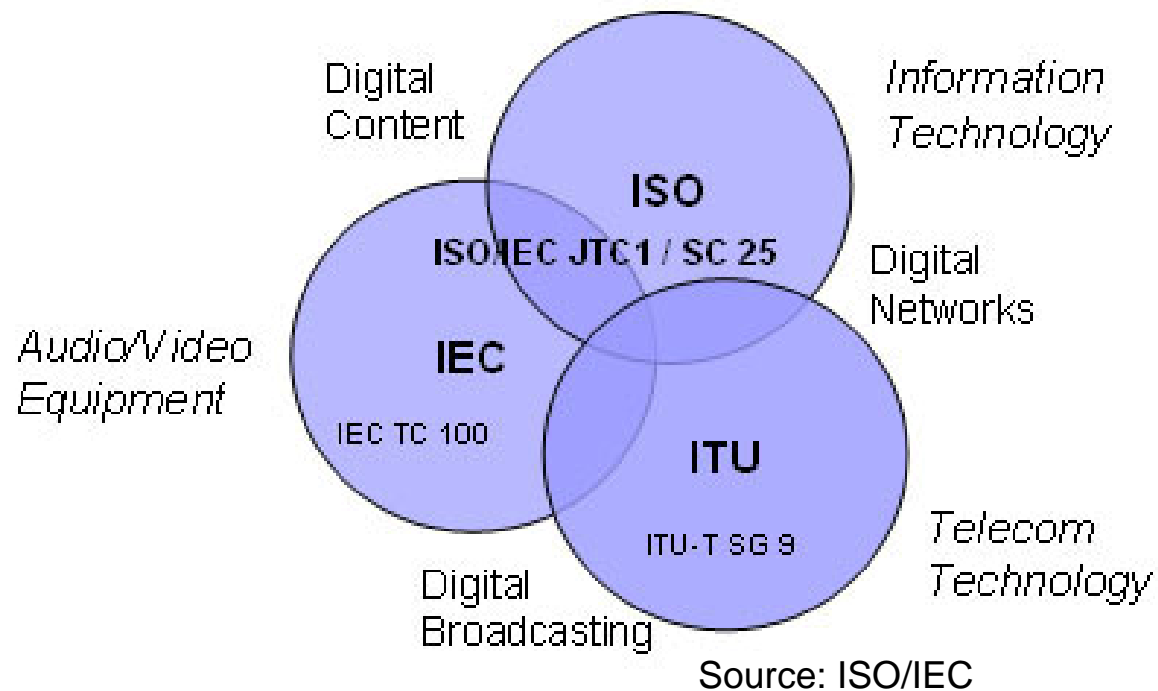


Source: LG Electronics

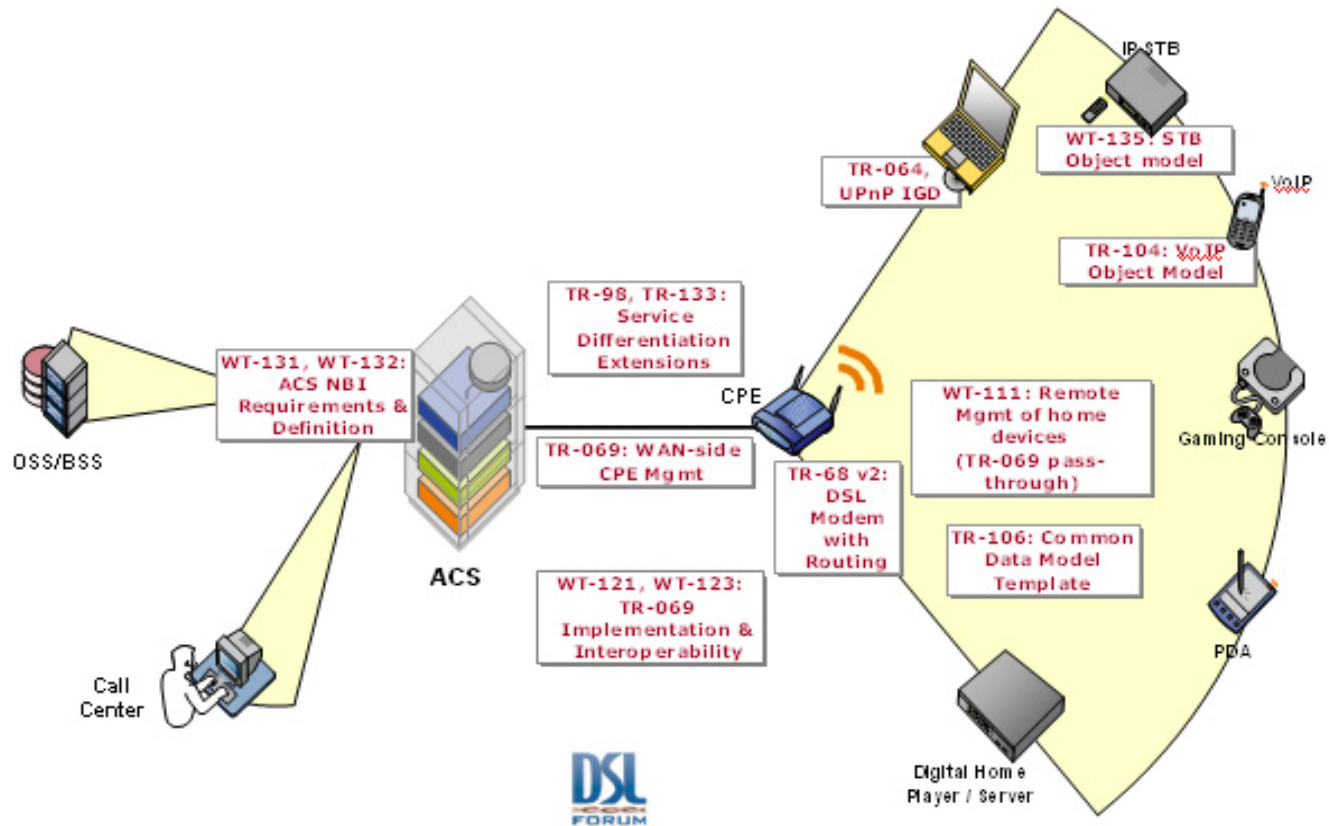
Digital Home – A Regional Perspective



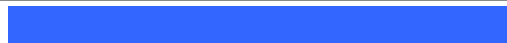

Digital Home – Activities of SDOs



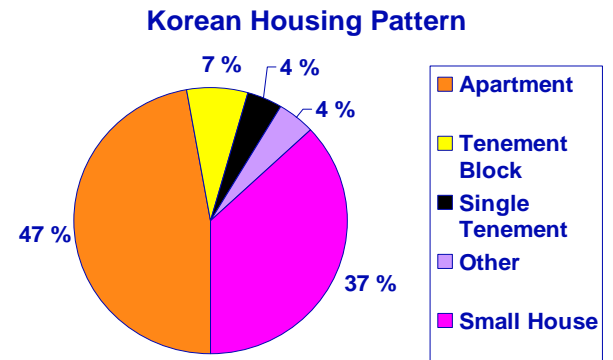
Home Networking Architectures – DSLHome, CableHome & NGN@Home



South Korea – Basic Facts (1/2)

South Korea in Figures	
Area	98,190 sq km (1/3 of Finland with 340,000 sq km)
Population	 (5.2 million for Finland)
Population Density	484 / sq km (32 times > than Finland with 15 / sq km)
Urbanization	81,.3% (22 million live in Seoul)
Households	17 million (2.2 million for Finland)
GDP	680.7 (billion USD) (US 11,735 – EU25 12,723 – World 39,503)
GNI Per Capita	 (US 37,870 – EU25 22,810 – World 5,110)
Arable Land	18% arable , 65% mountains (60 % of Finland forests, 10% under water)

Land of Apartment Forests: Residential Welfare A Concern



South Korea – Basic Facts (2/2)

General	Currency: South Korean Won (KRW) Government: Republic Languages: Korean Religion: Christian, Buddhist
R&D Investment	Total investment (2003): US\$ Million / % of GDP ██████████ 284,600 / 2.62 (USA), 124,000/ 3.12 (Japan), 60,000 / 2.50 (Germany)
R&D Funding	Funding sources: Public / Private / Foreign (%) 24,7 / 75.1 / 0.2 (Korea, 2003), 33.8 / 66.2 (USA, 2002), 26.6 / 73.0 / 0.4 (Japan, 2001), 31.9 / 66.0 / 2.1 (Germany, 2001)
Patent Applications	International applications (2003) : ██████████, 39,250 (USA), 16,774 (Japan), 13,979 (Germany)
<i>Sources: CIA Fact Book, PriceWaterHouseCoopers, National Statistics Office, KITA</i>	

10th Largest Economy – Strongest Industrial Sectors



South Korea – National Benchmarks

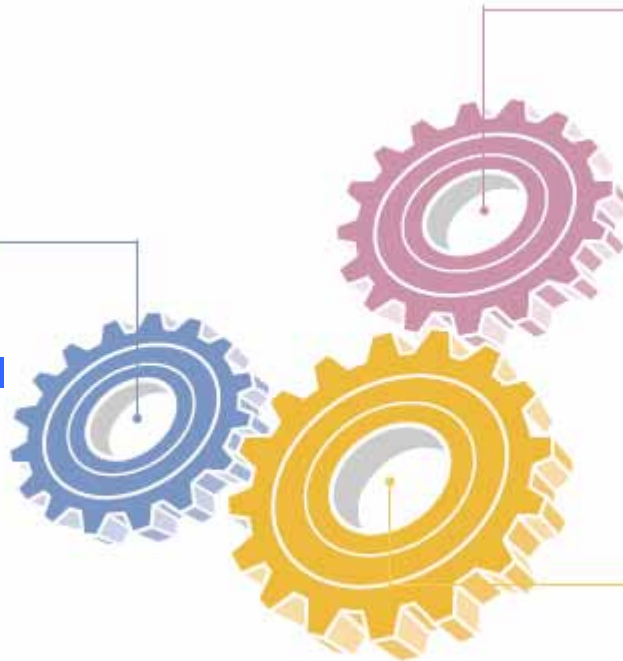
Vision	Technology development direction	Comparison with No.1 country in the world	
		Level (%)	Gap (Yr)
Realization of Society based on Knowledge, Information and Intelligence	- Communication at any time and in any place	72.9	3.2
	- Innovation of contents and services	69.8	3.5
		73.4	3.6
Promotion of Health Life Society	- Development and commercialization of new medicines	58.7	5.1
	- Innovation of disease prevention/diagnosis/treatment	62.5	4.8
Promotion of Environment/Energy Frontier	- Environmental innovation of realizing pleasant and healthy life	54.4	8.8
	- Efficient/stable/environment-friendly energy supply and industrialization	63.3	6.3
Value Creation of Key Industries	-Future-typed transportation machines/systems construction	70.5	7.8
		69.3	6.6
		72.0	4.8
	- Mechatronics, next generation manufacturing system	72.0	5.1
Enhancing National Security and Prestige	- Entering into the age of space aviation	46.5	11.9
	- Food security/ resources conservation	63.0	6.4
Source: Ministry of Science and Technology (2005)		Average	65.1
			5.8

IT-839 Strategy: Future Growth Engines of Korean Economy

8 Services

WiBro Service
DMB Service

Telematics Service
RFID- based Service
W-CDMA Service
Terrestrial DTV
Internet Telephony



9 Products

Mobile Handset & Equipment
DTV & Peripherals

System - on Chip(SoC)
Next Generation PC
Embedded SW
Digital Contents & SW Solution
Telematics
Intelligent Service Robot

3 Infrastructures

Broadband convergence Network(BcN)
Ubiquitous Sensor Network(USN)
Next Generation Internet Protocol [IPv6]

Source: Ministry of Information and Communication (MIC)

National Home Network Strategy: Government Pushed Growth

- Deployment of 10 million households by 2007 in Korea
- Development of convergent server, wireless technologies and service models
- Certification of the "Home Network Service"
- Amendment to housing law currently under study in the ministry

National Home Network Strategy: Government Measures and Funding

Funding	Amount	Description
R&D projects	45\$ million	Home Network Technology Research Centers have been established in Hanyang and Inha universities
Pilot projects	1,5\$ million	For two pilot projects participated by two [redacted] lead by SKT and KT
Ubiquitous Dream Hall	1,7\$ million	Built by Korea's leading IT companies to provide the public an opportunity to experience ubiquitous networking
Industry promotion	10\$ million	[redacted] for construction companies to subsidize the cost of digital home installations

Home Networking Industry Consortia

	KT Consortium (44)	SKT Consortium (39)	
# of Trial Homes	Seoul, Gyunggi, Daegu, Gwangju (700)	Seoul, Gyunggi, Busan, Daejon (600)	
# of Trial Services	25	24	
M e m b e r s	Telco	KT, KTF	SKT, Hanaro
	Broadcasting	Terrest.: KBS, EBS, MBC Satellite: Skylife	Terrest.: SBS Cable: CJ CableNet
	Construction	Samsung, Hyundai, Daelim, Korea National Housing Corporation	Daewoo, Lotte, LG, SK
	White goods	Samsung, WiniaMando, Rinnai	LG, Daewoo
	SI /NI	HT, Seoul Commtech, Daelim I&S, Samsung SDS	TechnoVillage
	Home Gateway	iCross Technology, Samsung, Commax, Mercury	Lucent, LG, RPA Networks
	Contents	KT, NHN, Yattoo, Enwise	Nate, Daum

Source: iCross Technology

South Korea: A Leader in Commercialization

Appliance manufacturers:

- Samsung "Homevita"
- LG "HomNet"

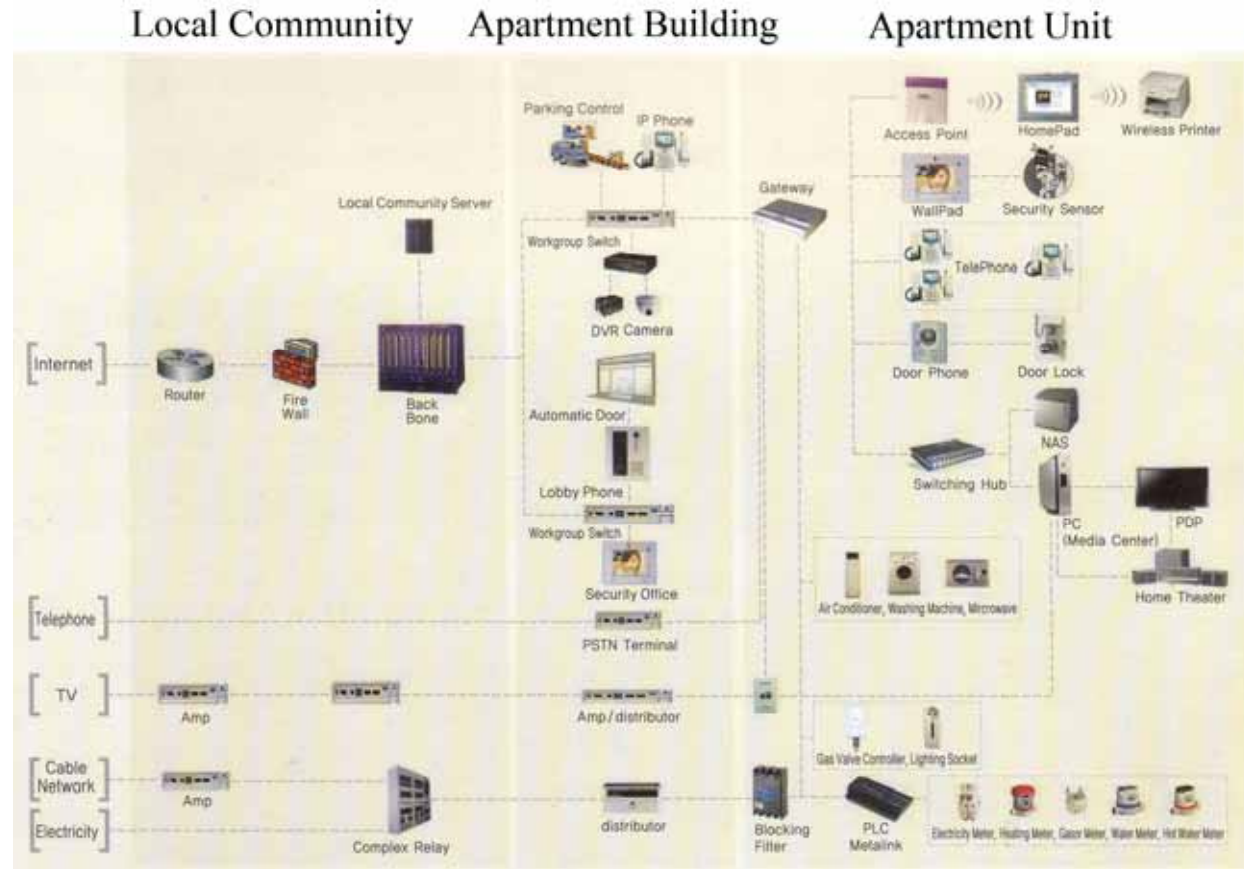
Telecom operators:

- KT "HomeN"
- SKT Digital Home

Different segments:

New apartments / Existing homes

Example: Samsung HomeVita – Home Network Configuration



Example: SKT Digital Home Services (3Q/2005)

Package	Lite - Security	Deluxe – Control	Premium -Infotainment
	-Burglar security -Fire security -Gas security	-Lighting control -Gas valve control -Electronics control -Mode control -Computer control +Lite package	-VOD -Family locator -Home messaging + Deluxe package
Options	-Pet Care -Digital Picture Frame -Video Phone -Home Monitoring -Door Contro		
Notes	- SK Telecom broadband connection required - Household appliances must be purchased separately		



Thank you!

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