KOREA INTERNET ECOSYSTEM

-KINX-

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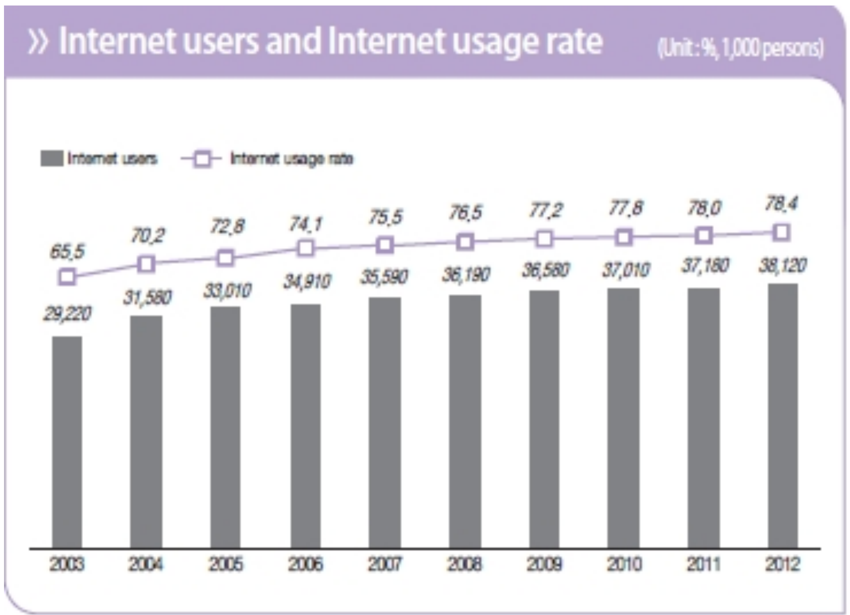
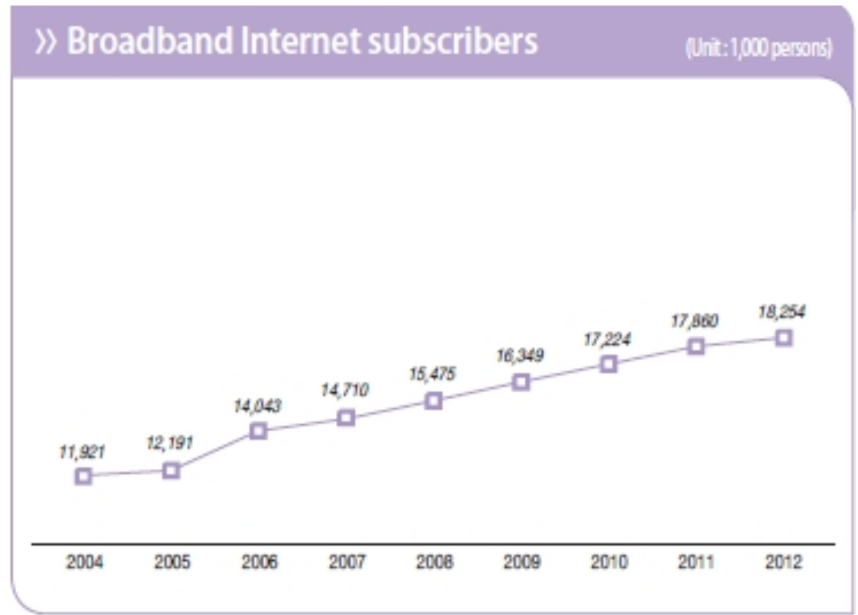
1. KOREA INTERNET STATUS

A. Internet Subscribers



Former KCC - KISA, 2012 Survey on the Internet Usage, 2013



MSIP, Broadband Internet subscription (compiled), 2013

A. Internet Subscribers

Broadband Internet subscribers by Providers

【Table 3-1-1】Broadband Internet subscribers

(Unit : 1,000 persons, %)

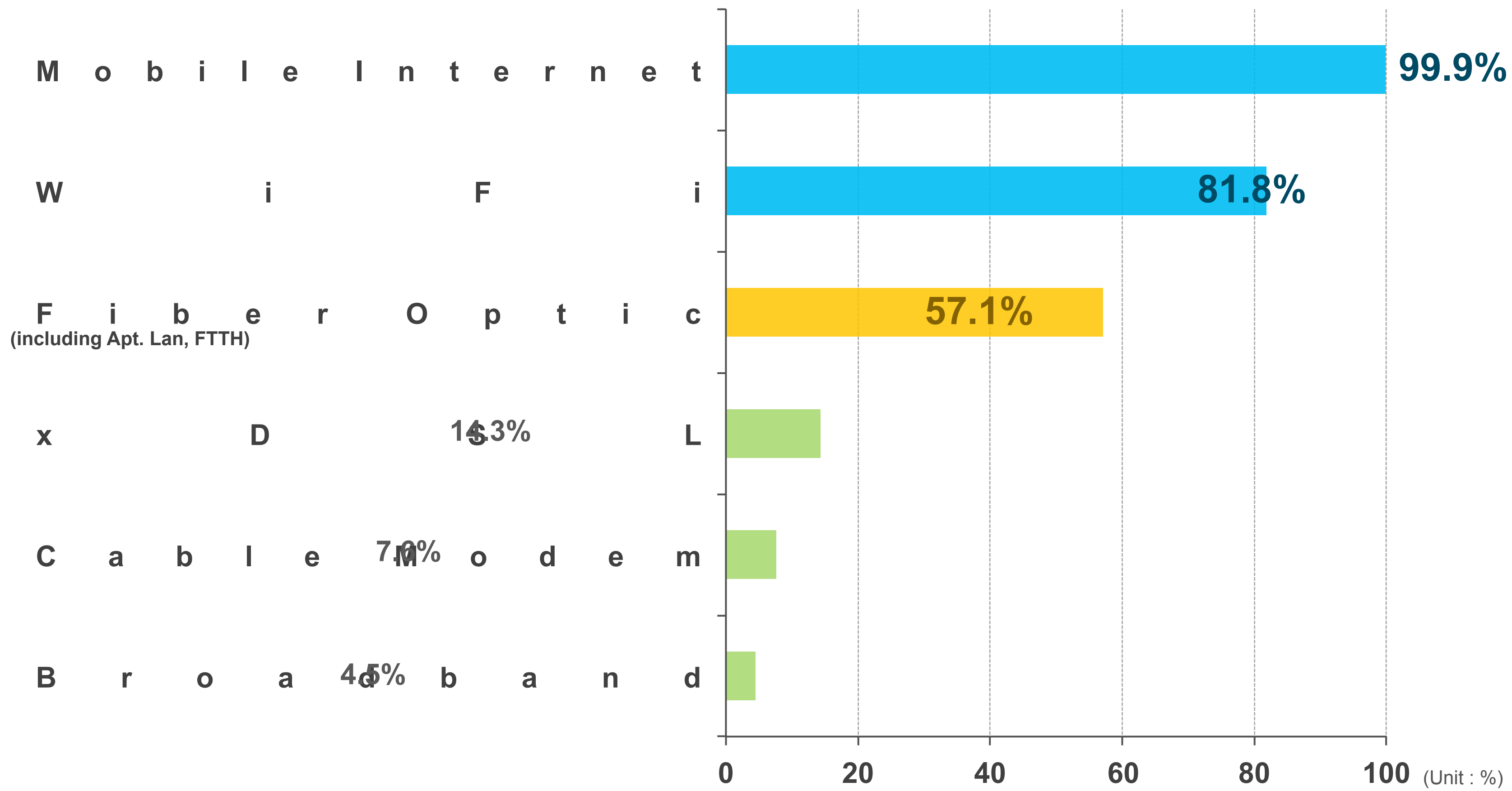
Provider		2007	2008	2009	2010	2011	2012
KT		6,516(44.3)	6,712(43.4)	6,953(42.5)	7,424(43.1)	7,823(43.8)	8,037(44.0)
SK Broadband		3,658(24.9)	3,544(22.9)	3,847(23.5)	4,002(23.2)	4,192(23.5)	4,394(24.1)
Dreamline		2(0.0)	1(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
LG U+	LG Dacom	68(0.5)	29(0.2)	12(0.1)	2,773(16.1)	2,810(15.7)	2,743(15.0)
	LG Powercom	1,721(11.7)	2,182(14.1)	2,510(15.4)			
System operator		2,507(17.0)	2,786(18.0)	2,811(17.2)	2,826(16.4)	2,857(16.0)	2,960(16.2)
Relay operator		16(0.1)	13(0.1)	11(0.1)	199(1.2)	178(1.0)	120(0.7)
Network System Operator		58(0.4)	50(0.3)	42(0.3)			
Special Category Telecommunications System Operator		164(1.1)	158(1.0)	163(1.0)			
Total		14,710	15,475	16,349	17,224	17,860	18,254

※ ( ) is year-end market share

MSIP, wired and wireless communication service subscribers statistics, 2013

2013 Survey from Internet White Paper

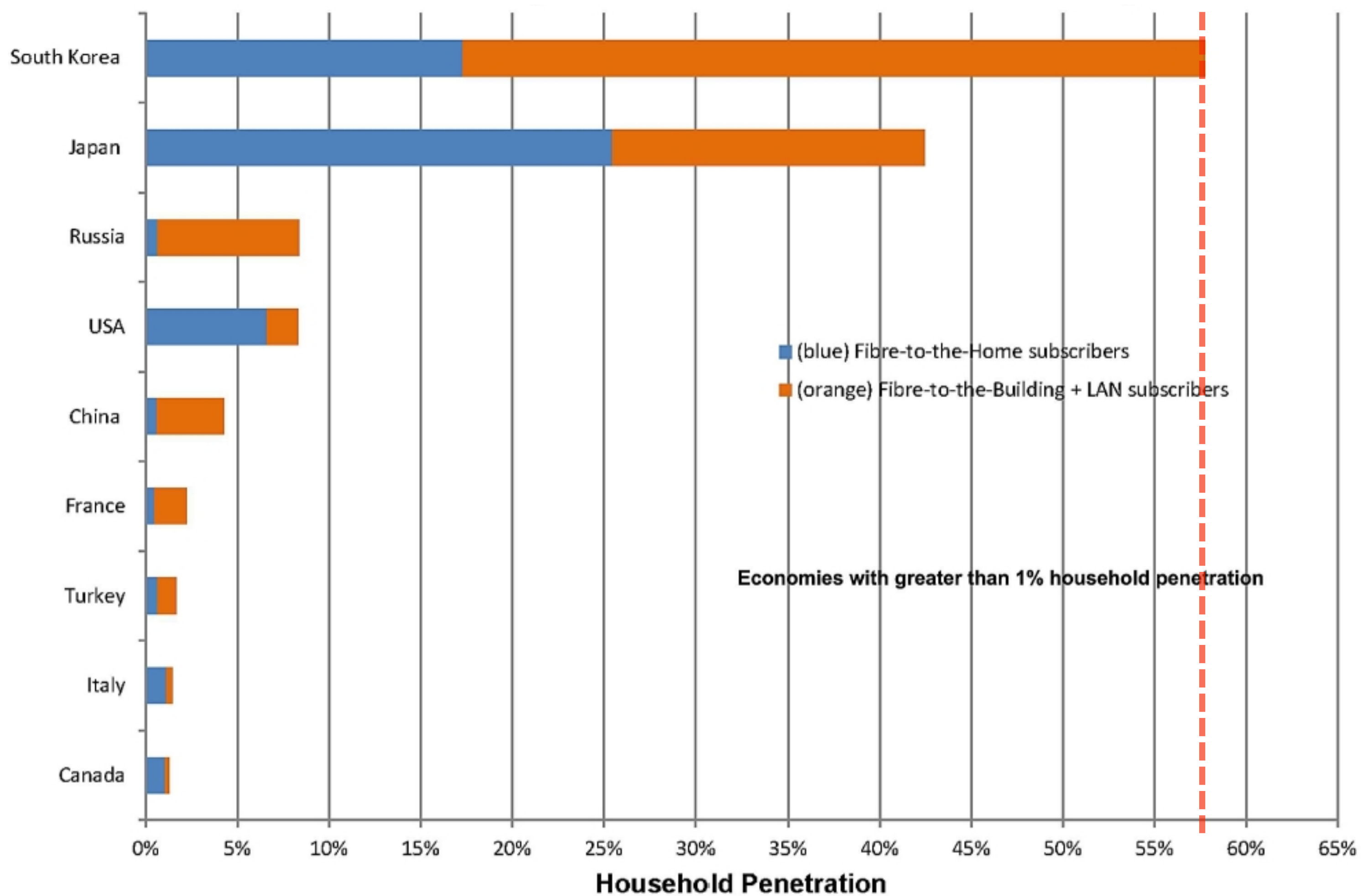
B. Internet Access Trend by household, multiple answer



May. 2012 Survey from KISA

C. FTTH Penetration

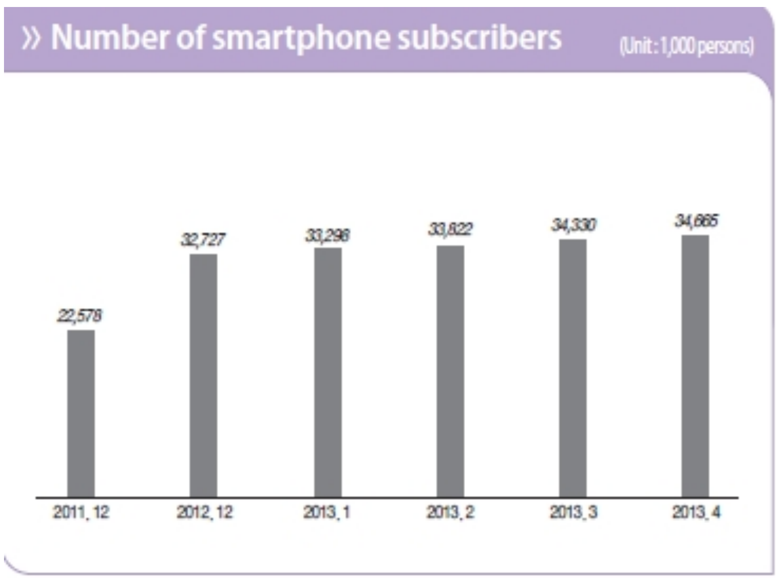
G20 Economies with the Highest Penetration of Fibre-to-the-Home/Building+LAN



2011 Ranking *Economies with at least 200,000 household

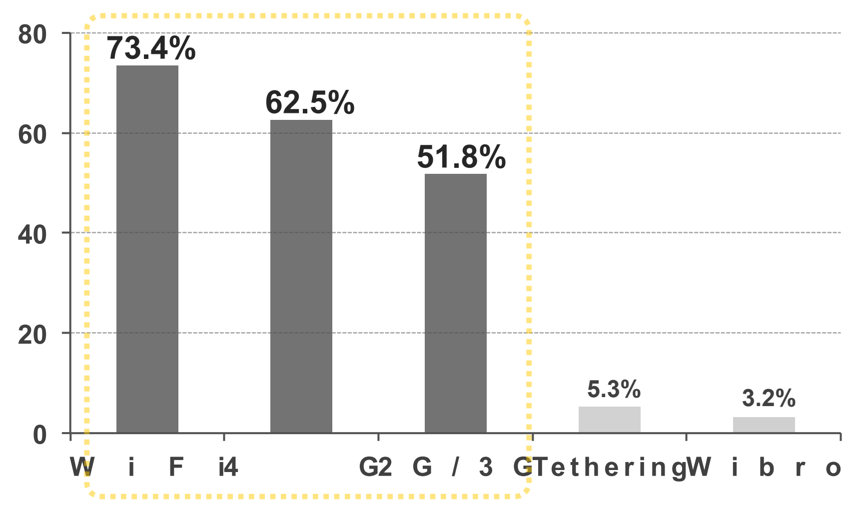
D. Mobile Broadband Users

G20 Economies with the Highest Penetration of Fibre-to-the-Home/Building+LAN



MSIP. wired and wireless communication service subscription statistics. 2013

Mobile Internet Access Method (Multiple answer) (Unit : %)



2013 Survey from KISA

E. Smartphone, Game & App Industry

Sales by app market (as of 2012)

(Unit : KRW 100 million)

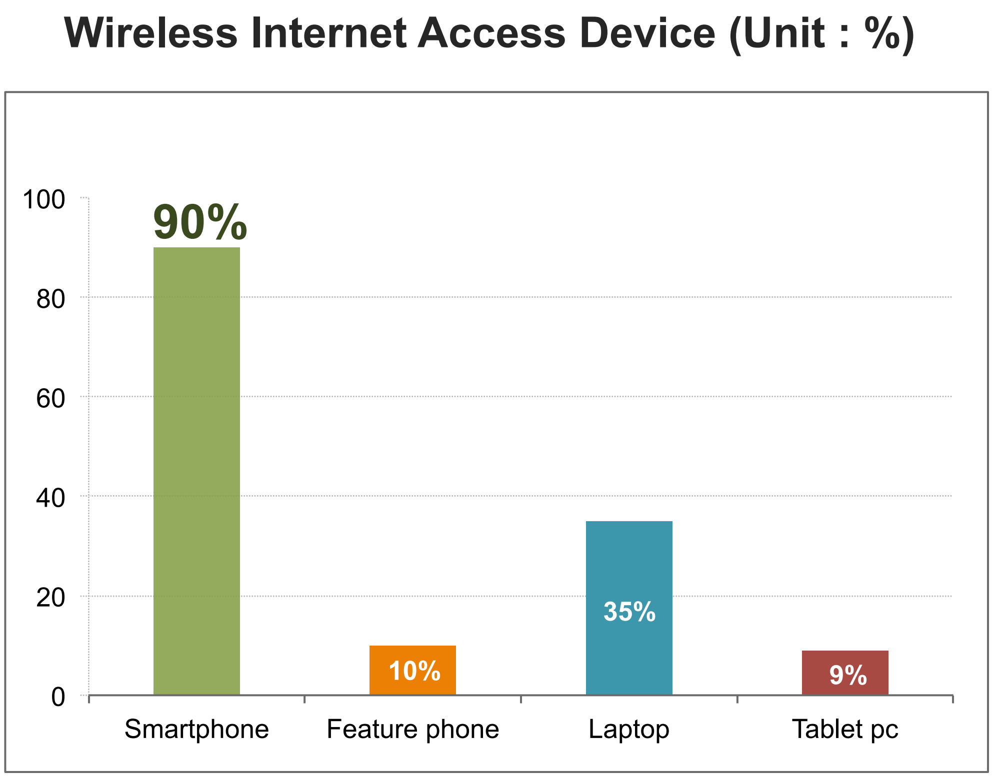
Classification		Service area	Date opened	Sales amount
Overseas	Google (Google Play)	Global	2008. 10	13,200
	Apple (App store)	Global	2008. 7	53,900
Domestic	SK Planet (Tstore)	Domestic	2009. 9	1,979
	KT (Olleh Market)	Domestic	2010. 10	440
	LG U^{+} (U^{+}App market)	Domestic	2010. 9	380

※ The app market sales of Google and Apple are calculated with USD 1 being KRW 1,100

IHS iSuppli and Gartner (compiled)

2012 Survey from Internet White Paper

E. Smartphone, Game & App Industry



May.2012 Survey from KISA

E. Smartphone, Game & App Industry

【Table 2-1-4】 Sales of the game industry

Type	Sales (KRW 1 million)	Added value (KRW 1 million)	Added value ratio (%)	Exports (USD 1,000)	Imports (USD 1,000)
2006	7,448,900	3,655,175	49.1	671,994	207,556
2007	5,143,600	2,487,445	48.4	781,004	389,549
2008	5,604,700	2,808,000	50.1	1,093,865	386,920
2009	6,580,600	3,348,867	50.9	1,240,856	332,250
2010	7,431,118	3,768,320	50.7	1,606,102	242,532
2011	8,804,740	4,184,893	47.5	2,378,078	204,986
Annual growth rate	18.5	11.1	△3.2	48.1	△15.5

Ministry of Culture, Sports and Tourism·Korea Creative Content Agency, 2012 content industry statistics, 2013

2013 Survey from Internet White Paper

2. INTERNET USAGE EXPLOSION

A. Fastest Internet Infrastructure

	Country/Region	Q2 '13 Avg. Mbps	QoQ Change	YoY Change
–	Global	3.3	5.2%	9.2%
1	South Korea	13.3	-6.3%	-6.4%
2	Japan	12.0	6.5%	11%
3	Switzerland	11.0	9.1%	31%
4	Hong Kong	10.8	0.8%	21%
5	Latvia	10.6	12%	22%
6	Netherlands	10.1	6.2%	27%
7	Czech Republic	9.8	8.7%	36%
8	United States	8.7	3.4%	22%
9	Sweden	8.4	0.7%	44%
10	United Kingdom	8.4	11%	48%

Figure 12: Average Connection Speed by Country/Region

(Source: Akamai State of the Internet Report 2013)

B. Mobile Data Plan : Unlimited

Most mobile service providers in Korea offer **unlimited data plan** or **big bandwidth of data** for their mobile subscribers and this brings increase of Mobile Traffic Volume

e.g.) Mobile Service Monthly Plan _ Company K

PLAN	MONTHLY FEE	WITH 2-YEAR CON TRACT	VOICE/TEXT	DATA
UNLIMITED 67 (LTE)	US$ 62 (US$ 69)	**US$ 48** (US$ 52)	UNLIMITED VOICE/T EXT TO ANYONE	UP TO 5 GB
UNLIMITED 77 (LTE)	US$ 72 (US$ 79)	**US$ 55** (US$ 60)		UP TO 9 GB
UNLIMITED 97 (LTE)	US$ 90 (US$ 99)	**US$ 72** (US$ 79)		UP TO 17 GB
UNLIMITED 129 (LTE)	US$ 120 (US$ 132)	**US$ 92** (US$ 101)		UNLIMITED

C. Mobile Contents Explosion

There are many successful **mobile contents** that encourage mobile subscribers to use more Internet

Mobile Contents Providers in Korea

SNS	Mobile Game	Entertainment
KAKAO LINE	Race Cha Cha(Net Marble) Dragon Flight AniPang(SundayToz) Monster Taming Everyone's Monopoly Wind runner (Wemade) Pokopang (NHN)	Mnet SM Production YG Production JYP Production Pooq Tviing

D. Live Streaming / VOD service explosion

▶ **No Copyright issue with VOD or Live Streaming**

1) About **90%** of the whole traffic of Korea moves in **Korean territory only**

2) Lots of **P2P** Solutions helps the traffic to be localized

▶ **ISP Based CDN Players are moving strong in Korean Market : Low cost based solutions**

	CDN Player	**Cloud Player**
Domestic	KT SK LG U+ Hyosung CDN GS Neotek	KT SK LG U+ Hostway Innogrid
International	Akamai Amazon CloudFront Limelight CDNetworks	Amazon AWS

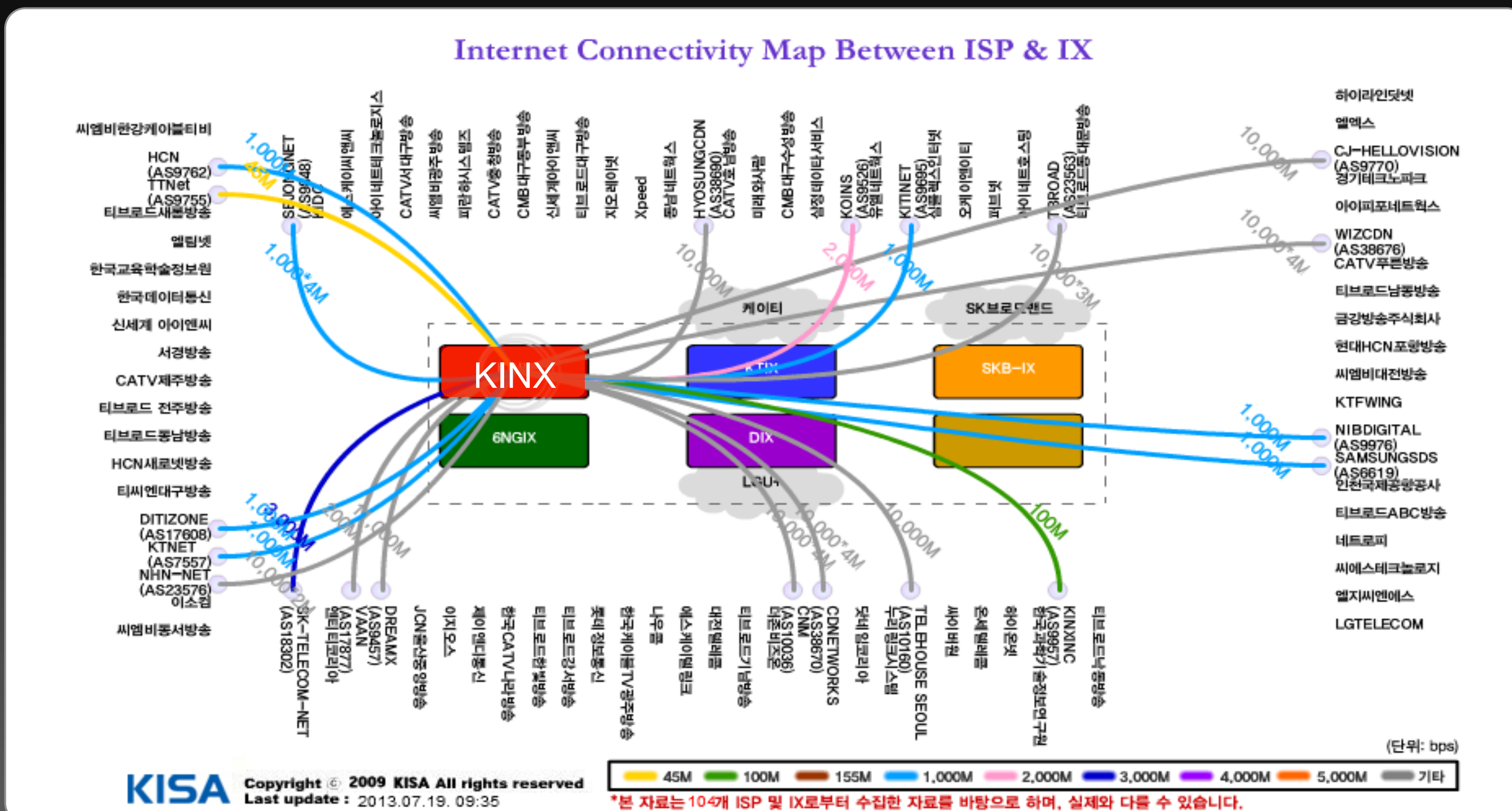
E. Major Players in Korea

1. Carrier

- Tier 1 : KT, SK Broadband, LG U+
- Tier 2 : Dream Line, Sejong, Onse

2. Layer 2 IX

- **KINX**



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3. *Busan – The Future ICT Hub for Asia-Pacific Region*

What makes Busan attractive place to build up Infra

for your services towards North East Asia?

A. Need for More Carrier - Neutral IDC

Conservative Korean ICT Market

- Most Tier 1 carriers in Korea own and run their own data centers
- The tenants of Tier 1 IDCs do not have much freedom to choose the circuits they like to g et connected
- The carrier neutral IDCs have difficulties to get all the circuits from Tier 1 carriers for their customers

→ Therefore, it is difficult for an IDC provider to become a real Carrier Neutral IDC in Kore a

The Second biggest city in Korea – Busan - is now preparing for
hosting the global IT companies with many attractive offerings

B. Cost Benefits

1) Cost Benefit - Power

(Unit: USD)

Country	SG	JP	TW	CN	HK	KR
Power Cost	0.15	0.18	0.11	0.14	0.12	**0.09**

2) Cost Benefit – Co-Location

Country	Rack	Description	Price(US$)	Power
Busan (Korea)	Full Rack Set-up Fee (NRC)	42U	**Free**	2.2KW
	Full Rack (MRC)		**$600 ~ 800**	

C. Tax Incentives

Eligible Business	Tax Reduction/ Exemption		
	Tax	Exemption Period	Eligibility (Minimum Investment Amount)
· High-Tech Businesses, Business-Supporting Service Industries · Businesses in a stand-alone type FIZ	· National Tax - Corporate Tax - Income Tax · Local Tax - Acquisition Tax - Registration Tax - Property Tax	· For 7 years - First 5 years: 100% The following 2 years: 50%	· High-Tech Businesses : None · Businesses in FIZ - Manufacturing : USD 30 million - Tourism : USD 20 million - Logistics : USD 10 million - R&D : USD 5 million
· Companies in a complex type FIZ · Companies in a FEZ · Companies in a FTZ · Companies in an ICDZ		· For 5 years - First 3 years: 100% The following 2 years: 50%	· Manufacturing : USD 10 million · Tourism : USD 10 million · Logistics : USD 5 million * ICDZ : USD 10 million

THANK YOU