

May. 23. 2002

International Workshop on
Broadcasting Technology

Digital Broadcasting Industry :Today & Tomorrow

Kook-Jin Kim Ph.D

Content

I. Transition to digital broadcasting

Triangle of Conflict

Ideal Work Network for Digital transition

II. Digital today : Current Status

Service industry

DTV industry

III. Digital Tomorrow : Forecasts

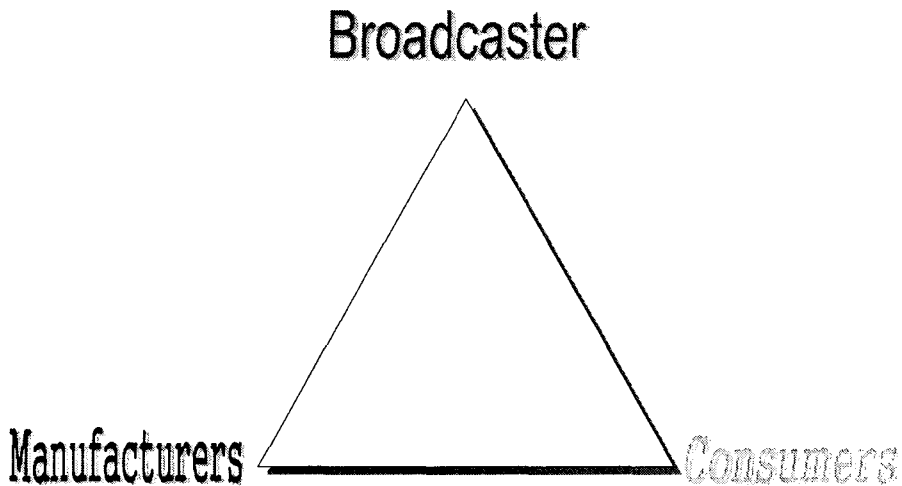
Service industry

DTV industry

IV. Summary & Conclusions

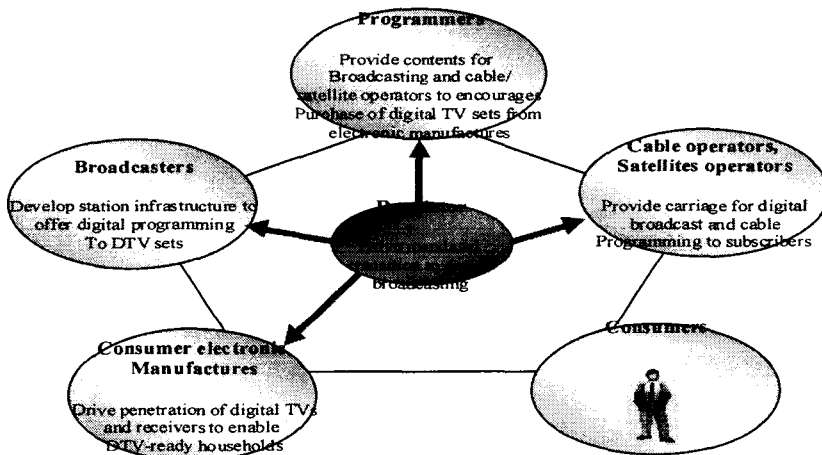
Kook-Jin Kim Ph.D.

2



Kook-Jin Kim Ph.D.

3



Yankee Group 2001

Kook-Jin Kim Ph.D.

4

□ Big Ten Digital TV Platform

□ DirecTV	US DTH	10,962,000(2002.2)
□ EchoStar	US DTH	7,100,000(2002.1)
□ SkyDigital	UK DTH	5,716,000(2002.1)
□ AT&T	US Cable	3,100,000(2001).
□ SkyPerfect	JP DTH	2,949,000 (2002.1)
□ TW Cable	US Cable	2,500,000(2001)
□ Premiere W	DE Cable/DTH	2,400,000(2001.5)
□ Comcast	US Cable	1,800,000(2001)
□ Canal Satellite	FR DTH	1,750,000(2001.6)
□ Charter	US Cable	1,600,000(2001)

1994 DirecTV (US)

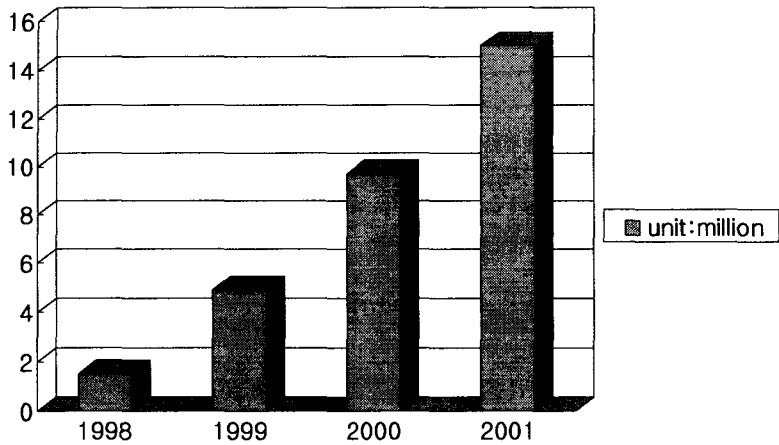
1996 DF1(DE), Canal Satellite(FR), PerfecTV (JP)

1998 BSkyB

2002. 2 There are 12 Platforms that have more than one Million subscribers

US, UK, JP, France, Germany, Spain, Italy-----

US Digital Cable

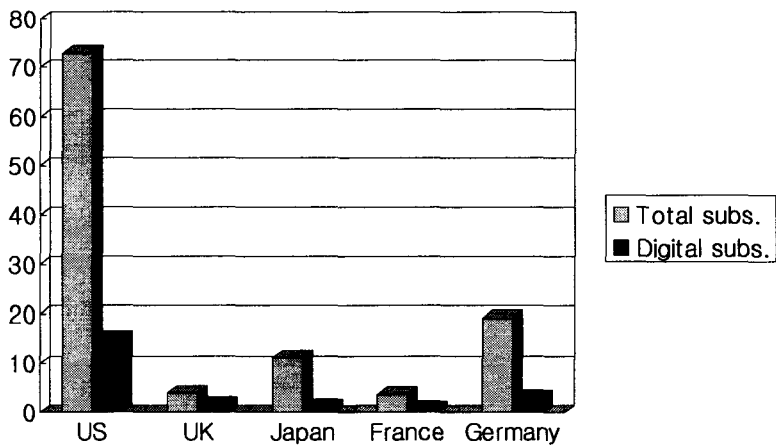


NCTA 2001

Kook-Jin Kim Ph.D.

7

Digital Cable



NCTA, Informa

Kook-Jin Kim Ph.D.

8

Digital Terrestrial Broadcasting Start

<i>Where</i>	<i>When</i>
<i>UK</i>	<i>1998. 11. 15</i>
<i>US</i>	<i>1998. 11. 1</i>
<i>Sweden</i>	<i>1999. 4. 1</i>
<i>Spain</i>	<i>2000. 5. 1.</i>
<i>Finland</i>	<i>2001. 8. 27.</i>
<i>Australia</i>	<i>2001. 1. 1.</i>
<i>Korea</i>	<i>2001. 10. 26</i>

Kook-Jin Kim Ph.D.

9

US Interactive TV Market (2000)

<i>Wink(DirectTV)</i>	<i>3 Million(US \$)</i>
<i>Web TV</i>	<i>1.3Million(US \$)</i>
<i>Echostar</i>	<i>1 Million (US \$)</i>
<i>Ultimate TV</i>	<i>0.2 Million (US \$)</i>
<i>WorldGate</i>	<i>0.2 Million(US \$)</i>

Vision Consult 2001

Kook-Jin Kim Ph.D.

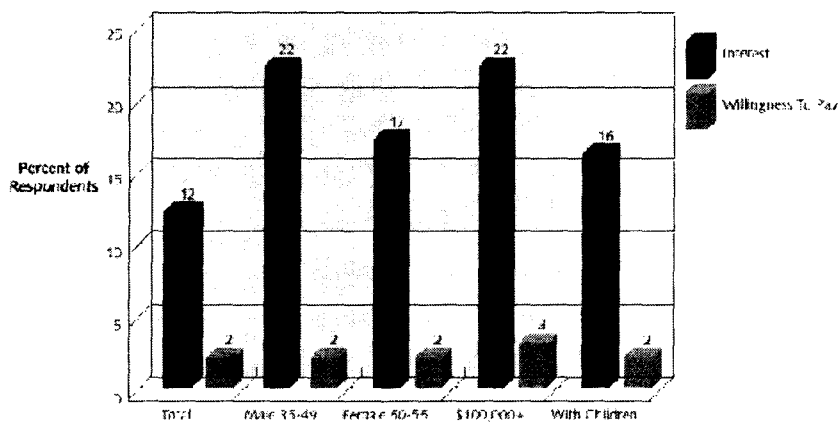
10

- Digital TV sets are finally beginning to boom.*
- Different Approaches to digital TV sets, depending on the types of services that are popular*
- Japan : DTV sets with integrated satellite tuners are the norm.*
- Europe: Integrated digital sets are the popular choice. (satellite)*
- US : At first, DTV Monitor and then box (the impact of DVD)
But iDTV start to make a market*

Kook-Jin Kim Ph.D.

11

Consumers are not willing to pay for DTV Reception



Yankee Group 2001

Kook-Jin Kim Ph.D.

12

□ Boom - the first stage 2003-2005

Terrestrial DTV service take up

Satellite DTV service peak up

Cable DTV service

□ Boom - the second stage 2006-2010

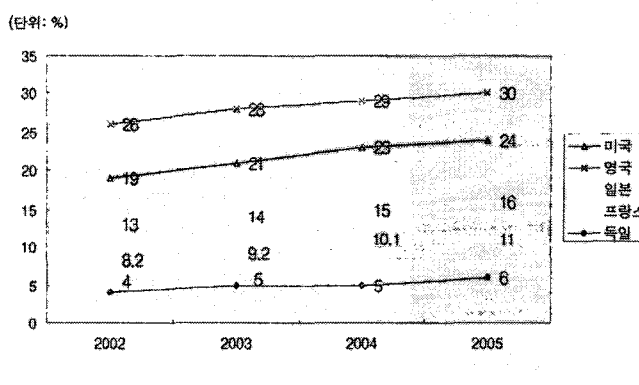
TV e-commerce \dashrightarrow TV-commerce

Mobile TV service market Open

---Digital Mobile Multimedia Age

Kook-Jin Kim Ph.D.

13



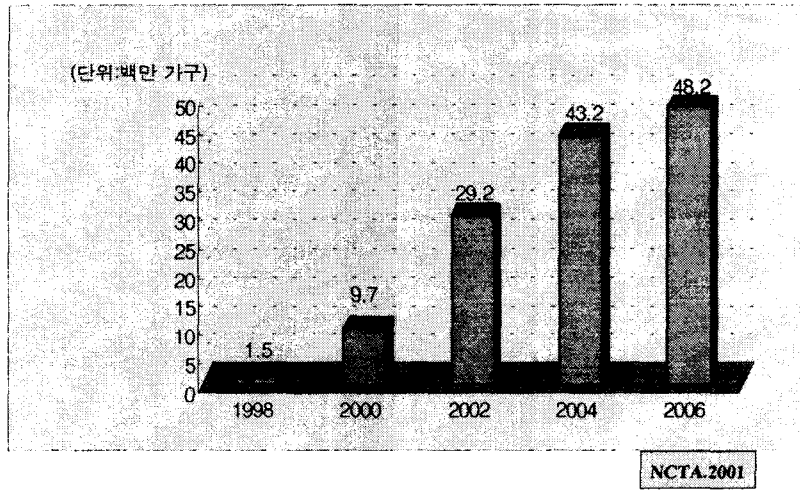
Satellite Home per TV Home (%) / CS Home in Japan

KISDI 2002

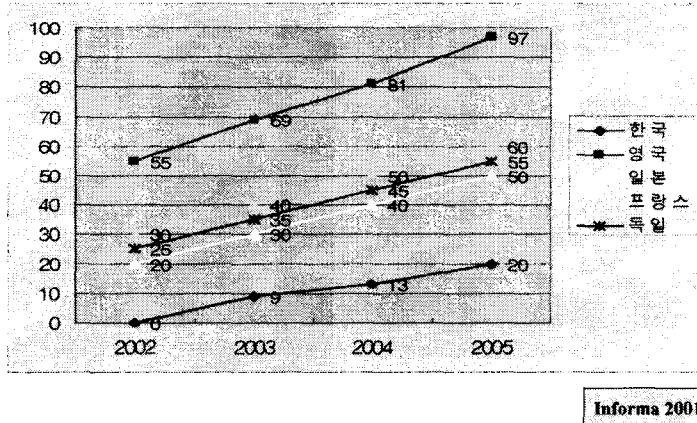
Kook-Jin Kim Ph.D.

14

US Cable Forecast



Kook-Jin Kim Ph.D.



Kook-Jin Kim Ph.D.

III. Digital Tomorrow

Service Industry II Terrestrial

□ Outlook

Restructuring of Broadcasting Service Industry

High cost of broadcasting right-> Restructuring power

Deregulation of Ownership

□ Solution

Big Money says many thing in the Media Market.

Good Technology says something in the Media Market

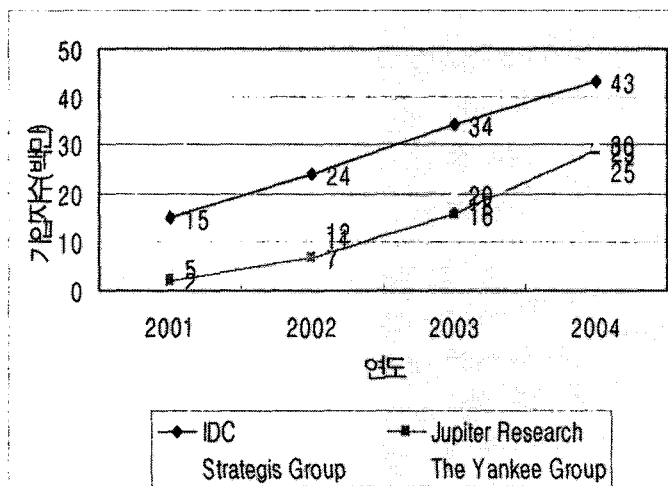
Powerful triangle between Money, Technology, & Policy says Everything in the Media Market

Kook-Jin Kim Ph.D.

17

III. Digital Tomorrow

Service Industry II Interactive



KISDI 2002

Kook-Jin Kim Ph.D.

18

III. Digital Tomorrow**Service Industry II
Interactive****Europe T-Commerce (Units: EURO Million)**

	2002	2003	2004	2005
<i>UK</i>	986	2,046	3,699	6,085
<i>France</i>	459	1,060	2,029	3,204
<i>Germany</i>	214	810	1,758	3,174
<i>Italy</i>	140	270	518	882
<i>Spain</i>	350	544	810	1,227
<i>Benelux</i>	39	188	613	1,155
<i>Nordic</i>	99	293	629	945
<i>etc.</i>	71	153	370	610
Total	2,358	5,364	10,436	17,283

Informa 2001

Kook-Jin Kim Ph.D.

19

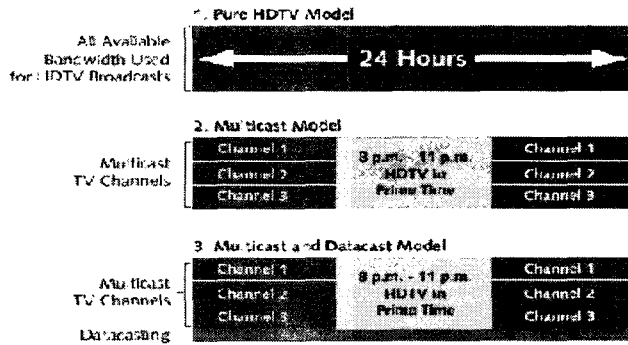
III. Digital Tomorrow**Service Industry II
Interactive****US Interactive TV Market Forecast**

	2002	2003	2004	2005
<i>DTV Subs.(Mil)</i>	32.80	40.80	48.80	57.00
<i>Interactive TV(%)</i>	39%	53%	66%	80%
<i>Interactive TV Subs. 12.79</i>	21.62	32.21	45.60	
<i>revenue/household(\$)</i> 25.00	35.00	50.00	75.00	
<i>Interactive service</i>				
<i>Revenue(US\$M)</i>	319.80	756.84	1,610.40	3,420.00

VisionConsult 2001

Kook-Jin Kim Ph.D.

20

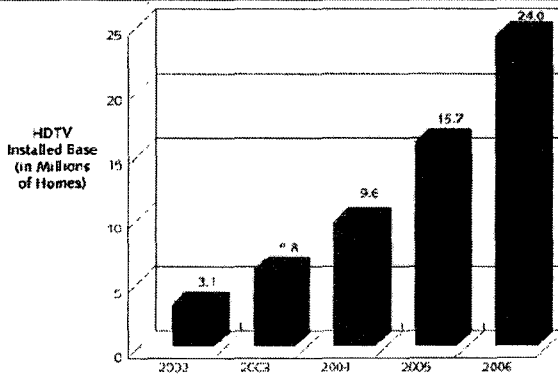


Yankee Group 2001

Kook-Jin Kim Ph.D.

21

HDTV Penetration (US) 24 Million Homes by 2006



Yankee Group 2001

Kook-Jin Kim Ph.D.

22

DTV Unit Shipments Forecast

Europe	2001	2002	2003	2004	2005	2006	CAGR
iDTV sets(000)	220	480	1,040	2,520	6,100	<u>10,100</u>	115.0%
Revenue(\$mil)	176	341	660	1,436	3,172	4,848	94.1%
Japan	2001	2002	2003	2004	2005	2006	CAGR
iDTV sets(000)	<u>280</u>	600	1,400	3,500	5,900	8,500	97.9 %
Revenue(\$mil)	<u>588</u>	1,092	2,212	4,970	7,729	<u>10,370</u>	77.5%
Asia	2001	2002	2003	2004	2005	2006	CAGR
iDTV sets(000)	250	550	1,060	1,970	3,400	5,500	85.6%
Revenue(\$mil)	430	853	1,442	2,206	3,060	4,235	58.0%

In-Stat/MDR,2002

Kook-Jin Kim Ph.D.

23

DTV Unit Shipments Forecast(Units in Thousands)

North America	2001	2002	2003	2004	2005	2006	CAGR
HD Projection Monitors	975	1,375	1,950	2,200	2,500	2,750	23 %
HD Direct View Monitors	245	415	750	1,050	1,350	1,700	47.3%
iHDTV Projection Sets	15	35	75	150	480	900	126.8%
iHDTV Direct View Sets	40	140	270	500	925	1,500	106.4%
Flat Panel Monitors/Sets	<u>45</u>	100	220	400	725	1,250	94.4%
EDTV & SDTV Sets	10	35	130	360	700	1,100	156%
Total	1,330	2,100	3,395	4,660	6,680	9,200	47.2%

In-Stat/MDR,2002

Kook-Jin Kim Ph.D.

24

III. Digital Tomorrow

DTV Industry

North America DTV Revenues by set type(US \$ M)

North America	2001	2002	2003	2004	2005	2006	CAGR
HD Projection Monitors (16:9)	1,563	2,389	3,528	3,931	4,000	3,713	18.9 %
HD Projection Monitors(4:3)	630	512	344	88	0	0	-100 %
HD Direct View Monitors(16:9)	257	417	825	1,131	1,397	1,830	48.1%
HD Direct View Monitors(4:3)	241	282	375	411	405	313	5.4%
iHDTV Projection Sets	60	130	272	543	1,320	2,115	103.9%
iHDTV Direct View Sets	94	308	554	963	1,619	2,363	90.6%
Flat Panel Monitors/Sets(16:9)	131	208	353	852	2,048	3,438	92.4%
Flat Panel Monitors/Sets(4:3)	68	139	271	350	400	484	48.3%
EDTV & SDTV Sets	9	28	90	209	336	407	115.3%
Total	1,330	2,100	3,395	4,660	6,680	9,200	47.2%

In-Stat/MDR, 2002

Kook-Jin Kim Ph.D.

25

Summary

Service Industry

*good digital contents are few
high cost of broadcasting right*

*Satellite broadcasting will be dominant in many countries
Interactive TV service will be an engine of digital
broadcasting*

DTV sets Industry

Big Market is coming

Kook-Jin Kim Ph.D.

26

Conclusion

Time is a money.

Big Money says many thing in the Media Market.

Good Technology says something in the Media Market

*Powerful triangle between Money, Technology, &
Policy says Everything in the Media Market*

*Ultimately we have to make a new digital
communication culture, which is a fundamental market*

Kook-Jin Kim Ph.D.

27

Thank you

Kook-Jin Kim Ph.D

Tel. 570-4171

E-mail kkj0123@kisd.re.kr
