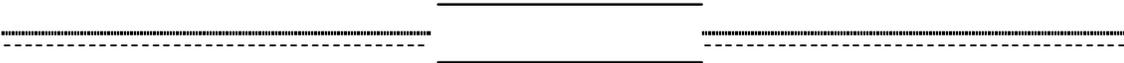




- - () 가 가
 - () AP, AP
NIC, Bridge ,
P2P Bridge ,
AP 가
 - () , 가
VoIP, VPN 가
- - () 가 ,
 - () 가 ,
 - () IEEE 802.11b
 - (/ /QoS) , Bluetooth
QoS, ,
- - () 가 가



가

· ()

, 3G

PDA

· ()

-

· ()

가 가

가

가

Ubiquitous

· , PDA

VoIP 가

· ()

5GHz 2.3GHz

· , ,

, 가

· 가

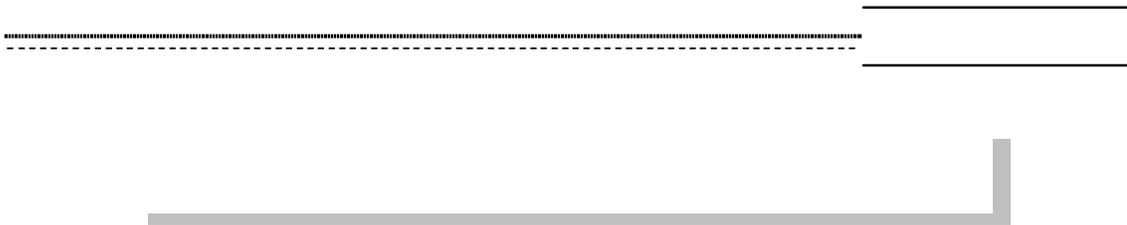
VOD

· , VPN

· ,

5GHz

, 4G



- (Wireless Local Area Network) 가
- 가 ,
- , Bluetooth

< 他 1) >

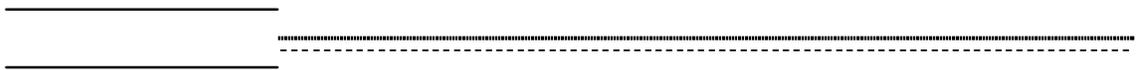
	(IEEE802.11b)	(ADSL)	(IMT2000)	Bluetooth (1.0)
	50 200m			10m
/	/			/
	11Mbps	8Mbps	144K 2Mbps	434kbps()
	, PDA	PC		, PDA
	가(,)	가()	가()	

: , Bluetooth

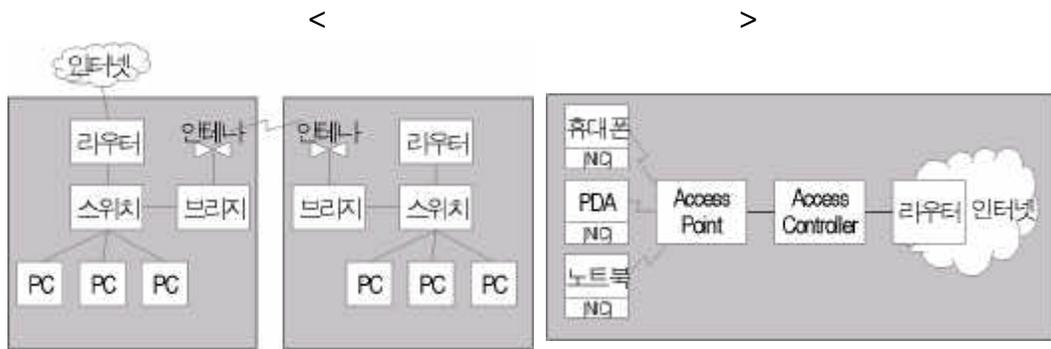
- AP(Access Point), AP
- NIC(Network Interface Card), Bridge 2)
- NIC

1) AP 가 100m B-WLL(Broadband Wireless Local Loop) Bluetooth

2) , 가



Peer-to-Peer, Bridge , AP
 가
 가



· , , , 3),
 가
 (vertical)
 (horizontal) 4)
 ,

3) 가 Hot spots AP (, ,),
). AP (, ,),
 (Bridge) 가 SI , VPN,
 (KT , r) , 2001.12.

4) IDC , 2001 82.2% 2006
 (13.8%, 4.0%). , ' , 2002.6.25.
 20.3%, 19.5% (, ' ,



< >	
	(Private) (Public Access)
	(Fixed Oriented) (Mobile Oriented)
	(Basic) 가 (Additional)
	PC(,) PDA,

: KT , 「 , 2001.12..

- : , PDA, 가 , e-Business

가 가

- , IMT-2000 가 5) 4G

< >	
/	<ul style="list-style-type: none"> · 가 · / · ,
	<ul style="list-style-type: none"> · , QoS, · 가
	<ul style="list-style-type: none"> · 2.4GHz 가 · 5GHz

- : 가 ,

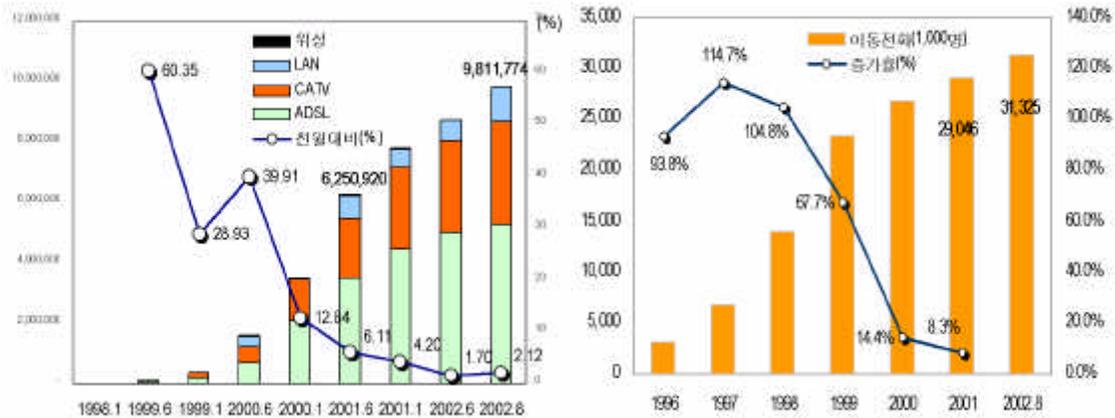
5) , , 3G 1~2
 , 2003 가 . 2002 9 28 110
 NIT 3 3 , 4 5
 (KTcom, ' 3G , 2002.09.11)



· , 60%(가 ,)
 가 가 80% ,

· , ,
 6)

< 가 >

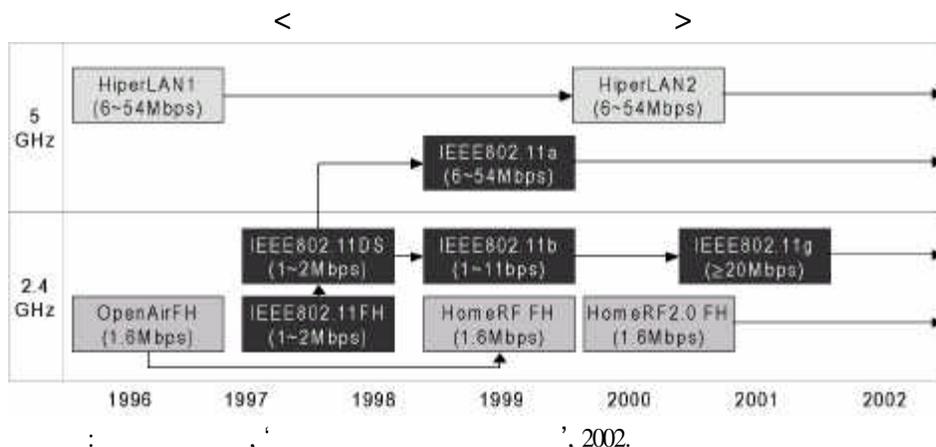


:
 - :

· IEEE가 97 802.11
 99 Ethernet 802.11b 7)
 · IEEE 2.4GHz , 2Mbps 802.11 , 11Mbps
 802.11b 가 , 802.11b 54Mbps
 802.11g⁸⁾, 5GHz 54Mbps 802.11a 9)

6) 2002 ARPU(Average Revenue Per User) 8%
 7) 90 美 FCC가 ISM(Industrial, Scientific and Medical) 2.4GHz 가 Proxim, Lucent Technologies 1.6Mbps 가 IEEE(Institute of Electrical and Electronic Engineers)가 IEEE802.11 WECA(Wireless Ethernet Compatibility Alliance) Wi-Fi(Wireless Fidelity)
 8) IEEE 9 802.11g 2003 5 . 802.11g 802.11b 5 가 , 802.11b (, 2002.09.11.)
 9) IDC IEEE802.11b가 89% 가 , HomeRF(8.6%) 802.11a(2.4%)

가



IEEE 802.11b가 WEP(Wired Equivalent Privacy)

802.11i

가 10)

Bluetooth(2.4GHz) (5GHz)

가 11). IEEE802.11a

, IEEE Bluetooth SIG

< 가 >

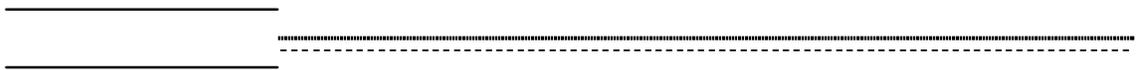
가	2.4GHz	5GHz	3G 가
	○	○	
	○	○	(가
	○	-	()
	○	×	(2.4GHz)
	○		(5GHz)
	×	×	· FCC ()
	×	×	· 5GHz
	×	×	

: , ' , KSDI , 2002. 5. 1.

10) WECA (2001 7 8 , PC 500 180 II)

50%, 72%가 / (WECA, 'Wireless LAN Research Study', 2001.10.)

11) ' 가 () 가



. , QoS 12),
 , 가 가 13)
 . , 가 가
 3G 가
 . PDA , ,
 ,
 .
 . Hotspot
 , 가
 .
 ,
 가
 < >

	·	·	· ,	· QoS
	·	· 가	·	·
	·	· 3G,	· M&A · ISP 가	·

: Analsys, 2001. 8.(, , 2002. 5. 17.)

12) QoS(Quality of Service) 가
 (. IEEE QoS)
 802.11e (QoS)
 13) 가 WECA IEEE

--	--

- :가 60% 가
 - , 가
 - : 가 , .
 - ,
- < >

	· 가 , ,
	· 가
	· /
	· , 가 가 /
	·
	· , / /

: enable Business, ' , 가?, 2002.3.(, , 2002.5.17.)

- : , 가 14)

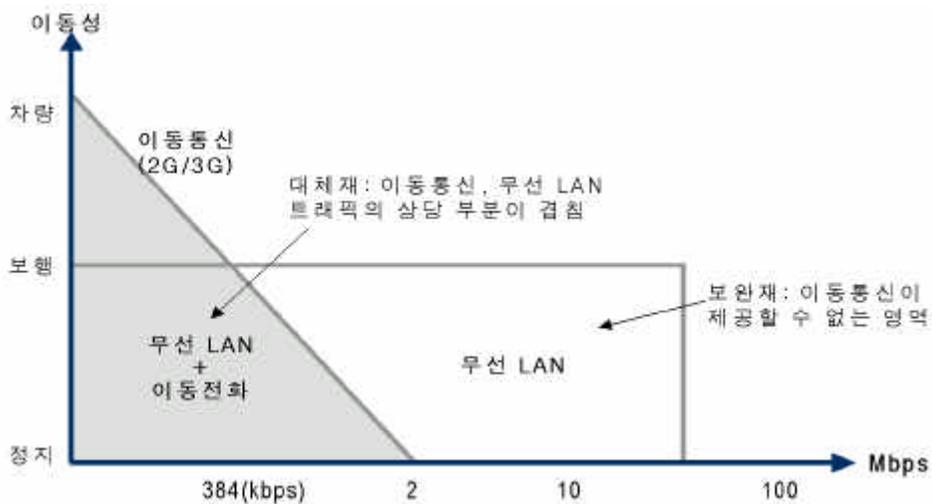
- : 가
 - : 가 , 가 15), 4G
- < >

	· 가 ,
	· ()
	· , ,
	· 3G, 4G
	· 가 , /

14) LG (2M 5Mbps),
CDMA (144Kbps)

15) 2002 8 가 87%가 가 (WAP/ME 86%, SMS 14%).
ARPU 8%

· :
 , 가 PDA ,
 ,
 < / >



· : PDA

< >

KT (Nespot)	·2001 10 ·2002 1 / / 42	2002 2	·2002 1 hotspot ·2002 5 , /CDMA PDA .	· (50% 2002) ·
(AnyWay)	·2001 9 · / /	2002 2	·2002 450	· 가 (800) ·
(AirLan)	·2001 9 · /	2002 4	·2002 1 hotspot · 2,000 /h	· ·
SKT	·2001 12 · /	2002	· KT	· ·
	-	-	· 가 5GHz, 23GHz	·

: , ' , 2002.6.22.

가

,

16)

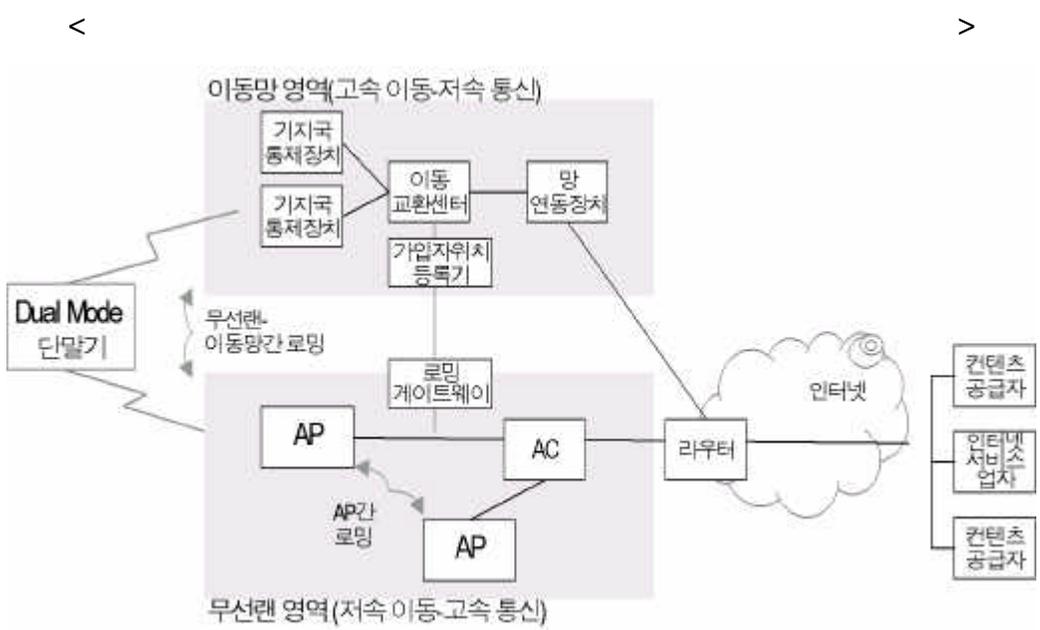
PDA

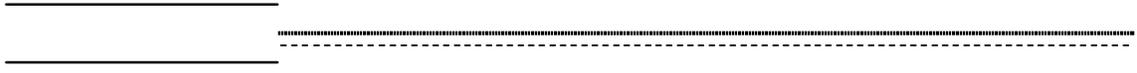
VoIP, VPN 가

가

가

Ubiquitous





.

가 17)

< >

	Htspot 2, 3G	+3G+ Bundling (3G, WLAN)
	, PDA 가	, 가
	+ (Bundling)	+ /
	3G Bundling	3G+ +
	, PDA	PDA, Dual Mode
	,	, Htspot
		3G, ,

: Atlas Research Group, 'WLAN', 2002. 4. 8.(, , 2002. 5. 17.)

-

. : 90 Mobile

Star Metricom 30 가

18) 가

. AP : 가

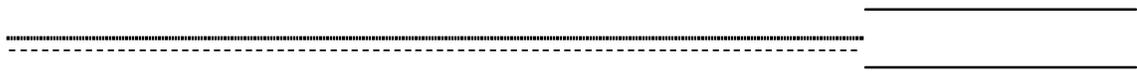
. AP 가 AP

. : 가

가

17) Atlas Research Group, 'WLAN', 2002.4.8.(, , 2002.5.17.)

18) AP



·

19)

·

가 가 : ,
PDA

·

VOD 가

·

·

가 : , 가
2.3GHz

-

·

2.4GHz 가

·

가 ,
가

·

IEEE 802.11a 5GHz
가 , OFDM

가 20)

19) 3G

(Sonera, Telia Mobile, Swisscom, BT,)

3G 가 All IP

4G 가 (, 2002.5.27.)

20) (ITU) WRC(World Radiocommunication Conference) 5GHz(5.150~5.350,

5.470~5.725) (2003 6), 5GHz

가 5GHz

, 5.150 5.350GHz



- 2.3GHz
- , 2.4GHz
- 4G
- 2.3GHz , QoS가
- IEEE 802.11

< 2.3GHz >

	IEEE 802.11 a/g	F-Burst
		(Araycomm)
	<200m(/)	1km ()
	54Mbps(AP)	1Mbps()
가	AP , NC 가 가	1 , NC 가
	, NC, AP	
	, 가	/
	, 가	

: (, 2002.07.19.)



bcpark@hri.co.kr 031)288-7339

· 5.725 5.825GHz 가 ISM 가 IEEE 802.11a
 OFDM 가 . OFDM(Othogonal Frequency Division Multiplexing) IEEE
 802.11a HiperLAN2
 (Digital Audio Broadcasting;DAB) TV
 21) 802.11b가 2.4GHz 26MHz
 가3 . 2.3GHz 98 가 (Wireless Local Loop; WLL) 2
 가
 F-Burst, DSL , (IME-2000
)