Module contents

★ Upgrading Station Firmware

- ★ Driver installation overview
- ★ Installation of Client Manager
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- ★ Operating the diagnostic tools



Station Architecture

communication



Station Firmware

- IEEE 802.11 MAC functions
- Functionality to be added over time

Drivers

- NDIS "Mini-port" driver
- **ODI** Driver
- **DOS Packet Driver**
- Apple Power book driver
- **Protocol Stacks**
 - TCP/IP
 - NETBEUI
 - IPX/SPX

Upgrading Station Firmware



- \star Firmware may need to be changed
 - ★ Fixes
 - ★ Improvements
 - ★ Tuning
 - ★ Newly released MAC functions
 - Power Management
 - IBSS
- ★ User can perform update using socalled "WSU" utility
 - ★ Made available via web site, to allow field upgrades
 - ★ Products leaving factory always upgraded to most recent version
 - ★ Downgrading possible if previous version of Utility has been kept

Upgrading Station Firmware

🗞 ORiNOCO Wireless Station Update (Windows)



The wireless card in your system will be upgraded to:

Close

Help

Station Functions firmware Variant 1, Version 6.06

-Card identification-

Update

PC Card Type-II Extended Variant 1, Version 4.00 Serial number: 99UT11360528

Station Functions firmware Variant 1, Version 6.06 ★ Download "WSU.EXE" Utility from web-site

★ Execute WSU Utility (e.g. double click the Icon in the Windows explorer)

★ Network connection will be lost; system may need re-boot, or PC Card may need to be ejected and re-inserted



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Driver Installation / configuration

★ Windows 95, Windows/NT

- ★ Install Hardware (ISA card, PCI card, PC Card)
- \star PC Card is recognized when inserted
- ★ Parameters to be changed in Network Neighborhood properties
- ★ Uses Miniport driver

★ NOVELL

- ★ Uses ODI driver (also used by Windows for Workgroup)
- ★ Parameters in NET.CFG

★ DOS

★ Packet driver



Installation for non- windows based systems

★ For example: Novell clients, Windows for Workgroup

- ★ Edit (if needed) configuration and ini files such as:
 - ★ Autoexec.bat
 - \star Config.sys
 - ★ Net.cfg (for Novell Netware users)
 - ★ protocol.ini (for Windows for Workgroups)
- ★ For details consult the Avaya Wireless PC Card manual or quick installation manual



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Installing the Client Manager



communication

★ As of release 6.2 New software will be delivered on CD-ROM using browser to navigate

★ CD-ROM contains:

- ★ Driver software (PC Card, PCI, ISA) for Win 95/98/NT/2000, CE, MSDOS, Linux, MAC
- ★ Utility software (AP Manager, EC Manager, Client Manager, RG Setup utility)
- ★ PC Card firmware
- ★ Install Client Manager by selecting the appropriate button

Client Manager Icon

(also displays RF status)



nmunication

- ★ Former CQI (release 6.0) is integrated in the Client Manager.
- ★ When started Client Manager displays itself by Icon on the task bar, indicating RF status:
 - ★ Color
 - ★ Number of columns
- ★ Right-click on icon presents Client Manger menu
 - ★ Starting the client manager
 - ★ Selecting/changing a profile
 - ★ Asking for version data

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PC Card Installation Preparations



- ★ Obtain PC Card Hardware
- ★ Make sure manual is available
- ★ Make sure Windows CAB files are accessible
 - ★ CD-ROM
 - ★ On hard-disk in "options" sub-directory
- ★ Obtain values for advanced parameter from Network administrator:
 - ★ Network name
 - \star Distance between APs
 - \star Transmit rate



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Install ISA adapter

Windows 95/98

Add New Hardware Wizard



If your hardware is already installed, you should have. Windows detect it.

When Windows detects new hardware, it automatically determines the current settings for the device and installs the correct driver.

Do you want Windows to search for your new hardware?

Next >

Cancel

C Yes (Recommended)

< <u>B</u>ack

• <u>N</u>o

★ Install the ISA card without the Avaya Wireless PC Card inserted, in an available slot

★ The ISA card itself is not "plug and play"

★ Activate "Control Panel" and select "Add New Hardware"

★ Do not let Windows detect the presence of new hardware but select "no"



Install ISA adapter Windows 95/98

	Select the type of hardware you want to install.
	Hardware types:
	Mouse
	Vetwork adapters Cher devices PCMCIA socket
	Printer
Add New Hardwa	re Wizard
Click the listed, or i	manufacturer and model of your hardware. If your hardware is not if you have an installation disk, click Have Disk.
lf your ha hardware	rdware is still not listed, click Back, and then select a different type. To see all hardware choices, click Unknown Hardware.
<u>Manufacturers:</u>	Mo <u>d</u> els:
(Standard PCMCI/ Cirrus Logic Compaq	A drivers) Intel PCIC compatible PCMCIA controller
Maxtor SCM SwanBox	<u>_</u>
Databook Intel Maxtor SCM SwanBox	 <u>H</u> ave Disk

nication

- ★ In the device list select PCMCIA socket
- ★ From the manufacturers list select Intel
- ★ Select the Intel PCIC compatible PCMCIA controller
- ★ Complete the installation of the ISA card and check the device manager for resource conflicts
- ★ Change board strapping if needed to avoid IO-Base conflict



Return to General Installation Process



- ★ Install the ISA card without the Avaya Wireless PC Card inserted, in an available slot
- ★ The ISA card itself is not "plug and play"
- ★ Activate "Control Panel" and select "Add New Hardware"





★ Insert ISA Card adapter in your PC

★ Introduce ISA Card to the OS of your system

- ★ Double click "devices"
- ★ select PCMCIA
- ★ set startup type "boot"
- ★ Restart PC





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General considerations

- ★ Requires installation of the "PCI-to-PC Card" converter card (sometimes referred to as "PCI-PCMCIA Bridge" or "PCI Swapbox")
- ★ Once the PCI Swapbox is installed the Avaya Wireless PC Card can be inserted in the PCMCIA slot (similar to ISA installation)
- ★ Success of installation of the PCI Swapbox depends on:
 - ★ Type of PC Hardware
 - ★ Operating System
 - ★ Version level of BIOS



Success factors for PCI swapbox installation

★ Type of Hardware:

- ★ New desktops with only PCI slots:
 - no incompatibility issues to be expected (exception for systems that have only PCI slots for reasons of size limitations)
- ★ Desktops with mixture of PCI and ISA slots:
 - BIOS needs to be of certain level (see below)
- ★ BIOS level:
 - **\star** Needs to be PCI version 2.2 compliant
 - ★ List of certified Hardware will be compiled throughout life-cycle based on tests and customer feedback



Success factors for PCI swapbox installation

★ Operating system:

- ★ Windows 98 and Windows ME, will recognize the card and installation is straightforward
- ★ Windows 95 requires the use of a different PCMCIA.INF file (provided separately by Agere Systems).
- ★ Windows 2000 requires Service Pack 1 to be installed, plus the addition of an entry in the registry
- ★ and Windows NT4 require installation of Enabler programs (provided by Agere Systems) or the use of 3rd part software such as Softex



System assessment chart for PCI Swapbox





List of PCs that are tested for compliance

Brand Desktop	PC Model	Operating System
Compaq	Presario 5547	Win 98
Compaq	Presario 5600i	Win 98
Compaq	Deskpro 200	Win 98
Dell	Dimension L 500 C	Win 98/NT4
Dell	Dimension XPS 350	Win 98/NT4
Dell	Dimension XPS 450	Win 98/NT4
Dell	Dimension XPS 500	Win 98/NT4
Dell	Dimension XPS 600	Win 98/NT4
Hitachi	FLORA Prius 330	Win NT4 JP
Fujitsu	FMV-6450CL3	Win NT4 JP
No name (motherbo	oard) Intel 440 BX	Win 98
No name (motherbo	bard) Intel 440 GX	Win 98
Siemens Nixdorf	Scenic 800	Win 98
IBM	300PL 6862-340	Win NT4
Fujitsu	Myrica	Win 98
HP	Vectra VIi8 MT	Win NT4
AOpen		Linux 2.2.13
•		

- ★ List of certified PCs is expected to grow
- ★ Readme.txt file will contain up to date list of certified PCs



Return to General Installation Process



Installation 24

Windows 98

System Properties			? ×
General Device Ma	anager Hardware F	Profiles Performan	ce
View devices t)y <u>t</u> ype ○ Vie	w devices by <u>c</u> onn	ection
Computer			
E 🔁 CDROM			
⊕	/S		
🕂 🕂 🛄 Display at	Japters		
🕂 🕀 🔁 Hard diak	x controllers		
Haiu uisk	controllers		
House			
	adapters		
	socket		
🔷 🂊 Gene	ric CardBus Controlle	er -	
📃 🚽 🧄 Gene	ric CardBus Controlle	er	
📃 🔄 😓 РСМО	CIA Card Services		
庄 🕀 Ports (CO	M & LPT)		
🕀 🏪 Sound, vi	deo and game contr	ollers	-
		1	
P <u>r</u> operties	Re <u>f</u> resh	R <u>e</u> move	Pri <u>n</u> t
		ΠΚ	Cancel

unication



- ★ The PCI card itself is "plug and play"
- ★ Windows 98 will detect the adapter and start the installation
- ★ Follow instructions on the screen and re-boot when advised
- ★ Verify the settings in the device Manager (see capture left)



Return to General Installation Process

Windows 95



ommunication

- ★ Install the PCI card without the Avaya Wireless PC Card inserted, in an available slot
- ★ The PCI card itself is "plug and play" and will auto-detect the card, and the driver for the generic PCIC controller is installed
- ★ Copy the file PCMCIA.INF provided by Agere Systems to the sub-directory windows\inf

Windows 95



ommunication

- \star Reboot the PC
- \star Proceed to Device Manager, select the PCIC controller and update the driver (Windows will locate the new .INF file)
- ★ Restart the PC
- \star Windows now installed the correct TI1410 Cardbus controller



Return to General Installation Process

Windows/NT 4.0 - Hardware & PCI-Enabler

★ If possible use a 3rd part Card Manager such as Softex.

★ Alternatively install the Enabler as provided by Agere Systems:

- ★ Verify that Service Pack 4.0 is installed
- ★ Install the PCI card without the Avaya Wireless PC Card inserted, in an available slot
- ★ Start the system and log in as "Administrator"
- ★ Insert installation diskette in a the floppy disk drive.
- ★ Execute the "Setup.exe" program that is on the installation diskette
- \star Follow the instructions on the screen and restart the system



Windows/NT 4.0 - Card and Socket Services

evices				×
De <u>v</u> ice	Status	Startup		
Parport	Started	Automatic		Close
Par∨dm	Started	Automatic		
PCIDump		System		<u>S</u> tart
Pemeia	Started	System		
piixide	Started	Boot		Stop
PnP ISA Enabler Driver		Manual		[]
ppa3nt	Started	Boot		Sta <u>r</u> tup
psidisp		Disabled		HW Profiles
QI10wnt		Disabled		
qv		Disabled	-	Help

- ★ On the Control Panel select "Devices"
- ★ From the device list select "PCMCIA"
- ★ Click the "Startup" button on the right side of the list
- ★ Set the Start-up type for the PCMCIA device to "Boot"
- ★ Close the window (select OK) and reboot





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Windows 95/98

- ★ Remove a previous version of the Avaya Wireless PC Card driver (I.e. older PC Card driver)
 - ★ Remove from network configuration
 - ★ Delete any Avaya Wireless related driver files left in the "System" and "Inf" subdirectories (no longer needed for release 5.0 and higher)
- ★ Insert the Avaya Wireless PC Card in PCMCIA slot
- ★ Switch on PC, if not already switched on
- ★ PC Card is "plug and play"
- ★ Windows 95/98 will report PC Card as new hardware detected.
- ★ If not activate "Control Panel" and select "Add New Hardware"
- ★ Do not prematurely cancel process as an entry for the card is made in the registry before the driver is installed.



Windows 95/98

Update Device Driver W	/izard		
	Windows was unable to If you do not want to ins search for a driver manu begin the automatic sea	locate a driver for this device. tall a driver now, click Finish. To Ially, click Other Locations. Or, to rch again, click Back.	
	< Back pdate Device Driver	Finish Cancel Wizard Windows found the following u device: WaveLAN/IEEE PC Card If you want to use this driver, cf correct driver and you want to : manually, click Other Locations Location of Driver Disk2 Dther Locations	pdated driver for this ick Finish. If this is r search for a differen
		< <u>B</u> ack F	inish Car

unication

iot the t driver

- ★ Windows reports detection of PC Card
- \star Follow instructions on screen
 - ★ When asked for the Avaya Wireless PC Card driver please insert diskette (or CD-ROM) and follow instructions
 - ★ If the driver has been downloaded and stored on disk, browse to the subdirectory on the disk

Windows 95/98



nmunication

- ★ After driver installation Windows will install network software
- ★ System will ask for CAB files
- ★ Please insert CD ROM or browse to the directory with the CAB files



Installation Process

Windows NT4

Vers	ion System Resources	Display	y Drive En∨ironment	s	Memory N	Servic letwork	es
		·		I	nclude HAL	_ resource	s 🗖
IRQ	Device				B	us Type	
01	i8042prt				0	lsa	
05	auddrive				0	lsa	
06	Floppy				0	lsa	
09	DC21X4				0	Pci	
12	i8042prt				0	lsa	
14	piixide				0	lsa	
15	piixide				0	lsa	
	IRQ I/OF	Por <u>t</u>	<u>D</u> MA	<u> </u> е	emory	De <u>v</u> ic	es

★ Verify IRQ setting

- ★ Windows NT diagnostics screen
- \star Resources screen
- \star select IRQ and find free value



Install PC Card and driver Windows NT4

N.	indows NT E	Diagnostics						
<u>F</u> lie	<u>H</u> eib							
	Version	System 🚶	Display	Drives	1	Memory	1 8	Services)
	Resou	irces	Envi	ronment			Netwo	irk
					Ir	nclude HA	AL res	ources 🗖
	Address	Device				E	3us	Туре
	0060 - 0060	i8042prt				()	Isa
	0064-0064	i8042prt				()	lsa 🛛
	0170-0177	piixide				()	Isa
	01CE-01CF	VgaSave				()	Pci
	01F0-01F7	piixide				()	lsa 🛛
	0224-022F	auddri∨e				0)	lsa 🛛
	0320 - 0327	WVLAN22				()	Internal
	0378-037A	Parport				()	lsa 🛛
	0388 - 038B	auddri∨e				()	lsa 🛛
	03B0-03BB	VgaSave				()	Pci
	03C0-03DF	VgaSave				()	Pci
	03F0-03F5	Floppy				()	lsa 🛛
	03F7-03F7	Floppy				()	lsa 🛛
	EC00-EC	DC21X4				0)	Pci
	ECF0-EC	piixide				()	lsa 🛛
	ECF8-EC	piixide				()	lsa 🛛
	<u>I</u> RQ	I/O Por		IMA	<u>M</u> e	mory		De <u>v</u> ices
			1			1		
		<u>P</u> roperties	<u> </u>	esh	Pr	i <u>n</u> t		OK

★ Verify I/O port Setting

- ★ Windows NT diagnostics screen
- ★ Resources screen
- \star select I/O ports and find free value



Windows NT4

R M	/indows NT	Diagnostics							X
<u>F</u> ile	<u>H</u> elp								
	Version Reso	System	Display Env	Driv ironmei	/es nt	Memo	ry Ne	Services etwork	
						Include	HAL	resources 🗖	
	Address		Device		Bus	Туре			
	FDFFC000-	- FDFFFFFF	mga64		0	Pci			
	00000378-0	0000037A	ppa3nt		0	lsa			
	000A0000-1	UUUBFFFF	VgaSave		U	Pa			
	IRQ	I/O Por <u>t</u>		<u>)</u> MA		<u>M</u> emory		De <u>v</u> ices	
		<u>P</u> roperties	<u>R</u> efr	esh		Pri <u>n</u> t		OK]

★ Verify PC Card Memory

- ★ Windows NT diagnostics screen
- ★ Resources screen
- \star select memory and check values
 - Avaya Wireless default 000D8000 - 000D8FFF
 - For alternative values check Avaya Wireless PC Card manual



Windows NT4

- ★ Insert PC Card in PCMCIA slot
- ★ Switch on PC, if not already on
- ★ System will automatically detect card
 - \star Follow instruction
- ★ If system does not detect the card
 - ★ select control panel
 - \star select devices
 - \star follow instructions as above



Windows NT4

- ★ Windows reports detection of PC Card
- ★ Follow instructions on screen
 - ★ When asked for the Avaya Wireless driver please insert diskette and follow instruction
 - ★ If the driver has been downloaded and stored on disk, browse to the sub-directory on the disk

Note: when installing newer version of the driver assure to remove the old driver files from the "windows/system sub-directory" to assure that Windows selects the new driver and not the old one (see readme.txt file)





Installation Process

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Avaya Wireless USB Client



- ★ Have the USB Client Driver software accessible by the OS
- ★ Connect the Avaya Wireless USB Client to the PC
- ★ Windows will detect the Avaya Wireless USB Client as new hardware and start its wizard
- ★ Alternatively select Add New hardware from the Control Panel
- ★ Direct the wizard to the location of the driver files



Avaya Wireless USB Client

Network ? 🗙
Configuration Identification Access Control
The following network components are installed:
🖼 3Com Megahertz 10/100 LAN CardBus PC Card (Ethernet
B Dial-Up Adapter
S ORINOCO USB Adapter
🗒 WaveAccess Jaguar PCMCIA Wireless LAN v2.01.02 💌
Add Remove Properties
Primary Network Logon:
Client for Microsoft Networks
<u>F</u> ile and Print Sharing
Description
A network adapter is a hardware device that physically
connects your computer to a network.
OK Cancel

- ★ Follow the instructions on the screen:
 - ★ Provide the requested driver parameters
 - ★ Restart the computer if requested
- ★ After Installation USB Client is available in the network configuration



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Set PC Card parameters

Profiles

Add/Edit Configuration Profile	e ? X
Select Profile	
At the office	Access Point
O At home	Access Point Residential Gateway Peer-to-Peer Group
O In Training	Access Point
C Testing	Peer-to-Peer Group
	<u>E</u> dit Profile
<u>0</u> K	<u>Cancel H</u> elp

nication

- ★ Up to four driver profiles can be defined each having their profile specific parameters
- ★ Activating a profile is done by clicking the associated button
- ★ Three basic modes of operation:
 - ★ Access Point
 - ★ Residential Gateway
 - ★ Peer-to-Peer (IBSS)
- ★ Switching between profiles is dynamic (no re-boot required)

Set PC Card parameters Basic

Add/Edit Configuration Pro	ofile ? 🗙	
Select Profile		
At the office	Access Point	
C At home	Residential Gateway	
O In Training	Access Point	
C Testing	Peer-to-Peer Group	
🔊 Edit Co	onfiguration [At the office]	? ×
Basic	Encryption Advanced Admin	
<u>N</u> etwo	rk Name JLucent Technologies	
lin	e Network Name should match the Network Nat	me
Va	lue or the Access Point(s).	
	would use up LANL administrator for the approach up hu	
	risuit your LAN auministrator for the conect value	5.
	OK Cancel	Help
·\ V /-\\		
	communication	

- ★ Network name (SSID) needs to be the same for all AP's that make out the network
- ★ If "ANY" is entered, station will associate to the AP with best communications link, if that AP is not "closed"

Set PC Card parameters Encryption

Add/Edit Configuration Pro	ile ? X
- Select Profile	
 At the office 	Access Point
C At home	Residential Gateway
C In Training	Access Point
C Testing	Peer-to-Peer Group
🔊 Edit Co	nfiguration [At the office]
Basic E	ncryption Advanced Admin
🔽 Ena	ble Data Security
Encrypt	data transmission using Key 1
- Gop	the Key
Encryp	tion Keys
• 0:	se <u>A</u> lphanumeric Characters (0-9, a-z)
O U:	se <u>H</u> exadecimal (0-9, a-f)
Key <u>1</u>	******
Key <u>2</u>	***************************************
Key 3	*******
Key 4	***************************************
	OK Cancel Help
·\V/-\\	///
	communication

- ★ Enable/disable WEP encryption using tick box
- ★ Identify up to four WEP keys:
 - ★ ASCII string
 - Max. 5 characters for Silver Cards
 - Max 13 characters for Gold Cards
 - ★ Hexadecimal string
 - Max 10 characters for Silver Cards
 - Max 26 characters for Gold Cards
- ★ Identify the transmit key by selecting it from the drop-down list

Set PC Card parameters

Advanced



- ★ Enable/disable Card Power Management, by selecting the appropriate radio button
- ★ Enable/disable Interference Robustness (Microwave Robustness), by selecting the appropriate radio button
- ★ Enable Medium reservation (RTS/CTS), by selecting the appropriate radio button (has to match setting in the AP)

Set PC Card parameters

Admin

Add/Edit Configuration Profile	8	? ×					
Select Profile							
At the office	Access Point	•					
• At home	Residential Gateway						
O In Training	Access Point	V					
C Testing	Peer-to-Peer Group	V					
	<u>E</u> dit Pr	rofile	V				
🔊 Edit Con	figuration	At the off	ice]	? ×			
Basic Er	cryption A	dvanced /	(dmin				
Distanc ⊙ La O Me O Sn	Distance between Access Points © Large (default) © Medium © Small						
	MAC Address O Default O Network Assigned						
This tab modify s infrastru	should only pecific settin cture.	be used by gs that may	LAN administrator apply for your net	s to view or work			
		OK	Cancel	Help			
	Ά						

Communication

- ★ Distance between Access Points:
 - ★ large for low bandwidth requirement
 - ★ small for high bandwidth requirement
 - ★ Parameters needs to match the setting on the APs
- ★ Select factory installed (default) MAC address or user assigned

Parameter settings for RG mode Basic

Add/Edit Configuration Pro	file ? 🗙		
Select Profile	Annone Point		
C At home	Recidential Category		
C In Training			
	Access Point		
	Peer-to-Peer Group		
	<u>E</u> dit Profile	\checkmark	
🔊 Edit Co	nfiguration [At ho	me]	? ×
Basic			
<u>N</u> etwo	rk Name 1e1f2b		
	able Data Security		
End	cryption Key	*****	×
For on Th of t	Network Name enter a label on the back o e default Encryption K he Network Name.	the 6-character ID pr fyour Residential Gate ley equals the last 5 c	inted eway. haracters
	UK	Cancel	Help
	/Α		

Communication

- ★ For Residential Gateway profiles just one tab is present:
- Network name (ID on the back of the RG-1000); pre-set in the RG-1000, cannot be altered
- ★ Encryption key (default being the last 5 digits of the ID); can be altered on the RG-1000

Parameter settings for IBSS mode Basic

ခဲ့Add/Edit Configuration Profile ?၊ 🗵
Select Profile
C At the office Access Point
C At home Residential Gateway
In Training Access Point
C Testing Peer-to-Peer Group ▼
🔊 Edit Configuration [Testing] 🛛 🛛 🕐 🗙
Basic
Network Name test net
Enable Data Security
Encryption Key
To connect to a Peer-to-Peer workgroup, all workgroup participants should use the same Network Name value.
OK Cancel Help
-\VA\VA\

communication

- ★ name (SSID) of the network that needs to be joined or created
- ★ Encryption can be switched on but only one key can be selected.

Set PC Card parameters

Re-setting the parameters



Control Panel Applet

 ★ Configuration window activated from "Avaya Wireless applet" on Control Panel

Client Manager Icon

- ★ Resides on System Tray in task bar
- ★ Right-click pops up menu; selecting Configuration Profile displays configuration window



Return to General Installation Process

Module contents

- ★ Upgrading Station Firmware
- ★ Driver installation overview
- ★ Installation of Client Manager

★ Client station installation

- ★ ISA adapter installation
- ★ PCI adapter installation
- ★ PC Card installation
- ★ USB Client installation
- ★ PC Card parameter settings
- ***** Adding protocol stack
- ★ Operating the diagnostic tools



Add Protocol stack

elect Network Component Typ	e ? 🗙
Click the tupe of network componen	st usu uppt to install:
Click the type of network componen	Add
🔜 Cilent 🎫 Adapter	<u></u>
Protocol	Cancel
📮 Service	
Desta a l'a sub-serve a la serve de	Constant
must use the same protocol to com	rr uses. Computers nmunicate.
Select Network Protocol	
Manufacturers:	Network Protocols:
Manufacturers:	Network Protocols:
Banyan Digital Equipment (DEC)	IPX/SPX-compatible Protocol Microsoft 32-bit DLC
IBM	Microsoft DLC
Y Microsoft	🐨 NetBEUI
🧯 Novell	TCP/IP
🗿 🖥 SunSoft	
	<u>H</u> ave Disk

unication

- ★ It may be needed that additional protocol stacks are needed
- ★ Add protocol on network neighborhood properties
- ★ Select Manufacturer (most time: Microsoft)
- ★ Select protocol



Return to General Installation Process

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★ Operating the diagnostic tools



New Client Manager Icon

(also displays RF status)



nmunication

- ★ Former CQI (release 6.0) is integrated in the Client Manager.
- ★ When started Client Manager displays itself by Icon on the task bar, indicating RF status:
 - ★ Color
 - ★ Number of columns
- ★ Right-click on icon presents Client Manger menu
 - ★ Starting the client manager
 - ★ Selecting/changing a profile
 - ★ Connecting an modem line on the RG-1000
 - ★ Asking for version data

New Client Manager Icon

Interpreting the Icon

🤣 ORiNOCO Client Manager 📃 🖂 🗙								
<u>File E</u> dit Book <u>m</u> ark <u>Options H</u> elp								
<u>C</u> ontents	Index	<u>B</u> ack	<u>P</u> rint	<u> </u>	≥>			
SNR In	dicator	SNR	Value	Ra	dio Conn	ections		
af.	<u>Green</u>	20 dB	or higher	Exc	<u>cellent</u> to G	}ood Radio		
<u>. d</u>	<u>Yellow</u>	10 dB	to 20 dB	Ma	<u>rqinal</u>			
b .	Red	0 dB t	o 10 dB	<u>Ou</u>	t of Range			
đ	<u>Red</u>	0dB		<u>Lo:</u> hav net	<u>st Connect</u> /e moved work	<u>ion</u> because you out of range of the		
al .	Blank	n/a		<u>No</u> no	<u>Connectio</u> PC Card C	<u>n</u> because there is ard inserted	•	

- ★ The Client Manager Icon on the task bar can take different shapes and colors
- ★ Use "help" to obtain information on how to interpret the icon



New Client Manager

(version information)



2	ORiN	OCO Client Manager - Version Info			X
	- Utility -	Client Manager	Variant 1,	Version 1.18	
	- Driver	NDIS 3 Miniport driver	Variant 1,	Version 6.14	
	- Card -	PC Card Type-II Extended Lucent Gold Card Enhanced WEP encryption allowed IEEE high-speed data rates Serial no:99UT11360528 Card ID: NIC 00101-04000	Variant 1,	Version 4.00	
[- Firmwa	are			
		Primary Functions firmware	Variant 1,	Version 4.00	
		Station Functions firmware Firmware ID: CFW 03101-06006	Variant 1,	Version 6.06	
				<u>Close</u> <u>H</u> elp	

- ★ Version information important for diagnostic purposes.
- \star Identifies version of
 - ★ Client Manager Utility SW
 - ★ PC Card driver
 - ★ PC Card Hardware
 - ★ PC Card Firmware



🛃 OR	iNOCO C	lient Ma	nager		_ 🗆 X
<u>F</u> ile <u>A</u>	<u>A</u> ctions A	\ <u>d</u> vanced	<u>H</u> elp		
	•		Current configuration pr	rofile At home	•
	Signal strength		Status Connected to network Radio connection Access Point name Channel Encryption	: 1e1f2b : Excellent : ORINOCO RG-1000 1e1f2b : 1 : Off	
					H <u>e</u> lp
	<u>H</u> e	lp	×		
	La Co <u>R</u> G <u>D</u> is	unch <u>C</u> l nfigurat à Moder sable Ra	ient Manager ion <u>P</u> rofile m adio		
	<u>E</u> xi	it			
	0	<u>3</u> (∢նու	4:29 PM	
<u> </u>		YA	munication		

- ★ Windows 95/NT/98/2000
- ★ Can be started from the Start Menu or via task-bar Icon
- ★ Integrates diagnostic functions and PC Card configuration setting
- ★ Welcome screen shows general status:
 - ★ Network name
 - ★ Link Qualification
 - ★ AP name (if applicable)
 - ★ Channel
 - ★ Encryption status

(profile selection)

💐 ORiNOCO Client M	anager		_ 🗆 ×
<u>File Actions Advance</u>	d <u>H</u> elp		
	Current configuration pro	ofile At the office	_
Signal strength	Status Connected to network Radio connection Access Point name Channel Encryption	At the office At home : Lu In Training : Ex Testing : WE 401 : 1 : On	

- ★ Current profile is identified on welcome screen
- ★ Other profile can be selected from the drop down list that holds available profiles



(profile selection)

💐 ORiNOCO Client M	anager			_ 🗆 ×
File Actions Advanced	i <u>H</u> elp			
<u>A</u> dd/Edit Config	uration Profile			
<u>S</u> elect Configura	ation Profile 💫 🕨	At the office	office	
Signal strength	Status Connected to r Radio connect Access Point na Channel Encryption	At home In Training Testing ame : we 401 : 1 : 0 n	chnologies	
			<u>0</u> K	H <u>e</u> lp

- ★ Alternatively profiles can be selected from the "Actions" item on the menu bar
- ★ "Actions" item also holds capability to add or change a configuration profile



(Diagnostic functions)

💐 ORINOCO	Client Ma	nager					_ 🗆 🗙
<u>File</u> <u>A</u> ctions	Advanced	<u>H</u> elp					
	<u>C</u> ard D Link Tr <u>S</u> ite Ma	iagnostics est onitor	juration pro	file	At the	office	
Signal strength		Connected to Radio conne Access Point Channel Encryption	network ction name	: Lu : Ex : W : 1 : Or	icent Te icellent E 401 n	echnologies	
						<u>0</u> K	H <u>e</u> lp

- ★ Diagnostic functions are available via the "Advanced" item on the menu bar:
 - ★ PC Card diagnostics
 - ★ RF Link test
 - ★ Site Monitor



(Diagnostic functions)

👢 ORiNOCO Client Manager	_ 🗆 ×	
File Actions Advanced Help		
(c <u>Link Test</u> Site Monitor	uration profile	
Connected t Radio conne Access Poin Channel Encryption Strength	network : Lucent Technologies ction : Excellent :name : WE 401 : 1 : On	
💐 ORiNOCO Client Manager - I	Card Diagnostics	Þ
Station Name : FRANS' OMNIBOO MAC address : 00601D1D2026	К	
Card Check		
Driver :	Ok	
Driver and Utility match :	Ok	
Driver and Firmware match :	Ok	
Utility and Firmware match :	Ok	
Hardware integrity :	Not Tested	
Firmware integrity : Error details :	Not Tested	
	Generate <u>R</u> eport	<u>C</u> ancel <u>H</u> elp

- ★ Card Diagnostics runs a series of tests on different elements of the communication HW and SW to check the integrity of the device
- ★ For support purposes a report can be generated



(Diagnostic functions)

🔍 ORi	NOCO Clier	t Manager				_ 🗆 X			
<u>F</u> ile <u>A</u>	ctions A <u>d</u> va	nced <u>H</u> elp							
		ard Diagnostic: ink Test ite Monitor	s uration profile	At the off	ice	•			
	Signal strength	Connec Radio c Access Channe Encrypti	ted to network : I onnection : B Point name : V I : on : (Lucent Tech Excellent WE 401 1 Dn	nologies				
	👢 orinoco	Client Manag	er - Link Test						>
	Channel : 1	This station: Test partner	FRANS' OMNIE WE 401	300K					
	Test Results	Test History I	.og Settings					Excelle	ent connection
	– Total messag	jes	This station Address 00-60	0-1D-1D-20-2	6	Test partner Address	00-60-1D-1	1E-1F-3F	
			SNR		36 dB	SNR			35 dB
			Signal level		-59 dBm	Signal level			-62 dBm
			Noise level		-94 dBm	Noise level		_	-97 dBm
				Received m	iessages		Rec	eived me:	ssages
			11 Mbps	24	100 %	11 M	/lbps	24	100 %
	Sent :	25	5.5 Mbps	0	0%	5.5 N	/lbps	0	0%
	Received :	24	2 Mbps	0	0%	21	/lbps	0	0%
	Lost :	0	1 Mbps	0	0%	1 M	/lbps	0	0%
	•					Advice	Eree	ze	<u>R</u> eset
					Log		Cano	el	<u>H</u> elp

nication

- ★ RF link test is the single most important test to verify the quality of the wireless link between two stations
 - ★ In AP mode link test is always between client station and AP
 - ★ In peer to peer mode link test is executed between client station and another client to be selected from a list of explored stations
- ★ Test results show snapshot readings of SNR, Signal and Noise and indication of attainable data-rate

(Diagnostic functions)



- ★ History test shows selected values over time
- ★ Values to be displayed can be selected from drop list:
 - ★ SNR
 - ★ Signal and Noise (two separate lines)
 - ★ Ranges for Noise, Signal or SNR
- \star Very useful to detect noise spikes

(Diagnostic functions)

👢 ORiNOCO Client Manager 📃 🗖 🗙	
Eile Actions Advanced Help	
Card Diagnostics Link Test Site Monitor	
Connected to network : Lucent Technologies Radio connection : Excellent Access Point name : WE 401 Channel : 1 Signal strength	
🌉 ORiNOCO Client Manager - Link Test	×
Channel : 1 This station: FRANS' OMNIBOOK Test partner: WE 401	
Test Results Test History Log Settings	Excellent connection
Log file name	
Data logging off C Automatic data logging Log every 25 seconds	
C Manual data logging C Continuous data logging	
Add comments to log Once per second Once per minute	
Log	<u>C</u> ancel <u>H</u> elp

- ★ Test results can be logged to disk for later analysis
 - \star User identified file
 - ★ Manual logging (on user command)
 - Automatic logging (after every x seconds)
 - ★ Continuous logging



(Diagnostic functions)

🗸 ORiNOCO Client Manager 📃 🗖	
File <u>A</u> ctions <mark>Advanced</mark> <u>H</u> elp	
Card Diagnostics Link Test Site Monitor	
Connected to network : Lucent Technologies Radio connection : Excellent Access Point name : WE 401 Channel : 1 Encryption : On	
💐 ORiNOCO Client Manager - Site Monitor	
Network name : Lucent Technologies Distance betweeen APs : Large	
Selection Site Monitor Log Settings AP names	
MAC address SNR Channel Signal Noise 00601D1E1F3F 1 1 1 1 1 00601D1E1F46 1 1 1 1 1 1	Off Off Off MAC addres Addres AP name SNP
00601D1E1F31	Signal Noise
00601DF7286A , , 1 1	SNR(dB) Signal(dBm) Noise(dBm) Channel
Sort on MAC address	<u>F</u> reeze <u>R</u> eset
Log	<u>C</u> ancel <u>H</u> elp

nication

- ★ Site monitor allows a user to "see" all APs with the same network name, from a location.
- ★ Display to be configured by the user by selecting items to show from drop down list
- ★ AP names can be assigned to locate APs easily.
 - ★ Names are maintained in file aplist.txt in association with the MAC address of the PC Card in the AP
 - ★ Can be created by editing or using AP names discovery function

Module Summary

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