# User's Guide


Issue 2

DECLARATION OF CONFORMITY

We, NOKIA CORPORATION declare under our sole responsibility that the product DTE-1 is in conformity with the provisions of the following Council Directive: 1999/5/EC. A copy of the Declaration of Conformity can be found from http://www.nokia.com/phones/declaration_of_conformity/

CE 168 !



Includes RSA BSAFE cryptographic or security protocol software from RSA Security.

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The availability of particular products may vary by region. Please check with the Nokia dealer nearest to you.

Issue 2

# For your safety

Read these simple guidelines. Breaking the rules may be dangerous or illegal. Further detailed information is given in this manual.

Do not switch the radio card on when wireless equipment use is prohibited or when it may cause interference or danger.

**Road safety comes first**

Don't use the radio card while driving.

**Interference**

All radio cards may get interference, which could affect performance.

**Switch off in hospitals**

Follow any regulations or rules. Switch the radio card off near medical equipment.

**Switch off in aircraft**

Wireless devices can cause interference in aircraft.

**Switch off when refuelling**

Don't use the radio card at a refuelling point. Do not use near fuel or chemicals.

**Switch off near blasting**

Don't use the radio card where blasting is in progress. Observe restrictions, and follow any regulations or rules.

**Use sensibly**

Use only in the normal position. Don't touch the antenna unnecessarily.

**Qualified service**

Only qualified personnel may repair radio card equipment.

**Accessories**

Use only approved accessories. Do not connect incompatible products.

**Water-resistance**

Your radio card is not water-resistant. Keep it dry.

**Backup copies**

Remember to make backup copies of all important data.

**Connecting to other devices**

When connecting to any other device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

# Network Services

The radio card described in this guide is approved for use on the EGSM 900 and GSM 1800 networks.

Dualband is a network dependant feature. Check with your local service provider if you can subscribe to and use this feature.

A number of features included in this guide are called Network Services. These are special services that you arrange through your wireless service provider. Before you can take advantage of any of these Network Services, you must subscribe to them through your service provider and obtain instructions for their use from your service provider.

**Note:** Some GSM networks may not support all language-dependent characters and/or services.

# Table of contents

# Introduction

The Nokia D211 is a multimode radio card that combines General Packet Radio Service (GPRS), GSM high-speed data (HSCSD), and Wireless Local Area Network (WLAN).

With the Nokia D211 you can send and receive e-mail, text messages, data and fax files, and access the Internet. Note that with the Nokia D211 you cannot make or receive voice calls.

The Nokia D211 operates on the GSM 900/1800 networks and IEEE 802.11b-compliant WLANs. It plugs into compatible portable computers or other devices with a type II or III PC card slot. The Nokia D211 is equipped with an integrated smart card reader: Wired Equivalent Privacy (WEP) keys and personal network profiles that make moving between networks easy, can be stored on a SIM card.

Supported operating systems are: Windows 98 Second Edition, Windows Me, Windows 2000, and Windows XP. For other supported operating systems and software updates, please check the Nokia Web site at www.club.nokia.com.

## Important!

**Warning:** Do not use the radio card when the use of a wireless device is prohibited or when it may cause interference or danger. Note that the radio card may cause similar interference as any cellular device (e. g. mobile phone) and must not be used in areas where the use of any such device is prohibited.

**Warning:** Be careful when moving your computer so that you do not cause damage to the protruding end of the inserted radio card.

**Warning:** Using the Nokia D211 in some countries or regions may be illegal. Consult local authorities on the regulations concerning the use of the Nokia D211.

**Note:** Transmitted data is not encrypted by the radio card by default.

**Warning:** Use only accessories approved by the radio card manufacturer for use with this particular radio card model. The use of any other types may invalidate any approval or warranty applying to the radio card, and may be dangerous.

For availability of approved accessories, please check with your dealer.

# Data and fax communication

The Nokia D211 provides the functionality of a wireless modem. In order to be able to connect to a remote computer, to send and receive files, e-mail and faxes, and to access the Internet, you need to take the following points into account:

- You need the appropriate data and fax communications software installed on your computer. You can use the Nokia D211 with a variety of commercially available Windows 98 Second Edition, Windows Me, Windows 2000, and Windows XP compatible data and fax communications applications, such as Dial-Up Networking and HyperTerminal.
- The data and fax communications applications must be correctly configured for use with the Nokia D211, according to the instructions given in the documentation of these applications and your compatible computer. Remember to select the Nokia D211 as the modem for each application.
- The data transfer and fax functions depend on the applications you have chosen, and not only on the computer or the Nokia D211. For information on how to use an application, please refer to that application's documentation.
- You need to subscribe to the corresponding data and fax services from your service provider or network operator. Contact your service provider for information about the availability and details of the services in your home network. Internet access requires that you have subscribed to the data service and obtained an Internet access point from your service provider.

The Nokia D211 can also be controlled with AT commands. For more information, please refer to the *Developer Manual for Nokia D211*, which can be found at www.forum.nokia.com.

# About data transmission

The Nokia D211 employs the data transmission capabilities of the WLAN and GSM network in order to send and receive data, to browse the Internet, to send short messages and e-mail, and to establish connections with other computers, for example.

Data connections may be made from most locations where your radio card operates. However, it is recommended that you move the radio card to a location where the strongest possible network signal can be obtained. When the signal is strong, data transmission is more efficient.

The following factors may impair wireless connections:

**Noise** – Electronic appliances and equipment can cause radio interference. Also in areas where radio cards are prevalent, other radio cards can impair the wireless connection.

**Roaming** – As the radio card user moves from one WLAN access point coverage area or GSM network cell to another, the signal strength of the channel drops. As a consequence, the network may hand the user over to a coverage area and frequency where the signal is stronger. Due to varying network traffic loads, roaming may also occur when the user is stationary. Such roaming may cause slight delays in transmission.

**Electrostatic discharge** – A discharge of static electricity from a finger or a conductor may cause erroneous functions in electrical devices. The discharge may result in unstable software operation. Network connections may become unreliable, data may become corrupted, and transmission halted. In those cases, end the existing connection (if any), stop the radio card, and remove it from the PC card slot. Then re-insert the radio card into the PC card slot and try connecting again.

**Dead spots and dropouts** – Dead spots are areas where radio signals cannot be received. Dropouts occur when the radio card user passes through an area where the radio signal is blocked or reduced by geographical or structural obstructions, such as concrete walls.

**Signal impairment** – Distance and obstacles can cause signals to become out-of-phase. They can also cause reflected signals. Both situations result in a loss of signal strength.

**Low signal strength** – Due to either distance or obstacles, the radio signal strength from a WLAN access point or GSM cell site may not be strong or stable enough to provide a reliable connection for communication. Therefore, to ensure the best possible communication, remember to consider the following points:

- Data connection works best when the radio card is in a stationary position. Attempting wireless data communication while in a moving vehicle is not recommended. Fax transmission is more easily impaired than data or text message transmission.
- Do not place the radio card on a metal surface.

# General Packet Radio Service (GPRS)

GPRS is a packet data technology where information is sent in short bursts of data over the mobile network. The benefit of sending data in packets is that the network is occupied only when sending or receiving data. GPRS as such is a data bearer that enables wireless access to data networks like the Internet. The applications that use GPRS are SMS messaging and GPRS dial-up (for example, the Internet and e-mail).

**Before you can use GPRS technology:**

- You need to subscribe to GPRS service.

  For availability and subscription to GPRS service, contact your service provider or network operator.

- You need to save the GPRS settings for the applications used over GPRS.

  See "Messages" on page 36 for configuring text message settings.

  See also **"Creating new profiles" on page 26** and "Data and fax communication" on page 8.

Please refer to the *Data Security* document found on the Nokia D211 CD-ROM for information on security issues.

### Pricing for GPRS and applications

Both the active GPRS connection and the applications used over GPRS, for example sending and receiving data and text messages, are priced. For more detailed information on fees, contact your service provider or network operator.

## High Speed Circuit Switched Data (HSCSD)

The Nokia D211 enables you to use GSM high-speed data services (HSCSD). The standard GSM data transmission rate is 9.6 kbit/s, but HSCSD technology allows for higher data transmission rates, making, for example, the downloading of large files faster and more convenient.

HSCSD technology is based on the use of multiple timeslots at the same time. Depending on the network, the data transmission speed in a single timeslot is 9.6 or 14.4 kbit/s. When sending and receiving e-mail, the 14.4 kbit/s data transmission speed can be doubled up to 28.8 kbit/s, and in Internet connections a download speed of up to 43.2 kbit/s can be achieved if supported by the equipment of the network operator and the Internet service provider.

The use of GSM high-speed data services requires that your network supports HSCSD technology and that you have subscribed to this service. For more information, contact your service provider or network operator.

See also "Data and fax communication" on page 8.

Please refer to the *Data Security* document found on the Nokia D211 CD-ROM for information on security issues.

## Wireless Local Area Network (WLAN)

The radio card described in this document is approved for use in a Wireless Local Area Network (WLAN).

**Warning:** This equipment operates at 2.4 - 2.4835 GHz. Note that in France the use of this equipment is only allowed at the frequency band of 2.445 - 2.4835 GHz (channels 10, 11, 12, and 13).

The Nokia D211 supports the following WLAN features:

- IEEE 802.11b standard
- Data rates of 1, 2, 5.5, and 11 Mbit/s
- Operation at a frequency of 2.4 GHz using Direct Sequence Spread Spectrum (DSSS) radio technology
- Wired Equivalent Privacy (WEP) data encryption with keys up to 152 bits.

The Nokia D211 enables you to wirelessly connect compatible laptop computers, hand-held devices, desktop PCs, and other devices with a type II or III PC card slot to a wired local area network through a WLAN access point. Instead of cables, radio waves are used to transmit and receive data over the air.

If you move the computer to another location within the WLAN and out of range of a WLAN access point, the roaming functionality can automatically connect your computer to another access point that belongs to the same network. As long as you remain within range of access points that belong to the same network, your computer can stay connected to the network.

The Nokia D211 enables different types of communication in a WLAN. There are two operating modes to choose from: *infrastructure* and *ad hoc*.

**Infrastructure**

The infrastructure operating mode allows two kinds of communication:

- Wireless stations communicate with each other through a WLAN access point.
- Wireless stations communicate with a wired LAN station through a WLAN access point.

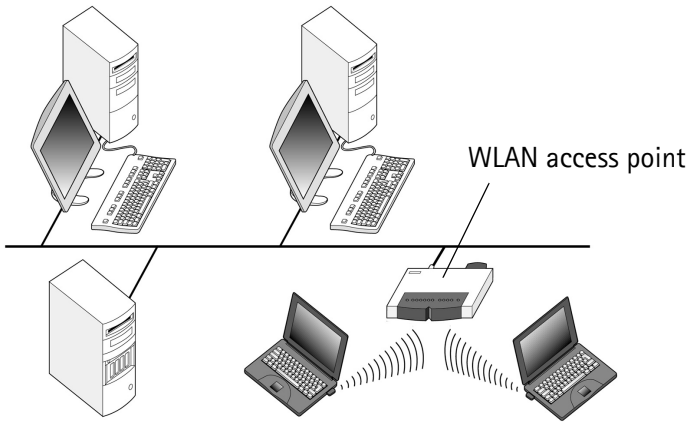



**Figure 1 – Infrastructure network**

The advantage of the infrastructure operating mode is that you can have more control over network connections because they pass through an access point. A wireless station can access the services that are available in a regular wired LAN: company database, e-mail, the Internet, and other network resources, for example.

### Ad hoc

In the ad hoc operating mode, wireless stations send and receive data directly with each other; no access point is required. Simply insert the radio cards into the stations, make the necessary configurations, and start communicating. Ad hoc networking is easy to set up, but communication is limited to stations that are within range. As long as the stations are within range, you can, for example, share and exchange files.

**Figure 2 – Ad hoc network**

See "Setting up and joining ad hoc networks" on page 22 for how to set up an ad hoc network.

## SIM services

SIM services refers to a service which enables you to access the Internet via your service provider's or network operator's own public network. Your service provider may, for example, offer you the possibility to check data from your company intranet, send and receive e-mail, and save documents. SIM services are usually available in public places such as hotels, airports, railway stations, business centres, and corporate buildings.

**Note:** Before you can take advantage of the SIM services, you must subscribe to these services from your service provider or network operator and obtain instructions for use.

A SIM card is used as a means for user identification: the data stored on the SIM card is read, and if valid, you are allowed to connect to the Internet and intranets. The SIM card is provided by the service provider or network operator.

Accounting data, such as used access time and/or transferred data, is passed from the network on to the service provider for billing purposes. Accounting begins when the wireless station is authenticated and ends when the wireless station logs off.

**Note:** The actual invoice for services from your service provider may vary, depending upon network features, rounding-off for billing, taxes and so forth.

### Security in WLAN

Security issues should always be carefully considered to ensure the secure transmission of data in both wired and wireless LANs. In current wireless systems, for example, WLAN access points need to authenticate wireless stations to prevent unauthorised access to the network. Authentication is a service that confirms the identity of an entity, such as a user or a computer, or confirms the origin of a transmitted message.

The Nokia D211 supports the Wired Equivalent Privacy (WEP) protocol, which offers basic protection in WLAN. The WEP protocol utilises the RC4 algorithm with an up to 152-bit secret key, which encrypts data before it is transmitted over radio waves. When the wireless stations in a WLAN wish to communicate using WEP, they must have the same WEP key in possession.

The Nokia D211 is also compatible with leading Virtual Private Network (VPN) clients over GPRS and WLAN. VPN is recommended for more secure network access.

The Nokia D211 is equipped with an integrated smart card reader. SIM cards and smart card readers provide a tool for managing secure user authentication in a WLAN. SIM cards also provide an easy way for users to carry an authentication device with them. On a SIM card users can store important information, such as WEP keys and network profiles.

The smart card reader reads the data stored on the computer chip and sends it to the network for processing. The SIM card is protected by a PIN code; to access the contents of the SIM card, you need to enter the correct PIN code.

**Caution:** Keep all miniature SIM cards out of small children's reach.

Please refer to the *Data Security* document found on the product CD-ROM for more information on security issues.

## Antennas

The Nokia D211 has built-in antennas inside an extension box. In this document *antenna* refers to the extension box and the antennas inside it.

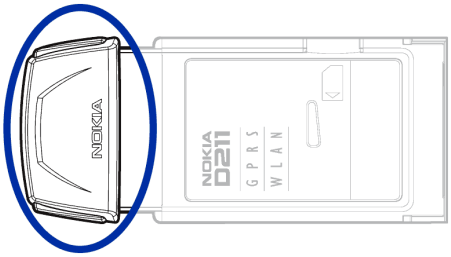



**Figure 3 – Extension box of the Nokia D211**

When connecting to a WLAN, make sure that the antenna is pointing towards the WLAN access point and placed in an open area. Do not cover the antenna.

Use only the supplied antenna. Unauthorised antennas, modifications, or attachments could damage the radio card and may violate regulations governing radio devices.

# Installation

There are some slight differences in the installation process between the different Windows operating systems. If the installation differs from the steps described below, follow the instructions on the screen.

The Nokia D211 software requires 20 MB of free disk space.

## Installing the Nokia D211 software

**Note:** Do not insert the radio card into your computer until the installation program instructs you to do so.

1. Exit all Windows programs. Insert the CD-ROM into the CD-ROM drive of your computer.

   If the CD-ROM is not launched automatically, go to your CD-ROM drive (e.g. drive D) and double-click on **Start.exe**.
2. Select the language for the CD-ROM and installation program and read through and accept the Nokia license agreement. If you do not accept the license agreement, you cannot use the CD-ROM.
3. The main screen of the CD-ROM opens. Click **Install** to start the installation.
4. The Welcome page of the installation wizard opens. Click **Next** to continue.
5. Read through and accept the Nokia license agreement. If you do not accept the license agreement, you cannot use the software and the installation procedure stops. Click **I Accept** to accept the license agreement.
6. Select the destination folder for the software. The default folder is C:\Program Files\Nokia\Nokia D211. If you want to install the software in another drive or folder, click **Browse**. When you have selected the correct destination folder, click **Next**.

   **Note:** You cannot install the Nokia D211 software on a network drive.
7. Select the type of installation you want. The *Administrator* option is for system administrators only. *Custom* allows you to choose the individual software components to be installed, and is recommended for advanced users. *Typical* installs the most common software components. This option is recommended for most users. When you have selected the desired type of installation, click **Next**.
8. Check the installation settings. To accept them, click **Next**. To change the settings, click **Back**, make the changes, and then click **Next**. The installation program starts copying the files.
9. When the installation program prompts you to insert the radio card, insert it into the PC card slot of your computer as shown in Figure 4. Note that the radio

card is not inserted all the way into the PC card slot and there is a gap between the protruding extension box and the computer. Do not use excess force when inserting the card.

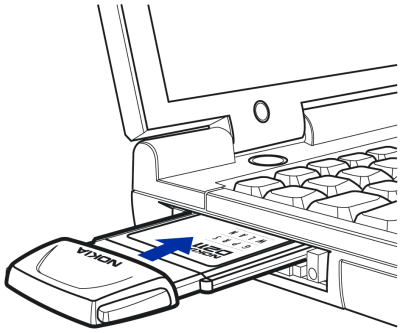



**Figure 4 – Inserting the radio card**

In the Windows 2000 operating system you are informed that no digital signature was found. Click **Yes** in each dialog box to continue with the installation.

In Windows XP, the operating system opens Found New Hardware wizards. For each of these wizards, first select the option **Install the software automatically**, and then select **Continue Anyway** to continue with the installation.

**10** The Completion page informs you when the installation is completed. Remove the CD-ROM from the CD-ROM drive and click **Finish**. You may need to restart your computer.

**11** A dialog box asks if you want to create a network profile now. Remember that you can create and edit your own network profiles at any time. If you do not want to create a profile, click **No** and the installation procedure is completed. If you want to create a profile, click **Yes** and the Welcome window of the profile wizard opens. See **"Creating new profiles" on page 26** for more information.

**Note:** If you want other applications to be able to use the smart card reader of the Nokia D211, you need to install separately a PC/SC (Personal Computer Smart Card) compliant smart card driver on your computer. Install the smart card driver only if you want to use other applications or special types of smart cards with the smart card reader of the Nokia D211. To install the driver, select *Custom* as the installation type (see step 7 above) and select the *PC/SC smart card driver* component. In the Windows 98 and Me operating systems you must have the Microsoft Smart Card Base Components 1.0 or later installed.

### Modifying the installation

You can alter the installation of the Nokia D211 by adding or removing components, for example.

1. Exit all Windows programs. Insert the CD-ROM into the CD-ROM drive of your computer.

   If the CD-ROM is not launched automatically, go to your CD-ROM drive (e.g. drive D) and double-click on **Start.exe**.
2. Select the language for the CD-ROM and installation program and read through and accept the Nokia license agreement. If you do not accept the license agreement, you cannot use the CD-ROM.
3. The main screen of the CD-ROM opens. Click **Install** to start the installation.
4. When the Welcome page of the installation maintenance program opens, choose from the following options:

   *Modify* – You can install new components or remove existing ones.

   *Update* – You can update the installed components and network profiles.

   *Uninstall* – You can remove the Nokia D211 program files and drivers from your computer.

   When you have selected the option, click **Next**.
5. The selected wizard opens. Make the changes and click **Next** to continue.
6. Check the settings. To accept them, click **Next**. To change the settings, click **Back**, make the changes, and then click **Next**.
7. The modification starts. The Completion page informs you when the modification is completed. Click **Finish**.

## Uninstalling the Nokia D211 software

**Caution:** Before you start uninstalling the Nokia D211 software, you must first stop the radio card and then remove it from the PC card slot of the computer. See "Removing the radio card" on page 22 for more information.

Close all dialog boxes in the user interface before uninstalling the Nokia D211.

**To uninstall the Nokia D211 software:**

1. From the **Start** menu, select **Settings** and then click **Control Panel**. Click **Add/Remove Programs**.
2. From the list of programs, select **Nokia D211** and click **Add/Remove**.
3. The Welcome page of the uninstallation wizard opens. If you do not want profiles and settings configured on the Settings page removed, select the **Keep all profiles and other settings** check box. If you want to save all data relating to the SMS application, for example text and picture messages you have sent or received, select the **Keep all data from the SMS application** check box.

Click **Next** to continue.

4 Check the uninstallation settings. To accept them, click **Next**. To change the settings, click **Back**, make the changes, and then click **Next**.

5 The uninstallation starts. The Completion page informs you when the uninstallation is completed. Click **Finish**.

# Getting started

With the Nokia D211 you can:

- establish a General Packet Radio Service (GPRS) connection where information is sent in short bursts of data over the cellular network. The benefit of sending data in packets is that the network is occupied only when sending or receiving data. GPRS is ideal for applications which transmit data in short bursts, such as Web browsers. The data rate can be up to 40.2 kbit/s. You need to subscribe to the GPRS service.
- connect to a GSM network where you can send and receive text and picture messages. You can also connect to the Internet or your e-mail by making a data call, which enables data transmission rates of up to 14.4 kbit/s. You can make GSM high-speed data calls if your network supports High Speed Circuit Switched Data (HSCSD) technology and you have subscribed to GSM high-speed data services. HSCSD technology is especially suited for active file transfer, and the data rate can be up to 43.2 kbit/s.
- connect to a Wireless Local Area Network (WLAN) and send and receive data like in a regular wired LAN. The data rate in WLAN can be up to 11 Mbit/s.

## Connecting to a network

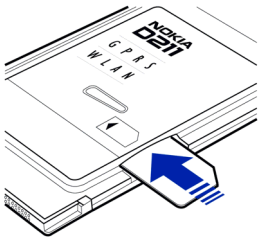
To be able to connect to a network you need a network profile. *Easy connection* profile with pre-defined settings is automatically created during software installation. This profile enables network access without your needing to configure any settings.

If you want to create a profile yourself, see **"Creating new profiles" on page 26** for more information.

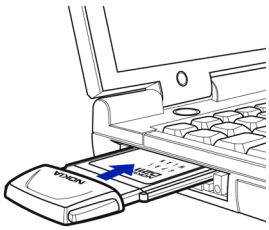
You need a SIM card to be able to establish a GSM or GPRS connection.

**To create a network connection:**

1 Slide the SIM card into the smart card slot of the Nokia D211. Make sure that the metal contacts of the SIM card are facing down and that the bevelled corner is on the right. Note that the radio card does not support 5 Volt SIM cards.



2 Insert the radio card firmly into the PC card slot of he computer.



Note that the radio card is not inserted all the way into the PC card slot and there is a gap between the protruding extension box and the computer. Do not use excess force when inserting the card.

3 Switch on your computer.

4 If you are using a SIM card, enter the PIN code and click **OK**. You can enter the PIN code before logging on to a network.

5 During the log on a dialog box opens in the top left-hand corner of the screen. To select the profile and connection type at this stage, click **Select**.

6 The **Select Connection** dialog box opens. See Figure 5. From the list of profiles open the profile and select the connection type you want to use.

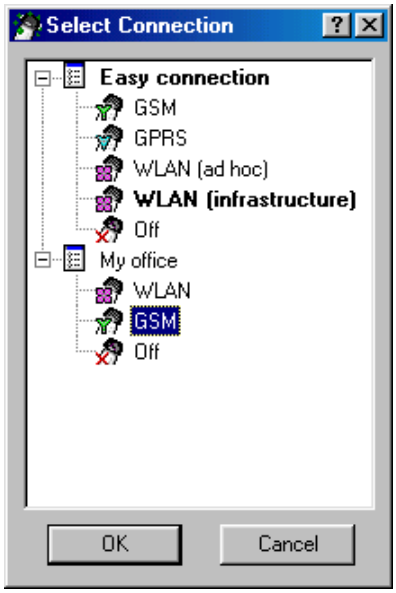



**Figure 5 – Select Connection dialog box**

**WLAN** – Connects you to a wireless local area network where you can send and receive data.

**GSM** – Allows you to make data calls and utilise GSM high-speed data services if your network supports HSCSD technology and you have subscribed to the service.

**GPRS** – You can establish a GPRS connection and send packet data. You need to subscribe to the GPRS service.

**OFF** – Disconnects the radio card from the network and turns off all radios.

7 Click **OK** to establish a network connection.

**Tip:** You can access the **Select Connection** dialog box also by right-clicking the Nokia D211 icon on the taskbar, or by opening the **Profiles** page of the Manager window and clicking **Select**. If the taskbar icon is not visible, see page 33 for more information.

**Tip:** You can manage network connections also by using the Nokia D211 icon on the taskbar. Right-click the icon and click **Connect** to connect to SIM services. To make a data call, click **Dial**, and to send packet data, click **Activate**. See "Connection status indicators" below for more information. If the taskbar icon is not visible, see page 33 for more information.

**Warning:** Do not use the radio card when the use of a wireless device is prohibited or when it may cause interference or danger. Note that the radio card may cause similar interference as any cellular device (e. g. mobile phone) and must not be used in areas where the use of any such device is prohibited.

## Connection status indicators

Taskbar icons and icons on the **Profiles** page indicate the status of the network connection.

**Ready for data call** – You have established a connection to a GSM network and can send and receive text messages. To access the Internet or your e-mail by using GSM high-speed data services, you need to make a data call. Click **Dial** to make a data call.

The use of GSM high-speed data services requires that your network supports HSCSD technology and that you have subscribed to this service. For more information, contact your service provider or network operator.

**Data call to** [phone number] – GSM data call is active. To finish the call, click **End Call**.

**Ready to activate GPRS** – You have established a connection to a GSM network that supports packet data sending (GPRS). You can send and receive text messages. To access the Internet or your e-mail by using GPRS, you need to establish a GPRS connection. Click **Activate** to establish a GPRS connection.

You need to subscribe to the GPRS service. For availability and subscription to packet data services, please contact your service provider or network operator.

**GPRS active** – GPRS connection is now active. To end the connection, click **Deactivate**.

**Linked to** (access point name) – You have established a connection to a WLAN access point.

To connect to the SIM services, click **Connect**. The **Connect** button is activated only when the wireless station has detected a service in the network, otherwise the button remains inactive.

**Connected to SIM services** – You have established a connection to SIM services. To end the connection, click **Disconnect**.

Before you can take advantage of the SIM services, you must subscribe to these services from your service provider or network operator and obtain instructions for use.

**Ad hoc network** – You have either established or joined an ad hoc network.

**No network** – You have selected **Off** as a connection type and are not connected to any network.

### Setting up and joining ad hoc networks

Ad hoc networks allow wireless stations to communicate directly with each other without any WLAN access points. The stations can, for instance, share folders. One user creates the ad hoc network and other users then join the network.

See "Wireless Local Area Network (WLAN)" on page 10 for more information on ad hoc networks.

**To connect to an ad hoc network:**

1. On the **Profiles** page, select the **General** tab and click **Select**.
2. The **Select Connection** dialog box opens. Open the **Easy connection** profile and select the **WLAN (ad hoc)** connection type. Click **OK**.
3. If you are starting an ad hoc network, type the network name. If you are joining a network, select the network name from the list box. Click **OK**.

**Tip:** Create your own profile for ad hoc networking with the profile wizard if you use the ad hoc operating mode frequently. This saves you from having to select a network each time and allows for quicker access. See **"Creating new profiles" on page 26** for more information.

## Ending network connections

Closing the Monitor or Manager window does not quit the program or end an existing network connection. To end a connection, select the connection type **Off** for a profile. See Figure 5 on page 20.

You can end the network connection also by stopping and removing the radio card.

## Removing the radio card

You should always stop the radio card before removing it from the PC card slot of your computer. To stop the card, right-click the Nokia D211 icon on the taskbar

and select the option **Stop card**. If the taskbar icon is not visible, see page 33 for more information.

**Caution:** The Windows 98 Second Edition operating system stops all PC cards when a new PC card is inserted into the computer. If you insert another PC card into your computer, make sure that you first stop the Nokia D211 and remove it from the PC card slot. Otherwise you may lose the network connection, which may result in loss of data.

# Nokia D211 features

## Manager and Monitor window

The user interface of the Nokia D211 consists of the *Monitor* window and the *Manager* window.

The Manager window is the main user interface of the Nokia D211. You can access the Manager window by right-clicking the Nokia D211 icon on the taskbar and by selecting Manager window from the shortcut menu.If the taskbar icon is not visible, see page 33 for more information.

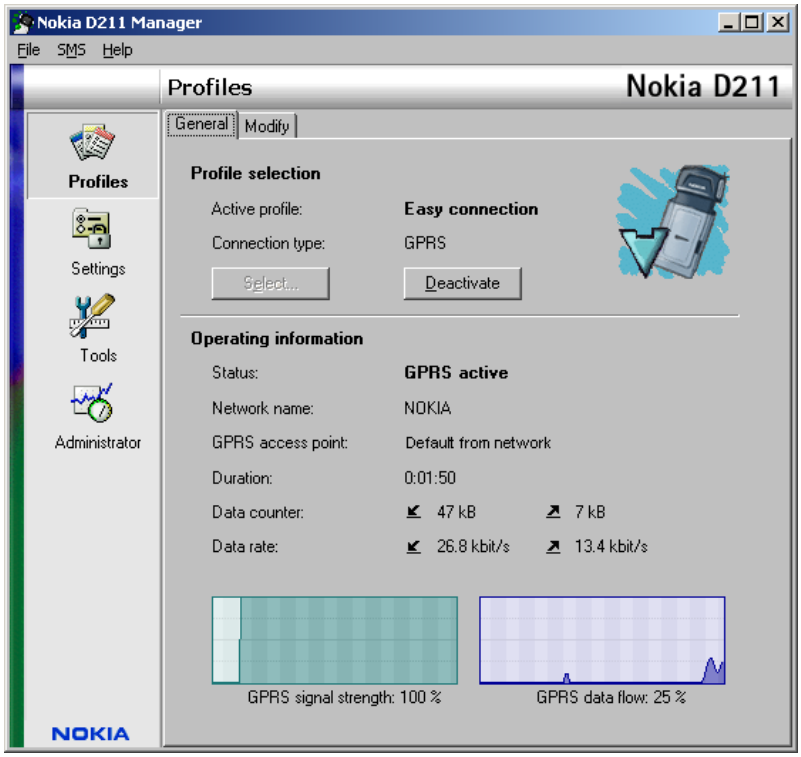



**Figure 6 – Manager window**

The Manager window consists of the following pages: Profiles, Settings, and Tools. The Administrator page is used by system administrators. The number of pages may vary depending on which pages were selected during the installation. You can view the different pages by clicking the icons on the icon bar on the left.

The Manager window is used for managing profiles, configuring settings, and viewing network status.

### Using the Monitor window

The Monitor window is a small window displaying information on the current network connection. The following information is available in the Monitor window: connection type, amount of sent and received data, duration of the connection, signal strength or WLAN connection quality, and data flow.


**Figure 7 – Monitor window**

To open the Monitor window, right-click the Nokia D211 icon on the taskbar and select **Monitor window**. If the taskbar icon is not visible, see page 33 for more information. If you want the Monitor window to open automatically each time the radio card is inserted, go to the **Settings** page, **General** tab. Select the **Open Monitor window automatically** option.

The Monitor window displays both the amount of sent and received data, and the duration of the active connection. The data counter unit is a kilobyte. When the data counter is displayed, click on it and the connection timer is displayed instead.

**Note:** The actual invoice for calls and services from your service provider may vary, depending upon network features, rounding-off for billing, taxes and so forth.

The signal strength indicator shows the strength and quality of the radio signal between the radio card and a GSM base station at your current location. In WLAN, the indicator shows the quality of the radio signal between a radio card and a WLAN access point. Remember that the strength of the radio signal is affected by distance and obstacles. The data flow indicator shows the relative speed at which data is transferred.

## Profiles page

A *profile* is a group of network-specific and Windows networking settings. Profiles enable easy transfer from one network to another without having to remember all the different settings.

On the Profiles page you can create new profiles, modify and delete them. Profiles can be saved to and opened from a file. You can also send profiles as text messages.

Profiles are stored on a hard disk or SIM card.

One profile with pre-defined settings is automatically created during software installation. This *Easy connection* profile enables network access without your

needing to configure any settings. Note that this profile cannot be edited, deleted, exported, or sent as a text message.

## Selecting a profile and connection type

You need to select a network profile and connection type suitable for the network in which you want the radio card to operate.

1 On the **Profiles** page, select the **General** tab and click **Select**.

2 The **Select Connection** dialog box opens. See Figure 5 on page 20. From the list of profiles open the profile and select the connection type you want to use. Click **OK**.

If you selected WLAN connection type, you are now connected to a WLAN access point. To connect to SIM services, click **Connect**.

If you selected GSM or GPRS connection type, you are connected to a GSM network, but to make a data call you have to click **Dial**, or to send packet data you have to click **Activate**.

If you set the connection type to **Off**, the radio card is disconnected from the network. See "Connection status indicators" on page 21 for a detailed description of the various network statuses.

**Tip:** You can access the **Select Connection** dialog box also by right-clicking the Nokia D211 icon on the taskbar. If the taskbar icon is not visible, see page 33 for more information.

**Tip:** You can manage network connections also by using the Nokia D211 icon on the taskbar. Right-click the icon and click **Connect** to connect to SIM services. To make a data call, click **Dial**, and to send packet data, click **Activate**. See "Connection status indicators" on page 21 for more information. If the taskbar icon is not visible, see page 33 for more information.

**Note:** When you change a profile or connection type, you may need to change your Web browser's proxy settings or domain settings for Windows networking.

## Creating new profiles

By creating different profiles for different networks, you can easily switch from one network to another without having to memorise the network settings.

1 On the **Profiles** page, select the **Modify** tab and click **New**.

2 The Welcome page of the profile wizard opens. To continue, click **Next**.

3 Give a name for the new profile. The name can consist of a maximum of 25 alphanumeric characters.

Select the appropriate connection type. You can use more than one connection type with each profile. Click **Next**.

4 If you selected WLAN connection type, you have to specify the following WLAN options:

*Operating mode* – Select one of the two available operating modes. In the infrastructure mode, computers can communicate with each other and with wired LAN stations through a WLAN access point. In the ad hoc mode, computers can send and receive data directly with each other. No access point is needed. See "Wireless Local Area Network (WLAN)" on page 10 for more information.

*Network name* – Type the network name as defined by the system administrator, or select one from the list box. In the ad hoc operating mode, the users themselves name the WLAN. The network name can consist of a maximum of 32 alphanumeric characters. By default, the network name is case-sensitive.

To continue, click **Next**.

5 If your local area network does not have a DHCP (Dynamic Host Configuration Protocol) server, which would assign an IP address for the radio card automatically, you need to specify the IP address, subnet mask, and default gateway settings manually. Ask your system administrator for the correct values.

**Note:** Make sure that the **Manage TCP/IP properties together with profiles** check box is selected (**Settings** page, **General** tab). If this check box is not selected, the TCP/IP settings are managed by network settings, which can be configured in the Control Panel of your computer.

6 If you selected GSM connection type, you have to specify the following settings:

*GSM connection method* – Select **Analog** if you are using a modem connection. If you are using an ISDN connection, select **ISDN V. 110** or **ISDN V. 120**, depending on which ISDN standard your Internet service provider supports.

*GSM connection speed* – The use of GSM high-speed data services include the use of the following data transmission rates: 9.6 kbit/s, 14.4 kbit/s, 19.2 kbit/s, 28.8 kbit/s, and 43.2 kbit/s. Select the standard 9.6 kbit/s GSM data transmission rate if the network you are using does not support HSCSD technology. See "GSM properties" on page 30 for more information on data transmission rates.

**Note:** The use of GSM high-speed data services requires that your network supports HSCSD technology and that you have subscribed to this service. GSM high-speed data services may cost more than normal GSM data services. Contact your service provider or network operator for more information.

*Dial-up connection* – Select a dial-up connection from the list or create a new dial-up connection. Dial-up networking connects you to remote networks using your radio card as a modem or ISDN adapter.

To continue, click **Next**.

7 If you selected GPRS connection type, you have to specify the GPRS access point name. You obtain the access point name from your service provider or network operator. If you select **Use access point provided by network**, the network will connect you to an available GPRS access point automatically if this feature is supported by the network**.** Click **Next**.

8 The Completion page of the profile wizard informs you when the creation of a new profile is completed. Click **Finish**.

To take the new profile into use, you must first select it. See "Selecting a profile and connection type" on page 26 for more information.

## Editing profiles

1 On the **Profiles** page, select the **Modify** tab and then select a profile from the list. Click **Edit**.

2 Make the necessary changes and click **OK**. Profile-specific settings that can be modified are explained on pages 28 – 32.

The *Easy connection* profile and profiles that are saved to a SIM card cannot be edited.

**Note:** It is recommended that you do not edit a profile that is currently in use.

### WLAN properties: General tab

#### Use WLAN connection with this profile

Select this check box if you want to use the profile for accessing a WLAN.

#### Operating mode

Select one of the two available operating modes. In the infrastructure mode, computers can communicate with each other and with wired LAN stations through a WLAN access point. In the ad hoc mode, computers can send and receive data directly with each other. No access point is needed. See "Wireless Local Area Network (WLAN)" on page 10 for more information.

#### Network name

Network name is the name of the WLAN as defined by the system administrator. In the ad hoc operating mode, the users themselves name the WLAN. You can add a new network name to the list, edit an existing one, or delete a name. The network name can contain a maximum of 32 characters, and is case-sensitive by default.

#### Configure settings manually

There are a number of advanced WLAN settings (fragmentation threshold, listen interval, RTS threshold, security policy, etc.), which are configured automatically. Select this check box and click **Advanced** if you want to specify a new value manually.

**Caution:** Do not change the settings manually unless you are sure how each setting affects system performance. System performance may drop dramatically if automatic settings are not used.

By default, you are automatically allocated an available radio frequency channel without needing to specify one. You can, however, also select a particular channel yourself: select **Channel** from the list of properties, clear the **Automatic** check box and select a channel from the list. Make sure that the Nokia D211 and the WLAN access point are using the same channel.

**Warning:** Using the Nokia D211 in some countries or regions may be illegal. Consult local authorities on the regulations concerning the use of the Nokia D211.

**Warning:** This equipment operates at 2.4 - 2.4835 GHz. Note that in France the use of this equipment is only allowed at the frequency band of 2.445 - 2.4835 GHz (channels 10, 11, 12, and 13).

#### Use WEP security

Select this check box and click **WEP Keys** if you want to use Wired Equivalent Privacy (WEP) keys for protecting the information transmitted in WLAN.

See "WEP security" on page 42 for more information.

### WLAN properties: TCP/IP tab

Automated IP settings (DHCP) are enabled by default. When using DHCP (Dynamic Host Configuration Protocol), you do not have to modify your IP settings when you change your location.

If your local area network does not have a DHCP server, which would assign an IP address for the radio card automatically, you need to specify the IP addresses manually. The advanced TCP/IP settings can also be specified and configured manually. Ask your system administrator for the correct values.

### WLAN properties: SIM Services tab

#### Use SIM services with this profile

SIM services refers to a service that enables you to access the Internet via your service provider's or network operator's own public network. Your service provider may, for example, offer you the possibility of checking data from your company intranet, send and receive e-mail, and save documents. SIM services are usually available in public places such as hotels, airports, railway stations, business centres, and corporate buildings.

A SIM card is used as a means for user identification and billing. The SIM card is provided by the service provider or network operator.

**Note:** Before you can take advantage of SIM services, you must subscribe to these services from your service provider or network operator and obtain instructions for use.

**Service provider domain**

Type the domain name, as in *company.com*. You cannot connect to SIM services without specifying the domain name. You obtain the name from your service provider or network operator.

**Prompt when a SIM service is detected**

When you are connected to a WLAN and a SIM service is detected, you are asked whether you want to get connected. Once you have confirmed that you want to get connected, you will be authenticated to the service.

**Enable advanced connection controlling**

Your wireless station sends keep-alive signals on a periodic basis to an access controller in order to check the validity of the connection. If the wireless station receives no response, the connection is ended automatically. If you select this check box, your wireless station and the access controller can exchange additional signals, which enables a quicker detection of lost connection.

## GSM properties

**Note:** The use of GSM high-speed data services requires that your network supports the HSCSD technology and that you have subscribed to this service. GSM high-speed data services may cost more than normal GSM data services. Contact your service provider for more information.

Remember to select the Nokia D211 as the modem in each data and fax communications application. Note that the modem settings have to be separately changed in each application.

**Use GSM connection with this profile**

Select this check box if you want to use the profile for making data calls. When you have an active data call, you can access the Internet and send and receive e-mail, for example.

**GSM connection method**

Select the appropriate data call type. Select **Analog** if you are using a modem connection. If you are using a ISDN connection, select **ISDN V.110** or **ISDN V.120**, depending on which ISDN standard your service provider supports. Contact your service provider for more information on which remote ISDN connections are supported.

**GSM connection speed**

Select the data transmission speed. The number of timeslots used is indicated in parenthesis and the receiving transmission rate is mentioned first.

| | |
|---|---|
| **9.6 KBIT/S (1+1)** | The standard GSM data transmission rate. Select this option if the network you are using does not support HSCSD technology, or you have problems with making a data call. |

**14.4 KBIT/S (1+1)** Can be used if it is supported by the network. Do not use this option unless you are sure your network supports it.

**19.2 KBIT/S (2+2)** Doubles the standard 9.6 kbit/s GSM data transmission rate.

You can select this option if your network supports HSCSD technology and you have subscribed to GSM high-speed data services.

**28.8 KBIT/S (2+2)** Triples the 9.6 kbit/s transmission rate, or doubles the 14.4 kbit/s transmission rate. This option is ideal for working with e-mail.

You can select this option if your network supports HSCSD technology and you have subscribed to GSM high-speed data services.

**43.2 KBIT/S (3+1)** Triples the 14.4 kbit/s transmission rate. This option is ideal for downloading Web pages since the radio card receives data faster than it sends data.

You can select this option if your network supports HSCSD technology and you have subscribed to GSM high-speed data services.

HSCSD technology allows for the use of multiple timeslots during a data connection. Data transfer is symmetric when the sending and receiving transmission rates are the same, for example 2 timeslots + 2 timeslots. Symmetric data transfer is ideal for working with e-mail. Data transfer is asymmetric when the receiving transmission rate is higher than the sending transmission rate, for example 3 timeslots + 1 timeslot. This is ideal for downloading Web pages or files. Due to the nature of the network, data transmission rates may change during a data connection.

You can see the receiving and sending data transmission rates on the **Profiles** page under the **Operating information** area.

**Dial-up connection**

Select a dial-up connection from the list or create a new dial-up connection using the Windows dial-up wizard. Dial-up networking connects you to remote networks using your radio card as a modem or ISDN adapter.

## GPRS properties

**Use GPRS connection with this profile**

Select this check box if you want to use the profile for sending and receiving packet data.

**Use access point provided by network**

Select this if you want the network to select a GPRS access point for you. The network will connect you to an available GPRS access point automatically if this feature is supported by the network**.**

**Specify access point name manually**

If you obtain the GPRS access point name from your service provider or network operator, select this check box and type the name. An access point name is needed to establish a connection to a GPRS network.

## Removing profiles

On the **Profiles** page, select the **Modify** tab and then select a profile from the list. Click **Delete**.

The *Easy connection* profile cannot be deleted.

Profiles that are stored on a SIM card can only be removed by the system administrator.

## Importing and exporting profiles

On the **Profiles** page, select the **Modify** tab and then click **Import**. Select the folder from which you want to import a profile.

Similarly, you can save a profile in a folder. Click **Export**, and select the folder where you want to save the profile.

The *Easy connection* profile cannot be exported.

The system administrator can import profiles from and export profiles to a SIM card.

## Sending a profile as a text message

Make sure you have either a GSM or GPRS connection type selected. You cannot send or receive text messages when connected to a WLAN.

The *Easy connection* profile cannot be sent as a text message.

1. On the **Profiles** page, select the **Modify** tab and select the profile you want to send as a text message. Click **Send**.
2. The **Send Profile Via SMS** dialog box opens. Type the phone number of the recipient in the box or click **Select** and select it from the list of contacts stored on your SIM card.

   The dial-up connection that has been specified for the profile is sent automatically with the profile. Dial-up connections are needed when you want to make a data call (GSM connection) or send packet data (GPRS connection).
3. Click **Send** to send the text message.

**Note:** A profile may be made up of several text messages. Therefore, sending one profile may cost more than sending one text message.

# Settings page

On the Settings page you can set properties that are common for all profiles. These settings will remain unchanged even when you switch to using another profile or connection type. The GSM and WLAN settings apply to corresponding connection types only.

For the changes to take effect, click the **Apply** button. If you have made changes to the settings but have not yet clicked **Apply** and wish to restore the previous settings, click **Restore**.

## General settings (General tab)

### Manage TCP/IP properties together with profiles

By default, TCP/IP settings are managed as defined in each profile.

When the **Manage TCP/IP properties together with profiles** check box is cleared, profiles will be activated without TCP/IP settings. You can change the settings manually in the Control Panel of your computer.

### Do not establish network connection automatically

When this check box is selected, the **Select Connection** dialog box opens automatically when you start your computer or insert the radio card. In the dialog box you can select the connection type you want to use. The default connection type is **Off**. See Figure 5 on page 20.

If you clear this check box, every time you start your computer or insert the radio card, the connection that was last used is established automatically.

**Warning:** It is recommended that you have this check box selected. It can prevent you from accidentally establishing a network connection in areas where the use of wireless device is prohibited or when it may cause interference or danger.

### Alert when connection status changes

If this check box is selected, you hear an alert tone every time the status of the network connection changes.

### Open Monitor window automatically

When you insert the Nokia D211 into your computer, a small icon appears on the taskbar. By right-clicking this icon a shortcut menu opens, and you can access the Monitor window from there. If, however, you want the Monitor window to open automatically each time the card is inserted, select the **Open Monitor window automatically** option.

### Show icon on taskbar

If you select **Show icon on taskbar**, a small Nokia D211 icon will be displayed on the taskbar whenever the radio card is inserted. If you clear this check box, you can access the user interface of the Nokia D211 from the **Start** menu (Start, Programs, Nokia, Nokia D211).

**Exit program when card is removed**

If this check box is selected, you automatically exit the program when you remove the radio card from the wireless station.

## Basic GSM settings (GSM tab)

**Automatic network selection**

The GSM network to which your radio card is connected can be selected either manually or automatically.

If the **Automatic network selection** check box is selected, the radio card automatically selects one of the cellular networks available in your area. Outside of the home network service area, the radio card will select one of the networks that have a roaming agreement with the home network.

To select a network manually, clear the **Automatic network selection** check box and click **Search Networks**. Select a network from the list of available networks and click **OK**. If the radio card cannot reach the selected network or loses contact with it, you are prompted to select another network.

**Note:** If you select any other than your home network, this network must have a roaming agreement with your home network operator.

**Voice mailbox number**

Type your voice mailbox number in this box. You obtain this number from your service provider or network operator.

**Display cell info**

You can set the radio card to indicate when it is used in a cellular network based on Micro Cellular Network (MCN) technology.

**Display incoming calls**

When this check box is selected, you will get a notification when you have a call (data, fax) coming in.

## Advanced GSM settings (GSM tab)

A number of advanced GSM settings are *network services*: before you can benefit from these services, you must subscribe to them from your service provider or network operator and obtain instructions on their use.

To access these settings, select the **Settings** page and **GSM** tab. Click **Advanced Settings**.

**Call Divert**

Call diverting is a network service that allows you to direct incoming voice, data and fax calls to, for example, your voice mailbox number.

**To set the call diverts:**

1. On the **Settings** page, select the **GSM** tab and click **Advanced Settings**.
2. The **Advanced GSM Settings** dialog box opens. Select the **Call Divert** tab.
3. From the **Call type** list, select the call type you want to be diverted (voice, data, or fax).
4. Click **Check Status** to check whether the divert is activated or not. To set the divert setting on, click **Change**.
5. Select where you want to direct your incoming calls and type the phone number. Click **OK**.
6. Click **OK** to apply the settings and to close the dialog box.

To cancel all the active call diverts at once, click **Cancel All Diverts**.

To cancel only one call type divert, click **Change** and select **Deactivate** in the **Divert to** list.

**Note:** Make sure you have either the GSM or GPRS connection type selected when setting call diverts or checking the status. When connected to WLAN, you cannot configure these settings.

### Call Barring

Call barring is a network service that allows you to restrict incoming and outgoing calls so that calls cannot be received or made.

Activating call barring or changing the barring settings requires the barring password, which you obtain from your service provider or network operator. See "To change access codes" on page 38 for information on how to change the barring password.

**To set call barring options:**

1. On the **Settings** page, select the **GSM** tab and click **Advanced Settings**.
2. The **Advanced GSM Settings** dialog box opens. Select the **Call Barring** tab.
3. From the **Call type** list, select the call type you want to bar (voice, data, fax, or messages).
4. Click **Check Status** to ask the network for the call barring status. To set a barring setting on, click **Activate**.
5. Type your barring password and click **OK**.
6. Click **OK** to apply the settings and to close the dialog box.

To disable all call barrings, click **Cancel All Barrings**. To disable only one call type barring, click **Deactivate**.

**Note:** Make sure you have either the GSM or GPRS connection type selected when setting call barring options or checking the status. When connected to WLAN, you cannot configure these settings.

## Messages

With the Nokia D211 you can send and receive text and picture messages. See "Nokia Short Messaging" on page 46 for more information.

Any changes that you make to message settings affect the way in which your messages are sent and received. The availability of some of the settings depends on the service provider or network operator.

### SMS application in use

Select the Short Message Service (SMS) application you want to use for sending and receiving messages. The Nokia D211 includes the Nokia Short Messaging application.

### Message centre number

You need the message centre number to send messages. You receive the number from your service provider or network operator.

### Messages sent as

Text and picture messages are normally sent in text format, but it is possible to convert them into an alternative format (e-mail, fax, paging). To be able to receive a converted message, the recipient must have an appropriate device available, and the network must support this feature.

### Message validity

If the recipient of a message cannot be reached within the set message validity period, the message is removed from the message centre. If you select **Maximum**, the validity period is set to the maximum time allowed by the network.

### Reply via same message centre

Select this check box if you want to request the network to route the reply to your message via your own message centre.

### Delivery reports

Select this check box if you want to receive delivery reports on the messages you have sent.

### Send long messages

If the **Send long messages** check box is selected, messages longer than 160 characters are sent as concatenated messages. A concatenated message is received as one long message if the recipient's device supports this function. If this option is not selected, messages longer than 160 characters are sent as several normal text messages.

### Start SMS application when message is received

Select this check box if you want your SMS application, such as Nokia Short Messaging, to open automatically when you have received a message.

**Use GPRS as preferred SMS bearer**

You can select whether messages will be sent using GPRS packet data whenever possible.

**Sounds**

If you want to be notified of an incoming call or message by a tone, select the **Alert on incoming calls and messages** check box. Type the name of the wav file in the appropriate text box or click the **Browse** button and select the file you want.

By clicking the arrow button you can listen to an example of the selected wav file.

## WLAN settings (WLAN tab)

**Enable power saving**

Since a radio card has no direct wire connection of its own, it uses power from the host computer. The Nokia D211 is equipped with a power saving option that allows you to control the power consumption of your computer: you can prolong the life of the battery when needed.

If you select the **Enable power saving** check box, the radio card is fully powered up only when sending or receiving data. The card wakes up from the power saving mode at regular intervals to check if there is any data for it at a WLAN access point, and wakes up immediately when there is any outgoing data.

**Note:** The speed of communication decreases when the power saving option is used.

**Note:** The power saving option may not be compatible with WLAN access points that are not Wi-Fi (Wireless Fidelity) approved. Do not use power saving with such access points.

**Case-sensitive network names**

By default, the name of the WLAN is case-sensitive. If you do not want the network names to be case-sensitive, clear this check box.

**Renew DHCP automatically when needed**

If the network has a DHCP server and you want the system to allocate you IP addresses automatically, select the **Renew DHCP automatically when needed** check box. You can also renew your IP address whenever you want by clicking the **Renew DHCP Now** button.

## Security settings (Security tab)

You can set various access codes and protect your radio card and SIM card against unauthorised use.

Codes can only include digits from 0 to 9.

### PIN code request

The PIN (Personal Identification Number) code is usually supplied with the SIM card. It protects your SIM card against unauthorized use. If you set the **PIN code request** on, you are asked for the PIN code when you start the Nokia D211 program or insert the radio card, provided that you have inserted a SIM card into the radio card. Click the **Change** button to change the status.

**Note:** Some SIM cards do not allow turning off the PIN code request.

If you enter an incorrect PIN code three times in a row, the code is blocked and the SIM card cannot be used. To change a blocked PIN code, you need a PUK (PIN Unblocking Key) code. PUK is an 8-digit code supplied with the SIM card.

### Security code request

The security code protects your radio card against unauthorised use, and is supplied with the radio card. The preset code is 12345. Change the preset code and keep the new code secret and in a safe place separate from your radio card.

If you key in an incorrect security code five times in succession, the radio card will not accept the correct code for the next five minutes.

### To change access codes:

You can change the PIN code, security code, and barring password. Note that changing the barring password requires that the call barring service is activated for your SIM card.

1. On the **Settings** page, select the **Security** tab and click **Change Access Code**.
2. The **Change Access Code** dialog box opens. Select from the list the access code you want to change.
3. In the **Current code** box, type the code used presently.
4. In the **New code** box, type the new code.

   **Note:** The access codes may only include numbers from 0 to 9. The PIN code length must be at least four and no more than eight digits. The length of the security code is always five digits and the length of the barring password is four digits.
5. In the **Confirm new code** box, type the new code again.
6. Click **OK** to apply the changes and to close the dialog box.

# Tools page

On the Tools page you find, for example, detailed information on the network connections, you can run a series of fault diagnosis tests, and you can create personal WEP keys.

## Setting counters

On the **Counters** tab you can view detailed information on the different types of network connections made: number of connections, their duration, and amount of data transmitted. You can also see how many text and picture messages you have sent and received.

You can select a pre-defined time period for which information is shown, or set the start and end time yourself.

You can save the information to an html or a csv file by clicking the **Report** button. To clear all counters, click **Clear**.

**Note:** The actual invoice for calls and services from your service provider may vary, depending upon network features, rounding-off for billing, taxes and so forth.

## Viewing history information

On the **History** tab you can monitor various connection events. You can select the type of network and the level of detail to be reported.

You can save the information to an html or a csv file by clicking the **Report** button. Note that only information that is currently on display is saved to a file. The file can be useful if you need, for example, to contact technical support in problem situations.

To remove all history information, click **Clear**.

## Diagnosing faults

On the **Diagnostics** tab you can run a series of fault diagnosis tests to ensure that the radio card and the software are operating correctly. If you encounter problems in accessing a network, for example, the tests can help to identify the source of the problem.

The tests check that the software files have not been modified, the settings configured both on the **Profiles** and **Settings** pages are valid and do not conflict, and all drivers have been installed correctly. If the card does not pass the test, you are given advice on how to proceed.

To start the fault diagnosis test, click **Start**.

You can save the test result to a text file by clicking the **Report** button. The text file can be useful if you need, for example, to contact technical support in problem situations. Note that the content of this file is in English only.

## Managing personal WEP keys

Personal Wired Equivalent Privacy (WEP) keys are used for authenticating the user in a WLAN. Personal keys are usually created by the system administrator, who can store them on SIM cards and then distribute them to the users. Personal keys can also be saved to a file. Since personal keys are not network specific, they cannot be

saved together with profiles. They can, however, be saved to a file and used independently from profiles.

Personal WEP keys can be used only with the infrastructure operating mode, provided that the WLAN access point supports the keys. Ad hoc networks use shared WEP keys only.

See "Creating and editing personal WEP keys" on page 44 for more information.

# Administrator page

The Administrator page is meant for system administrators and is not installed as part of the normal installation procedure. On the Administrator page, the system administrator can view detailed information on the network connections and save important data on a SIM card. The administrator can create installation disks that include relevant network profiles and settings, and that then can be distributed to end users within a corporation, for example.

## Monitoring information on WLAN

On the **WLAN** tab you can view general information on various elements of a WLAN. Depending on the type of access point in use, the details displayed can include network name, data rate, channel, signal strength, and IP address.

Select from the following items:

*Access points* – In the infrastructure operating mode, shows which WLAN access points are currently in range and available.

*Networks* – Shows all the wireless local area networks that can be accessed with the radio card.

*Wireless stations* – In the ad hoc operating mode, the names of the other computers connected to the ad hoc network are displayed. Note that only the names of those computers that are using the Nokia D211 are shown.

To update the information on display, click **Refresh**.

## Viewing WLAN statistics

On the **Statistics** tab you can view detailed information on the connection between the Nokia D211and the WLAN access point to which you are linked. Both graphical and numeric statistics are given for the following properties: connection quality, received signal strength (RSSI), noise floor, signal to noise ratio (SNR), Tx retry rate, and data flow.

If you want to save the information to a text file, click **Start Logging**.

## Creating installation disks

The system administrator can create installation disks that contain all the software and necessary settings needed for accessing networks. The custom installation package fits on a compact disk but can also be saved on a hard disk.

The installation disk can be used for distributing profiles. All the desired settings and profiles can be copied to the installation disk, and the end user does not have to configure settings in order to be able to connect to a network.

**To generate an installation disk:**

1 On the **Administrator** page, select the **Installation Disk** tab. Select from the following options:

*Profiles available* **–** The list contains the names of all the profiles found in the system registry. Select the profiles that you want to include in the installation package.

*Allow editing of selected profiles* – The administrator can deny the editing of those profiles that are distributed with the installation disk. The user can create new profiles.

*Include smart card driver* – If you want other applications to be able to use the smart card reader of the Nokia D211, you need to install a PC/SC (Personal Computer Smart Card) compliant smart card driver. When this option is selected, the smart card reader can be used with other applications besides the Nokia D211, and with special types of smart cards.

*Include basic settings from Settings page* – Certain settings that have been configured on the **Settings** page can be included in the installation package. These include all settings configured on the General tab, GSM tab (no advanced settings such as call diverts), and WLAN tab. These settings are common for all profiles.

*Create one file installation package* – The installation package consists of only one executable file. It contains the necessary files and drivers, and is easier to distribute through e-mail, for example, than several separate files.

*Include Administrator page* – The entire **Administrator** page is included in the installation package.

2 To start creating an installation disk with the selected profiles and options, click **Create**.

3 Select the destination folder and click **OK**.

## Managing SIM card contents

The system administrator can store important information such as personal WEP keys and network profiles on a SIM card. The administrator can then give users SIM cards, which contain the necessary network settings and encryption keys for quick network access.

Transferring files from the computer to the SIM card and vice versa is done by using a drag-and-drop operation or by using the **Copy**, **Move**, and **Delete** buttons on the **SIM Card** tab.

For the changes to take effect, click **Apply**. Note that the button is inactive if there is not enough free space on the SIM card. If you have made changes but wish to restore the previous state, click **Restore**.

### Distributing profiles

The system administrator can create profiles and then distribute them to end users within a corporation. There are different ways for delivering profiles:

- Installation disks: the system administrator can create installation disks which contain all the software and necessary settings needed for accessing networks – including profiles. See "Creating installation disks" on page 41.
- Network: profiles can be saved to a folder on a network drive from which the end user can import the profile. See "Importing and exporting profiles" on page 32.
- SIM card: the system administrator can store profiles on SIM cards which can then be distributed to end users. See "Managing SIM card contents" above.
- Text messages: profiles can be distributed by sending a text message that includes a profile. See "Sending a profile as a text message" on page 32.

## WEP security

To increase the security of communication over the wireless local area network, the Nokia D211 offers the Wired Equivalent Privacy (WEP) security feature. WEP uses the RC4 algorithm with an up to 152-bit key. The algorithm provides for security via two methods: authentication and encryption. Authentication is the means by which one wireless station is verified to have authorisation to communicate with a second station in a given coverage area.

In the infrastructure operating mode, authentication is established between a WLAN access point and each wireless station. If a wireless station receives a packet that has not been scrambled with a correct key, the packet is discarded. Encrypted messages can be opened by other radio cards only if they all use the same encryption key. In the ad hoc operating mode, authentication is established between each wireless station.

The level of security is dependent on the length of the key: the more bits there are in the key, the longer it takes to decrypt the information sent and the higher the level of security.

WEP keys consist of a secret key and a 24-bit Initialization Vector. For example, the 128-bit WEP key has a 104-bit secret key that the user can set, and a 24-bit Initialization Vector that cannot be controlled by the user. Many manufacturers

refer to this 128-bit key as a 128-bit key, whereas some refer to it as a 104-bit key (104+24). Both keys offer the same level of encryption and are therefore interoperable.

**Tip:** Regardless of how the WEP keys have been named, all keys are compatible as long as their length is the same. For example, keys that are 40 bits long, always consist of 5 alphanumeric characters or 10 hexadecimal characters.

The Nokia D211 supports three key lengths: 40 (40+24), 128 (104+24), and 152 (128+24) bits. The 40-bit key is Wi-Fi (Wireless Fidelity) compatible.

There are two types of WEP keys: *shared keys* and *personal keys*.

### Shared WEP keys

Shared WEP keys are shared by all wireless stations using the network or subnetwork; only stations that have the correct key can receive and decrypt data. The same key is loaded into the WLAN access point. Shared keys are usually created by system administrators, who distribute them to users.

Shared keys are network-specific, and each network can have a maximum of four different shared keys. A WLAN access point only transmits data using the active key, but can receive data from wireless stations using any of the four shared WEP keys.

**Tip:** If you have a profile that includes more than one network, it is recommended that you use the same shared WEP keys with all these networks.

Because the shared WEP keys are network-specific and user-independent, they can be saved in a file together with profiles. Users can import from a file or a SIM card profiles that include shared keys and that have been created by their system administrator.

Shared keys can be used as the only form of WEP security or used together with a personal key.

### Personal WEP keys

Each wireless station can have an individual, personal WEP key. Personal keys are used for providing additional security for wireless connections. They are usually created by system administrators, who distribute them to users. A WLAN access point uses a different key for each wireless station.

There are two types of personal WEP keys, and the difference between the keys is the type of information that is used for identifying the user:

- *Station-specific* – Uses the MAC address of the radio card to identify the user.
- *User-specific* – Uses an identifier that the users can create themselves.

Unlike shared WEP keys, personal WEP keys are not network specific, and therefore cannot be saved together with profiles. They can, however, be saved to a file and used independently from profiles.

Personal WEP keys can be used only with the infrastructure operating mode. Ad hoc networks use shared WEP keys only.

**Note:** Not all WLAN access points support personal WEP keys. Ask your system administrator for more information.

## Creating and editing shared WEP keys

Shared WEP keys are usually created by a system administrator.

In the infrastructure operating mode, make sure that the same shared WEP key is configured to the WLAN access point; if the access point and radio card are using incompatible keys, they cannot communicate. Contact your system administrator for details.

1. On the **Profiles** page, select the **Modify** tab. Select from the list the profile with which you want to use a shared WEP key. Click **Edit**.
2. The **Edit Profile** dialog box opens. Select **WLAN** and **General** tab.
3. Select the **Use WEP security** check box and click **WEP Keys**.
4. Select from the four keys which one you want to modify. Click **Edit**.
5. Select the appropriate key length. Supported key lengths are 40, 128, and 152 bits. Remember that the more bits there are in the key, the higher the level of security.

   Type in the WEP key data in hexadecimal format. If you want to enter the WEP key in text form, type the text in the **In text form** box. You can copy and paste the text by using the CTRL+ C and CTRL+V key combinations respectively.
6. Click **OK** to save the shared WEP key.

To select which shared WEP key to use, select the key and click **Activate**.

To empty the contents of the key, click **Clear**.

## Creating and editing personal WEP keys

Personal WEP keys can be used only with the infrastructure operating mode. Ad hoc networks use shared WEP keys only.

Make sure that the same personal WEP key is configured to the WLAN access point; if the access point and radio card are using incompatible keys, they cannot communicate with each other. Contact your system administrator for details.

1. Go to the **Tools** page and select the **Personal Keys** tab. Click **New** to create a new key, or click **Edit** to modify an existing one.
2. Give the personal key a name. You can also include a further description of the key, such as the name of the network where the key is used.
3. Select the type of key you want to create: *station-specific* or *user-specific*. If you choose a station-specific key, the MAC address of the radio card is used for identifying the user. If you choose a user-specific key, you can choose the identifier yourself.

4 Select the appropriate key length. Supported key lengths are 40, 128, and 152 bits. Remember that the more bits there are in the key, the higher the level of security. Click **Generate**. The system generates your personal key.

   If you want to enter the WEP key in text form, type the text in the **In text form** box. You can copy and paste the text by using the CTRL+ C and CTRL+V key combinations respectively.

5 Click **OK** to save the WEP key.

## Importing and exporting personal WEP keys

Instead of creating a personal WEP key yourself, you can import from a folder a key created, for example, by your system administrator. You can export and save personal keys in folders. The system administrator can import personal WEP keys from a SIM card and export them to a SIM card.

1 On the **Tools** page, select the **Personal Keys** tab. Select the key you want to save to a file and click **Export**. To open a key from a file, click **Import**.

2 If you are exporting a personal WEP key, select the destination to which you want to save the key, and click **Save**. If you are importing a key, select the source from which you want to import the key and click **Open**.

## Selecting a personal WEP key

1 On the **Profiles** page, select the **Modify** tab. Select from the list the profile with which you want to use a personal WEP key. Click **Edit**.

2 The **Edit Profile** dialog box opens. Select **WLAN** and **General** tab.

3 Select the **Use WEP security** check box and click **WEP Keys**.

4 Select the **Use a personal WEP key** check box and select a key from the list.

5 Click **OK**.

# Nokia Short Messaging

The Nokia Short Messaging application enables you to manage text and picture messages in a similar way that you manage e-mail: you can send and receive messages, reply to a message, and forward a message.

The sending and receiving of messages requires that the Short Message Service (SMS) is available in the GSM network you are using and it is activated for your SIM card. Contact your service provider or network operator for details.

**Note:** You cannot send or receive messages when connected to a WLAN.

**Tip:** You can access the Nokia Short Messaging application by right-clicking the Nokia D211 icon on the taskbar and by selecting **SMS application** from the shortcut menu. If the taskbar icon is not visible, see page 33 for more information.

The Nokia Short Messaging application consists of the following pages:

- The **Inbox** page contains the received messages.

   Received text message. If the message icon is green, you have not read the message.

   Received picture message.

   Message that you have forwarded to someone.

   Message to which you have replied**.**

   You have both replied to the message and forwarded it to someone.

   Received business card.

- The **Outbox** page contains messages that are being sent or waiting to be sent. If you write and send a new message when the radio card is not inserted in the wireless station, you are connected to WLAN, or the GSM or GPRS connection is lost, the unsent message is stored in Outbox. Outbox may contain several unsent messages, which are then sent when the radio card is inserted, or a proper network connection is established.

  The messages can have the following statuses:

  *Sending* – The message is currently being sent.

  *Waiting* – The message is waiting for sending to become possible.

- The **Delivery reports** page contains information on the status of the messages you have sent. This is a network service to which you must subscribe before being able to use it.

Possible statuses for sent messages are:

*Delivered* – The message has been delivered to the recipient.

*Pending* – The message has not been delivered to the recipient yet. If the recipient of a message cannot be reached within the set message validity period, the message is removed from the message centre.

*Failed* – The message could not be delivered to the recipient. The recipient was not reached within the set message validity period and the message was removed from the message centre.

- The **Sent messages** page contains a copy of each sent message.
- The **Contacts** page enables you to manage contact information and business cards stored on the SIM card. You can create, edit, and delete contacts, and send business cards as text messages.

# Text messages

Before you can send any text messages, you need to save your message centre number. See "Configuring message settings" on page 48 for more information.

Make sure you have either a GSM or GPRS connection type selected. You cannot send or receive messages when connected to WLAN.

## Sending text messages

1 Click  on the toolbar, or click **New** on the **File** menu. The **Message Editor** dialog box opens.

2 In the **Message** field, type the message. The character counter above the field shows how many characters you have left and in how many messages the text will be sent.

**Note:** The standard length of a text message is 160 characters. Messages longer than this can be sent as several normal text messages or as one concatenated text message which is received as one long message if the recipient's device supports this function. You can select the **Send long messages** option on the **Settings** page of the Nokia D211. See "Configuring message settings" on page 48 for more information.

You can attach a picture to the text message. See "Sending picture messages" on page 49 for more information.

3 Click the **Add Recipients** button. Select the recipient from the list of contacts on the left and click the arrow button pointing to the right. If you do not have a contact card created for the recipient, type the phone number in the **Number** box and click the arrow button. Note that you can send the message to several recipients.

When you have selected the recipients, click **OK**.

4 To send the message, click  on the toolbar.

## Replying to text messages

1. On the **Inbox** page, select the message to which you want to reply.
2. Click  on the toolbar, or click **Reply** on the **File** menu. The **Message Editor** dialog box opens.
3. In the **Message** field, type your reply.
4. To send the message, click  on the toolbar.

## Forwarding text messages

1. On the **Inbox** page, select the message you want to forward. To forward a message you have sent to someone, go to the **Sent messages** page and select the message.
2. Click  on the toolbar, or click **Forward** on the **File** menu. The **Message Editor** dialog box opens.
3. Click the **Add Recipients** button. Select the recipient from the list of contacts on the left and click the arrow button pointing to the right. If you do not have a contact card created for the recipient, type the phone number in the **Number** box and click the arrow button. Note that you can send the message to several recipients.

   When you have selected the recipients, click **OK**.
4. To send the message, click  on the toolbar.

## Deleting text messages and delivery reports

**To delete a text message**

1. On the **Inbox** page, select the message you want to delete. To delete an unsent message, go to the **Outbox** page, and to delete a sent message, go to the **Sent messages** page.
2. Click  on the toolbar, or click **Delete** on the **File** menu. To delete all messages, click **Delete All** on the **File** menu.

**To delete delivery reports:**

1. On the **Delivery reports** page, select the delivery report you want to delete.
2. Click  on the toolbar, or click **Delete** on the **File** menu. By clicking the **Clear List** button you can delete the whole list of reports.

## Configuring message settings

1. On the **Tools** menu, click **Nokia D211**. The Manager window of the Nokia D211 opens.
2. Go to the **Settings** page and select the **GSM** tab. Click **Advanced Settings**.
3. The **Advanced GSM Settings** dialog box opens. Select the **Messages** tab.

4 Make the necessary changes. See "Messages" on page 36 for more information.

5 When you have configured the necessary settings, click **OK**.

# Picture messages

You can send and receive text messages that contain pictures. These messages are called picture messages.

Note that:

- This function can be used only if it is supported by your network operator or service provider. Only devices that offer picture message features can receive and display picture messages.
- Each picture message is made up of three text messages. Therefore, sending one picture message may cost more than sending one text message.
- Before you can send any picture messages, you need to save your message centre number. See "Configuring message settings" on page 48 for more information.
- Make sure you have either a GSM or GPRS connection type selected. You cannot send or receive messages when connected to WLAN.

## Sending picture messages

1 Click  on the toolbar, or click **New** on the **File** menu. The **Message Editor** dialog box opens.

2 To insert a picture, click  on the toolbar. The **Picture Library** dialog box opens.

3 Select the picture you want to attach to the message and click **OK**.
If there are no pictures available in the list, click  to draw a new picture or import a picture from a file by clicking  . See "Drawing and editing pictures" on page 50 and "Opening pictures from a file" on page 50 for more information.

4 In the **Message** field, type the message. The character counter above the field shows how many characters you have left and in how many messages the text will be sent.

5 Click the **Add Recipients** button. Select the recipient from the list of contacts on the left and click the arrow button pointing to the right. If you do not have a contact card created for the recipient, type the phone number in the **Number** box and click the arrow button. Note that you can send the message to several recipients.
When you have selected the recipients, click **OK**.

6 To send the message, click  on the toolbar.

### Drawing and editing pictures

1. On the **Tools** menu, click **Picture Library**.
2. To draw a new picture, click  on the toolbar. To edit a picture, select the picture and click  on the toolbar. The **Picture Editor** dialog box opens.
3. Move the mouse cursor to the desired position. The cursor appears as a pen on the drawing area. Press down the left mouse button. Move the mouse to draw. The left mouse button draws black colour, and the right mouse button draws white colour. To stop drawing, release the mouse button. Click **Save** to save the picture.
4. Click **Close** to close the **Picture Library** dialog box.

### Saving pictures to a file

1. On the **Tools** menu, click **Picture Library**.
2. Select the picture you want to save to a file. Click  on the toolbar.
3. In the **Export Picture** dialog box, type a name for the file. By default, pictures are saved as picture message files in gms format. Click **Save**.
4. Click **Close** to close the **Picture Library** dialog box.

If you have received a picture message, you can add the picture to the **Picture Library** by clicking **Save Picture** on the **File** menu.

### Opening pictures from a file

1. On the **Tools** menu, click **Picture Library**.
2. Click  on the toolbar.
3. In the **Import Picture** dialog box, select or type the name of the file you want to import to the Picture Library. Click **Open**.
4. Click **Close** to close the **Picture Library** dialog box.

### Deleting pictures

1. On the **Tools** menu, click **Picture Library**.
2. Select the picture you want to remove and click  on the toolbar.
3. Click **Close** to close the **Picture Library** dialog box.

## Contacts

Contacts are names and phone numbers that have been saved in the SIM card's memory.

### Creating and editing contacts

1. On the **Contacts** page, click **New** to create a new contact. To edit a contact, click **Edit**. The **Contact Information** dialog opens.
2. Type the name and phone number for the contact. Click **OK**.

If you receive a message from a phone number that is not stored on your SIM card, you can save the number to the list of contacts by clicking **Add To Contacts** on the **File** menu.

### Deleting contacts

1. On the **Contacts** page, select the contact you want to delete.
2. Click  on the toolbar, or click **Delete**.

### Sending business cards

When you send or receive a person's contact information, the term *business card* is used. A business card is a contact card in a format suitable for transmission, such as vCard format.

1. On the **Contacts** page, select the contact you want to send as a business card. Click **Send**.
2. The **Send Business Card** dialog box opens. Type the phone number of the recipient, or click **Select** to select the recipient from the list of contacts.
3. Click **Send** to send the business card.

Make sure you have either a GSM or GPRS connection type selected. You cannot send business cards when connected to WLAN.

## Chat

The chat function allows you to have a conversation with another person using text messages. The other party must have either the Nokia D211 or a mobile phone with the SMS capability.

Make sure you have either a GSM or GPRS connection type selected. You cannot send or receive messages when connected to WLAN.

### Configuring chat settings

1. On the **Tools** menu, click **Options**.
2. You can configure the following chat settings:

   You can specify the number of hours for which the chat messages are shown in the **Chat** window during the conversation.

   *Chat name* – Nickname that is displayed with your chat messages.

*Always show chat window on top* – Select this if you want the chat window to remain visible even when you have other applications open.

3 Click **OK** to apply the settings.

## Starting a chat session

1 On the **Contacts** page, select the contact you want to start a chat session with. If you do not have a contact card created for the other party, you have to create one first. See "Creating and editing contacts" on page 51 for more information.

2 Click  on the toolbar, or click **Chat** on the **Tools** menu.

3 The **Chat** dialog box opens. Write the message in the **Message** field and click  .

4 When you receive a reply from the other party, the reply message is shown automatically in the **Chat** window. It is not stored in **Inbox**.

You can save the chat conversation to a text file. Click  on the toolbar to save the file.

You can also attach pictures to your chat messages. See "Picture messages" on page 49 for more information on how to handle pictures in messages.

# Troubleshooting

## Installation

**The installation program is interrupted.**

Make sure you have enough power on your computer.

Make sure you have enough free disk space on your computer.

Make sure you have enough resources available in the system.

Check that you have closed all Windows programs before starting the installation, and that you have not inserted the radio card into your computer until prompted to do so by the installation program.

**The CD-ROM drive cannot be opened during installation.**

Some CD-ROM drives cannot be opened when installing software from them. If you think that you might need the operating system files during the installation, it is advisable that you first copy the Nokia D211 installation files to the hard drive of your compatible PC and install the program from there.

**The radio card cannot be inserted into the PC card slot.**

Check that the radio card is turned the right side up.

Check the PC card slot for any problems.

**After inserting the radio card, it takes a while before the computer responds.**

There might be a pause while the driver initialises the radio card. This is normal. Please wait until the next message box appears and tells you what to do. This should not take more than a few minutes.

**Installation to a network drive fails.**

You cannot install the Nokia D211 software onto a network drive. The software must always be installed on a local hard drive.

**I do not have a CD-ROM drive on my computer.**

Using another computer, copy the installation program on floppy disks. On the CD-ROM there is a folder at English\Setup. Copy the contents of this folder on floppy disks. It is recommended that you then copy the contents of the disks to the hard drive of your compatible PC before installing. If installed directly from the floppy disks, the system will ask you to change the disk several times.

# Network

**The radio card seems to be working, but the network connection does not work.**

Run the fault diagnosis tests on the **Tools** page. If all tests are passed successfully, make sure that the network settings are correct. Ask your system administrator for advice.

**In Windows 98/Me, Network Neighborhood does not show my computer name at all. Other computers cannot see my computer name in Network Neighborhood either.**

Open the Network dialog box (click **Start**, **Settings**, **Control Panel**, **Network**) and click the **File and Print Sharing** button. Make sure that the **I want to be able to give others access to my files** check box is selected. Other users should now be able to see your computer in Network Neighborhood. If you share folders on your computer, other users can see them too.

**I cannot access the Internet.**

When using a WLAN connection type, check that you use a routing protocol such as TCP/IP.

Make sure that the proxy settings in the Web browser are correct.

Also make sure that there is a connection from your network to the Internet.

# Resources

**The radio card does not work and this is probably caused by another installed device.**

Check that the radio card is not trying to use an I/O, IRQ, or memory address used by another device in your computer. To check the status of resources in Windows 98/Me, click **Start** - **Settings** - **Control Panel** - **System** - **Device Manager** - **Network Adapters**. If there is a conflict, a yellow symbol is shown in front of the name of the device.

# Hardware

**I am not sure if the radio card is working.**

Check in the Monitor window that the radio card is working. You can also check the Status page for the status of the connection.

**There are no resource conflicts, but the radio card still does not work.**

Check that the operating environment does not cause damage or interference to the radio card. Detailed information on the operating environment can be found in the chapter "About data transmission" on page 8.

Check that the radio card is properly inserted.

Run fault diagnosis tests on the **Tools** page.

You can try to determine whether the problem lies with the computer or the radio card by using the card in another available PC card slot, by installing the card in another computer, or by using another card in the first computer.

**The radio card does not work in another PC card slot, but works in another computer.**

Try to insert another PC card in the slot to determine if there is a compatibility problem between the Nokia D211 and the PC card slot, or if there is a general fault with the slot.

**The SIM card is not detected by the radio card.**

Make sure that you are using a correct type of SIM card. The radio card does not support 5 Volt SIM cards.

Make sure that the SIM card is inserted correctly: the connectors on the SIM card and the radio card must meet.

**Note:** You can find the latest troubleshooting information in the readme.txt file on the Nokia D211 CD-ROM.

**Tip:** On the **Tools** page you can run fault diagnosis tests and save the test results to a text file. The report can be useful if you need, for example, to contact technical support in problem situations.

# Care and maintenance

Your radio card is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the radio card and all its parts and accessories out of small children's reach.
- Keep the radio card dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the radio card in dusty, dirty areas.
- Do not store the radio card in hot areas. High temperatures can shorten the life of electronic devices, and warp or melt certain plastics.
- Do not store the radio card in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not attempt to open the radio card. Non-expert handling may damage it.
- Do not drop, knock, or shake the radio card. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the radio card.
- Do not paint the radio card. Paint can prevent proper operation.
- Use only the supplied antenna. Unauthorised antennas, modifications, or attachments could damage the radio card and may violate regulations governing radio devices.

All of the above suggestions apply equally to your radio card or any accessory. If any of them is not working properly, take it to your nearest qualified service facility. The personnel there will assist you and, if necessary, arrange for service.

# Important safety information

## Traffic safety

Do not use the radio card while driving a vehicle. Do not place the radio card on the passenger seat or where it can break loose in a collision or sudden stop.

**Remember: road safety always comes first!**

## Operating environment

Remember to follow any special regulations in force in any area and always power off your radio card whenever it is forbidden to use it, or when it may cause interference or danger. Note that the radio card may cause similar interference as any cellular terminal (e.g. mobile phone) and must not be used in areas where the use of any such device is prohibited.

Use the radio card in its normal operating positions.

## Electronic devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your radio card.

### Pacemakers

Pacemaker manufacturers recommend that a minimum separation of 20 cm (6 inches) be maintained between a radio card and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers:

- Should always keep the radio card more than 20 cm (6 inches) from their pacemaker when the radio card is powered on.
- Should not carry the radio card in a breast pocket.
- If you have any reason to suspect that interference is taking place, power off your radio card immediately.

### Hearing aids

Some digital radio cards may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider.

### Other medical devices

Operation of any radio transmitting equipment, including radio cards, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if

they are adequately shielded from external RF energy or if you have any questions. Power off your radio card in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

**Vehicles**

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (e.g. electronic fuel injection systems, electronic anti-skid (anti-lock) braking systems, electronic speed control systems, air-bag systems). Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

**Posted facilities**

Power off your radio card in any facility where posted notices so require.

## Potentially explosive atmospheres

Power off your radio card when located in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Users are advised to power off the radio card when at a refuelling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants, or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. These include below deck on boats; chemical transfer or storage facilities; vehicles using liquified petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

## Vehicles

Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the radio card, its parts or accessories.

For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects in the area over the air bag or in the air bag deployment area. If the radio card is improperly placed and the air bag inflates, serious injury could result.

Using your radio card while in the air is prohibited. Remove your radio card from the PC card slot before boarding an aircraft. The use of radio cards in an aircraft may be dangerous to the operation of the aircraft, disrupt the wireless telephone network and may be illegal.

Failure to observe these instructions may lead to suspension or denial of telephone services to the offender, or legal action or both.

## Antenna

This product model has been tested and meets radio frequency exposure guidelines when used in a position that keeps the antenna at least 2.0 cm from your body when the product is switched on.

As with any other radio transmitting device, do not touch the antenna unnecessarily when the product is on. Contact with the antenna affects connection quality and may cause the radio card to operate at a higher power level than otherwise needed.

# Glossary

**Access controller**

Physical device that manages permission and restrictions for logging onto a computer or network.

**Ad hoc**

One of the two WLAN operating modes that can be selected when using the Nokia D211. With this configuration option, users can set up a wireless local area network where wireless stations can send and receive data directly with each other without WLAN access points. This type of network is sometimes called a peer-to-peer network.

**Barring password**

The barring password is a 4-digit code needed to change call barrings. The password is not located in your radio card or SIM card, but in the network. You obtain the password from your service provider or network operator when you subscribe to the call barring service.

**Dual-band functionality**

Dual-band functionality provides seamless roaming between networks during a call within the same network operator. In practice, this means that you are less likely to get "Network busy" messages. When you are abroad, dual-band functionality gives more roaming possibilities, depending on your network operator's roaming agreement.

**GPRS**

General Packet Radio Service. GPRS is a technology that enables sending and receiving data over a mobile network. GPRS as such is a data bearer that enables wireless access to data networks like the Internet. The applications that use GPRS are SMS messaging and the GPRS dial-up (for example, Internet and e-mail).

**GPRS access point**

Interface between a GPRS network and external packet data networks, such as the Internet.

**GSM**

GSM (Global System for Mobile Communications) is a digital telecommunications system used widely in Europe, Asia and the Pacific.

**Home network**

Your home network is the network run by the operator that issued your SIM card.

**HSCSD**

High Speed Circuit Switched Data. HSCSD technology enables a data transmission speed of up to 43.2 kilobits per second. HSCSD technology is based on the use of multiple timeslots at the same time. The transmission speed in a single timeslot is 9.6 or 14.4 kilobits per second.

**Infrastructure**

One of the two WLAN operating modes that can be selected when using the Nokia D211. With this configuration option users can set up a wireless local area network where wireless stations communicate with wired and wireless stations through a WLAN access point.

**Network operator**

A network operator maintains a cellular telecommunications network in a specific area, often in a particular country. Several network operators may have overlapping networks.

Network operators offer a variety of network services, including GSM data services such as the Short Message Service (SMS), both to individual subscribers and service providers. Not all network operators provide exactly the same services.

**Network services**

Special services provided by network operators and service providers. These services must be subscribed to, and typically include the Short Message Service (SMS), data service and fax service.

**Picture message**

Text message that contains pictures. Each picture message is made up of several text messages. This function can be used only if it is supported by your network operator or service provider. Only devices that offer the picture message feature can receive and display pictures.

**PIN code**

Personal Identification Number code. PIN code (4 to 8 digits) is an access code for protecting a SIM card against unauthorised use.

**Profile**

A profile is a group of network-specific and Windows networking settings. Profiles enable easy transfer from one network to another without having to remember all the different settings.

**PUK code**

PIN Unblocking Key code. PUK is a 8-digit code supplied with the SIM card. The code is needed when you want to change a blocked PIN code. You cannot

change the PUK code. If you lose the code, contact your service provider or network operator.

**Security code**

The security code is supplied with the radio card. It protects your radio card against unauthorised use. Keep the code secret and in a safe place, separate from the radio card. If you key in an incorrect security code five times in succession, the radio card will not accept the correct code for the next five minutes.

**Service provider**

A company that offers telecommunications services, such as network services. A service provider may be a network operator or a separate company.

**Short message**

See "Text message".

**SIM card**

Subscriber Identity Module card. A small plastic card with an embedded integrated circuit. The SIM card contains all the information the cellular network needs to identify the network user. The SIM card also contains security-related information.

**SMS**

Short Message Service. SMS is a network service provided by network operators or service providers. It enables sending and receiving short text messages over the digital cellular network. The standard length of a text message is 160 characters.

**Text message**

Short message that is sent over the digital cellular network. The standard length of a text message is 160 characters.

**WEP**

Wired Equivalent Privacy. A security feature using the RC4 algorithm that performs wireless data encryption. The WEP algorithm uses up to 152-bit keys.

**Wireless station**

Any computing device with a PC card slot, into which the radio card can be inserted in order to send and receive data.

**WLAN**

Wireless Local Area Network. A local area network in which radio links are used to connect devices instead of physical cables.

**WLAN access point**

Physical device that connects wired and wireless networks together.

# Index

# LIMITED MANUFACTURER'S WARRANTY

## PART OF EUROPE & AFRICA REGION

This limited warranty shall apply in part of Nokia Mobile Phones' Europe & Africa Region unless a local warranty exists. Nokia Corporation, Nokia Mobile Phones ("Nokia") warrants that this NOKIA product ("Product") is at the time of its original purchase free of defects in materials, design and workmanship subject to the following terms and conditions:

1 This limited warranty is given to the end-purchaser of the Product ("Customer"). It shall neither exclude nor limit i) any mandatory statutory rights of the Customer or ii) any of the Customer's rights against the seller/dealer of the Product.

2 The warranty period is twelve (12) months from the date on which the first Customer purchased the Product. In case of a subsequent purchase or other change of owner/user, such warranty period shall continue for the remaining part of the twelve (12) month period and otherwise remain unaffected. This limited warranty is only valid and enforceable in the following countries: any member state of the European Union, Iceland, Norway, and Switzerland.

3 During the warranty period Nokia or its authorized service company will repair or replace, at Nokia's sole discretion, a defective Product. Nokia will return the repaired Product or another Product to the Customer in good working condition. All parts or other equipment for which replacements have been provided shall become the property of Nokia.

4 A repaired or replaced Product will not be given a prolonged or renewed warranty period.

5 This limited warranty will not cover painted covers or other similar personalized parts. In all cases that require unlocking or locking of an operator SIM-lock, Nokia will first direct the Customer to such operator for unlocking or locking of the operator SIM-lock before repairing or replacing the Product.

6 This limited warranty shall not apply to deteriorations due to normal wear and tear. This limited warranty shall further not apply if:

(i) the defect was caused by the fact that the Product has been subjected to: use in contradiction with the owner's/user manual, rough handling, exposure to moisture, dampness or extreme thermal or environmental conditions or rapid changes in such conditions, corrosion, oxidation, unauthorized modifications or connections, unauthorized opening or repair, repair by use of unauthorized spare parts, misuse, improper installation, accident, forces of nature, spillage of food or liquid, influence from chemical products or other acts beyond the reasonable control of Nokia (including but not limited to deficiencies in consumable parts and breakage or damage to antennas) unless the defect was caused directly by defects in materials, design or workmanship;

(ii) Nokia or its authorized service company was not notified by the Customer of the defect within thirty (30) days after the appearance of the defect within the warranty period;

(iii) the Product was not returned to Nokia or its authorized service company within thirty (30) days after the appearance of the defect within the warranty period;

(iv) the Product serial number, the accessory date code or the IMEI number has been removed, erased, defaced, altered or is illegible;

(v) the defect was caused by a defective function of the cellular or wireless LAN network;

(vi) the defect was caused by the fact that the Product was used with or connected to an accessory not manufactured and supplied by Nokia or used in other than its intended use;

(vii) the Product software needs to be upgraded due to changes in cellular or wireless LAN network parameters;

(viii) the defect was caused by a defective function of the computer to which the Product was connected;

(ix) the changes in the computer (including but not limited to updates or other changes in its operating system) to which the Product was connected cause malfunction of the Product.

7 To claim this limited warranty the Customer shall present either i) a legible and non-modified original warranty card which clearly indicates the name and address of the seller, the date and place of purchase, the product type and the IMEI or other serial number or alternatively ii) a legible and non-modified original purchase receipt which contains the same information, if such purchase receipt is presented to the seller/dealer of the Product.

8 This limited warranty is the Customer's sole and exclusive remedy against Nokia and Nokia's sole and exclusive liability against the Customer for defects or malfunctions of the Product. This limited warranty replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise. Nokia is in no event liable for any incidental, consequential or indirect damage, costs or expenses. Neither is Nokia in any event liable for any direct damage, costs or expenses, if the Customer is a legal person.

9 Any change or amendment to this limited warranty requires Nokia's prior written consent.

FILL IN WITH BLOCK LETTERS

**Purchaser's Name:** _____

**Address:** _____

_____

**Country:** _____

**Phone:** _____

**Date of Purchase (dd/mm/yy):** __ __/ __ __/ __ __

**Product Type (on type label):** __ __ __- __

**Product Code (on type label):** __ __ __ __ __ __ __

**Product Serial No (on type label):**
__ __ __ __ __ __/ __ __/ __ __ __ __ __ __/ __

**Place of Purchase:** _____

**Store Name:** _____

**Store Address:** _____

_____