Option

Quick Start Guide

About this document

Overview and Purpose

This document describes how to use the hardware, software and gives some installation instructions.

Confidentiality

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Version History

Date	Version	Author(s)	Revision(s)	Remarks
May 31, 2006	V01 – D1	R. Biesemans		Initial version
August 21, 2006	V02	J. Boeckx		Adapted to use for certification
December 1,2006	V03	J. Elebaut		Added some information

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1   DRIVER INSTALLATION

Note: depending on the actual product you are trying to install the names may differ in some parts !

Following drivers are available for WinXP, Win2K and Win XP x64 edition:
- Multifunction Adapter : Globetrotter Module 3G+ Bus
- Modem : Globetrotter Module 3G+ Modem
- Network : Globetrotter Module 3G+ Network Card
- Ports : Globetrotter Module 3G+ Application Port
- Ports : Globetrotter Module 3G+ Diagnostics Port
- Smart Card : Globetrotter Module 3G+ Smart Card Interface (if applicable)

Installation procedure:

1. If you have not already done so, install and connect the cradle. The unit shall be connected correctly only if the "Welcome to the Found New Hardware Wizard" appears.

2. By connecting the unit to the PC, Windows will detect new hardware and will ask to install the drivers. Insert the CD and install the drivers following the windows driver installation wizard. As there are 4 drivers the "Found new hardware" wizards needs to run 4 times. Further installation instructions will be given for Windows XP.

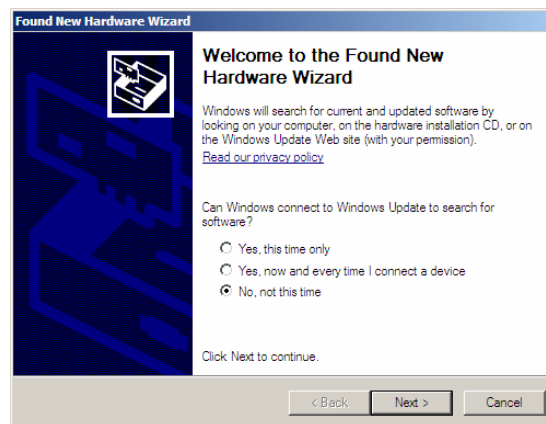3. For Windows XP: on the first dialog ("connect to Windows Update ?") select No, not this time:

Figure 1: Hardware wizard

4. On the next dialog, select "Install software automatically":

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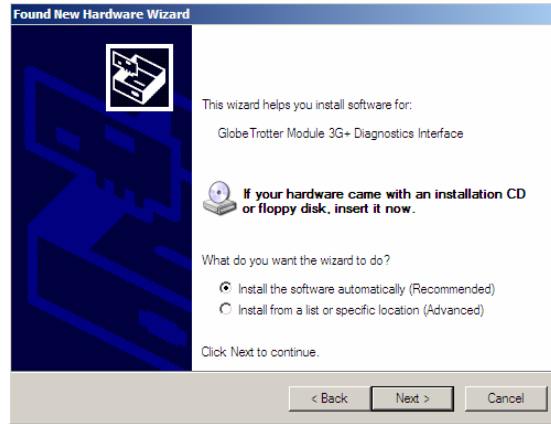
Figure 2: automatic search for driver

If Windows does not automatically find the correct driver, you should select Install from a list or specific location and browse to the folder "DriverXP_2000" on the CD

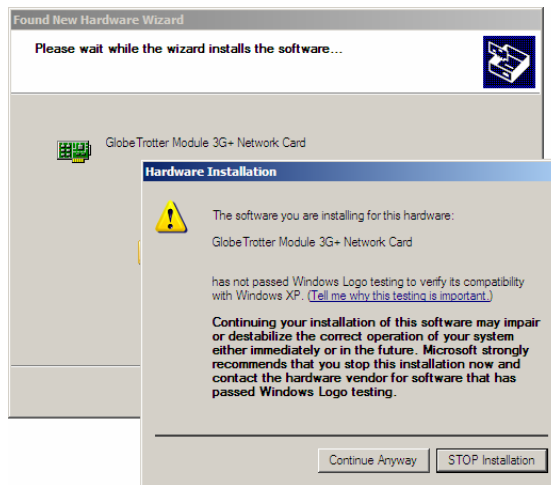5. For the driver signing warning, click "Continue Anyway":

Figure 3: Not signed driver warning

6. In total, five or six devices will be detected:
    - Globetrotter Module 3G+ Bus
    - Globetrotter Module 3G+ Modem
    - Globetrotter Module 3G+ Network Card
    - Globetrotter Module 3G+ Application Interface
    - Globetrotter Module 3G+ Diagnostics Interface
    - Globetrotter Module 3G+ Smart Card Interface (if available)

    Repeat steps 3 through 5 for the 3 remaining devices to complete the installation.

On successful installation of the drivers, the four GT devices should show up in the device manager:

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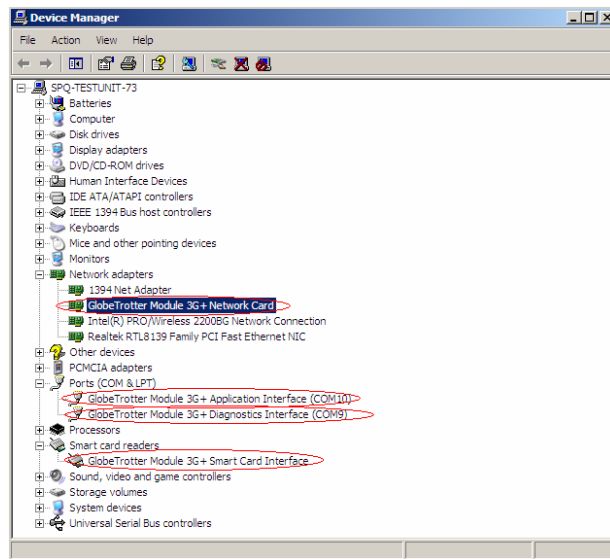
Figure 4: Device manager

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2 HYPERTERMINAL

This section describes briefly how to setup HyperTerminal to enter AT commands.

1. Go to device manager, and check which port is the Application port.
   On my PC, the application port is COM6
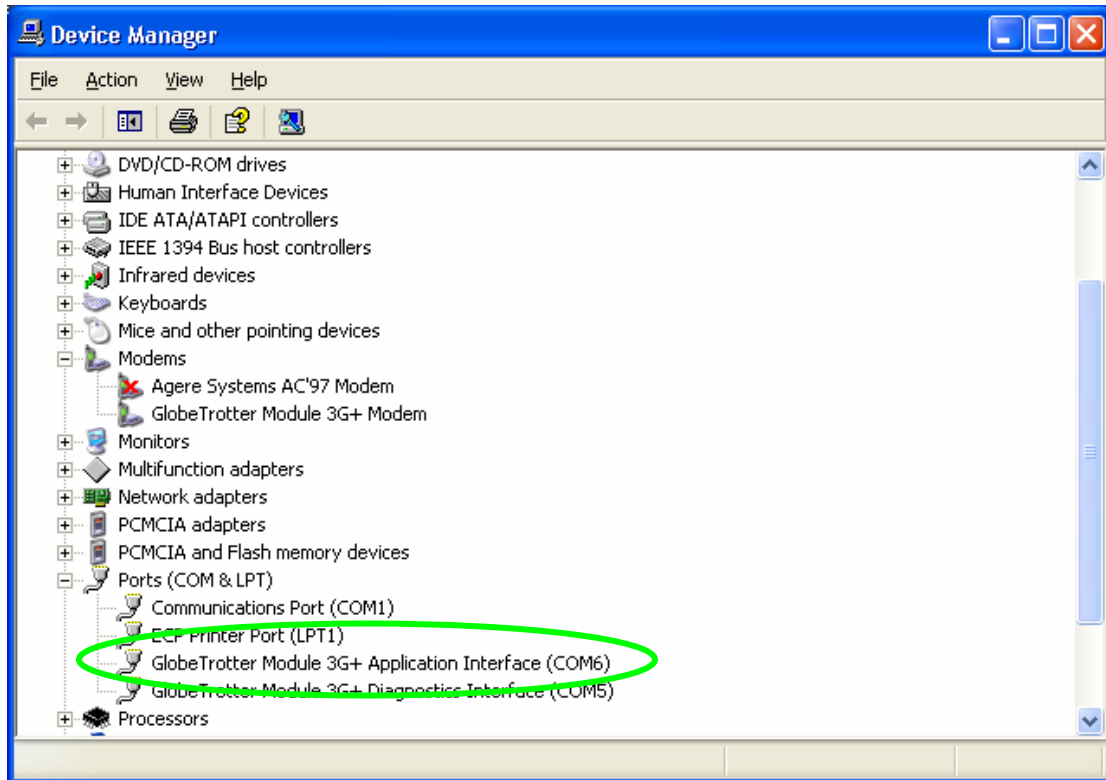
Figure 5: Device manager

2. Open HyperTerminal
   Therefore you can follow the following path:
   Start → Programs → accessories → Communication → HyperTerminal

3. Enter a name for your HyperTerminal Connection and press OK.

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Figure 6: Connection Description

4. In the next window, change the connecting using field to the Application Port (COM6 for my PC). Click on OK.

Figure 7: Connection port

5. Now the next window will appear. Modify the Bit per second field to 115200 and Click the OK button.
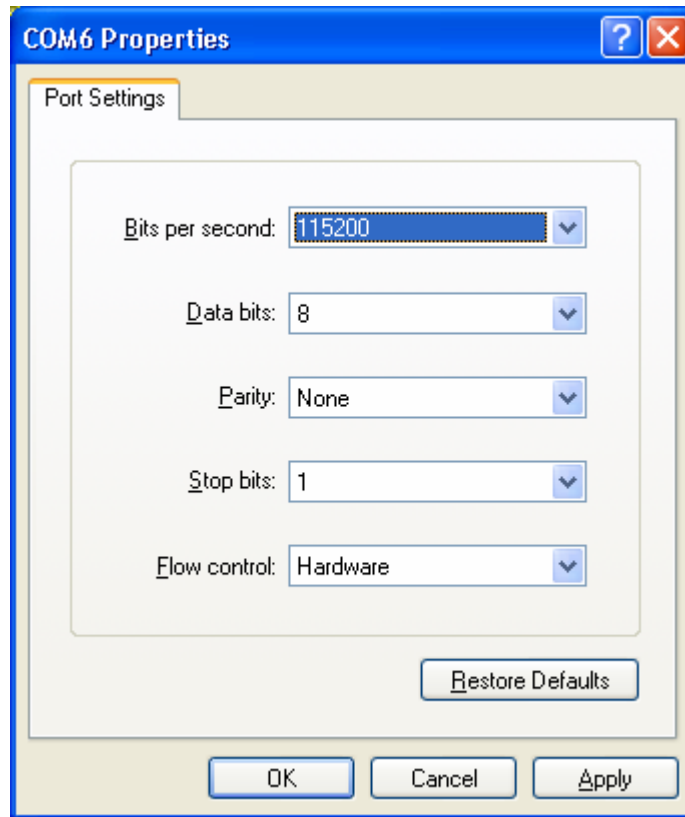
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Figure 8: Connection Properties

Now HyperTerminal is configured. You are now ready to check some basic settings.

3 SET UP A DATA CALL

Besides using dashboard applications, it is also possible to set up a data call using windows dial up networking. This section explains how to set up a dial up connection.

1. Go to Start → Control Panel → Network Connections and click on the icon "New Connection Wizard".

   The following screen will appear:

Figure 9: Network connections

2. Click the 'next' button and Figure 10 will appear.
   Select "connect to the internet", and click next. Now Figure 11 will appear.

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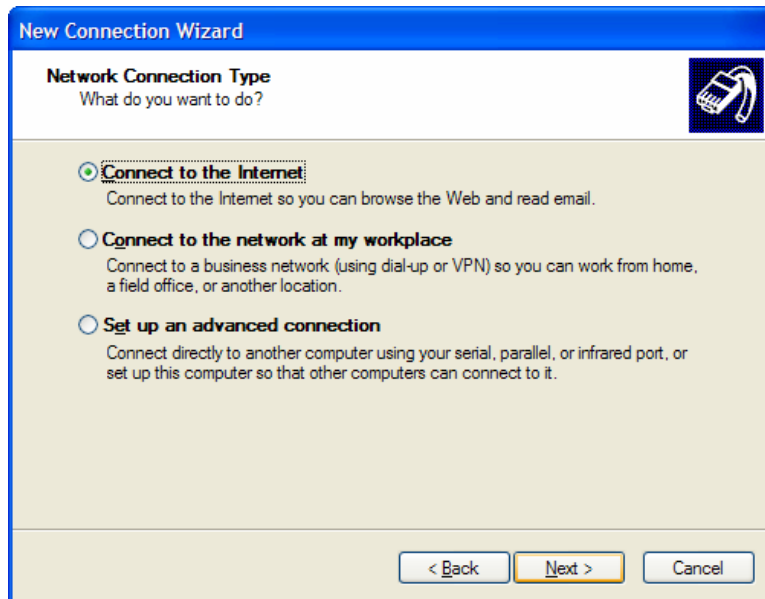
Figure 10: New network connection
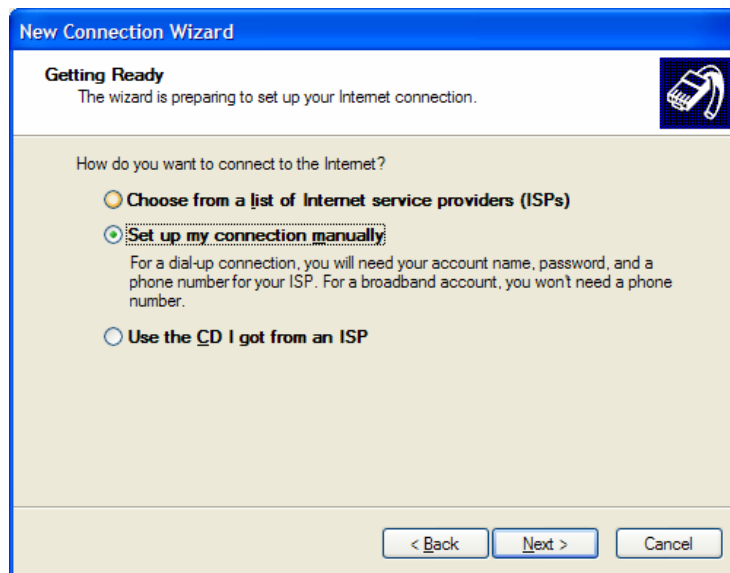
Figure 11: Manual connection setup

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3. Select "Set up the connection manually", and click the NEXT button.
   Choose the Connect using a dial-up modem option, and click the NEXT button.
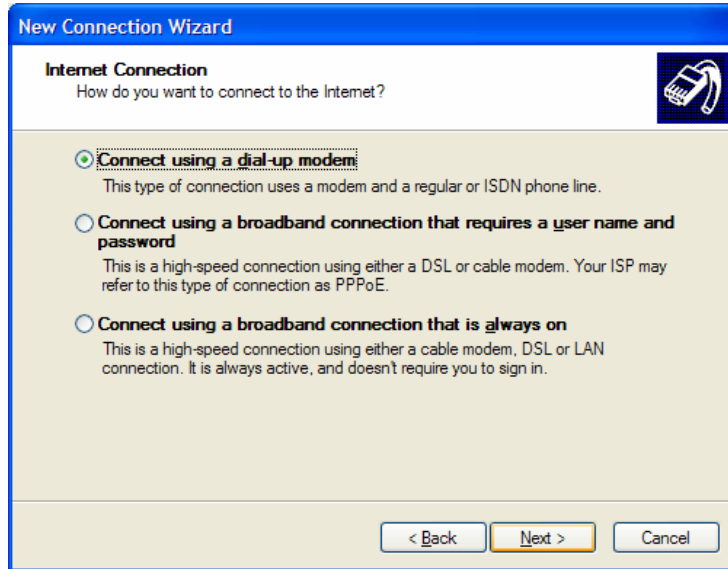
Figure 12: Connection with dial-up modem

4. Select the correct modem (Modem - Globetrotter 3G+ modem interface), and click the 'next' button.
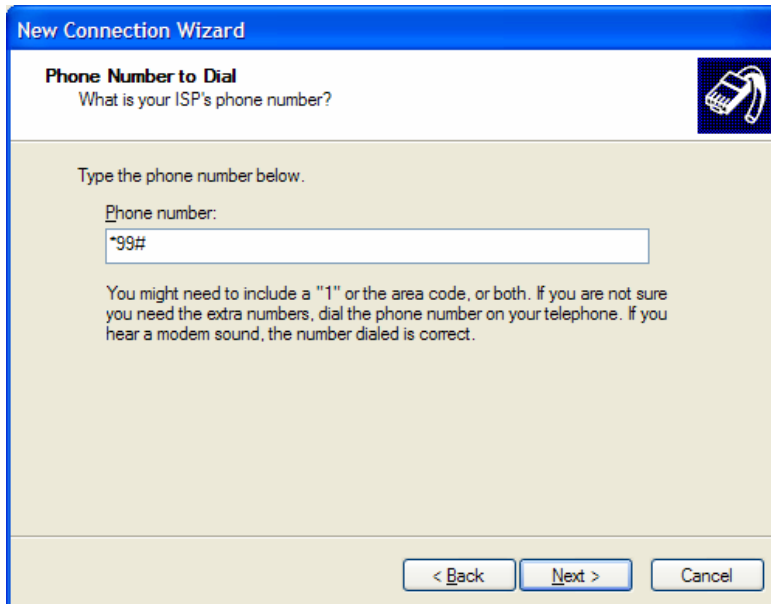

Figure 13: Select modem

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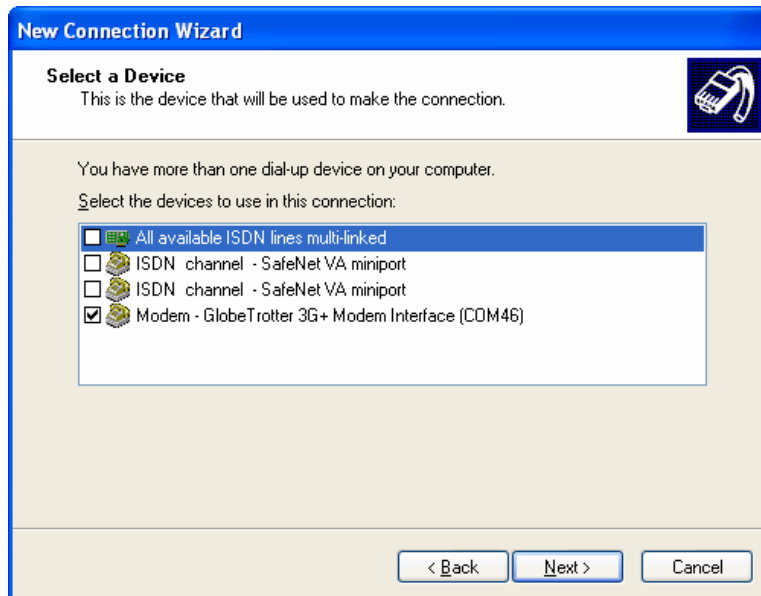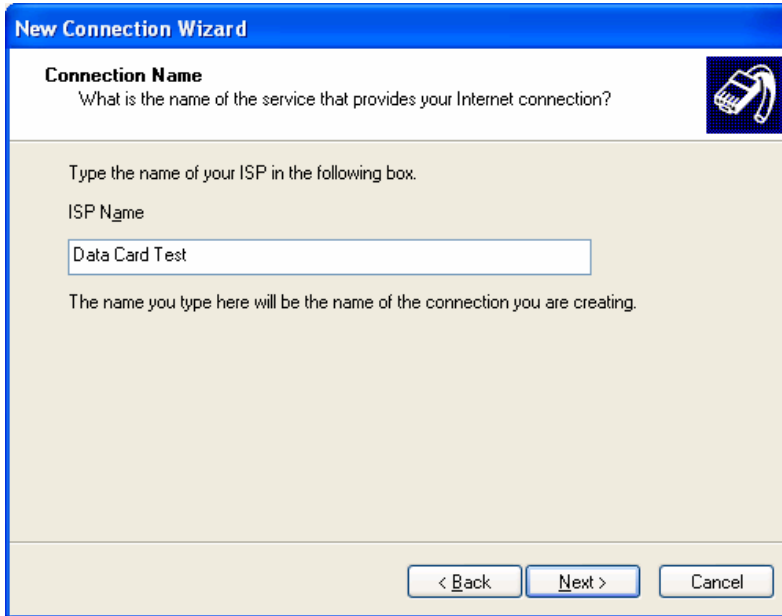
5. Type a name for the connection, which you will select the next time you need this dial-up connection, and click the 'next' button.

Figure 14: Connection name

6. Type in the Phone number to dial, which is *99#, and click the 'next' button.

Figure 15: Number to dial

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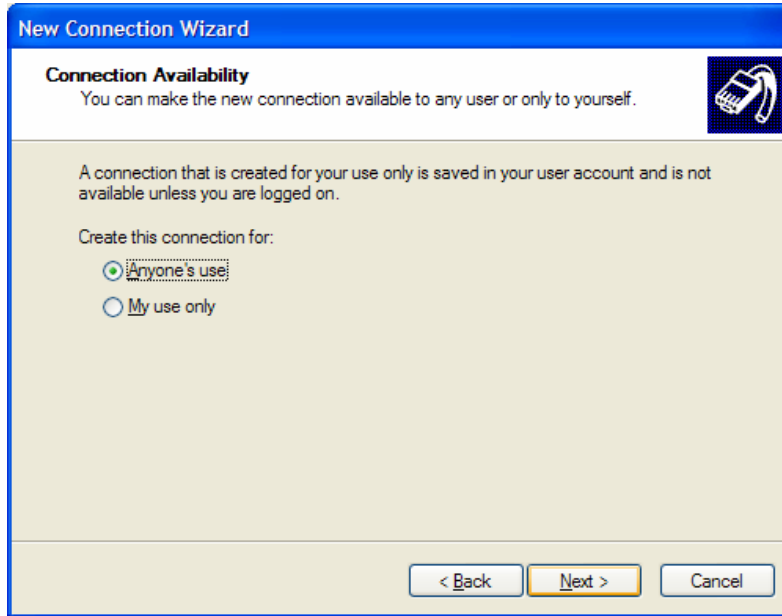7. Choose the option you like, and then click the 'next' button.

Figure 16: Connection availability

8. If your service provider requests to enter username and password for setting up a PS data call connection, please enter it using the screen below.

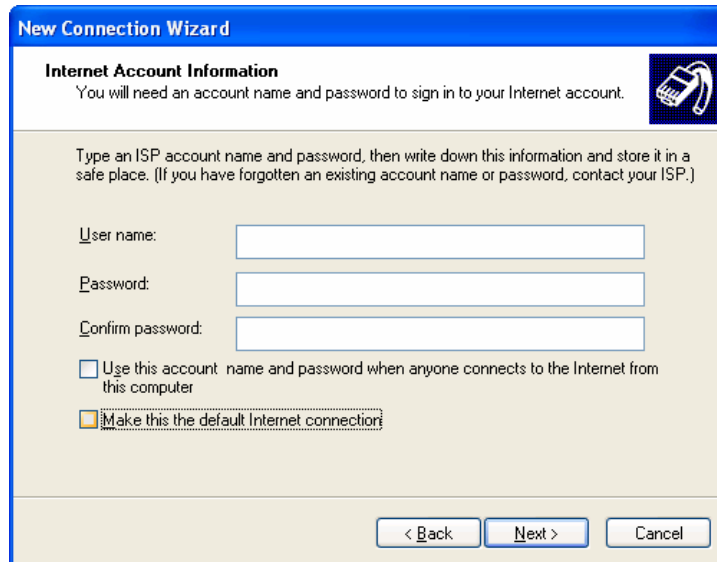**Figure 17: Internet Account Information**

9. The connection is set up and ready to used. Click the 'finish' button to close the wizard window.

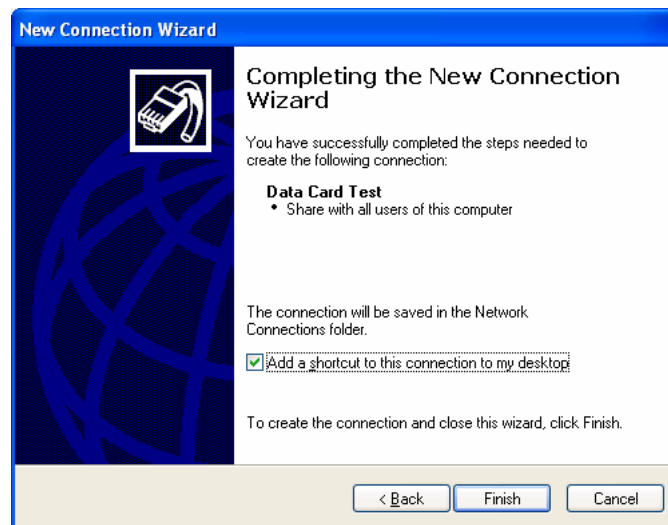| **Author:**	R. Biesemans	**Version:**	V01 – D1
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Figure 18: Connection complete

10. If your card is registered on the network, you can use the just configured dial-up connection to activate a PDP context.
Go to Start → Connect to → "Your Connection name here" and select it.
Click the Dial button. After a while, a connection to the internet is made.

4 SET UP A VOICE CALL

Voice calls can be set up using HyperTerminal. In chapter 2 a description is given how HyperTerminal can be configured. Here the necessary AT commands are specified to make a voice call.

1. AT_ODO=0
   With this AT command circuit switched data transfer, which is needed for voice calls, is enabled
   The response on this AT command should be: OK
2. AT_OPCMENABLE=1
   As a default the voice part of the firmware is disabled. To enable digital voice, the command above must be set.
   The response on this AT command should be: OK
3. AT_OPCMCONFIG=0,0,0,256,0,1,4
   When this AT command is entered, the PCM voice codec on the module/datacard is configured correctly.
   The response on this AT command should be: OK
4. ATD<phone number>;
   To set up the call, the ATD command followed by a phone number must be used.
   NOTE: Do not forget the semi don (;) at the end of the AT command!!!
   The response on this AT command should be: OK

5 WHEN CARD DOESN'T REGISTER

When the module/datacard doesn't register, you can try to evaluate following settings:

1. At_opbm

   When not working in a shielded environment, all life networks could interfere with the signal coming from the CMU. When the simulated network is not in the same band as the surrounding life networks, this problem can be avoided by deselecting all other basebands but the one you are working in.
   This could be done using the at_opbm command:

   Extract from datasheet:

   ### Preferred Band Mode _OPBM

Command	Possible response(s)
_OPBM=<band>,<n>	OK
_ OPBM =?	_OPBM: (list of supported <band>s)
_ OPBM?	<band>: <n>[<CR><LF><band>: <n>[…]]

   Description
   This command is used to disable/enable specific frequency bands.

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Defined Values

<band>
"ANY"   : any band
"EGSM"   : EGSM (900MHz) band
"DCS"   : DCS (1800MHz) band
"PCS"   : PCS (1900MHz) band
"G850"   : GSM 850MHz band
"U2100"   : WCDMA 2100MHz band
"U1900"   : WCDMA 1900MHz band
"U1700"
"U17IV"
"U850"   : WCDMA 1900MHz band

<n>
0   : disable
1   : enable

Eg: if you use GSM1900 (PCS) band, select only this band. All other bands have to be deselected.
It is also very important to deselect EVERY UMTS band when trying to connect to a GSM
network and vice versa:

    At_opbm = "PCS",1   (selection of PCS band)
    At_opbm = "DCS",0   (deselection of DCS band)
            Same for the other bands, also the UMTS bands!!!

To check if the band is really (de)selected, use "at_opbm?" The bands showing 0 are deselected,
the bands showing 1 are selected.

2. AT_OPSYS

    When the band settings did not work, try the OPSYS command: this command selects the
    UTRAN and the packet and/or circuit switched domain.

    Extract from datasheet:

    ### Preferred SYStem "AT_OPSYS"

Command	Possible Response(s)
_OPSYS=[<mode>[,<domain>]]	OK
_OPSYS?	_OPSYS: <mode>,<domain>
_OPSYS=?	_OPSYS: (0-5),(0-6)

    Description
    This command changes the preferred system, GSM/WCDMA, the acquisition order and the service
    domain preference PS/CS.

    Defined values

<mode>:
0 GSM only
1 WDMA only
2 GSM first
3 WCDMA first
4 No change
5 Auto

<domain>:
0 Acquire only circuit-switched systems
1 Acquire only packet-switched systems
2 Acquire circuit-and/or packet-switched systems
3 Any domain will do; no preference

Eg: at_opsys=0,2 selects options:
        GSM only and CS & PS domains

6   ADDITONAL AT COMMANDS

This section contains some basic at commands you may need when using our datacard/modules.

1. at_osec

This command sets the RRC security setting.
Please note that a hard reset of the card is required before the setting will take effect.

Extract from datasheet:

SECurity "AT_OSEC"

Command	Possible Response(s)
_OSEC=[<sec>]	OK
_OSEC?	_OSEC: <sec>
_OSEC=?	_OSEC: (list of supported <sec>s)

Description
This command sets the RRC security setting.
Please note that a hard reset of the card is required before the setting will take effect.

Defined values

<sec>:
0 None
1 Integrity

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</div>

          2 Ciphering
          3 Fake Security
          4 Integrity and Ciphering

2.   ata

This commands accepts a MT call.

3.   at+chup

This commands terminates a call.

7 CRADLE MODE

Datacards : Nominal voltage = 3,5V
Modules: Nominal voltage = 3,3V

Changing card from cradle mode to laptop mode and vica versa is done with the port change command at_opos. For cradles with a usb connection this is normally not needed.
It is important to use the port settings as described in the hyperterminal section otherwise it will not be possible to make a connection with the card.

Use "at_opos?" to see the current value.

    a.   From cradle mode to laptop mode

You can communicate with the cradle through COM1 (or whatever the name is of the port you attached the cradle to)

At_opos=x,x,1,x
➔ when in cradle: at_opos=2,10

    b.   From laptop to cradle mode

You can communicate with the cradle through the application port or modem port. You can see their port numbers when you doubleclick the safe removal button.

At_opos=x,x,10,x
➔ to change the card to laptop mode, you can change the opos parameters by using at_opos=2,1. Now you CAN'T CONNECT through modem-port.

For fujiGT there are some different settings:

    a.   From cradle mode to laptop mode

At_opos=1,4

    b.   From laptop mode to cradle mode

At_opos=1,1

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