UC20 WinCE RIL Driver User Guide

UMTS/HSPA Module Series

Rev. UC20_RIL_USB_Driver_User_Guide_V1.0

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About the document

History

Revision	Date	Author	Description
1.0	2013-08-12	Wythe WANG	Initial

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1 Introduction

This document mainly introduces how to integrate the RIL driver for UC20 module in WinCE 6.0 OS, and how to use PPP dial function without RIL.

2 System Integrating

UC20 provides USB driver and RIL driver for WinCE6.0. Before you integrate RIL driver, please make sure that UC20 USB driver for WinCE6.0 has been installed successfully (please refer to UC20_WinCE_USB_Driver_User_Guide).

2.1. Introduction to Driver Package

RIL driver package includes BINARY and REG folder. qlril.dll is stored in BINARY folder. qlril.reg, matching with qlril.dl, is stored in REG folder. Please refer to the structure of driver package as below:

Figure 1: RIL Driver Package Structure

2.2. Integrate RIL Driver Files

To integrate WinCE RIL driver, please add the driver BINARY and REG files in your system. When you start the integration, you should follow the steps as below:

2.2.1. Check System Component

RIL driver transforms the RIL request from application layer into AT commands, and then send them to UC20 module. You need to enable some system components under the options of kernel, before using RIL driver in your system board. For WinCE6.0, VS2005 is the main development tool，which ensures you to choose the necessary option in "Catalog Items View", shown as below:
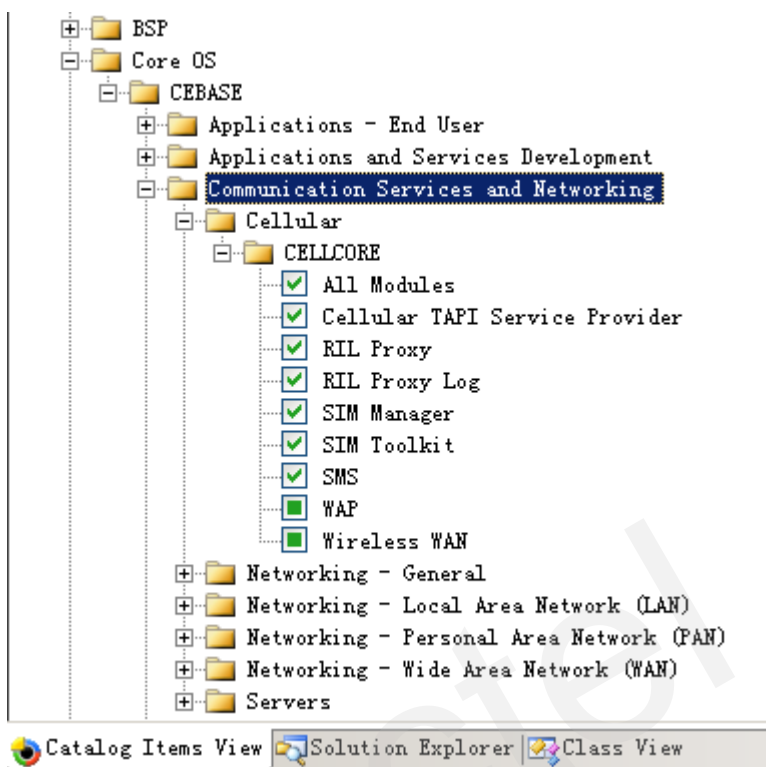
Figure 2: RIL Driver Package Structure

2.2.2. Copy Files

Please copy the qlril.dll and qlril.reg in the driver package to your BSP project folder, i.e. C:\WINCE600\PLATFORM\<TARGETBSP>\FILES.

NOTE

Please do remember to change <TARGETBSP> as your own BSP directory name.

2.2.3. Modify the Platform.reg

Add the below line at the end of platform.reg.

#include "$(_PLATFORMROOT)\<TARGETBSP>\FILES\qlril.reg"

2.2.4. Modify the Platform.bib

Add the following comment in Module section of platform.bib.

```
MODULES
..
..
qlril.dll          $(_PLATFORMROOT)\(TARGETBSP)\FILES\qlril.dll      NK       SHK
..
..
```

2.2.5. Rebuild and Create System Image

After you have done the four steps above, you need to execute "clean sysgen" command to rebuild your project and create the new system image.

2.2.6. Load Testing

Install the new image to your target board and reboot it. The new system will load the RIL driver automatically. You can make phone-call or send short message via RIL API to test whether RIL is loaded successfully.

3 Create PPP Connection

For RIL users, you should use the USB AT Port as the AT channel for RIL to do the VOICE CALL and SMS service, and use USB Modem port for PPP connection on "Network and Dial-up Connections" system options. It is simple to set up PPP dial-up over UC20 module with the new PPP connection. When PPP dial-up is established, you can enjoy surfing the Internet. The method of creating PPP connection is given as below:

1. Open and Enter "Control Panel".

Figure 3: Open Control Panel

2. Double Click "Network and Dial-up Connections"

Figure 4: Click Network and Dial-up Connections

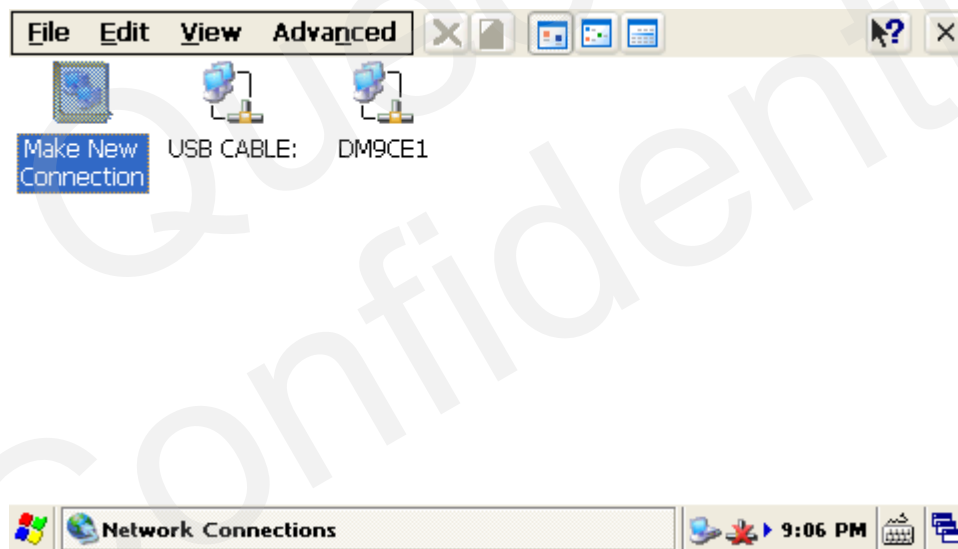3. Enter Window Interface below:

Figure 5: Click Make New Connection

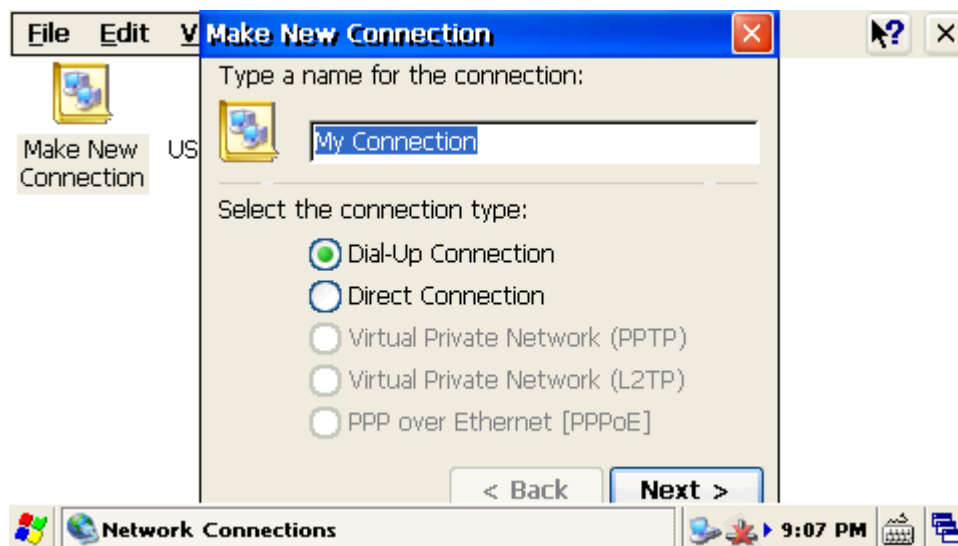4. Double click the "Make New Connection" and the pop-up box below is displayed:

Figure 6: Make New Connection Interface
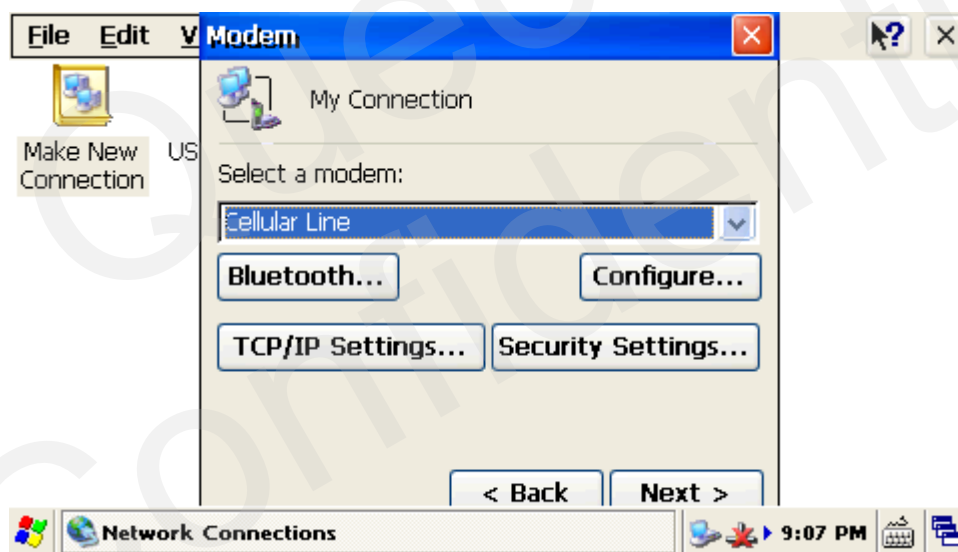
5. Click the "Next" button:

Figure 7: Modem Selection Interface

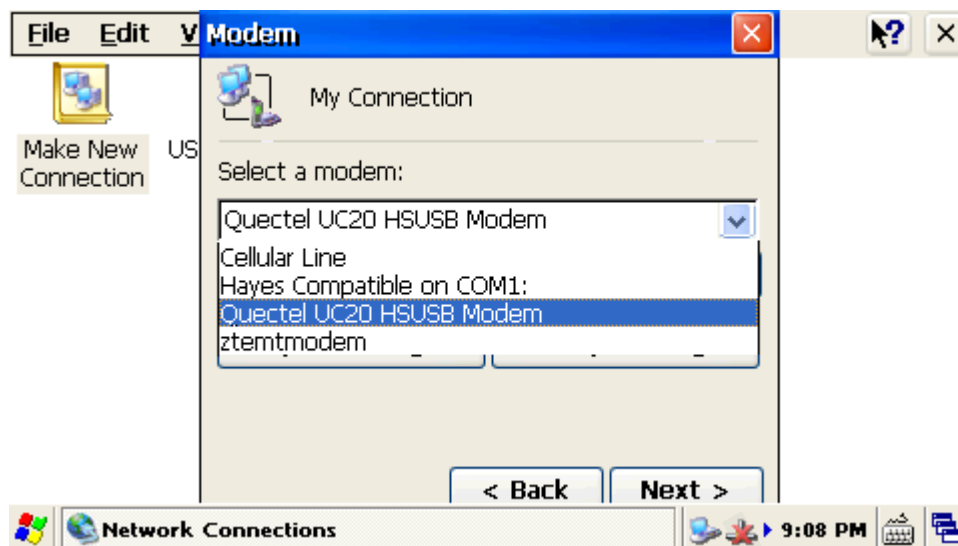6. Select the "Quectel UC20 HSUSB Modem" on the pull-down menu:

Figure 8: Select "Quectel UC20 HSUSB Modem"

7. Click the "Configure" button:

Figure 9: Connection Properties

8. Select "Call Options" and configure the APN in the "Extra Settings" text-box. For example, if you use SIM Card of CHINA-UNICOM, and you need to set "3gnet" for CHINA-UNICOM to your APN:
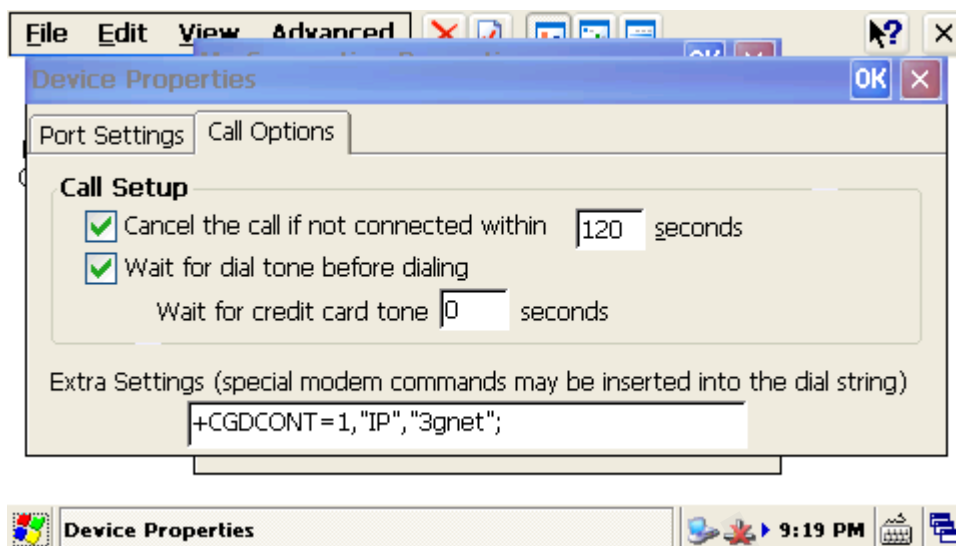
Figure 10: Set APN

9. Click "OK" and click "Next" button, it goes to the interface of phone number configure. Then, fill "*99#" in the Phone number text-box:
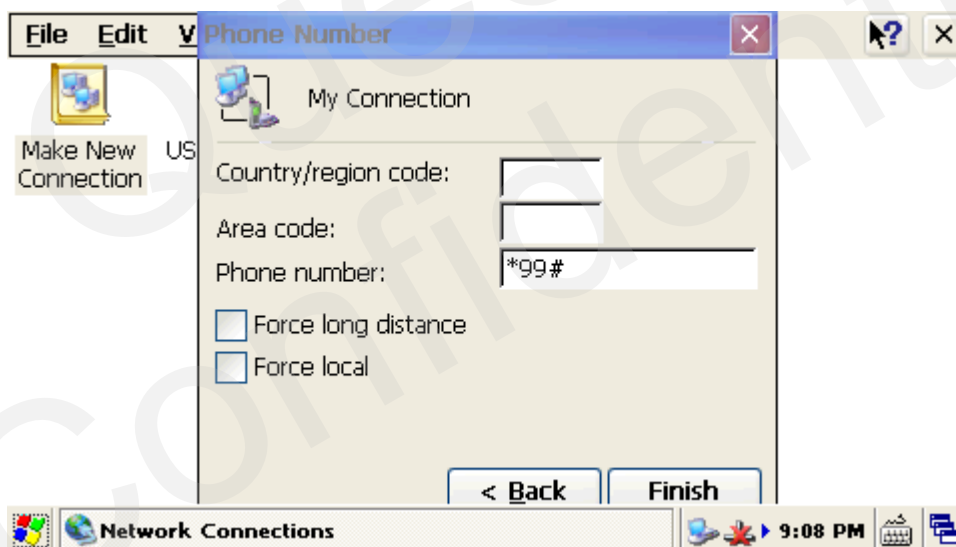

Figure 11: Set Phone number

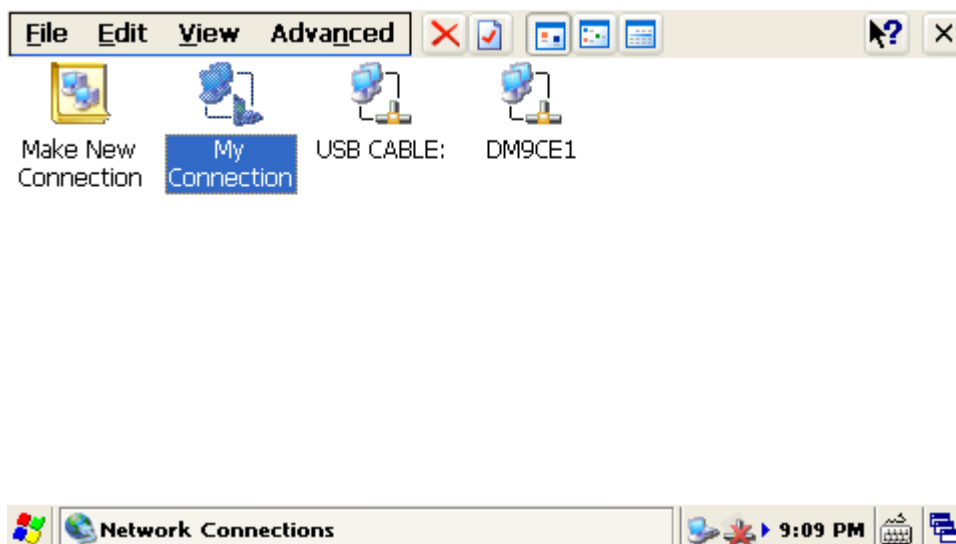10. Click "Finish" button and a new icon named "My Connection" will appear in this window:

Figure 12: Add new connection OK
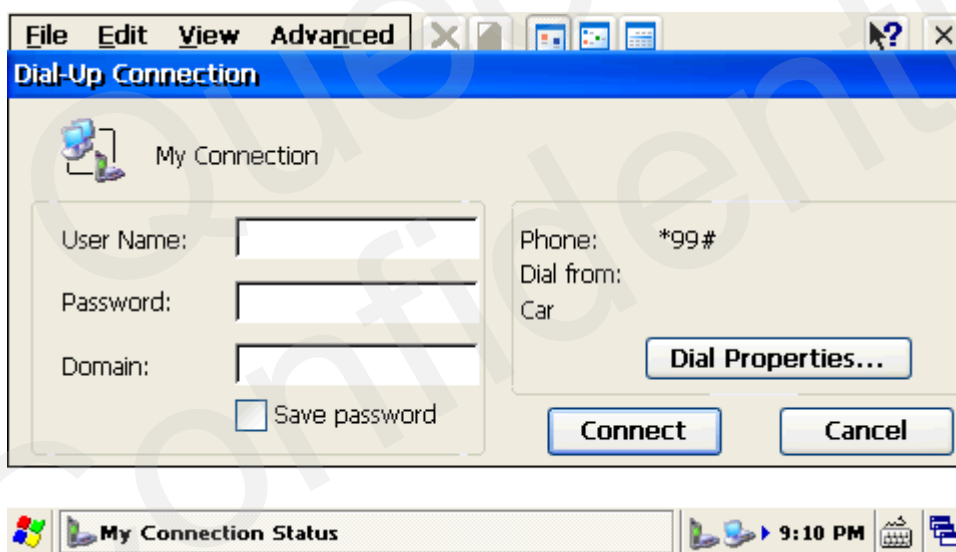
11. Double click "My Connection" icon:

Figure 13: Dial-up Connection Interface

12. Fill in user name and password of PPP dial-up in the text-box. It uses '"wap" both as User Name and Password here:
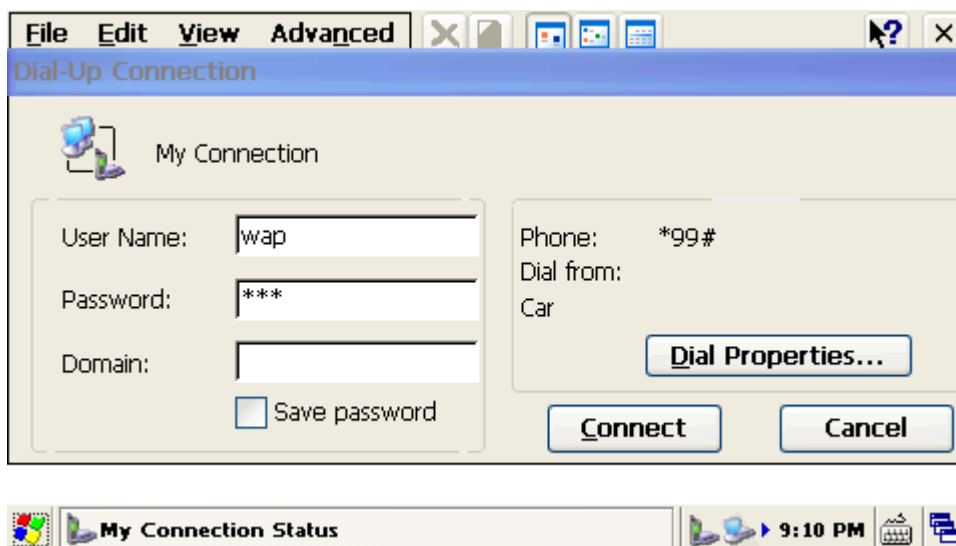
Figure 14: Add User Name and Password

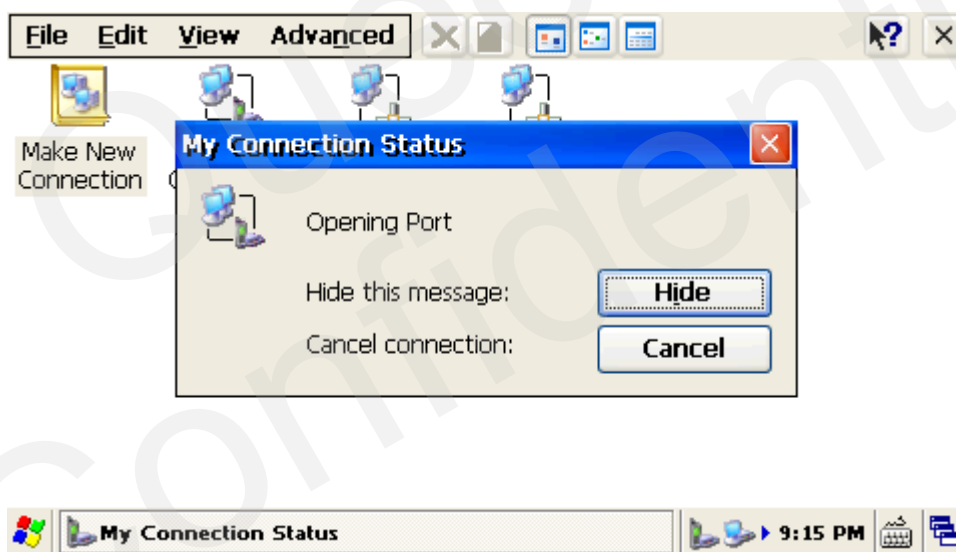13. Click "Connect" button to set up the PPP connection:

Figure 15: Begin to set-up PPP connection

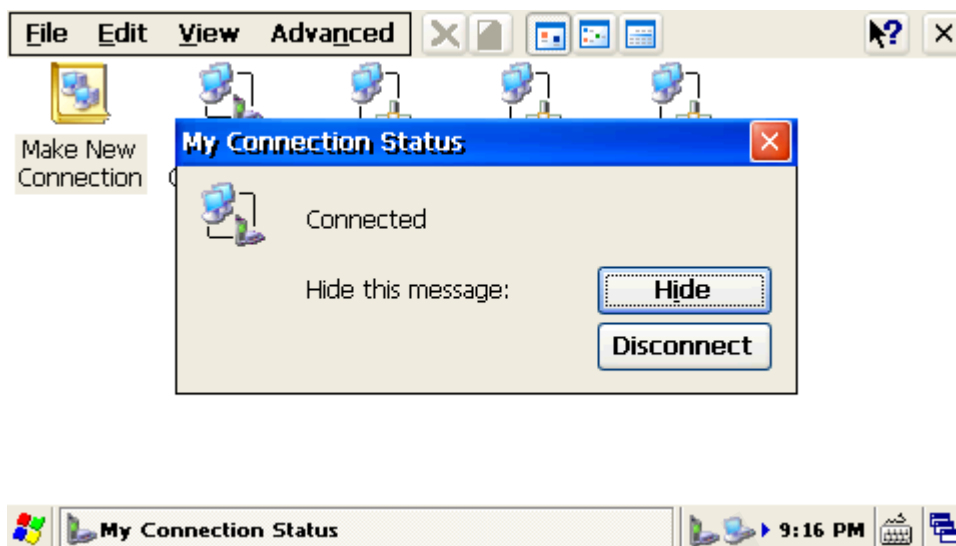14. Usually, the PPP dial-up will be connected in several seconds:

Figure 16: PPP Connected

15. Finally, you can surf the Internet on your WinCE board:

Figure 17: Surf Internet

4 Appendix A Reference

Table 1: Terms and Abbreviations

Abbreviation	Description
OS	Operating System
RIL	Radio Interface Layer
BSP	Board Support Package