



# **Palm OS<sup>®</sup> Virtual Phone Guide**

**Palm OS<sup>®</sup> Developer Suite**

Written by Brian Maas

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*Palm OS Virtual Phone Guide*

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# About This Book

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Palm OS® Virtual Phone is a development tool that can help you test Palm OS applications that communicate with a mobile telephone. Virtual Phone is a part of Palm OS Developer Suite.

*Palm OS Virtual Phone Guide* will help you understand how to use Virtual Phone with Palm OS Simulator to test your telephony applications. This introduction discusses what materials are included in this document and what conventions are used.

## What This Book Contains

- [Chapter 1, “Introducing Palm OS Virtual Phone,”](#) on page 1  
This chapter introduces you to Virtual Phone concepts and provides you with an overview of Virtual Phone.
- [Chapter 2, “Getting Started,”](#) on page 7  
This chapter helps you setup Virtual Phone and configure it to work with Palm OS Simulator.
- [Chapter 3, “Using Palm OS Virtual Phone,”](#) on page 17  
This chapter describes how to use Virtual Phone to test Palm™ applications which are written to communicate with mobile telephones.

## Related Information

- *Exploring Palm OS: Telephony and SMS*  
Wherever appropriate, *Palm OS Virtual Phone Guide* makes reference to functions and constants described in *Exploring Palm OS: Telephony and SMS*. You can use this information to relate the Telephony Manager services to the Virtual Phone services.
- *Testing with Palm OS Simulator*  
You can learn about Palm OS Simulator in this manual.

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## Additional Resources

- Documentation

PalmSource publishes its latest versions of this and other documents for Palm OS developers at

<http://www.palmos.com/dev/support/docs/>

- Training

PalmSource and its partners host training classes for Palm OS developers. For topics and schedules, check

<http://www.palmos.com/dev/training>

- Knowledge Base

The Knowledge Base is a fast, web-based database of technical information. Search for frequently asked questions (FAQs), sample code, white papers, and the development documentation at

<http://www.palmos.com/dev/support/kb/>

# Introducing Palm OS Virtual Phone

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Palm OS® Virtual Phone is a tool which simulates the AT interpreter of a mobile telephone, and provides a user interface to change phone settings.

Virtual Phone can help you develop and test applications which use the Telephony Manager API. Virtual Phone recognizes Telephony Manager AT commands and responds exactly the same as a mobile phone. Virtual Phone is also capable of simulating events like incoming voice calls and SMS messages.

## What Virtual Phone Can Do for You

- Virtual Phone provides developers with a fast and simple tool for implementing, debugging, and testing a telephony application during the initial development stages.
- Virtual Phone reduces debugging and testing time for telephony applications which can be a lengthy process when using a real cellular phone.
- Virtual Phone eliminates delays due to slow phone device answer time and delays in wireless connections.
- Virtual Phone eliminates costs associated with establishing a real connection in order to test an outgoing or incoming SMS message. These costs are prohibitive.
- Virtual Phone provides an intermediate solution before final testing with a real phone.

# About Virtual Phone

Virtual Phone is not intended to test the different phone drivers that can be used to communicate with telephones. It is designed to test applications which communicate with a mobile telephone.

Virtual Phone is based on a plug-in architecture that supports standard phone driver functions. For example, the Standard GSM phone driver plug-in supports all the functions of a standard GSM phone.

## What Virtual Phone Does

Virtual Phone supports all the services offered by the Telephony Manager.

Virtual Phone considers the state of the telephone when performing some operations. For example, a reduced set of operations can be performed on Virtual Phone if the **Security State** is not set to **Ready**.

Virtual Phone provides all of the following functions:

- Simulates network events (signal strength, signal lost)
- Simulates incomings calls and supports conference calls
- Simulates incoming SMS
- Makes an outgoing call and send SMS with suitable AT commands
- Supports multipart SMS
- Simulates the registration to an operator
- Manages SMS PDU with advanced configuration
- Initiates data connection
- Supports the SIM toolkit and provides SIM applications

## What Virtual Phone Does Not Do

Virtual Phone does not simulate automatic changes in the state of the telephone such as fluctuations in the network level or progressive drain of the battery. These state parameters can be manually changed in the configuration panel.

# Virtual Phone Background Information

Virtual Phone simulates a standard mobile telephone working under a Global System for Mobile Communications (GSM) Network.

When working with Virtual Phone, you should understand the following background information:

- Telecommunication standards

The European Telecommunication Standards Institute (ETSI) has established the European Telecommunication Standards (ETS) which contains a series of attention (AT) commands recognized by a mobile phone. It is assumed that you are aware of these standards.

For information on these standards, see *GSM Technical Specification 07.07 Reference TS/SMG-040707Q* and *GSM Technical Specification 07.05: SMS AT Commands*. See also *GSM 11.11 Specification of the Subscriber Identity Module* for SIM access +CRSM command and *GSM 11.14 Specification of the SIM Application Toolkit for the Subscriber Identity Module* for STK related informations.

- Telephony Manager

The Palm OS® provides the Telephony Manager, which programmers can use to write applications that interact with telephony services. For information about the Telephony Manager, see the Telephony Manager chapter in *Exploring Palm OS: Telephony and SMS*.

- Palm OS Simulator

You can use Palm OS Simulator to test your applications. For information on Palm OS Simulator, see *Palm OS Simulator Guide*.

Virtual Phone communicates with Palm OS Simulator and processes AT commands issued by applications running under the Palm OS. Processing includes analyzing AT commands sent from the Palm OS Simulator to the Virtual Phone, forwarding commands to the appropriate Service (Network, Security, etc.) and generating both AT command replies and unsolicited events (for example, RING . . .).

Virtual Phone logs exchanged AT commands, and you can save this log into a text file.

## Virtual Phone Overview

Virtual Phone requires several ASCII format text files, which use the standard INI file format. Virtual Phone will create these files if they do not already exist.

### Profile File

When you run Virtual Phone the first time, Virtual Phone starts by opening the New Profile wizard as described in “[Creating a Virtual Phone Profile](#)” on page 7. When you close Virtual Phone, Virtual Phone creates a file called `DefaultConfigFile.vpc` in the data directory. (You can assign a different name to the profile file using [File > Save Phone Config As.](#))

The profile file stores the following information:

- Configuration information, which you set by using the [Phone Configuration Dialog Box](#)
- the options state, which you set by using the [Options Dialog Box](#)
- the phone plug-in and the link plug-in information (TCP, Serial, etc.), which you set by using the [Profile Setup Dialog Box](#)

Virtual Phone is automatically associated with the VPC extension, so you can launch Virtual Phone by double-clicking on a VPC file's icon.

### SMS Message Files

Two SMS files, `SmsStore.db` and `SmsSentStore.db`, store SMS messages. `SmsStore` contains SMS messages that Virtual Phone has received or sent; `SmsSentStore` contains messages that Virtual Phone has sent to the network.

### Phone Book Files

Virtual Phone supports the ETSI standard phone book files.

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**NOTE:** Virtual Phone uses the `PhbLD.db`, `PhbMC.db`, and `PhbRC.db` files, but does not update them using call features. You can modify the content of these files using any text editor.

---

- `PhbDC.db` - Mobile Equipment (ME) dialed calls list
- `PhbEN.db` - SIM or ME emergency number
- `PhbFD.db` - Fixed phone book
- `PhbLD.db` - Last dialed list
- `PhbMC.db` - ME missed calls list (received calls that were unanswered)
- `PhbME.db` - Phone phone book
- `PhbMT.db` - Combined ME and SIM phone book
- `PhbON.db` - SIM or ME own numbers (MSISDNs) list
- `PhbRC.db` - ME received calls list
- `PhbSM.db` - SIM phone book
- `PhbTA.db` - Terminal Adapter (TA) phone book

The phone book files all have the same format, which consists of an index number, name, and phone number.

### Configuration Files Summary

All configuration files, phone book files, and log files are created in the directory where Virtual Phone is executed. In general, you do not need to edit these files directly because Virtual Phone provides dialog boxes to set the values that are stored in the files.

We strongly recommend that you keep a back-up copy of these files for security and recovery reasons.

## Introducing Palm OS Virtual Phone

*Virtual Phone Overview*

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# Getting Started

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Before using Palm OS® Virtual Phone, you need to create a profile for your Virtual Phone session. Then you need to configure Palm OS Cobalt Simulator to work with Virtual Phone. This chapter describes how to get started.

<a href="#">Creating a Virtual Phone Profile</a>	7
<a href="#">Configuring Palm OS Cobalt Simulator</a>	10
<a href="#">Configuring the Phone Preferences</a>	13

## Creating a Virtual Phone Profile

When you run Virtual Phone the first time, Virtual Phone starts by opening the New Profile wizard. The Virtual Phone profile defines the Phone plug-in and the Communication plug-in that are used for this Virtual Phone session.

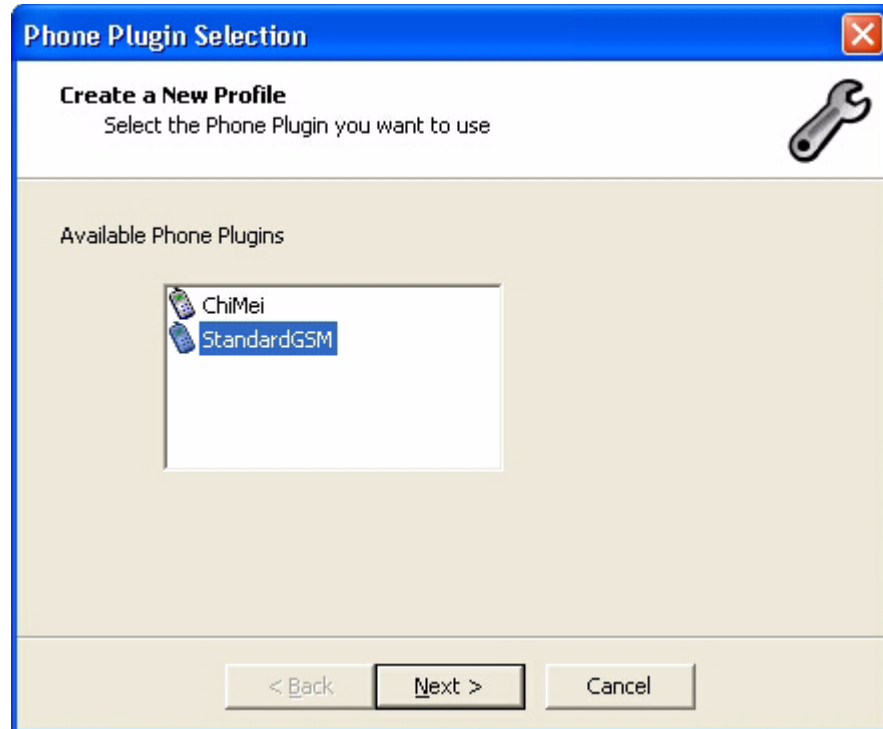
The first page of the New Profile wizard is the Phone Plugin Selection page, shown in [Figure 2.1](#).

## Getting Started

### *Creating a Virtual Phone Profile*

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**Figure 2.1** Phone Plugin Selection page

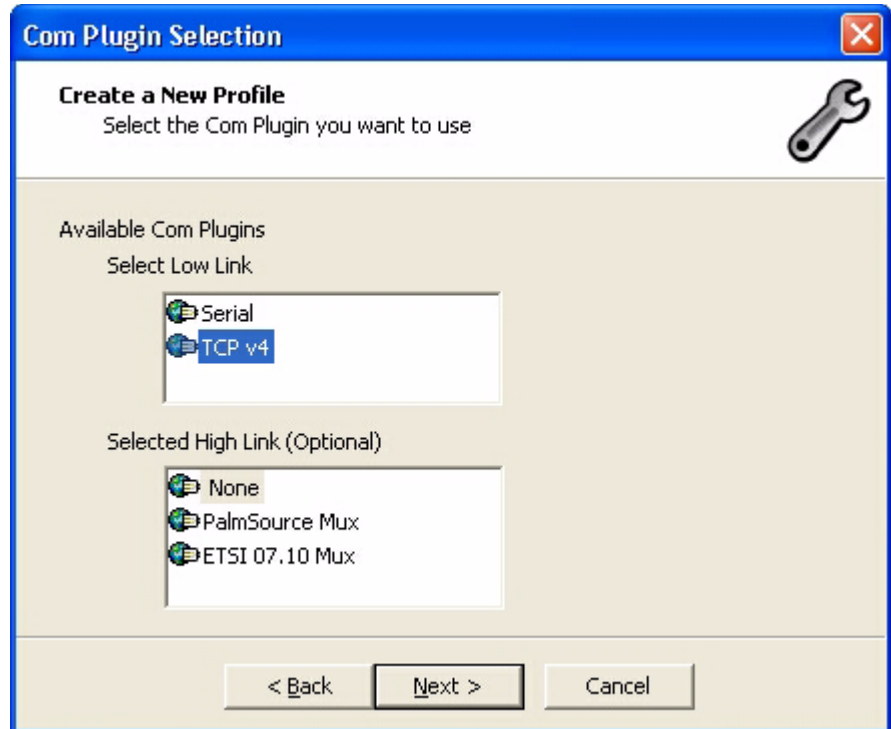


This page lets you select a phone plug-in from the list of available plug-ins. Virtual Phone comes with two options (ChiMei and StandardGSM), but licensees can create additional phone plug-ins as well.

For now, select the StandardGSM phone plug-in, and click **Next**.

The next page of the wizard is the Com Plugin Selection page, shown in [Figure 2.2](#).

**Figure 2.2 Com Plugin Selection page**



This page lets you choose a Low Link communication option of either Serial and TCP v4.

For now, select the TCP v4 for the Low Link communication plug-in, and select None for the High Link communication plug-in, and click **Next**.

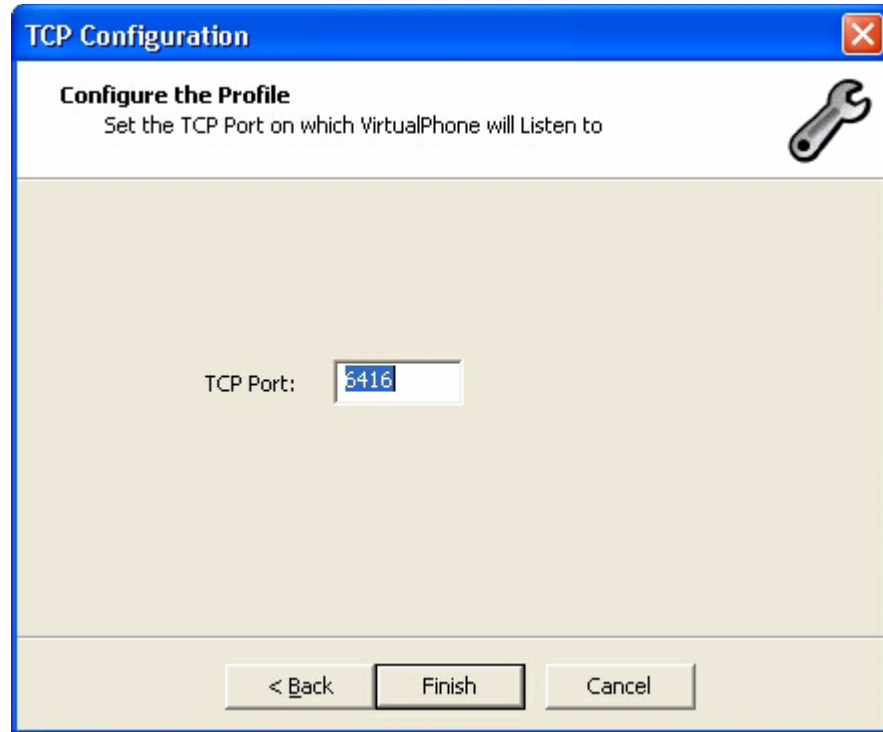
The next page of the wizard is the TCP Configuration page, shown in [Figure 2.3](#).

## Getting Started

### Configuring Palm OS Cobalt Simulator

---

**Figure 2.3** TCP Configuration page



This page lets you specify the TCP communication port for communication between Virtual Phone and Palm OS Cobalt Simulator. Both tools use the default port setting of 6416, so accept this value and click **Finish**.

Next, you need to configure Palm OS Cobalt Simulator to communicate with Virtual Phone.

## Configuring Palm OS Cobalt Simulator

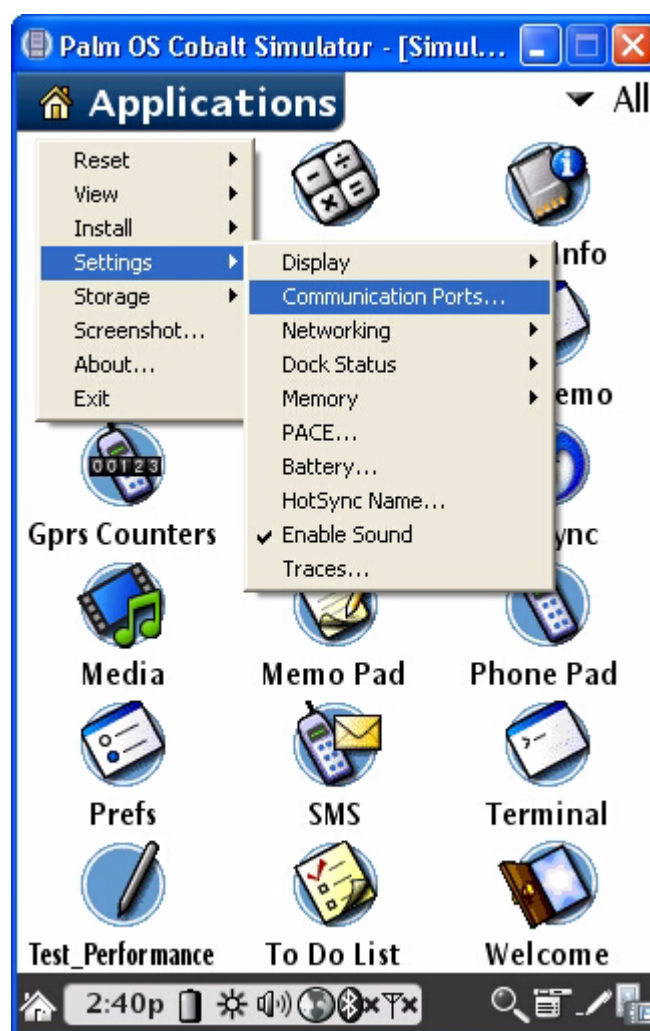
Palm OS Cobalt Simulator is a tool that you can use to test Palm OS applications. Simulator includes all of the Palm OS Cobalt system code, compiled to run on Windows.

The Simulator main window looks like the display that runs on a Palm Powered™ device. However, as a Windows-based application, Simulator supports many standard Windows-based user interaction techniques. You can use your mouse to perform actions that you

perform with the stylus on handheld devices, and you can use menus to access Simulator functions.

In order to configure Simulator to work with Virtual Phone, right-click the Simulator window to display the pop-up menu. Then select **Settings > Communication Ports**, as shown in [Figure 2.4](#) on page 11.

**Figure 2.4** Configuring Palm OS Cobalt Simulator



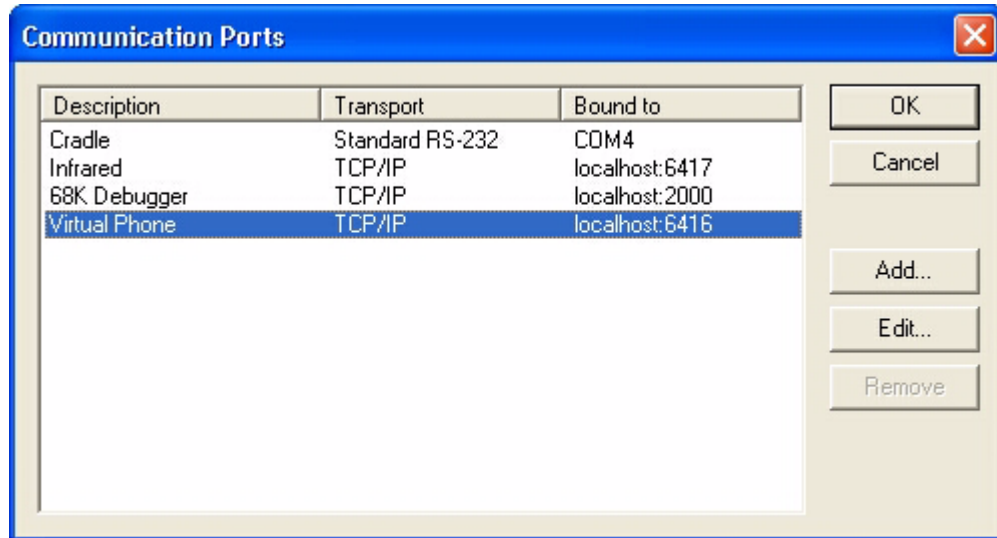
When you select **Settings > Communication Ports**, the Communication Ports dialog box opens, as shown in [Figure 2.5](#) on page 12.

## Getting Started

### Configuring Palm OS Cobalt Simulator

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**Figure 2.5 Palm OS Cobalt Simulator Communication Ports dialog box**



Use the Communication Ports dialog box to configure Palm OS Simulator's communication parameters. These parameters must correspond to Virtual Phone's parameters in order to establish communication between the two applications (see "[Tools Menu](#)" on page 23 and "[Profile Setup Dialog Box](#)" on page 84 for more information).

In the previous section, you defined the Virtual Phone communication plug-in to use **TCP/IP** as the Transport and `localhost:6416` as the "Bound to" port. This is Palm OS Cobalt Simulator's default for this communication port.

## Configuring the Phone Preferences

To verify that the Palm OS Simulator is configured to communicate with a GSM Phone, first open Palm OS Virtual Phone and click the **On** button (  ) in Virtual Phone's toolbar.

Next, in Palm OS Cobalt Simulator, tap the **Prefs** application, shown in [Figure 2.6](#).

**Figure 2.6** Tap the Prefs application



## Getting Started

### Configuring the Phone Preferences

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The Preferences application opens. In the Preferences application, tap Phone Setup, as shown in [Figure 2.7](#)

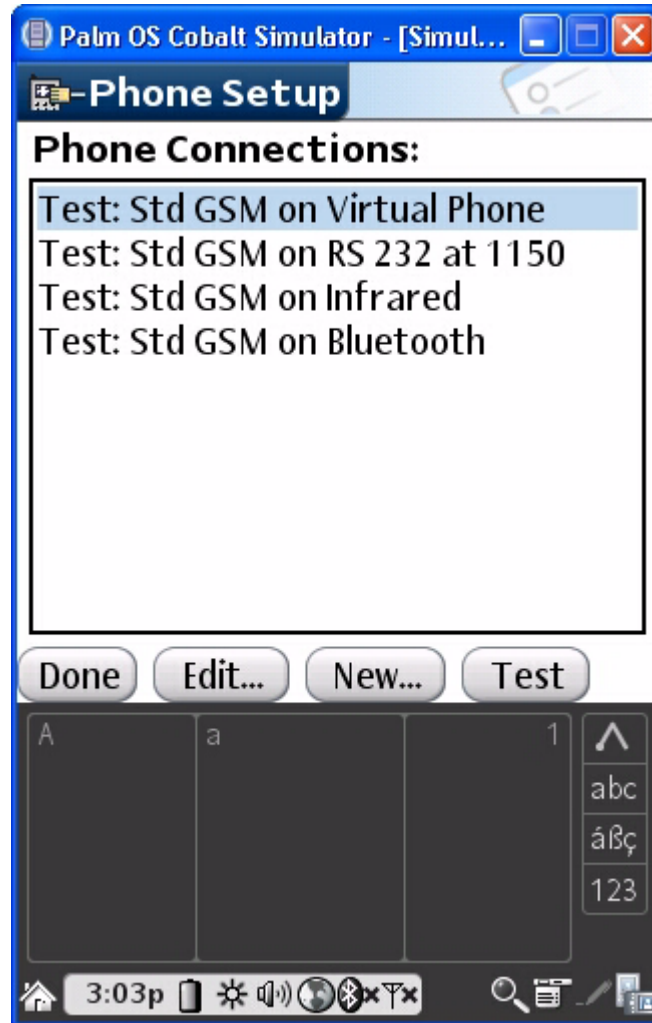
**Figure 2.7** Select Phone Setup in the Preference application





The Phone Setup application opens, as shown in [Figure 2.8](#).

**Figure 2.8 Phone Setup application**



Select **Test: Std GSM on Virtual Phone** to connect Palm OS Cobalt Simulator with Virtual Phone. Tap **Test** to test the connection.

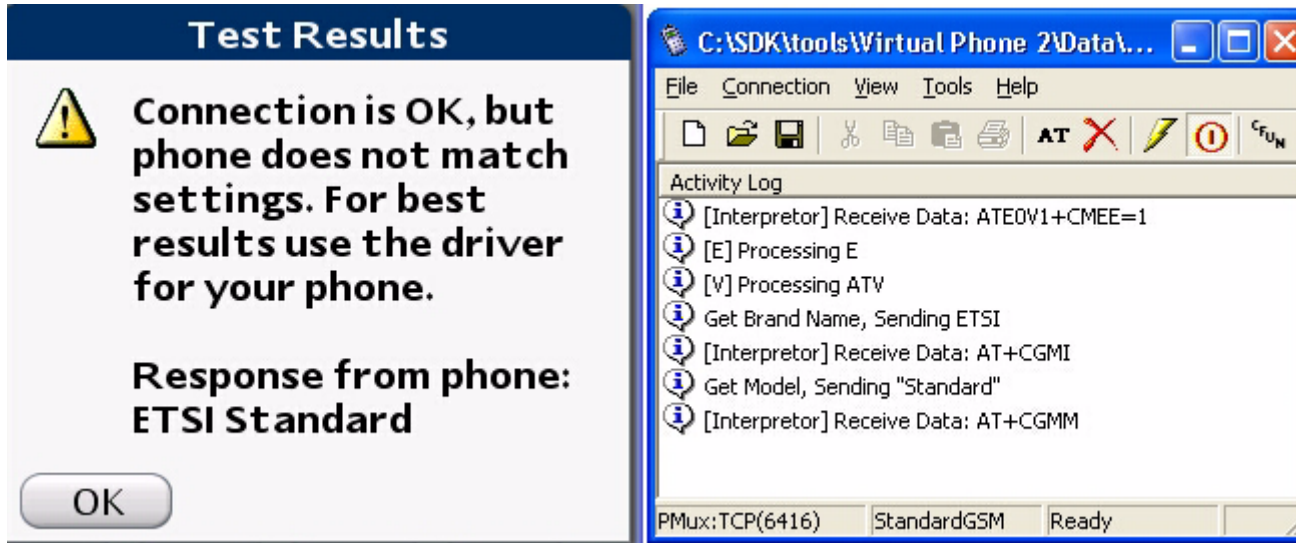
You should see a **Test Results** dialog similar to the one shown in [Figure 2.9](#).

## Getting Started

### Configuring the Phone Preferences

---

Figure 2.9 Phone connection Test Result dialog



## Fixing Connection Problems

Virtual Phone may not be able to establish a connection for several reasons. For example, the specified communications port may already be in use.

If a connection cannot be established, Virtual Phone displays a message dialog box.

You can then either close the application that is preventing the connection and click the reconnect icon, or you can use the **Connection > Connect** menu. As an alternative, you can go back to the Connection Setup dialog box and change the connection settings.

# Using Palm OS Virtual Phone

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Palm OS® Virtual Phone is a standard Windows NT/2000 application. This application displays a log of AT Commands that correspond to the Telephony Manager functions which were called by the application executing in Palm OS Cobalt Simulator.

Every time a Palm OS application calls a Telephony Manager function, the Telephony Manager issues one or more AT commands which are then sent to Virtual Phone. When Virtual Phone receives these AT commands it responds exactly like a real phone.

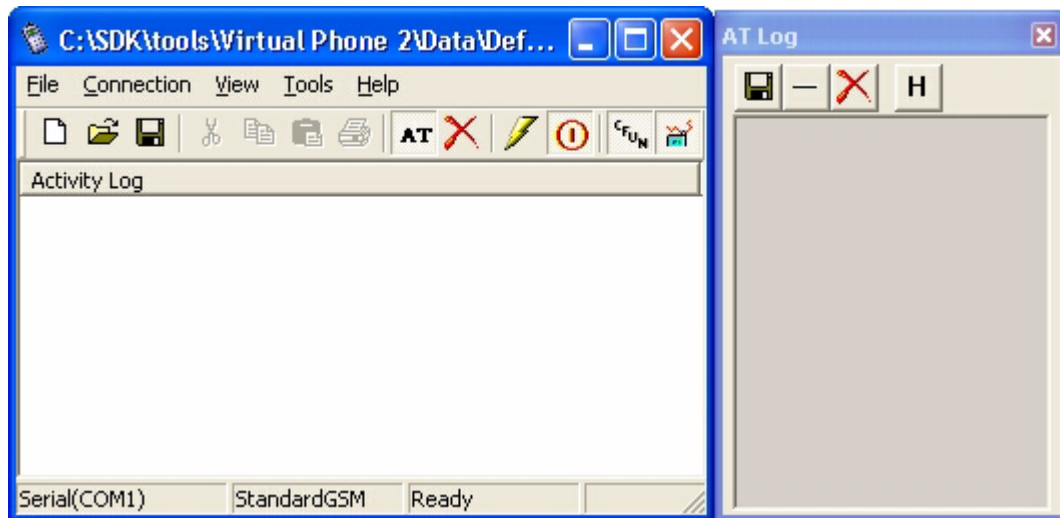
This chapter explains how you can use the Virtual Phone user interface to test your telephony applications. The chapter has the following organization.

<a href="#">Palm OS Virtual Phone Window</a>	. . . . . 18
<a href="#">Palm OS Virtual Phone Menu Items</a>	. . . . . 18
<a href="#">Phone Configuration Dialog Box</a>	. . . . . 26
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<a href="#">Response Preferences Dialog Box</a>	. . . . . 75
<a href="#">Options Dialog Box</a>	. . . . . 81
<a href="#">Profile Setup Dialog Box</a>	. . . . . 84

## Palm OS Virtual Phone Window

The Virtual Phone window, shown in [Figure 3.1](#), displays the text equivalent of the original Telephony Manager function, while the actual AT commands or traces are displayed in the AT Log window.

**Figure 3.1 Virtual Phone window**



This window displays the Telephony Manager functions that are called and the results of the calls.

## Palm OS Virtual Phone Menu Items

Most of Virtual Phone's functions are available through the following menu items.

### File Menu

Select **File** to work with Virtual Phone configuration files (VPC files).

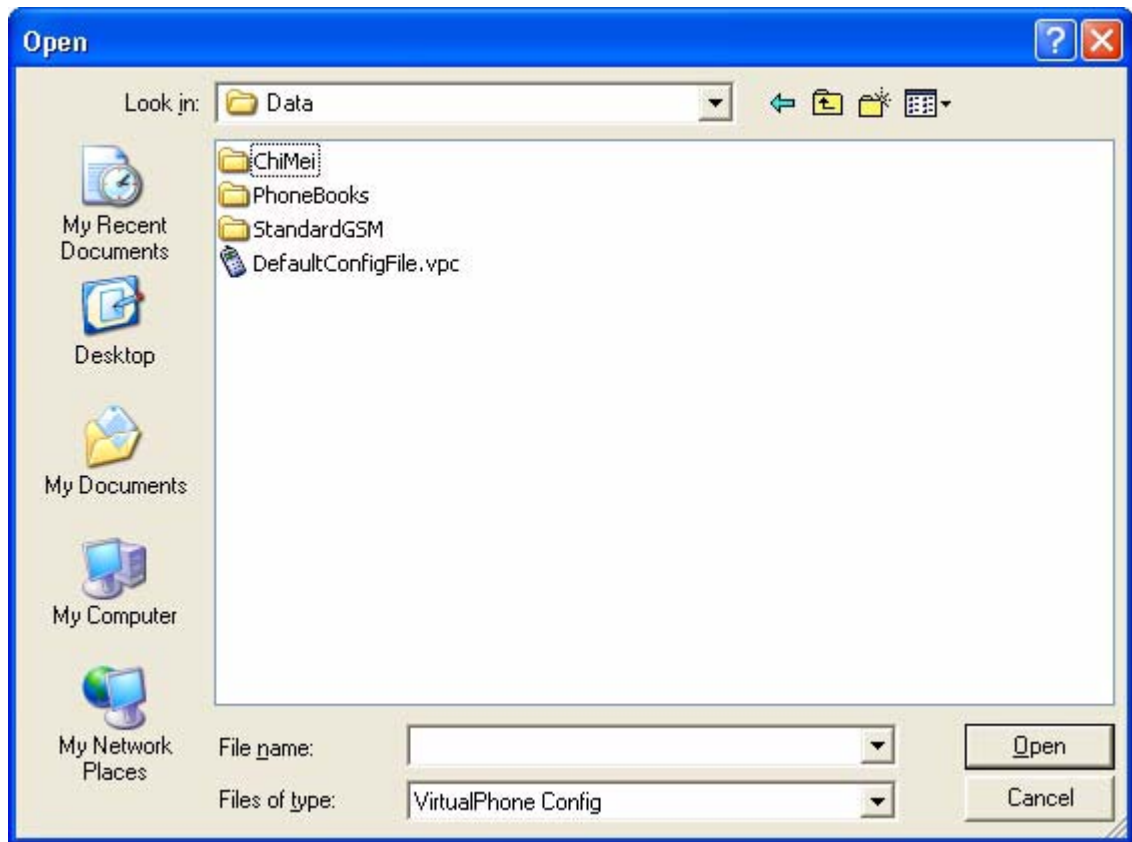
#### **File > New Profile**

Select to open the New Profile wizard to create a new Virtual Phone configuration.

### File > Open Phone Config

Select to open the Open dialog box, shown in [Figure 3.2](#), to select an existing Virtual Phone configuration file.

**Figure 3.2** Open dialog box for Virtual Phone configuration (VPC) files



### File > Save Phone Config

Select to save the current Virtual Phone configuration file.

### File > Save Phone Config As

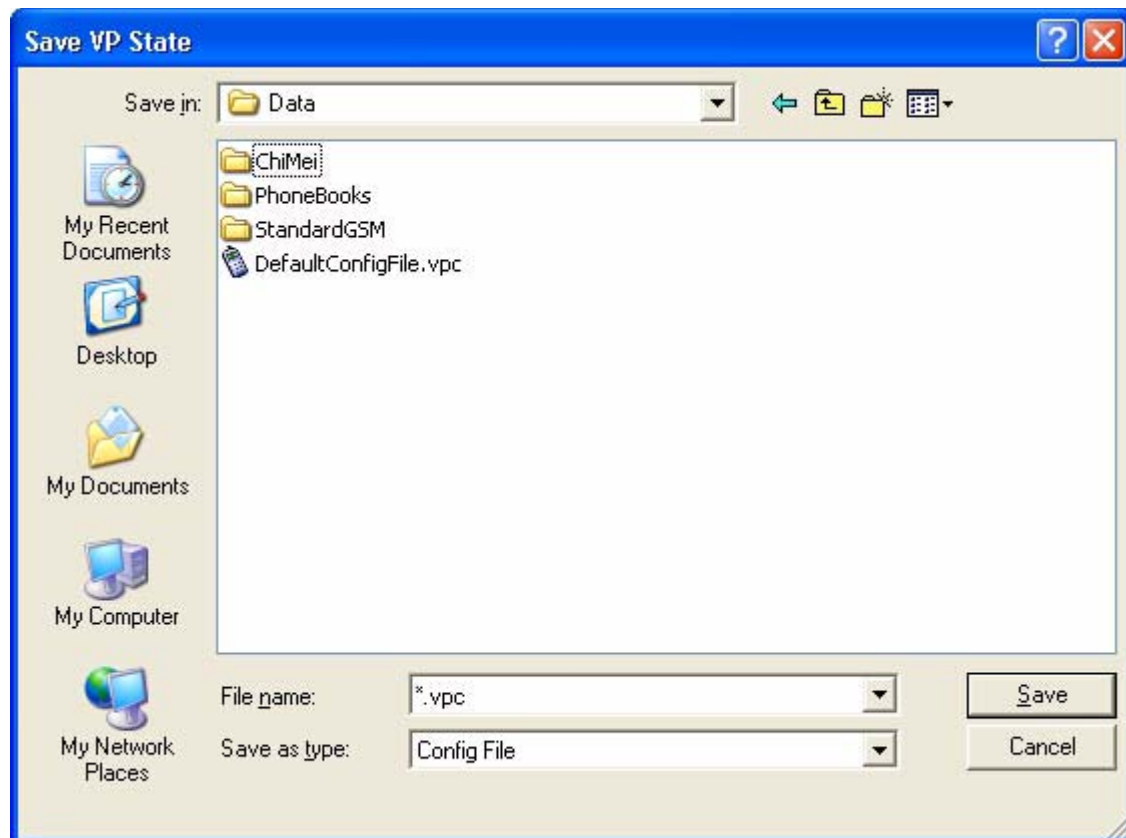
Select to open the Save VP State dialog box, shown in [Figure 3.3](#), to save the current Virtual Phone configuration file with a filename that you specify.

## Using Palm OS Virtual Phone

### *Palm OS Virtual Phone Menu Items*

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**Figure 3.3** Save VP State dialog box



### **File > Exit**

Select to exit Virtual Phone.

### Connection Menu

Select **Connection** to connect or disconnect Virtual Phone.

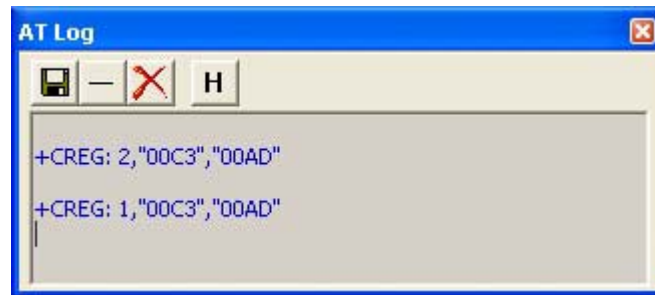
### View Menu

Select **View** to open or arrange the secondary Virtual Phone windows.

#### View > AT Log

Select to open the AT Log window, shown in [Figure 3.4](#).

**Figure 3.4** AT Log window



- To save the contents of the AT Log window, click the diskette icon in the toolbar.
- To add a separator line to the window, click the line icon in the toolbar.
- To clear the contents of the window, click the delete icon (the red X) in the toolbar.
- To view the contents of the window in hexadecimal format, click the hex icon (the black H) in the toolbar.

#### View > Auto Arrange AT Log

Select to position the AT Log window below the Virtual Phone window.

#### View > Auto Arrange AT+CFG

Select to position the AT Log window to the right of the Virtual Phone window, and the Phone Configuration dialog box below the Virtual Phone window.

## Using Palm OS Virtual Phone

### *Palm OS Virtual Phone Menu Items*

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#### **View > Auto Arrange CFG+AT**

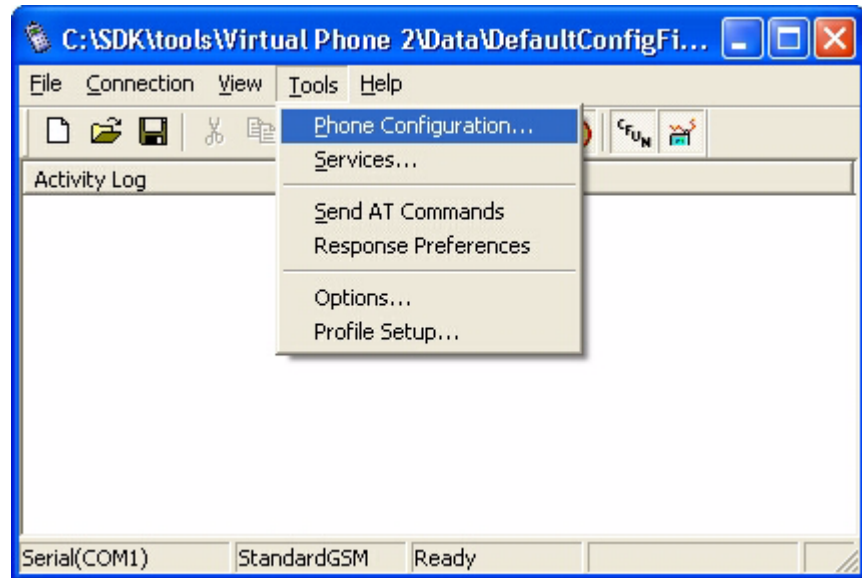
Select to position the AT Log window to below the Virtual Phone window, and the Phone Configuration dialog box to the right of the Virtual Phone window.



### Tools Menu

The **Tools** menu, shown in [Figure 3.5](#), provides access to several services.

**Figure 3.5 Virtual Phone Tools Menu**



#### **Tools > Phone Configuration**

Select to open the Phone Configuration dialog box to set and view the settings for basic services of Virtual Phone. See "[Phone Configuration Dialog Box](#)" on page 26 for more information.

#### **Tools > Services**

Select to open the Service Configuration dialog box to set and view the settings for PhoneBook, SMS, and Speech services. See "[Service Configuration Dialog Box](#)" on page 62 for more information.

#### **Tools > Send AT Commands**

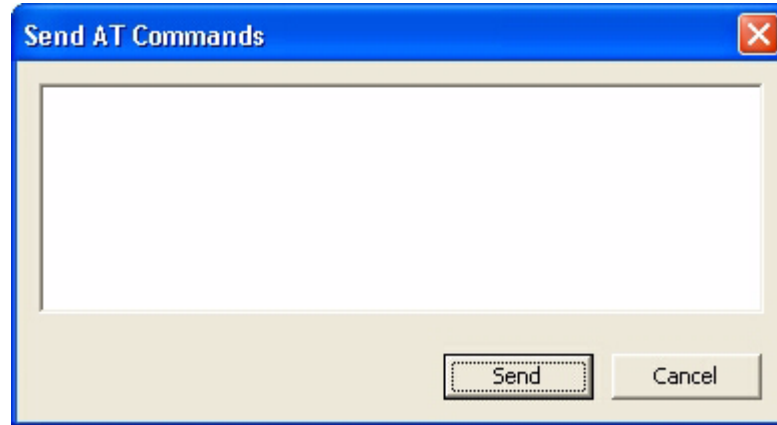
Select to open a dialog box, shown in [Figure 3.6](#), where you can enter AT unsolicited results that you want to send.

## Using Palm OS Virtual Phone

### *Palm OS Virtual Phone Toolbar Items*

---

**Figure 3.6** Send AT Commands dialog box



#### **Tools > Responses Preferences**

Select to define the Virtual Phone services, error numbers, and messages. See "[Response Preferences Dialog Box](#)" on page 75 for more information.

#### **Tools > Options**

Select to define the options for Profiles, Phone use, and window settings. See "[Options Dialog Box](#)" on page 81 for more information.

#### **Tools > Profile Setup**

Select to change or view current Profile settings. See "[Profile Setup Dialog Box](#)" on page 84 for more information.

## Palm OS Virtual Phone Toolbar Items

Virtual Phone's provides additional functions through the toolbar shown in [Figure 3.7](#).

**Figure 3.7** Virtual Phone toolbar



### **AT Button**

Toggles the display of the AT Log window.

### **Clear Button**

Clears the contents of the Activity Log

### **Connection Button**

Connects or disconnects Virtual Phone.

### **Power Button**

Turns Virtual Phone on or off, determining whether Virtual Phone can receive AT commands.

### **CFUN Button**

Turns the phone functions on or off (equivalent to processing the AT+CFUN command).

### **Network Registration Button**

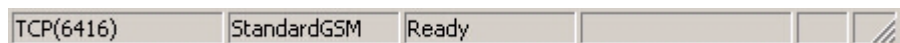
Registers the phone to the operator selected (equivalent to processing the AT+COPS=0 command).

## **Palm OS Virtual Phone Status Bar**

The status bar, shown in [Figure 3.8](#), displays information about the current configuration.

- The communications plug-in link setting
- The phone plug-in setting
- The security state (such as Ready, PIN Expected, PUK Expected)

**Figure 3.8 Virtual Phone status bar**



## Phone Configuration Dialog Box

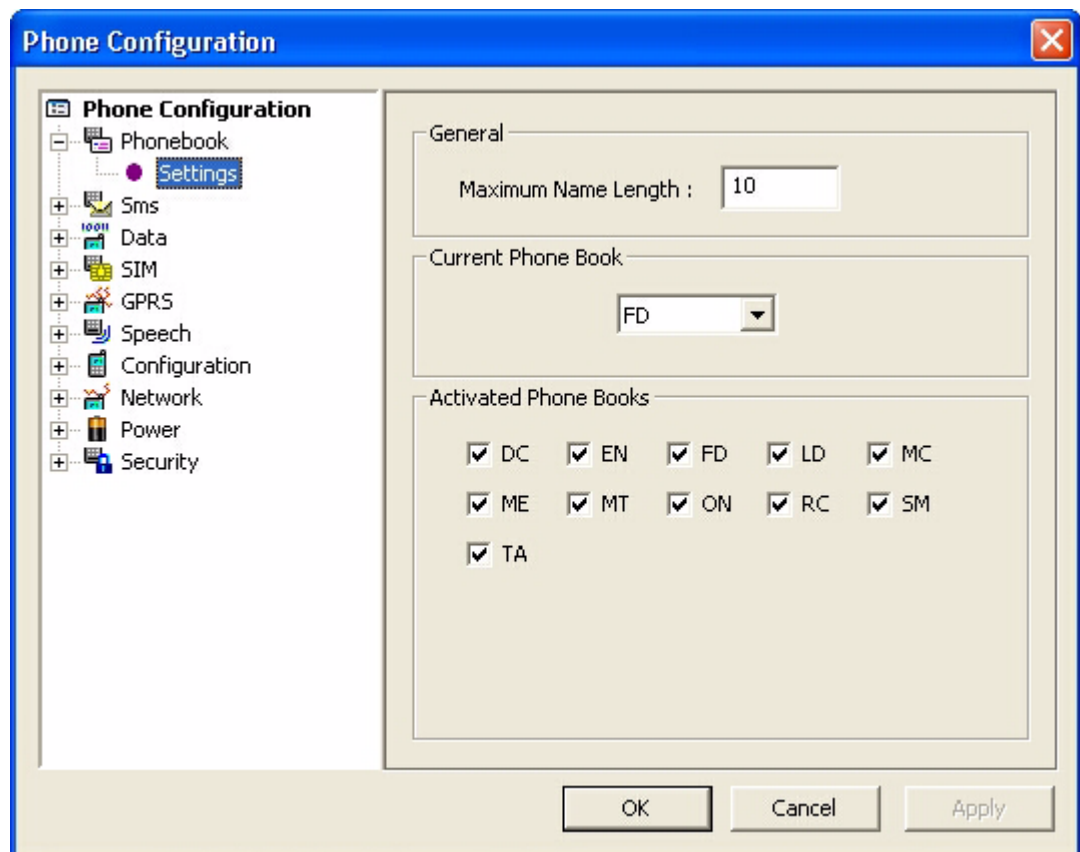
The Phone Configuration dialog box provides access to the phone configuration settings. To open the Phone Configuration dialog box, select **Tools > Phone Configuration**.

<a href="#">Phonebook Settings</a>	. . . . . 27
<a href="#">SMS Settings</a>	. . . . . 29
<a href="#">Data Settings</a>	. . . . . 31
<a href="#">SIM Settings</a>	. . . . . 32
<a href="#">GPRS Settings</a>	. . . . . 34
<a href="#">GPRS PDP Management</a>	. . . . . 37
<a href="#">Speech Settings</a>	. . . . . 41
<a href="#">Speech Forwarding</a>	. . . . . 43
<a href="#">Configuration Settings</a>	. . . . . 45
<a href="#">Configuration Facilities</a>	. . . . . 47
<a href="#">Network Settings</a>	. . . . . 49
<a href="#">Network Notifications</a>	. . . . . 51
<a href="#">Network Networks</a>	. . . . . 53
<a href="#">Power Settings</a>	. . . . . 56
<a href="#">Security Codes</a>	. . . . . 57
<a href="#">Security Status</a>	. . . . . 59

## Phonebook Settings

Phonebook Settings, shown in [Figure 3.9](#), displays information about the stored phone books, showing the current phonebook and which phonebooks are activated.

**Figure 3.9 Phonebook Settings**



### General

- **Maximum Name Length**

Enter the maximum length of a name associated to a phone number. A maximum of 30 characters is permitted for the name length.

See `TelPhbGetEntryMaxSizes` in *Exploring Palm OS: Telephony and SMS*.

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

#### **Current Phone Book**

The currently selected Phone Book. See `TelPhbGetSelectedPhonebook` in *Exploring Palm OS: Telephony and SMS*.

#### **Activated Phone Books**

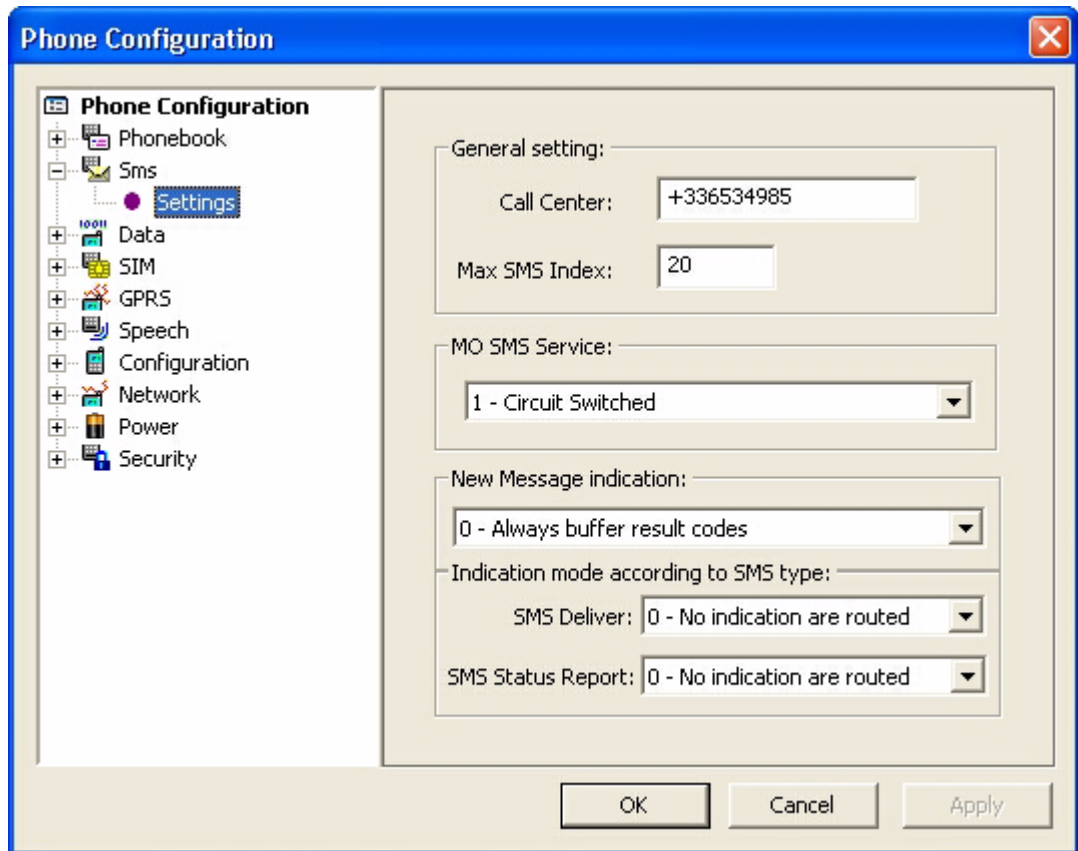
Check to indicate that the phone book is present.

For all of the above see `TelPhbGetAvailablePhonebooks` in *Exploring Palm OS: Telephony and SMS*.

## SMS Settings

SMS Settings, shown in [Figure 3.10](#), displays information about the SMS features.

**Figure 3.10 SMS Settings**



The values entered and displayed here are stored in the SMS (Short Message Services) files, `SmsStore.db` and `SmsStoreSend.db`.

### General setting

- **Call Center**

Enter the phone's service center. See `TelCfgSetSmsCenter` in *Exploring Palm OS: Telephony and SMS*.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

- **Max SMS Index**

Enter the maximum number of messages to display and store (maximum 500). See `TelSmsGetMessageCount` in *Exploring Palm OS: Telephony and SMS*.

#### **MO SMS Service**

- 0 - GPRS
- 1 - Circuit Switched
- 2 - GPRS Preferred
- 3 - Circuit switch preferred

#### **New Message indication**

Select the mode for new messages:

- 0 - Always buffer unsolicited result codes
- 1 - Discard unsolicited results when link is reserved
- 2 - Buffer unsolicited results when link is reserved

#### **Indication mode according to SMS type**

- **SMS Deliver**

Select the **SMS Deliver** setting:

- 0 - No indications are routed
- 1 - Memory location is routed
- 2 - PDU is routed

- **SMS Status Report**

Select the **SMS Status Report** setting:

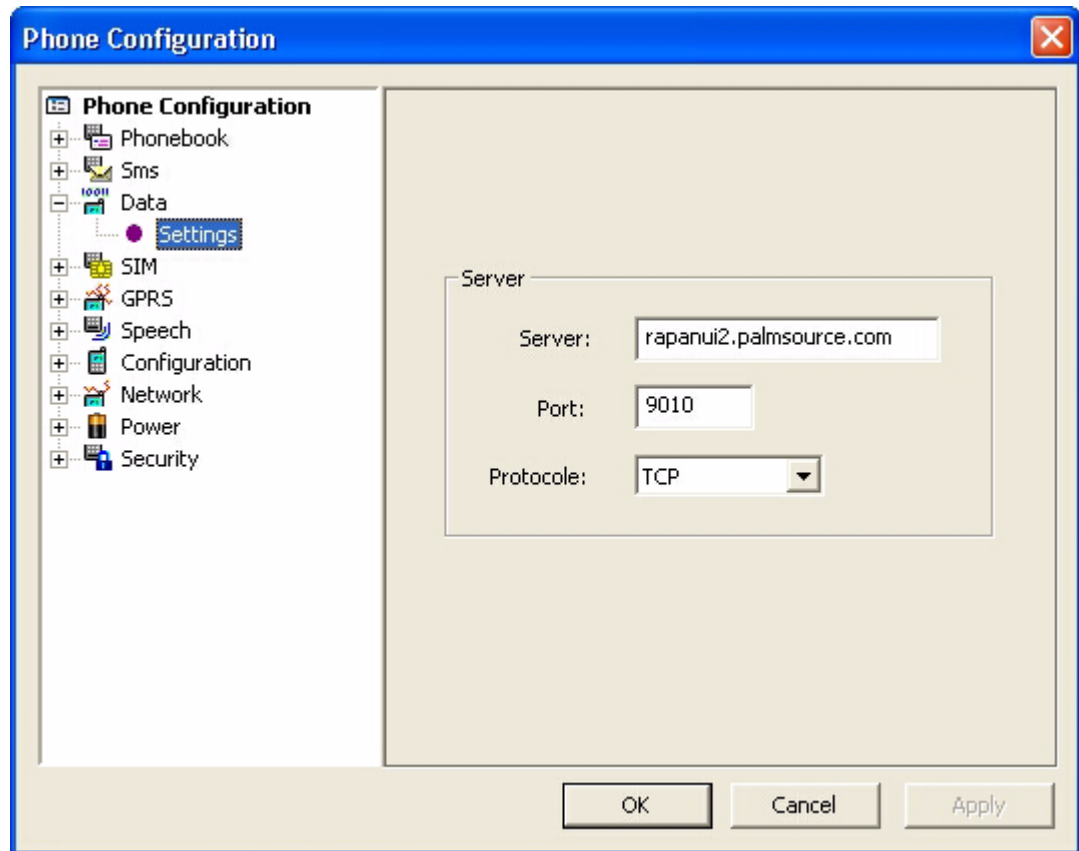
- 0 - No indications are routed
- 1 - Memory location is routed
- 2 - PDU is routed



## Data Settings

Data Settings, shown in [Figure 3.11](#), displays information about the server, server port, communication protocol.

**Figure 3.11 Data Settings**



### Server

These settings are used for data connections (GSM/GPRS). The server specified should be a valid TCP server.

- **Server**  
Enter the name of the server.
- **Port**  
Enter the port for the server.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

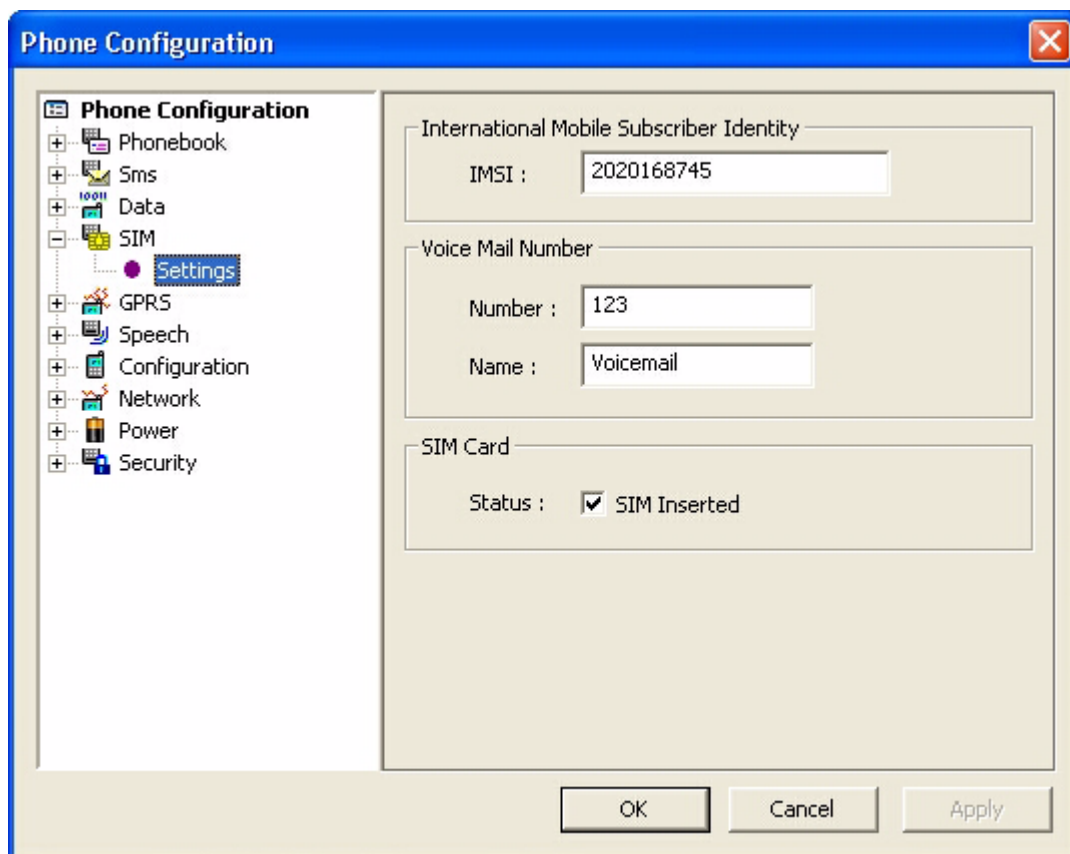
- **Protocol**

Select the communication protocol for the server.

## SIM Settings

SIM Settings, shown in [Figure 3.12](#), displays SIM properties for the phone you are emulating.

**Figure 3.12 SIM Settings**



### International Mobile Subscriber Identity

- **IMSI - International Subscriber Identity**

Enter the international mobile subscriber identity number corresponding to the SIM card.

### Voice Mail Number

- **Number**

Enter the voice mail number for the SIM card.

- **Name**

Enter the voice mail name for the SIM card.

### SIM Card

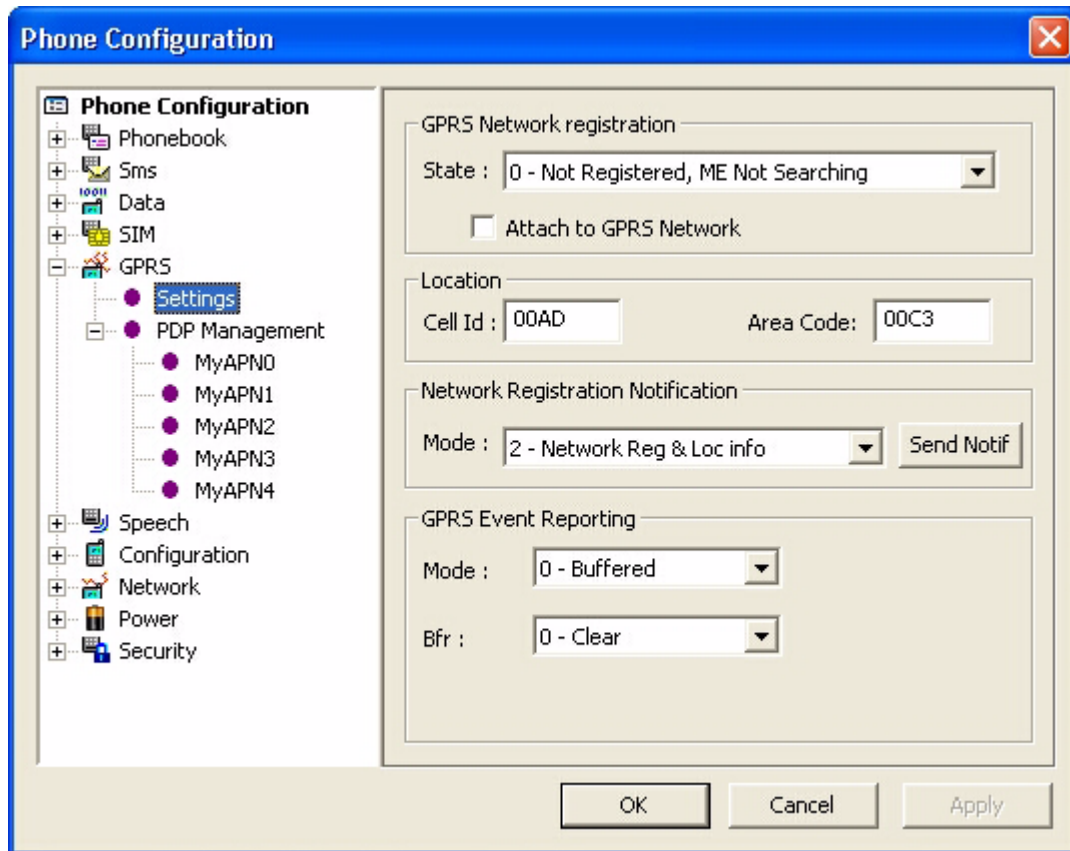
- **Status**

**Sim Inserted:** Select this setting to indicate whether the SIM card is in use for the emulation.

## GPRS Settings

GPRS Settings, shown in [Figure 3.13](#), displays GPRS properties for the phone you are emulating.

**Figure 3.13 GPRS Settings**



### GPRS Network registration

- **State**

Specify the network registration state for the Mobile Equipment (ME).

- 0 - Not Registered, ME Not Searching.

- 1 - Registered

Select this value if the highlighted network is registered to a provider (RegStat=1).

- 2 - Not Registered, ME Not searching

Select this value if the network is not registered (RegStat=2).

- 3 - Registration Denied

Select this value to simulate a denied registration (RegStat=3).

- 4 - Unknown

Select this value if the network is not recognized by Virtual Phone (RegStat=4).

- 5 - Registered, Roaming

Select this value if the network is registered as roaming (RegStat=5).

See `TelNwkGetNetworkName` in *Exploring Palm OS: Telephony and SMS*.

- **Attach to GPRS Network**

Select to indicate whether the phone is attached to the GPRS network.

### Location

- **Cell Id**

- Enter the value of the current cell. This value is a two-byte cell ID in hexadecimal format. See `TelNwkGetLocation` in *Exploring Palm OS: Telephony and SMS*.

- **Area Code**

- Enter the value of the cell's area code. This value is a two-byte location area code in hexadecimal format. See `TelNwkGetLocation` in *Exploring Palm OS: Telephony and SMS*.

### Network Registration Notification

- **Mode**

- Set the network registration notification state.

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

- 0 - None

Select this value to disable the network registration unsolicited results code.

- 1 - Network Reg.

Select this value to enable the network registration unsolicited results code.

- 2 - Network Reg. & Location Info

Select this value to enable the network registration and location information unsolicited results code.

- **Send Notif**

Click to send a network registration notification. Note that if you modify the Cell ID or Area Code information, you should click Apply before clicking Send Notif.

### **GPRS Event Reporting**

- **Mode**

Select the buffering mode for event reporting.

- 0 - Buffered
- 1 - Discard when On Line
- 2 - Buffer when On Line

- **Bfr**

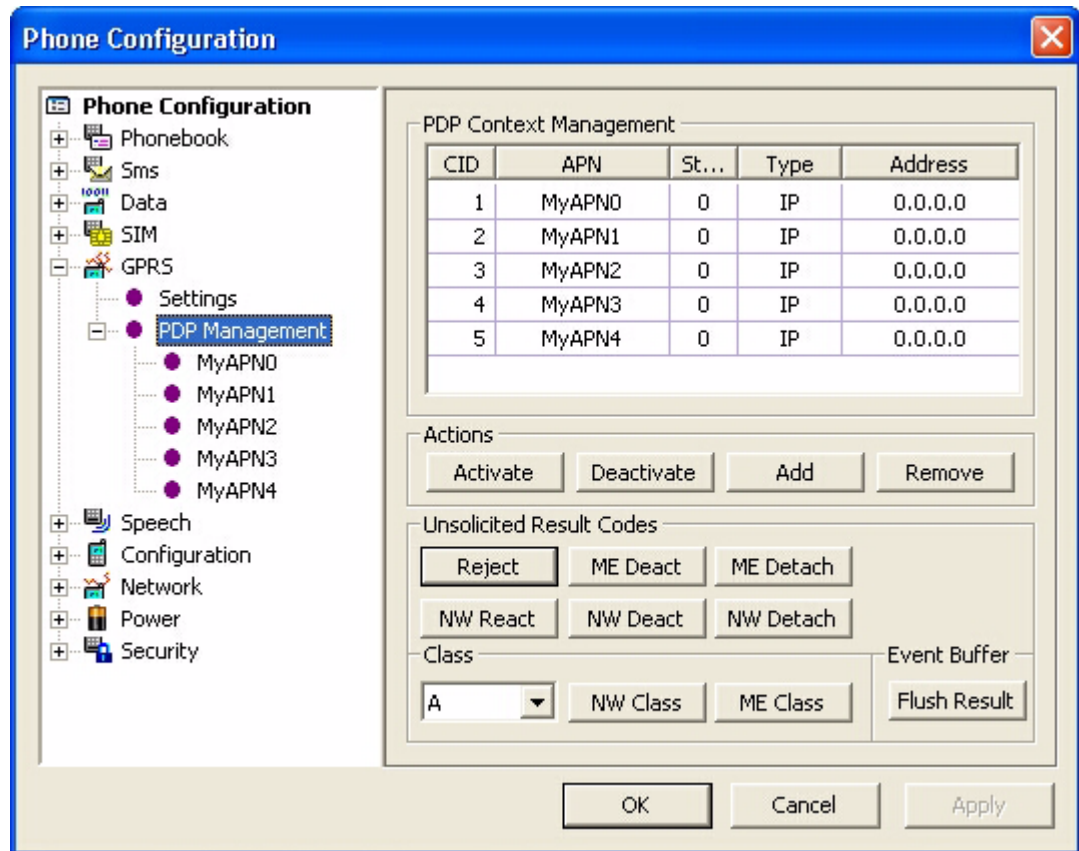
Select the buffer behavior.

- 0 - Clear
- 1 - Flush

## GPRS PDP Management

The Phone Configuration dialog box provides one settings page for overall settings, and an additional page for each APN specified.

**Figure 3.14 PDP Management**



### PDP Context Management

The table lists the APN definitions for this Virtual Phone session. The PDP parameters available depend on the selected PDP type.

#### Actions

- Activate
- Deactivate
- Add

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

- Remove

#### **Unsolicited Result Codes**

- Reject
- ME Deact
- ME Detach
- NW React
- NW Deact
- NW Detach

#### **Class**

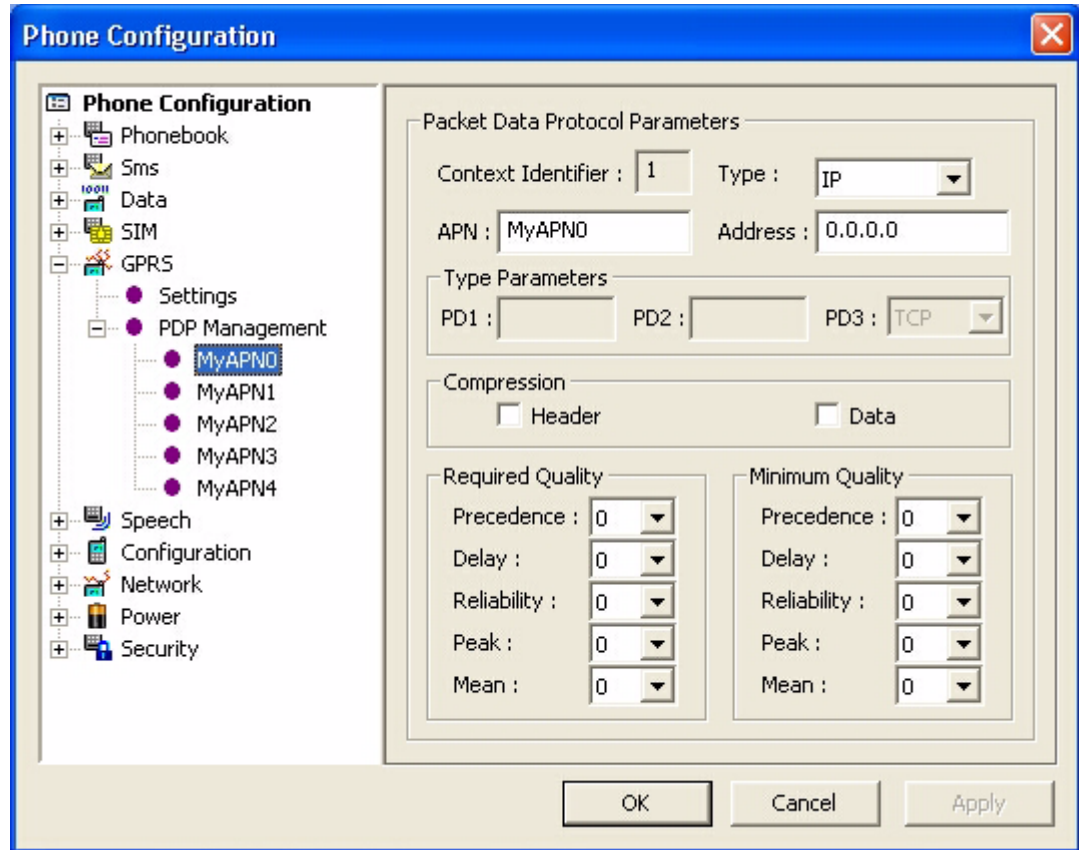
- Selection
- NW Class
- ME Class

#### **Event Buffer**

- Flush Result



**Figure 3.15 MyAPN**



Each APN defined has a page for defining packet data protocol parameters.

### Packet Data Protocol Parameters

- Context Identifier
- Type
- APN
- Address

### Type Parameters

- PD1
- PD2
- PD3

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

#### **Compression**

- Header
- Data

#### **Required Quality**

- Precedence
- Delay
- Reliability
- Peak
- Mean

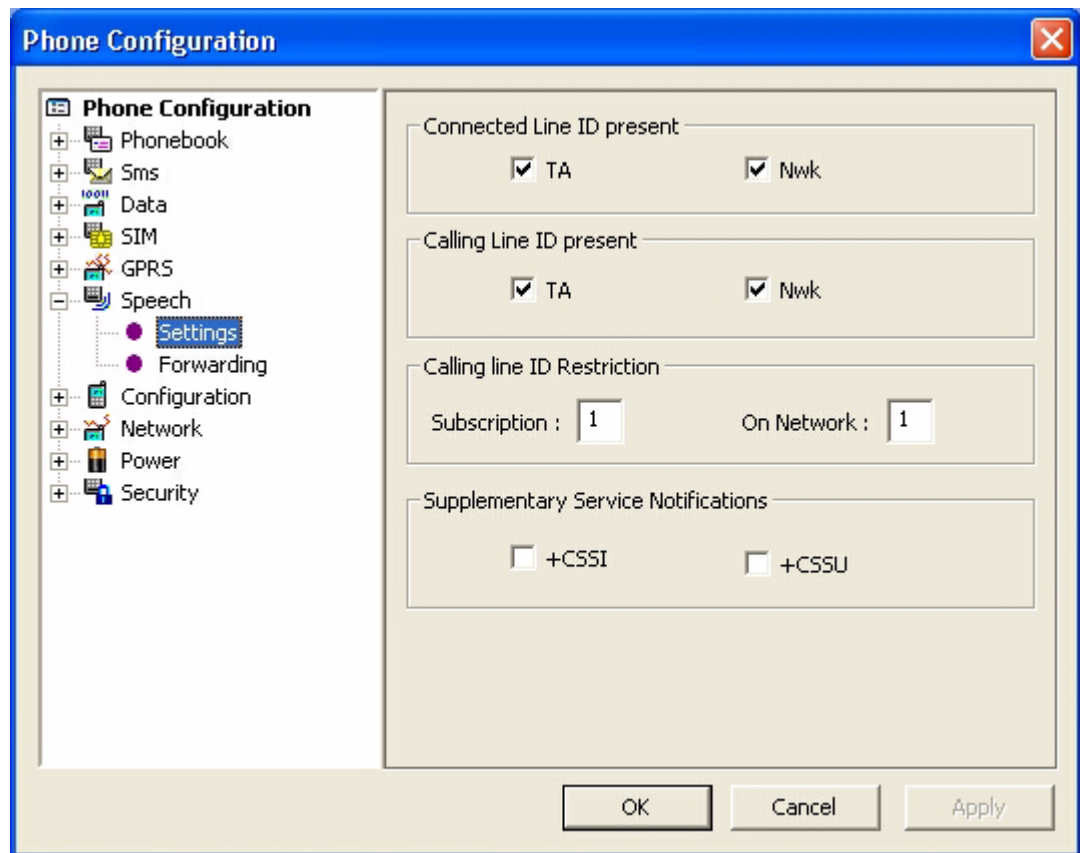
#### **Minimum Quality**

- Precedence
- Delay
- Reliability
- Peak
- Mean

## Speech Settings

Speech Settings, shown in [Figure 3.16](#), displays properties for speech calls.

**Figure 3.16** Speech Settings



### Connected Line ID present

- **TA**

Check to show the result code presentation status in the Terminal Adapter (TA) phone book.

- **Nwk**

Check to show the subscriber connected line identification presentation service status in the network phone book.

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

#### **Calling Line ID Present**

- **TA**

Check to show the result code presentation status in the Terminal Adapter (TA) phone book.

- **Nwk**

Check to show the subscriber connected line identification presentation service status in the network phone book.

#### **Calling Line ID Restriction**

- **Subscription**

Set according to the subscription of the calling line identification restriction service.

- **On Network**

Set to the subscriber calling line identification restriction service status in the network.

#### **Supplementary Service Notifications**

- **+CSSI**

Select to indicate whether +CSSI notifications are supported.

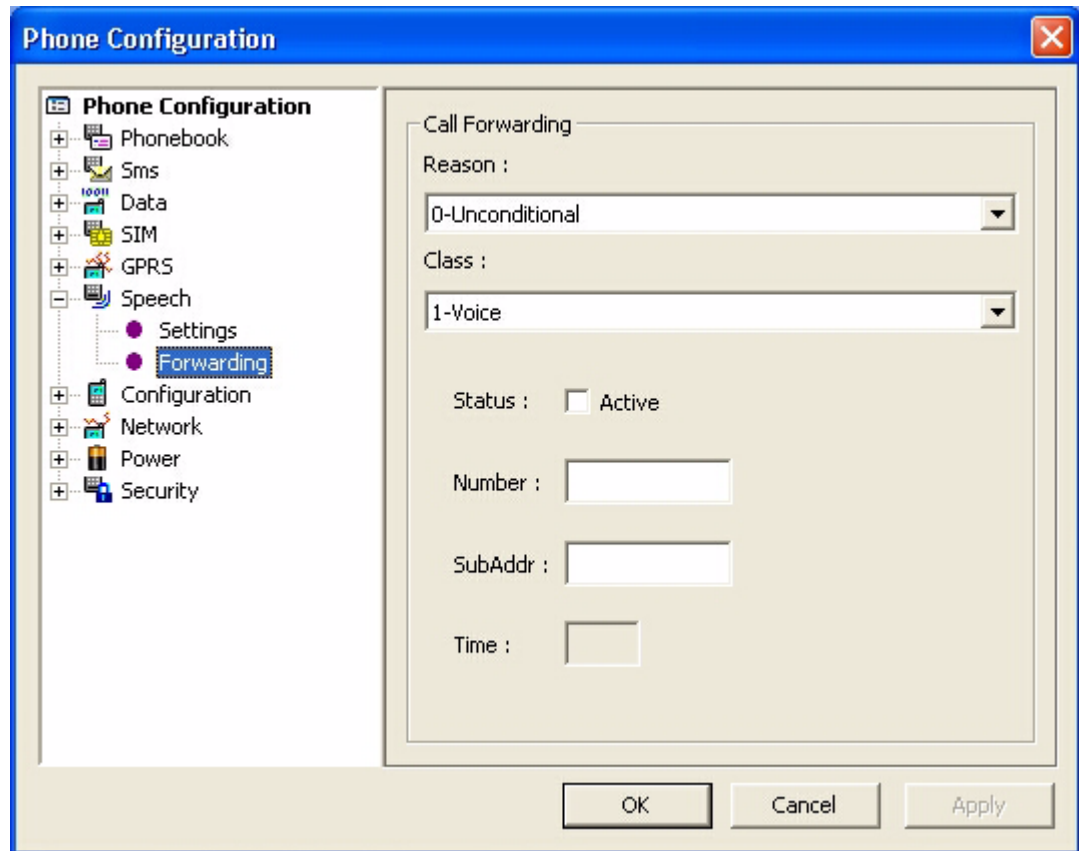
- **+CSSU**

Select to indicate whether +CSSU notifications are supported.

## Speech Forwarding

Speech Forwarding, shown in [Figure 3.17](#), displays information about call forwarding settings.

**Figure 3.17** Speech Forwarding



### Call Forwarding

- **Reason**

Select the reason for call forwarding:

- **Unconditional**

Select this option to forward always.

- **Busy**

Select this option to forward when the line is busy.

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

---

- **No Reply**

Select this option to forward when there is no reply.

- **Not Reachable**

Select this option to forward when the line is not reachable.

- **Class**

Select the call type that you want forwarded:

- **Voice**

Select this option to forward incoming voice calls.

- **Data**

Select this option to forward incoming data calls.

- **Fax**

Select this option to forward incoming fax calls.

- **Sms**

Select this option to forward incoming SMS messages.

- **Data Circuit Sync**

Select this option to forward incoming synchronous data service calls.

- **Data Circuit Async**

Select this option to forward incoming asynchronous data service calls.

- **Dedicated Packet Access**

Select this option to forward incoming dedicated packet access service calls.

- **Dedicated PAD Access**

Select this option to forward incoming dedicated PAD access service calls.

- **Status: Active**

Check to indicate that call forwarding is active.

- **Number**

Enter the phone number of the forwarding address.

- **SubAddr**

Enter the call forwarding subaddress.

- **Time**

Enter the time in seconds to wait before call is forwarded.

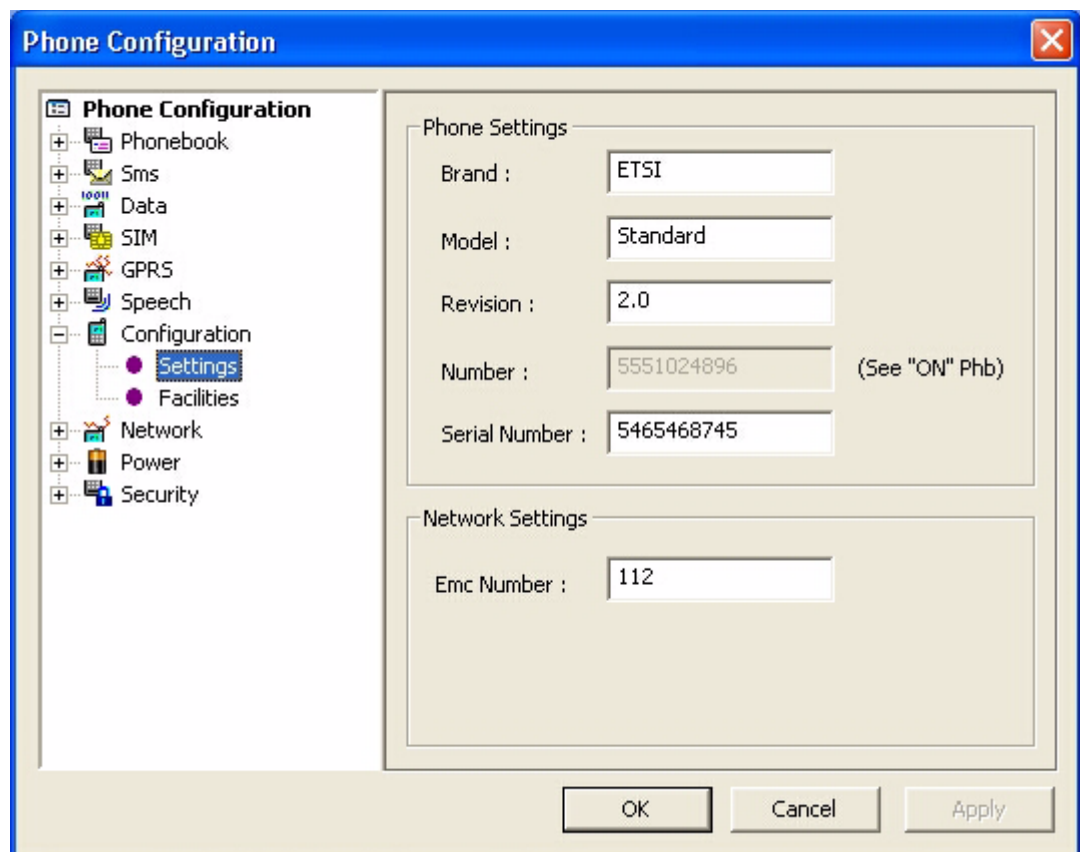
Note that this setting applies only when **Call forwarding by class** is set to **No Reply**.

### Configuration Settings

The Configuration Settings, shown in [Figure 3.18](#), provides access to basic Virtual Phone configuration parameters.

See the Information, Power, and Configuration Services in *Exploring Palm OS: Telephony and SMS* for further details.

**Figure 3.18 Configuration Settings**



## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

#### Phone Settings

Enter the information for the phone you want to emulate.

- **Brand**

Enter any name (limited to 30 alphanumeric characters). Use the function `TelInfGetInformation` to access this information. See the `TelInfGetInformation` function in *Exploring Palm OS: Telephony and SMS*.

- **Model**

Enter any model number (limited to 30 alphanumeric characters). Use the function `TelInfGetInformation` to access this information. See the `TelInfGetInformation` function in *Exploring Palm OS: Telephony and SMS*.

- **Revision**

Enter the revision number (limited to 30 alphanumeric characters). Use the function `TelInfGetInformation` to access this information. See the `TelInfGetInformation` function in *Exploring Palm OS: Telephony and SMS*.

- **Number**

Enter the Phone Number (limited to 30 alphanumeric characters) of the “virtual” mobile phone. See the `TelCgfGetPhoneNumber` function in *Exploring Palm OS: Telephony and SMS*.

- **Serial Number**

Enter the serial number of the phone you are emulating.

#### Network Settings

- **Emc Number**

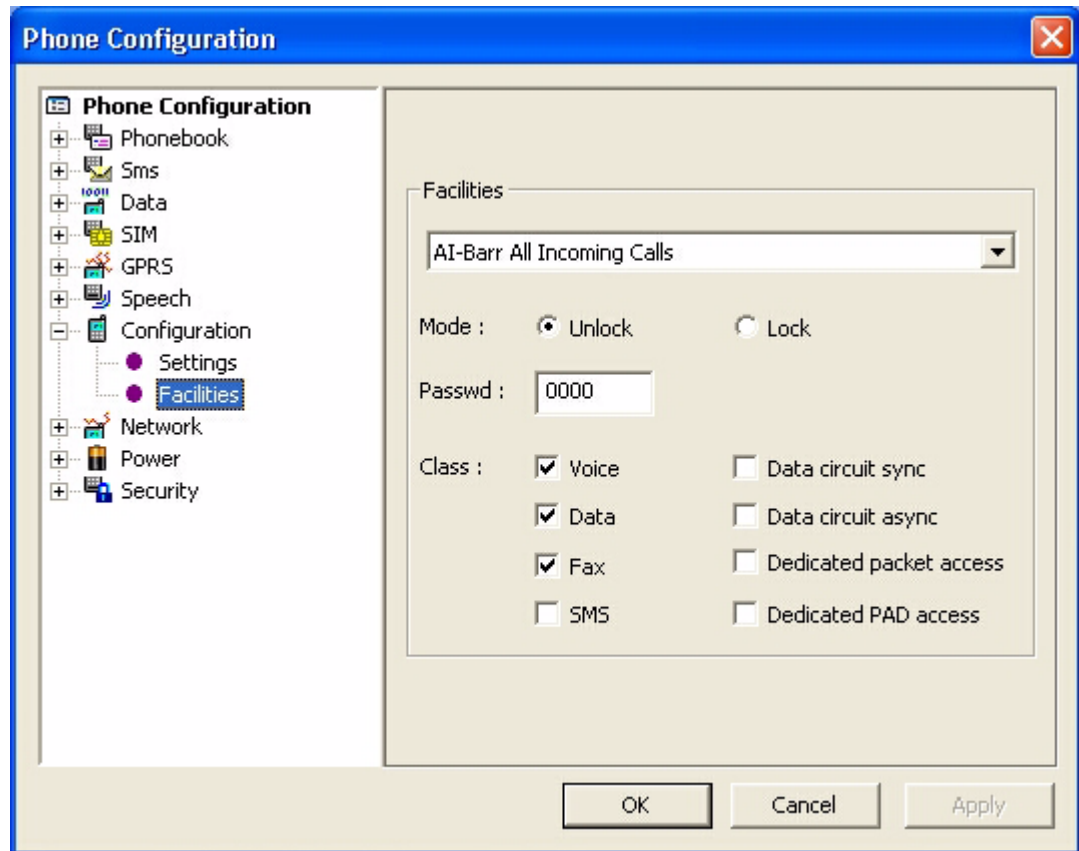
Enter the emergency call number.



## Configuration Facilities

Configuration Facilities, shown in [Figure 3.19](#), displays information about the current emulation session.

**Figure 3.19 Configuration Facilities**



### Facilities

- Select the facility from the list:
  - AI-Bar All Incoming Calls
  - AO-Bar All Outgoing calls
  - FD-SIM fixed dialing memory feature
  - IR-Bar incoming calls when roaming outside the home country

## Using Palm OS Virtual Phone

### *Phone Configuration Dialog Box*

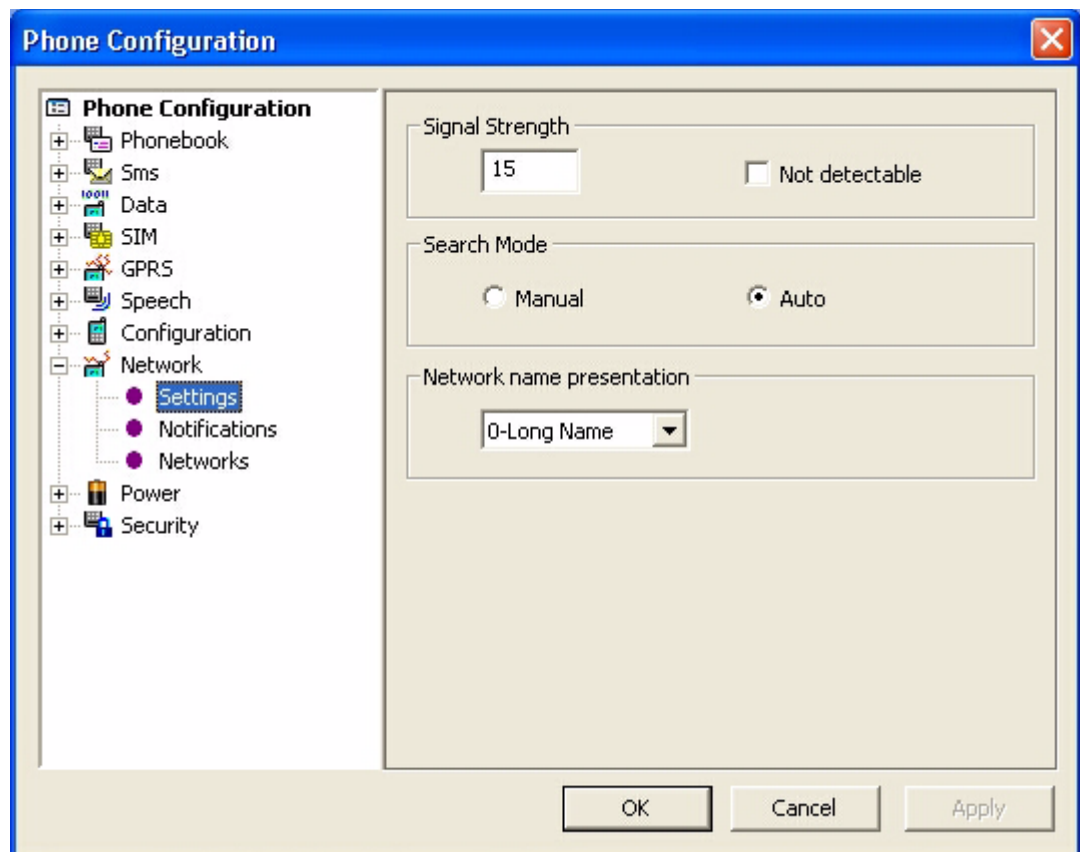
---

- OI-Bar Outgoing International calls
- OX-Bar Outgoing international calls eXcept to home country
- PF-Lock phone to the first inserted SIM card
- PS-Lock phone to SIM card
- SC-SIM asks for password in ME power-up
- **Mode**
- Select this value to indicate whether the facility lock is active.
- **Passwd**
- Enter the facility lock password.
- **Class**
- Select the class of information. Call barring facilities are based on GSM supplementary services (refer GSM 02.88 [6]). The interaction of these with other commands is based on other GSM supplementary services as described in the GSM standard. See the selection descriptions in the Call forwarding by class section.

## Network Settings

Network Settings, shown in [Figure 3.20](#), displays properties that simulate network-oriented services, including authorized networks, forbidden networks, current network, signal strength, and search mode.

**Figure 3.20** Network Settings



Set the parameters for the network you are emulating.

### Signal Strength

Set the signal level you want to test.

- **Entry field**

Enter a numeric value between 0 and 31, with 0 being no signal and 31 being the maximum signal strength. See

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

`TelNwkGetSignalLevel` in *Exploring Palm OS: Telephony and SMS*.

- **Not detectable**

If checked, Virtual Phone will issue a 99 for Signal Strength. As specified in the GSM Technical Specification. See `TelNwkGetSignalLevel` in *Exploring Palm OS: Telephony and SMS*.

### Search Mode

Select how you want Virtual Phone to select a network.

- **Manual**

Select this value if you want Virtual Phone to manually select a network

- **Auto**

Select this value if you want Virtual Phone to automatically select a network.

See `TelNwkGetSearchMode` in *Exploring Palm OS: Telephony and SMS*. See `kTelNwkManualSearch` in *Exploring Palm OS: Telephony and SMS*.

### Network name presentation

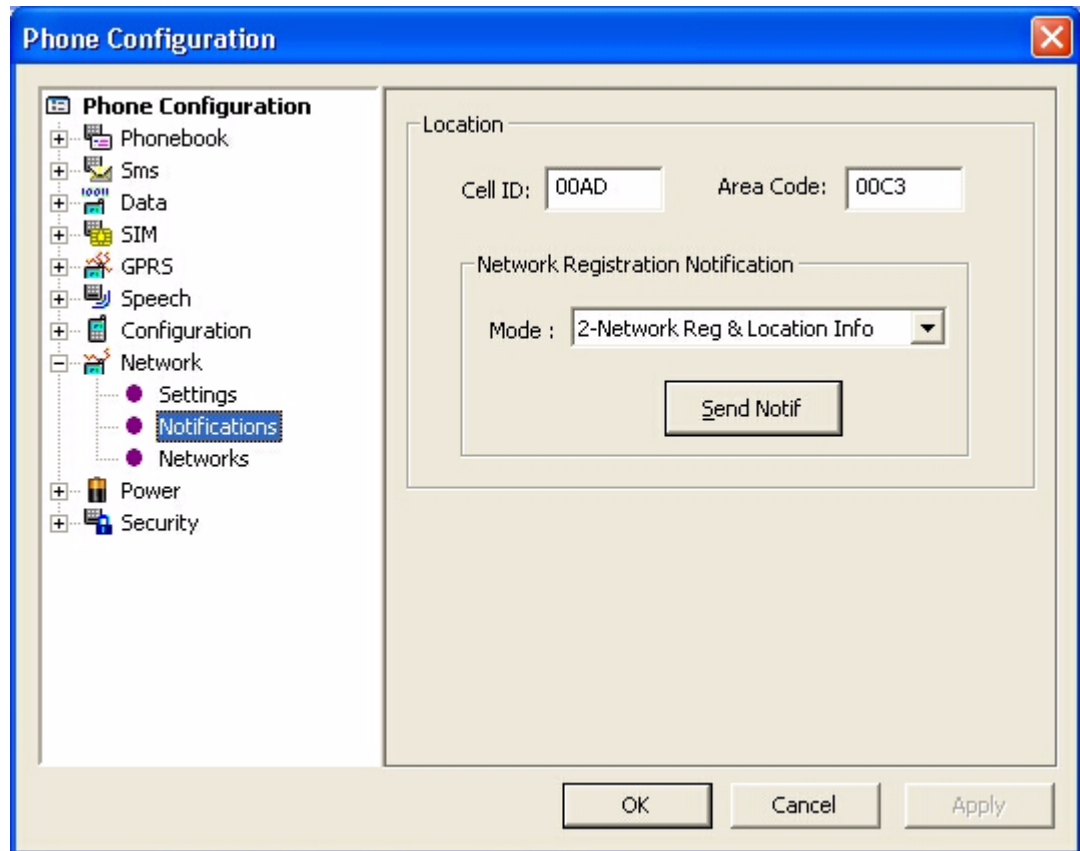
Select how you want the network name presented:

- 0-Long Name
- 1-Short Name
- 2-Numeric Name

## Network Notifications

Network Notifications, shown in [Figure 3.21](#), displays information about the network location and registration notifications.

**Figure 3.21 Network Notifications**



### Location

Set the location information for the current cell and its area code.

- **Cell Id**

Enter the value of the current Cell. This value is a two-byte cell ID in hexadecimal format. See `TelNwkGetLocation` in *Exploring Palm OS: Telephony and SMS*.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

- **Area Code**

Enter the value of the Cell's area code. This value is a two-byte location area code in hexadecimal format. See `TelNwkGetLocation` in *Exploring Palm OS: Telephony and SMS*.

#### **Network Registration Notification State**

Set the network registration notification state.

- **0 - None**

Select this value to disable the network registration unsolicited results code.

- **1 - Network Reg.**

Select this value to enable the network registration unsolicited results code.

- **2 - Network Reg. & Location Info**

Select this value to enable the network registration and location information unsolicited results code.

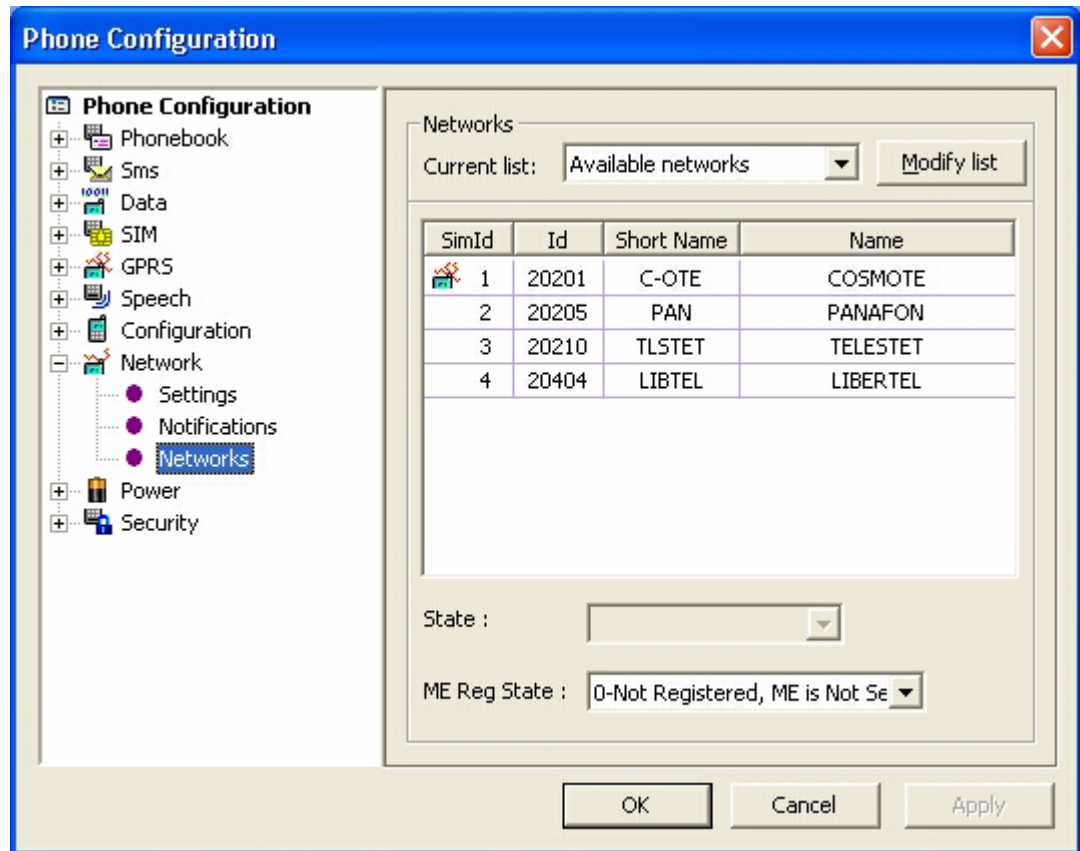
- **Send Notif button**

Click to send a network registration notification. Note that if you modify the Cell ID or Area Code information, you should click **Apply** before clicking **Send Notif**.

## Network Networks

Network Networks, shown in [Figure 3.22](#), displays information about the networks used for this Virtual Phone session.

**Figure 3.22 Network Networks**



See the Telephony Network section in *Exploring Palm OS: Telephony and SMS* for further details.

### Networks

Specify the networks for your phone.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

- **Current List**

Select a list of network from either the **Available Networks** list or the **Preferred Networks** list. Select **Modify List** to display the Network List Management dialog box.

A network is defined by its **SimId**, **Id**, **Short Name** and **Name**. Virtual Phone stores these values in the AvailableNwk.db file. See AvailableNwk.db file, in the NWK section, variable name Num. See TelNwkGetNetworks in *Exploring Palm OS: Telephony and SMS*.

- **SimId**

The order number of the operator in the SIM available/preferred operator list.

- **Id**

This is a hexadecimal value five digits long. The first three digits represent the country code; the next two digits represent the network name. The normal numeric format is the GSM Location Area Identification number, which consists of a three-digit (BCD) country code plus a two-digit (BCD) network code.

See the AvailableNwk.db or PreferredNwk.db file, in the NWK section, variable name Id. See TelNwkGetNetworks in *Exploring Palm OS: Telephony and SMS*.

- **Short Name**

An abbreviation of the **Name** with a maximum 8 alphanumeric characters. See the AvailableNwk.db or PreferredNwk.db file, in the NWK section, variable name Sname.

- **Name**

The normal maximum value for name is 16 alphanumeric characters. Some operators restrict this value to 6 or 8 characters, while some networks allow more than 16 characters for the long name. See the AvailableNwk.db or PreferredNwk.db file, in the NWK section, variable name Lname. See TelNwkGetNetworks in *Exploring Palm OS: Telephony and SMS*.

See TelNwkGetNetworks in *Exploring Palm OS: Telephony and SMS*.



- **State**

Select the state of the network that is selected in the table. There are four options:

- **Unknown**

Select this value if the network unknown (Stat=0).

- **Available**

Select this value if the selected network is available (Stat=1).

- **Current**

Select this value if the highlighted network is currently selected (Stat=2).

- **Forbidden**

Select this value if the network is unavailable for security reasons (Stat=3).

See the AvailableNwk.db or PreferredNwk.db file, in the NWK section, variable name Stat. See TelNwkSelectNetwork in the Telephony Manager chapter in *Exploring Palm OS: Telephony and SMS*.

- **ME Reg State**

Select the ME (Mobile Equipment, that is the GSM phone) network registration status.

- **1 - Registered**

Select this value if the highlighted network is registered to a provider (RegStat=1).

- **2 - Not Registered, ME Not searching**

Select this value if the network is not registered (RegStat=2).

- **3 - Registration Denied**

Select this value if the network is secured and registration is rejected (RegStat=3).

- **4 - Unknown**

Select this value if the network is not recognized by Virtual Phone (RegStat=4).

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

#### – 5 - Registered, Roaming

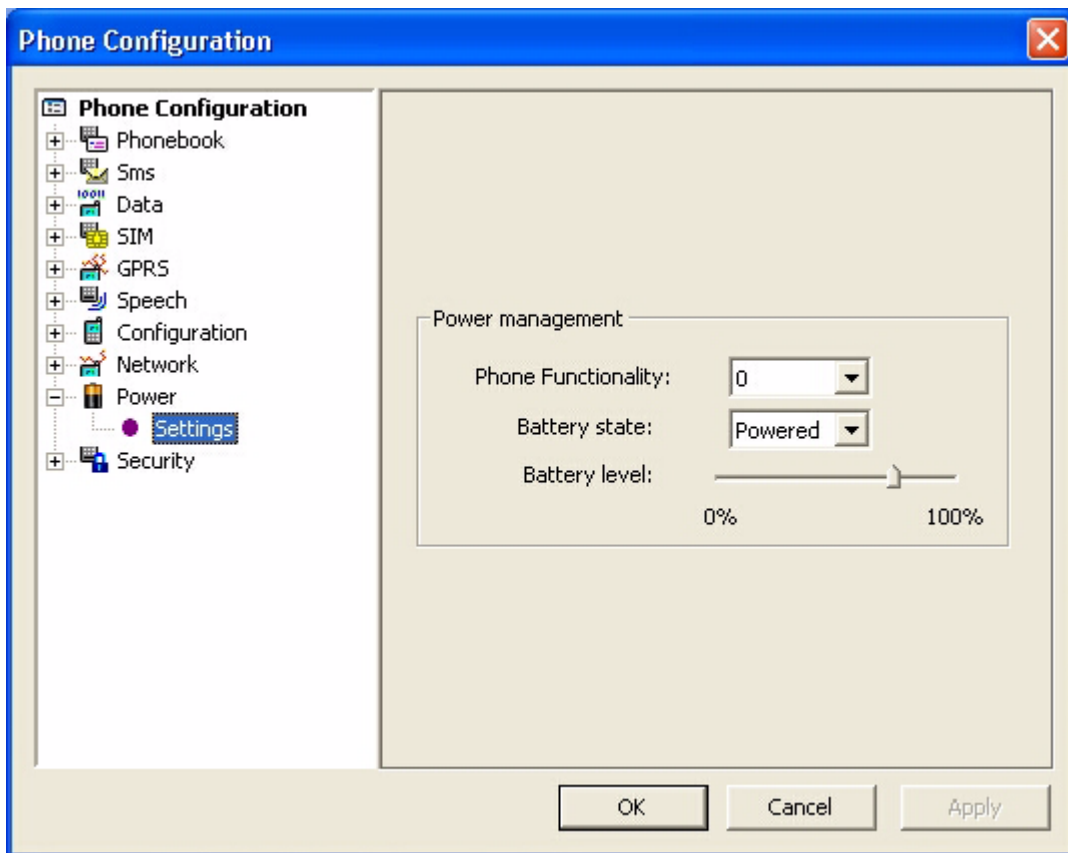
Select this value if the network is registered as roaming (RegStat=5).

See TelNwkGetNetworkName in *Exploring Palm OS: Telephony and SMS*.

## Power Settings

Use Power Settings, shown in [Figure 3.23](#), to enter the power information for the phone you are emulating.

**Figure 3.23** Power Settings



### Power management

- **Phone Functionality Value**

Enter a number indicating the phone functionality status as defined in ETSI standard (see AT+CFUN command).

- **Battery state**

Enter the battery conditions you are testing.

- **Powered**

Select to indicate that the battery is present and that the Battery Level setting should be taken into consideration.

- **Not Powered**

Select to indicate that the battery is present but its power level is zero.

- **No Battery**

Select to indicate that no battery is present.

- **Battery Fault**

Select to simulate a battery fault condition.

See `TelPowGetBatteryStatus` in *Exploring Palm OS: Telephony and SMS*.

- **Battery level**

Select the battery range from 0% (for no power) to 100% (for full power). See `TelPowGetPowerLevel` in *Exploring Palm OS: Telephony and SMS*.

### Security Codes

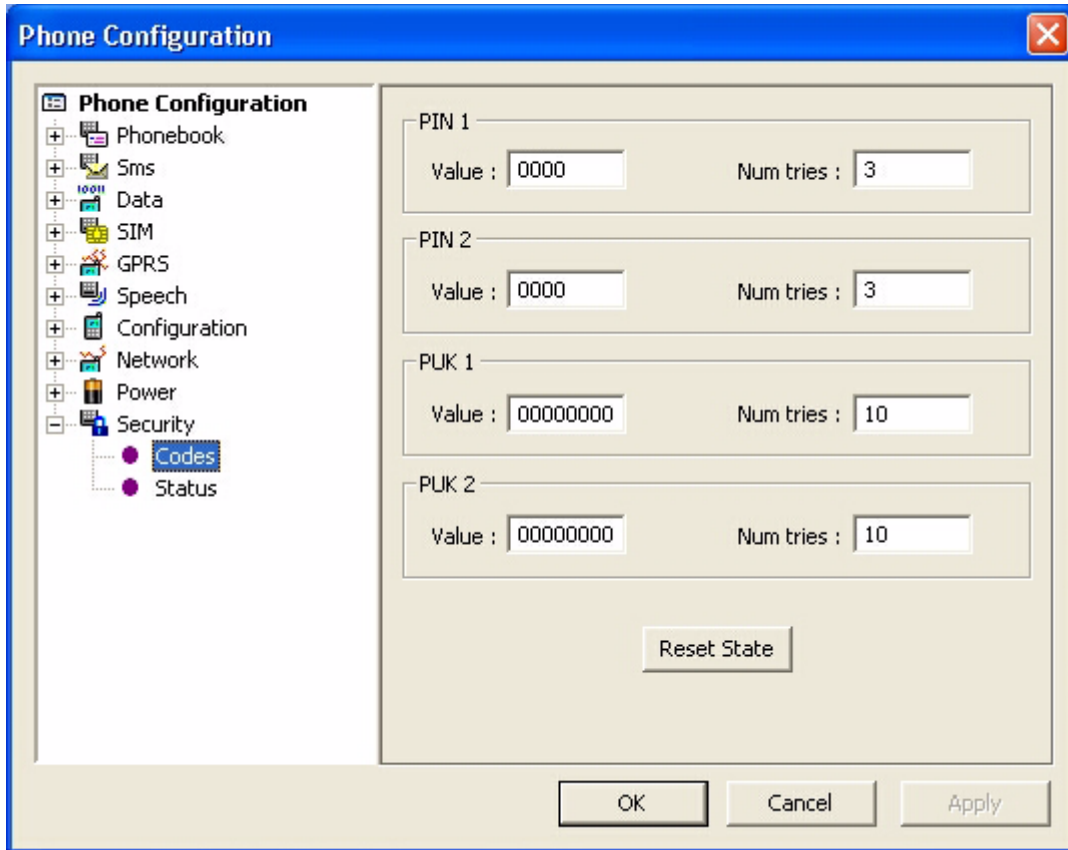
Security Codes, shown in [Figure 3.24](#), displays information about security settings used for this emulation session.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

**Figure 3.24 Security Codes**



You can change the values of these codes using Telephony Manager functions or directly in this dialog box. To change an authentication code, see `TelStyChangeAuthenticationCode` in *Exploring Palm OS: Telephony and SMS*.

#### **PIN 1**

- Value

Enter the primary Personal Identification Number (PIN), between 4-digits and 8-digits long. See `TelStyEnterAuthenticationCode` in *Exploring Palm OS: Telephony and SMS*.

- Num tries

Enter the number of times that a user can attempt to enter the PIN 1 value.

### **PIN 2**

- Value

Enter the secondary Personal Identification Number between, 4-digits and 8-digits long. See `TelStyEnterAuthenticationCode` in *Exploring Palm OS: Telephony and SMS*.

- Num tries

Enter the number of times that a user can attempt to enter the PIN 2 value.

### **PUK 1**

- Value

Enter the primary Personal Universal Key (PUK). This value is a mandatory 8-digits long. See `TelStyEnterAuthenticationCode` in *Exploring Palm OS: Telephony and SMS*.

- Num tries

Enter the number of times that a user can attempt to enter the PUK 1 value.

### **PUK 2**

- Value

Enter the secondary Personal Universal Key (PUK). This value is a mandatory 8-digits long. See `TelStyEnterAuthenticationCode` in *Exploring Palm OS: Telephony and SMS*.

- Num tries

Enter the number of times that a user can attempt to enter the PUK 2 value.

### **Reset State**

Click to reset the security values to the default state.

### **Security Status**

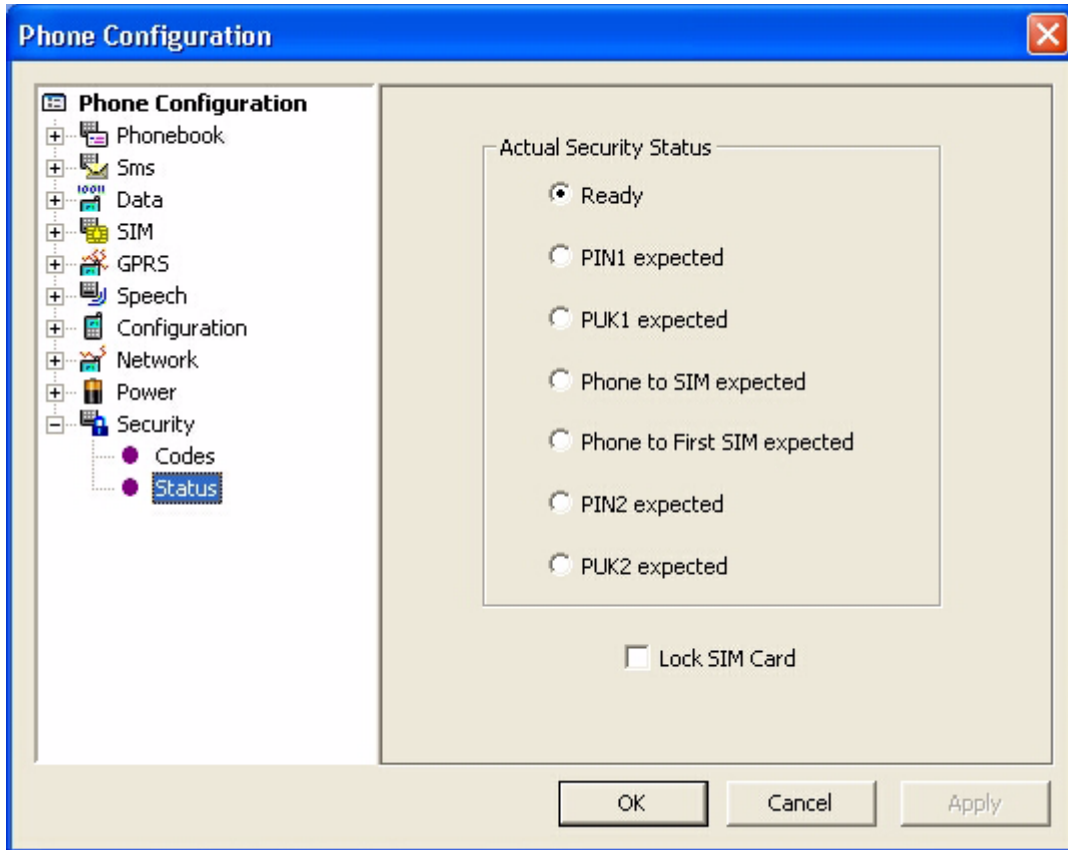
Use Security Status to set the security for this Virtual Phone session.

## Using Palm OS Virtual Phone

### Phone Configuration Dialog Box

---

**Figure 3.25 Security Status**



#### Actual Security Status

Enter the security state of the phone. See `TelStyGetAuthenticationState` in *Exploring Palm OS: Telephony and SMS*.

- **Ready**

Select this value if Virtual Phone is ready to receive AT commands. `State=0`.

In this state, Virtual Phone answers “Ready” to any `+CPIN?` command, and does not apply PIN Security before answering other AT commands.

See `kTelStyReady` in *Exploring Palm OS: Telephony and SMS*.

- **PIN1 expected**

Select this value to indicate that Virtual Phone should expect a primary Personal Identification Number (PIN). `State=1`. See `kTelStyPin1CodeId` in *Exploring Palm OS: Telephony and SMS*.

- **PUK1 expected**

Select this value to indicate that Virtual Phone should expect the primary Personal Universal Key (PUK). `State=3`. See `kTelStyPuk1CodeId` in *Exploring Palm OS: Telephony and SMS*.

- **Phone to SIM expected**

Select this value to indicate that Virtual Phone should expect the Phone to Subscriber Identification Module (SIM) code. `State=5`. See `kTelStyPhoneToSimCodeId` in *Exploring Palm OS: Telephony and SMS*.

- **Phone to First SIM expected**

Select this value to indicate that Virtual Phone should expect the Phone to First SIM Key (PH-FSIM PIN).

- **PIN2 expected**

Select this value to indicate that Virtual Phone should expect a secondary Personal Identification Number (PIN). `State=2`. See `kTelStyPin2CodeId` in *Exploring Palm OS: Telephony and SMS*.

- **PUK2 expected**

Select this value to indicate that Virtual Phone should expect the secondary Personal Universal Key (PUK). `State=4`. See `kTelStyPuk2CodeId` in *Exploring Palm OS: Telephony and SMS*.

### **Lock SIM Card**

Check to activate PIN1 security.

# Service Configuration Dialog Box

To open the Service Configuration dialog box, select **Tools > Services**. The Service Configuration dialog box displays settings for PhoneBook, SMS, and Speech.

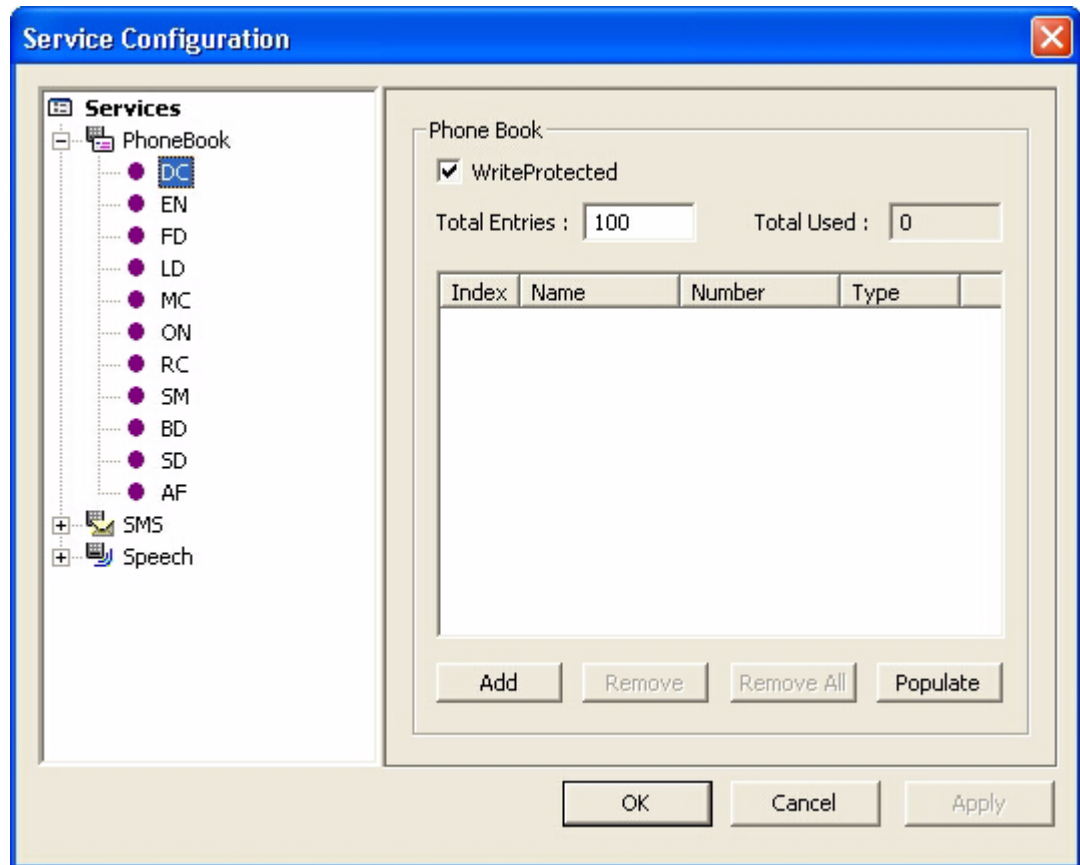
- [PhoneBook](#) . . . . . 63
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- [Speech Manage Calls.](#) . . . . . 74



## PhoneBook

The PhoneBook page, shown in [Figure 3.26](#), displays information about each of the active phonebooks.

**Figure 3.26 PhoneBook**



See `TelPhbGetAvailablePhonebooks` in *Exploring Palm OS: Telephony and SMS* for information on phone books.

- **Write Protected**

Check to indicate that the phone book is write protected.

- **Total Entries**

Enter the maximum number of entries allowed in the phone book.

## Using Palm OS Virtual Phone

### *Service Configuration Dialog Box*

---

- **Total Used**

Enter the number of entries used in the phonebook.

- **Add** button

To manually add an entry in the phone book, click **Add**. This generates an index entry for the item, and you can click on the fields in the table to add data.

- **Remove** button

To remove an entry, select the entry and click **Remove**.

- **Remove All** button

To remove all entries in the phone book, click **Remove All**.

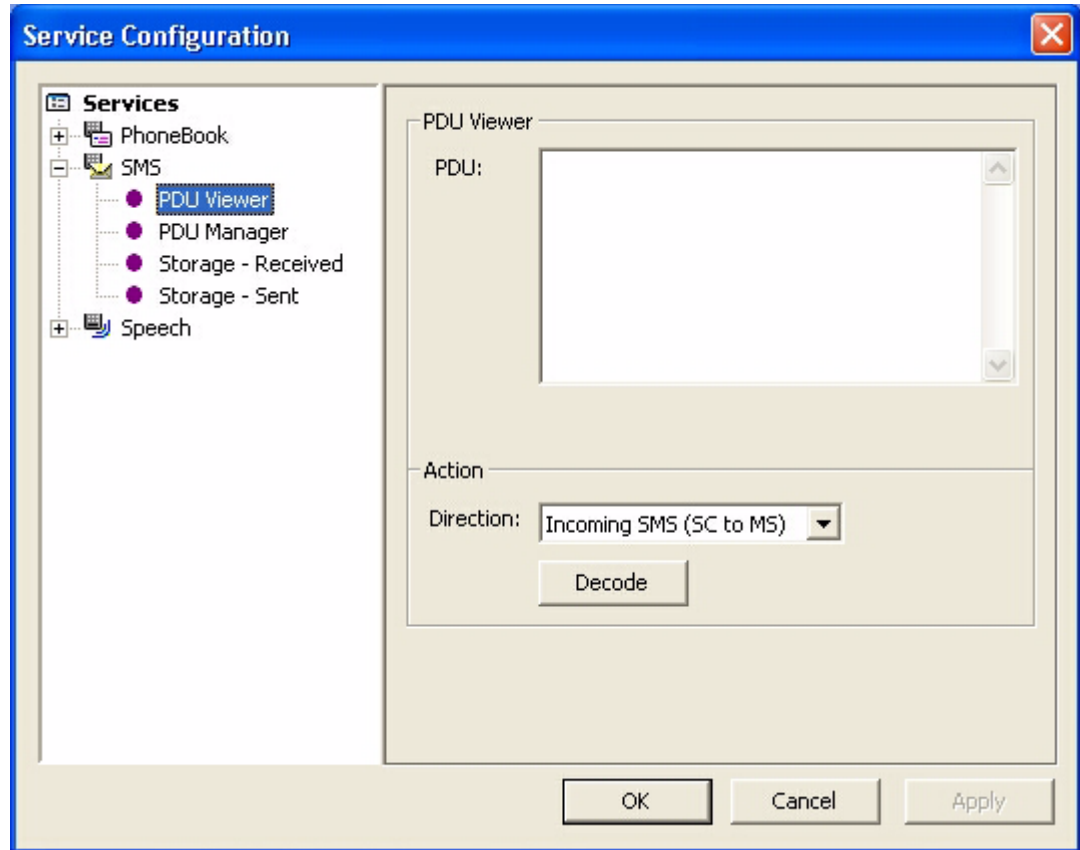
- **Populate** button

To add random data to the phone book, click **Populate**.

## SMS PDU Viewer

Use PDU Viewer, shown in [Figure 3.27](#), to create a new SMS delivery message, which is an SMS message received by Virtual Phone from the GSM network. The message is stored in the first available location in the `SmsStore.db` file.

**Figure 3.27 PDU Viewer**



### **PDU Viewer**

- **PDU**

Enter the PDU (Protocol Data Unit) for this message.

### **Action**

- **Direction**

Select whether this is an incoming message or an outgoing message.

- **Incoming SMS (SC to MS)** - Select if this is an incoming message.
- **Outgoing SMS (MS to SC)** - Select if this is an outgoing message.

## Using Palm OS Virtual Phone

*Service Configuration Dialog Box*

---

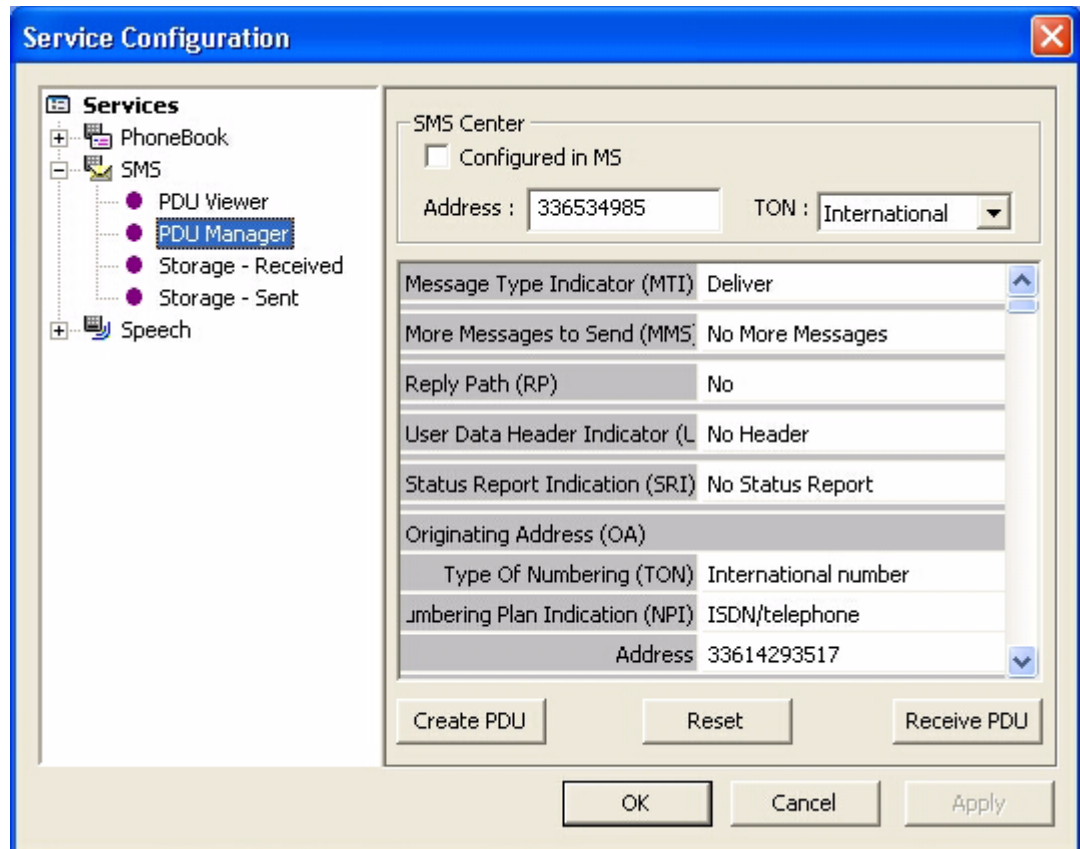
- **Decode**

Click to decode this message.

## SMS PDU Manager

Use the PDU Manager page to set options for the SMS Center.

**Figure 3.28 PDU Manager**



### SMS Center

- **Configured in MS**

Check to indicate that the SMS Center is configured in the MS (Mobile Station).

- **Address**

Enter the address of the SMS Center. This option is available when the **SMS Center is configured in MS** checkbox is not selected.

## Using Palm OS Virtual Phone

### *Service Configuration Dialog Box*

---

- **TON**

Select the “Type of Numbering (TON)” phone number format:

- **Unknown - Address octet 129 ISDN**
- **International - Address octet 145 ISDN**
- **National - Address octet 161 ISDN**

- **Message Parameters**

Enter the other message data in the scrollable table.

- **Create PDU button**

Click to create a PDU.

- **Reset**

Click to reset the data to the default data.

- **Receive PDU button**

Click to receive a PDU.

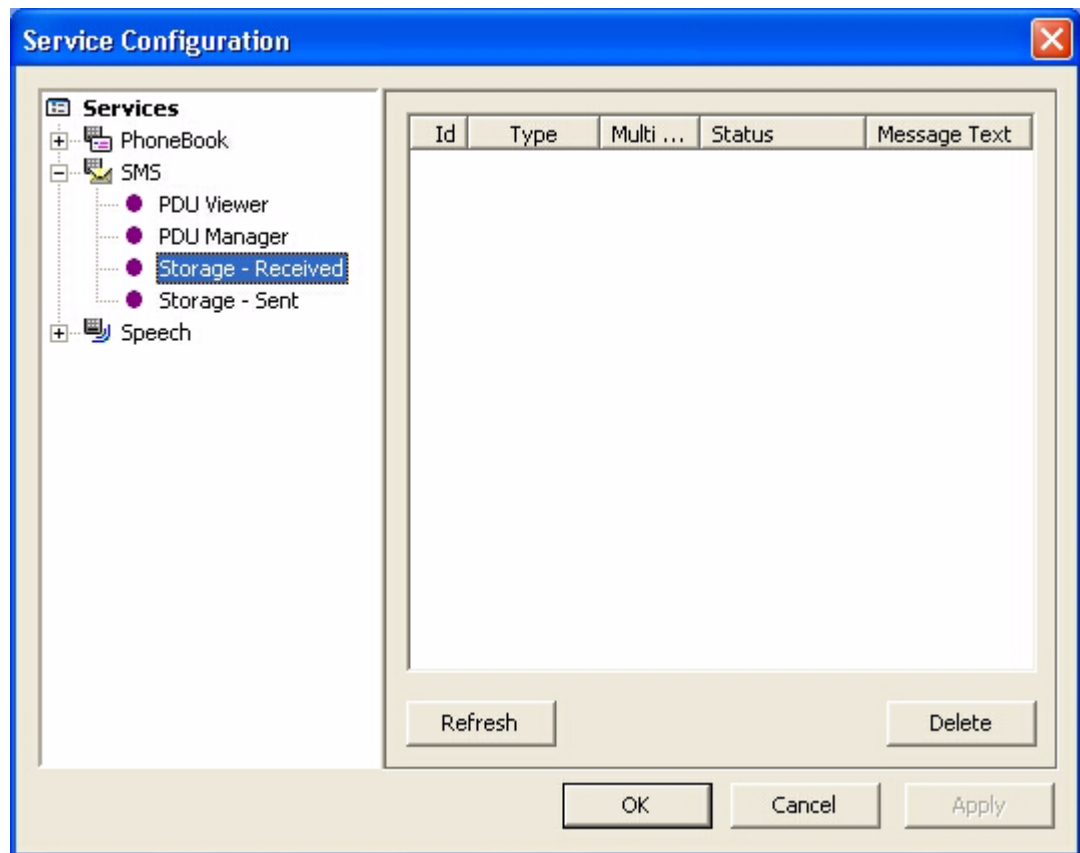
With the default Virtual Phone configuration, you can create a standard SMS message by clicking **Receive PDU**. Virtual Phone creates a Class 1 SMS text message with the text “Hello world!”

To create a multiple-part SMS message, simply add enough characters to the message.

## SMS Storage - Received

The Storage - Received page keeps a record of SMS messages you have received.

**Figure 3.29** Storage - Received



### Messages

- **Id**  
The identification number of the message.
- **Type**  
The message type.

## Using Palm OS Virtual Phone

### *Service Configuration Dialog Box*

---

- **Multi Part**

Indicates whether the SMS is composed of several parts. For a single-part message, the field says `None`. For a multiple-part message, the field contains a relative number indicating the part displayed, such as 1 / 3 for the first part of a three-part message.

- **Status**

Indicates the status of the message: received unread, received read, stored unsent, or stored sent.

- **Message Text**

Content of the SMS message.

- **Refresh button**

Click to refresh the messages table.

- **Delete button**

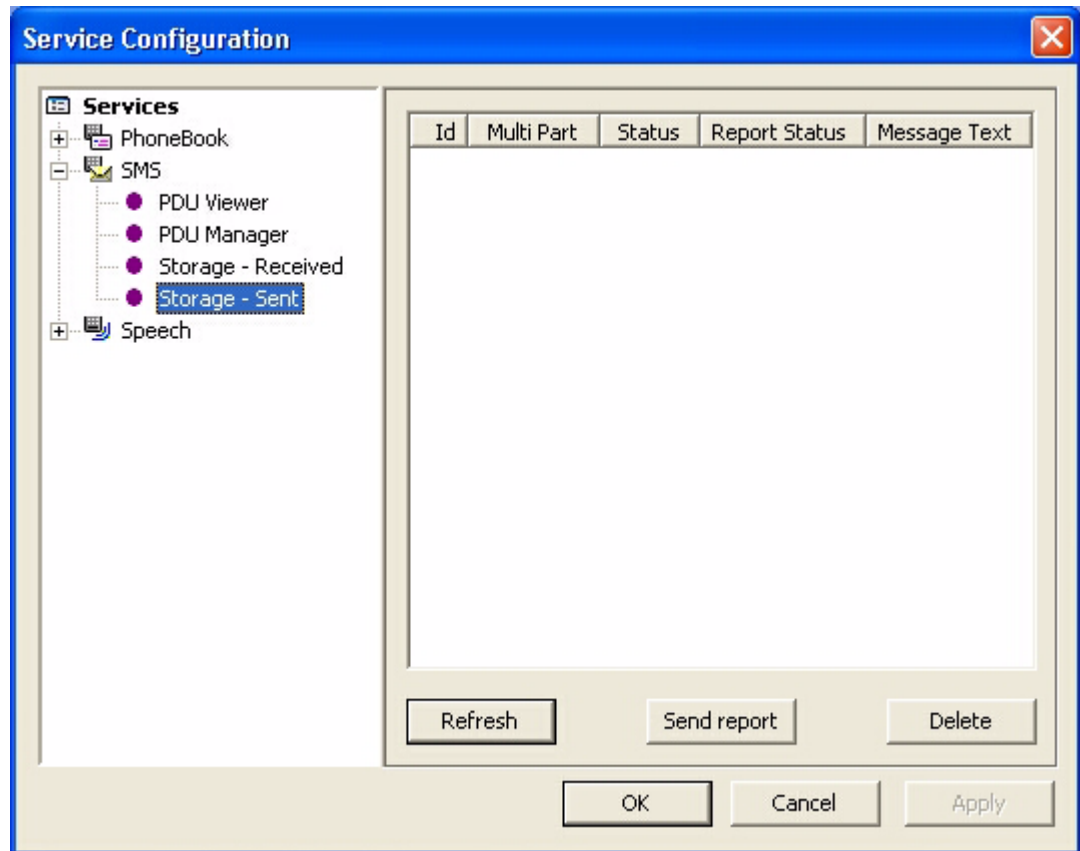
Click to delete a selected message. To select a message, either use CTRL+A or else CTRL-click the message.



## SMS Storage - Sent

The Storage - Sent page keeps a record of SMS messages you have sent.

**Figure 3.30 Storage - Sent**



### Messages

- **Id**  
The identification number of the message.
- **Multi Part**  
The SMS is composed of several parts.

## Using Palm OS Virtual Phone

### *Service Configuration Dialog Box*

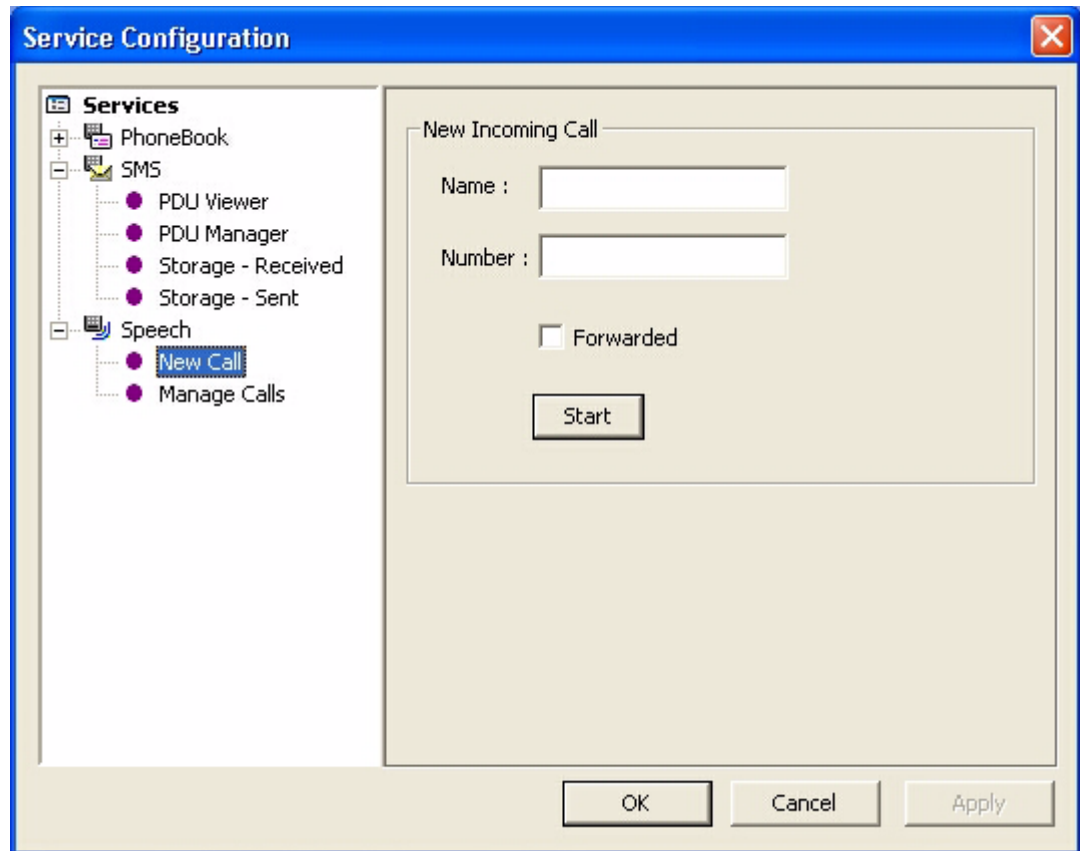
---

- **Status**  
Indicates the status of the message: received unread, received read, stored unsent, or stored sent.
- **Report Status**  
The SMS contains a status report request.
- **Message Text**  
Content of the SMS message.
- **Refresh List button**  
Click to refresh the messages table.
- **Send Report button**  
Click to send an SMS status report for the selected SMS message (if applicable).
- **Delete button**  
Click to delete a selected message. To select a message, either use CTRL+A or else CTRL-click the message.

## Speech New Call

Use the New Call page to create a new call.

**Figure 3.31 New Call**



### New Incoming Call

- **Name**  
Enter the name for the incoming call.
- **Number**  
Enter the phone number for the incoming call.
- **Forwarded**  
Check if you want this call treated as a forwarded incoming call.

## Using Palm OS Virtual Phone

### *Service Configuration Dialog Box*

---

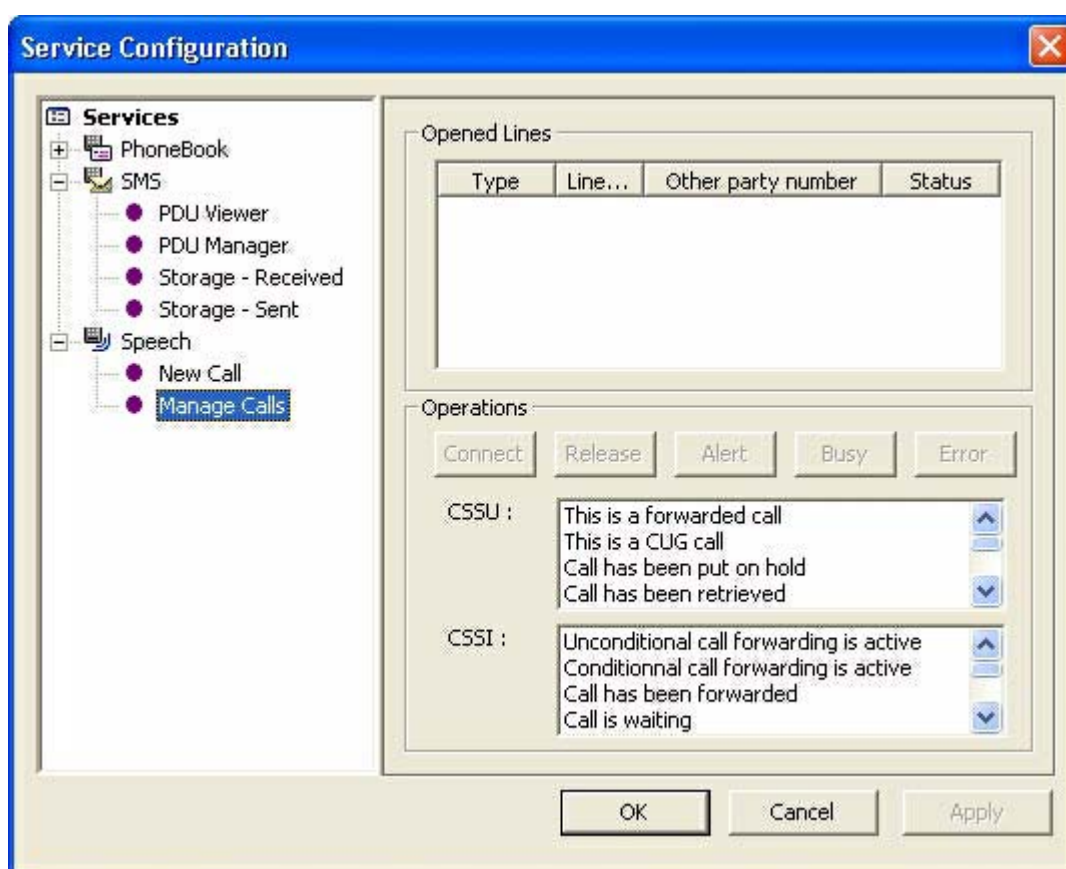
- **Start**

Click to make the call you have created.

## Speech Manage Calls

The Manage Calls page allows you to change the state of calls that you have placed or received.

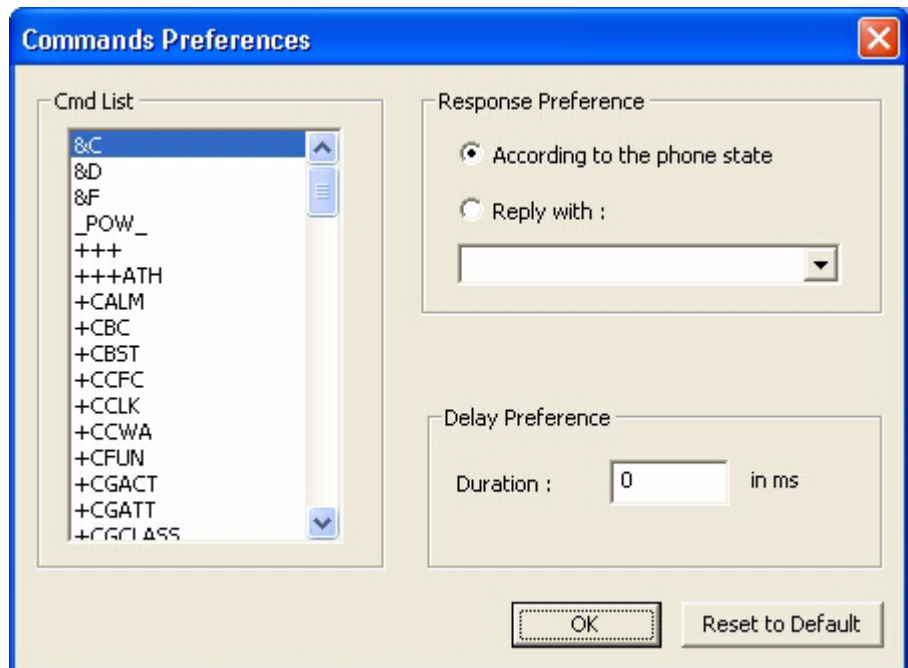
**Figure 3.32 Manage Calls**



## Response Preferences Dialog Box

To open the Response Preferences dialog box, select **Tools > Response Preferences**. Use this screen to select an error which will systematically be returned by a service.

**Figure 3.33 Response Preferences Dialog Box**



The following list associates a Virtual Phone service to a Telephony Manager function as supported by a standard GSM phone driver.

**Table 3.1 Virtual Phone Services and Telephony Manager Functions**

Services	Associated Functions
Accept Call	TelSpcAcceptCall
Add Entry	TelPhbAddEntry
Auto Operator Select	TelNwkSetSearchMode
Call Number	TelSpcCallNumber

## Using Palm OS Virtual Phone

*Response Preferences Dialog Box*

---

**Table 3.1 Virtual Phone Services and Telephony Manager Functions (*continued*)**

<b>Services</b>	<b>Associated Functions</b>
Change Authentication Code	TelStyChangeAuthenticationCode
Close Line and Reject Call	TelSpcCloseLine or TelSpcRejectCall
Delete Entry	TelPhbDeleteEntry
Delete Message	TelSmsDeleteMessage
Enter Authentication Code	TelStyEnterAuthentication
Get Authentication State	TelStyGetAuthenticationState
Get Available Storage	TelSmsGetAvailableStorage
Get Available Phone Books	TelPhbGetAvailablePhonebook
Get Battery State	TelPowGetBatteryStatus
Get Brand Number	TelInfGetInformation
Get Call State	TelGetCallState
Get Entries	TelPhbGetEntries
Get Entry Max Sizes	TelPhbGetEntryMaxSizes
Get Location	TelNwkGetLocation
Get Model Number	TelInfGetInformation
Get Networks	TelNwkGetNetworks
Get Phone Number	TelCgfGetPhoneNumber
Get Revision	TelInfGetInformation
Get Selected Phone Book	TelPhbGetSelectedPhonebook

**Table 3.1 Virtual Phone Services and Telephony Manager Functions (*continued*)**

<b>Services</b>	<b>Associated Functions</b>
Change Authentication Code	TelStyChangeAuthenticationCode
Close Line and Reject Call	TelSpcCloseLine or TelSpcRejectCall
Delete Entry	TelPhbDeleteEntry
Delete Message	TelSmsDeleteMessage
Enter Authentication Code	TelStyEnterAuthentication
Get Authentication State	TelStyGetAuthenticationState
Get Available Storage	TelSmsGetAvailableStorage
Get Available Phone Books	TelPhbGetAvailablePhonebook
Get Battery State	TelPowGetBatteryStatus
Get Brand Number	TelInfGetInformation
Get Call State	TelGetCallState
Get Entries	TelPhbGetEntries
Get Entry Max Sizes	TelPhbGetEntryMaxSizes
Get Location	TelNwkGetLocation
Get Model Number	TelInfGetInformation
Get Networks	TelNwkGetNetworks
Get Phone Number	TelCgfGetPhoneNumber
Get Revision	TelInfGetInformation
Get Selected Phone Book	TelPhbGetSelectedPhonebook

## Using Palm OS Virtual Phone

### *Response Preferences Dialog Box*

---

**Table 3.1 Virtual Phone Services and Telephony Manager Functions (*continued*)**

<b>Services</b>	<b>Associated Functions</b>
Get Selected Network	TelNwkGetSelectedNetwork
Get Selected Storage	TelSmsGetSelectedStorage
Get Signal Level	TelNwkGetSignalLevel
Get Sms Center	TelCgfGetSmsCenter
Hold Line	TelSpcHoldLine
Mute	TelSndMute
Operator Select	TelNwkSelectNetwork
Read Message	TelSmsReadMessage
Read Messages	TelSmsReadMessages
Select Phone Book	TelPhbSelectPhonebook
Select Storage	TelSmsSelectStorage
Send Burst DTMF	TelSpcSendBurstDTMF
Send Short Message	TelSmsSendMessage
Set Sms Center	TelCgfSetSmsCenter

### **Response Configuration**

- **According to Phone's State**

Select this option to return a value according to the current state of Virtual Phone.

- **Reply with Error**

Use this option to return the selected error message.



**Table 3.2 GSM Errors**

<b>GSM Error Number</b>	<b>Error</b>	<b>Telephony Constant</b>
0	Phone failure	telErrCommandFailed
1	No connection to phone	telErrPhoneComm
2	Phone-adapter link reserved	telErrPhoneComm
3	Operation not allowed	telErrCommandFailed
4	Operation not supported	telErrFeatureNotSupported
5	PH-SIM PIN required	telErrPhoneToSIMPINRequired
10	SIM not inserted	telErrNoSIMInserted
11	SIM PIN required	telErrPINRequired
12	SIM PUK required	telErrPUKRequired
13	SIM failure	telErrSIMFailure
14	SIM busy	telErrSIMBusy
15	SIM wrong	telErrSIMWrong
16	Incorrect password	telErrPassword
17	SIM PIN2 required	telErrPIN2Required

## Using Palm OS Virtual Phone

### *Response Preferences Dialog Box*

---

**Table 3.2 GSM Errors (*continued*)**

<b>GSM Error Number</b>	<b>Error</b>	<b>Telephony Constant</b>
18	SIM PUK2 required	<code>telErrPUK2Required</code>
20	Memory full	<code>telErrPhoneMemAllocation</code>
21	Invalid index	<code>telErrInvalidIndex</code>
22	Not found	<code>telErrEntryNotFound</code>
23	Memory failure	<code>telErrPhoneMemFailure</code>
24	Text string too long	<code>telErrInvalidString</code>
25	Invalid characters in text string	<code>telErrInvalidString</code>
26	Dial string too long	<code>telErrInvalidDial</code>
27	Invalid characters in dial string	<code>telErrInvalidDial</code>
30	No network service	<code>telerrNonetwork</code>
31	Network time-out	<code>telErrNetworkTimeOut</code>
100	Unknown	<code>telErrUnknown</code>
	Error	The command is not supported.
	No response	The phone received no response; equivalent to a <code>telErrTimeOut</code>

## Options Dialog Box

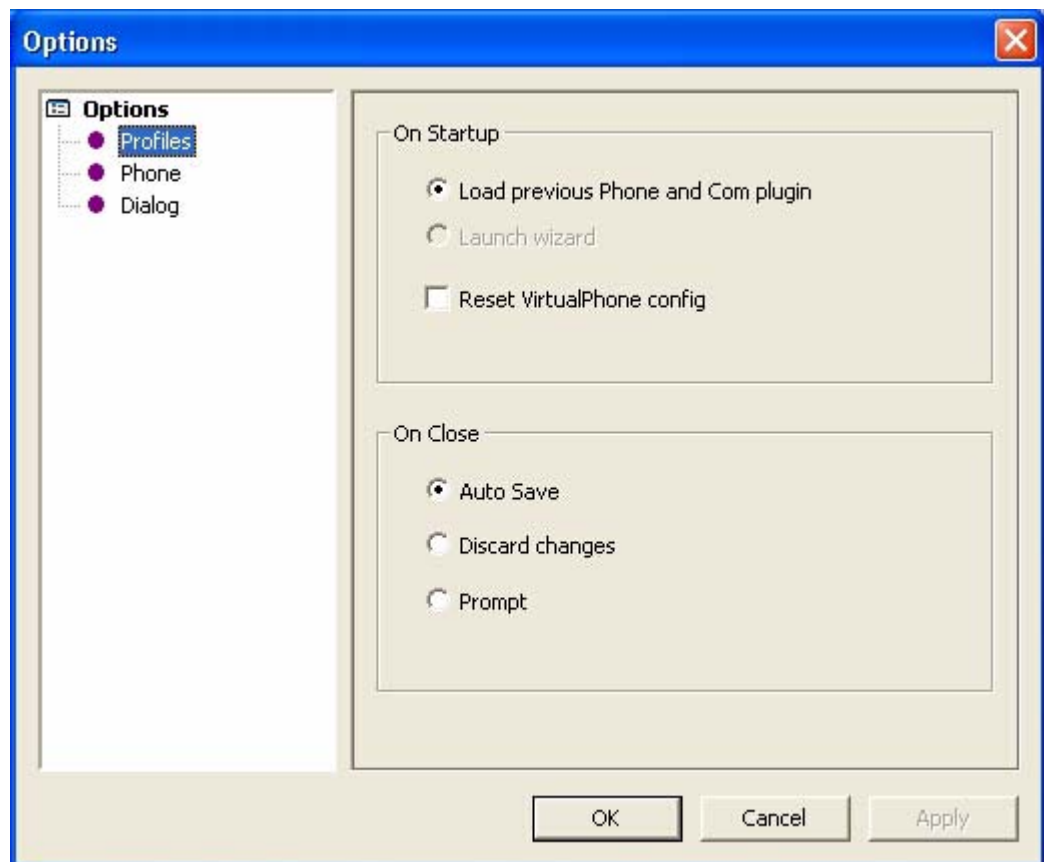
Use the Options dialog box to set general options for Virtual Phone. To open the Options dialog box, select **Tools > Options**.

<a href="#">Profiles Options</a>	. . . . .	81
<a href="#">Phone Options</a>	. . . . .	82
<a href="#">Dialog Options</a>	. . . . .	83

### Profiles Options

Use the Profiles page to set options for when you start and exit Virtual Phone.

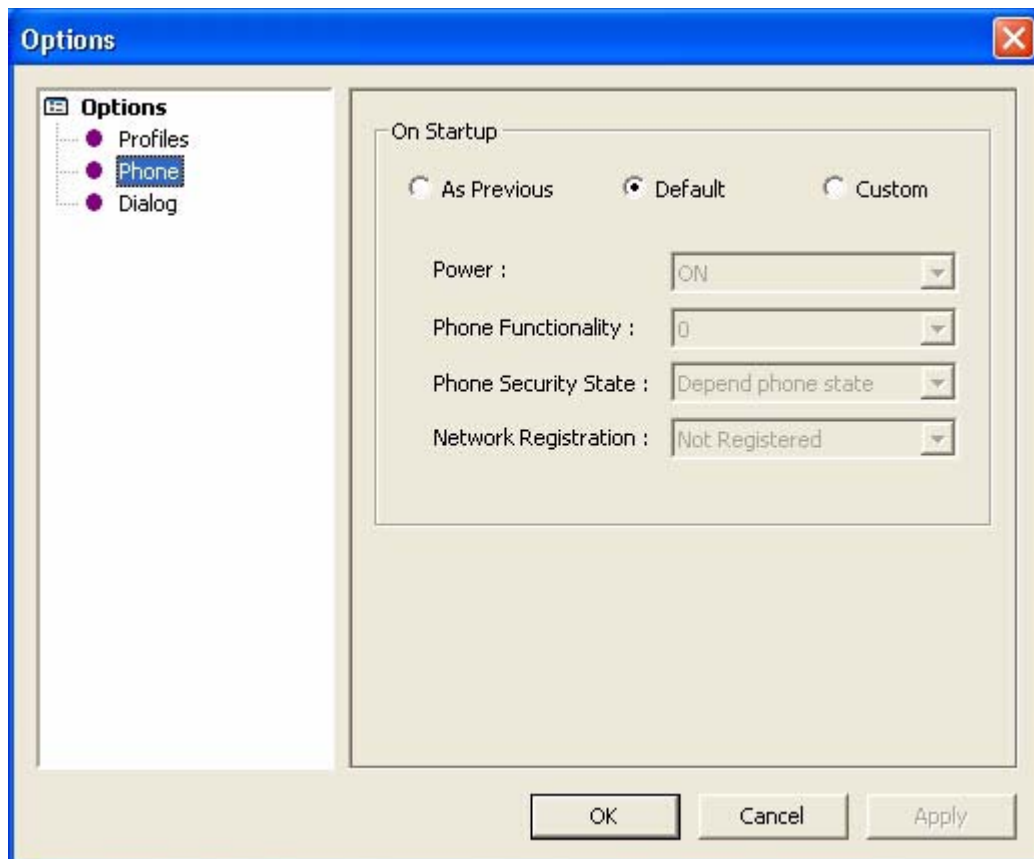
**Figure 3.34 Options - Profiles**



## Phone Options

Use the Phone page to set options for general phone simulation.

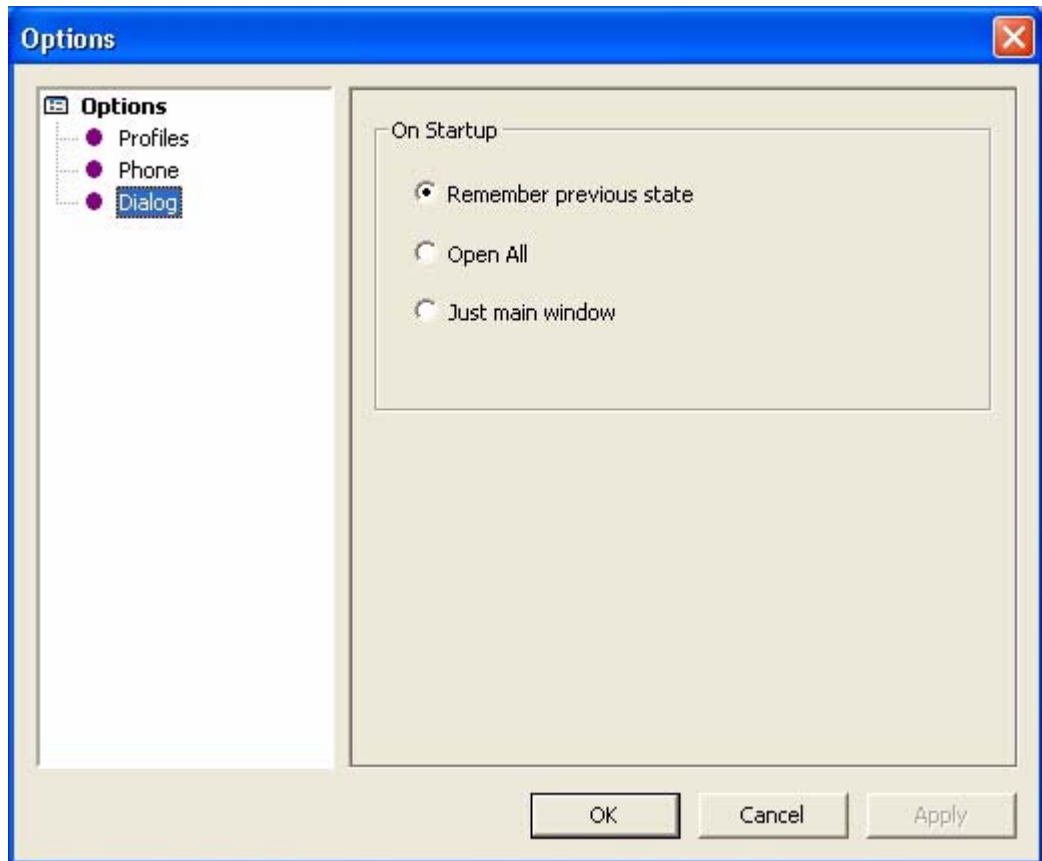
**Figure 3.35 Options - Phone**



### Dialog Options

Use the Dialog page to set options for how Virtual Phone windows are handled at start-up.

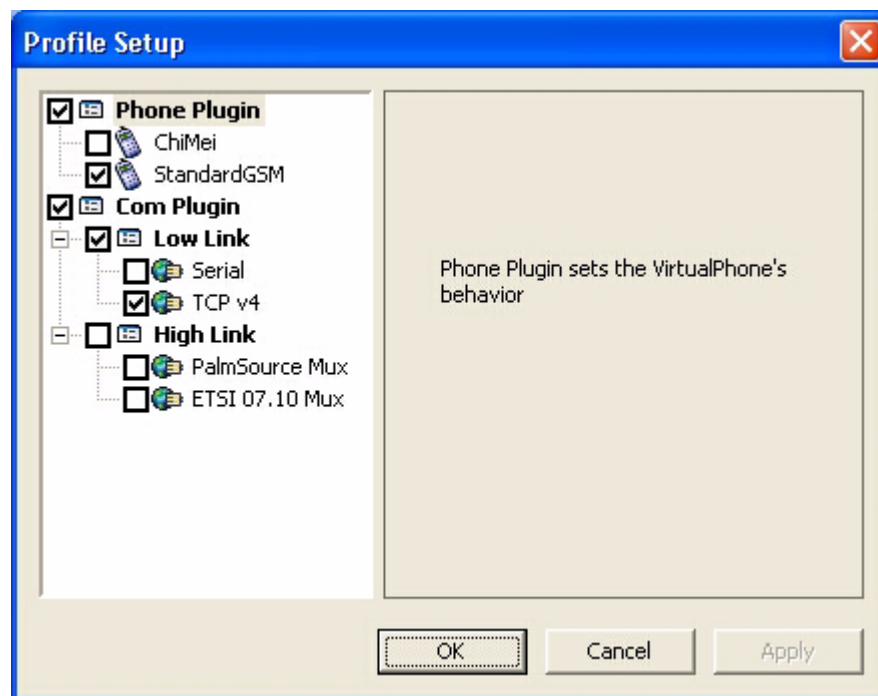
**Figure 3.36 Options - Dialog**



## Profile Setup Dialog Box

The Profile Setup allows you to change the settings that get written to the Virtual Phone configuration file (VPC) when you run the New Profile wizard (described in “[Creating a Virtual Phone Profile](#)” on page 7). To open the Profile Setup dialog box, select **Tools > Profile Setup**.

**Figure 3.37** Profile Setup Dialog box



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