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## SMPP Concentrator

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Field Code Changed



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## Introduction

PEC has come up with a new and innovative way to display message alert on cellular phones. This method uses a program they created called SMPP Concentrator. SMPP Concentrator allows a company using the PEC voicemail system to have new method in the way they deliver a “new message” notification for their customers. This program has a big advantage over other methods when the voicemail server cannot send the “new message” notification directly back to the cellular switch. When this occurs, there is no way for a customer using a cell phone to know they have a new message.

To demonstrate how SMPP Concentrator works, here is an example:

When a person calls a cell phone and no one picks up, the call is then sent to our PEC VoiceSaver server, which records their message. Two files are then created; the first is the actual voice message that the person has left. The second is a notification file. This notification file has the sender’s and receiver’s call information. Normally VoiceSaver would then send this file back to the cellular switch. The cellular switch then sends it to the SMS server (Short Messaging System), which sends a message indicating the cell phone, has a new message.

When that option is not possible, PEC created the option of the SMPP Concentrator, which is a program that reads a certain directory periodically (for example every second) looking for a notification file. If in fact it finds the notification file, it then reads the information, deletes the old notification file and then sends the information directly to the SMS Server, which in turn sends the message to the cell phone client informing the person they have a message. This is the basic idea behind the SMPP Concentrator.

## Installation

### System Requirements

<b>Processor</b>	Pentium II processor or better
<b>Operating System</b>	Windows NT 4.0 (SP6) or 2000 or XP
<b>Memory</b>	128MB RAM
<b>Hard Disk</b>	20MB of available hard disk space
<b>Drive</b>	CD-ROM or DVD-ROM drive
<b>Connection</b>	TCP/IP over public internet TCP/IP over direct leased line TCP/IP over RAS dial-up connection Or X.25 connection

## Installing

The software for SMPP Concentrator consists of two files:

One of them is **smppconcentrator.exe**, which is the executable for the program. The other file is **smcsdk.dll**, which is the dynamic link library and is a licensed file that you will need to register and purchase the rights to.

When you installed the Voicesaver software, the installation automatically registered the library to the computer. But if for some reason it was not registered, you will need to register the library with windows.

To do this:

1. Go to the command prompt by pressing **Start->Run**.
2. Then type **cmd** and hit **Enter**.
3. From the command prompt, type in the following code:  
 regsvr32.exe "file path to library" for example:  
 regsvr32.exe c:\program files\SMSCSDK\SMSCSDK.dll

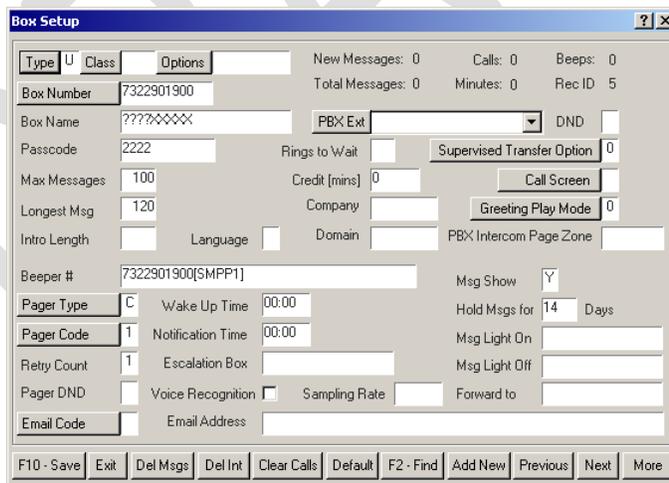
When Voicesaver was installed, the installation program put all essential files in the file path: c:\pec.

1. Copy the files **smppconcentrator.exe** and **smcsdk.dll** into c:\pec
2. Create the following new subdirectories:  
 c:\pec\concentrator  
 c:\pec\concentrator\smpp1

There are also a few parameters that will need to be changed within the **Box Setup** of Voicesaver for each of the numbers who will use this option.

1. Change the **Mailbox Page Type** to C, which stands for Concentrator.
2. Change the **Pager Code** to 1.
3. Within the **Beeper#** parameter, you must type:  
*Cell phone#[SMPP1]*

An example of **Box Setup** with the necessary changes made s shown below:



Type	U	Class	Options	New Messages: 0	Calls: 0	Beeps: 0
Box Number				Total Messages: 0	Minutes: 0	Rec ID: 5
Box Name	7322901900	????xXXXXX	PBX Ext			DND
Passcode	2222	Rings to Wait		Supervised Transfer Option		0
Max Messages	100	Credit [mins]	0	Call Screen		
Longest Msg	120	Company		Greeting Play Mode		0
Intro Length		Language		Domain		PBX Intercom Page Zone
Beeper #	7322901900[SMPP1]			Msg Show	Y	
Pager Type	C	Wake Up Time	00:00	Hold Msgs for	14	Days
Pager Code	1	Notification Time	00:00	Msg Light On		
Retry Count	1	Escalation Box		Msg Light Off		
Pager DND		Voice Recognition		Sampling Rate		Forward to
Email Code		Email Address				

Figure 1 Voicesaver Box Setup

## Using SMPP Concentrator

The program has a very easy to use interface and once you set up parameters and get it running, it will run without any interactions. When you start the program, its interface will be like the one shown. This manual will take you through each of the individual sections of configuration to help you understand and utilize the SMPP Concentrator efficiently.

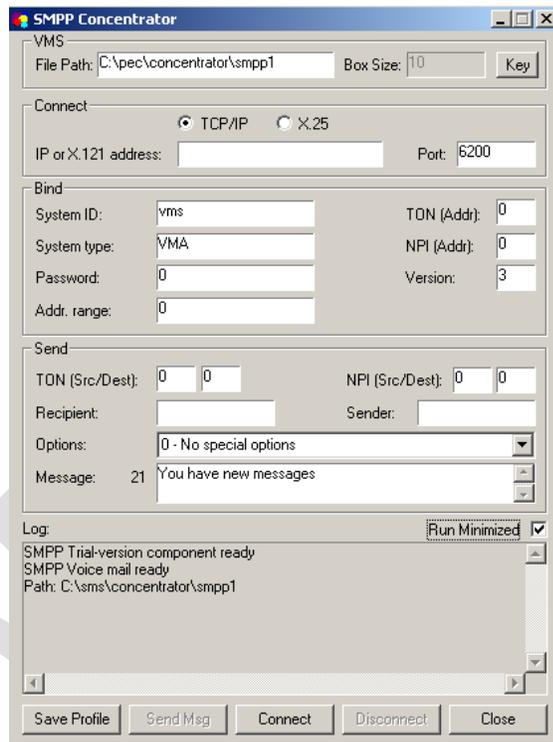
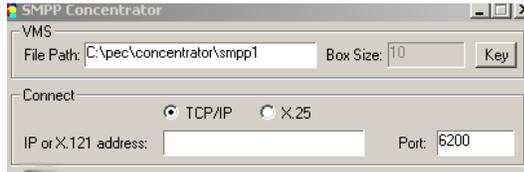


Figure 2 SMPP Interface

## Configuration



**Figure 3 Connection Setup**

1. The **File Path** field should be the directory created during the installation of the Concentrator.
2. Press the **Key** button and enter your software key. You will have 30-days of the fully functional trial version. After the trial version, you will still be allowed to connect to the SMSC operator but will not be able to send or receive any SMS messages
3. Indicate whether you are connecting through TCP/IP or X.25 and then enter your IP or X.25 address. Also input your port number, which is used for TCP/IP only.

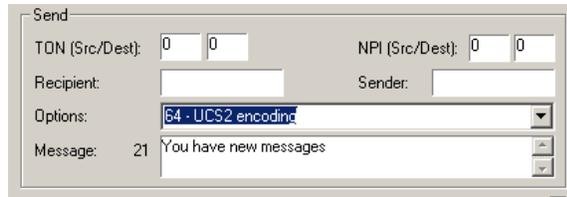


**Figure 4 Binding with SMS**

This next part of the configuration has to deal with connecting to the SMS server. A SMS server technician may be needed to input some of the information. Brief descriptions of the fields are in the table below.

<b>Binding Parameters</b>	<b>Description</b>
<b>System ID</b>	Your Identification on the system.
<b>System Type</b>	The type of system you are using, used as additional information to identify you.
<b>Password</b>	Password used to log into the SMSC
<b>Addr. Range</b>	Range of mobile phone numbers that can send messages to you
<b>TON (Addr.)</b>	Short value representing "Type Of Number" of your address. Used for the internal billing purposes.
<b>NPI (Addr.)</b>	Short value representing "Numbering Plan" of your address. Used for billing purposes.
<b>Version</b>	Version of the SMPP interface.

The next section involves the configuration of the messaging system.



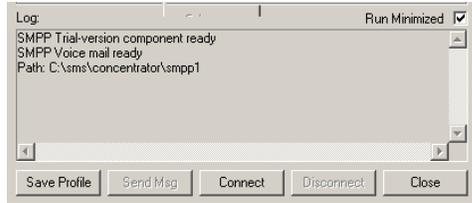
**Figure 5 Messaging Setup**

Brief descriptions of the various fields in figure 5 are listed below in the table.

<b>Messaging Parameters</b>	<b>Description of field</b>
<b>TON (Src/Dest)</b>	The value of the TON of the Originator (Src) and the Destination (Dest.)
<b>NPI (Src/Dest.)</b>	The value of the NPI of the Originator (Src) and the Destination (Dest.)
<b>Recipient</b>	The client who receives the call.
<b>Sender</b>	The one placing the call.
<b>Options</b>	Various ways the notification could be sent to the SMS. A Table is given below to describe the different options.
<b>Message</b>	The message that is sent to SMS to send to the caller.

A description of each of the options is listed below in the table.

<b>Option Values for MSG.</b>	<b>Description of Option Value</b>
<b>0</b>	The message is submitted as a plain 7-bit ASCII message
<b>2</b>	The SDK requests a delivery notification from the SMSC, which is sent automatically upon final delivery of the SMS message.
<b>4</b>	The SMS message is submitted as a so-called flash SMS (direct display), which forces the mobile terminal to put the message directly on it's display without storing it to the SIM card.
<b>8</b>	The SMS message is submitted as a binary 8-bit message.
<b>16</b>	Indicates that the SMS message contains a User Data Header, which is used for logos, and ringing tones.
<b>32</b>	VSMSC stands for Virtual SMSC which is used when a direct or dedicated connection.
<b>64</b>	Indicates that the message encodes Unicode (UCS2) international characters.



**Figure 6 Command Options**

The **Log** enables you to keep track of recent activities along with identifying any kind of error that might have occurred during connection.

The **Run Minimized** box places the Concentrator in the taskbar and allows it to keep running.

To save any changes you have made, press the **Save Profile** button.

When you are finished configuring SMPP, press the **Connect** button to connect to the SMS server and **Disconnect** to terminate your connection with the SMS system.

There also is the option to send a message directly from the interface. To send a message from this interface, type in the recipient's mobile phone number, type the message and press the **Send Msg.** button. To close the SMPP interface, press the **Close** button.

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