Desktop SMPP Client

SphereEdge Consulting Limited

User Manual

Version : 1.0

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Introduction

The Desktop SMPP Client is an application that runs on a client computer and connects to an **SMPP*** Server. This application enables you to send messages and receive Delivery Reports. Apart from the send/receive provisions you can manage your contacts with the Desktop Client using the **AddressBook** feature.

The **AddressBook** allows you to create new **Groups** and add/upload contacts to a group. It also allows the creation and modification of **Distribution Lists**. Distribution Lists contain only numbers as opposed to groups which contain contacts that have a name and a number. Using the Desktop SMPPClient a user can also check his **CreditDetails** online. CreditDetails show the user details like the initial credit allotted to him, the credit used by the user till date and the balance left.

The next section discusses certain technical details about the application and its working environment so as to understand the requirements of the application and also to appreciate them. One does not need to read this section to use this application. But if you have a few questions as to why the application behaves the way it does, the next section might just answer them. Those who do not want to get into much technical detail can feel free to skip the next section.

Requirements

Protocols and Network connection

The application works on the Short-Message-Peer-To-Peer (SMPP) Protocol. SMPP Protocol allows an ESME (External Short Messaging Entity) to communicate with a SMSC (Short Message Service Centre). The SMPP Protocol defines PDUs (Protocol Data Units) for the entities to communicate with each other. The SMPPClient acting as an ESME sends PDUs to the SMPP Server or SMSC to connect, send messages, disconnect, receive delivery reports of send messages etc. During sending a batch of messages the application needs to be connected to the server all the time. If it disconnects in-between then the sending might stop immediately and to start again the user might have to enter all the parameters again. The application even needs to send and receive PDUs just to stay connected to the server. And a non-active Internet connection, or a connection that keeps dropping, might pose problems in the proper functioning of the application.

In such regard one of the core requirements for the application to work appropriately is an active Internet connection at all times.

Operating Systems

Windows

The application runs on Microsoft Windows XP. (Other editions not tested).

Other Systems

The application also runs on Linux-based systems but is not thoroughly tested on such systems. Also User Interface generated on such systems might be inappropriate. No support or help would be available for running the application on such systems. Also no guarantees and assurances about the proper working of the application on these systems would be offered.

Runtime Environment

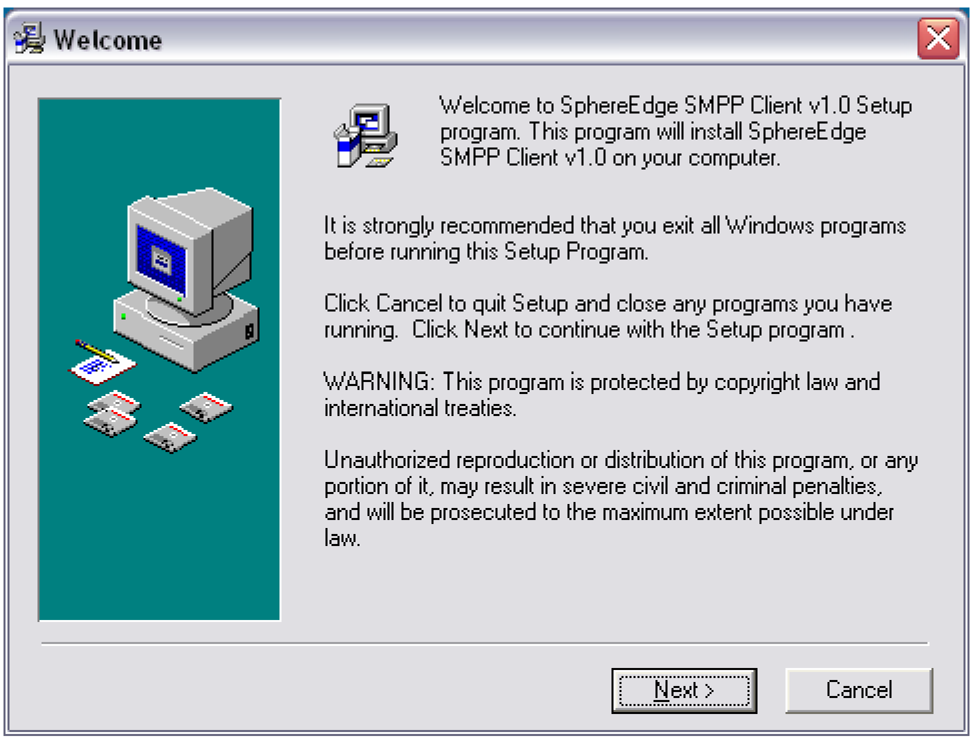
The application would require Java Runtime Environment 1.6.0. to be installed on your system. But incase you don't have this software installed on your system or have a lower version of it, the application will download and install the software for you.

Note: For download and installation you would require an active network connection.

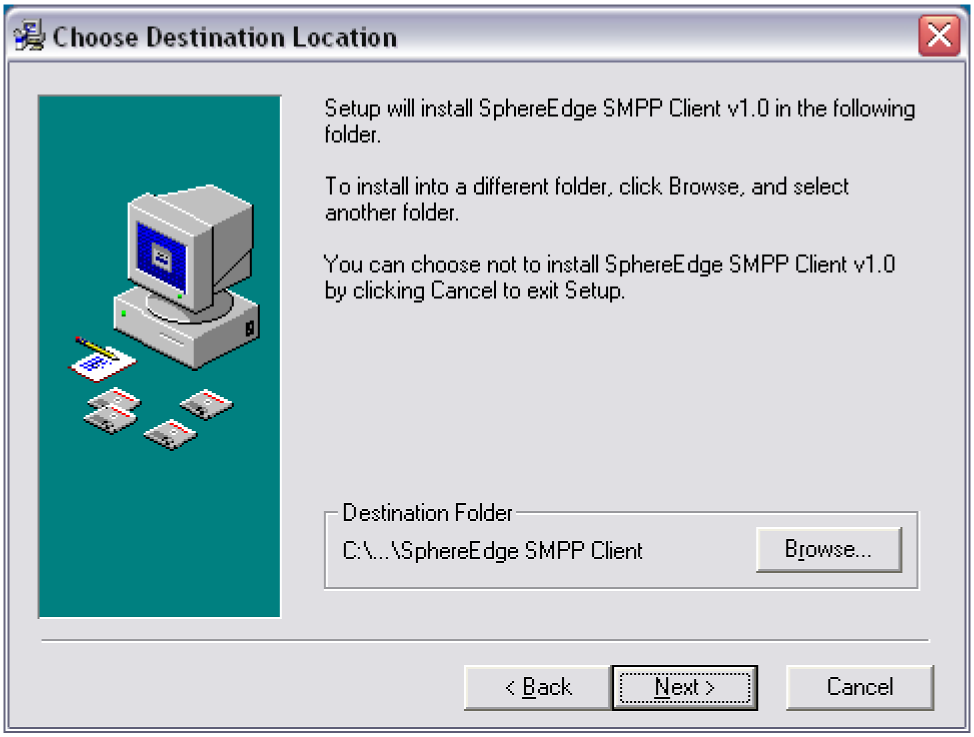
Installation

After downloading the application executable (.exe) file, double click it to start the installation. Once the installation begins you just need to enter appropriate inputs as the installation proceeds. After the installation has successfully completed it will show you a dialog about successful installation of the software and would ask you whether you like to launch the application immediately. Tick the check box named 'Launch the application' if you intend to use it right away or if you want to use it at a later time you can uncheck the check-box.

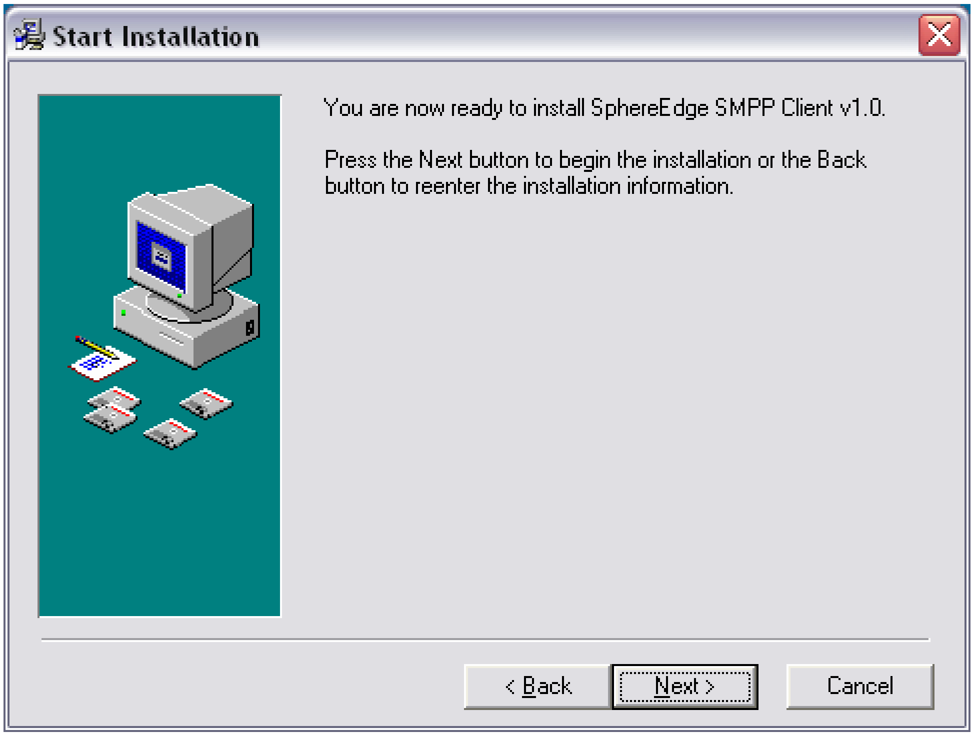
Some of the dialogs during installation and the appropriate input for them is shown below:

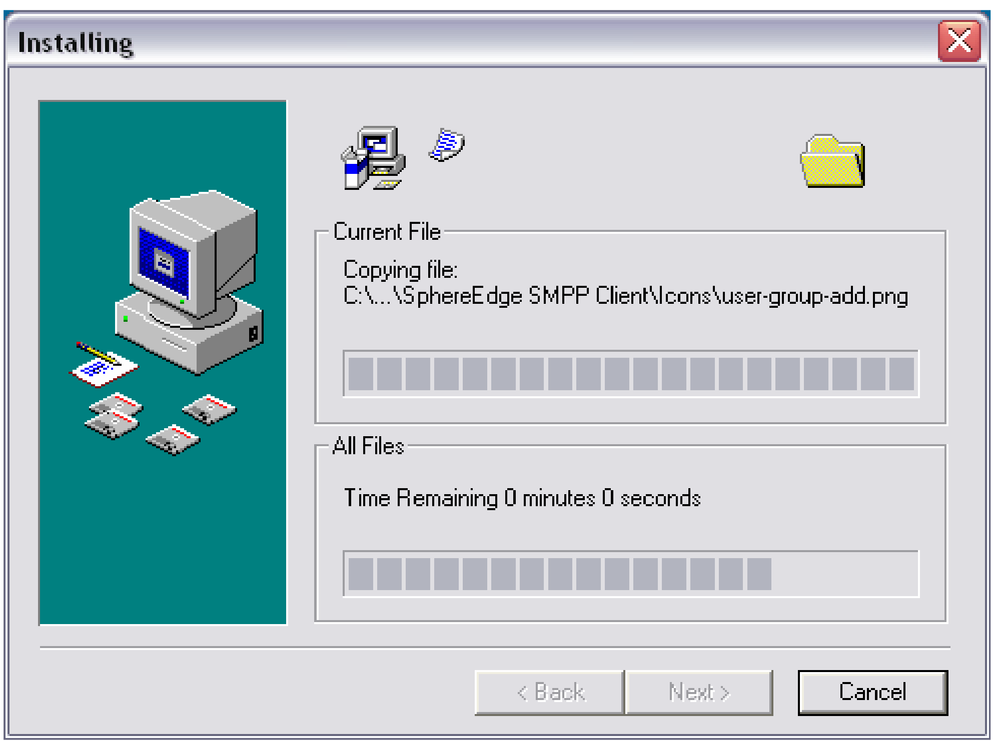


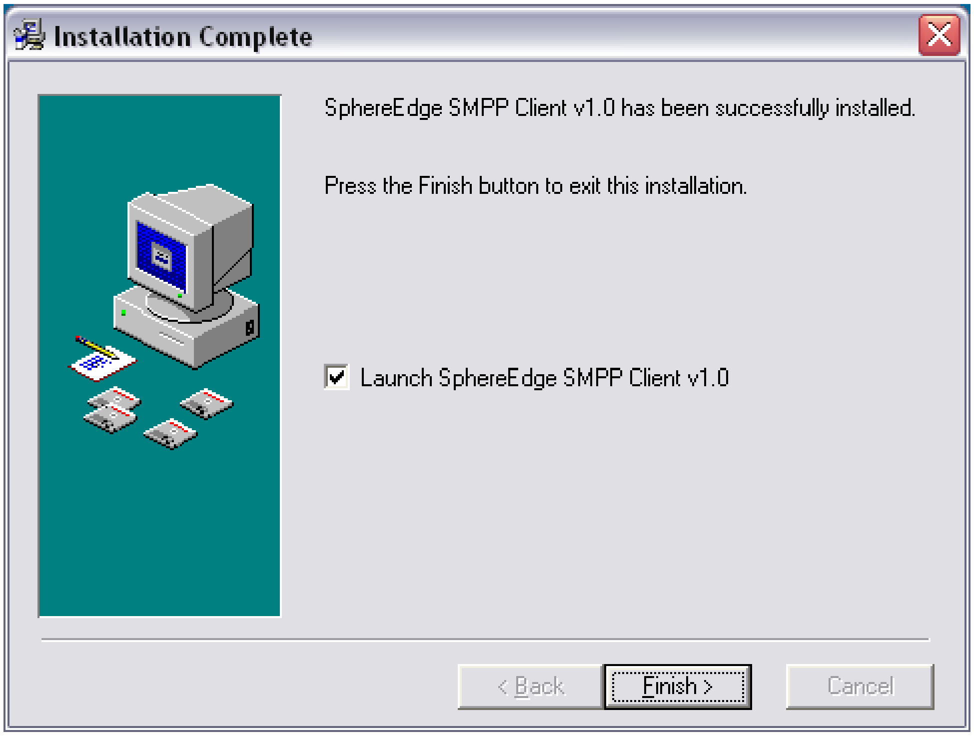
This dialogue asks you the location for the application directory, the default path will be in 'Program Files', if you want the application to be installed elsewhere you can select the location by clicking **Browse.**



Click **Next** to begin the installation.


Start Installation
You are now ready to install SphereEdge SMPP Client v1.0.
Press the Next button to begin the installation or the Back button to reenter the installation information.
< Back
Next >
Cancel


Installing
Current File
Copying file:
C:\...\SphereEdge SMPP Client\Icons\user-group-add.png
All Files
Time Remaining 0 minutes 0 seconds
< Back
Next >
Cancel



Clicking **Finish** will launch the application, if you wish to run the application at a later time uncheck the check-box for **Launch**.

Post Installation

The installer will register short-cuts in three places on your desktop

1. Under the Programs Menu.
2. Top of Start Menu.
3. On your Desktop.

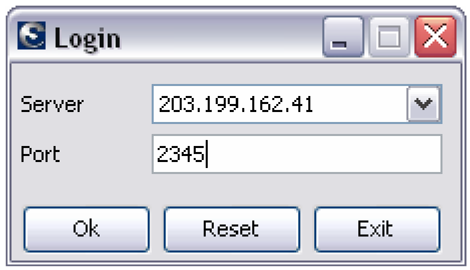
You can use any of these shortcuts to start the application at a later time.

First Run

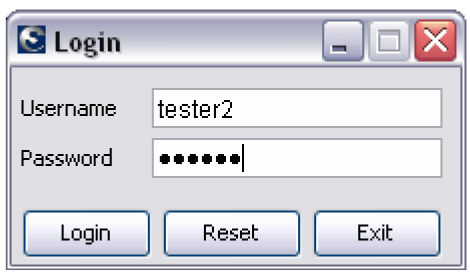
When you run the application for the first time after installation, the application will install the Java Runtime Environment (JRE) if you do not already have it and if you have downloaded the JRE Embedded pack. As stated in the requirements section this is one of the must requirements that the application cannot run without. The application will inform you before installing the JRE through a dialog. If you have a non-JRE Embedded pack it will redirect you to the page where you could find the latest JRE.

Using the Desktop Client

Once you have installed the application on your desktop you can start using it right away. Just double-click the desktop short-cut or select the application from under the programs menu. This will start the application and you will see a login screen similar to this:

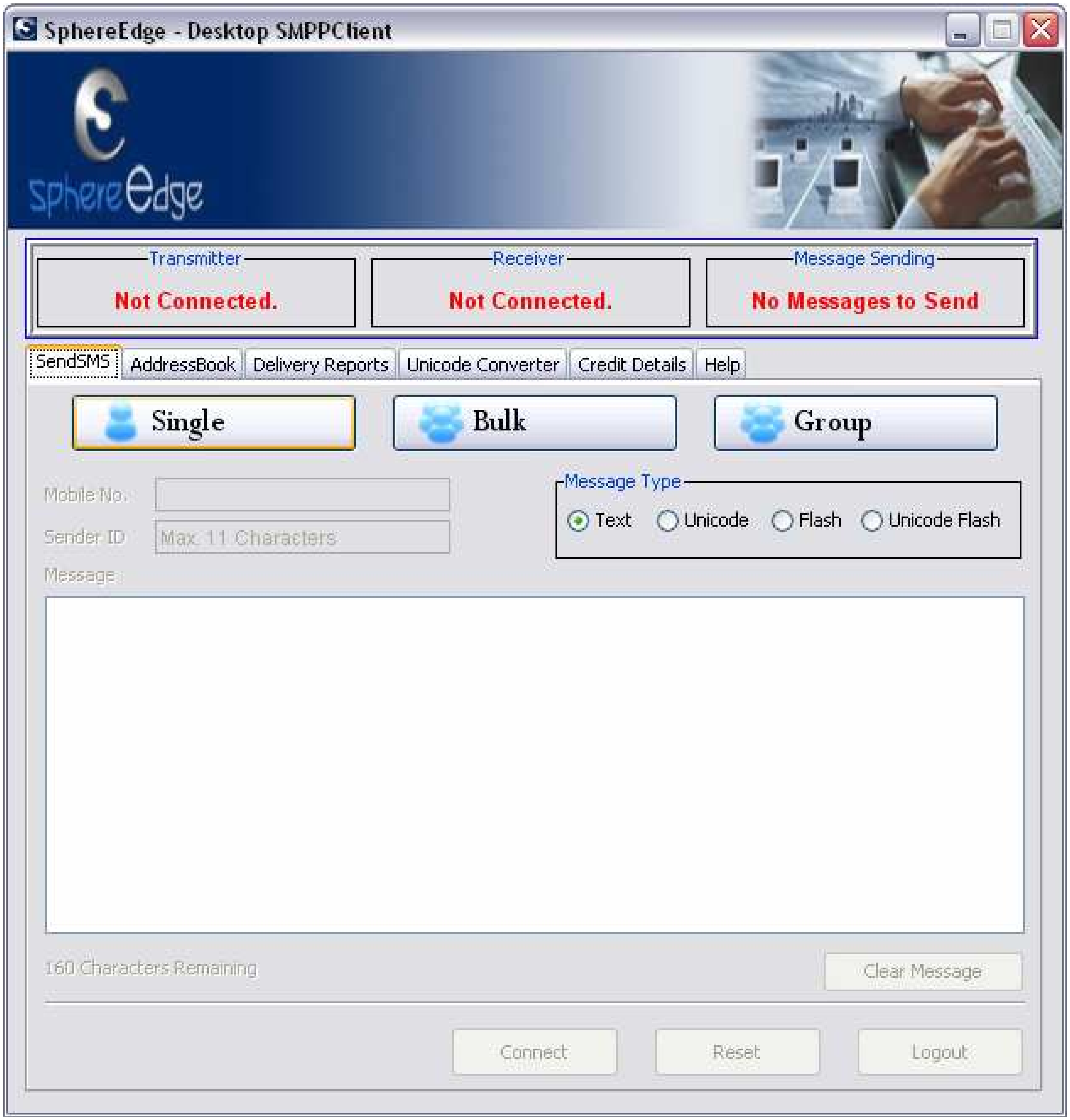


You will have to enter your server details in this dialog screen. Select the server IP and enter the port number allotted to you. On the next screen fill in your username and password .



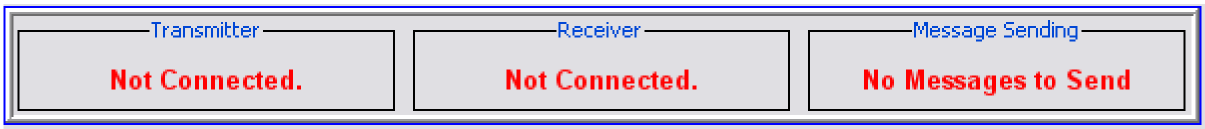
Click **Login** to proceed to the application. If you get a dialog saying Invalid Username/Password check and re-enter your Username and Password. If you continue getting this message contact your business manager.

Once you have entered all the login details you can start using the application. The first screen you will see is



There are two individual panels on this screen the application status panel that shows the current status of the client application and the main panel that allows you to access the different features of the application.

The application status panel that you see below shows three individual windows showing the application current status for **Transmitter** mode, **Receiver** mode and the status for the last sending task that you performed. Currently as you see the application is not connected in either of the modes and also as there has been no sending activity it shows **No Messages to Send.**



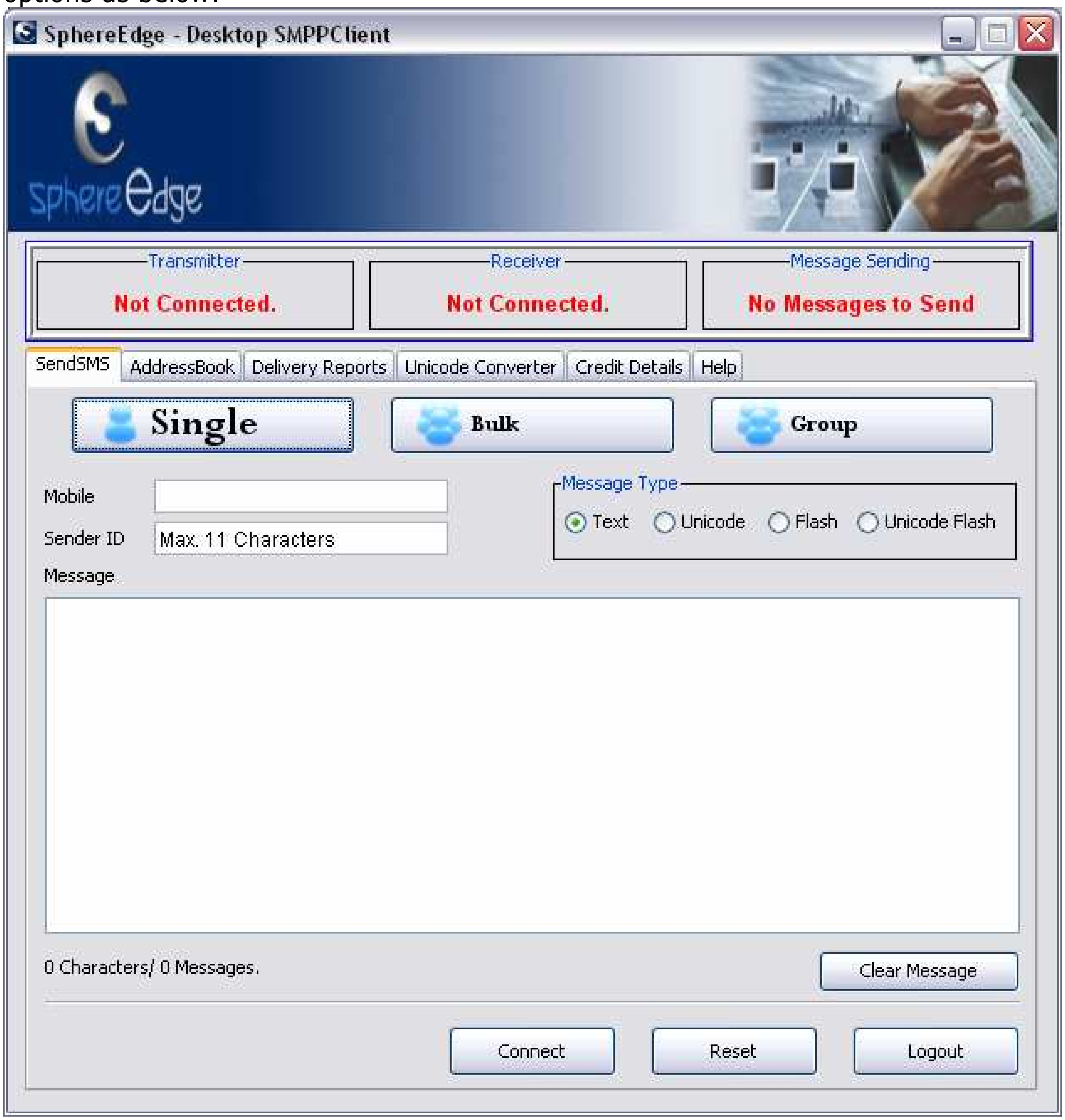
On the main panel you can see various tabs allowing you access to those features of the application. The current selection or the default tab is for send messages.

SendSMS Panel

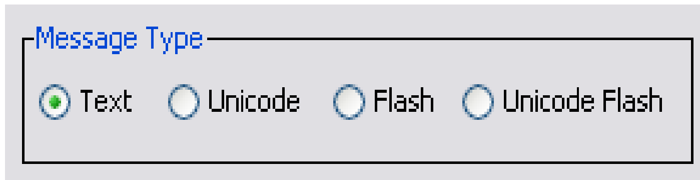
Here you can select whether to send a single, Bulk or a Group Message. To send message through either of the message sending options click on the corresponding button, and enter the parameters for that type of message. You can cut, copy and paste text in the message box.

Single SMS

To send a single message click on the Single button and you can see the single options as below:

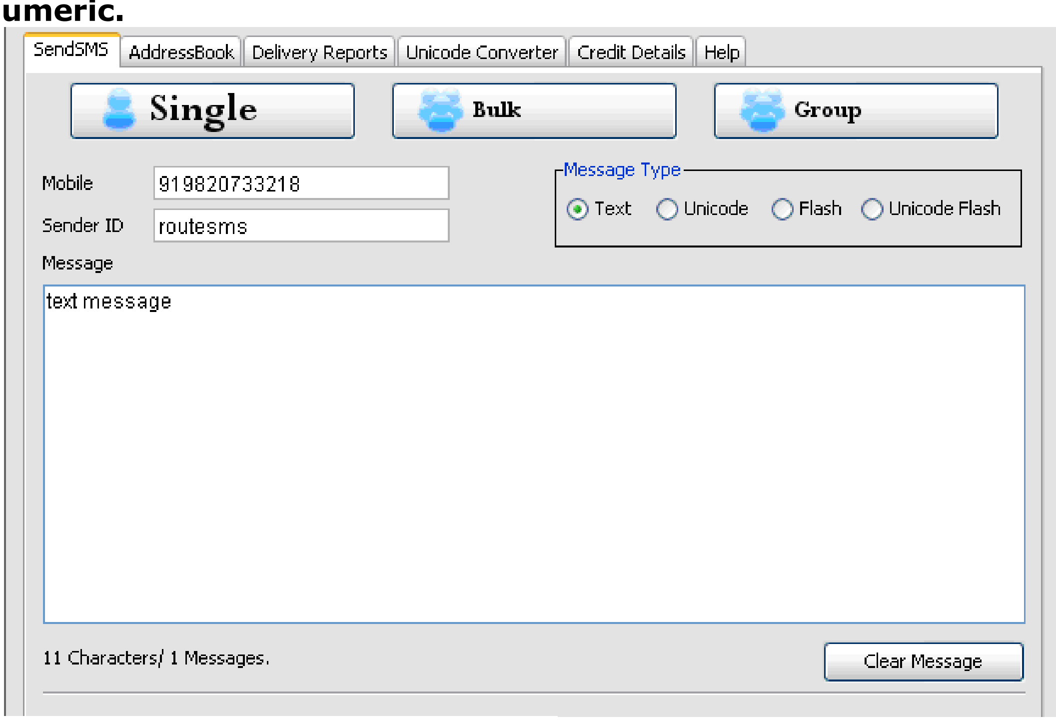


Enter the details for the message according to the guidelines as shown below.



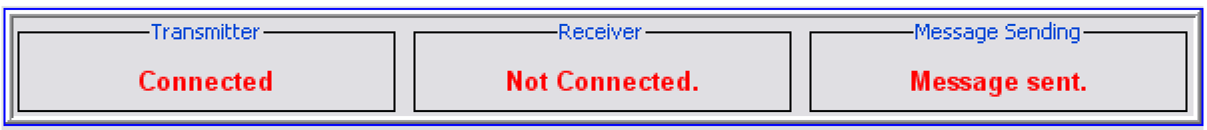
This panel allows you to set the type of the message. Set it to that of your current message.

NOTE: The sender ID should not be longer than 11 characters if the sender is alphanumeric.



Click **Connect & Send** to send the message.

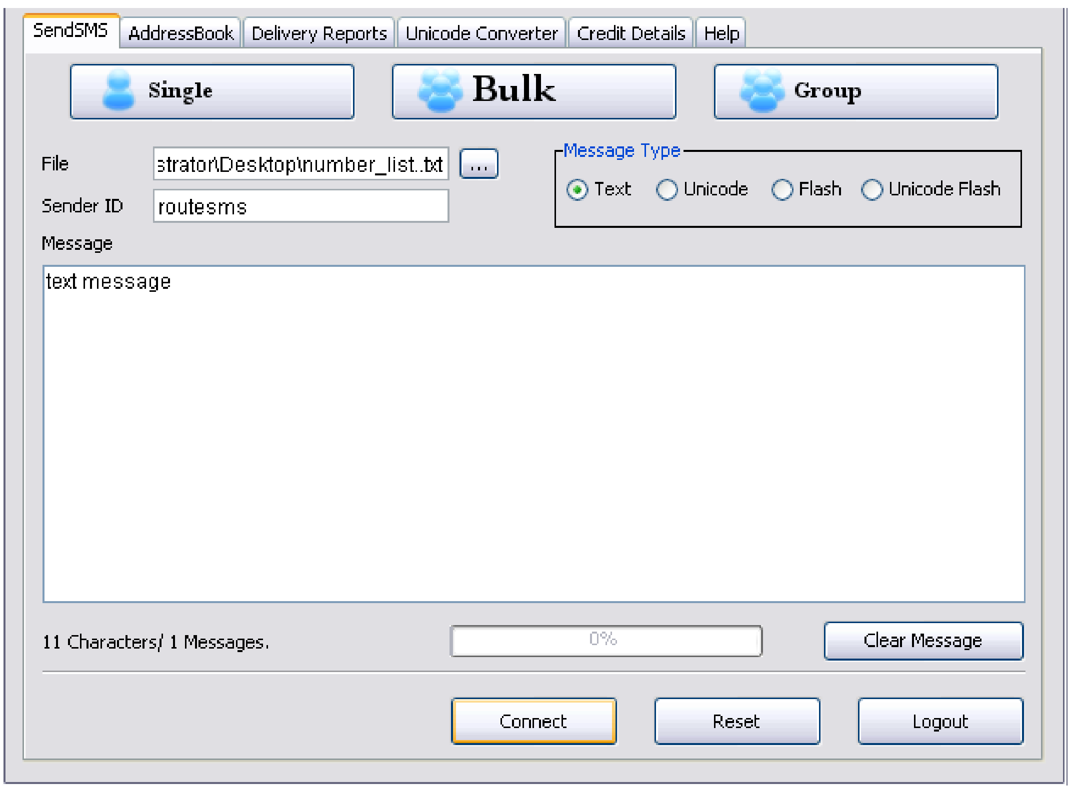
You will get a success message if the message is sent successfully.
Also as you can see now on the application status panel, it shows that the desktop client is connected in the transmitter mode and that the last message was sent successfully.



Bulk Message

Bulk Message feature allows you to send a message to multiple destinations. For this you need to create a file containing all the destinations (mobile numbers) with each destination on a new line. Once you have created such a file save it with a .txt (text) extension (else the application won't allow you to select the file through the interface). When you are done select the **Bulk** message option so you see the bulk messaging options.

On the bulk message menu click the button to select file. It will open a file selecting dialog, select the file that you saved and set the other parameters accordingly. Finally click '**Connect'** to send the batch. While sending the progress of the messages can be seen in the **Progress bar** next to the **'Clear message'** option. When all the messages are sent it will show 100% on the message bar and '**Messages sent'** successfully will be shown.



If the entire message batch is sent successfully you will get a success message.

Address Book

The address book feature allows you to store and manage your contacts. You can create Groups and Distribution Lists here. In a group you can store contacts whereas in distribution lists you can store numbers.

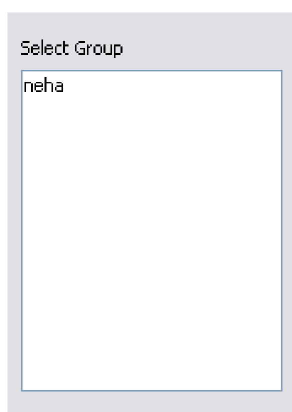
A contact is a name-number pair for e.g. neha 919829123456 etc. A number is just a destination number and would allow you to store the name for the number.

This section guides you in creating Groups and Distribution lists. It would also guide you in creating, managing and deleting contacts and numbers within them.

Groups

Select the address book tab from within the main panel. To create a group click **'Create Group'** and you will see a dialog such as this:

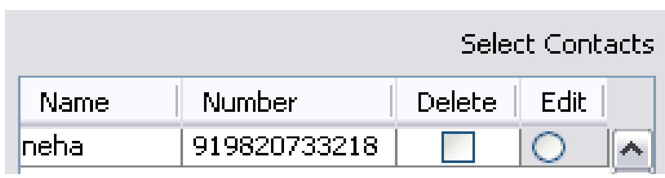
Type in the name for the group and click **Save.** You can see the group created in the Group Box.



Adding Contacts

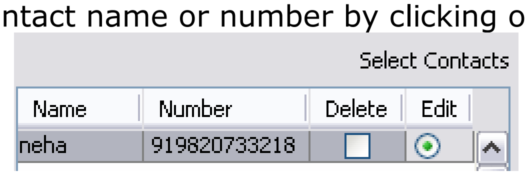
Now to add contacts within this group select the group from the group box and click **Add Contacts.** You can see a dialog similar to this:

Enter the details for the contact and click **Save.** You can see the contact added to the selected group in contact table.



Editing Contacts

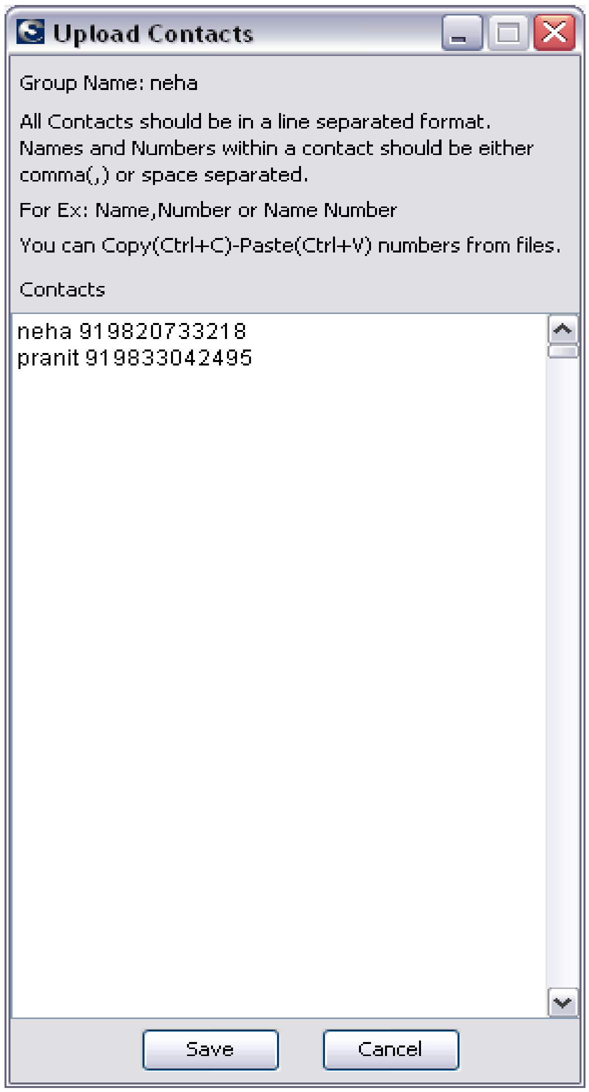
You can also edit the contact name or number by clicking on the **'Edit'** button.



It will show a dialog as **'Edit Contact'** in which you can make the changes and click on **'Save'** which will save the changes made.

Uploading contacts

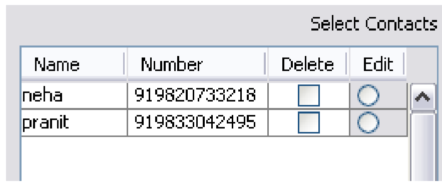
This feature allows you to add multiple contacts to a group at once. Select a group that you want to upload contacts to and click **Upload contacts**. Fill in the details for the contacts in the specified format. You can also use mouse for **'Cut, Copy and Paste'** The contact name and number should be mentioned on one line separated by a comma(,) or space. One contact on one line.



When you are done click **'Save'.**
On clicking **Save** the entries will be scanned and all valid entries (please see the 'Errors' section for information on what entries will be treated as invalid.) will be added leaving out the invalid entries . You will get a message for the entries that were treated as invalid and their line numbers.

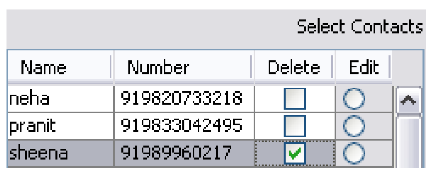
If you have already created a file with contacts you can copy paste your entries from that file to the upload contacts list by using **Copy** (Ctrl+C) and **Paste** (Ctrl+V).

All the entries that were added to the selected group will be reflected in the contact box.

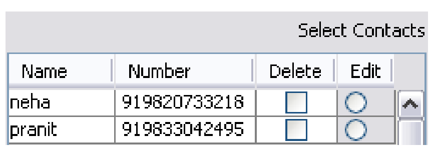


Deleting Contacts

You can delete previously added contacts from a group. To do this make use of the third column in the contacts table. In this column titled delete select the contacts that you want to delete if you want to delete just a few contacts or check the **Select All** check-box to select all the contacts at once and delete them. Once you have selected the contacts to be deleted. Click **Delete Contacts.** The changed group will be reflected immediately. If you want to delete all contacts and also do not want to keep the group, you can simply delete the entire group by clicking **Delete Group.**



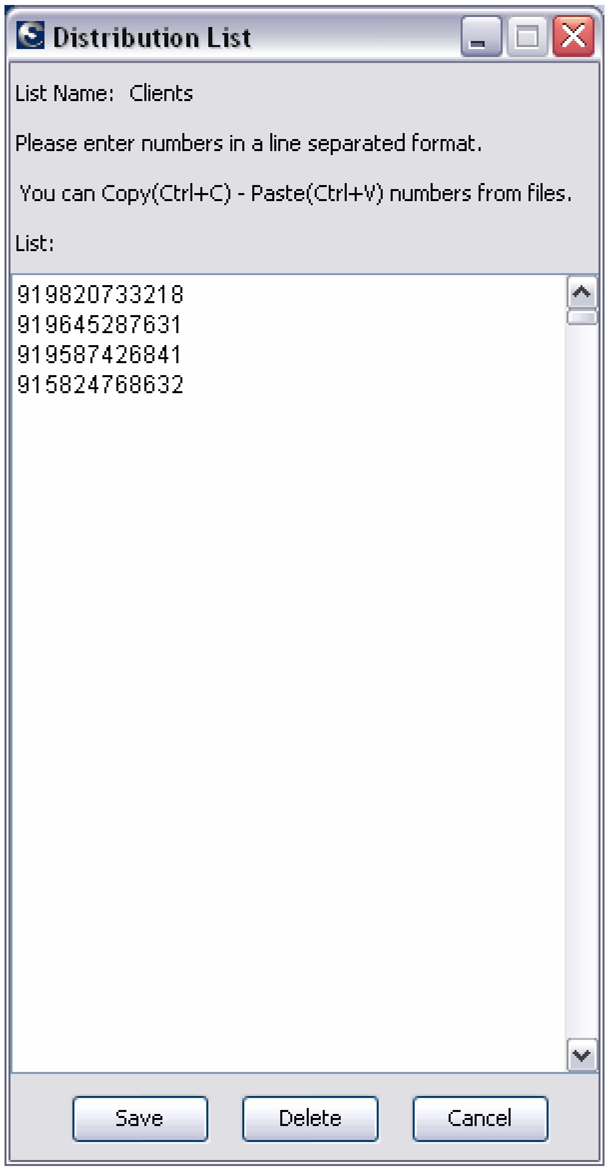
This example shows deleting of a selected contact. We have selected a contact here. We delete that particular contact by clicking Delete Contacts.



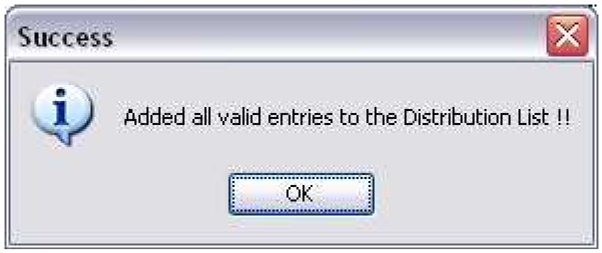
The contact has been deleted and the updated group formation can be seen here.

Distribution Lists

To create a distribution list click **Add List.** You will see a dialog for entering the numbers in the distribution list. Set a name for the list. Then fill in the list with the numbers, again the numbers are supposed to be in the line separated format.Also one can cut,copy,paste by right click of a mouse from excel sheet. An example is shown below:



Once done click **'Save'**. You will see a success dialog as shown below:



Here again the distribution list will only be created containing all the valid entries. The invalid entries will be reported and discarded.

Editing Distribution Lists

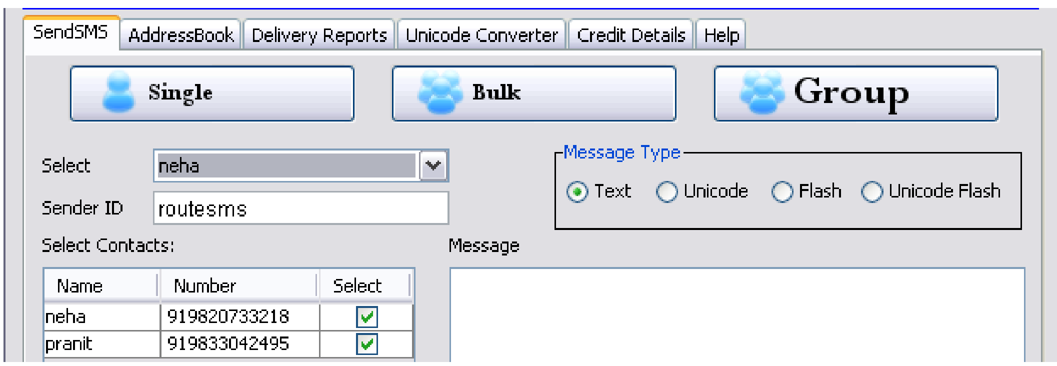
Once the list has been created you can manage it by selecting it from the distribution list combo-box. Select the list that you want to manage and click **Edit List**. You now have the option of editing and deleting the list. Through edit list you can also add or delete a few contacts from an existing list and save it so that the changes get affected.
An example showing the editing of a list is shown here:
Firstly select a previously created list from the distribution lists list. Then select **Edit List .** You will see a dialog as shown below:

Remove the last two entries and click **Save.** Now if you select the list again for editing you can see that the changes you made have taken effect.

Group Message

After getting to know how to add and manage Groups and Distribution Lists, you can move ahead with sending a Group Message. A group message is a message that you send to a previously configured group or a distribution list. You can also send message to all contacts from your entire group set by selecting **All Contacts.**

Select Group message from the SendSMS panel. Select the Group or Distribution list, to which to send the message, from the **Select Group** list or select **All Contacts** as said above to send a message to all contacts from all groups.



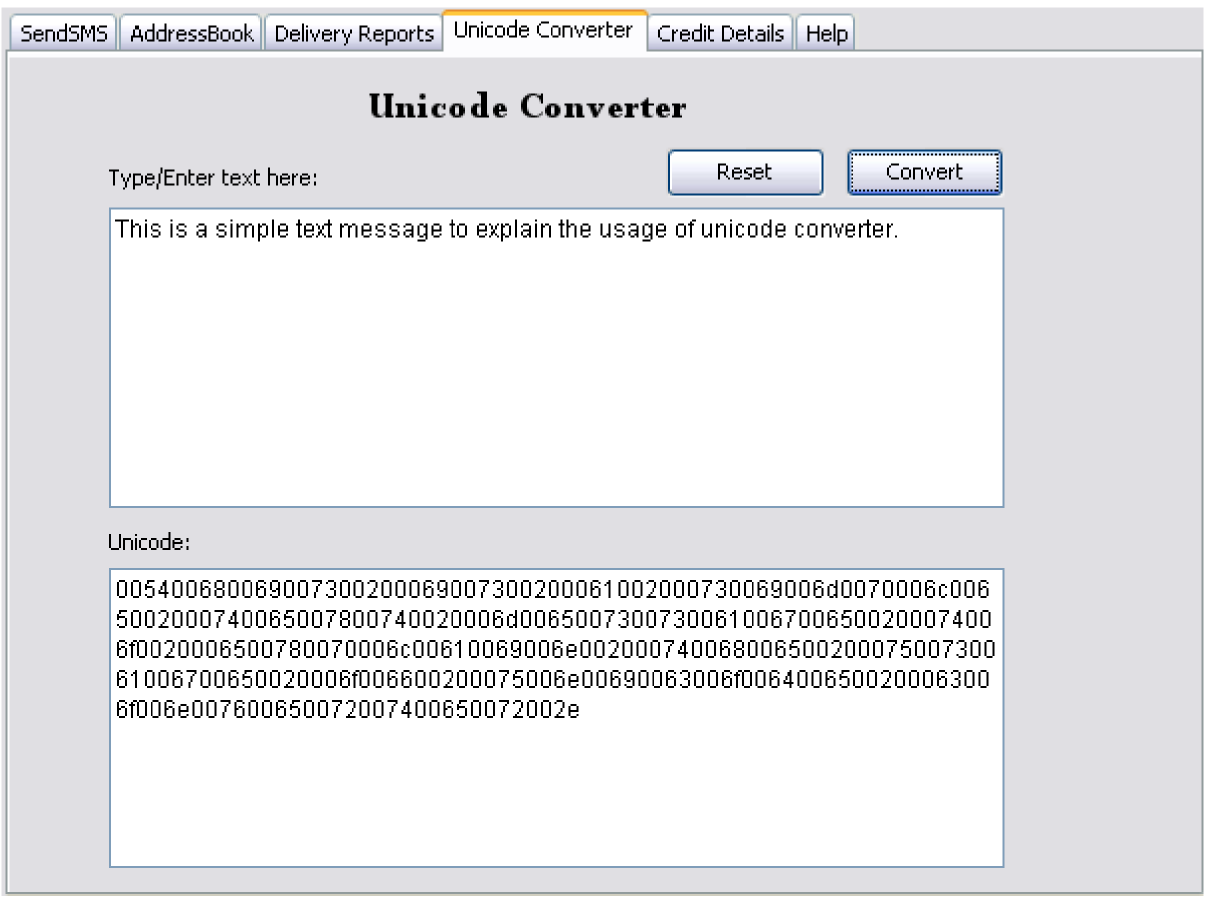
Here as you select a group from Group List, the contacts from the list are listed in the select contacts table. You can opt here to deselect a few contacts from the message recipient group if you want to do so. By default all contacts in the selected group will be selected. Fill in the required parameters and click **Connect** to send the message. The progress of the messages sent can be seen in the **ProgressBar** next to the '**Clear Message**' option.

When sending to a distribution list you cannot see the numbers that exist in the distribution list nor can you have the option of sending the messages to a subset of those numbers. This is because distribution lists are typically used for business purposes where a message is broadcasted to all numbers.

Sending a Unicode Message

This section not only explains sending how to send a Unicode message but also how to use the Unicode converter. Both these features are fairly simple and would not require much explaining, but an example makes things all clear.

We take a simple example to send a Unicode message. Here we need to understand that though we use the Unicode converter to convert a text message, which can be sent in its original form as a text message, Unicode converters are typically used to convert Arabic text to Unicode so that it can be received in it's original Arabic form on cell phones that support Unicode character encoding.



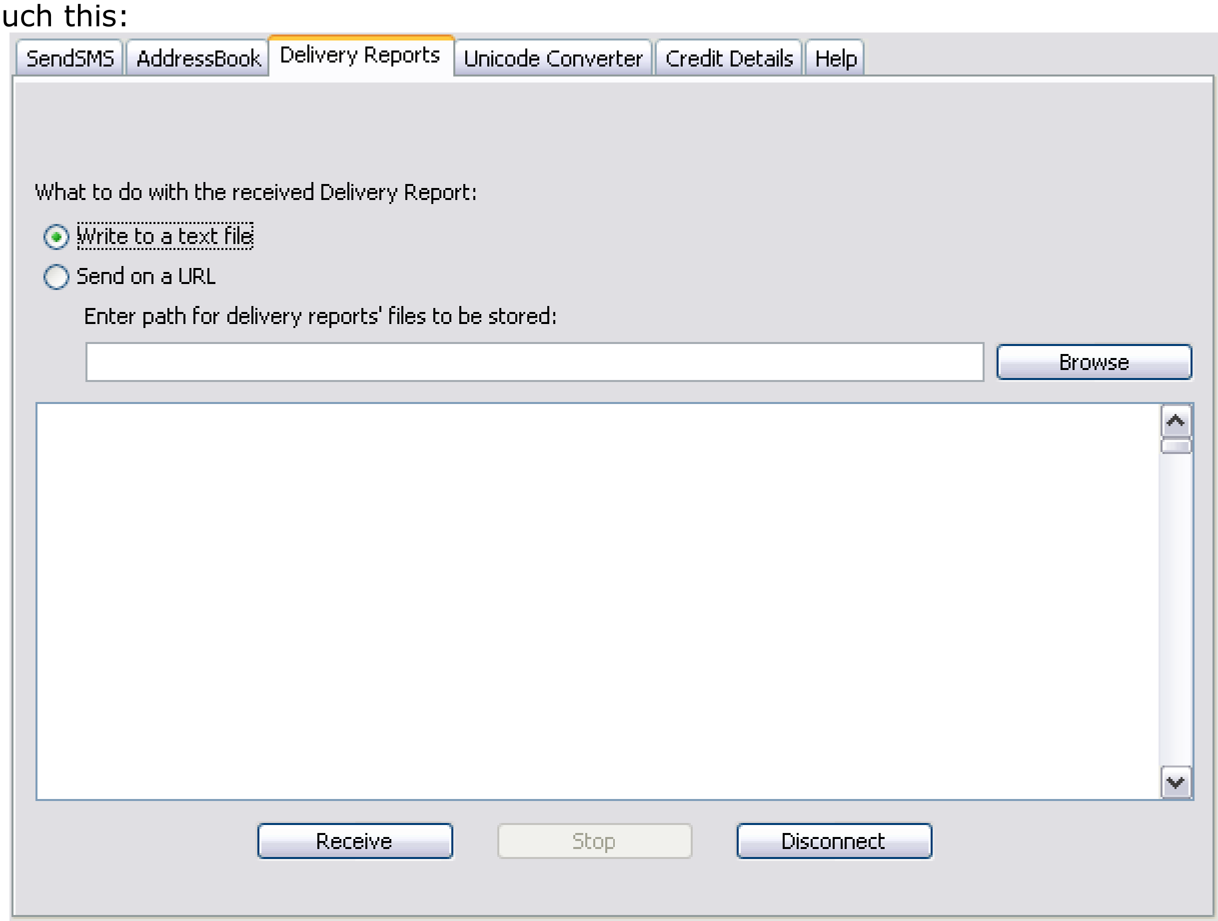
Enter the text that you need to convert into the text area provided for normal text. Click **Convert** to get the Unicode for that text. Copy (Ctrl+C) / Cut (Ctrl+X) or Right-Click Mouse the converted text from the Unicode text area to the message area provided for message text in the **SendSMS** panel. Remember to change the type of the message to Unicode in the message type box, then send the message.

Delivery Reports (DLR)

Delivery Reports specify the details of a sent message. You receive these from the SMSC/SMPP server that you sent the message to. Delivery Reports specify details such as the delivery status, source address or sender, destination address or mobile number, submit date the date time that the message was submitted to the SMSC, done date – the date time that the message was forwarded by the SMSC/SMPP Server, any error flags if required etc.

A report containing these details is called the delivery report for a message. For receiving delivery reports you need to connect to the SMSC/ SMPP Server in the receiver mode.

Once you are connected you keep receiving the messages until to either stop the receiving process explicitly or disconnect from the server from the receiver mode.
To receive delivery reports move to the **Delivery Reports** panel. You see a dialog such this:



You need to log the DLRs to a file to view them at a later time. Here you have the option of either putting the received DLR to a text file of your choice by selecting the directory for the DLR log files or you can have them redirected to an URL of your choice so that you could perform a task of your own (putting them in a special file, dumping them to a database etc.) on the received delivery reports. Click **Receive** here to connect in the receive mode and start receiving the delivery reports. But before that you need to select your option for the storing of delivery report log files. If you do not select any option the default that is the writing to a text

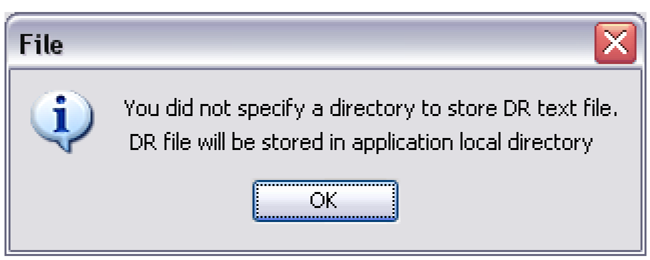
File option will be selected, also if you do not select the directory that you want the received delivery report to be put into, the application will create a directory called **DLRLogs** in the application default directory and put all the generated log files into it.

Naming the delivery report log files

Since storing all the delivery reports in the same file may make the file grow to an unmanageable proportion log files are made once everyday. To do this the application names the log file in a way that it would automatically generate a new file everyday. For this to happen the application names the files as '**DeliveryReport_date_value.log**' so that it always finds a file of the said name within the same day and keeps on appending to it. As the day changes and the application no longer finds a file with the matching name it creates one and keeps appending the logs to it and so on.

Here we show an example of a received delivery report:

We do not specify an option nor we do specify a file and hence the application gives an alert such as this:



We click **Ok** and proceed to receive reports.
What you first see after clicking on **Receive** is that the application connects to the server in the receiver mode which can be seen in status panel above the main panel, details of this connect can be seen in the text area in the form of bind PDU and bind response. Receiving a bind response successfully means that the application has connected successfully to the server in the receiver mode.

```
Bind Request : (bindreq: (pdu: 0 1 0 [398]) tester2       null 52 (addrrang: 0
 0 ) )
Bind Response : (bindresp: (pdu: 31 80000001 0 398) ROUTESMSC 52)
Bind Successful
 Received PDU ----- (deliver: (pdu: 185 5 0 1176733417) (addr: 5 0 routesms)  (
addr: 1 1 919833725473)  (sm: msg: id:438efb6c-fd78-4b42-aab6-637d97d9bb1f sub:
000 dlvrd:001 submit date:070416203938 done date:070416203945 stat:DELIVRD err:
000 text:)  (opt: ) )
```

You can see the details of the connection and report in the text area, this same report is dumped in the log file for the delivery report.

Posting Delivery Reports on URL

To post the received delivery reports on to an URL user must take a note of the below mentioned details:

1. The method used to send data on the URL is **POST.**
2. The data fields of the DLR are sent in the following sequence: strmsgid,strmobile,strsender,submitdate,donedate,strstatus,slogDate.

The user needs to define the URL to accept the parameters in the same sequence as that mentioned above. Any other sequence would cause jumbling of the data between various fields. The user can put his own logic to handle the received DLR within this page. For e.g. writing the DLR to a file, dumping the data into a database etc.

After the user implements the page (URL) for accepting data he needs to specify the location of the page with the server name and other parameters in the 'Send on a URL' text field.

Example:
If the user develops a page named **dumpDLR.php** then the user specifies:

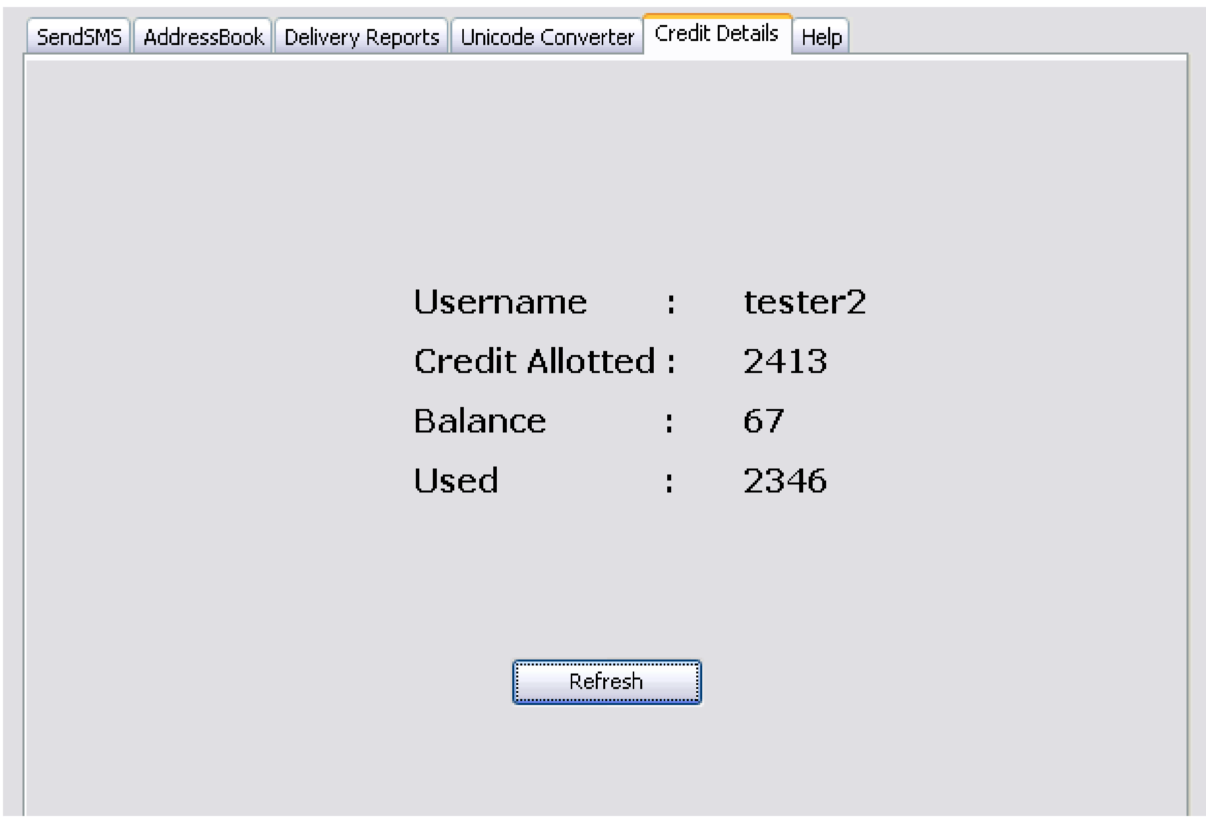
http://servername_or_IP/path_to_file/dumpDLR.php

If the user has the Web Server running on a port other than the default, even the port number has to be mentioned.

http://servername_or_IP:port_number/path_to_file/dumpDLR.php

Credit Details

The credit details panel shows you the credit details for the user such as credit allotted, Balance left, and credit used. This panel proves helpful so that the user does not have to open a browser window, go to the web interface provided by the company every time he has to check his credit details. He can just access the tab for credit details and he can check all the details right there.



Help

During anytime that you are using the application and you need help on a particular feature you need not go searching for this document. The Help Panel offers application embedded and feature specific help right inside the application. This makes using the application even more useful and efficient, as you do have to navigate or search for the topic that you need help on in a user manual such as this. The help is offered on all of the features of the application that would typically require help. Plus this help is offered in a brief format and hence can be read typically within a few minutes. For any other comprehensive help or details about the application you can always concern this document. In the help panel just click the topic that you need help on and you can read on the topic there itself.