

Fleet Manager SMS Processor

Introduction

A new feature in Fleet Manager 2002 Professional is the ability to communicate with GPS equipped vehicles via the Short Message Service (SMS). This is facilitated by the use of the SMS Processor component, which is responsible for sending messages queued in the database out via the GSM network and storing messages received from the GSM network into the database where they can be viewed or reported on by other components of the system.

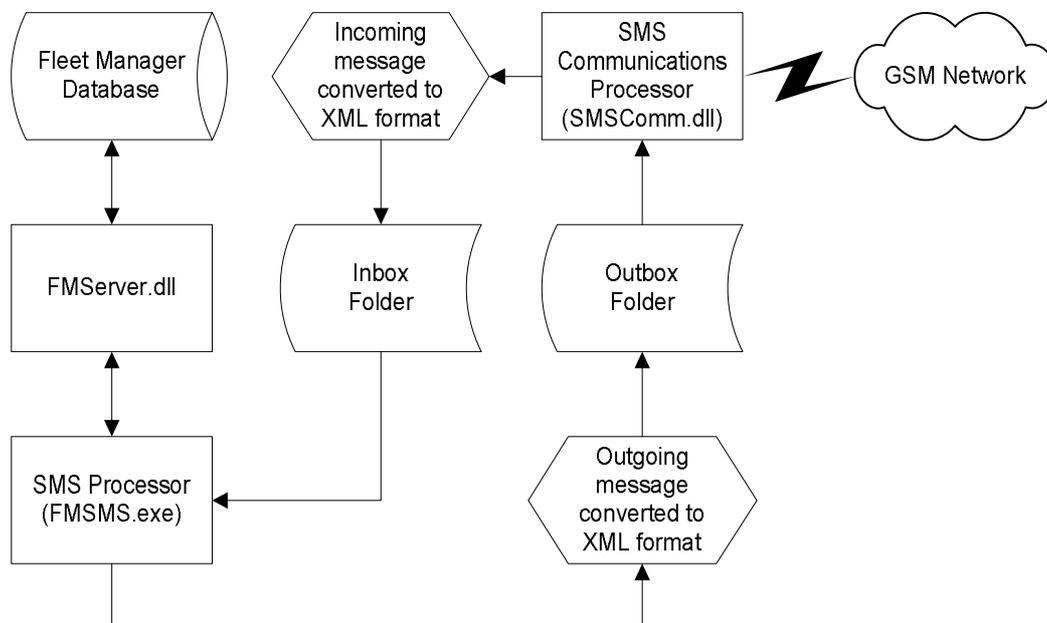
Note: This document should be read in conjunction with the following documents on the Fleet Manager CD-ROM:

- ? Fleet Manager GSM Functionality
- ? How To Configure A GSM Modem Using HyperTerminal
- ? Fleet Manager Active Events and Tracking Extension

How Does It Work?

The SMS Processor is typically installed into the C:\Program Files\Fleet Manager SMS Processor folder. The installation process creates two folders beneath this, called Inbox and Outbox. These are used as temporary folders through which the incoming and outgoing messages are processed.

When it is started the SMS Processor loads the SMS Communication Processor (SMSComm.dll), which performs the actual communication with the GSM network. The diagram below describes the flow of messages between the database and the GSM network.



The SMS Processor monitors an SMS Queue in the Fleet Manager database via the FM Server. When a new entry is detected the SMS Processor translates it into a file in the common XML format and places the file in the Outbox folder. The SMS Communication Processor is in turn monitoring the Outbox folder for new XML files. When one is detected it is converted into the transmission format and transmitted to the vehicle via the GSM network.

Incoming messages are treated in a similar fashion. When the SMS Communications Processor receives a message from a vehicle via the GSM network, the message is translated into the common XML format and placed

in the Inbox folder. The SMS Processor is monitoring the Inbox folder for new files and when one is detected it is read and written into the Fleet Manager database via the FM Server.

XML (eXtensible Markup Language) files are simply text files with a standard structure. They are used as a transfer mechanism between the SMS Processor and the SMS Communications Processor for several reasons. Firstly, because they are plain text files they can be read by people as easily as by programs, which makes for easier diagnosis of any problems that may occur in the flow of processing. Secondly they can be validated in an efficient manner by comparing their structure to the structure defined in a DTD (Data Type Definition) file. These factors combine to make for an open, yet structured data transfer mechanism.

How Do I Use It?

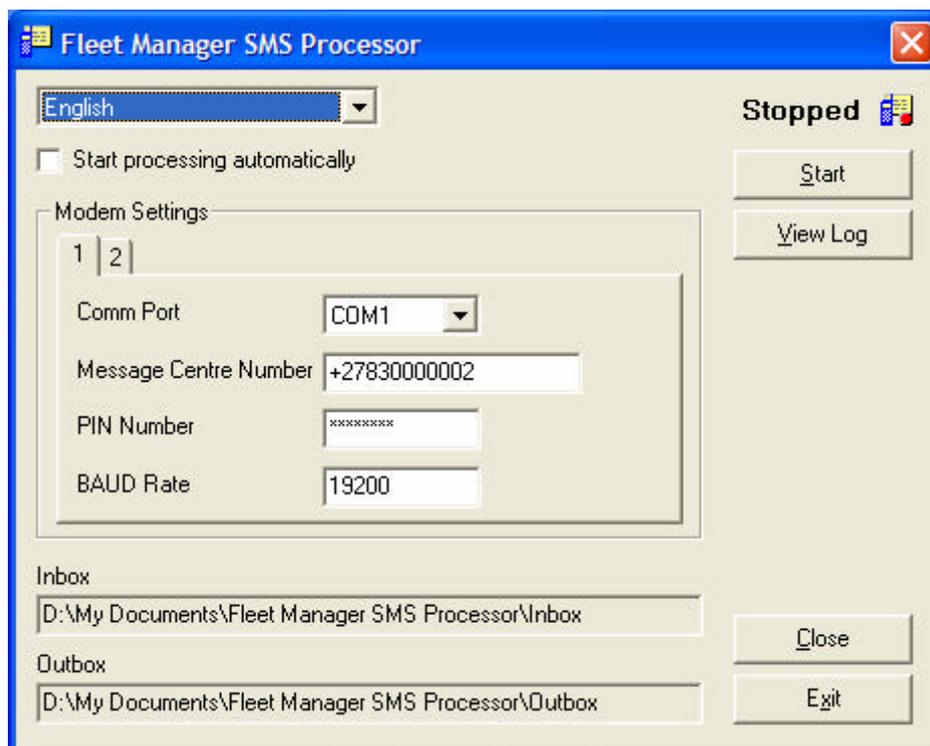
Launch the SMS Processor using the shortcut created by the install set. Unless otherwise specified during installation, this shortcut is created in the Fleet Manager folder beneath the Programs folder on the Start menu.

The install set also creates an additional shortcut in the Startup folder so that the SMS Processor runs automatically when your computer is restarted.

When you launch the SMS Processor from the menu it may attempt to start processing immediately, if it has been configured to do so. If this is the case but all configuration data is not correct, the processor will fail to start and a message will be displayed. If however the configuration data is correct the processor will start and will indicate that it is running by displaying the  icon in the system tray. When the processor is not running the  icon is displayed in the system tray.

All configuration of the SMS Processor is done from a single dialog that can be accessed by double-clicking the system tray icon, or by right-clicking the system tray icon and selecting Configure from the menu. Once you have entered the configuration information you can simply click the Start button to initiate processing of in and outgoing SMS messages.

The configuration dialog looks as follows.



There are a number of controls on the dialog;

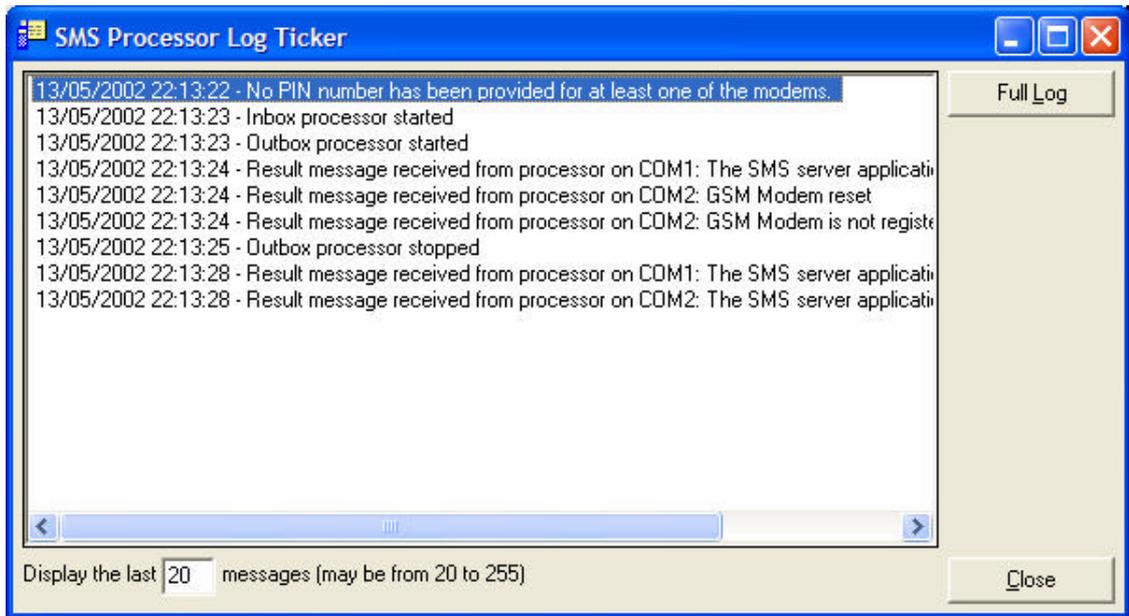
- ? **Language selector** – appears at the top of the dialog and is used to select the language in which the SMS Processor is to operate
- ? **Autostart setting** – appears just below the language selector and is used to indicate whether processing is to commence as soon as the program is started.
- ? **Modem settings** – appears as a tabbed group in the centre of the dialog. Two modems are supported and the tabs are used to select the modem whose settings you wish to view or change. The settings themselves consist of;
 - o **Comm Port** – the communications (serial) port that the modem is connected to.

NOTE: Although the program interface only allows the selection of COM ports 1 through 4, it is possible to make use of other COM ports. To do so it will be necessary to edit the registry. The port information is held in the following registry value;

```
HKEY_LOCAL_MACHINE
SOFTWARE
  Data Pro Development (Pty) Ltd
    Fleet Manager
      SMS Processor
        Modem001 (or Modem002)
          Port
```

The value of the Port entry is a string of the form COM_n where _n is the port number. So the value would be COM1 if the modem is connected to the first serial port. In order to change the port the value of this entry can be changed. For example to use the 27th serial port you would change this entry to COM27. You should terminate the SMS Processor before making this change and start it again afterwards. The modem settings tab in the SMS Processor will correctly display the new port that you have specified.

- o **Message Centre Number** – the telephone number of the GSM SMS message centre that is to be used for sending and receiving messages.
 - o **PIN Number** – the PIN code that is required to access the SIM card in the GSM modem. Note that this is a protected field and can never be viewed in plain text.
 - o **BAUD rate** – the speed at which communications between the port and the modem will take place. This field has a default value of 19200.
- ? **Inbox** – a display only field indicating the path to the Inbox folder
 - ? **Outbox** – a display only field indicating the path to the Outbox folder
 - ? **Status indicator** – appears at the top right of the dialog and consists of the word Running and the system icon with a green light, indicating that the processor is running, or the word Stopped and the system icon with a red light, indicating that the processor is not running.
 - ? **Start/Stop button** – used to stop or start the processor. The text displayed on the button and the action it will take depend on whether the processor is running or stopped.
 - ? **View Log button** – opens the Log Ticker window pictured below.



The Log Ticker window can be used to monitor the processing that is taking place. It will display a number of messages indicating the processing actions that are occurring. The default is to display up to 20 messages but this can be configured between 20 and 255 by changing the value in the text box at the bottom. It must be noted that the Log Ticker does not display all the messages that are being logged by the SMS Processor. If you wish to view the full log file, click on the Full Log button. This will open the log file, FMSMSLog.txt, using the default text editor. If the Log Ticker window is open when you exit the SMS Processor, it will be reopened when next the SMS Processor is executed. The Close button will close the Log Ticker window.

- ? **Close button** – closes the configuration dialog without exiting the SMS Processor, in effect minimizing it to the system tray.
- ? **Exit button** – exits the SMS Processor. A confirmation dialog is displayed that requires you to confirm your intention to exit before the program is actually exited.