User Manual

SMS Bridge

Global Monitoring System

YORK Marine, Controls/ – the people to talk to

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User Manual

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Introduction

System overview   The SMS Bridge provides an economical means of transmitting reefer monitoring data to the YORK Global Monitoring Server (GMS). Instead of sending SMS messages directly to the GMS server in Denmark, your monitoring systems send them to the SMS Bridge. The SMS Bridge relays the messages to the GMS server via the Internet, reducing the cost of data transmission.

The SMS Bridge is intended for use with the YORK RefLine and RefBox reefer monitoring systems. It consists of a GSM modem and a software application for a Windows 2000 or XP PC.
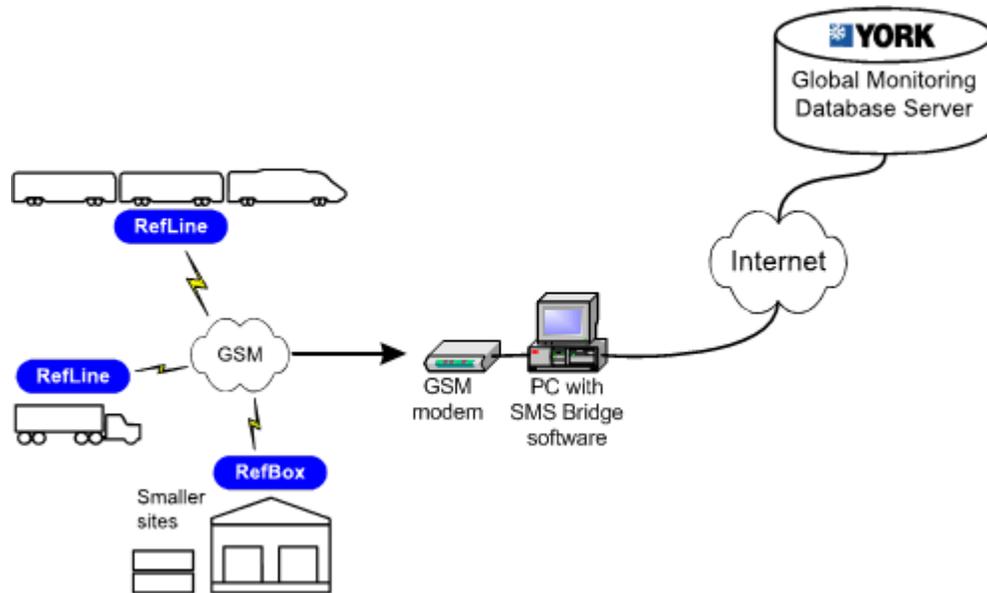
Purpose of this document   This document describes how to install and use the SMS Bridge.

Included items   The SMS Bridge comes with the following items:
- GSM dual band 900/1800 MHz modem
- Universal input 12 V DC power supply
- GSM 900 / 1800 MHz antenna
- 1 m modem data cable
- CD-rom with SMS Bridge application
- User manual

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Introduction, Continued

Services The SMS Bridge application consists of three following components, or services.

- **MailHandler service**
  Sends system related e-mails, for example if the GSM modem loses it's registration on the GSM network. This is an optional service for your convenience.

- **SMSHandler service**
  Receives SMS messages from the GSM modem and delivers them to the SMSBridge service. Required for operation.

- **SMSBridge service**
  Transfers SMS messages to the Global Monitoring Server over the Internet. Required for operation.

Main screen
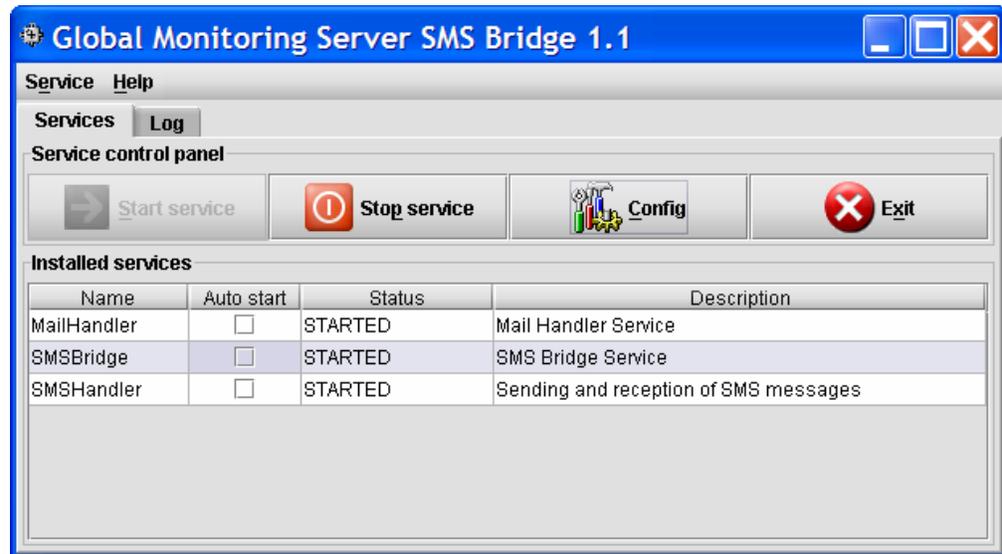
GSM modem

Requirements

Computer	The SMS Bridge runs on Windows 2000 and XP personal computers. The computer must have an RS-232 serial (COM) port for connection of the GSM modem or a serial port adaptor.

GSM service   The SMS Bridge receives data over the GSM mobile phone network via SMS text messages. This requires a GSM account and SIM card (not included).

More information about the GSM system, including coverage maps, is available from www.gsmworld.com. To obtain GSM service, consult with a local GSM mobile phone provider.

Note: Verify that the GSM provider supports text messaging through "circuit-switched" core network services rather than "packet switched" services.

Internet connection   The SMS Bridge requires an ISDN or faster connection to the Internet. If the Internet connection is not "always on", it must be capable of automatic log on.

E-mail account on SMTP server   An e-mail address is required by the MailHandler service to send system messages. This function is an optional convenience and not required for data relay.

Note: The current version of the SMS Bridge does not support password authentication. The MailHandler service does not work if your SMTP email server requires authentication to send outgoing mail.

Installation

Before you begin	Before installing the modem and software:

- Verify that the PC has an RS-232 serial (COM) port. If no serial port is available, a USB to serial port adaptor may be used.
- Verify that a GSM signal is present at the PC location. You can check for a signal using a mobile phone.
- Make a note of the SIM card PIN code and the GSM service provider's SMS message center number.
- Ask your system administrator to provide the SMTP host name and whether the SMTP server requires password authentication.

Software installation

Install the SMS Bridge software on the PC as follows.

Step	Action
1	Save your work and close all applications.
2	Insert the included CD-ROM in the disk drive.
3	Double-click the installation file (GMSSMSBridge-x_x) to start the installation process.
4	Follow the setup wizard instructions to complete the installation.

Modem setup

Setup and connect the GSM modem as follows. Note! Do not apply power to the modem without first connecting the antenna.

Step	Action
1	Connect the 9-pin plug of the serial cable to a serial port on the PC. Connect the other plug to the modem.
2	Press in the SIM card release button and remove the SIM card holder. Place the SIM card in the holder and insert the holder back in the modem.
3	Connect the GSM antenna to the modem. Lead the antenna to a convenient location, remove the tape, and press the antenna firmly to the mounting surface.
4	Plug the output from the included power supply into the modem's DC input socket.
5	Verify that the antenna is connected to the modem, then connect the power supply to AC power.
6	Verify that the modem LED is lit.

Software removal

To uninstall the SMS Bridge application, select **Uninstall SMS Bridge** from the **Global Monitoring Server** folder in your program list

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Configuration

Service startup	By default, the services do not automatically start when the application is launched. To start a service, you click it's name and then click the **Start service** button. To avoid this step, select the Auto start option for each service as shown below.

Mail handler configuration	Configure the MailHandler as follows.

Step	Action
1	Click **MailHandler** in the main screen.
2	Click the Config button. The configuration screen opens.
3	**SMTP host:** Enter the host name of the SMTP server used to send e-mail. Your system administrator can provide this information.
4	**From e-mail:** Enter the "from" e-mail address.

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Configuration, Continued

Mail handler configuration (continued)

Step	Action
5	**From name:** Enter a name to identify the sender as the SMS Bridge system. The receiver sees this name in the inbox.
6	**Administrator e-mail:** Enter the address for person monitoring the system.
7	Click **Save configuration** to save the changes.
8	Click the **Test** button to send a test message from the SMS Bridge to the administrator.
9	Close the configuration screen and start the service.

SMS bridge configuration

The SMS Bridge is pre-configured with the settings that are required for most applications. If the service does not start, verify the settings as described below.

Step	Action
1	Click **SMSBridge** in the main screen.
2	Click the **Config** button. The configuration screen opens.
3	**Log interface host**: This is the host name for the GMS log interface. The setting to use is **logif.reefers-online.com**. In rare cases it may be necessary to enter the IP address for the interface. The IP address is currently 195.249.110.24 but is subject to change.
4	**Log interface port:** The value for this setting is **10000**.
5	Close the window and start the service. The service is functioning correctly if **STARTED** appears in the **Status** field.
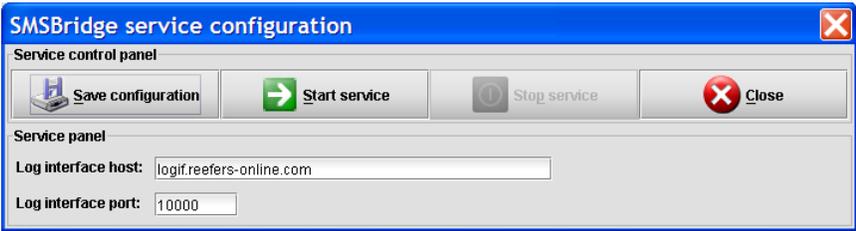
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Configuration, Continued

SMS Handler configuration

Configure the SMSHandler as follows.

Step	Action
1	Click **SMSHandler** in the main screen.
2	Click the **Config** button. The configuration screen opens.
3	**SIM PIN code**: Enter the PIN code for the SIM card. NOTE: Verify that the PIN code is correct! The SMSHandler transmits the PIN code to the modem three times, which may result in blocking of the SIM card if the code is incorrect. See Troubleshooting if the SIM card is blocked. The PIN code field is not used if SIM card's PIN code request is disabled.

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Configuration, Continued

SMS Handler configuration (continued)

Step	Action
4	**COM port**: Enter the number of the COM port to which the GSM modem is connected. If using a USB to Serial Port adaptor, to find the port number right-click **My Computer**, click **Manage**, click **Device Manager**, and double-click **Ports (COM & LPT)** in the list of devices. The port number should be shown in parenthesis after the device name.
5	**Baud rate**: Select **115200**.
6	**SMS service center**: Enter the phone number of the SMS service center of your GSM provider.
7	**Receive status reports**: When selected, the SMS handler handles status reports when sending SMS messages. Status reports are not displayed.
8	**GSM char set**: Select **GSM**.
9	Click **Save configuration** to save the changes.
10	Click **Start service** to initialize the modem. After a few moments, the modem's LED starts to blink to indicate the modem has successfully logged on to the GSM network.
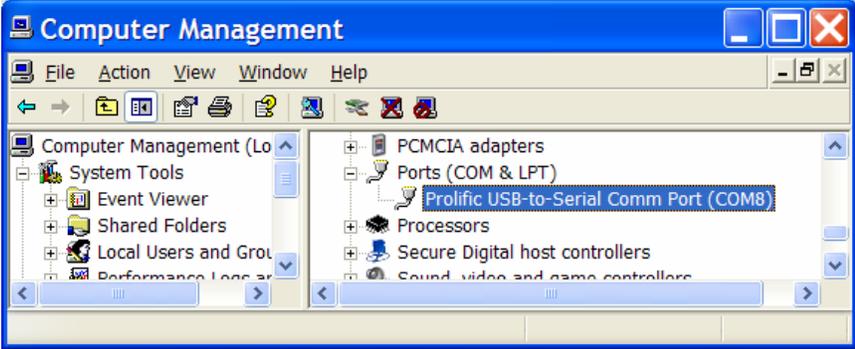
Operation

Starting the SMS Bridge	After the system has been installed and configured as described in the previous sections, start the SMS Bridge as follows. If the Auto Start option is selected, no user intervention is required.

Step	Action
1	Start the computer. The SMS Bridge launches automatically on start-up. Should you need to launch the SMS Bridge manually, select **SMS Bridge** from the **Global Monitoring Server** folder in your program list.
2	If you have not selected the Auto Start option, start the services by clicking the service name and then clicking the Start service button.
3	Refer to the troubleshooting section if a service fails to start.

Normal operation	Once the SMSHandler and SMSBridge services are started, the modem is logged on to the GSM network (indicated by flashing of the LED), the SMS Bridge is operational. For uninterrupted operation, it is recommended that the computer be left on. Note that your RefLine/RefBox systems must be configured with the number for the SMS Bridge.
RefLine/RefBox configuration	To configure RefLine and/or RefBox systems, use the Service Tool to change the phone number in the **WEB server phone number** field of the **Basic** tab to the number for the SMS Bridge. Please refer to the RefLine or RefBox user manual.

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Troubleshooting

Monitoring activity	The log function allows you to monitor system activity. To view the log, click the Log tab. To make the log scroll up as new messages appear, select the Auto scroll option.
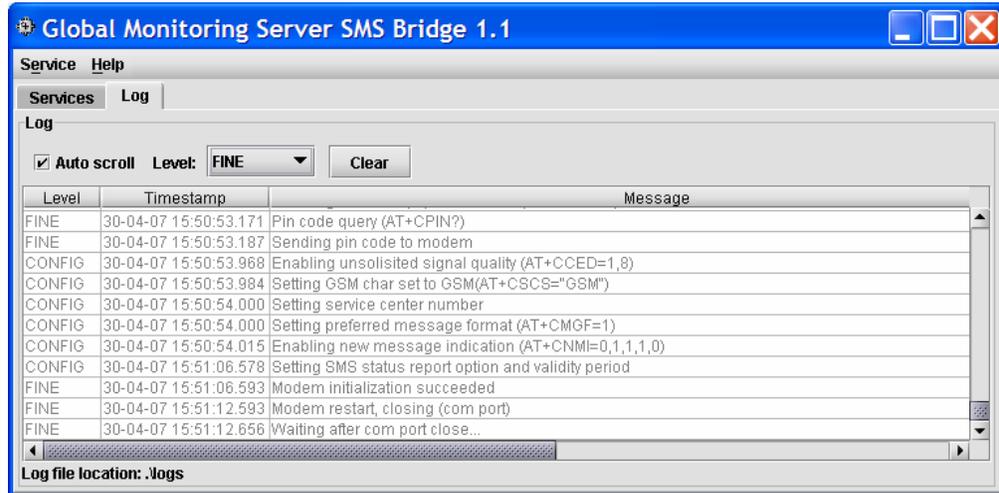
Log detail	Log messages are divided into seven levels of detail from Finest to Severe. Selecting a detail level causes the log to display that level and those below it. For example, selecting the Info level displays Info, Warning, and Severe messages, but not Config, Fine, Finer, or Finest messages. • Finest: All activity, including low-level modem commands • Finer: Very detailed activity • Fine: Detailed activity • Config: Modem configuration activity • Info: General activity • Warning: All errors • Severe: Critical errors To monitor the system for errors, set the message level to **Warning** or **Severe.**

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Troubleshooting, Continued

MailHandler   Use the table below to troubleshoot problems with the MailHandler service.

Problem	Likely Cause	Solution
Error message "Details: [host name]"	Incorrect SMTP host name	Get host name from system administrator.
Error message "Details: 553 Authentication is required..."	Mail server requires user authentication	The MailHandler is not compatible with the server. Use log to monitor system directly.

SMSBridge   Use the table below to troubleshoot problems with the SMSBridge service.

Problem	Likely Cause	Solution
Error Starting	No connection to Internet	Refer to system administrator or ISP
	System unable to resolve log interface host name	Enter IP address in log interface host field.

SMSHandler   Use the table below to troubleshoot problems with the SMSHandler service.

Problem	Likely Cause	Solution
Error starting and servere log message: AT+CPIN=[PIN] failed	Incorrect PIN code	Change PIN code in configuration dialog
Error starting and severe log message: SIM CARD FAILURE	SIM card locked due to attempt to configure with incorrect PIN code	Place SIM card in a mobile phone and unlock with the card's PUK code.
	Missing SIM card	Place SIM card in modem
	Defective SIM card	Verify by testing modem with a different SIM card or testing the card in a mobile phone.

Troubleshooting, Continued

SMSHandler (continued)

Problem	Likely Cause	Solution
Error starting and severe log message: Unable to open specified com port	Wrong COM port	Select correct COM port in configuration dialog
	Modem cable not connected	Check connections
Error starting and severe log message: Modem activity query failed	Modem cable not connected	Check connections
	Wrong BAUD rate	Select correct BAUD setting (115200) in configuration dialog
	Defective modem	Contact YORK service
Service starts, modem LED flashes but test messages fail	Missing or wrong service center number	Enter the SMS service center number for the GSM provider in the configuration dialog.
Service starts but LED does not flash	Poor GSM signal	Verify that modem antenna is connected and that there is a good signal
	Defective modem	Contact YORK service

E-mail error messages

Use the table below to troubleshoot the most common errors generated by the MailHandler service.

Problem	Likely Cause	Solution
GMS modem loses registration on GSM network	Poor GSM signal	Allow modem to re-register. If problem persists, verify that modem antenna is connected and that there is a good signal
Restart of GSM modem fails	SIM card removed from modem	Replace SIM card
	Cable disconnected or USB adaptor moved	Check cable connections between modem and PC. If using a USB to Serial Port adaptor, verify port assignment.
	Modem power failure	Check connections to modem power supply
	Defective modem	Contact YORK service

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Document Revision Record

Rev.	Date	Author	Brief description of change	Pages affected
1.0	8 aug 2003	PCL	Original issue of this document	all
1.1	26 may 2004	PCL	GSM modem baud rate added	1
1.2	23 mar 2005	PCL	Not released	
1.3	07 may 2007	MA	General revision and update	all

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