Quick Start Guide – Now SMS/MMS Gateway

This document is intended for new users of the Now SMS/MMS gateway, as a quick start toward a working installation.

In this guide, we will perform the following steps:

- **Step 1:** **Install the Now SMS/MMS Gateway Software** on your PC.
- **Step 2:** **Configure the SMS/MMS Gateway** to allow you to send SMS and MMS messages.
- **Step 3:** **Send an SMS Message** to confirm that you have properly configured the gateway.
- **Step 4:** **Configure the MMSC** to provide enhanced MMS message sending capabilities, and optionally to allow mobile phones to utilize the gateway as their preferred MMS Messaging Server (MMSC).
- **Step 5:** **Send an MMS Message** to confirm that you have properly configured the MMSC.
- **Step 6:** **Configure your Mobile Phone Settings** to connect to the gateway as a preferred MMS Messaging Server (MMSC).
- **Step 7:** **Take a Break** before getting back to work on your SMS and/or MMS solution.

Step 1: Install the Now SMS/MMS Gateway Software

To install the Now SMS/MMS Gateway software, you will need a PC running Windows NT 4.0, Windows 2000 or Windows XP.

The Now SMS/MMS Gateway also requires a connection to an SMSC (Short Messaging Service Centre) to interface with SMS and MMS networks.   An SMSC connection can consist of one or more of the following:

GSM Modem – A GSM modem or phone connected to a PC serial port (or to a USB port with an appropriate modem driver).

SMPP (Short Message Peer to Peer Protocol) – A TCP/IP connection over the internet or a private network to a service that supports v3.3 or v3.4 of the SMPP protocol.

UCP/EMI (Universal Computer Protocol / External Machine Interface) – A TCP/IP connection over the internet or a private network to a service that supports v3.5 or v4.0 of the UCP/EMI protocol.

CIMD2 (Computer Interface to Message Distribution, version 2) – A TCP/IP connection over the internet to a service that supports the CIMD2 protocol. CIMD2 is implemented by Nokia SMSCs.

HTTP (Hyper Text Transport Protocol, e.g., the standard protocol for the "web") – A TCP/IP connection over the internet or private network to a service that accepts SMS messages via an HTTP "GET" based protocol. (This protocol allows you to chain multiple Now SMS/MMS Gateways together.)

The installation program for the Now SMS/MMS gateway software is self-explanatory. It will prompt for a directory in which to install the software, and will then proceed to install the software into the specified directory.

The installation will create a program group named "NowSMS", which contains 4 entries:

Now SMS Gateway – Runs the configuration program for the Now SMS/MMS Gateway.

Now SMS Gateway Help – Loads the help file for the Now SMS/MMS Gateway into your web browser. (The file is stored locally on your hard drive, however it is a collection of pages in a web format.)

Now SMS Web Interface – Connects to the "web menu interface" of the Now SMS/MMS Gateway via your web browser, allowing you to quickly send test SMS and MMS messages.

Now SMS Web Site – Connects to the home page of the Now SMS Web Site (http://www.nowsms.com), where you can access discussion boards, frequently asked questions, and other information resources about the software.

When the installation program is complete, the Now SMS/MMS gateway configuration program will load automatically.

Step 2: Configure the SMS/MMS Gateway

The first step in configuring the SMS/MMS gateway is to configure SMSC (Short Messaging Service Centre) settings, which tell the gateway how it connects to the GSM network to send SMS messages.

Step 2a: Configure SMSC Settings

When the Now SMS/MMS Gateway configuration program is first loaded, you will see a setup screen similar to the following:
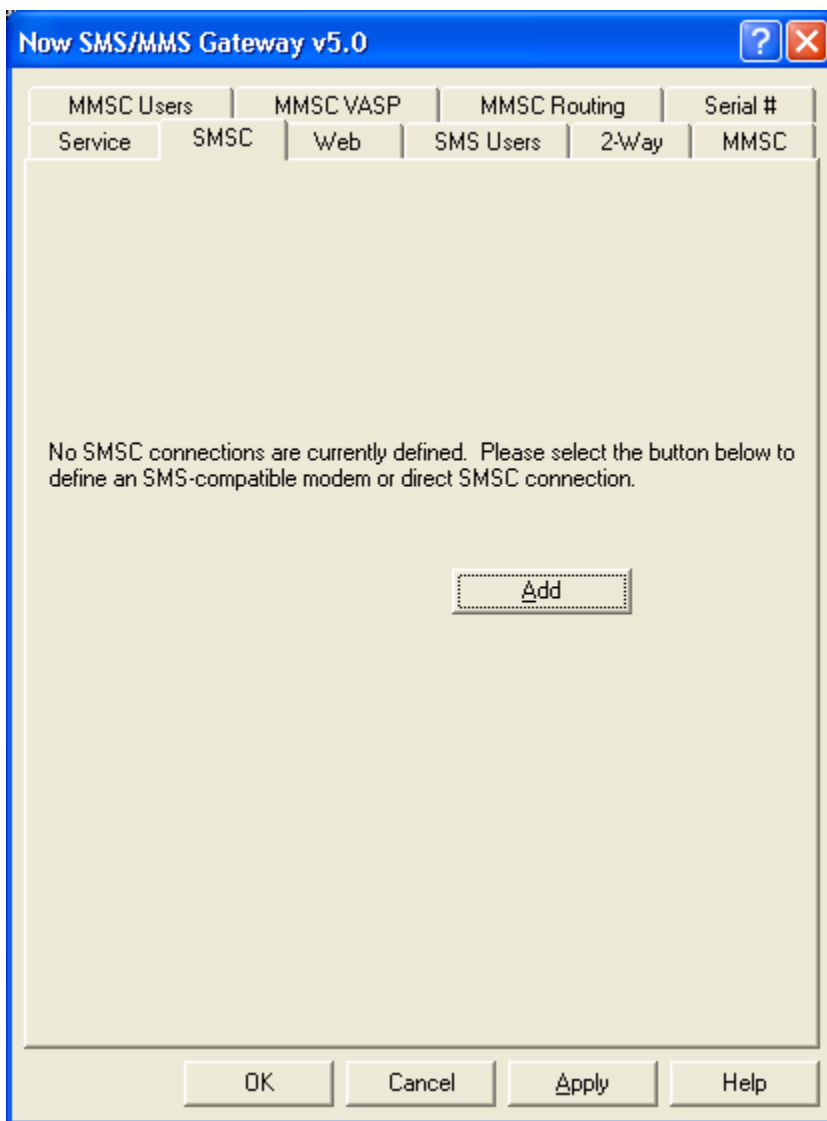

If you do not see this particular screen, select the **"SMSC"** page from the gateway configuration dialog.

For an initial installation, no SMSC connections will have been defined. You will need to define an SMSC connection to tell the gateway how to send SMS messages.

This quick start guide will focus on GSM Modem connections. For more information on other types of SMSC connections, follow the highlighted link to open a page that explains the configuration settings for the type of SMSC connection that you will be establishing: SMPP, UCP/EMI, CIMD2, or HTTP. When you have completed SMSC configuration, you can continue with the section titled "Step 2b: Configure Web Settings for SMS/MMS Gateway".

When no SMSC have yet been defined, only the **"Add"** button will be available on this dialog. Select **"Add"**, and then **"GSM Phone or Modem"** to display a list of available modem drivers on your computer.
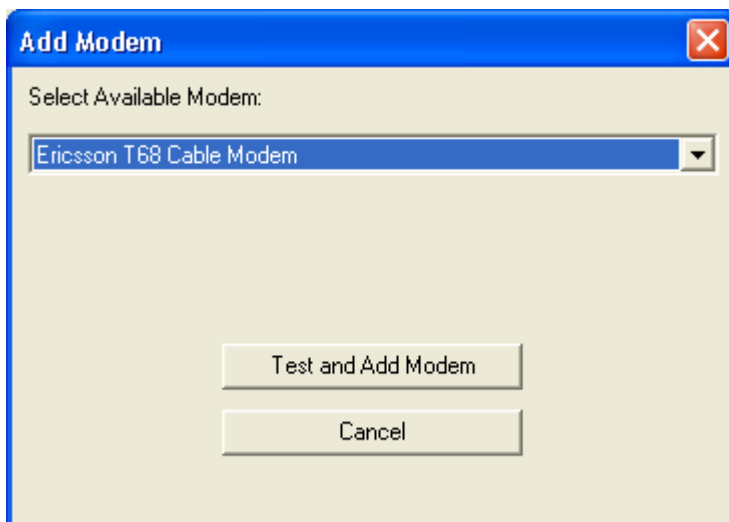
Select an available modem and press the **"Test and Add Modem"** button. The gateway will then attempt to initialize the modem, and confirm that the modem supports the necessary interfaces to send and receive SMS messages. The modem will only be added to the configuration if the gateway confirms that it can properly communicate with the modem.

What if the gateway says it cannot initialize my modem?

- ✓ It is possible to define a modem connection by either selecting the name of the Windows modem driver, or selecting the name of the COM port to which the modem is connected. If you are attempting to connect to a modem by specifying a COM port and are experiencing problems, the best way to troubleshoot this problem is to ensure that you are connecting to the phone or modem using a Windows modem driver supplied by the phone or modem manufacturer, instead of going directly to a COM port. When you configure a GSM modem connection for the gateway, you are presented with a list of modem drivers installed on your system, as well as a list of COM ports. You will achieve better results going through the modem driver. If you have not installed a Windows modem driver for your device, visit the manufacturer web site, or use the CD supplied by the manufacturer, and install the appropriate modem driver.

- ✓ Assuming an appropriate modem driver is installed, go into the Windows Control Panel, and select the "Modems" or "Phone and Modem Options" applet. In the diagnostics section, ensure that you are able to use "Query Modem" to interface with your modem, which will ensure that Windows is able to properly communicate with the modem. The Now SMS/MMS gateway will not be able to access the modem if it is not accessible to Windows. Follow the instructions from the device manufacturer if you encounter problems accessing the modem in the Windows Control Panel.

- ✓ One common problem is an incorrect cable. Some phone manufacturers have different cables for different purposes. You want to the type of cable that allows your PC to use the phone as a modem (sometimes referred to as a "data/fax cable"). For example, most Nokia phones have DLR-3 and DAU-9 types of cables. The DLR-3 type is for data/fax applications, and the DAU-9 is for use with Logo Manager. The Now SMS/MMS gateway requires the DLR-3 type (data/fax).
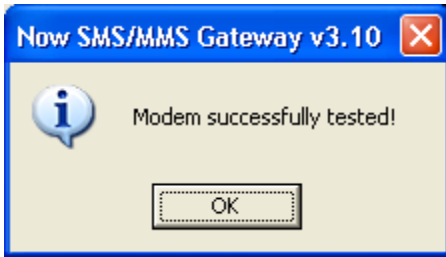
Once the modem has been added to the SMSC list, as shown below, continue with the next step of the configuration process.
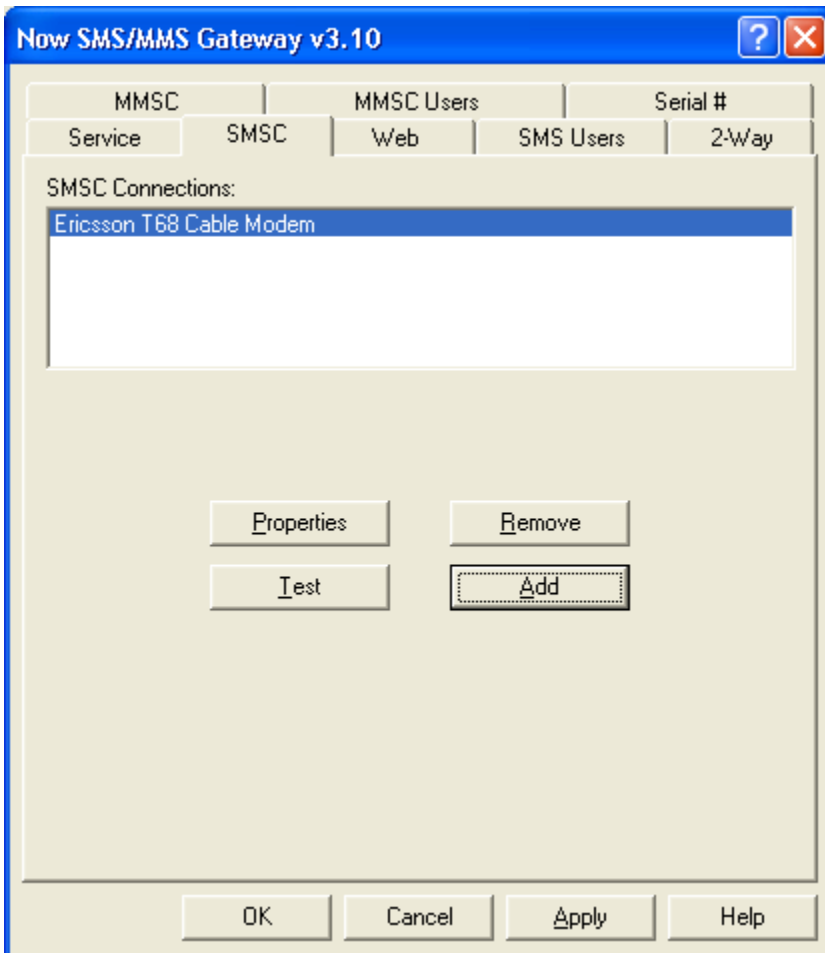
Step 2b: Configure Web Settings for SMS/MMS Gateway

When you wish to submit any type of SMS message, including MMS notifications or WAP push messages, you will submit the request via the gateway's web interface. The **"Web"** page of the configuration dialog contains settings relevant to this web interface.

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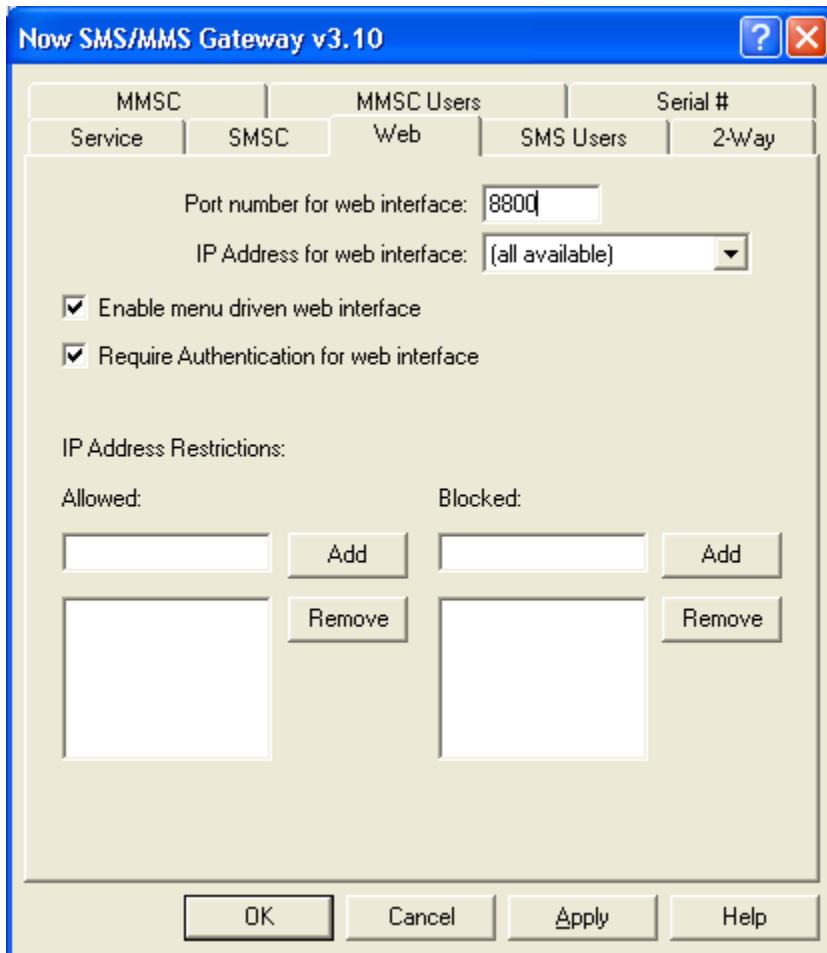
You configure the gateway to listen for web/HTTP requests on a particular TCP/IP port number. The standard web port on the internet is 80, however you will most likely want to use a non-standard port for this service. The service defaults to the non-standard port 8800.

The PC that is running the gateway might have other web services installed. For this reason, the gateway allows you to specify which of the available IP addresses on the current PC should be used by the gateway. The **"IP Address for web interface"** prompt displays the available IP addresses on the current PC. To make the gateway service available via any address on the current PC, select "(all available)", otherwise select a specific IP address.

"Enable menu driven web interface" specifies whether or not an HTML menu will be displayed when a user connects to the gateway via the web interface.

This menu interface can be helpful when you are first exploring the features of the gateway. If this menu setting is disabled, then the gateway will require the appropriate URL parameters to perform any tasks. For the purpose of this "Quick Start Guide", we recommend enabling this option. You may decide to disable this option after you become more familiar with the product.

Important: Click the **"Apply"** button at the bottom of the dialog to save the configuration settings that you have entered thus far.

Step 2c: Install the SMS/MMS Gateway Service

The next step in configuring the SMS/MMS Gateway is to install the service. The Now SMS/MMS Gateway installs as a Windows service, which means that it is automatically loaded and run when the computer is restarted. The service can also be manually started and stopped via the Services option in the Windows control panel.

To install the Now SMS/MMS Gateway as a service, select the **"Service"** page of the configuration dialog.
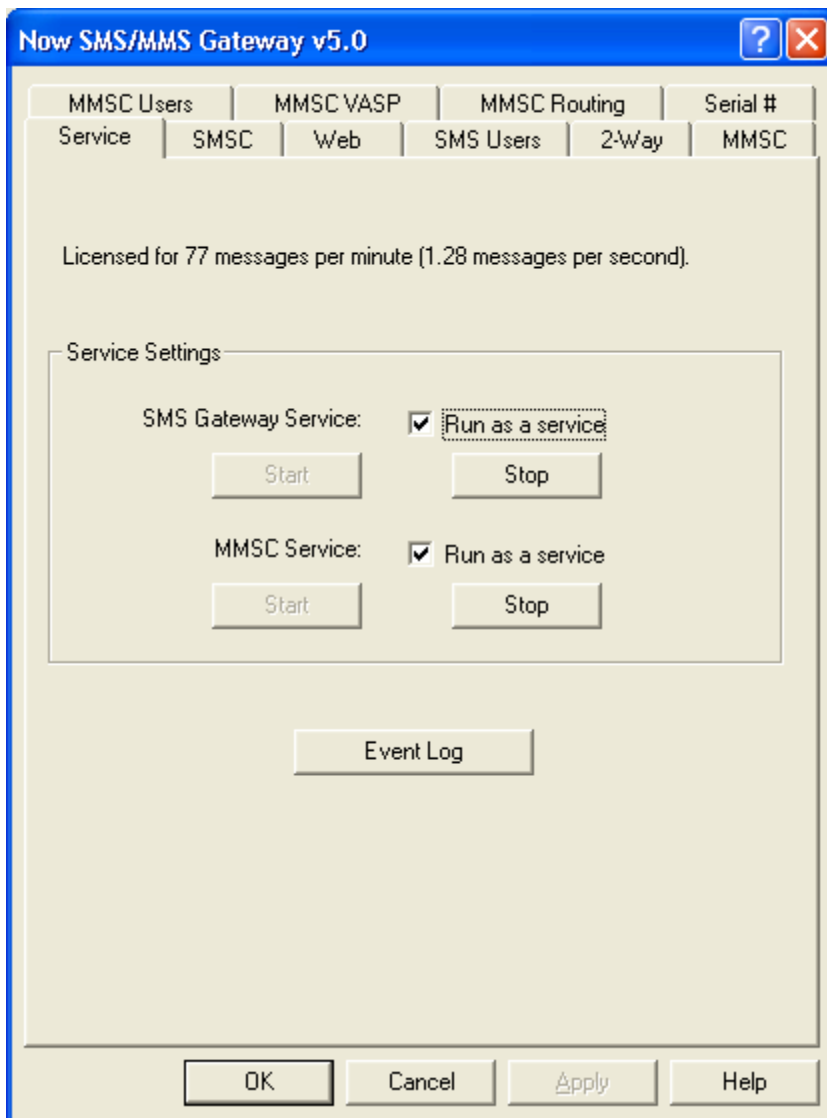
Click the "**Run as a Service**" check boxes. After several seconds, the text of the "Start" button should be grayed out, while the text of the "Stop" button is enabled. This indicates that the Now SMS/MMS Gateway service is now running.

If an error occurs when installing the service, ensure that you are logged into Windows with an account that has administrator privileges which is allowed to install and remove services.

It is also possible for an error message to be displayed indicating: "Gateway is not active. Port number for web interface already in use by another application. Please change the port number on the Web page of this dialog." This error message indicates that the "Port Number for Web Interface" configured on the "Web" page of the dialog in Step 2b, is in use by another

application. Return to Step 2b, and select another port, or change the port setting in the other application.

Step 3: Send an SMS Message

Once the SMS/MMS gateway is installed, the next step is to test your SMS connectivity to verify that you are able to properly send SMS messages.

The easiest way to send an SMS message through the gateway is to connect to the "web menu interface". To connect to this interface, load a web browser on the same PC on which the gateway is installed, and connect to the address:

http://127.0.0.1:8800

Note: If you configured an HTTP port number other than "8800" on the "Web" page of the dialog in Step 2b, then substitute that number for "8800".

Note: 127.0.0.1 is an internal TCP/IP loopback address which tells your web browser to connect to a service that is running locally on your PC. If in Step 2b, you selected a specific address for "IP Address for Web interface", then the 127.0.0.1 address will not work, and you must replace "127.0.0.1" with the address entered on the "Web" page of the configuration dialog.

The web browser should display a web page similar to the following:
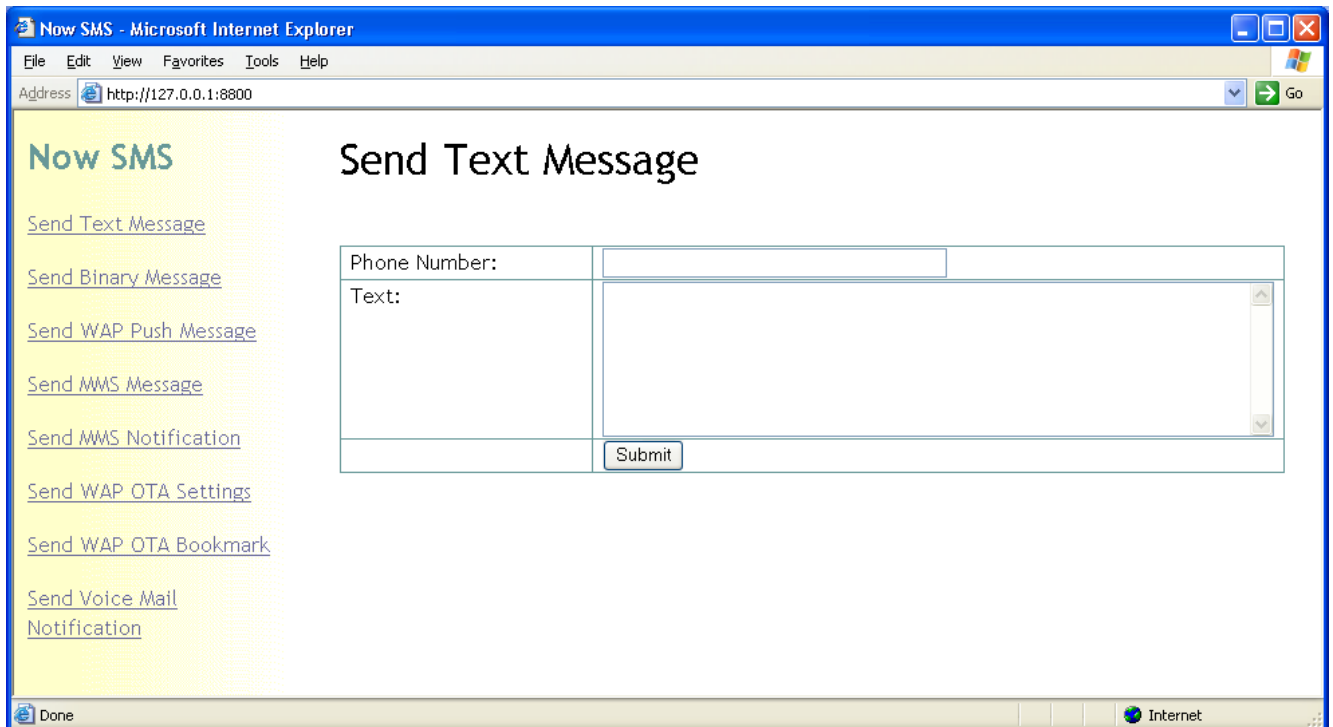
This web page provides a menu driven interface for sending various types of SMS and MMS messages.

To test that you can send SMS messages, begin by sending a simple SMS message. Enter the phone number of the message recipient and some text for the message, then click "Submit".

Wait up to several minutes, and verify that the recipient has received the SMS message.

What if the recipient did not receive the SMS message?

- ✓ If you are using a GSM phone as your modem, verify that you can send an SMS message to that same recipient using the menus on the mobile phone. If you cannot send the SMS message directly via the phone, then the gateway software will not be able to send the message.

- ✓ If you are using a dedicated GSM modem, try placing the SIM card in a GSM phone, and verify that you can send an SMS message to that same recipient using the menus on the mobile phone. If you cannot send the SMS message directly via the phone, then the gateway software will not be able to send the message.

- ✓ If you an SMSC connection via HTTP, UCP/EMI or SMPP, try alternate formats for the phone number of the recipient. Some services prefer to only process messages where the phone number format is expressed in international notation (e.g., +447778001210 instead of 07778001210).

- ✓ Go into the "Event Viewer" under the Administrative Tools of your Windows system. Select the "Application" log, and look to see if there are any recent entries from a source of "NowSMS". If there are any entries for "NowSMS", they are likely to be error messages regarding an inability to make a particular SMSC connection. If this is the case, go to the "Services" page of the configuration dialog, click "Remove Service", and return to Step 2a ("SMSC" page) to test your SMSC connection.

- ✓ You may need to contact NowSMS technical support. Go to the "Services" page of the configuration dialog, click "Remove Service". Manually edit the SMSGW.INI file in the gateway directory, and under the [SMSGW] section header, add the setting Debug=Yes. Return to the "Services" page of the configuration dialog, click "Install Service", then repeat your test. If you continue to experience service failures, e-mail all files with a ".log" file extension in the gateway directory to nowsms@now.co.uk, along with any relevant information to describe your problem.

Next, you may want to verify that you are able to correctly send binary formatted SMS messages. All of the other types of messages that the Now SMS gateway supports are different binary SMS message formats.

The simplest binary SMS message to send is a WAP Push message. A WAP Push message displays a text prompt on the mobile phone, and gives the user an option to connect to a specific link via the WAP browser. You will, of course, need a recipient with a mobile phone that supports WAP push. As MMS technology is built on top of WAP Push, any phone with MMS capabilities can be used for this test.

To send a WAP push message, from the "web menu interface", select "Send WAP Push Message". A web page similar to the following will be displayed:

It has never been simpler to send a WAP Push message. Simply enter a phone number, a WAP URL (if the "http://" prefix is not included it will be added automatically), and some text to be included in the informational message displayed to the user. The gateway will automatically generate and send a WAP Push "Service Indication" (SI) message to the specified phone number.

If you are unsure what information to enter, simply enter:

WAP URL: http://www.now.co.uk/index.wml
Text: This is a test WAP Push

The user interface for receiving a WAP push message will vary between phones, but there should be a visual indication on the display of the mobile phone when a push message is received.

If the push is not received, but text messages are, you should first verify that push is enabled on the recipient mobile phone. Push is normally enabled by default, but can be disabled via settings on the mobile phone. Refer to your mobile phone documentation for more information. Assuming that you eventually want to send MMS messages to the mobile phone, WAP Push will need to be enabled on the phone as MMS is built on top of WAP Push services.

If you are having problems receiving the WAP push message and want to verify the ability to send binary messages, then if your handset supports EMS, select "Send Binary Message" from the "web menu interface". Specify "Message Type" as "Other", "User Data Header" as "080D0200040B020007", and "Binary Data" as "00". "PID" and "DCS" can be left as 0. The recipient should receive an SMS/EMS message with a simple animation and sound effect.

If you continue to have problems, try sending messages to other devices. It is possible that the SMSC you are using may have problems sending binary messages. You may want to e-mail technical support at nowsms@now.co.uk, providing details about your configuration, and asking for suggestions on how to proceed.

Step 4: Configure the MMSC

You will need to configure the MMSC in order to take advantage of the more advanced MMS functionality of the Now SMS/MMS gateway. Without the MMSC, you will still be able to "Send MMS Notifications" where the MMS content is stored on a separate web server, but you won't be able to use the "Send MMS Message" feature of the "web menu interface", or make use of the "E-Mail to MMS" gateway.

The gateway includes a powerful MMSC Messaging Server, integrated into the Now SMS/MMS gateway.

The MMSC supports sending MMS messages between mobile phones, and also supports sending and receiving MMS messages between mobile phones and standard internet e-mail systems.

Important: The gateway PC must be accessible via the internet in order to use its MMSC. Mobile phones will need to connect to an HTTP port on the MMSC in order to retrieve MMS messages. If your gateway PC is not accessible via the internet, you will not be able to use the MMSC functionality.

Step 4a: General MMSC Configuration

Configuration for the MMSC can be found under the **"MMSC"** and **"MMSC Users"** configuration pages of the gateway.

The "MMSC" configuration page specifies general configuration information for the MMSC:

The MMSC runs as a separate service process from the gateway. As you are configuring the MMSC service with the intent of using it, check the box next to the prompt **"Activate MMSC Service"**.

When a mobile phone sends or receives an MMS message, it makes an HTTP connection to an MMSC (usually through a WAP gateway). The MMSC contains an integrated HTTP server to process these connections. Please specify an available **"HTTP Port Number"** on the local computer for the HTTP server to accept connections from mobile phones.

Important: Some mobile operator WAP gateways have firewalls which prevent them from connecting to content servers that are installed on ports other than the default HTTP port of 80. Use caution when configuring the MMSC for a port other than 80, as this may prevent MMS messages from being received via some services.

MMS messages can be sent to and received from, standard internet e-mail accounts. To support this functionality, the MMSC provides message format

conversions between MMS and SMTP. To accept messages from internet e-mail accounts, the MMSC contains an integrated SMTP server. Please specify an available **"SMTP Port Number"** on the local computer for the SMTP server to accept e-mail messages from internet e-mail recipients. Note that the standard SMTP port number is 25, and you will require special configuration of another SMTP mail server in your network to support relaying to a port other than 25.

The PC that is running the gateway might have other web and mail services installed. For this reason, the gateway allows you to specify which of the available IP addresses on the current PC should be used by the gateway. The **"IP Address"** prompt displays the available IP addresses on the current PC. To make the gateway service available via any address on the current PC, select "(all available)", otherwise select a specific IP address.

"Local Host Name or IP Address" specifies the local host name or IP address of the computer that is running the MMSC service. The name or address specified here will be used to construct URLs when sending MMS messages to mobile phones. If a host name is used, this host name must be defined in DNS and resolve back to the computer running the MMSC service.

"Domain Name for MMS E-Mail" specifies the SMTP domain name that is associated with users defined to the MMSC. When MMS users exchange e-mail messages with internet recipients, this is the SMTP domain name associated with the MMSC users.   Note that the MMSC acts as an e-mail server, and you will need to configure DNS for this domain name so that internet mail sent to this domain name is properly routed to the PC running the gateway.

When an MMS user sends a message to an SMTP recipient, the MMSC requires an **"SMTP Relay Host"** to transfer the message to the correct internet mail server for the intended recipient. Please define an appropriate SMTP mail server in your network that will perform this SMTP message relay capability.

Important: Enabling the MMS E-mail gateway requires coordination with other systems to enable the ability to send and receive e-mail. It is possible to operate the MMSC without the e-mail link, leaving the **"Domain Name for MMS E-Mail"** and **"SMTP Relay Host"** fields blank. You can always return to the MMSC configuration dialog pages later to complete these settings after coordinating settings with your e-mail administrator.
Checking **"Enable Dynamic Image and Audio Conversion"** enables the dynamic content adaptation and conversion services of the MMSC. The MMSC uses WAP/MMS "User Agent Profile" capabilities to determine the MIME formats that a device supports, as well as the maximum size of images supported by the device. Where required, the MMSC converts between common image formats (including, but not limited to GIF, JPG, PNG, BMP and WBMP) to deliver an image supported by the device. For images larger than the maximum size

supported by the device, the MMSC will automatically scale the image to fit the device, speeding up download times. For audio formats, conversion between WAV and AMR is provided in the e-mail gateway interface. MIME types not supported by the receiving device, which cannot be supported, will be removed prior to delivery to the receiving device to prevent compatibility issues and unnecessary download delays.

Checking **"Enable E-Mail WAV to AMR Conversion"** enables conversion between WAV (audio/wav) and AMR (audio/AMR) formats when messages are exchanged between e-mail and MMS recipients. For audio recordings, the WAV format is more commonly supported for e-mail recipients, while the AMR format is more commonly supported for MMS recipients. When this setting is enabled, AMR sound files going from MMS to e-mail are converted to WAV format, and WAV sound files going from e-mail to MMS are converted to AMR format.

Checking "**Enable E-Mail BMP to JPEG Conversion**" enables conversion of files from BMP (image/bmp) to JPEG (image/jpeg) format when messages are sent from an e-mail sender to an MMS recipient. The BMP format is somewhat common in PC environment, but is not frequently supported in MMS environments. Even when supported in MMS environments, BMP files are very large, which makes them awkward and inconvenient to transmit to MMS devices.

The **"Enable E-Mail to SMS Support"** checkbox enables the SMTP interface to be used to send SMS messages. For more information on this setting, refer to the help file.

An administrative interface for adding, deleting and modifying users is available via the HTTP port of the MMSC if an **"Admin User"** is defined on the MMSC dialog. If an administrative user is defined, then the administrative interface is available by connecting via a web browser to "/ADMIN" on the MMSC HTTP port (e.g., http://127.0.0.1/ADMIN), and supplying the defined administrative user name and password. The administrative interface provides functionality similar to that described for the "MMSC Users" tab dialog, which is defined next, however it provides it remotely over a web interface.

Click the **"Apply"** button at the bottom of the dialog to activate the MMSC service. Make note of any error messages that are displayed. In particular, an error message will be displayed if the "HTTP Port Number" conflicts with another installed service.

Step 4b: Define an MMSC User

The **"MMSC Users"** tab defines users that are allowed to utilize the MMSC to send MMS messages from their mobile phone.
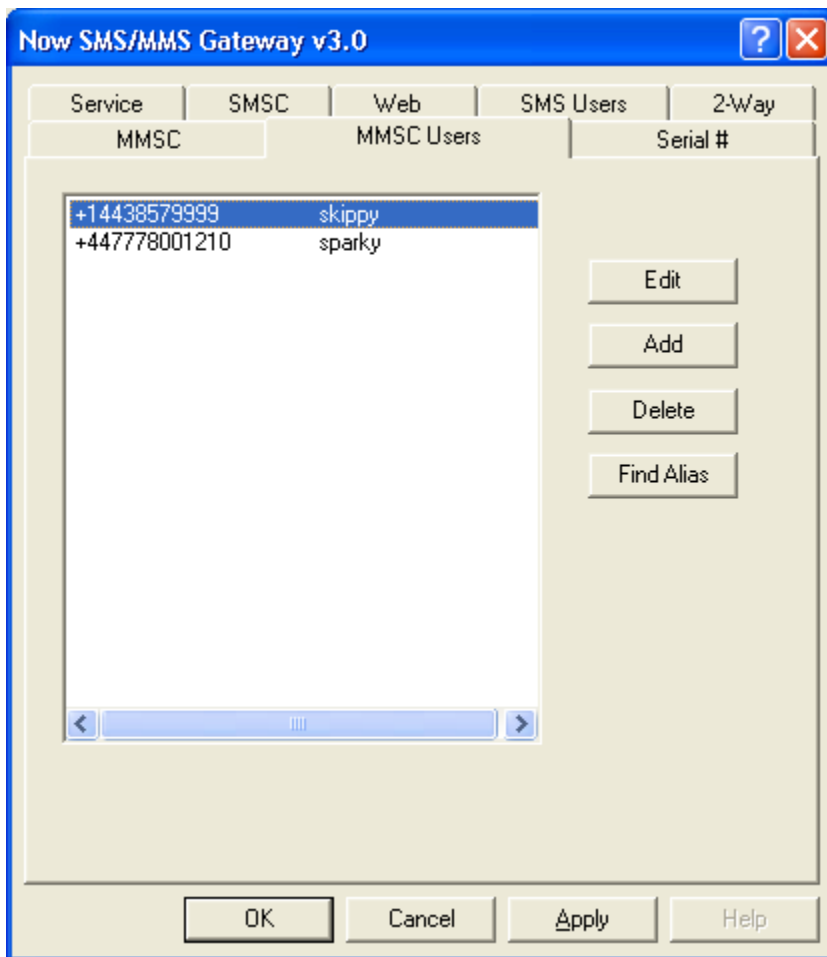
To define a user to use the MMSC, you must define a phone number using international format (e.g., +447778001210 instead of 07778001210), and an alias name for the user account. (The alias name will be used as the user name when sending and receiving SMTP e-mail, and when the mobile phone logs on to the MMSC to send messages.)

Note that for a mobile phone user to use the simple MMSC integrated with this gateway, the mobile phone user must configure their MMSC (MMS Messaging Server) to point to the address of the MMSC, and include their user name and password in the MMSC URL. Example:

http://x.x.x.x/username=password

or

http://host.domain:81/username=password

Include a port number (e.g., ":81") in the URL if you have configured the MMSC HTTP port for a port other than "80".

The username can be either the user's alias name or phone number.
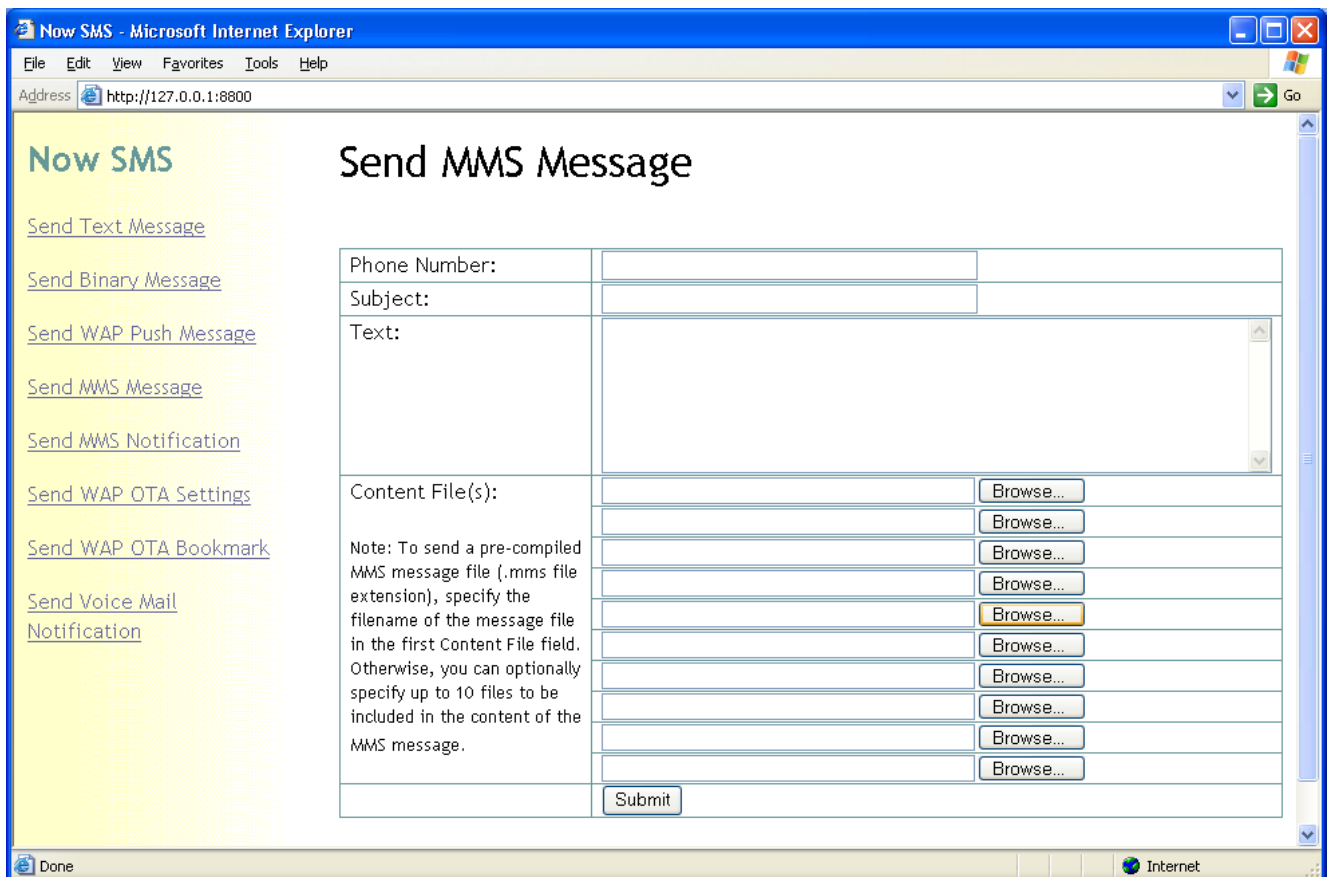
As you become more familiar with the Now SMS/MMS gateway, you will want to note that the gateway includes a WAP OTA ("Over The Air") configuration capability, which enables you to send WAP configuration settings to Nokia and Ericsson mobile phones via special SMS messages, which can greatly simplify the process of configuring these settings on mobile phones.

Step 5: Send an MMS Message

This step focuses on sending an MMS message from the gateway to a mobile phone. Sending MMS messages from the mobile phone will be covered in Step 6.

The easiest way to send an MMS message through the gateway is to connect to the "web menu interface". If you do not recall how to connect to the "web menu interface" with your web browser, refer to Step 3 to refresh your memory.

Select **"Send MMS Message"** from the "web menu interface", and you will see a web page similar to the following:

The web menu interface provides two methods for sending an MMS message. The "Send MMS Message" option allows you to define a subject, message text, and optionally include multiple content files (uploaded via the browser). Content files may include text files, audio files, image files, SMIL files, and/or other supported MMS content types. The gateway automatically compiles the MMS message file and uses the gateway's built-in MMSC to send the message.

The "Send MMS Notification" option is for sending notifications for pre-compiled content residing on other content services, and is an advanced topic beyond the scope of this "Quick Start Guide".

To send your first MMS message, enter the **"Phone Number"** for the recipient, supply some text for the **"Subject"** of the message, and enter some text for the "**Text**" of the message. For your first test, you may want to leave the "Content File" fields blank, but if you're ambitions, you could try specifying the filename of a small "jpeg" or "gif" file as one of the **"Content File"** entries. Click "**Submit**" to send your message.

Does your browser return an error message?

Your browser might return an error message when you submit the MMS message. Here's what happens behind the scenes when you click "Submit": The SMS/MMS gateway creates a compiled MMS message file, and submits it to the local MMSC. The MMSC provides the SMS/MMS gateway with a URL for retrieving the message, based upon the MMSC configuration information defined in Step 4. In particular, the MMSC tells the SMS/MMS gateway that to retrieve the message that was just submitted, it should connect to **"Local Host Name or IP Address"** on the **"HTTP Port Number"**. If the MMSC is configured incorrectly, the SMS/MMS gateway will not be able to retrieve the URL from the MMSC and an error will occur. Of course, it is preferable that the error occur here rather than occurring when a mobile phone attempts to retrieve the MMS content, so you'll want to correct any configuration errors from Step 4 before continuing.

Do you receive an MMS notification message, but are unable to access the message content?

✓ Re-configure your MMSC to use HTTP port 80. Some operator WAP gateways have firewalls that prevent access to any content that is on a port other than port 80. If you are sending an MMS notification message where the content server resides on a port other than 80, change the content server to use HTTP port 80. Repeat your attempt to send an MMS message. Note that changing these settings will only affect messages that are sent after the change is made, they will not change attributes of messages that were already sent.

✓ Check the WAP profile that is associated with the MMS setup in your phone, and verify that this is the same WAP profile that you use for regular WAP browsing activities. It has been noticed that some operators are setting up restrictive MMS profiles, where the MMS profile connects to a separate GPRS APN, and a separate WAP gateway, which only allow access to the operator MMSC. After changing the MMS setup to use the WAP profile that you use for

regular WAP browsing activities, repeat your test. You should not need to resend any messages, but can retry accessing messages for which notification was already received.

✓ It is possible that your operator has constructed a "walled garden" in attempts to lock users to their content services. To leave the walled garden, check with your operator to determine what GPRS APN (access point name) should be used for PDA/PC type connections, and if a username or password is required, what those values should be. Create a WAP profile on your phone that connects to that GPRS APN. Specify an IP address for the WAP gateway of 213.48.20.10 (this is a gateway at the Now Wireless offices, if you have your own WAP gateway, substitute that gateway IP address). Try using that WAP profile to browse to a site, such as http://mms.now.co.uk/index.wml. Switch back to your normal WAP settings for browsing, but configure the MMS services on your phone to use the WAP profile that you just created.

✓ Are you using your own WAP gateway instead of the operator WAP gateway, or does your operator not yet support MMS? MMS requires that WAP gateways support "SAR" (segmentation and re-assembly). Some early WAP gateways did not provide this support. If you are unsure about your WAP gateway, you may want to try using the public WAP gateway referenced in the previous item.

Step 6: Configure your Mobile Phone Settings

The final step in this "Quick Start Guide" configuration is to configure your mobile phone settings to enable the mobile phone to send MMS messages via the MMSC.

Refer to your mobile phone documentation for information on where specifically to define your MMS settings. Generally speaking, the menus on the mobile phone where MMS settings are defined will allow you to specify a WAP profile that is used for MMS connectivity, together with a URL for an MMSC Message Server (some Nokia phones refer to this setting as an MMS Home Page).

In Step 4b, you defined one or more users to the MMSC. Based on those user definitions, define the MMSC Message Server on your phone using the following format:

http://host.domain:81/username=password

or

http://ip.address/username=password

Include a port number (e.g., ":81") in the URL **only** if you have configured the MMSC HTTP port for a port other than "80".

The username can be either the user's alias name or phone number.

As you become more familiar with the Now SMS/MMS gateway, you will want to note that the gateway includes a WAP OTA ("Over The Air") configuration capability, which enables you to send WAP configuration settings to Nokia and Ericsson mobile phones via special SMS messages, which can greatly simplify the process of configuring these settings on mobile phones. A menu driven interface to the send "WAP OTA" messages can be found in the "web menu interface".

Assuming that you are successfully receiving messages per Step 5, once the MMSC Message Server is defined in your phone, you should now be able to send messages.

Initially, we'd suggest you try sending an MMS message to your own phone number as a loopback test to make sure that the basic configuration is working properly.

Note that you will only be able to send MMS messages to e-mail addresses if you completed the MMSC e-mail configuration in Step 4b.

If you receive an error when sending a message, verify that the MMSC message server URL is configured properly in your phone. Next you can check the MMSC-yyyymmdd.log (yyyy is the current year, mm is the current month, dd is the current day) in your gateway directory, to see if there is an entry that corresponds to your sending attempts. If there is an entry in this log, then you may need to contact NowSMS technical support at nowsms@now.co.uk for further troubleshooting suggestions. If there is not an entry in this log that corresponds to your sending attempt, then either the MMSC message server URL is not configured properly, or the path to the MMSC message server via the WAP gateway is not clear, and you should refer to the troubleshooting steps in Step 5.

Step 7: Take a Break

You earned it. For a "Quick Start Guide", this one is a little on the long side, but we hope it helped guide you through the process!

Appendix A: GSM Modem Configuration

A GSM modem can be an external modem device, such as the Siemens MC35 or Wavecom FASTRACK external modems. Insert a GSM SIM card into this modem, and connect the modem to an available serial port on your computer.

A GSM modem can be a PC Card installed in a notebook computer, such as the Sierra Wireless Aircard 750.

A GSM modem could also be a standard GSM mobile phone with the appropriate cable and software driver to connect to a serial port or USB port on your computer. Any phone that supports the "extended AT command set" for sending/receiving SMS messages, as defined in the ETSI GSM 07.05 Specification can be supported by the Now SMS/MMS Gateway.

A dedicated GSM modem (external or PC Card) is usually preferable to a GSM mobile phone. This is because of some compatibility issues that can exist with mobile phones. For example, if you wish to be able to receive inbound MMS messages with your gateway, most GSM phones will only allow you to send MMS messgaes. This is because the mobile phone automatically processes received MMS message notifications these messages, without forwarding them via the modem interface. Similarly some mobile phones will not allow you to correctly receive SMS text messages longer than 160 bytes (known as "concatenated SMS" or "long SMS"). This is because these long messages are actually sent as separate SMS messages, and the phone attempts to reassemble the message before forwarding via the modem interface. (We've observed this latter problem utilizing the Ericsson R380, while it does not appear to be a problem with many other Ericsson models.)
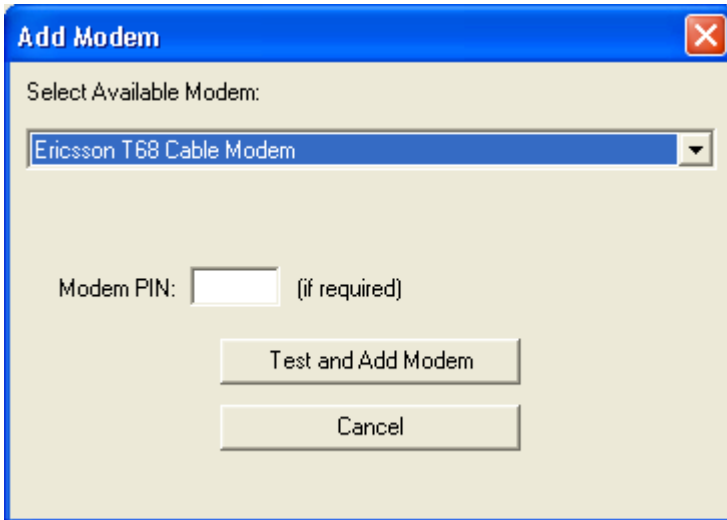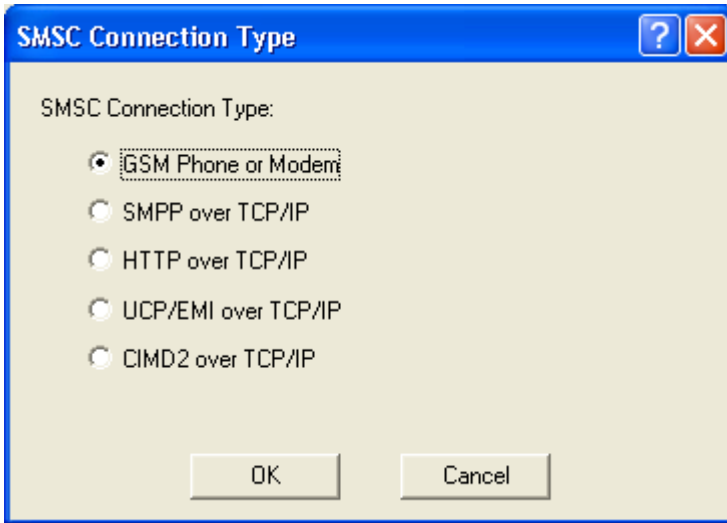
When you install your GSM modem, or connect your GSM mobile phone to the computer, be sure to install the appropriate Windows modem driver from the device manufacturer. To simplify configuration, the Now SMS/MMS Gateway will communicate with the device via this driver. If a Windows driver is not available for your modem, you can use either the "Standard" or "Generic" 19200 bps modem driver that is built into windows. A benefit of utilizing a Windows modem driver is that you can use Windows diagnostics to ensure that the modem is communicating properly with the computer.

The Now SMS/MMS gateway can simultaneously support multiple modems, provided that your computer hardware has the available communications port resources.

To define which modems are to be utilized by the gateway, select the **"SMSC"** tab from the gateway configuration dialog:
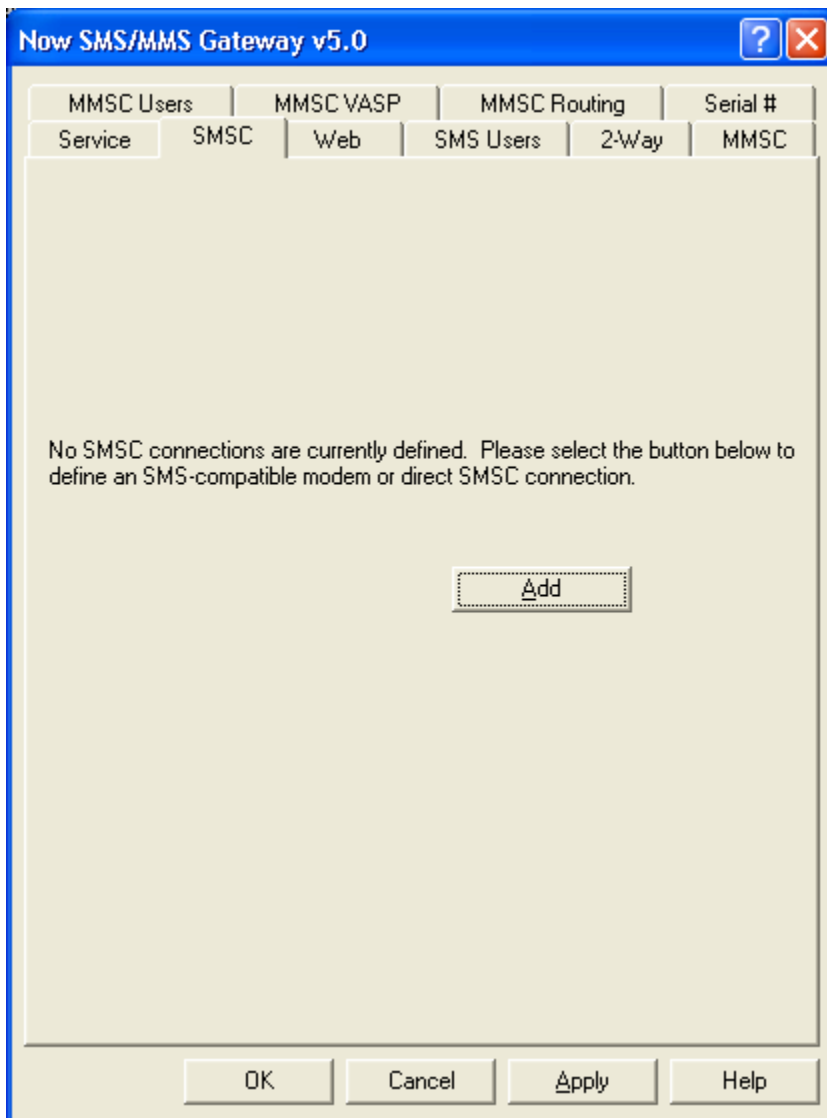
If no modems are yet to be defined, only the **"Add"** button will be available on this dialog. Select **"Add"**, and then "**GSM Phone or Modem**" to display a list of available modem drivers on your computer.

SMSC Connection Type

SMSC Connection Type:

- ● GSM Phone or Modem
- ○ SMPP over TCP/IP
- ○ HTTP over TCP/IP
- ○ UCP/EMI over TCP/IP
- ○ CIMD2 over TCP/IP

[OK] [Cancel]

Add Modem

Select Available Modem:

Ericsson T68 Cable Modem ▼

Modem PIN: [   ] (if required)

[Test and Add Modem]

[Cancel]

Select an available modem and press the **"Test and Add Modem"** button. The gateway will then attempt to initialize the modem, and confirm that the modem supports the necessary interfaces to send and receive SMS messages. The modem will only be added to the configuration if the gateway confirms that it can properly communicate with the modem. If the SIM card for the modem requires a 4-digit PIN, please supply it in the field provided.

Appendix B: SMPP SMSC Configuration

The gateway supports the SMPP (Short Message Peer to Peer) protocol, version 3.3 or 3.4, to connect to an SMSC over the internet or other private TCP/IP network. Some mobile operators provide SMPP connections for higher volumes of SMS traffic.

To add an SMPP connection, select **"Add"** from the **"SMSC"** tab of the gateway dialog. Then select **"SMPP over TCP/IP"**.
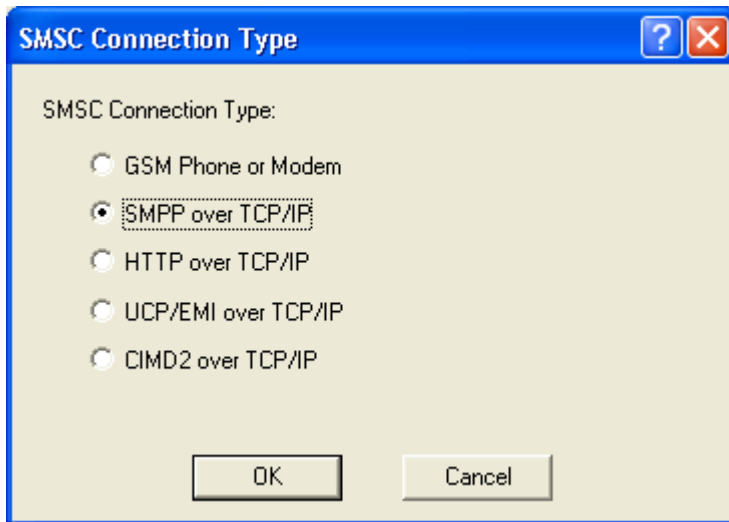
"SMPP Version" specifies the version of the SMPP protocol to use. The gateway supports "v3.3" and "v3.4".

"Server Host Name" specifies the TCP/IP address or host name of the SMPP server.

"Port" specifies the TCP/IP port on the SMPP server to which the gateway should connect.

"User Name" specifies the user name (sometimes called System ID) for the gateway to use when connecting to the SMPP server.

"Password" specifies the password for the gateway to use when connecting to the SMPP server.

"Address Range" is a parameter used primarily when receiving messages. Set this field only if instructed to do so by your SMPP service provider.

"System Type" is an optional login parameter that should be set only if required by the SMPP server. The SMPP system administrator will provide this value, which when required, is usually a short text string.

"Sender Address" specifies the default sender address (phone number) to apply to outbound SMS messages. The SMPP server may override this setting.

Check **"Allow Sender Address Override"** if you want to allow messages submitted to the gateway to be able to specify a sender address. If this box is checked, and a sender address is present in a message being submitted to an SMPP based SMSC, the sender address in the message will be submitted to the SMSC. The SMPP server may override this setting.

Check the **"Receive SMS Messages"** box if you wish to receive messages from the SMPP server. When this box is checked, the gateway will connect to the SMPP server with two separate connections, one bound as a transmitter and the other bound as a receiver.

Check the **"Receive MMS Messages"** box if you will be receiving MMS Notification messages via the SMSC. Note that not all service providers support the routing of MMS notification messages via an SMSC connection. If MMS messages will be received via the SMSC connection, it is necessary to also configure additional MMS settings. The **"MMS Settings"** dialog will display a dialog with additional configuration settings that are required for enabling the gateway to be able to receive MMS messages from the operator network. For additional configuration information on processing received MMS messages, please refer to the product documentation.

The **"Routing"** group of options is used when multiple SMSC connections are defined to the gateway. These options define what messages should be routed to this connection. The Routing options are common to SMPP, GSM Modem, UCP/EMI and HTTP connections, and are described in the product documentation.

When the **"OK"** button is selected, the gateway will attempt to connect to the SMPP server to verify the configuration information provided. Diagnostic information will be displayed if the connection fails. The connection will only be added to the configuration after a successful connection to the SMPP server.

Many SMPP SMSC providers will also tell you to that you need to configure certain additional parameters in your SMPP software. You might be told to specify particular Source TON, Source NPI, Destination TON or Destination NPI values.

The Now SMS/MMS Gateway uses intelligent defaults for the TON and NPI values which are sufficient for 99.9% of SMPP connections.

The Source TON and NPI are settings that apply to the sender address that is associated with messages that are submitted by the Now SMS/MMS Gateway to the SMSC. NowSMS automatically sets the Source TON to "1" if the sender address is in international format (starts with a "+" character). If the sender address is not in international format, NowSMS automatically sets the Source TON to "0". In both cases, the Source NPI is set to "1". If the sender address is contains alphabetic characters and is not a valid phone number, the Source TON is set to "5", and the Source NPI is set to "0".

The Destination TON and NPI are settings that apply to the recipient addresses for messages that are submitted by the Now SMS/MMS Gateway to the SMSC. NowSMS automatically sets the Source TON to "1" if the sender address is in international format (starts with a "+" character). If the sender address is not in international format, NowSMS automatically sets the Source TON to "0". In both cases, the Source NPI is set to "1".

If it is necessary to adjust these TON and NPI settings, they can be adjusted via configuration settings in the SMSGW.INI file. Create or modify a section of the SMSGW.INI file with a [SMPP] section header, and the following settings are supported under this header:

SourceTON=
SourceNPI=
DestTON=
DestNPI=

If a TON or NPI value is explicitly set in the SMSGW.INI file, this value will be used in place of the automatic determination described above.

Appendix C: UCP/EMI SMSC Configuration

The gateway supports the UCP/EMI (Universal Computer Protocol / External Machine Interface) protocol, version 3.5 or 4.0, to connect to an SMSC over the internet or other private TCP/IP network. Some mobile operators provide UCP connections for higher volumes of SMS traffic.

To add a UCP/EMI connection, select **"Add"** from the **"SMSC"** tab of the gateway dialog. Then select **"UCP/EMI over TCP/IP"**.
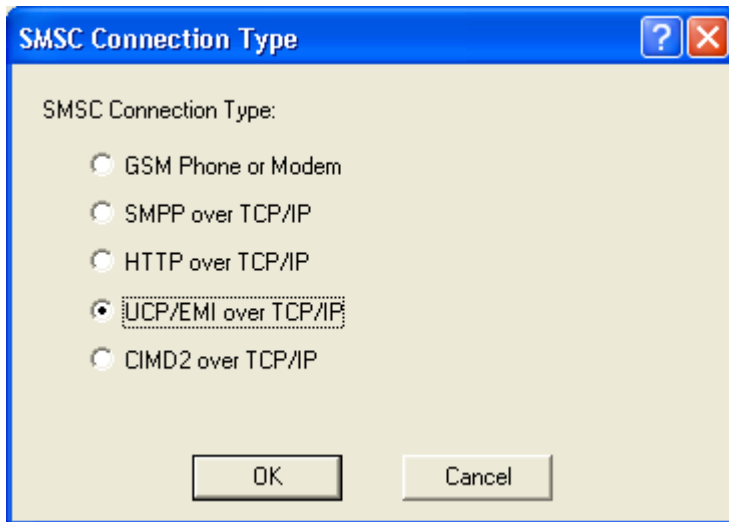
"Server Host Name" specifies the TCP/IP address or host name of the UCP/EMI server.

"Server Port" specifies the TCP/IP port on the UCP/EMI server to which the gateway should connect.

"User Name" specifies the user name for the gateway to use when connecting to the UCP/EMI server.

"Password" specifies the password for the gateway to use when connecting to the UCP/EMI server.

Note: Some UCP/EMI systems may not require a username and password, and validate your account based only on the TCP/IP address of your system. If the username and password fields are left blank, the gateway will not send a UCP-60 bind message to the server to login.

"Local Port", if set, should be set to the value of a TCP/IP port number on the gateway PC. If set, the gateway will initiate all connections to the UCP/EMI server from this port.

"Sender Address" specifies the default sender address (phone number) to apply to outbound SMS messages. The UCP/EMI server may override this setting.

Check **"Allow Sender Address Override"** if you want to allow messages submitted to the gateway to be able to specify a sender address. If this box is checked, and a sender address is present in a message being submitted to an UCP/EMI based SMSC, the sender address in the message will be submitted to the SMSC. The UCP/EMI server may override this setting.

Some UCP/EMI servers may require that clients submit keep-alive messages to the server every so many seconds or minutes, or the server will time out the connection. To enable keep-alive messages, specify a value in seconds for the **"Keep-Alive"** setting. (Note: The gateway uses a UCP-31 message for the keep-alive message.)

Check the **"Enable Receive Messages"** box if you wish to receive messages from the UCP/EMI server. When this box is checked, the gateway can either receive messages using a single connection to the UCP/EMI server, or the **"Receive Port"** setting can specify a TCP/IP port number on the gateway PC that will listen for connections from the UCP/EMI server, and receive messages. (Note: The "Receive Port" should be left blank for most configurations. This setting should only be specified if the UCP/EMI service provider will initiate connections to your server when it has a message to deliver, which is a rare configuration. Most service connections require that your server initiate all connections to the service provider, and the "Receive Port" setting is not used in those configurations.)

Check the **"Receive MMS Messages"** box if you will be receiving MMS Notification messages via the SMSC. Note that not all service providers support the routing of MMS notification messages via an SMSC connection. If MMS messages will be received via the SMSC connection, it is necessary to also configure additional MMS settings. The **"MMS Settings"** dialog will display a dialog with additional configuration settings that are required for enabling the gateway to be able to receive MMS messages from the operator network. For additional configuration information on processing received MMS messages, please refer to the product documentation.

The **"Routing"** group of options is used when multiple SMSC connections are defined to the gateway. These options define what messages should be routed to this connection. The Routing options are common to SMPP, GSM Modem,

UCP/EMI and HTTP connections, and are described in the product documentation.

When the **"OK"** button is selected, the gateway will attempt to connect to the UCP/EMI server to verify the configuration information provided. Diagnostic information will be displayed if the connection fails. The connection will only be added to the configuration after a successful connection to the UCP/EMI server.

Appendix D: CIMD2 SMSC Configuration

The gateway supports the CIMD2 (Computer Interface to Machine Distribution, version 2) protocol to connect to an SMSC over the internet or other private TCP/IP network. This protocol is implemented by Nokia SMSCs.

To add a CIMD2 connection, select **"Add"** from the **"SMSC"** tab of the gateway dialog. Then select **"CIMD2 over TCP/IP"**.
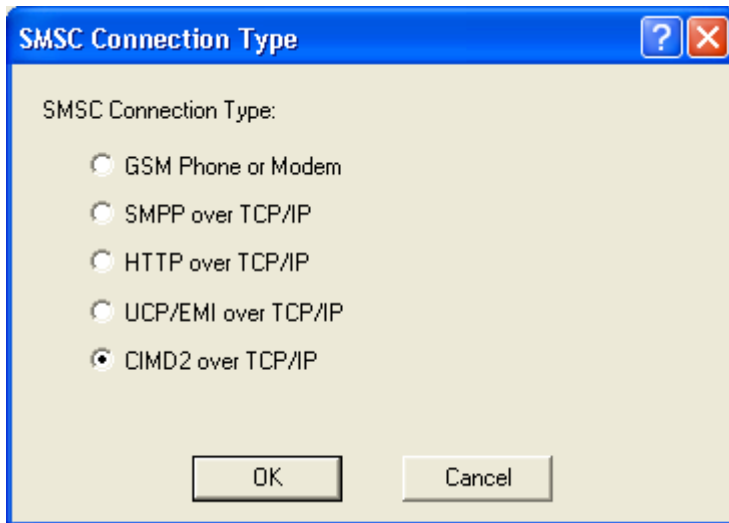
"Server Host Name" specifies the TCP/IP address or host name of the CIMD2 server.

"Server Port" specifies the TCP/IP port on the CIMD2 server to which the gateway should connect.

"User Name" specifies the user name for the gateway to use when connecting to the CIMD2 server.

"Password" specifies the password for the gateway to use when connecting to the CIMD2 server.

 "Sender Address" specifies the default sender address (phone number) to apply to outbound SMS messages. The CIMD2 server may override this setting.

Many CIMD2 connections allocate multiple phone numbers to an individual SMSC account. The **"Sender Address Prefix"** setting specifies the prefix associated with all phone numbers allocated to the SMSC account.

Check **"Allow Sender Address Override"** if you want to allow messages submitted to the gateway to be able to specify a sender address. If this box is checked, and a sender address is present in a message being submitted to a CIMD2 based SMSC, the sender address in the message will be submitted to the SMSC. The CIMD2 server may override this setting.

Some CIMD2 servers may require that clients submit keep-alive messages to the server every so many seconds or minutes, or the server will time out the connection. To enable keep-alive messages, specify a value in seconds for the **"Keep-Alive"** setting.

Check the **"Enable Receive Messages"** box if you wish to receive messages from the CIMD2 server.

Check the **"Receive MMS Messages"** box if you will be receiving MMS Notification messages via the SMSC. Note that not all service providers support the routing of MMS notification messages via an SMSC connection. If MMS messages will be received via the SMSC connection, it is necessary to also configure additional MMS settings. The **"MMS Settings"** dialog will display a dialog with additional configuration settings that are required for enabling the gateway to be able to receive MMS messages from the operator network. For additional configuration information on processing received MMS messages, please refer to the product documentation.
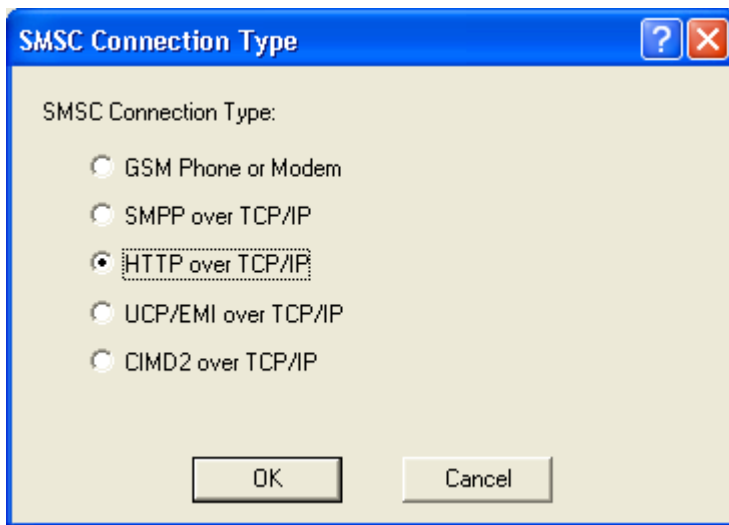
The **"Routing"** group of options is used when multiple SMSC connections are defined to the gateway. These options define what messages should be routed to this connection. The Routing options are common to SMPP, GSM Modem, UCP/EMI and HTTP connections, and are described in the product documentation.

When the **"OK"** button is selected, the gateway will attempt to connect to the UCP/EMI server to verify the configuration information provided. Diagnostic information will be displayed if the connection fails. The connection will only be added to the configuration after a successful connection to the UCP/EMI server.

Appendix E: HTTP SMSC Configuration

The gateway supports the HTTP (Hyper Text Transport Protocol) protocol to connect to an SMSC over the internet or other private TCP/IP network. In addition to connecting to other services, this allows you to make connections to another Now SMS/MMS gateway, which can be useful for "least cost routing" of SMS messages between gateways over TCP/IP.

To add an HTTP connection, select "**Add**" from the "**SMSC**" tab of the gateway dialog. Then select "**HTTP over TCP/IP**".

"**Host Name**" specifies a DNS host name or TCP/IP address for connecting to the service.

"**Port Number**" specifies the HTTP port number to use when connecting to the service.

Check **"Use HTTP Proxy"** if the gateway must connect to the HTTP server via a proxy server, and supply the host name or TCP/IP address and port number of the proxy server in the **"Proxy Server"** field using a format of "host.name:9999", where "host.name" is the DNS host name or TCP/IP address of the proxy server, and "9999" is the port number of the proxy server.

"**User name**" and "**Password**" specify a user account and password to use when connecting to the service.

"**Send login credentials using HTTP Authorization headers**" refers to how the user name and password information is sent to the HTTP server. The login information can either be sent as replaceable parameters in the URL request, or using the "HTTP Authorization" header. Check this box to use the "HTTP Authorization" header. This box should be checked when connecting with another Now SMS/MMS gateway.

"**Server Type**" provides pre-defined templates for connections to common gateway interfaces. If you are connecting to one of the servers with a pre-defined template, such as another Now SMS/MMS gateway, select its server type here. Otherwise, select "Custom" to define a custom template.

"**URL Template Text**" is a URL template that is used when sending text SMS messages. When the gateway has a text SMS message to send, it connects to the HTTP server and issues the URL request specified in this field, replacing the "replaceable parameters" with values for the message to be sent. A complete list of "replaceable parameters" is provided below.

"**URL Template Binary**" is a URL template that is used when sending binary SMS messages. When the gateway has a text SMS message to send, it connects to the HTTP server and issues the URL request specified in this field, replacing the "replaceable parameters" with values for the message to be sent. A complete list of "replaceable parameters" is provided below.

URL Template Replaceable Parameters:

@@UserName@@	The user name configured for this connection (optional)
@@Password@@	The password configured for this connection (optional)
@@PhoneNumber@@	The phone number of the recipient to receive this SMS message (required)
@@Text@@	The text of the SMS message (required for text messages)
@@Data@@	The data of the SMS message in binary format as a string of hexadecimal characters (either this or @@DataBin@@ required for binary messages)
@@DataBin@@	The data of the SMS message in binary format as the actual binary data in URL escaped format (either this or @@Data@@ required for binary messages)
@@UDH@@	The "User Data Header" of a binary message as a string of hexadecimal characters (either this or @@UDHBin@@ required for binary messages)

@@UDHBin@@	The "User Data Header" of a binary message in binary format as the actual binary data in URL escaped format (either this or @@UDH@@ required for binary messages)
@@PID@@	SMS "Protocol ID" field as a hexadecimal value
@@PIDdecimal@@	SMS "Protocol ID" field as a decimal value
@@DCS@@	SMS "Data Coding Scheme" field as a hexadecimal value
@@DCSdecimal@@	SMS "Data Coding Scheme" field as a decimal value.
@@Sender@@	Phone number to be included as the sender of this message.

"Sender Address" specifies the default sender address (phone number) to apply to outbound SMS messages. The SMSC to which you are connecting may override this setting. (Note: The sender number is only transmitted if the @@Sender@@ variable is included in your URL template string.)

Check **"Allow Sender Address Override"** if you want to allow messages submitted to the gateway to be able to specify a sender address. If this box is checked, and a sender address is present in a message being submitted to an HTTP based SMSC, the sender address in the message will be submitted to the SMSC. The SMSC may override this setting.

Check **"Remove '+' from Recipient Phone Number"** if the gateway should remove the "+" character from international phone numbers before submitting the message to the HTTP SMSC. HTTP SMSC interfaces based upon the Kannel product expect the "+" character to be removed.

Some types of messages processed by the Now SMS/MMS Gateway may require multiple SMS messages to transmit a single logical message. This is because the maximum size of an SMS message is 160 text characters or 140 binary bytes of data. The Now SMS/MMS Gateway automatically segments larger messages and submits them as multiple SMS messages that can be reassembled by the receiving client. Some HTTP based SMSCs prefer to split larger messages themselves. Check **"Send long messages without segmentation"** if you want the SMSC to split larger messages into multiple SMS messages, or leave this setting unchecked to allow the Now SMS/MMS Gateway to perform necessary segmentation of large messages.

The **"Routing"** group of options is used when multiple SMSC connections are defined to the gateway. These options define what messages should be routed to this connection. The Routing options are common to SMPP, GSM Modem, UCP/EMI and HTTP connections, and are described in the product documentation.

When the **"OK"** button is selected, the gateway will attempt to connect to the HTPP server to verify the configuration information provided. Diagnostic information will be displayed if the connection fails. The connection will only be added to the configuration after a successful connection to the HTTP server. Note that although a connection attempt was successful, you should attempt to send a message through the interface to verify that the URL templates are defined correctly.