MobileXdge SMPP

Version 3.0

For WinNT/Win2000/WinXP/Win2003

Release Date: 25 July 2009

User's Manual

End User License Agreement (EULA)

IMPORTANT-READ CAREFULLY: This MobileXdge End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and MobileXdge for the MobileXdge software product(s) identified above which may include associated software components, media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT"). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, do not install or use the SOFTWARE PRODUCT. If the SOFTWARE PRODUCT was purchased by you, you may return it to your place of purchase for a full refund.

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE. The SOFTWARE PRODUCT is licensed as follows:

- Installation and Use. MobileXdge Inc grants you the right to install and use copies of the SOFTWARE PRODUCT on your computers running validly licensed copies of the operating system for which the SOFTWARE PRODUCT was designed [e.g., Windows NT(r), Windows XP, Windows 2000 or Windows 2003].
- Backup Copies. You may also make copies of the SOFTWARE PRODUCT as may be necessary for backup and archival purposes.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS.

- Maintenance of Copyright Notices. You must not remove or alter any copyright notices on all copies of the SOFTWARE PRODUCT.
- Distribution. You may not distribute copies of the SOFTWARE PRODUCT to third parties.

- Prohibition on Reverse Engineering, Decompilation, and Disassembly. You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation.

- Rental. You may not rent, lease, or lend the SOFTWARE PRODUCT.

- Transfer. You may not permanently transfer all of your rights under this EULA, provided the recipient agrees to the terms of this EULA.

- Support Services. MobileXdge may provide you with support services related to the SOFTWARE PRODUCT ("Support Services"). Use of Support Services is governed by the MobileXdge polices and in "on line" documentation and/or other MobileXdge-provided materials. Any supplemental software code provided to you as part of the Support Services shall be considered part of the SOFTWARE PRODUCT and subject to the terms and conditions of this EULA. With respect to technical information you provide to MobileXdge as part of the Support Services, MobileXdge Inc may use such information for its business purposes, including for product support and development. MobileXdge Inc will not utilize such technical information in a form that personally identifies you.

- Compliance with Applicable Laws. You must comply with all applicable laws regarding use of the SOFTWARE PRODUCT.

3. TERMINATION. Without prejudice to any other rights, MobileXdge may terminate this EULA if you fail to comply with the terms and conditions of this EULA. In such event, you must destroy all copies of the SOFTWARE PRODUCT.

4. COPYRIGHT. All title, including but not limited to copyrights, in and to the SOFTWARE PRODUCT and any copies thereof are owned by MobileXdge. All title and intellectual property rights in and to the content which may be accessed through use of the SOFTWARE PRODUCT is the property of the

respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants you no rights to use such content. All rights not expressly granted are reserved by MobileXdge.

5. NO WARRANTIES. MobileXdge expressly disclaims any warranty for the SOFTWARE PRODUCT. THE SOFTWARE PRODUCT AND ANY RELATED DOCUMENTATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. THE ENTIRE RISK ARISING OUT OF USE OR PERFORMANCE OF THE SOFTWARE PRODUCT REMAINS WITH YOU.

6. LIMITATION OF LIABILITY. To the maximum extent permitted by applicable law, in no event shall MobileXdge or its suppliers be liable for any special, incidental, indirect, or consequential damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the SOFTWARE PRODUCT or the provision of or failure to provide Support Services, even if MobileXdge as been advised of the possibility of such damages. In any case, MobileXdge' entire liability under any provision of this EULA shall be limited to the greater of the amount actually paid by you for the SOFTWARE PRODUCT or US$5.00; provided however, if you have entered into a MobileXdge Support Services Agreement, MobileXdge' entire liability regarding Support Services shall be governed by the terms of that agreement. Because some states and jurisdictions do not allow the exclusion or limitation of liability, the above limitation may not apply to you.

Welcome

Welcome to MobileXdge SMPP Gateway System. With the Mobile Gateway, you can send and receive SMS/WAP Push messages from your own Server system. You may also develop your own business engine and interact with this user's friendly system, MobileXdge SMS/WAP Push Gateway. The system is robust and easy to use. All you need is just a normal Server, with a least a connection to SMS Centre.

The MobileXdge SMPP Gateway supports up to 180 concurrent SMPP connections. It is can be configured to route the messages to the most ideal messaging route or to provide failover when any of the SMPP conections is down. This user's guide will help you to set up your own MobileXdge SMPP gateway and provide some resources on how to enhance it. It also suggested to you how to implement business orientated system through the use of MOXRules in Visual Basic 6 / Visual Basic .Net 2005 / C# .Net 2005 .

Chapter 1 – Introduction

Getting Started

In order for a smooth operation and installation of the MobileXdgeä SMPP Gateway, please follows the guidelines stated below:

- Have an account with SMS Centre that supports SMPP 3.4
- Obtain a License Key file for the software installation

1.1 The License Key File

A License Key File is needed in order for the MobileXdge SMPP Gateway to operate. The CD activation key is labelled on the MobileXdge Installation CD.

1.1.1 First Time Registration

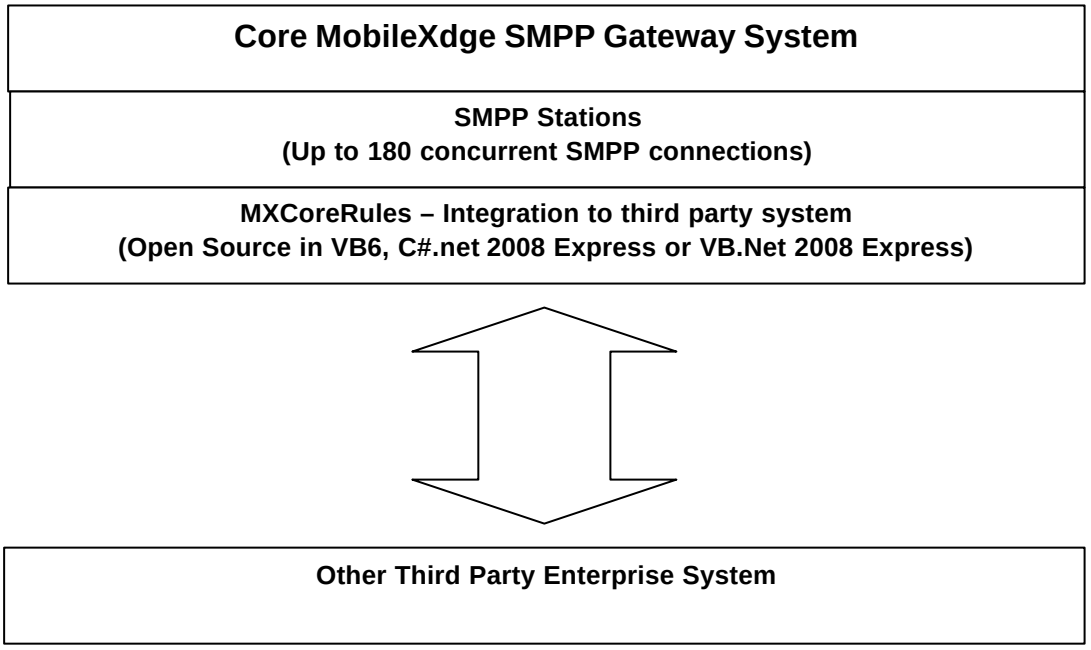
First Time Registration means that the license key has new and has not been registered online via MobileXdge Registration web site. To get your CD Key, you need to obtain it by using the Registration Manager provided in the CD. Please install the software in the live machine. Upon executing the Registration Manager for MobileXdge SMPP Gateway, you will be prompt to enter your Company Name, and the CD key that can be found at the back of the CD Case. Once you have generated the Registration Key, copy the Registration Key information and visit http://www.mobilexdge.com to continue with your registration. Once you have registered successfully, the system will generate a License Key file. Copy the License Key file into the windows system directory (for Win2000/NT/XP/2003, the directory is c:\windows\system32). Rename the License key to MobileXdge.key. If you have purchased additional port license, please repeat the above process and copy the license key file for the additional ports to the sub directory "License" of the installed directory.

1.1.2 Subsequent Registration

Subsequent registration means that the license key has been registered online before. You may need to subsequent registration if you want to migrate the existing MobileXdge SMPP Gateway to a new PC Server or the PC Server has been corrupted.

To get your CD Key, you need to obtain it by using the Registration Manager provided in the CD. Please install the software in the live machine. Upon executing the Registration Manager for MobileXdge SMPP Gateway, you will be prompt to enter your Company Name, and the CD key that can be found at the back of the CD Case. Once you have generated the Registration Key, copy the Registration Key information and email to our support team at support@mobilexdge.com. Our support team will response to your request on the new license key file within the next 4 hours. Copy the License Key file into the windows system directory (for Win2000/NT/XP/2003, the directory is c:\windows\system32). Rename the License key to MXSMPP.key. If you have purchased additional port license, please repeat the above process and copy the license key file for the additional ports to the sub directory "License" of the installed directory.

1.2 Overall System Architecture



The above diagram shows the overall system architecture of MobileXdge SMPP Gateway. It consists of 3 main components. The Core MobileXdge SMPP Gateway System, SMPP Stations and the MXCoreRules Open Source Component.

Core MobileXdge SMPP Gateway System: **This is the main system component of the MobileXdge Gateway System. Most of the co-ordination of the sending and receiving of the SMS Messages is done with here.**

SMPP Stations Component: **This component handles the incoming and outgoing SMS Messages. Each of the SMPP Stations acts directly and independently on the Virtual processors, which is emulated during the start up of MobileXge SMPP Gateway. There are a total of 180 Virtual processors within. With this technology which our R&D Team has developed, it enables high speed and concurrent sending/receiving of SMS Messages through 180 concurrent SMPP connections.**

MXCoreRules Component: **This component handles all the business rules. This component is written in VB6 and is open source. With the open source concept, users are able to further customise the system to integrate seamlessly into any third party enterprise applications with minimum effort.**

1.3 System Functions

The MobileXdge SMPP Gateway is designed to send and receive SMS messages via SMPP protocols. It can supports up to 180 concurrent SMPP connections. It is made so robust that it can seamlessly integrate with any third party applications. Hence, it gives companies a great window of business opportunities to explore into the Mobile market.

MobileXdge SMPP Gateway runs as a Windows Service, which can be Start and Stop easily, just by a click of a button. System configuration is also can be done easily by changing the setting in the configuration file (MOBILEXDGE.CFG) which is located in the folder "C:\SMPP\Config".

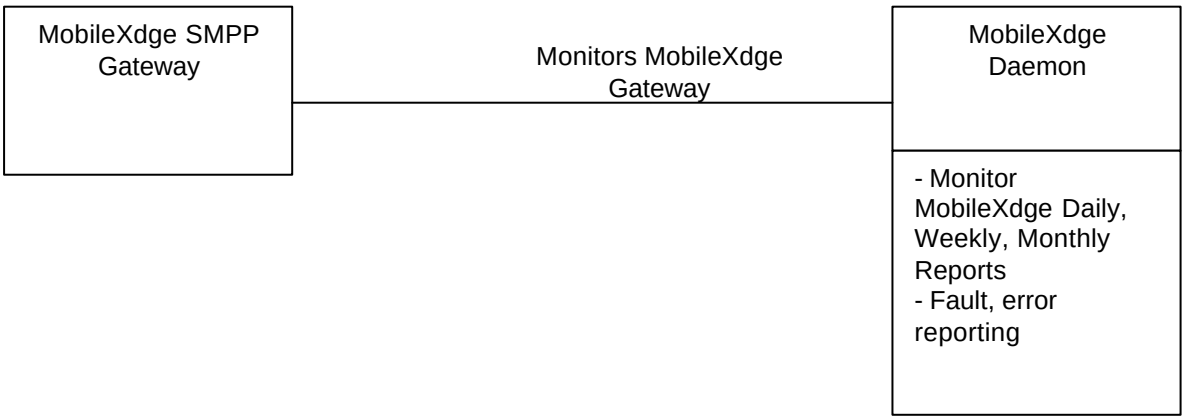
MOBILEXDGE.CFG

```
<MOBILEXDGE>
<CONTROL>
<LOGENABLE>Y</LOGENABLE>
<LOGFILE>c:\MXSMPP\LOGFILES\MXSMPP.LOG</LOGFILE>
<ARCHIVEDIR>C:\MXSMPP\Archive</ARCHIVEDIR>
<STATSFILE>C:\MXSMPP\Stats\stats.txt</STATSFILE>
<SMPPRULES>1</SMPPRULES>
</CONTROL>
<SMPP_STN_1>
<SERVER>192.168.1.1</SERVER>
<PORT>8888</PORT>
<UID>uid</UID>
<PWD>password</PWD>
<LOGENABLE>Y</LOGENABLE>
<LOGFILE>C:\MXSMPP\LOGFILES\Stn_1.LOG</LOGFILE>
<READXML>C:\MXSMPP\XML\Station1\READ</READXML>
<READBKXML>C:\MXSMPP\XML\Station1\READ\Backup\</READBKXML>
<SENDXML>C:\MXSMPP\XML\Station1\Sent</SENDXML>
<SENDBKXML>C:\MXSMPP\XML\Station1\Sent\Backup\</SENDBKXML>
<STATUSXML>C:\MXSMPP\XML\Station1\Status</STATUSXML>
<STATUSBKXML>C:\MXSMPP\XML\Station1\Status\Backup\</STATUSBKXML>
<POLL>5</POLL>
<CHECK>30</CHECK>
<TYPE></TYPE>
<SYSTYPE>3</SYSTYPE>
<ADDRTON>AlphaNumeric</ADDRTON>
<ADDRNPI>npiISDN</ADDRNPI>
<SMPPVER>SMPP34</SMPPVER>
<ADDRESSRANGE></ADDRESSRANGE>
<STARTUP>Y</STARTUP>
</SMPP_STN_1>
…….
…….
…….
[SMPP_STN_180]
```

The MobileXdge SMPP Gateway supports up to 180 SMS Centre connections concurrently via SMPP. The MobileXdge SMPP Gateway will constantly call the MXCoreRules, which is pre-customised by the users for specific business needs and purpose.

The MobileXdge SMPP Gateway also come with a main events log (MobileXdge.LOG), and 180 other SMPP Stations log file, STN_X, which will track all transmission In other words, its provides a detail audit trail of all the activities of the MobileXdge SMPP Gateway, as well as the avtive SMPP connections. This events log files can also use as a diagnosis tools to fault find on the SMPP Gateway if there is any unusually activities. In addition, the system will generate two separate files: MXError.txt and MXEngineError.txt when errors occur within the MXCoreRules or within the SMPP connection.

1.3.1 Error notification & Reporting Feature via email



MobileXdge™ SMPP Gateway comes with an MobileXdge Daemon that monitors the MobileXdge™ SMPP Gateway. In the event if the MobileXdge™ SMPP Gateway cease to operate due to some fatal error, the MobileXdge Daemon will generate an alert email to the administrator. In addition, the system allows you to configure to receive daily, weekly and monthly reports on the status and statistics of the MobileXdge™ SMPP Gateway.

Chapter 2 – Installation

2.1 System Requirement

Please ensure that the system, which you are intended to install the MobileXdge SMPP Gateway, must satisfied the minimum requirement as listed below:

- Intel Pentium 4 and above personal computer
- Microsoft Windows 98/2000/2003 or NT 4.0 (Service Pack 4) or higher
- 512 Mbytes of RAM
- A mouse and keyboard that is supported by Windows Operating System
- A hard disk with at least 1GB of free space for the program.
- A internet lease line that connects to the internet 7/24hrs
- Microsoft Dot Net Framework 3.5

2.2 Installation checklist

To run MobileXdge SMPP Gateway successfully, you need:

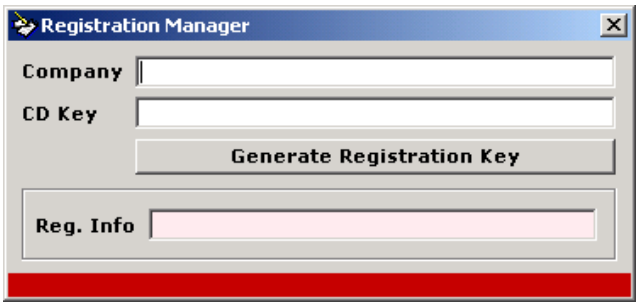
- Minimum system requirements as listed in previous section
- License KEY file that you can obtain after you registered the MobileXdge SMPP Gateway
- One or more SMPP connection(s) to the mobile operator(s)
- Complete the necessary steps in Chapter 1 of this guide.

2.3 Install MobileXdge Gateway

Install MobileXdge SMPP Gateway 2.0 from the web browser, which will auto-run "default.htm" from the installation CD provided.

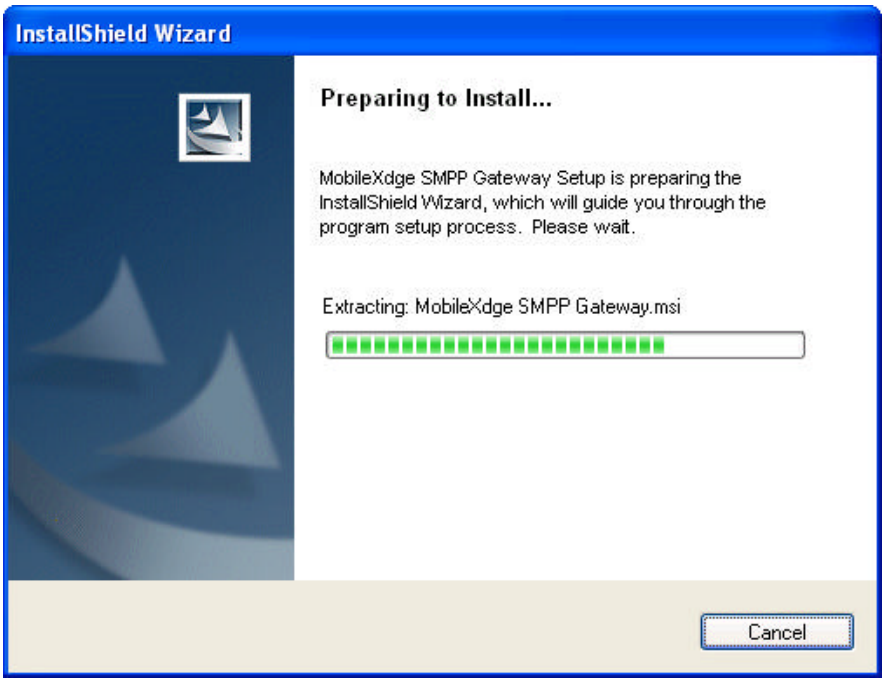
Install the Registration Manager from the web browser, which will auto-run "default.htm" from the installation CD provided.

After installing the above Setup programs, restart the Windows Server. Start the Registration Manager. You will be prompt to enter your Company Name, and the CD key, which can be found at the back of the CD Case. Once you have generated the Registration Key, copy the Registration Key information and visit http://www.mobilexdge.com to continue with your registration. Once you have registered successfully, the system will generate a License Key file. Copy the License Key file into the windows system directory (for Win2000/NT/2003, the directory is c:\windows\system32). Rename the License key to MXSMPP.key. If you have purchased additional port license, please repeat the above process and copy the license key file for the additional ports to the sub directory "License" of the installed directory.

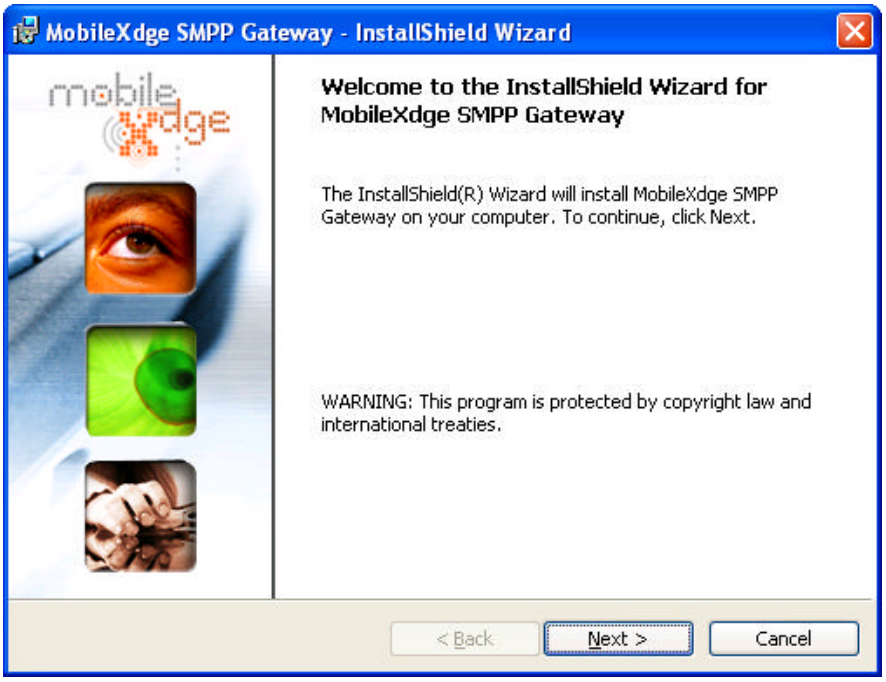


The next few pages will guide you to install the MobileXdge SMPP Gateway.

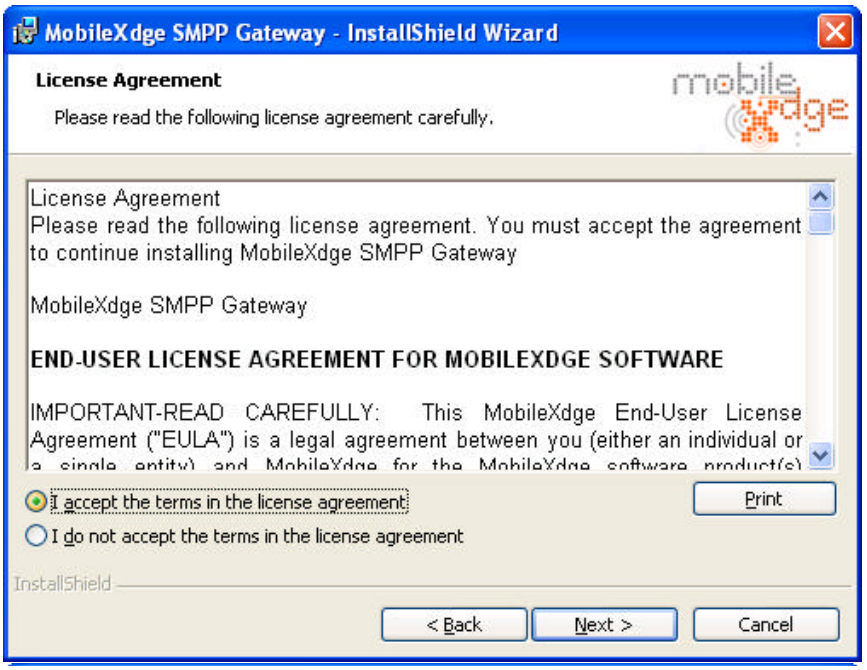
Step 1:


InstallShield Wizard
Preparing to Install...
MobileXdge SMPP Gateway Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Extracting: MobileXdge SMPP Gateway.msi
Cancel

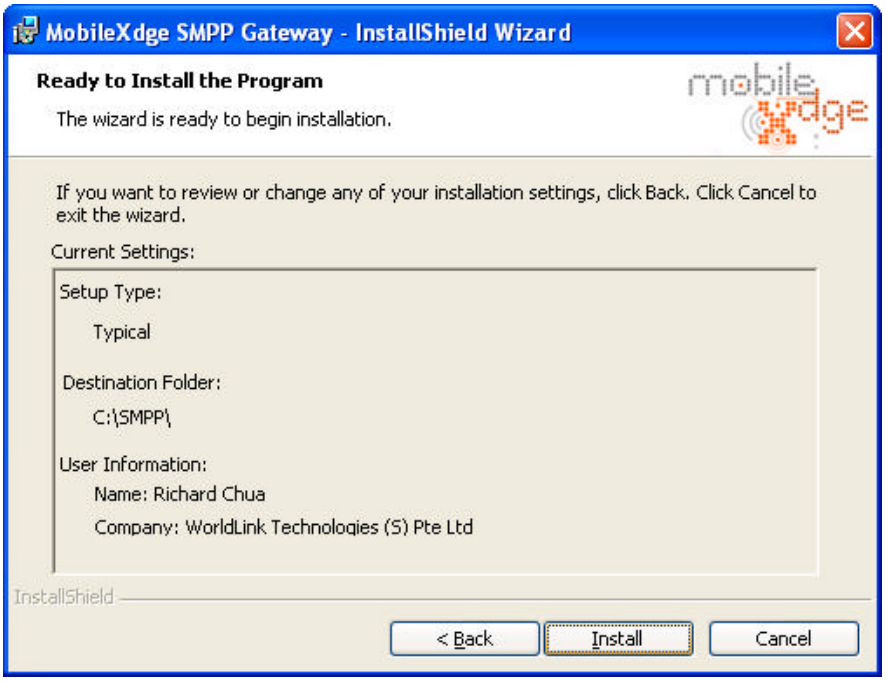
Step 2:


MobileXdge SMPP Gateway - InstallShield Wizard
Welcome to the InstallShield Wizard for MobileXdge SMPP Gateway
The InstallShield(R) Wizard will install MobileXdge SMPP Gateway on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

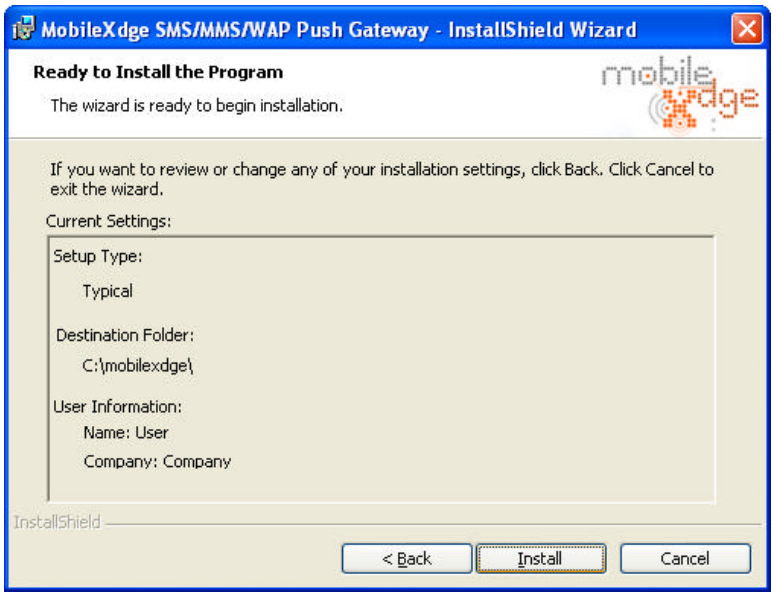
Step 3:


MobileXdge SMPP Gateway - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
License Agreement
Please read the following license agreement. You must accept the agreement to continue installing MobileXdge SMPP Gateway
MobileXdge SMPP Gateway
END-USER LICENSE AGREEMENT FOR MOBILEXDGE SOFTWARE
IMPORTANT-READ CAREFULLY: This MobileXdge End-User License Agreement ("EULA") is a legal agreement between you (either an individual or
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

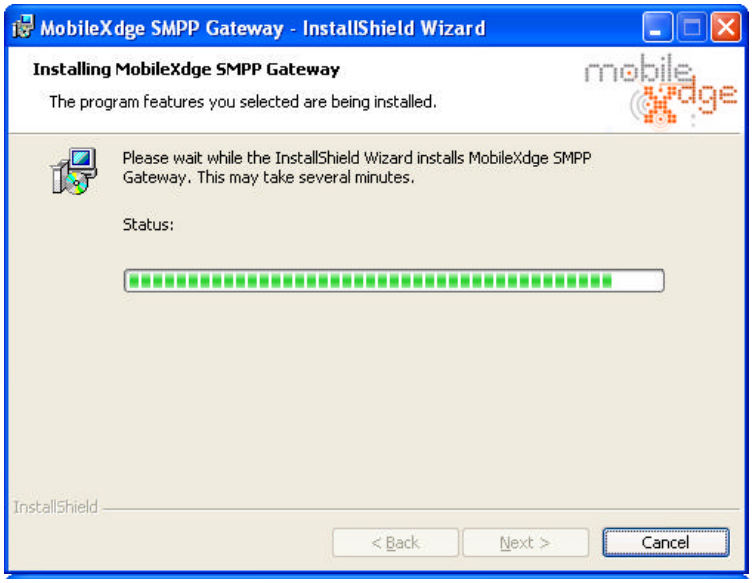
Step 4:


MobileXdge SMPP Gateway - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Current Settings:
Setup Type:
Typical
Destination Folder:
C:\SMPP\
User Information:
Name: Richard Chua
Company: WorldLink Technologies (S) Pte Ltd
InstallShield
< Back
Install
Cancel

Step 5:


MobileXdge SMS/MMS/WAP Push Gateway - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Current Settings:
Setup Type:
Typical
Destination Folder:
C:\mobilexdge\
User Information:
Name: User
Company: Company
InstallShield
< Back
Install
Cancel

Step 6:


MobileXdge SMPP Gateway - InstallShield Wizard
Installing MobileXdge SMPP Gateway
The program features you selected are being installed.
Please wait while the InstallShield Wizard installs MobileXdge SMPP Gateway. This may take several minutes.
Status:
InstallShield
< Back
Next >
Cancel

Step 7:


MobileXdge SMPP Gateway - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed MobileXdge SMPP Gateway. Click Finish to exit the wizard.
Launch the program
< Back
Finish
Cancel

Chapter 3 – Using MobileXdge Gateway

3.1 Running MobileXdge SMPP Gateway

It is important to check if the SMPP settings to the SMS Centre or mobile operators are being set correctly before executing MobileXdge SMPP Gateway in the config file named under "MobileXdge.CFG".

3.2 Configuration Setting

You will need to configure the MobileXdge.cfg before you start operating the system. In this chapter, we will discuss in great details on the setting of the MobileXdge System.

MOBILEXDGE.CFG

```
<MOBILEXDGE>
<CONTROL>
<LOGENABLE>Y</LOGENABLE>
<LOGFILE>C:\SMPP\LOGFILES\MXSMPP.LOG</LOGFILE>
<ARCHIVEDIR>C:\SMPP\Archive</ARCHIVEDIR>
<STATSFILE>C:\SMPP\Stats\stats.txt</STATSFILE>
<SMPPRULES>1</SMPPRULES>
</CONTROL>
<SMPP_STN_1>
<SERVER>www.server.com</SERVER>
<PORT>8888</PORT>
<UID>Account ID</UID>
<PWD>Account Password</PWD>
<LOGENABLE>Y</LOGENABLE>
<LOGFILE>C:\SMPP\LOGFILES\Stn_1.LOG</LOGFILE>
<READXML>C:\SMPP\XML\Station1\READ</READXML>
<READBKXML>C:\SMPP\XML\Station1\READ\Backup\</READBKXML>
<SENDXML>C:\SMPP\XML\Station1\Sent</SENDXML>
<SENDBKXML>C:\SMPP\XML\Station1\Sent\Backup\</SENDBKXML>
<STATUSXML>C:\SMPP\XML\Station1\Status</STATUSXML>
<STATUSBKXML>C:\SMPP\XML\Station1\Status\Backup\</STATUSBKXML>
<POLL>3</POLL>
<CHECK>20</CHECK>
<ENQLINK>Y</ENQLINK>
<TYPE></TYPE>
<SYSTYPE>3</SYSTYPE>
<ADDRTON>AlphaNumeric</ADDRTON>
<ADDRNPI>npiISDN</ADDRNPI>
<SMPPVER>SMPP34</SMPPVER>
<ADDRESSRANGE></ADDRESSRANGE>
<STARTUP>Y</STARTUP>
</SMPP_STN_1>
…
…
```

PARAMETER NAME	DESCRIPTION
<MOBILEXDGE>	XML Header for the main MobileXdge SMPP Settings
<CONTROL>	XML Control Header for the main MobileXdge SMPP Settings
<LOGENABLE>	Set if you want the system to log the events of the MobileXdge
<LOGFILE>	Set the log file where the system write to the events of the MobileXdge
<ARCHIVEDIR>	Set the archive folder location where the system will save the log file to daily
<STATSFILE>	Set the location and the file name of the status file. This status file will be accessed by MobileXdge Daemon. If you have changed the setting in this parameter, make sure you change the settings in the MobileXdge Daemon as well.
<SMPPRULES>	The language of the rules where the system will use. Set the value to 1 if you use the business rules in VB.net. Set the value to 2 if you use C#.net and set the value to 3 if you use VB6.
<SMPP_STN_1>	XML Control Header for the MobileXdge SMPP Station 1 Settings
<SERVER>	Set the internet IP address of the remote SMPP server
<PORT>	Set the internet IP address port of the remote SMPP server
<UID>	Set the user identity assigned by the remote SMPP server
<PWD>	Set the password assigned by the remote SMPP server
<LOGENABLE>	Set if you want the system to log the events of the MobileXdge SMPP Station 1

< LOGFILE>	Set the log file where the system write to the events of the MobileXdge SMPP station 1
<READXML>	Set the location of the folder where the system will process the XML files for any incoming SMS messages
<READBKXML>	Set the location of the folder where the system will backup the XML files for incoming SMS after processing them
<SENDXML>	Set the location of the folder where the system will process the XML files for any outgoing SMS messages
<SENDBKXML>	Set the location of the folder where the system will backup the XML files for outgoing SMS after processing them
<STATUSXML>	Set the location of the folder where the system will process the XML files for any incoming status from the SMS Centre
<STATUSBKXML>	Set the location of the folder where the system will backup the XML files for incoming status after processing them
<POLL>	Set the polling frequency to call the MOXCoreRules in the system. By default, the MOXCoreRules will read/write from a database for sending or receiving of SMS records. The default frequency is set to 3 seconds.
<CHECK>	Set the check frequency to issue the EnquireLink command to the SMS Centre. Please note that this will only be activated if the ENQLINK parameter is set to Y. By default, the check frequency is set to 20 seconds.
<ENQLINK>	Set if you want to issue the EnquireLink command to the SMS Centre. By default, the value is Y.
<TYPE>	Reserved parameter. Not use currently.

<SYSTYPE>	Sets the category type of the ESME that is binding to the SMSC. By default is blank.
<ADDRTON>	Sets the type of number (TON) to be used in the SME address parameters. The following are the ADDRTON values: UNKNOWN International National Network_Specific Subscriber_Number AlphaNumeric Abbreviated
<ADDRNPI>	Sets Numeric Plan Indicator (NPI) to be used in the SME address parameters. The following NPI values are defined: npiUnknown npiISDN npiData npiTelex npiLandMobile npiNational npiPrivate npiERMES

	npiInternet npiWAPClientId
<SMPPVER>	Sets the version of the of the remote SMPP server. By default it is set to SMPP34. The following are the SMPPVER values: SMPP34 SMPP33
<ADDRESSRANGE>	Sets a set of SME addresses serviced by the ESME client. By default is it blank.
<STARTUP>	Sets if you want to start the SMPP Stations. By default, the value is N

3.6 Configuring MobileXdge Daemon

MobileXdge™ SMPP Gateway is widely used in mission critical operations. This MobileXdge Daemon provides transmission of emails to the system administrator if there is any failure or status change in the individual SMPP Stations in the MobileXdge™ SMPP Push Gateway as well as generation of daily, weekly monthly report via email.

The MobileXdge Daemon allows you to conduct diagnostic on the system to send out email alerts. To enable the diagnostic mode, you will need to run the MobileXdge Daemon with a 't' parameter at the end of the program. Below is the detail:-

"C:\SMPP\MXDaemon\MXDaemon.exe t"

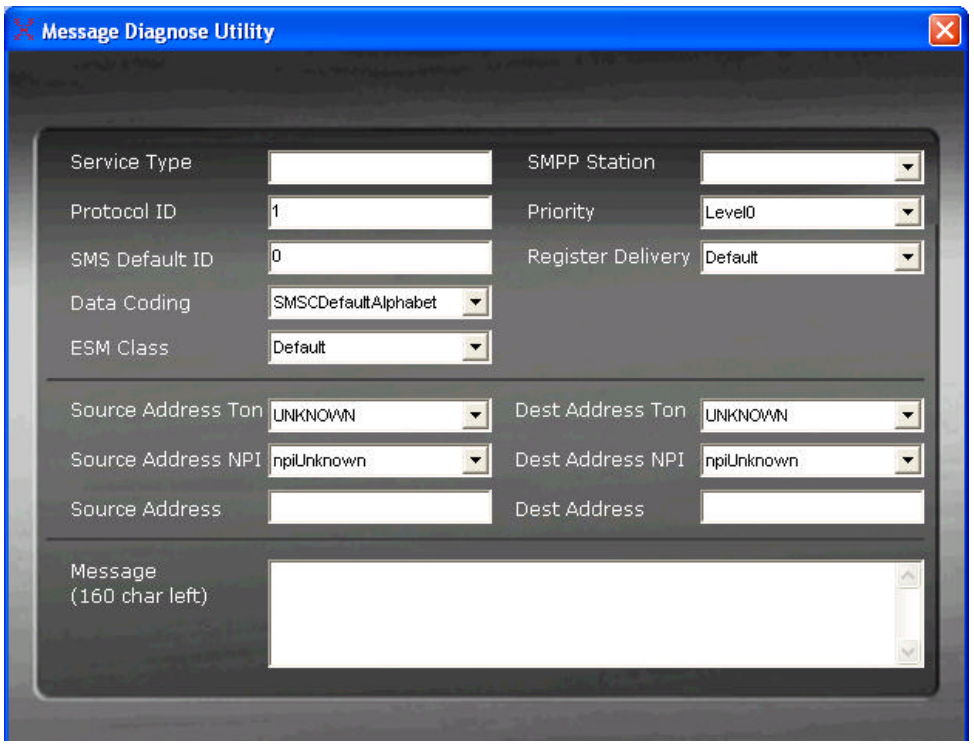
```
<MXDAEMON>
<MXDAEMONSMTPSVR>SMTP Server</MXDAEMONSMTPSVR>
<MXDAEMONSMTPPORT>25</MXDAEMONSMTPPORT>
<MXDAEMONNAME>Your display name</MXDAEMONNAME>
<MXDAEMONFROMAC>Your email account</MXDAEMONFROMAC>
<MXDAEMONPWD>your password</MXDAEMONPWD>
<MXDAEMONTOAC>receiving email address</MXDAEMONTOAC>
<MXSTATFILE>c:\SMPP\stats\stats.xml</MXSTATFILE>
<ADHOCRPT>Y</ADHOCRPT>
<DAILYRPT>Y</DAILYRPT>
<WEEKLYRPT>Y</WEEKLYRPT>
<MONTHLYRPT>Y</MONTHLYRPT>
</MXDAEMON>
```

PARAMETER NAME	DESCRIPTION
<MXDAEMON>	XML Header for the main MobileXdge Daemon Settings
<MXDAEMONSMTPSVR>	Sets the SMTP server internet IP address
<MXDAEMONSMTPPORT>	Sets the SMTP server internet IP address port
<MXDAEMONNAME>	Set the display name on the email sent
<MXDAEMONFROMAC>	Set the sender email account
<MXDAEMONPWD>	Set the sender email account password
<MXDAEMONTOAC>	Set the receiver email account. If you have more than one email accounts you want to receive the email. You will need to include a comma after each email. Eg. support@mobilexdge.com,sales@mobilexdge.com
<MXSTATFILE>	Set the location and the file name of the status file. This status file will be frequently updated by MobileXdge SMPP Gateway. Thus if you have changed the setting in

	for this parameter in the MobileXdge SMPP Gateway, make sure you change the setting here also.
<ADHOCRPT>	Sets if you want to receive ad-hoc report via email. Ad-hoc reports will includes errors or status change that MobileXdge SMPP Gateway encounters. By default, it is set to Y
<DAILYRPT>	Sets if you want to receive daily statistical reports on the outgoing/incomings/failed SMS messages. By default, it is set to Y
<WEEKLYRPT>	Sets if you want to receive weekly statistical reports on the outgoing/incomings/failed SMS messages. By default, it is set to Y
<MONTHLYRPT>	Sets if you want to receive monthly statistical reports on the outgoing/incomings/failed SMS messages. By default, it is set to Y

3.8 System Testing

There is a system test button situated on the main screen of the MobileXdge SMPP Gateway. This is to allow you to performance a simple test on the MobileXdge Gateway on each individual SMPP Stations. When you first installed the system, you can use this function to test the operability of the system. Click on the <System Test> button of the MobileXdge Gateway and a new test window will appear.



Type in the necessary information provided and a test message in the text box provided respectively. Click the <Send> button to send out the test message. An "OK" pop-up window will appear if the message sends out successfully.

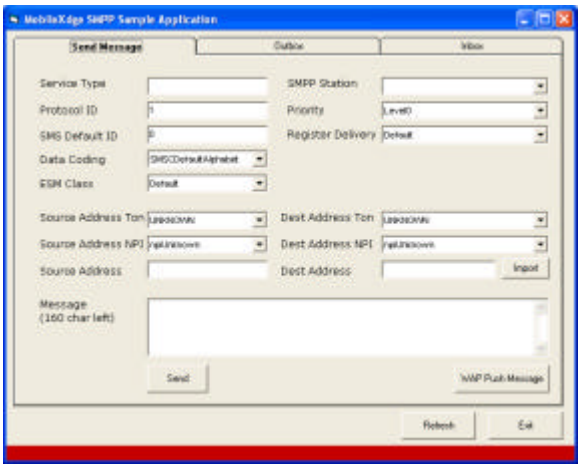
Chapter 4 – Using Sample Application

4.1 Sending Mobile Messages

MobileXdge comes with a sample VB6 application. This application has been developed to demonstrate the features of the MobileXdge Gateway. As the application is open source, you will be able to further customise the application to cater for your requirements. Below are the screen shots of the application. When preparing to transmit the message, you need to define at least a valid mobile phone number in the mobile phone field. You can import the mobile phone number from an external file. The format of the file has to be as follows:-

```
6590123456
6012847373
4733635222
.....
......
......
```

4.2 Send SMS Messages



In the Send Message Tab, you need to fill up the fields.

FIELDS	DESCRIPTION	DEFAULT VALUE
Service Type	Parameter use to indicate the SMS Application Service associated with the message.	Blank
SMPP Station	Parameter use to indicate which SMPP station to use to send the SMS messages	Blank
Protocol ID	Set according to GSM 03.40	1
Priority	Parameter use to indicate a priority level to the short message. The following are the values: Level0 Level1 Level2 Level3	Level0
SMS Default ID	Parameter that specifies the SMSC index or a canned SMS. The following are the values: 0 1-254	0

	255	
Register Delivery	Parameter that is used to request and SMSC delivery receipt and/or SME originated acknowledgements. The following are the values: **Default** **rdDAR** **rdMUAR** **rdDARMUAR** **rdINR** **rdDARINR** **rdMUARINR** **rdDARMUARINR** **rdDRRS** **rdDRRSDAR** **rdDRRSMUAR** **rdDRRSDARMUAR** **rdDRRSINR** **rdDRRSDARINR**	Default

	rdDRRSMUARINR **rdDRRSDARMUARINR** **rdDRRF** **rdDRRFDAR** **rdDRRFMUAR** **rdDRRFDARMUAR** **rdDRRFINR** **rdDRRFDARINR** **rdDRRFMUARINR** **rdDRRFDARMUARINR**	
Data Coding	Parameter that is used to specify the data coding of the SMS message. The following are the values: SMSCDefaultAlphabet IA5 OctetUnspecifiedB Latin OctetUnspecifiedA JIS Cyrllic	SMSCDefaultAlphabet

	Hebrew UCS2 PictogramEncoding MusicCodes ExtendedKanji KS GSMMWIcontrolD1 GSMMWIcontrolD2 GSMmessageClassControl SMSWAPPush	
ESM Class	Parameter that is used to indicate special message attributes associated with the short message. The following are the values: **Default** **cUDHI** **cUDHIRAW** **cSRP** **cUDHISRP** **cDAT**	Default

	cDATUDHI **cDATSRP** **cDATUDHISRM** **cMUT** **cMUTUDHI** **cMUTSRP** **cMUTUDHISRM** **cDGMM** **cDGMMUDHI** **cDGMMSRP** **cDGMMUDHISRP** **cDGMMDAT** **cDGMMDATUDHI** **cDGMMDATSRP** **cDGMMDATUDHISRM** **cDGMMMUT** **cDGMMMUTUDHI** **cDGMMMUTSRP** **cDGMMMUTUDHISRM**	

	cFWDM **cFWDMUDHI** **cFWDMSRP** **cFWDMUDHISRP** **cFWDMDAT** **cFWDMDATUDHI** **cFWDMDATSRP** **cFWDMDATUDHISRM** **cFWDMMUT** **cFWDMMUTUDHI** **cFWDMMUTSRP** **cFWDMMUTUDHISRM** **cSTRFWDM** **cSTRFWDMUDHI** **cSTRFWDMSRP** **cSTRFWDMUDHISRP** **cSTRFWDMDAT** **cSTRFWDMDATUDHI** **cSTRFWDMDATSRP**	

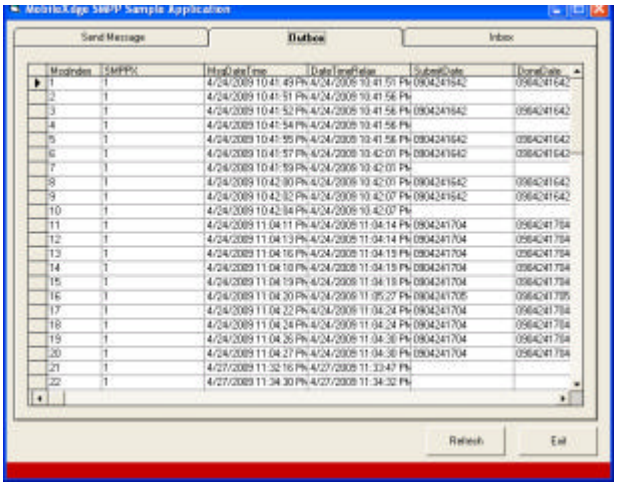
	cSTRFWDMDATUDHISRM **cSTRFWDMMUT** **cSTRFWDMMUTUDHI** **cSTRFWDMMUTSRP** **cSTRFWDMMUTUDHISRM**	
Source Address Ton	Sets the type of number (TON) to be used in the short message. The following are the values: UNKNOWN International National Network_Specific Subscriber_Number AlphaNumeric Abbreviated	UNKNOWN
Source Address NPI	Sets Numeric Plan Indicator (NPI) to be used in the short message. The following values are defined: npiUnknown	npiUnknown

	npiISDN npiData npiTelex npiLandMobile npiNational npiPrivate npiERMES npiInternet npiWAPClientId	
Source Address	Sets the source address in the short message. Please note that you do not need to include a '+' in front of the source address	Blank
Dest Address Ton	Sets the type of number (TON) to be used in the short message. The following are the values: UNKNOWN International National	UNKNOWN

	Network_Specific Subscriber_Number AlphaNumeric Abbreviated	
Dest Address NPI	Sets Numeric Plan Indicator (NPI) to be used in the short message. The following values are defined: npiUnknown npiISDN npiData npiTelex npiLandMobile npiNational npiPrivate npiERMES npiInternet npiWAPClientId	npiUnknown
Dest Address	Sets the destination address in the short message. Please note that you do not need to include	Blank

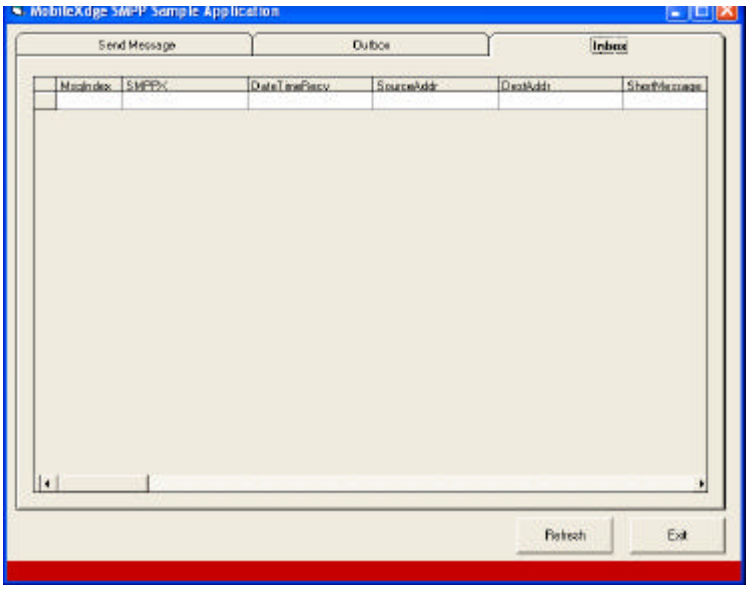
	a ‘+’ in front of the source address	
Message	Service Type	Service Type

4.3 Outbox Tab



The system log for all the outgoing SMS messages

4.4 Inbox Tab



The system log for all the incoming SMS messages.

Chapter 5 – MOXRules Customisation

You can customise MobileXdge SMPP Push Gateway according to your business need by changing the database and its calling application. A sample application is included in the installation of MobileXdge Gateway. The VB6 project file is located in the folder "\MOXCoreRulesVB6. Please note that you will need to copy the compiled DLL into "C:\SMPP" folder for the changes to take effect.

5.1 MOXRules – VB6 Platform

Whenever there are new changes made to the MOXCoreRulesVB6.vbp, you will need to perform the following steps: -

- **Compile the MOXCoreRulesVB6.vbp to MOXCoreRulesVB6.dll.**
- **Copy the MOXCoreRulesVB6.dll into the "C:\SMPP" folder.**
- **At the Command line, issue REGSVR32 "C:\SMPP\MOXCoreRulesVB6.dll".**

5.2 MOXRules – VB.Net 2008 Express Platform

The project files for the MOXCoreRulesVBNet is located at C:\SMPP\MXCoreRulesVBNet folder. Whenever there are new changes made to the MOXCoreRulesVBNet, you will need to perform the following steps: -

- **Compile the MOXCoreRulesVBNet.vbp to MOXCoreRulesVBNet.dll.**
- **Copy the MOXCoreRulesVBNet.dll into the "C:\SMPP" folder.**

5.3 MOXRules – C#.Net 2008 Express Platform

The project files for the MOXCoreRulesCSNet is located at C:\SMPP\MXCoreRulesCSNet folder. Whenever there are new changes made to the MOXCoreRulesCSNet, you will need to perform the following steps: -

- **Compile the MOXCoreRulesCSNet.vbp to MOXCoreRulesCSNet.dll.**
- **Copy the MOXCoreRulesCSNet.dll into the "C:\SMPP" folder.**

5.4 MOXRules Functions

The MobileXdge SMPP Gateway will execute the application extension MOXCoreRules for sending or receiving messages and updating the database. Hence, you can create your own application according to your need. Below is the functions needed for the MobileXdge Gateway System to process.

5.4.1 GetSendLog(strID, StrPath)

This function will be called by the MobileXdge SMPP gateway to request from the customise application for any UN-send message/s. The strID parameter provides information on current SMPP Station that the system is accessing, and the strPath parameter provides information on the XML path where the system creates the XML files for sending SMS.

5.4.2 UpdateSendLog(StatusType, strRemoteID, strLocalID, strSub, strDlvrd, strSubmitDate, strDoneDate, strStat, strErr, strText)

This function will be call by the MobileXdge SMPP gateway to update the database of the customise application.

Descriptions of the parameters are listed below:-

<StatusType>: The values of this parameter will be either “1” or “2”. When the value is “1”, the parameters value that passed by the system will be the strLocalID, strRemoteID and the strStat. This will allow you to update to into your database the strRemoteID from the SMS Centre as well as the status from the SMS Centre.

When the value is “2”, the parameters values that passed by the system will be as follows:-

<strRemoteID>: This parameter will match the previous update from the system, which will allow your system to search for the record to update in your system.

<strDlvrd>: This parameter indicate the actual status string response from the SMS Centre.

<strSubmitDate>: This parameter indicate the actual timestamp of the message submission from the SMS Centre to the mobile operator.

<strDoneDate>: This parameter indicate the actual timestamp of the message delivered/failed from the SMS Centre.

<strErr>: This parameter indicate the actual error string response from the SMS Centre.

<strText>: This parameter indicate the brief text string of the original short message response from the SMS Centre.

There are two scenarios here in this function: -

Case 1:

In this case, it will update the response from the SMS Centre to see if the short message has been successfully sent.

Case 2:

In this case, it will update the delivery status report from the SMS Centre.

5.4.3 UpdateReadLog(strID, strSourceAddr, DestAddr, strDateTime, strText)

This function will be call by the MobileXdge SMPP gateway to update the database when a message is received by the MobileXdge SMPP gateway.

<strID>: This parameter indicates the SMPP Station ID which the MobileXdge SMPP Gateway connects.

<strSourceAddr>: This parameter indicates the receiver short code number of the message received.

<strDestAddr>: This parameter indicates the sender mobile number of the message received.

<strDateTime> is the Date/Time of the message received

<strText>: This parameter contains the text message received.

Chapter 6 – Message APIs Component

MobileXdge SMPP provides two additional API components to allow you to send out concatenated SMS messages as well as multi-lingual SMS messages and WAP Push Messages.

6.1 WAP Push API Component

The WAP Push API Component (PPG.DLL) formats the WAP Push details into the WAP Push message. Please see below on how to use the WAP Push API Component:

```
Dim WP As New PPG.Push
WP.strProxyTitle = YourWAPPushTitle
WP.strProxyPush = YourWAPPUSHURL
WP.strType=1
FormatedMessage = WP.Proxy
```

You will need to set the Data Coding to "SMSWAPPush" and to set the ESM Class to "cUDHI" if you are sending WAP Push Messaging. StrType = 1 means that you are sending WAP Push message, strType=2 means you are sending WAP Push bookmark message.

6.2 Concatenated API Component

The Concatenated API Component will format the SMS message into concatenated SMS messages. It supports multi-lingual messaging. Please see below on how to use the Concatenated API Component:

```
Public ConCatMsg as New Concat.ClassSplit
OutputMessage = ConCatMsg.GetDataInput(InputMessage, True)
```

You will need to invoke the function GetDataInput, which require you to enter the InputMessage, which is the orginal SMS message, and the message type (True= Unicode)

The system will return the formatted SMS message. If the message returned by the function has "^", is means that there is more than one SMS messages

within the content. You will have to break up the message into multiple messages. You will need to set the ESM Class to “cUDHIRAW” if you are sending concatenated SMS messages.