logic IO
The M2M Enabler

VSMSGW wrapper DLL for Visual Basic Ver. 1.21

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Introduction

The vsmsgwW.dll is a library that allows The VSMSGW library to be used with Visual Basic
The VSMSGW library is a small library that encapsulates some of the transactions that is possible to make against a RTCU unit. For a description of the complete Gateway protocol, please consult the appropriate document from Logic IO.

Contents of package:

vsmsgwW	The Visual C++ 6 project for the wrapper DLL. All required DLL's are found in the release sub directory.
vsmsgwW_test_vb	The Visual Basic 6 project for the example program. The example program is described elsewhere in this document.
VB wrapper DLL for VSMSGW.pdf	This document.

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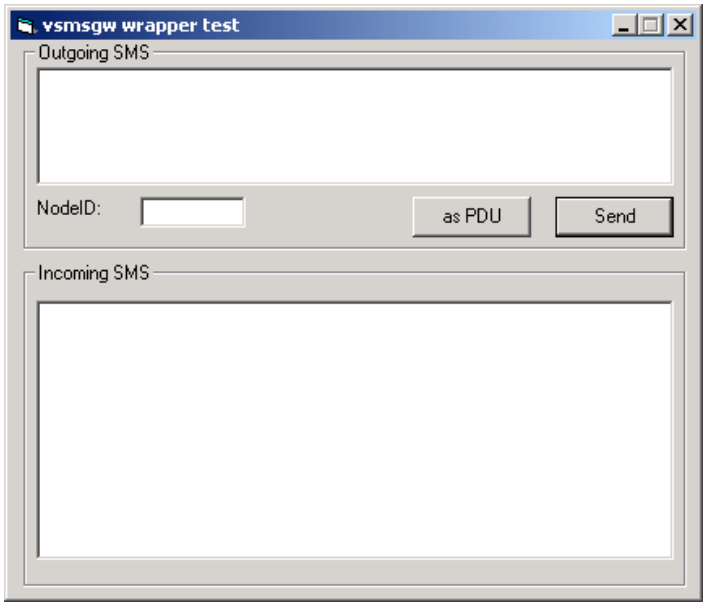
Visual Basic example project

The example project is a simple demonstration of how to use the wrapper dll to send and receive VSMS messages to/from RTCU units.



The application is found with the Visual Basic project.
The Required dll's are found in the Visual C++ project (They are located in the release folder).

How to send messages:
To send a text message (SMS), type the receivers NodeId into the NodeId field, write the text and press the Send button.
To send a binary message (PDU), type the receivers NodeId into the NodeId field and press the as PDU button. This will send the text "Hello world" to the receiver as binary data (ASCII).

The application will write any received SMS messages in the Incoming SMS list.
The application will try to convert the PDU to text and write it in the Incoming SMS list

The program connects to the Gateway at Logic IO.
Gateway IP: rtcu.dk
Gateway port: 5001
Gateway key: AABBCCDD
Program NodeId: 2000

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Functions

The Library is a collection of the following functions described in this section.

Return Codes

Symbolic name	Value	Description
GWRC_OK	0	Operation successful
GWRC_ERROR	1	Unspecified error
GWRC_NOT_CON	2	Not connected
GWRC_TIMEOUT	3	A timeout occurred
GWRC_INV_LEN	5	Invalid length
GWRC_IS_OPEN	7	Is already open
GWRC_NOT_OPEN	8	Is not open
GWRC_INV_PARM	9	Invalid parameters
GWRC_DST_UNREACH	10	Destination node is unreachable

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vsmsgwInit

Declaration

```
Declare Function vsmsgwInit Lib "vsmsgwW.dll" (ByVal MyNodeID As Long, _
                                               ByVal GWIP As String, _
                                               ByVal GWPort As Long, _
                                               ByVal GWKey As String, _
                                               ByVal SMSText As Long, _
                                               ByVal SMSPDU As Long, _
                                               ByRef arg As Long) As Long
```

Description

Initialize the connection to the GPRS Gateway.

Input

MyNodeId	The nodeid for the PC application. If set to 0, it will be assigned by the GPRS Gateway
GWIP	The IP address (or symbolic name) of the GPRS Gateway
GWPort	The portnumber the GPRS Gateway listens on
GWKey	The key value (an 8 character password) used to access the GPRS Gateway.
SMSText	A callback function that will be called whenever an Text SMS is received
SMSPdu	A callback function that will be called whenever an PDU SMS is received
arg	A user supplied 32 bit variable.

Reply

GWRC_IS_OPEN, GWRC_OK

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vsmsgwInitAdv

Declaration

```
Declare Function vsmsgwInitAdv Lib "vsmsgwW.dll" ( _
                               ByVal MyNodeID As Long, _
                               ByVal GWIP As String, _
                               ByVal GWPort As Long, _
                               ByVal GWKey As String, _
                               ByRef CryptKey As Byte) As Long
```

Description

Initialize the connection to the GPRS Gateway.

Input

MyNodeId	The nodeid for the PC application. If set to 0, it will be assigned by the GPRS Gateway
GWIP	The IP address (or symbolic name) of the GPRS Gateway
GWPort	The portnumber the GPRS Gateway listens on
GWKey	The key value (an 8 character password) used to access the GPRS Gateway.
CryptKey	The encryption key used to access the GPRS Gateway. (16 Bytes)

Reply

GWRC_IS_OPEN, GWRC_OK

vsmsgwSetDataPackageCB

Declaration

```
Declare Function vsmsgwSetDataPackageCB Lib "vsmsgwW.dll" ( _
        ByVal PACKAGE As Long, ByRef arg As Long) As Long
```

Description

Set the callback function that will be called when a data package is received.

Input

PACKAGE	A callback function that will be called whenever a data package is received
arg	A user supplied 32 bit variable

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vsmsgwSetSMSPDUCB

Declaration

```
Declare Function vsmsgwSetSMSPDUCB Lib "vsmsgwW.dll" ( _
        ByVal SMSPDU As Long, ByRef arg As Long) As Long
```

Description

Set the callback function that will be called when a PDU SMS is received.

Input

SMSPDU	A callback function that will be called whenever a PDU SMS is received
arg	A user supplied 32 bit variable

---

vsmsgwSetSMSTextCB

Declaration

```
Declare Function vsmsgwSetSMSTextCB Lib "vsmsgwW.dll" ( _
        ByVal SMSText As Long, ByRef arg As Long) As Long
```

Description

Set the callback function that will be called when a PDU SMS is received.

Input

SMSText	A callback function that will be called whenever a Text SMS is received
arg	A user supplied 32 bit variable

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vsmsgwIsConnected

Declaration

```
Declare Function vsmsgwIsConnected Lib "vsmsgwW.dll" () As Boolean
```

Description

Determine connection status to the GPRS Gateway.

Input

None.

Reply

False if not connected
True if connected

vsmsgwGetMyNodeID

Declaration

```
Declare Function vsmsgwGetMyNodeID Lib "vsmsgwW.dll" (ByRef MyNodeID As Long) As Long
```

Description

This function will return this nodes nodeid. This function is used especially when a dynamic node-id is requested (by setting MyNodeID to 0 in the vsmsgwInit() function).

Input

MyNodeId	The nodeid for the PC application

Reply

GWRC_OK, GWRC_NOT_CON, GWRC_NOT_OPEN

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vsmsgwSendSMS

Declaration

```
Declare Function vsmsgwSendSMS Lib "vsmsgwW.dll" (ByVal HisNodeID As Long, _
                                                   ByVal str As String, _
                                                   ByRef rc As Long) As Long
```

Description

Send a Text SMS message to the specified NodeID, the return code from the RTCU unit, will be contained in rc

Input

HisNodeID	The nodenumber (serialnumber) of the receiving RTCU unit
str	The string to send to the receiving RTCU unit. Maximum size is 160 characters.
rc	The return code from the receiving RTCU unit, 0 if OK, else error

Reply

GWRC_OK, GWRC_ERROR, GWRC_DST_UNREACH, GWRC_NOT_CON, GWRC_NOT_OPEN, GWRC_INV_LEN, GWRC_INV_PARM

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vsmsgwSendPDU

Declaration

```
Declare Function vsmsgwSendPDU Lib "vsmsgwW.dll" (ByVal HisNodeID As Long, _
                                                   ByRef data As Byte, _
                                                   ByVal length As Long, _
                                                   ByRef rc As Long) As Long
```

Description

Send a PDU SMS message to the specified NodeID, the returncode from the RTCU unit, will be contained in rc.

Input

HisNodeID	The nodenumber (serialnumber) of the receiving RTCU unit
data	The data to send to the receiving RTCU unit Maximum size is 140 bytes.
length	The length of data to send
rc	The return code from the receiving RTCU unit, 0 if OK, else error

Reply

GWRC_OK, GWRC_ERROR, GWRC_DST_UNREACH, GWRC_NOT_CON, GWRC_NOT_OPEN, GWRC_INV_LEN, GWRC_INV_PARM

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vsmsgwSendDataPackage

Declaration

```
Declare Function vsmsgwSendDataPackage Lib "vsmsgwW.dll" ( _
                          ByVal HisNodeID As Long, _
                          ByRef data As Byte, _
                          ByVal length As Long, _
                          ByRef rc As Long) As Long
```

Description

Send a data package to the specified NodeID, the returncode from the RTCU unit, will be contained in rc.

Input

HisNodeID	The nodenumber (serialnumber) of the receiving RTCU unit
data	The data to send to the receiving RTCU unit Maximum size is 480 bytes.
length	The length of data to send
rc	The return code from the receiving RTCU unit, 0 if OK, else error

Reply

GWRC_OK, GWRC_ERROR, GWRC_DST_UNREACH, GWRC_NOT_CON, GWRC_NOT_OPEN, GWRC_INV_LEN, GWRC_INV_PARM

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Callbacks

cbfuncPDU

Declaration

```
Function PduCB(ByVal HisNodeID As Long, ByRef data() As Byte, _
               ByVal length As Long, ByRef arg As Long) As Long
```

Description

Callback function for receiving PDU SMS messages.

Input

HisNodeID	The nodeid of the sender (the serial number of the RTCU that sent the message)
data	The data sent by the RTCU. Max size is 140 bytes.
length	The length of data sent by the RTCU
arg	A user supplied 32 bit variable that was set when vsmsgwInit() was called

Reply

0 if you accept the SMS.
1 if you do not accept the SMS.

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cbfuncText

Declaration

```
Function TextCB(ByVal HisNodeID As Long, ByVal str As String, _
                ByRef arg As Long) As Long
```

Description

Callback function for receiving Text SMS messages.

Input

HisNodeID	The nodeid of the sender (the serial number of the RTCU that sent the message)
str	The text string sent by the RTCU. Max size is 160 characters.
arg	A user supplied 32 bit variable that was set when vsmsgwInit() was called

Reply

0 if you accept the SMS.
1 if you do not accept the SMS.

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cbfuncPackage

Declaration

```
Function PackageCB(ByVal HisNodeID As Long, ByRef data() As Byte, _
                   ByVal length As Long, ByRef arg As Long) As Long
```

Description

Callback function for receiving data packages.

Input

HisNodeID	The nodeid of the sender (the serial number of the RTCU that sent the message)
data	The data sent by the RTCU. Max size is 140 bytes.
length	The length of data sent by the RTCU
arg	A user supplied 32 bit variable that was set when vsmsgwInit() was called

Reply

0 if you accept the data package.
1 if you do not accept the data package.

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