Intrepid and Merlin interfacing.

Contents

1.0 Programme Explaination.

The SouthWest Microwave middleware is based around the Crisis input system, meaning you have a back-office program to configure the middleware, then a front end program that you run/reload when you have configured it.
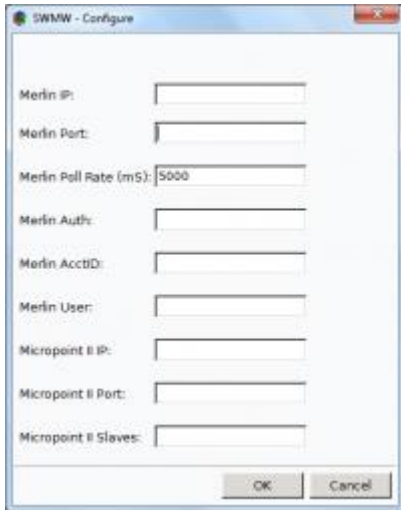
The middleware will pick up alarms and signals from the IP to RS422 unit that is connected to the Southwest microwave installation and pass these on to Merlin via MerlinIP and the Initsys XML protocol, the middleware will also poll Merlin and this will tell Merlin if the connection is alive between Merlin and the middleware.

Configuration

To Begin configuration, first run the swmwbo.exe, run the SMWM Application and click the configure button.

This opens up the Configuration Menu

The explanation for each configuration item is as follows:-

    Merlin IP: = IP or hostname of the Merlin server that is running MerlinIP.

    Merlin Port: = Port number in MerlinIP that is running the XML protocol for Southwest Microwave.

    Merlin Poll Rate (mS): = Number of milliseconds between polls to Merlin.

    Merlin Auth: = Authorisation code in MerlinIP port for Southwest microwave.

    Merlin AcctID: = Account number for Transmitter in Merlin.

    Merlin User: = Unused function in this Middleware.

    Micropoint II IP: = IP or hostname of the RS422 to IP converter that is linked to Southwest Microwave RS422 network.

    Micropoint II Port: = Port number that the RS422 to IP converter listens on.

    Micropoint II Slaves: = The ID number of each device to be monitored.

Connection to Merlin

Setup the XML port in MerlinIP and enter the IP and port of the MerlinIP server in the SWMW configuration, then enter the authorization code. Speak to the control room for the Account number to use.

For more information on how to connect to Merlin see section 2.0.

Polling Merlin

In the SWMW configuration set the polling frequency for SWMW to poll Merlin (default should be 5000ms).

Merlin now needs to be configured to monitor the Transmitter for stealth polling,
Edit the site that SWMW is connected to and edit the transmitter that has been created on the site.

```
    1. Edit the site details

    2. Select the middleware transmitter and select edit

    3. Select the Advanced Tab

    4. Click on the check box "Stealth polling Enabled"

    5. Select the timeout in seconds, this should be at least three times
longer than the polling frequency set in the middleware.

    6. Now ask the engineer to stop the middleware application so you can
test the connection failure alarm.
```

For connection to South-West Microwave, enter the IP or hostname into the MicroPoint II IP of the configuration then the port that the device speaks on into MicroPoint II Port.

Enter the RS422 ID numbers of the devices on in the MicroPoint II Slaves option and they should be separated by commas
For more information to connect to South-West Microwave see section 3.0

2.0 Connecting to Merlin.

MerlinIP Configuation

You should create a new XML port in MerlinIP by editing the ini file.

Please make a note of the Authorisation Code and pass this to the Installer configuring the SouthWest Microwave Middleware.

Merlin Configuation .

Now that the MerlinIP port has been created you will need to create a Site / Transmitter to link the Southwest Microwave installation too.

First create the site, you do not have to do this if its to be linked to an existing site (move to transmitter step).

```
    1. From a Merlin Client terminal select Edit > Sites

    2. Click on Insert

    3. In the blank site card, give the site an account name, Description
and Site type

    4. Fill out the Address and contact details, then click on the site
contacts tab to add Contacts

    5. Now click on the Save
```

Now add the transmitter to the site.

```
    1. Edit the site you wish to link to the Southwest microwave
installation

    2. In the Transmitter section of the site click on New

    3. Select to add an unassigned transmitter only if the engineer has
already sent signals

    4. If you have not received a signal select to create a new transmitter

    5. With the blank transmitter enter a new account number

    6. Select the device type to SouthWest Microwave

    7. Set the TCP/IP settings to the Middleware

    8. Click on the save button to add the transmitter to the site
```

You will need to create a new transmitter for each of the Southwest Microwave devices that is installed at the location. These should all start with the same account number as the one you have just created but will end with a hyphen, and device number.

For example, if the main transmitter account number is SWMW01 and you have two Southwest Microwave devices at the location, you will need to create two more transmitters with the account numbers of SWMW01-1 and SWMW01-2.

Merlin will automatically create these transmitters if they have not been created when the middleware sends alarms from the device. If this is the case click follow steps 1, 2 and 3 above.

Pass on the Main Account ID to the engineer installing the Southwest Microwave middleware.

3.0 Connection to SWMW.

Setup for Southwest Microwave will require an engineer to be on site and they will need to do the following

```
    1. Connect Intrepid II products as instructed by Southwest Microwave
    2. Connect the device to the Southwest Microwave Universal Installation
tool and walk test the system
    3. Connect the IP to RS422 converter to the RS422 network
    4. Enter the IP and port number of the RS422 converter into the
SWMWbo.exe Configuration area
    5. Click on the add devices button
    6. Enter in the Intrepid II devices that are on site and enter the
Subcells into the Zones the client wishes to use.
```

4.0 Types of Alarms and Signals.

Southwest Microwave Products

Southwest Microwave have a range of products from fence intrusion detection systems, buried cable systems(walking over ground detection) and alarm input and output modules (used for Microwave detection beams)

The types of alarms vary per device, this will be explained per product further down the page. Initsys's middleware application will then convert these alarms and use SIA channel types to front them to the operator on the Merlin terminal

MicroPoint II, PM II

This device works by running a specialised cable along a fence line where it detects for vibrations, it can then tell how far down the cable has detected the vibrations and report this to Initsys' middleware app as a sub cell. These are pin point areas of the cable and are grouped together as a zone in the middleware and sent through to Merlin as an Extra Point signal, channel type number 2350.

The device can support two cables, A and B. Any alarms from cable A will start from 1000, whereas cable B will be 2000.

The MicroPoint device also has 4 auxiliary inputs, which can be used for external detectors, these are then sent through as channel type 2350 but with channels 1-4

The unit will also give you a series of tamper alarms with descriptions of what they are.