SCOM-100

SMS Alarm pager and remote controller

Application Note:

M2M Communication Between Units

An SCOM unit (Firmware version 1.0.7 or later) can be programmed to trigger a command execution at another SCOM unit when an alarm occurs. An example of this feature is described below.

Let's consider we have two SCOM units. We are going to program one of them, eg. unit1, to monitor a digital input, eg. DI01 (the first digital input of the base module) for a positive transition alarm (low to high transition). When an alarm occurs, a digital output of another SCOM unit, eg. unit2 will be turned on. Let's consider DO01 (the first digital output of the base module) as the digital output of unit2 that will be set if a positive transition of DI01 occurs at unit1.

We need to establish a serial connection with each of the two units, using HyperTerminal (or any other terminal program).

Unit1

This is the unit that monitors the digital input and issues a "set digital output" command destined for the other unit when an alarm occurs.

We create a user entry at unit1 that corresponds to unit2.

```
atsms="0500,2,unit2,+306972987654,0,0,1,1"
```

The phone number shown above is supposed to be the SIM card phone number of unit2. Note that there is no need for this user to be a unit1 administrator nor is he necessary to have setup/control privileges at unit1. On the contrary, we do have to set the "receive SMS alarm messages" flag as well as the "user is an SCOM unit" flag of this user.

We now issue the digital input monitoring command.

```
atsms="1100,0,1,di01,1,2"
```

The first two parameters define the first digital input of the base module. The last two define the alarm triggering mode (1 – positive transition alarm) and the alarm delay (2 sec).

We need to create a custom alarm message that will set digital output DO01 (the first digital output of the base module) when sent to unit2.

```
atsms="0630,1,#1000,0,1#"
```

We now need to set this custom message as digital input's DI01 positive transition alarm message.

```
atsms="1101,0,1,0,1"
```

The first two parameters define the digital input whereas the last two define the alarm messages for the negative/positive transition alarms respectively. Note that we are not interested in the negative transition alarm message so we define the standard system message for this purpose by setting the third parameter to 0.

Unit2

We now need to establish a serial connection with unit2, the unit that will receive the "set digital output" message from unit1 when an alarm occurs.

We create a user entry at unit2 that corresponds to unit1.

```
atsms="0500,2,unit1,+306972123456,0,1,0,1"
```

The phone number shown above is supposed to be the SIM card phone number of unit1. Note that there is no need for this user to be a unit2 administrator nor is he necessary to receive alarm messages that may occur at unit2. On the contrary, we do have to set the "setup/control" flag (so that this user is allowed to set the digital output) as well as the "user is an SCOM unit" flag of this user.

That's about all we have to do. When an alarm occurs at digital input DI01 of unit1 an SMS message will be dispatched to unit2 to set digital output DO01.

The above commands can also be sent via SMS from an existing (registered) user of each unit, in which case the "atsms=" command prefixes must be omitted as well as the double quote ("") characters. In case of unit1, the existing user must have administrative privileges so that he can create a new unit user as well as "setup/control" privileges so that he can change unit configuration. In case of unit2, the user only needs to have administrative privileges to be able to create a new unit user.