OCS Training Workshop
Lab 5

Configuration of SmartMod Remote I/O modules

Lab 5: Configuration of SmartMod Remote I/O's

Introduction

Objective:
This lab will help you to gain knowledge about configuring SmartMod Remote IO modules.
SmartMod I/O's communicate with OCS using MODBUS Serial protocol and function as Remote I/O's.
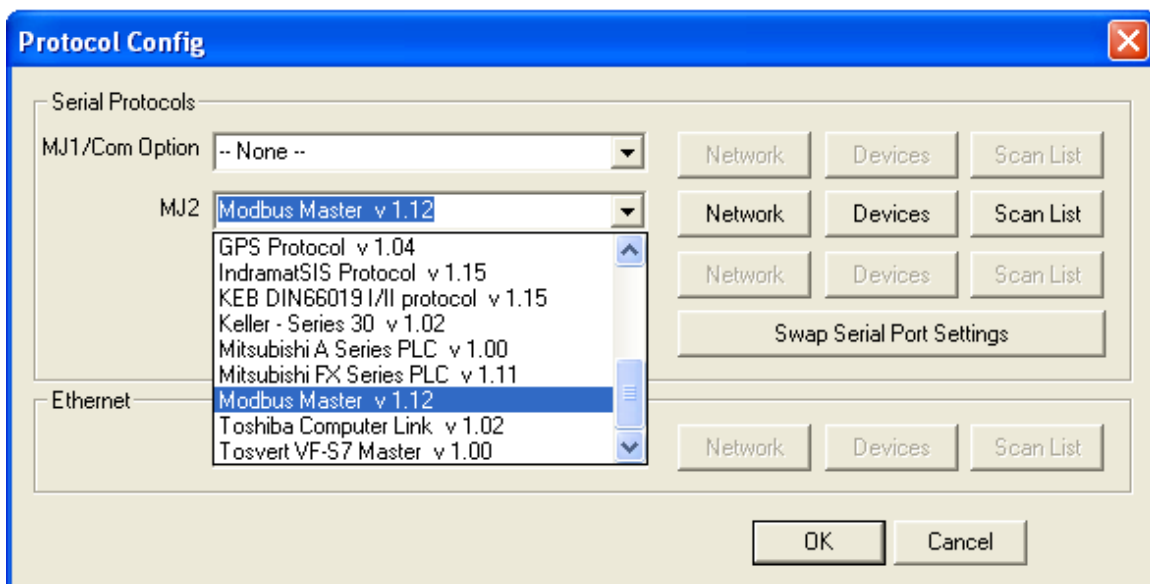
Procedure:
Step 1

Protocol Configuration
Open **Cscape** and create a new program file. Click on the **Program** menu and select **Protocol Configuration.** A window to configure the protocol of communication is opened displaying settings for both the ports MJ1 and MJ2. We will use the MJ2 port for MODBUS communication, since MJ1 is the default programming port and is already being used.
Select **MODBUS Master protocol from the dropdown list**

This also highlights the **Network, Devices** and **Scan List** buttons. In the case of switching to use port MJ1 for communication after the settings are configured, **Swap Serial Port Settings** button can be used.

Step 2
Network Configuration
Click the **Network** button. The Network Configuration window is opened.

Enter the details required for the communication protocol. Protocol help button opens up the Modbus Protocol help. Click OK to save the settings.
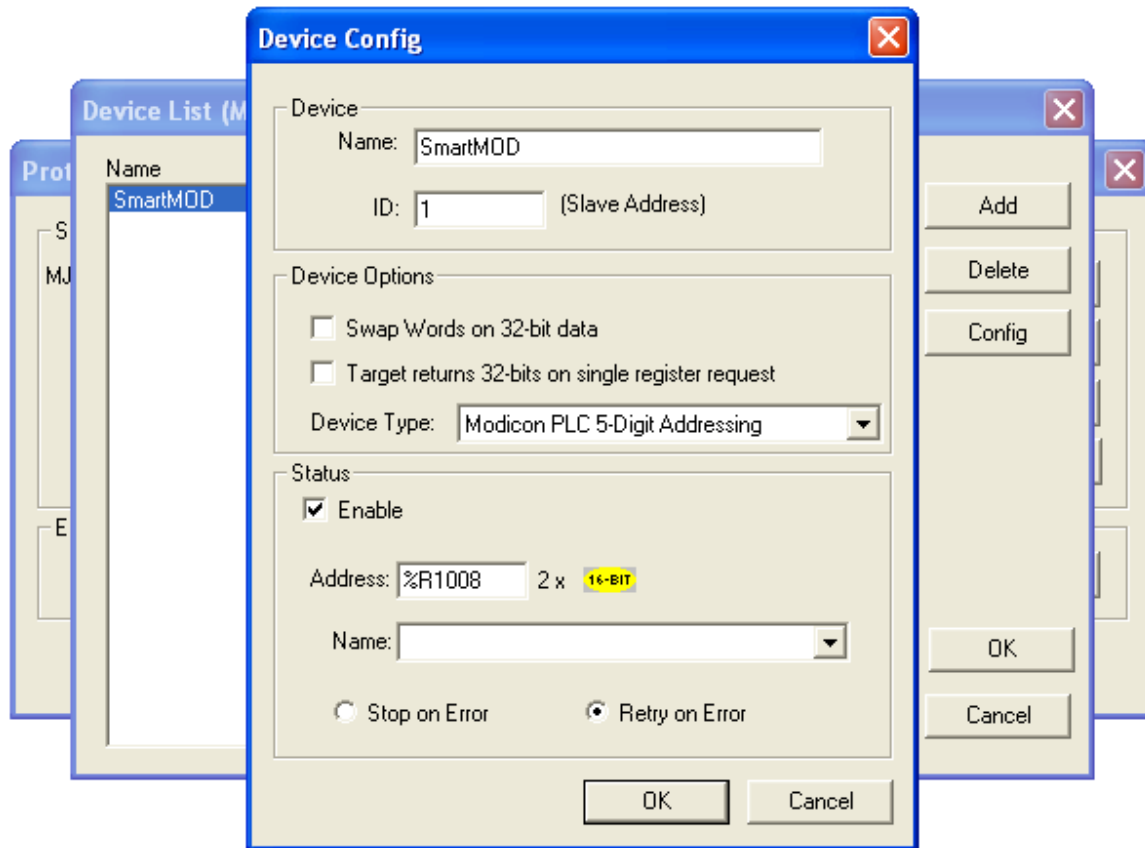
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Step 3
Device Configuration
Click the **Device** button. The **Device List** window is opened, which will have a list of all the Devices in the network. Click Add to include a device.
Device Config window is opened.

Enter the name and MODBUS ID for the device. Select the **Device Type** from the dropdown box and enable the Status. The status register provides the feedback of the connection, which can be useful for troubleshooting, if need arises.
Click **OK** to save the Device details.

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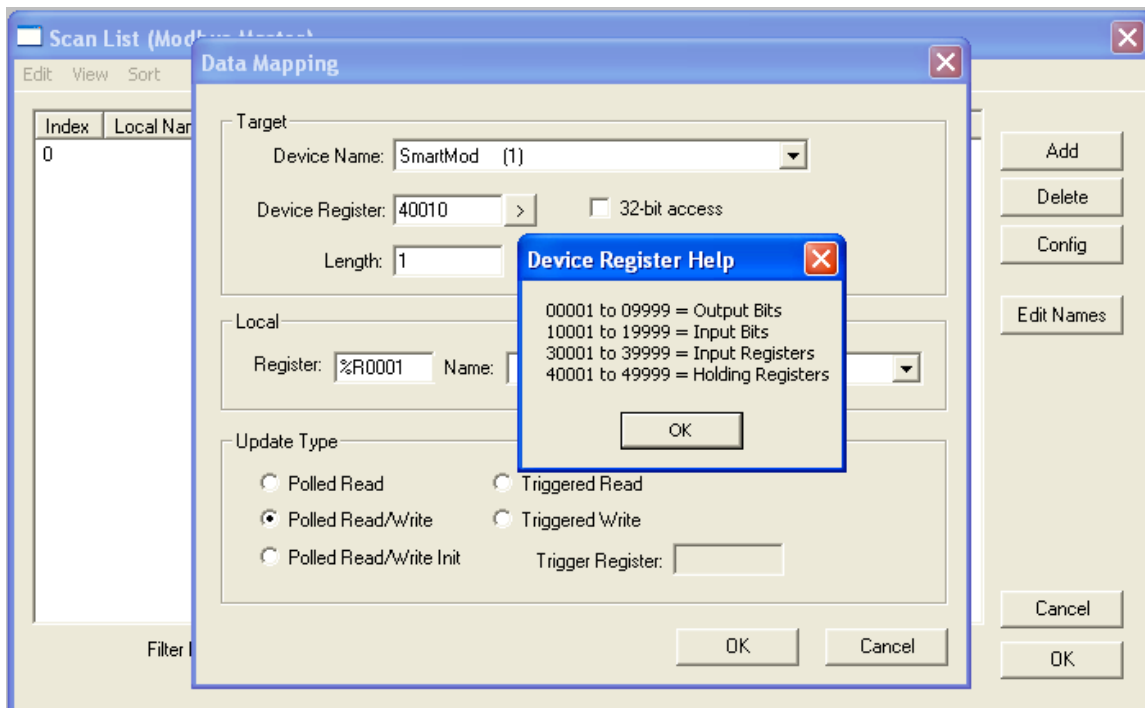Device List will display the added devices along with details of the device.

Click OK.

Step 4
Scan List Configuration
Click the **Scan List** button on the Protocol Configuration. Click Add to configure registers to be scanned.
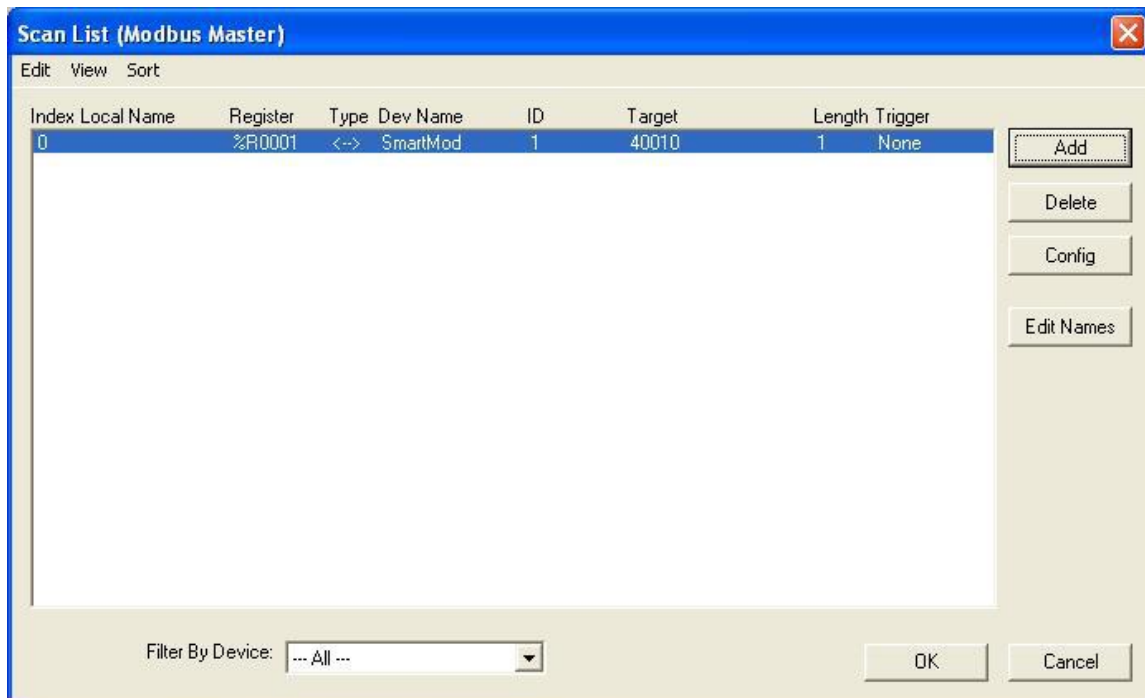
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Data Mapping window opens up. This window helps us to configure the particular registers to be scanned during the communication from the particular device. Select the target device from the device name list. Bracketed number indicates the MODBUS Node ID.

We select the holding registers 40010 which correspond to our Retentive Registers %R0001. Length determines the number of consecutive registers to be scanned.

Click OK. Scan List will display the Target device details and its registers to be scanned.

The configuration of the SmartMod modules is completed. Now we move on to configuration of the SmartMod device registers on the screens to display the scanned data.
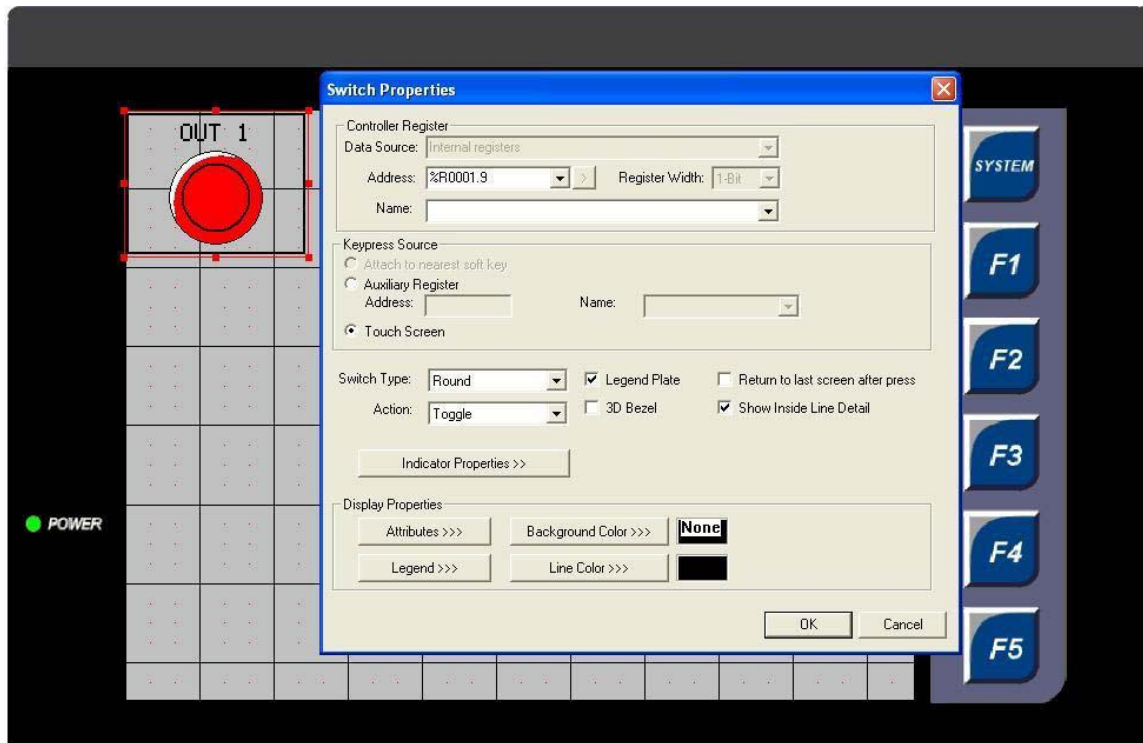
Step 5

Screen Configuration

Open the Graphics Editor in Cscape. The SmartMOD data can be read using the OCS internal registers %R0001 or by using the drop down list of the Data Source and selecting the configured device.

When the configured device is selected, the Address must be in MODBUS format for the scanned registers.

When the internal Registers are being used, then the OCS registers (%R0001) should be used. Save and Download the program to the OCS.
This completes the set-up of SmartMod device for remote communication.

End of LAB 5