

chromperfect

Gulf Coast Conference

2013

Simplifying Data Systems

- *General tool between plant and laboratory
- *Learning curve shortened significantly
- *Easy change control

Lets Start at the Top

* Menu system replaced
with an Active Start Bar

chromperfect



Combine All Elements of Acquisition and Analysis

The screenshot displays the Chrom Perfect File Editor interface, divided into four main panels for configuration and analysis.

Top Left Panel: Component List
 This panel shows a table of components with the following data:

In Plot	Component Name	Retention Time, min.	Window Width, min.	Ref. Comp. #	Proxy Comp. #	Group #	Low Alarm
1	PEN	1.536	0.1	0	0	0	0
2	n-HEX	2.204	0.1	0	0	0	0
3	Benzene	2.689	0.1	0	0	0	0
4	cy-HEX	3.09	0.1	0	0	0	0
5	n-Heptane	3.357	0.1	0	0	0	0
6	Toluene	4.125	0.1	0	0	0	0
7	n-octane	4.542	0.1	0	0	0	0
8	m,p-xylene	6.096	0.1	0	0	0	0
9	o-xylene	6.413	0.1	0	0	0	0
10	p-benzene	7.164	0.1	0	0	0	0

Top Right Panel: Detector Settings
 This panel configures two detectors with the following parameters:

Parameter	Detector #1	Detector #2
Temperature, deg. C	250	350
Hydrogen pressure	25	26
Air pressure (ignite)	10	13
Air pressure (run)	25	26

Bottom Left Panel: Chromatogram Processing
 This panel includes settings for smoothing, baseline subtraction, and peak detection. Key settings include:

- Type of Smoothing: None
- Smoothing Time (sec): 0
- Subtract Baseline Chromatogram:
- Initial peak detect threshold: -4
- Initial peak width, minutes: 0.1
- Calibration File Name: Atest.cal

Bottom Right Panel: Report Layout Configuration
 This panel allows for customizing the report layout. The 'New Element' list includes:

- Header "HEADER"
- ChromPlot (highlighted in green)
- PTable 1 "PEAK TABLE"
- Header "FOOTER"

 Additional options include:

- Layout Width: Page Width, Report Width
- Orientation: Portrait, Landscape
- Report width in: []

Version = 2 Format: CP32 Modified on 10/15/2013 6:20:08 AM test

Communicate to the Universe

- * Make Data Available to all Customers
- * Create PDF files on the Fly
- * eMail reports and plots
- * Evaluate Analysis and produce Alarms
- * Converse with SCADA

Instrument Control

- * Analyzer Instrument
- * Laboratory Instrument

C:\CPData\SampleData\Sample.mfl

Aux Oven | Events | Injector | Inlet | Detectors | Columns

Detector #1

Temperature, deg. C: 250

Hydrogen pressure: 25

Air pressure (ignite): 10

Air pressure (run): 25

Invert data

Detector #2

Temperature, deg. C: 350

Hydrogen pressure: 26

Air pressure (ignite): 13

Air pressure (run): 26

Invert data

C:\CPData\SampleData\Sample.mfl

Aux Oven | Events | Injector | Inlet | Detectors | Columns

Oven Temperature, deg C: 250

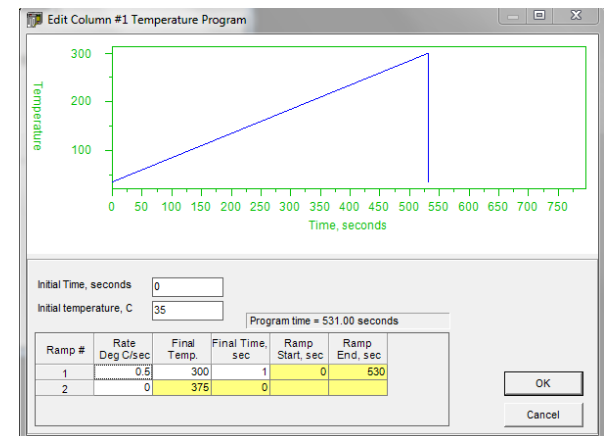
Delay time, seconds: 5

Splitless time, seconds: 0

Split vent time, seconds: 30

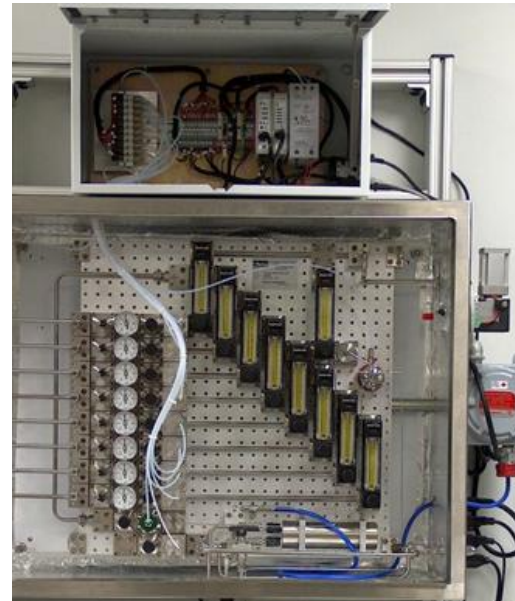
Loop injection time, seconds: 10

Idle Flow fraction, percent: 33



Sampling Control

*Automated Sample Streams



Process Control

* OPC

- * Chromperfect OLE for Process Control

* Analog Output

- * Chromperfect Analog Output

* Modbus Output

- * Chromperfect Process Control

Data Control

* OPC

* OLE for Process Control

* Open Platform Communications (1996)

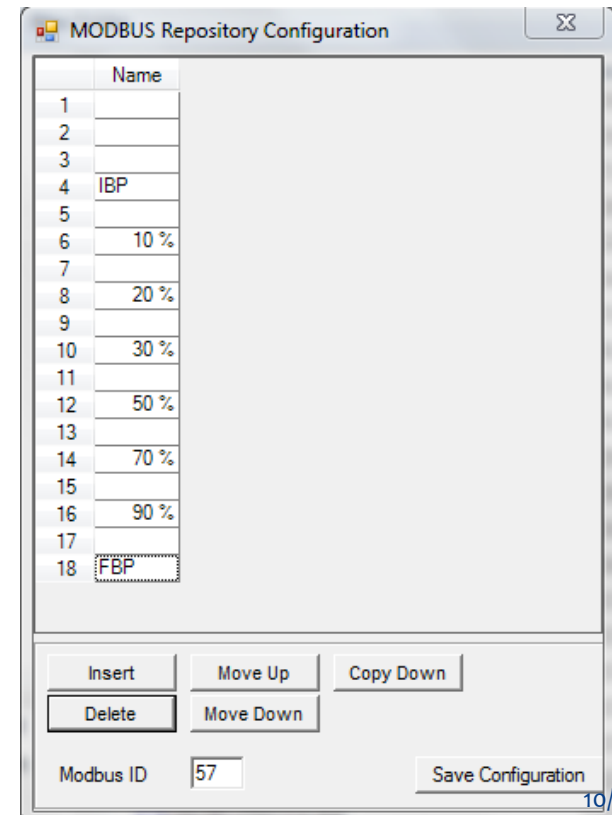
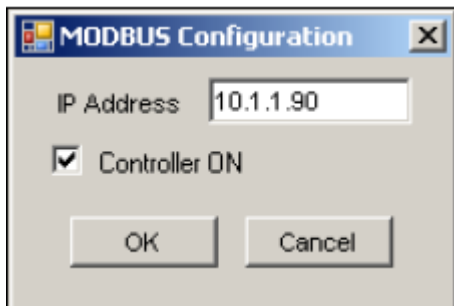
Data Control

Analog Output

- * Current loop -- 4-20ma
- * Voltage output -- Various
- * PLC

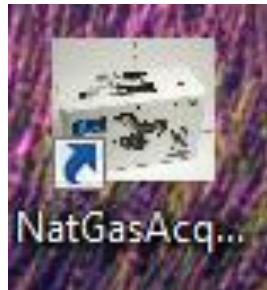
Data Control

Modbus Coil/Register population



Plant to Laboratory

* NatGas



NatGas

Instrument

Selected Instrument:

Instrument Status:

Method

Governing Method file name:

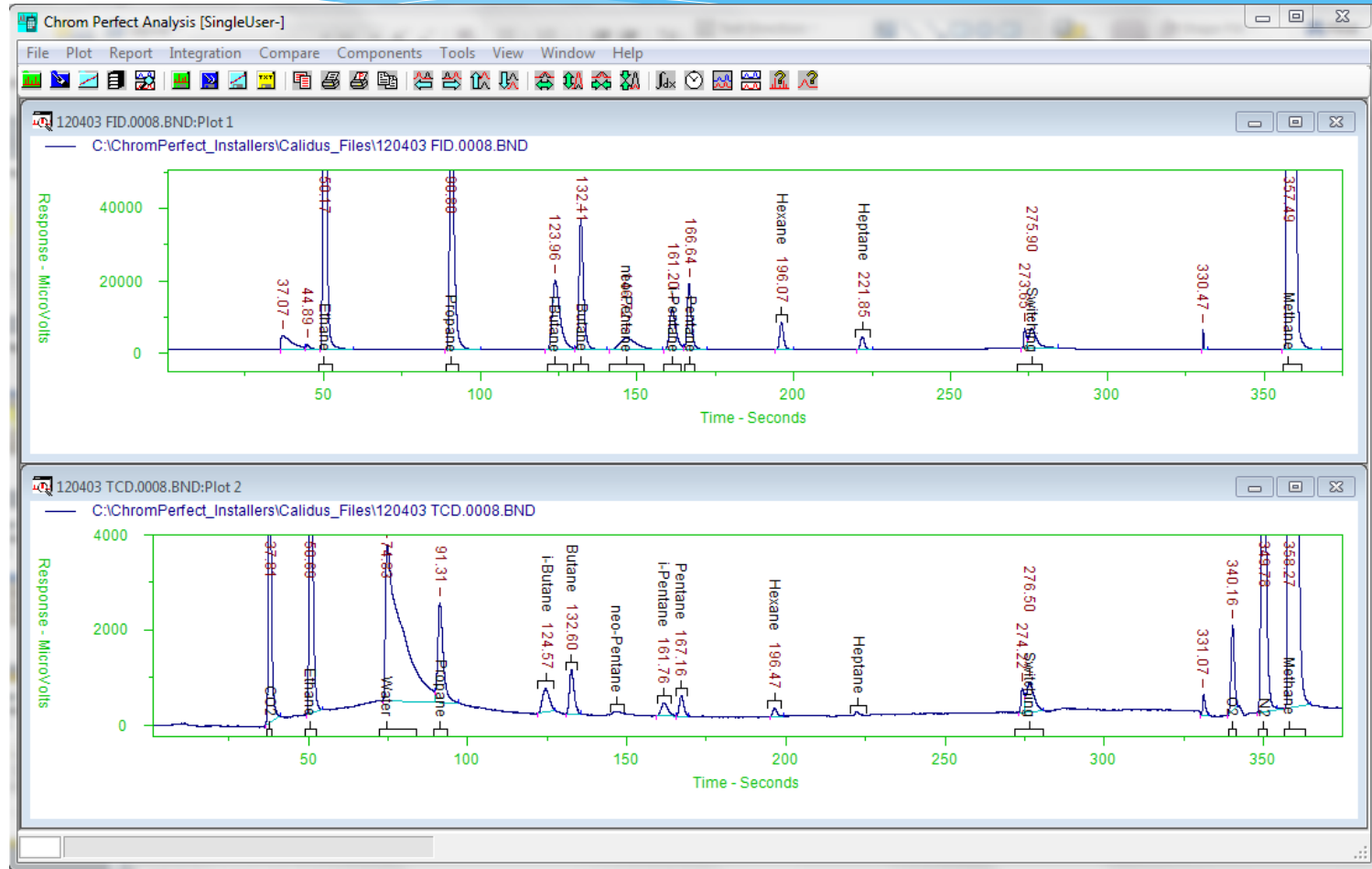
Sample

Sample Name:

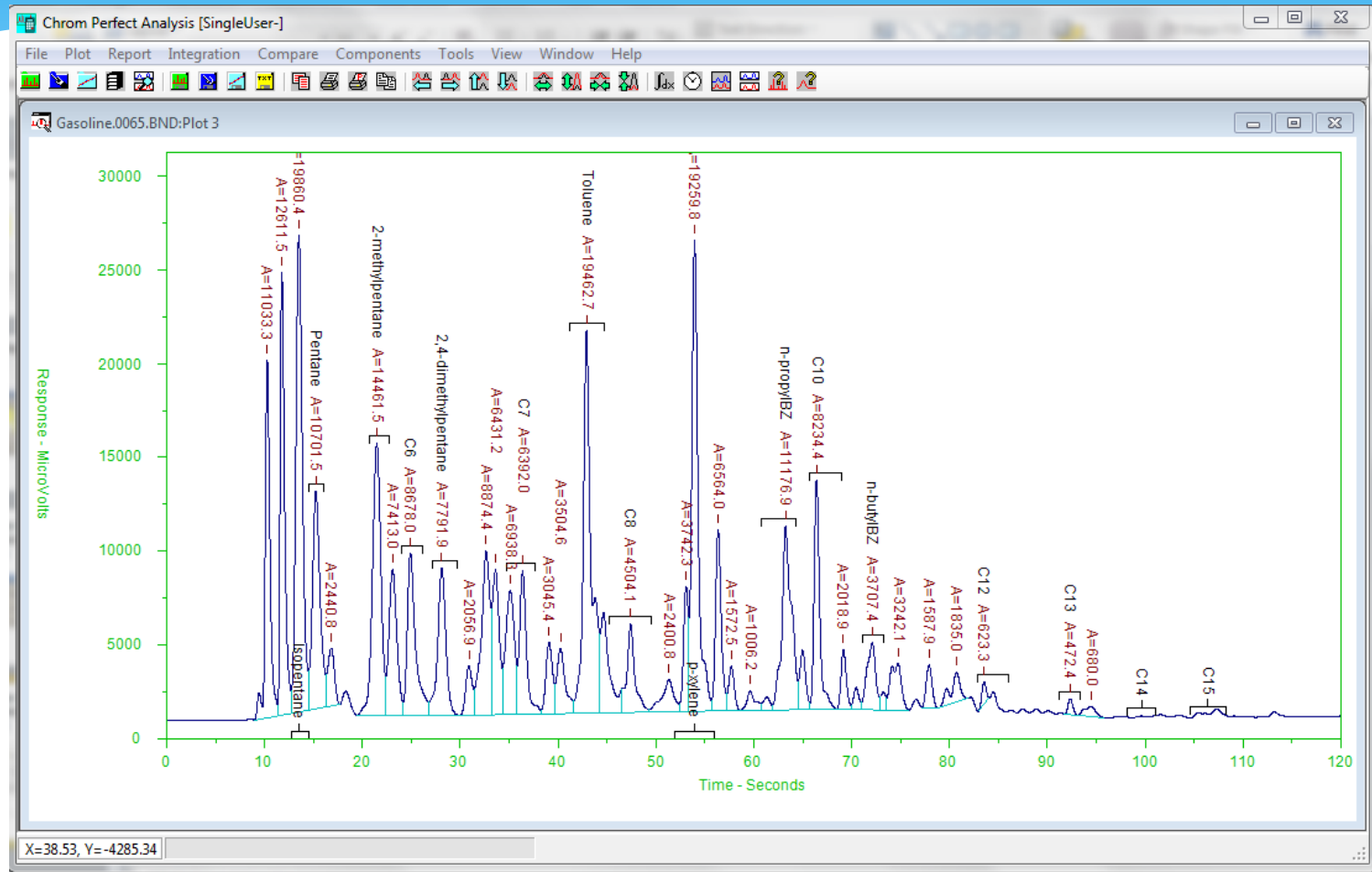
Disk File Base Name:

Calibration run Calibration Level:

Plant to Laboratory



Plant to Laboratory



Plant to Laboratory

* Sulfur

Sulfur

Instrument

Selected Instrument: Digital Data

Instrument Status: Free

Method

Governing Method file name: C:\CPData\SampleData\Atest.smt

Sample

Sample Name: Sulfur

Disk File Base Name:

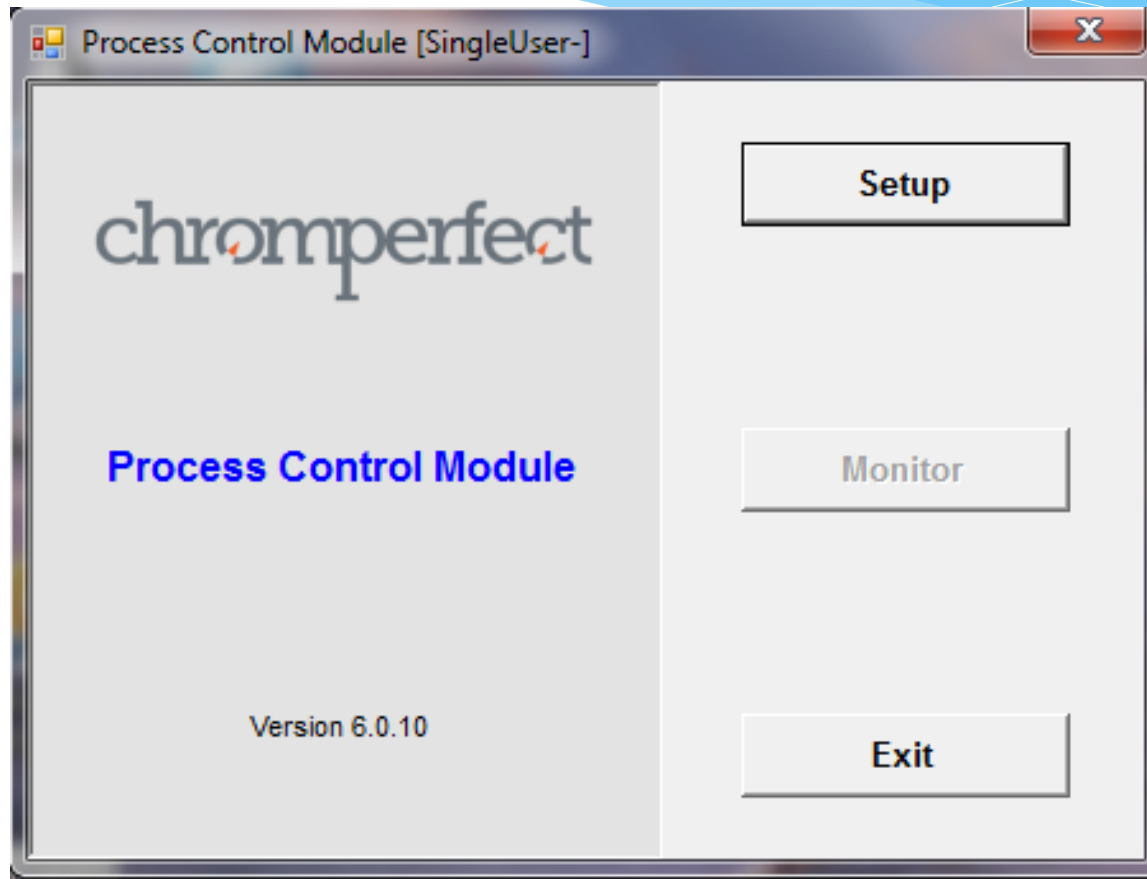
Calibration run Calibration Level: 1

Download Start Stop

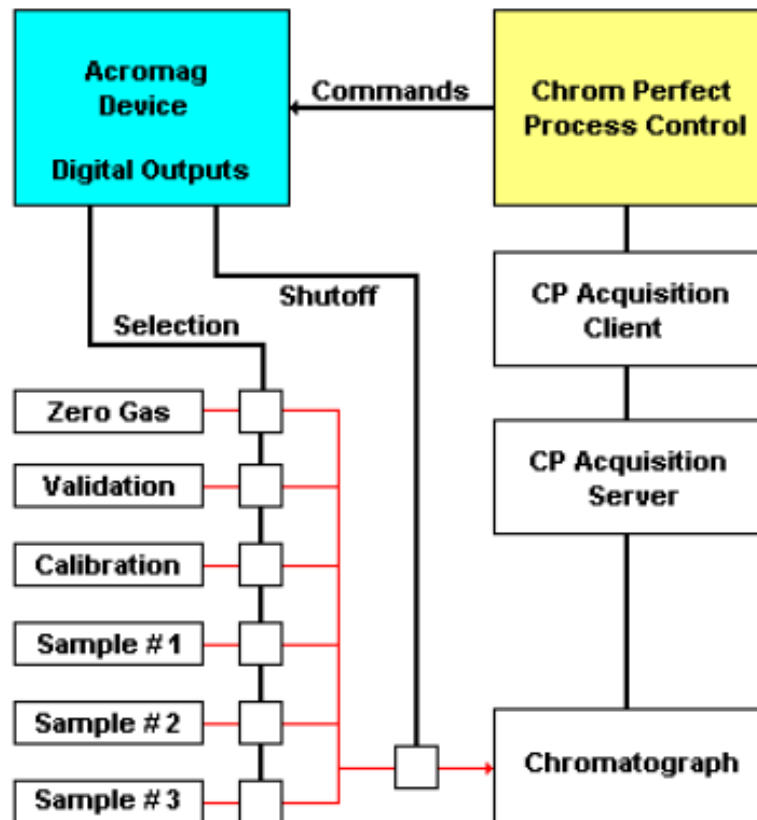
Laboratory to Plant

- * Analytical Methods
- * File compatibility
- * Result correlation
- * Chromperfect Process Control

CPPC



CPPC



CPPC

The image shows a software configuration window titled "Instrument #1 Configuration". It has a tabbed interface with the following tabs: General, AcroMag, Special Ports, Scheduled Streams, Temperature Sensing and Control, External Alarms, and Internal Alarms. The "General" tab is selected. The configuration options are as follows:

Parameter	Value
Instrument Name	Digital Data
Injection Delay Time, sec.	2
Recovery Delay Time, sec.	4
Message Background Color	White

At the bottom right of the dialog, there are two buttons: "OK" and "Cancel".

General Instrument Selector

CPPC

The image shows a software dialog box titled "Instrument #1 Configuration". It has a tabbed interface with the following tabs: General, AcroMag, Special Ports, Scheduled Streams, Temperature Sensing and Control, External Alarms, and Internal Alarms. The "General" tab is selected. The dialog contains a table for configuring I/O gear. The table has two columns: "Model" and "IP Address". There are three rows of configuration:

	Model	IP Address
Digital I/O "A" (required)	983EN	192.168.20.101
Digital I/O "B" (optional)	951EN	192.168.20.102
RTD Module (optional)	966EN-6006	192.168.20.103

At the bottom right of the dialog are "OK" and "Cancel" buttons.

I/O Gear Configuration

CPPC

Instrument #1 Configuration

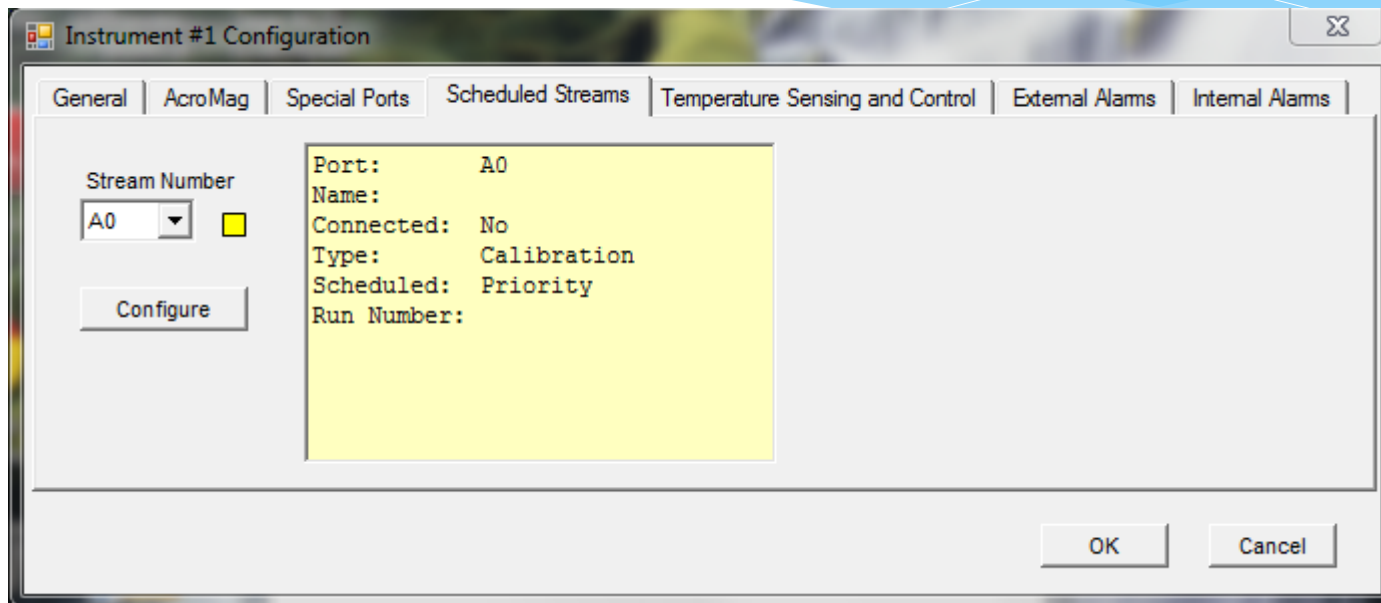
General | AcroMag | **Special Ports** | Scheduled Streams | Temperature Sensing and Control | External Alarms | Internal Alarms

Zero Gas Stream Port Number	A1	■	
Shutoff Valve Port Number	None	■	
Shutoff Valve Duration, sec.	1	<input checked="" type="checkbox"/>	Use MFL file
Heater Control Port Number	A2	■	
Cooler Control Port Number	A3	■	
Maintenance Mode Port Number	A4	■	
Priority Stream Port Number	A5	■	
Priority Stream Number	B0		

OK Cancel

Specialized Ports

CPPC



Scheduled Stream Configuration

CPPC

The screenshot shows a software window titled "Instrument #1 Configuration" with a close button in the top right corner. The window has several tabs: "General", "AcroMag", "Special Ports", "Scheduled Streams", "Temperature Sensing and Control" (which is the active tab), "External Alarms", and "Internal Alarms".

Under the "Temperature Sensing and Control" tab, the following settings are visible:

- RTD Port Number (Main): 0 (dropdown menu)
- (Backup): 1 (dropdown menu)
- Upper Alarm Limit: 65 (text input)
- Lower Alarm Limit: 35 (text input)
- HR Addr: 200 (text input)
- Controller ON
- Upper Threshold (cool ON): 55 (text input)
- Lower Threshold (heat ON): 45 (text input)
- Refractory Time, min.: 1 (text input)

At the bottom right of the dialog box, there are "OK" and "Cancel" buttons.

Analyzer Enclosure Conditions

CPPC

Instrument #1 Configuration

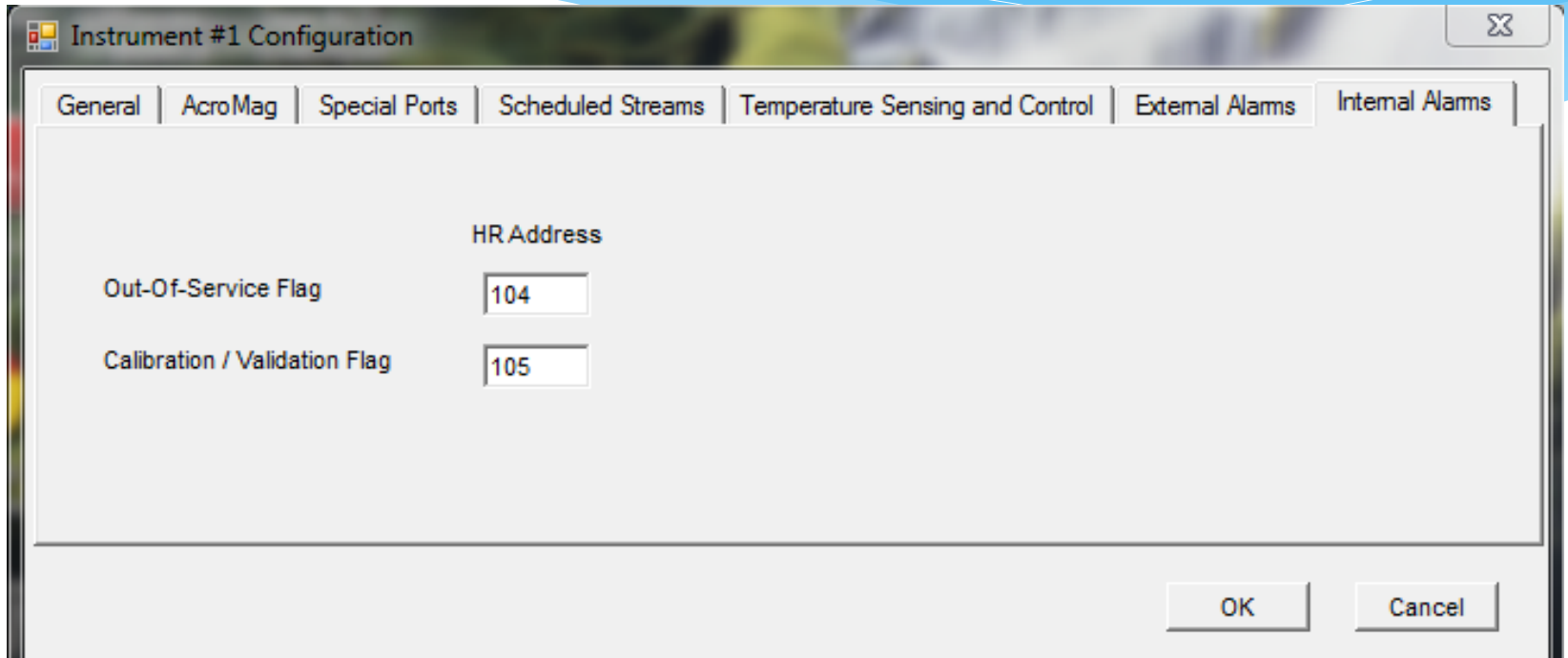
General | AcroMag | Special Ports | Scheduled Streams | Temperature Sensing and Control | External Alarms | Internal Alarms

	Port Number	HR Addr	Function
Alarm A	B1	101	Validation
Alarm B	B2	102	Calibration
Alarm C	None	0	
Alarm D	None	0	

OK Cancel

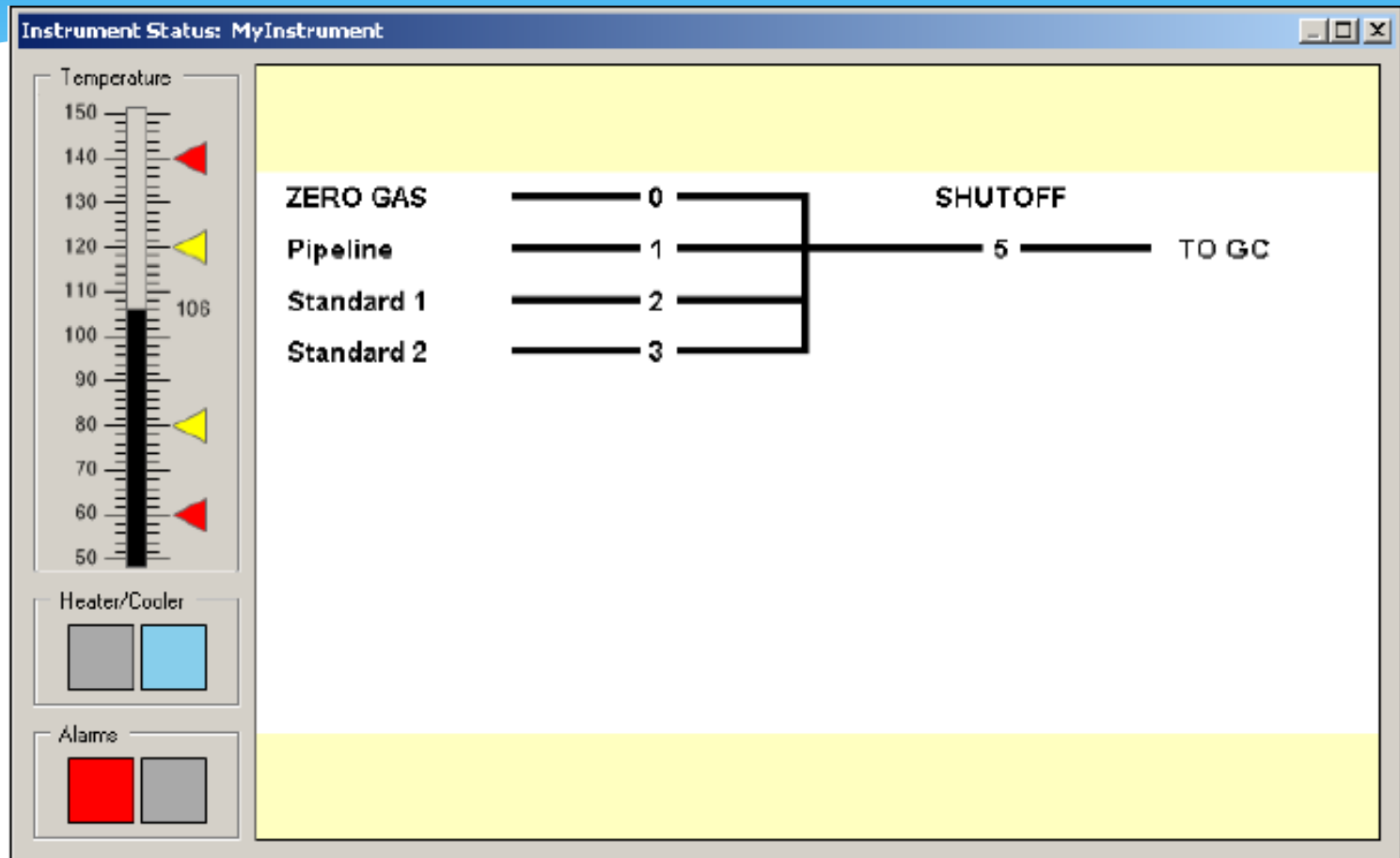
External Alarms from SCADA

CPPC

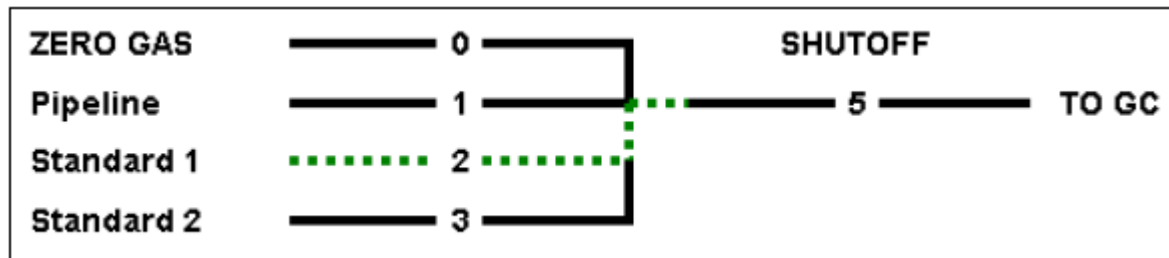
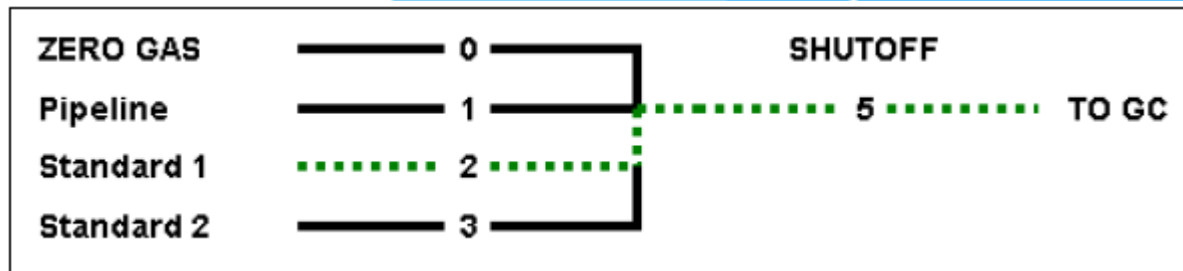


Internal Alarms visible to SCADA

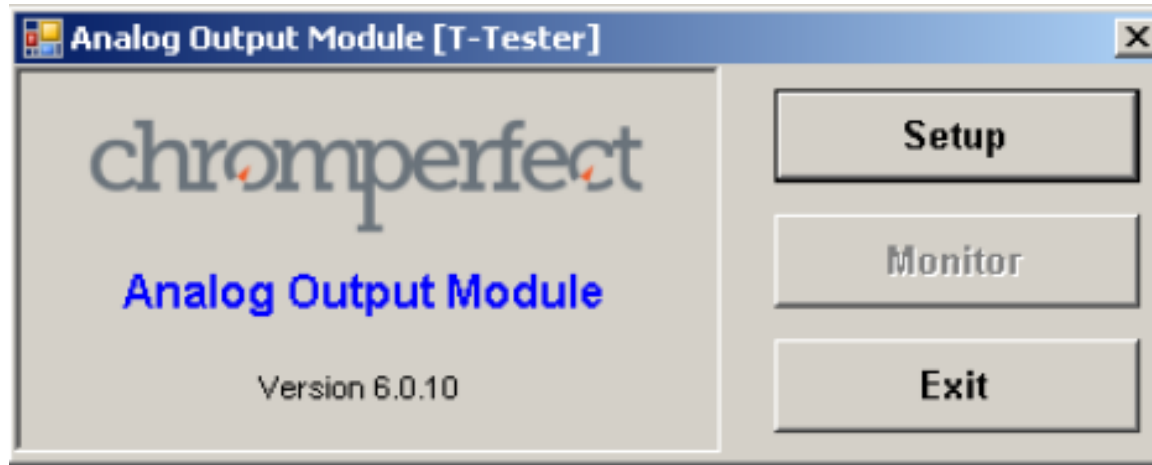
CPPC



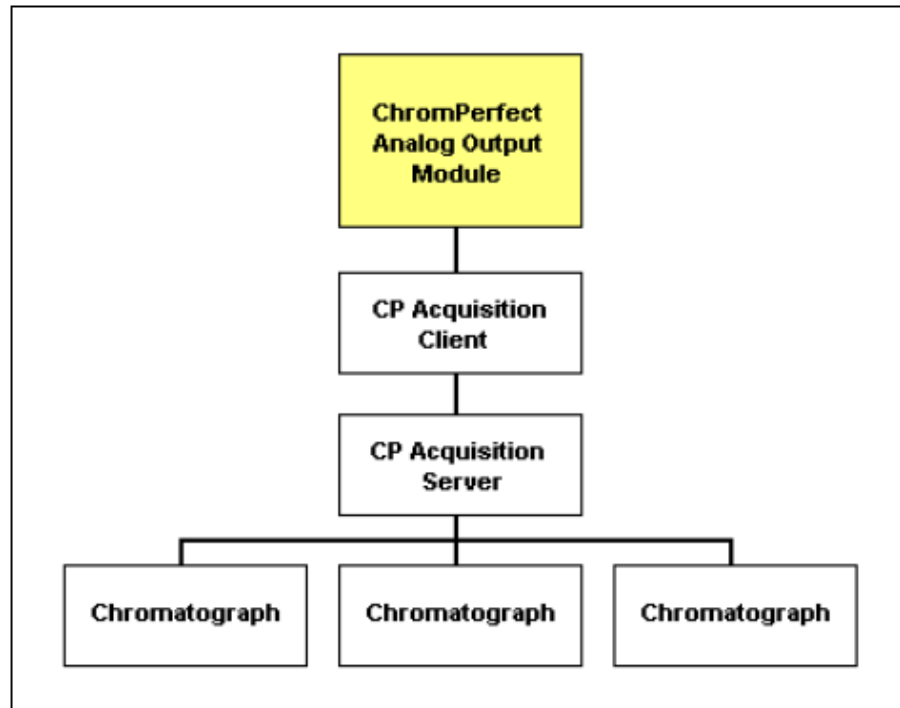
CPPC



Chromperfect Analog Output CPAO



Chromperfect Analog Output CPAO



Chromperfect Analog Output CPAO

The screenshot shows a software configuration window titled "Configuration". It contains a table of "Programmed Hardware I/O Ports" and a list of "Available Port Types".

	Port Type	IP Addr	Port #	Zero	Span	Default	Tag Name
1	Analog Input	10.1.1.90	1	0	2		ana1in
2	Analog Input	10.1.1.90	2	0	2		ana2in
3	Digital Input	10.1.1.90	1				dig1in
4	Digital Input	10.1.1.90	2				dig2in
5	Analog Output	10.1.1.90	1	0	2	1	
6	Analog Output	10.1.1.90	2	0	2	1	
7	Digital Output	10.1.1.90	2			Lo	

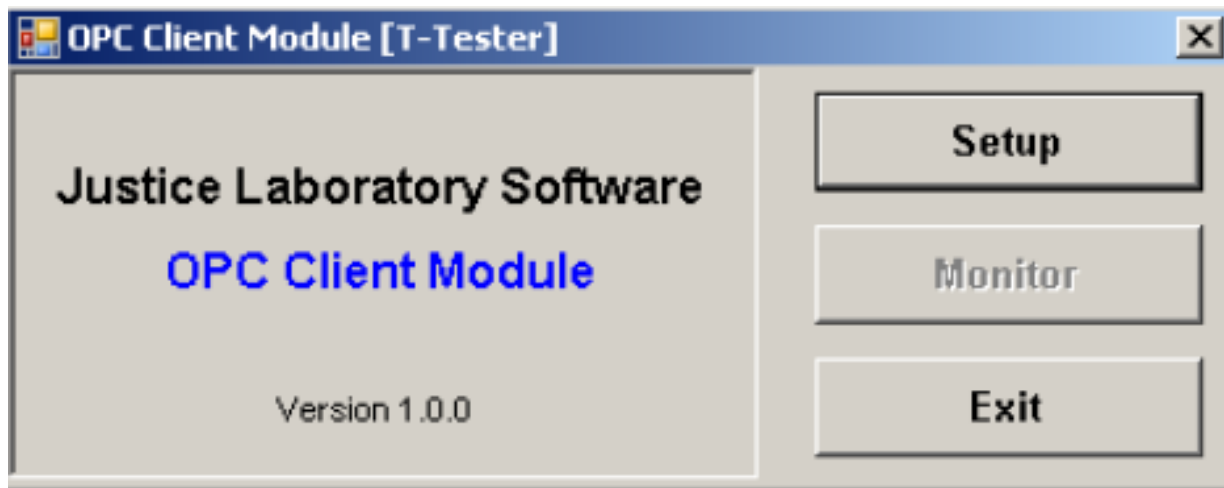
Available Port Types:

- Analog Input
- Digital Input
- Analog Output
- Digital Output

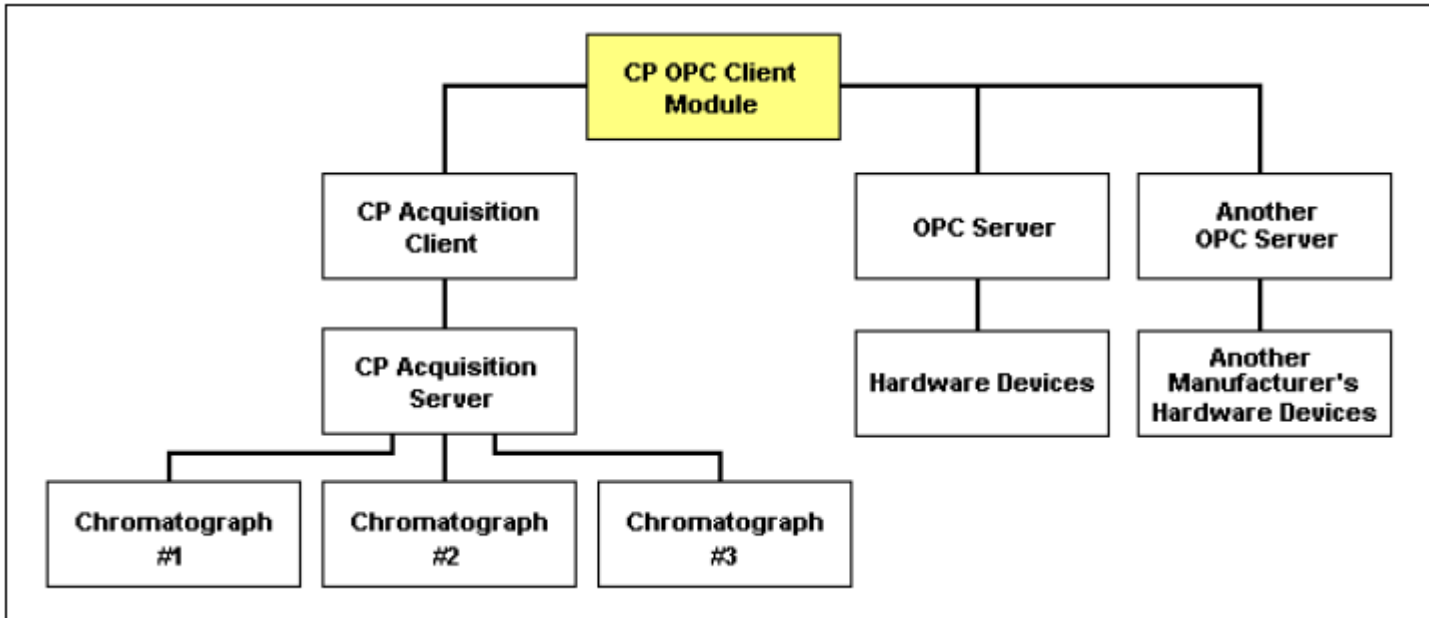
Buttons at the bottom: Insert, Delete, Move Up, Move Down, Copy Down, Assign, OK, Cancel.

Chromperfect Open Platform Communications

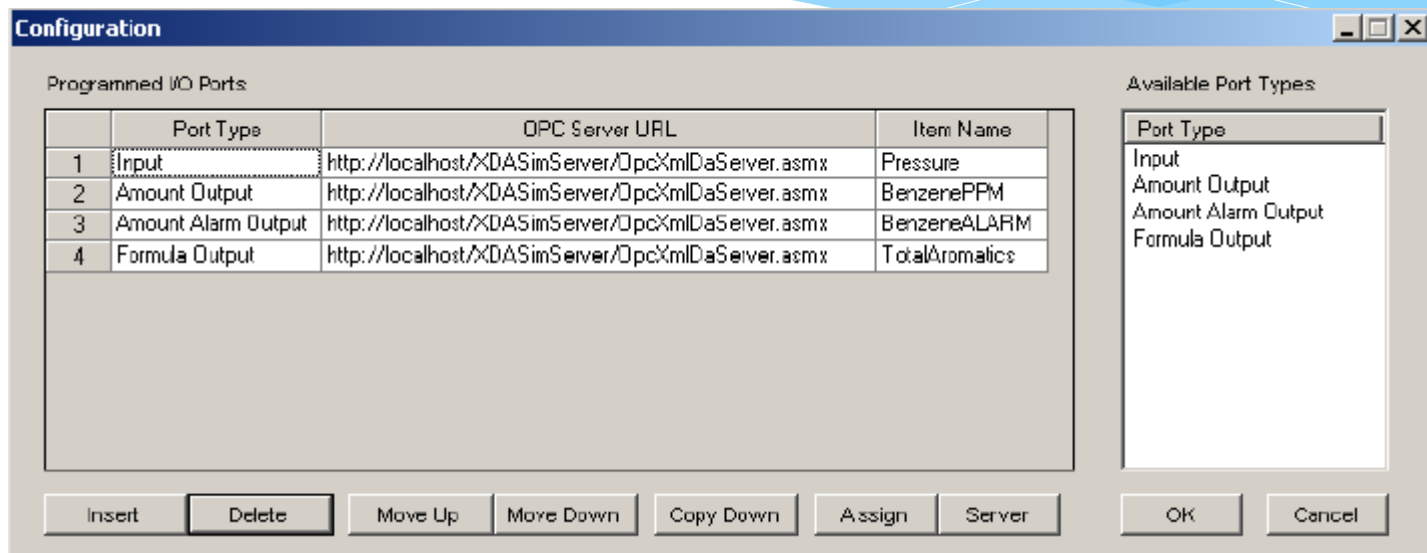
CPOPC



Chromperfect Open Platform Communications CPOPC



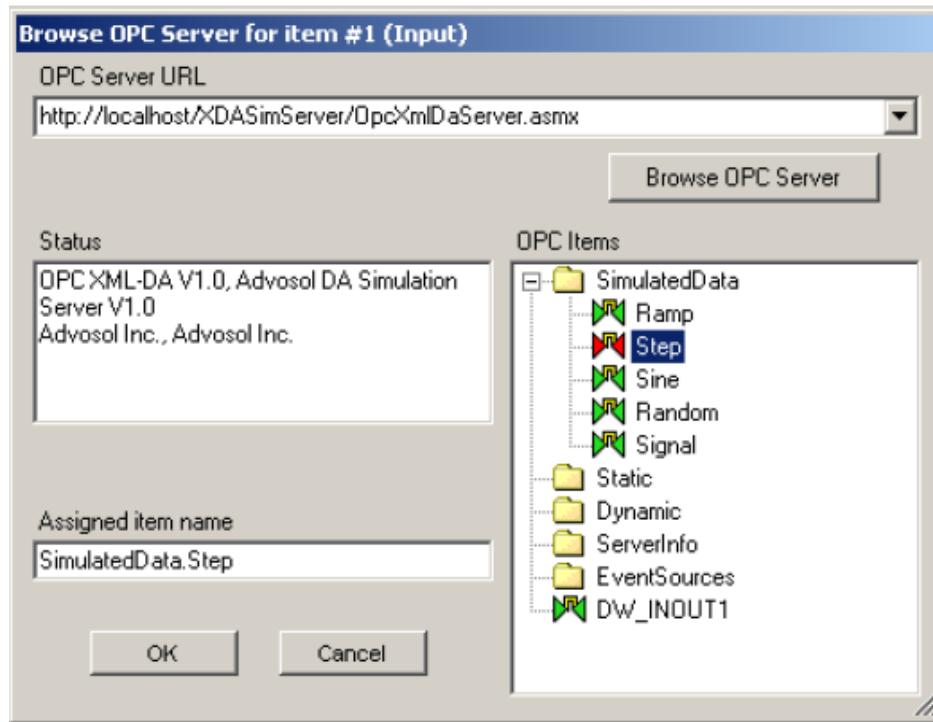
Chromperfect Open Platform Communications CPOPC



Configure Client

Chromperfect Open Platform Communications CPOPC

Browse for OPC Server



Plant and Laboratory

