

HMI Training Certificate Course Workbook Samples

See more at https://bin95.com/rsview32_hmi.htm

Introduction:

RSView32 depends upon RSLinx Professional for communications. It is therefore necessary to establish communications between the computer and the PLC. This is accomplished by configuring a driver to handle the communications, and by configuring a DDE or OPC Topic for information exchange with the HMI software.

Terminal Objective:

Upon completion of this unit the learner will be able to discuss the configuration of drivers used by RSLinx to establish communications. This will be evidenced by successful completion of Assignment Sheets, Practical Exercises and the Final Exam.

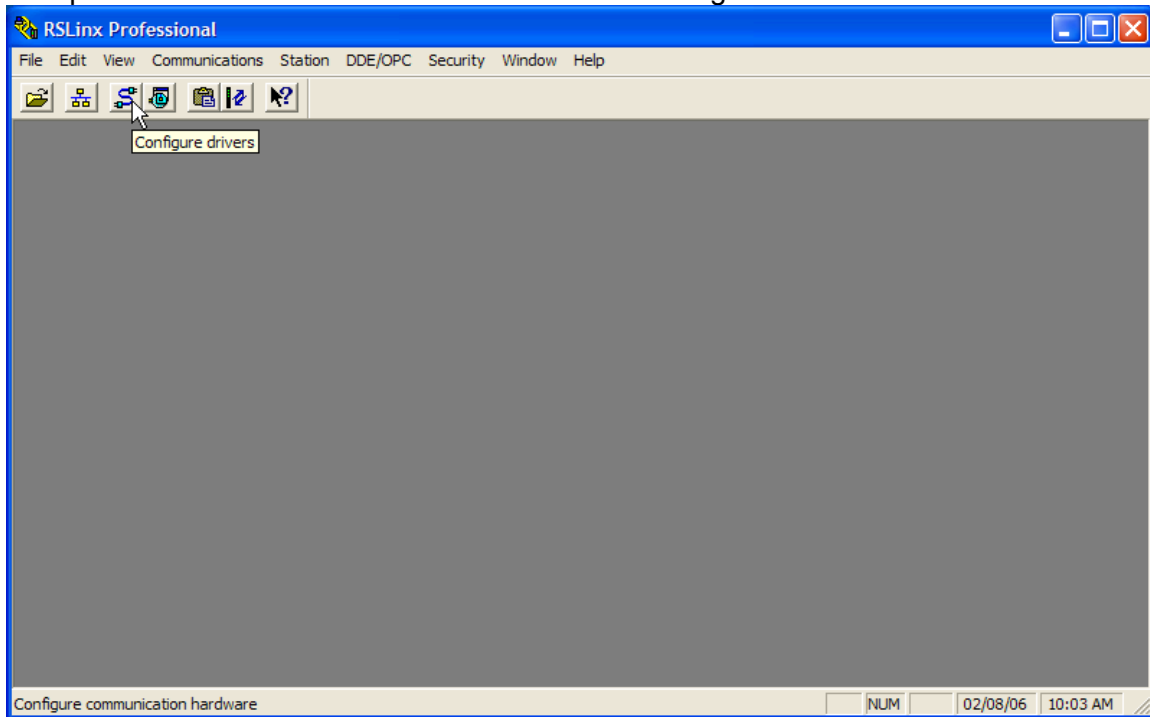
Enabling Objectives:

1. Answer study questions pertaining to the configuration of RSLinx drivers.
2. Configure drivers in RSLinx for establishing communications between a controller and an HMI.

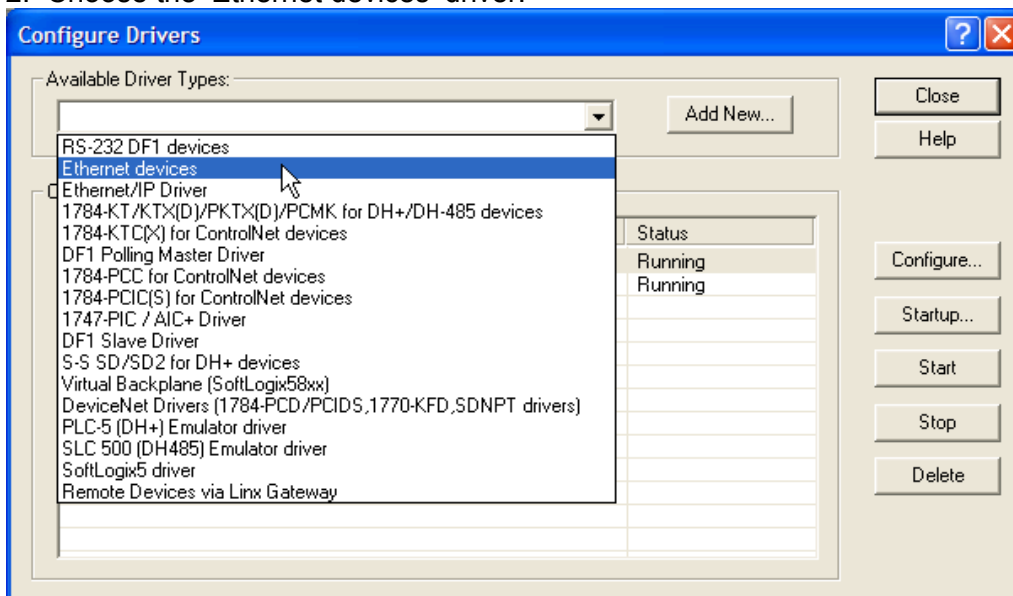
Practical Exercise 1

Configure a driver in RSLinx to provide a communications path between your controller and RSView32. This process may vary, depending on the hardware and/or network configuration available to you. The example here deals with “Ethernet Devices”, where a static IP address is required. Check the RSLinx User’s Manual for your specific application.

1. Open RSLinx Professional and then click the ‘Configure drivers’ button.



2. Choose the ‘Ethernet devices’ driver.



Introduction:

DDE can be compared to a conversation between several people. Some only ask questions, they are 'clients'. Others provide answers; they are 'servers'. Still others will both ask and answer questions. They are 'client/servers'. DDE is an interprocess communications specification that is built into the Windows operating system.

Terminal Objective:

Upon completion of this unit the learner will be able to configure a DDE Topic for communications with Microsoft Excel. This will be evidenced by successful completion of Assignment Sheets, Practical Exercises and the Final Exam.

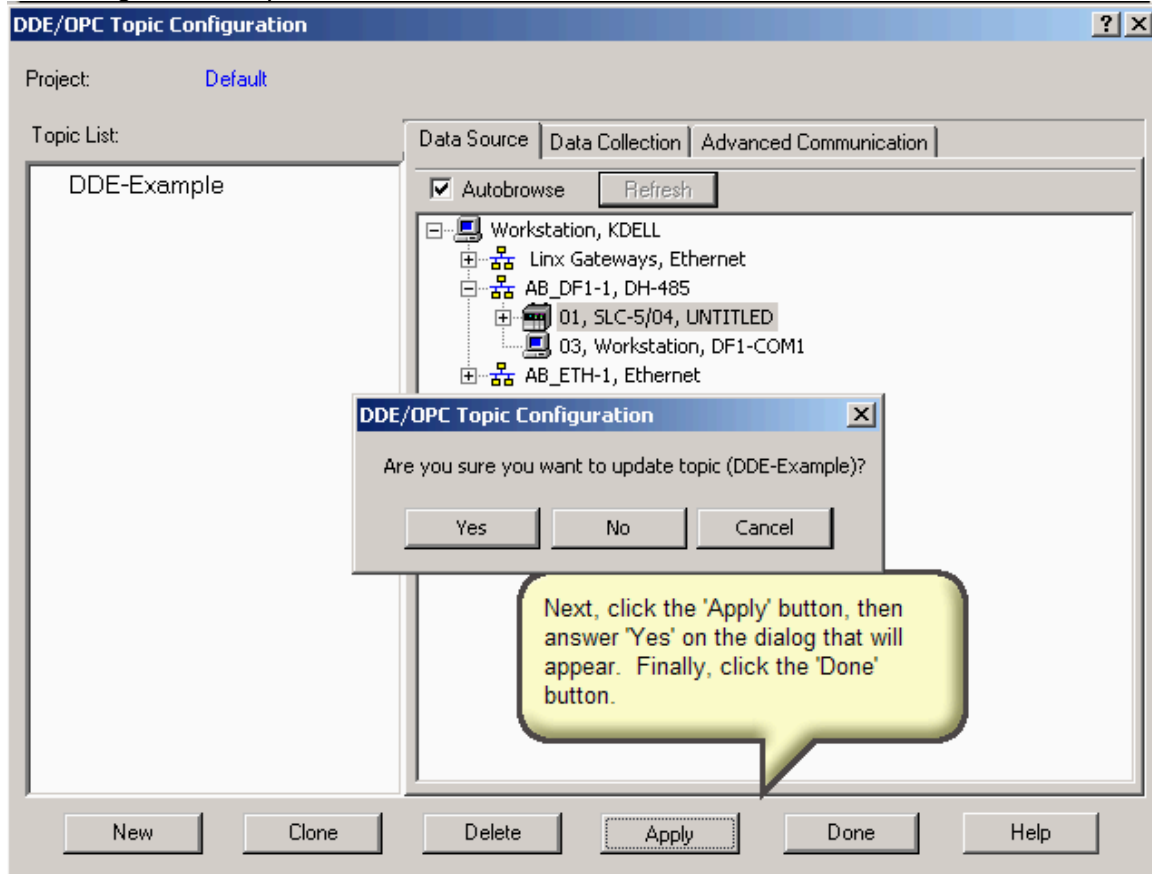
Enabling Objectives:

1. Answer study questions pertaining to DDE Topics & Excel
2. Configure a DDE Topic to display a real-time value in a cell in Excel.
3. Create a graph displaying real-time data dynamically changing.

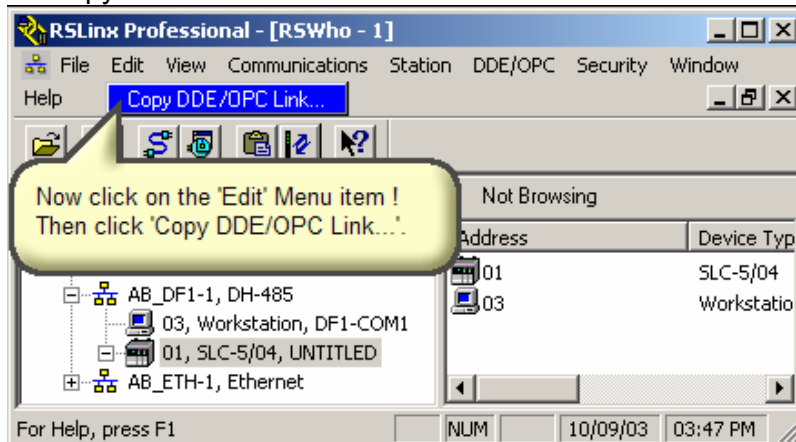
Practical Exercise 1

Configure a DDE topic to provide real-time updates to 5 cells in an Excel spreadsheet. The cells can display the accumulated value of timers or counters or a combination of the two. Using the graphing tools within Excel, create a bar graph that dynamically displays these values.

1. Configure the Topic



2. Copy the link.



Introduction:

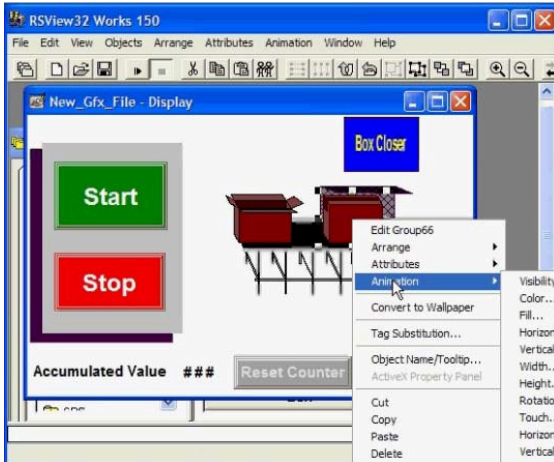
Graphic displays are the heart and soul of any HMI. They provide the operator with a visualization of the current status of the process being operated. The technician should have a working knowledge of these systems and the ability to modify and/or create these visualizations.

Terminal Objective:

Upon completion of this unit the learner will be able create and program visualization screens using various input and output objects as well as various animations. This will be evidenced by successful completion of Assignment Sheets, Practical Exercises and the Final Exam.

Enabling Objectives:

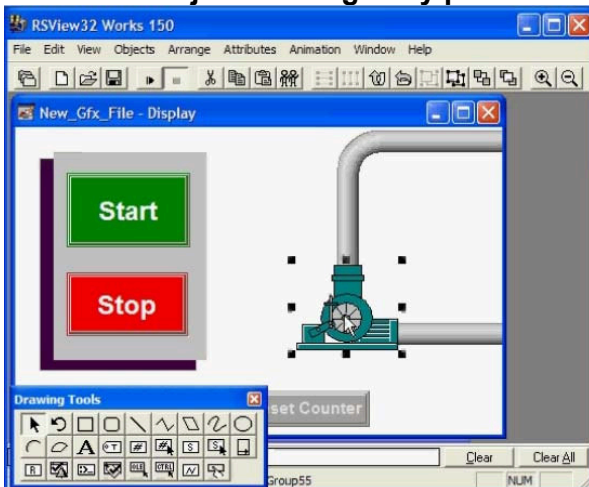
1. Complete study questions related to creation of visualization screens in RSVIEW32.
2. Create an HMI screen that incorporates button objects, to start and stop a process.
3. Create an HMI screen that incorporates numerical input objects and numeric display objects.
4. Create an HMI screen that uses horizontal animation to show objects progressing through a process.
5. Create an HMI screen that uses rotational animation to show operation of a pump or other motor driven device.
6. Create an HMI screen that uses fill animation to display liquid level within a storage unit.
6. Create an HMI screen that uses fill animation to display liquid level within a storage unit.
7. Create an HMI screen that uses fill animation and an expression to display liquid level within a storage unit and a numerical display of the percentage of full.
8. Create an HMI screen that uses a slider to change the preset of a counter or timer within a specific set of numbers.
9. Create an HMI screen that uses touch animation to control the operation of a device or object.
10. Create an HMI screen that uses height and width animation to create perspective or movement of an object from a distance.
11. Create an HMI screen that uses color animation to indicate the active or inactive state of a device.
12. Create an HMI screen that embeds a sound into a visualization.
13. Create an HMI screen that embeds a spreadsheet or other Windows based application into visualization.
14. Create an HMI screen that incorporates numerical input objects and string input objects through the use of an onscreen keyboard.



The solutions to this problem will vary with equipment etc. There is no set right or wrong answer. The final judgment should be based on whether the system works, does it actually control the process.

Practical Exercise 4

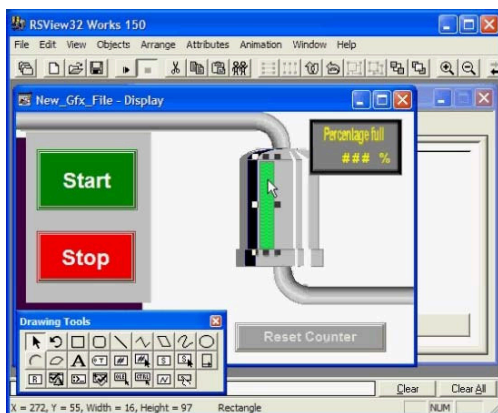
Create a visualization screen that uses rotational animation. This may be any number of objects through any process.



The solutions to this problem will vary with equipment etc. There is no set right or wrong answer. The final judgment should be based on whether the system works, does it actually control the process.

Practical Exercise 5

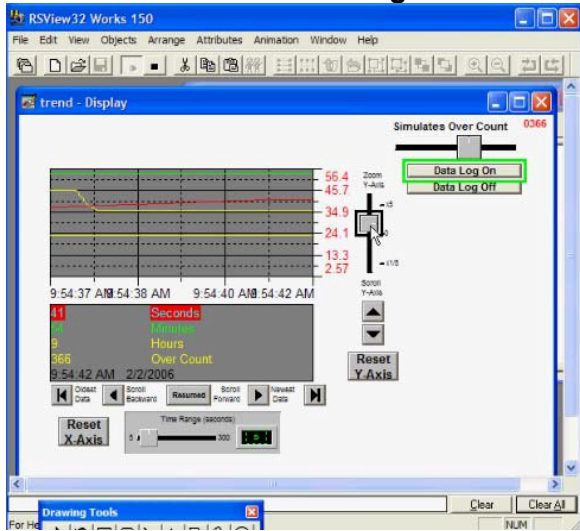
Create a visualization screen that uses fill animation. This may be any number of objects through any process.



The solutions to this problem will vary with equipment etc. There is no set right or wrong answer. The final judgment should be based on whether the system works, does it actually control the process.

Practical Exercise 1

Create a visualization of a trending object to monitor the accumulated value of 4 counters and a self-resetting timer.

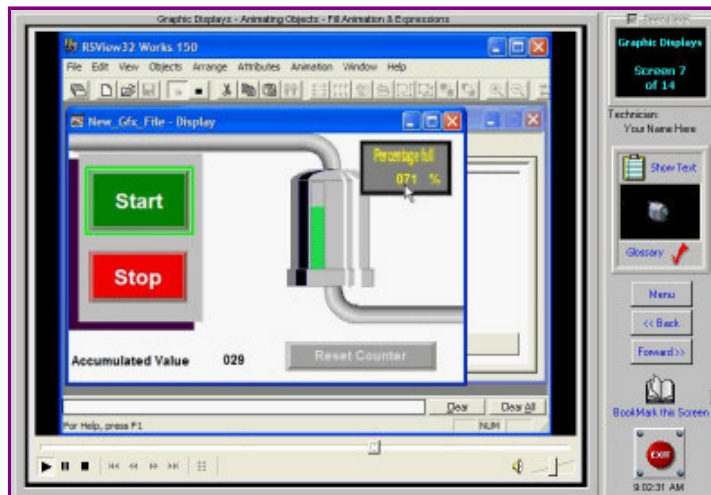


The solutions to this problem will vary with equipment etc. There is no set right or wrong answer. The final judgment should be based on whether the system works, does it actually graphically display the process values.

The previous pages are samples from the Laboratory Manual of ...

"The ViewTrainer" Tutorial Software CBT

To learn more about this software, please see http://www.bin95.com/RSView32_HMI.htm



The ViewTrainer Tutorial Software CBT

ESBN: C60-59CD-6727-81B2

Description:

This **NEW RSView32 HMI Training Software (The ViewTrainer)** includes **RSLinx communications, DDE topics and excel, creating a new RSView project, rsview graphics, interactive quiz, laboratory manual and much more.** This **distant learning course** can serve as a precursor to taking on those **control engineering projects.**

TABLE OF CONTENTS

- RSLinx Communications
- DDE Topics & Excel
- Creating a new RSView Project
- Graphic Displays & Animation
- Alarms
- Run Mode
- Interactive Quiz
- Final Exam
- Laboratory Manual
- Password protected Student Log File
- Ability to print Certificate of Completion
- Ability to print test responses



Related Titles:

["PLC Training CBT and Simulator CD"](#) - ["Contrologix - RSLogix 5000 Simulation PLC Trainer"](#) - ["DeviceNet Software Electrical Troubleshooting Skills"](#)

