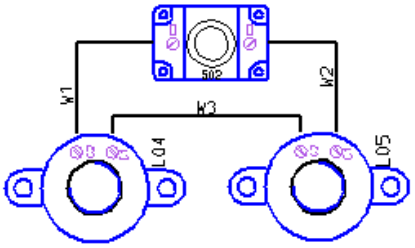
Routed Systems Designer 8.0 for Pro/ENGINEER Wildfire 4.0

Overview

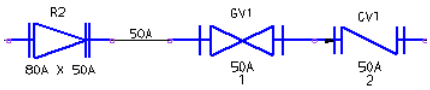
Course Code	TRN-2185–T
Course Length	3 Days



In this course, you will learn how to use Routed Systems Designer (RSD) to create schematic diagrams for both electrical harness and piping designs. You will learn how to administer the RSD working environment, and how to configure the catalog library. You will learn how to create functional block diagrams and block interconnect diagrams. You will learn how to create electrical circuit diagrams, and wiring diagrams, including wire interconnect diagrams. You will also learn how to create process and instrumentation design (P&ID) diagrams for piping systems. Finally, you will learn how to use wiring diagrams and P&ID diagrams to configure 3-D harness designs and industrial piping designs created within Pro/ENGINEER Wildfire 4.0. At the end of each module, you will complete Pro/FICIENCY skills assessment questions. These questions are used to help reinforce your understanding of the course topics and form the basis for review sessions.

Course Objectives

- Understanding the 2-D schematic design processes for electrical harness designs and piping designs.
- Configuring the RSD working environment.
- Creating and configuring the catalog library.
- Creating functional block diagrams, (including block interconnect diagrams).
- Creating circuit diagrams.
- Creating wiring diagrams, (including wire interconnect diagrams).
- Creating process and instrumentation design diagrams.
- Communicating diagram information to Pro/ENGINEER Wildfire.



Prerequisites

- None

Audience

- This course is intended for engineers, involved in the schematic 2-D layout of either electrical diagrams or piping diagrams.

Agenda

Day 1

Module	1	Introduction to Routed Systems Designer
Module	2	Configuring the Working Environment
Module	3	Configuring Designs and Diagram Sheets
Module	4	Configuring Catalog Properties
Module	5	Creating Design Templates and Template Sheets
Module	6	Using RSD Tools

Day 2

Module	7	Creating Catalog Artifacts
Module	8	Creating and Configuring a Central Catalog
Module	9	Reviewing Designs
Module	10	Instancing and Manipulating Objects
Module	11	Creating Block Diagrams

Day 3

Module	12	Creating Circuit Diagrams
Module	13	Creating Wiring Diagrams
Module	14	Creating Interconnect Diagrams
Module	15	Creating P&ID Diagrams
Module	16	Using Schematic Design Data in Pro/ENGINEER Harness and Piping Designs
Module	17	Using Pro/Diagram Information

Course Content

Module 1. Introduction to Routed Systems Designer

i. Electrical Diagram and Harness Design Process
ii. Piping Design Process
iii. Understanding Diagram Types
iv. Understanding RSD Concepts and Terminology

Knowledge Check Questions

Module 2. Configuring the Working Environment

i. Understanding the RSD User Interface
ii. Configuring Options and Switches
iii. Configuring Colors

Knowledge Check Questions

Module 3. Configuring Designs and Diagram Sheets

i. Creating and Configuring Designs and Diagram Sheets
ii. Configuring Grids
iii. Configuring Layers
iv. Configuring Location Sets

Knowledge Check Questions

Module 4. Configuring Catalog Properties

i. Configuring Object Types and Global Properties
ii. Configuring Derived Properties

Knowledge Check Questions

Module 5. Creating Design Templates and Template Sheets

i. Creating and Configuring Template Sheets
ii. Creating and Using Design Templates

Knowledge Check Questions

Module 6. Using RSD Tools

i. Using Selection Tools
ii. Using Viewing Tools
iii. Understanding Probe Specifier Tools
iv. Understanding Tool Trays

Knowledge Check Questions

Module 7. Creating Catalog Artifacts

i. Understanding Catalog Artifacts
ii. Using Datatables and Datasets
iii. Creating Ports
iv. Creating Blocks
v. Creating Fibers

vi. Understanding Groups
vii. Creating Groups
viii. Creating Cables
ix. Exporting and Importing Packages

Knowledge Check Questions

Module 8. Creating and Configuring a Central Catalog

i. Creating a Central Catalog
ii. Managing Central Catalogs

Knowledge Check Questions

Module 9. Reviewing Designs

i. Using the Model Explorer

Knowledge Check Questions

Module 10. Instancing and Manipulating Objects

i. Instancing Objects
ii. Manipulating Objects

Knowledge Check Questions

Module 11. Creating Block Diagrams

i. Creating Block Diagrams

Knowledge Check Questions

Module 12. Creating Circuit Diagrams

i. Creating Circuit Diagrams
ii. Managing Signal Networks

Knowledge Check Questions

Module 13. Creating Wiring Diagrams

i. Creating Wiring Diagrams

Knowledge Check Questions

Module 14. Creating Interconnect Diagrams

i. Understanding Interconnect Diagrams
ii. Creating Block Interconnect Diagrams
iii. Creating Wiring Interconnect Diagrams
iv. Verifying Interconnect Diagrams

Knowledge Check Questions

Module 15. Creating P&ID Diagrams

i. Creating P&ID Diagrams
ii. Updating P&ID Diagrams

Knowledge Check Questions

Module 16. Using Schematic Design Data in Pro/ENGINEER Harness and Piping Designs

i. Transferring XML Data into 3-D Harness Designs
ii. Understanding 3-D Piping Design Approaches
iii. Transferring XML Data into 3-D Piping Designs
iv. Verifying RSD Design Data

Knowledge Check Questions

Module 17. Using Pro/Diagram Information

i. Migrating Pro/DIAGRAM Schematics

Knowledge Check Questions