

Wind River Tilcon Graphics Suite Fundamentals

Wind River Education Services enables you to unleash the power of Wind River's technology. Our training and mentoring empower developers with the knowledge and proficiency required to program and manage device software faster and more reliably. Reduce your project risks and shorten your development timelines by equipping your engineers with the right training by our experts.

Course Description

The Wind River Tilcon Graphics Suite Fundamentals training workshop provides engineers with a fast, cost-effective way to learn to develop real-time user interface (UI) applications with Wind River Tilcon Graphics Suite.

After this course, students will be able to do the following:

- Describe the concepts and architecture of the Wind River Tilcon Interface Development Tool and Wind River Tilcon GUI Engine.
- Design, prototype, simulate, and test embedded graphical user interfaces (GUIs) on a host machine using Tilcon Interface Development Tool.
- Select features and use them effectively, including container objects, notifications, triggers, and advanced drawing techniques.
- Design and develop an international-ready UI.
- Integrate an application with Photoshop.
- Write applications using Tilcon Graphics Suite APIs.

Products Supported

- Wind River Tilcon Graphics Suite 5.5 and later

Who Should Attend

- Developers using Wind River Tilcon Graphics Suite to design and deploy embedded GUIs

Prerequisite Skills

- Basic C programming experience (only required for application development sections)

Prerequisite Courses

- None

Related Courses

- VxWorks 6.x and Workbench Fundamentals
- Wind River Linux and Workbench Fundamentals

Course Title:	Wind River Tilcon Graphics Suite Fundamentals
Duration:	Three days
Format:	Instructor-led lectures and hands-on lab sessions; instructor-led Live Remote delivery available
Price:	Contact your local sales representative

Course Format

- This three-day instructor-led course consists of lectures and lab sessions.
- Students receive personal guidance from expert Wind River instructors.
- Students use Wind River Tilcon Graphics Suite 5.5 to gain experience with the topics presented.
- Lab sessions allow hands-on application of course concepts.

Global Reach of Wind River Education Services

With more than 20 years of device software experience, we provide education services in every region of the world. You can rely on our expertise—acquired by delivering hundreds of classes each year to thousands of students—to provide a highly effective learning experience, wherever your developers are located.

Private Classes

Private classes are conducted at your location, scheduled for your convenience. Private classes include the use of a preconfigured laboratory environment that may consist of a connection to a remote lab environment or equipment that we bring to your facility. Private classes can be tailored to your specific needs by adding or removing topics from multiple courses, maximizing the benefit of your time in class.

Mentoring

Our Rapid Integration and Mentoring programs provide coaching from a seasoned expert who can increase your team's productivity and reduce your project's risk. An experienced engineering specialist will review your specific goals, project environment and challenges, and address productivity obstacles. Whether you need assistance with product installation and configuration, advice on development workflow, debug assistance, or optimization best practices – Mentoring can shorten your trial-and-error cycle, document recommended procedures, and ensure your developers are using tools and technology efficiently.

Syllabus

Day 1

Wind River Tilcon Graphics Suite Overview

- GUI vs. CLI
- Graphics User Interface (GUI) Challenges
- Categories of GUI Solution
- Wind River Tilcon Graphics Suite Product Components
- Wind River Tilcon Graphics Suite Architecture

Wind River Tilcon Interface Development Tool—Introduction

- Tilcon IDT
- Components of Tilcon Interface Development Tool
- Wind River Tilcon Graphics Suite—Object Types
- Tilcon Interface Development Tool Version
- Tilcon Interface Development Tool—Product Documentation

Wind River Tilcon Graphics Suite Standard GUI Objects

- Introduction
- Standard GUI Objects Overview
- Selection Objects
- List Objects
- Data Input Objects
- Decoration Objects
- Creating Standard GUI Button Object Lab
- List Object Lab
- Menu Bar and Pop-up Menu Lab

Tilcon Graphics Suite Text Objects

- Introduction
- Text Objects Overview
- Noninteractive Text Objects
- Interactive Text Objects
- Text Object Components
- Creating a Feedback Form Using Text Objects Lab

Wind River Tilcon Graphics Suite Advanced GUI Objects

- Introduction
- Advanced GUI Objects
- Meter Objects
- State Objects
- Data Display Objects
- Meter Object Lab
- Chart Object Lab

Day 2

Wind River Tilcon Graphics Suite Object Linking

- What Is Object Linking?
- Why Object Linking?
- Link Object Data Types
- How to Link Objects
- Linking Tilcon Objects Lab

Wind River Tilcon Graphics Suite Object Triggers

- What Is a Trigger?
- Why Use Trigger?
- Trigger Types in Tilcon Interface Development Tool
- How to Create Triggers
- Creating Triggers on Tilcon Objects Lab

Tilcon Graphics Suite Container and Drawing Tool Objects

- Introduction to Container Objects
- Introduction to Drawing Tool Objects
- Drawing Tool Options
- Tabbed Notebook Lab
- Object Grouping Lab
- Tilcon Symbol (TSY) Images Lab

Wind River Tilcon Graphics Suite Object Redraw Options

- Why Redraw an Object?
- Wind River Tilcon Graphics Suite Redraw Options
- How the Components of an Object are Redrawn
- Redraw Options from Tilcon Interface Development Tool and Application
- Understanding Redraw Options in Tilcon Interface Development Tool Lab

Day 3

Application Development in Wind River Tilcon Graphics Suite I

- Wind River Tilcon Graphics Suite Application Development
- Sample Program Structure
- Tilcon API Library
- Starting Tilcon GUI Engine
- Loading and Displaying (.twd) Window
- How to Process Notification
- How to Set and Get Object Attributes
- Terminating Tilcon GUI Engine
- Creating MP3 Player Demo Application Lab
- Creating Window Transition Application Lab

Application Development in Wind River Tilcon Graphics Suite II

- What Is a Tilcon Timer Hint?
- Why Use Timer Hints?
- How to Use Timer Hints
- What Is a Tilcon Callback?
- Why Use Tilcon Callbacks?
- How a Tilcon Callback Works
- Updating Needle Values Using Time Hints Lab
- Creating an Application Using Callbacks Lab
- Chart Scrolling Lab

Fonts and UI Internationalization

- Tilcon Font Support
- How to Add Fonts in Tilcon Interface Development Tool
- Why Add Fonts in Tilcon Interface Development Tool
- How to Register Fonts with Tilcon GUI Engine
- Internationalization—Introduction
- Internationalization—Step by Step
- Internationalization Using Tilcon Interface Development Tool Lab

Photoshop Export, Import, and Merge in Tilcon Interface Development Tool

- What Is Photoshop Integration?
- Why Use Photoshop Integration?
- Benefits of Photoshop Integration
- Photoshop Features in Tilcon Interface Development Tool
- Photoshop Export, Merge, and Import in Tilcon Interface Development Tool Lab

Optional Topics

Customers may choose to customize the standard training by replacing topics that are not relevant to their circumstances with any of the following optional topics. Contact Wind River Education Services if you wish to arrange a custom course.

Creating User Interfaces Dynamically

- Why Create User Interfaces Dynamically?
- Creating Windows and Objects
- Saving Windows
- Saving Windows as BMP Files

Tab and Field Order

- Introduction to Tab Order
- Introduction to Field Order
- Tab and Field Order Lab

Image Sharing with a Resource Dictionary

- Introduction to Resource Archives
- Benefits of Resource Archives
- How to Use Resource Archives
- Image Resource Dictionary Lab

Storing Customized Objects

- Storing Customized Objects
- Object Libraries
- The Enable Defaults Option
- Storing Customized Objects Lab

Multithreading and TCP/IP Design in Tilcon Graphics Suite

- Product Overview
- Tilcon Channels
- Object Space
- Creating a Multithreaded Application
- TCP/IP Applications
- Accommodating Third-Party Applications
- Multithreaded Applications Lab
- TCP/IP Connections Lab
- Direct WindML Calls Lab

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