



Pyrrhus Software

Enduring Solutions

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Real-Time Programming in Ada 95

Course Syllabus

An Overview of Ada 95 Core Language Annexes Conformance Assessment	Time Bounded Computations Wake-Up Time Delay Monotonic Time Real-Time Clock
Real-Time Ada Process Model Improved Real-Time Capabilities Changes to the Process Model	Asynchronous Transfer of Control Triggering Events Event Processing Time Bounded Computations
Protected Types Light weight synchronization Two-level locking Protected operations	Exceptions and Interrupts Exception Occurrences Protected Procedure Handlers Package Ada.Interrupts
Common Real-Time Paradigms Mutex Persistent Event Transient Signal Counting Semaphore Producer/Consumer	Systems Programming Annex Access to Machine Operations Required Representation Support Praelaboration Requirements Pragma Discard_Names Shared Variable Control Task Identification and Attributes
Errors and Exceptions Potentially Blocking Operations Exception Propagation	Real-Time System Annex Preemptive Abort Tasking Restrictions pragma Profile Ravenscar Profile Synchronous Task Control Asynchronous Task Control Optimizations and Determinism Rules
Priority Model System Priorities Queuing Policy Dispatching Policy Locking Policy Priority Inheritance Dynamic Priorities	Safety and Security Annex Normalize Scalars pragma Reviewable Restrictions
Requeue Between Tasks Between Protected Objects Preference Control	Other Annexes Distributed Systems Annex Numerics Annex

This 3-day course is designed for software engineers who are familiar with the Ada 83 programming language as defined in the Ada Language Reference Manual ANSI/MIL-STD-1815A-1983 and its tasking model.