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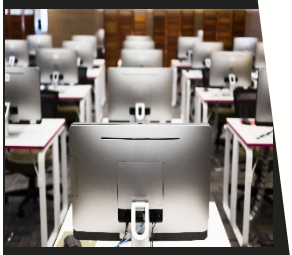

INTEGRATING SOFTWARE & HARDWARE RELIABILITY PREDICTIONS TRAINING CLASS

MISSION READY SOFTWARE
SOFTREL LLC

INTEGRATING SOFTWARRE & HARDWARE RELIABILITY PREDICTIONS TRAINING CLASS

In this class the students learn how to merge the software and hardware reliability predictions to yield a subsystem or system prediction such as a system Reliability Block Diagram or a fault tree. This class will also present how to measure the software reliability during testing and operation.

PREREQUISITES

The IEEE 1633 Recommended Practices for Software Reliability training class is a perquisite.

TARGET AUDIENCE

- Students who have previously taken the 2 day IEEE 1633 Recommended Practices for Software Reliability Training
- Students who need to incorporate software reliability predictions into an overall system prediction
- Reliability engineers, Systems engineers, Software quality engineers, Software managers

EACH COURSE ATTENDEE IS ABLE TO…

- Merge software and hardware predictions to yield a system reliability prediction
- Determine a system reliability prediction
- Allocate the system reliability prediction to the software
- Estimate software reliability during testing, how much more testing hours are needed and/or defects to be corrected to reach a desired level of reliability
- Determine the stability of a software release and when it's OK to stop testing

RELATED SERVICES & TRAINING CLASSES

Related products		Related services
Requs AI Predict		Software reliability growth modeling Software reliability assessment

INTEGRATING SOFTWARE & HARDWARE RELIABILITY PREDICTIONS TRAINING CLASS

The below class outline includes merging predictions and estimating software reliability growth.

TABLE OF CONTENTS

Section of this training	Section of IEEE 1633
Combine software and hardware reliability	
1.0 Identify an initial system reliability objective	5.3.1
2.0 Determine an appropriate overall software reliability requirement	5.3.5
3.0 Merge the software reliability predictions into the system prediction	5.3.4
4.0 Allocate the required reliability to the software LRUs	5.3.8
5.0 If the system objective can't be met, perform system level sensitivity analysis	5.3.7.2
Apply software reliability during testing	
Overview -The reliability growth curve for software	5.4.4
How to know where the program is on that curve	
1.0 Collect the data	5.4.4
2.0 Plot the data - How to estimate the failure rate, MTBF from plot	5.4.4 and 5.4.5
3.0 Select the best model for the current trend	5.4.5
4.0 Compute the reliability figures of merit	6.3 and Annex B
5.0 Validate the accuracy of the estimation	5.4.7
6.0 Make a release decision	5.5