

Isograph News

SEPTEMBER 2001

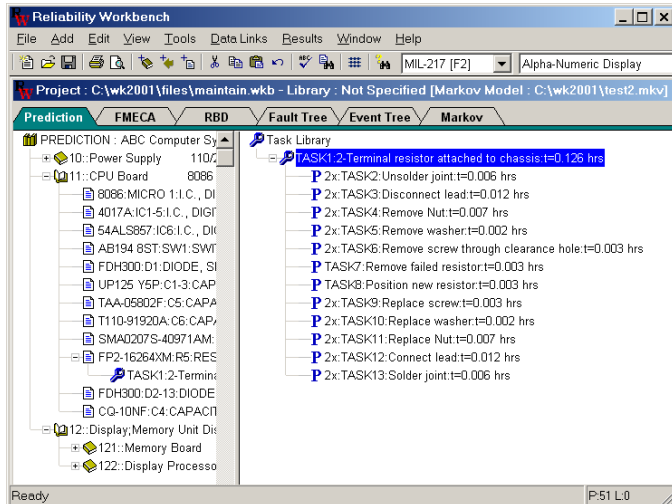
Three Major New Product Releases

FaultTree+, Reliability Workbench and RCMCost have all been upgraded to include a substantial number of major enhancements. A selection of these new features are described below.

Reliability Workbench V9...

Maintainability Prediction Added

A new Maintainability Prediction facility has been added in version 9. This facility allows users to define a library of maintenance tasks and assign these tasks to blocks in the hierarchical diagram in the Prediction module. Blocks with tasks assigned to them are assumed to be replaceable items.



Building a task library in Reliability Workbench V9

Workbench predicts MTTR values by applying the following expression

$$MTTR = \frac{\sum_{i=1}^N \lambda_i MTTR_i}{\lambda_i}$$

where λ_i = failure rate of the child block i

$MTTR_i$ = mean time to repair child block i

Tasks may be categorised into the following elements :

° Preparation	° Reassembly
° Fault Isolation	° Alignment
° Disassembly	° Checkout
° Interchange	° Start Up

New Telcordia Standard Added

Reliability Workbench will now calculate failure rates based on the new Telcordia standard SR-332 Issue 1. Alternatively users may request the program to calculate rates based on the TR-332 Issue 6 standard by selecting the appropriate option in the Options Dialog for the Prediction Module.

Import Data from RAC Prism Program

You may now import data from the RAC Prism program into Reliability Workbench. Reliability Workbench imports the hierarchical structure of a Prism project together with component and assembly failure rates.

Commercial Aircraft FMEA Format Added

A new standard format has been added in version 9. The Commercial Aircraft (CA) format allows users to define failure modes and effects at unit, system, engine and aircraft level. When operating in CA mode Reliability Workbench will display special dialogs for entering failure mode and effect information.

Customisable FMEA Text Field Headers by Level

Users may now set different block and failure mode text field headers for different hierarchical levels in a FMEA.

Phrases Specified by Hierarchical Level

In version 9 you may now assign a phrase not just to a given category type but also to a specific hierarchical level if required.

Setting FMECA User Restrictions

In version 9 you may now password protect a project so that a user is restricted in the FMECA editing options that may be performed.

FMECA Severity Matrix

Users may now request Reliability Workbench to produce a FMECA Severity Matrix. The severity matrix tabulates the number of failure mode contributors in each severity category for each block in the system.

New Prediction Import and Report Fields Added

You may now import base failure rates for external components directly without having to use the Fixed Parameters field (a new Base Failure Rate field has been created). Environment and temperature fields have also been added to the Prediction Blocks and Components table.

FaultTree+ V10...

Event Tree Consequence Categorisation

Users may now define up to 10 custom consequence categories. Each consequence defined in a project may then be assigned to the appropriate consequence category. This facility also allows users to specify more than one consequence to an event tree sequence. For example, a given sequence may lead to a safety consequence and a financial consequence.

Secondary Event Trees Added

You can now define a new event tree as being a secondary event tree when it is created. Secondary event trees usually represent repeated event tree logic. Rather than repeat an identical portion of an event tree, with identical consequences, in different parts of the project, a single secondary event tree may be defined.

New Failure Models

The Binomial, Poisson and 'Time at Risk' failure models have now been added.

Printing Parts of a Fault Tree

Users may now print the currently visible tree or the visible tree and logically connected pages below the visible tree.

Report Page Indexing for Fault and Event Tree Diagrams

Users may now produce text reports which list gates and events together with the pages they appear on in diagram reports. Use the 'FT Event Pages' or 'FT Gate Pages' tables to create these new report types.

Tracing Cut Sets in the Fault Tree Diagram

Cut sets may be highlighted in the fault tree diagram by selecting the Trace Cut Set button in the Results Summary Dialog after having selected a cut set in the dialog. Gates and events which are 'True' when the cut set occurs are highlighted in red.

Fault and Event Tree Importance Measures Extended

The program now allows users to view Fussell-Vesely and Birnbaum Importance measure for initiators as well as enablers. In addition, the new version provides initiator and enabler importance rankings for the overall risk.

Cut Set Importance Measures Added for Fault and Event Trees

The program now calculates Fussell-Vesely unavailability and frequency importance measures for cut sets as well as events.

Risk Values Displayed in the Results Summary Dialog

Event tree consequence risk calculation results are now displayed in the Results Summary Dialog.

Fault and Event Tree Append Facility Extended

This Append facility now allows users to preview the fault and event trees in the append file. Individual fault tree gates may be selected and appended together with connected data. Similarly individual event trees may be appended together with connected data.

This new functionality allows users to build library projects and selectively append fault tree and event trees within the library.

Paste Special Facility Improved

Paste Special allows you to copy part of a fault tree structure to another position in the fault tree project. All gates and events are renamed by default but all other parameters remain as they were in the original tree. This is a useful facility when you wish to construct similar fault tree structures (often representing similar systems) within your project.

The new facility provides users with the option of selecting one or more gates and events that are common events between the new and old trees. On creating the new tree the program will not rename these selected gates.

Other New FaultTree+ Features

- Individual event tree scaling
- Mean unavailability values calculated
- New multiplier factors for diagram reports
- Directly type gate and event names into Gate Dialog
- Total frequency shown for event trees
- Event tree borders may be shown as an option
- Maximum risk sequential model now available
- Event descriptions now in cut set reports
- Fine, medium and coarse grid options for snap
- Users may now specify metafile page sizes
- Relative cut-offs may now be applied to consequences
- Risk values are now displayed in Summary Results Dialog
- Partial event probabilities are now shown in event tree diagrams

RCMCost V3...

Enhanced Weibull Analysis Facility

This facility allows users to directly analyse sets of historical failure data for different component types in an interactive graphical environment. The program automatically produces and displays Weibull graphs for each historical data set.

Library Facility Added

Users may now build up libraries of FMECA data allowing projects to be constructed more rapidly. A system or subsystem hierarchy may be transferred from a library to a project using drag and drop.

Dialog Layout Improved

The dialog layout has been improved to increase productivity.

Enhanced Report Generation and Import/Export

The Report Generator has been enhanced to allow better customization of user-generated reports. An import/export Wizard has been introduced.

Multiple Crew Category Assignment

Multiple crew categories may now be assigned to an individual maintenance task.

Profile on Isograph

If you are new to the reliability software field, or have purchased one of our software products through a distributor or agent, you may be interested to learn more about Isograph as a company.

Isograph was formed in 1986 by a group of reliability engineers, mathematicians and programmers. The objective of the company was to provide off-the-shelf software tools and training in the reliability field. Our first customers were in the Aerospace, Defence and Nuclear industries. Our first ever sale was of the program FaultTree+.

Since then we have developed a full range of integrated reliability tools which are used in a broad span of industries. Currently these mature products are used at over 7000 sites world-wide. We currently have two main offices - one in Manchester UK and the other in California USA. We have distributors and agents in different regions of the world, many of which provide full local pre and post sales technical support and training. Some of the regions covered by local distributors and agents are given below :

- Australia
- Germany
- Scandinavia
- China
- Taiwan
- Italy
- Spain
- Korea
- Japan
- Canada
- Singapore
- The Netherlands
- Belgium
- France

All our products are fully maintained. Enhancements are largely driven by our user group community and associations with consultants and universities in the reliability field.

To learn more about Isograph and our products visit our web site www.isograph.com. Alternatively, we look forward to meeting you at an exhibition, seminar or user group meeting.

Conferences and Exhibitions

We invite you to visit our stand at the following conferences where we will be happy to demonstrate the new versions of our products to you.

19th International Systems Safety Conference, Huntsville, Alabama, USA. Sep 10-14 2001.

ESREL 2001 Torino, Italy. Sep16-20 2001.

RAMS 2002 Seattle, USA Jan28-Feb1.

User Group Meetings and Seminars

You are invited to attend any of the seminars or user group meetings to be held later this year and in early 2002 :

European Seminar

November 13th 2001, Manchester UK.

European User Group Meeting

November 14th 2001, Manchester UK

For details contact Richard Pullen at support@isograph.com or call +44 (161) 835 2902.

Australian User Group Meeting & Seminar

October 8-12th 2001, Gold Coast, Australia
For details contact Michael Drew at
mdrew@reliability.com.au or call +61 (352) 555 357.

USA Seminar

February 4th 2002, Los Angeles, USA

USA User Group Meeting

February 5th 2002, Los Angeles, USA
For details contact Brett Duncan at
BDuncan@isographdirect.com or call (949) 798 6114.

Training Courses

Isograph provide on-site training courses on individual products and also theoretical workshop courses. Scheduled

courses are also held on a regular basis. Currently scheduled courses for the second quarter of 2001 are given below.

FaultTree+ (Fault Tree Analysis) Workshop

November 15th 2001, Manchester, UK

AvSim+ (Availability Simulation) Workshop

November 16th 2001, Manchester, UK

For details contact Richard Pullen at support@isograph.com or call +44 (161) 835 2902.

FaultTree+ (Fault Tree Analysis) Workshop

February 6th 2002, Los Angeles, USA.

AvSim+ (Availability Simulation) Workshop

February 7th 2002, Los Angeles, USA.

For details contact Brett Duncan at
BDuncan@isographdirect.com or call (949) 798 6114.

Information

Fill out this form and mail or FAX it to us for more information. Alternatively call or email us !

Please indicate which products you may be interested in :

- FaultTree+ Fault Tree Analysis, Event Tree Analysis, Markov Analysis
- Reliability Workbench Prediction, FMECA, FMEA, RBD Analysis, Fault and Event Tree Analysis, Markov Analysis
- AvSim+ Availability and Production Capacity Simulator, Reliability-Centred Maintenance
- RCMCost Reliability-Centred Maintenance
- LccWare Life Cycle Costing
- WeibullPro Weibull Analysis
- HazopPlus Hazard and Operability Studies
- RiskVu Management tool linking to FaultTree+

Send me information on user groups Name : _____

Send me information on seminars Address : _____

Send me information on training Tel : _____

Send me a demonstration CD Email : _____

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