Reliability Workbench®

14.0

Release Notes

Isograph

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Product Notes

Please read the following notes carefully.

- Reliability Workbench 14.0 requires a new version 14.0 license. Customers who have a valid maintenance agreement can request their new license from licence@isograph.com.
- Reliability Workbench 14.0 is installed as a new product alongside any existing versions of Reliability Workbench. It is recommended that you uninstall the previous versions if you do not require them.
- If you are upgrading from Reliability Workbench 13.0 then your version 13.0 license will be replaced by a version 14.0 license (see above). This version 14.0 license will allow you to run Reliability Workbench 13.0 if you require.
- The installation upgrades the FlexNet publishing service from version 11.14.1.0 to 11.16.2.0.
- The license server is now installed as a separate product - the Isograph License Server - and can be downloaded from the Isograph customer area at http://www.isograph.com/customerarea.

New Features

The following new features have been implemented.

Reliability Workbench

- The help system now displays help in the user's default browser by default. The help files are HTML5 based using a responsive layout that caters for resizing of the parent browser.
- Additional testability parameters for fault isolation have been added to the FMECA module. Failure modes may now be assigned isolation % values. RWB then calculates isolation parameters at higher levels in the project hierarchy for modes, blocks and the overall project. Isolation parameters combine with existing fault detection fields to provide testability analysis.
- Quantity and operating time factor values are now hidden in FMECA function dialogs for functional failure FMECAs. Quantity and operating time factor values are now only set at non-function block level.
- Failure modes beneath system level functions are now identified as end effects in functional failure FMECAs. Functions are now identified as component functions only if they occur below component blocks.
- FMECA failure modes trees now retain their expansion settings.
- The RBD module now has an append facility allowing users to append systems blocks from external projects. Blocks are only appended if there is a component block with the same ID in the target project.
- A RBD Results Summary Report has been added to the standard reports.
- RBD/Fault tree append and batch analysis dialogs now have a minimum size.
- Fault tree event paste special no longer opens the tree control event node.
- For fault trees and RBDs an option has been added in the project options dialog, calculation tab, to apportion time at risk model frequencies according to the ratio of time at risk and project lifetime.
- Bitmaps may now be stored inside a project.
- The Sequential Model failure model type has been extended for fault tree and RBD analysis. The extended model enables accurate averaging calculations to be performed taking into account sequencing. The model also provides for modelling revealed double and triple latent (dormant) failures that are revealed before a flight (for aircraft applications), a journey for (automotive and rail applications) or a mission.
- Paste Special of primary events no longer expands the top level primary event node in the project tree control.
- When a datalink transfer is made FMECA and RBD/Fault Tree results are now only set out of date if the data has changed.
- RBD and fault tree results summary dialogs now show the visible page results if a block or gate is not selected in the tree control or diagram.

- The RBD and fault tree cross-product method is now not applied when evaluating a cut sets list that has applied either a dependent sequence model.
- A default grid layout has been added for IEC 61508 FT failure models.
- IEC 61508 parameters are now transferred when converting a FMECA to a fault tree or RBD. The failure model created will now match the default failure model set in project options.
- A new method has been added to the DLL allowing prediction calculations to be performed.
- Import/Export to Excel has been speeded up for very large Excel files.
- An option has been added to the application settings dialog (Naming tab) allowing users to disable renaming on copying and pasting hierarchy structures (SSA functions, FMECA blocks and allocation blocks).
- Excel import and export now handles multi-line text fields. Excel 2007 special identifiers _x000D_ are also removed on import.
- When browsing for bitmap files, the open file dialog now allows users to choose files of type Bitmap,JPEG,GIF,TIFF and PNG.
- The report designer now uses SQL Server LocalDB for both 32-bit and 64-bit versions.
- A paste special function has been added to the SSA module allowing sub-projects to be automatically attached using linked functions.
- SSA module function and failure paste operations from libraries now transfer dependent types (e.g. effect types, document groups etc.).
- The terms compliant and non-compliant have been replaced by achieved and ‘not achieved’ in the SSA and allocation modules.
- SSA functions now have 24 text fields attached.
- DAL values (SAE 4754A) are now calculated for functions in the SSA module. DAL values are assigned to each classification.
- Individual SSA failures are now renamed when a copy or cut operation takes place if the appropriate options are set in the application options naming tab.
- SSA Effect now have a long description field (max 2000 characters).
- Phrases may now be selected into SSA effects description fields.
- Users may now transfer a phrase to the clipboard rather than overwriting the associated field. This is useful for inserting a phrase into existing text.
- System Safety Assessment Functions and Failures are now shown in the grid if they appear anywhere below the selected function in the tree control rather than just at the immediate function level.
- The drawing speed of fault tree diagrams has been significantly speeded up for the case where paging is disabled.
- A new method has been added to the DLL allowing prediction calculations to be performed.
- An option has been added to the application settings dialog (Naming tab) allowing users to disable renaming on copying and pasting hierarchy structures (SSA functions, FMECA blocks and allocation blocks).
- Excel import and export now handles multi-line text fields. Excel 2007 special identifiers _x000D_ are also removed on import.
- Import/Export to Excel has been speeded up for very large Excel files.
- The SSA module now allows users to enter up to 3 effects for each failure. Effects and effect types are now organised into 3 categories. The user may change the description of each effect category in the project options dialog.
- SSA module function and failure paste operations from libraries now transfer dependent types (e.g. effect types, document groups etc.).
- A paste special function has been added to the SSA module allowing sub-projects to be automatically attached using linked functions.

Report Designer

- PDF files generated from RBD, fault tree and event tree diagrams now have page links allowing users to click on a page reference and move to that page.
- The help system now displays help in the user's default browser by default. The help files are HTML5 based using a responsive layout that caters for resizing of the parent browser.

Licensing

- FlexNet Publisher licensing components have been upgraded from version 11.14.1.0 to version 11.16.2.0.

  Two vulnerabilities have been addressed which guard against the corrupted execution of the FlexNet Licensing Service caused by the transmission of a crafted, invalid message block. This vulnerability has been reported as CVE-2016-10395.

  Verified support for Windows Server 2019 has been introduced in this release.
- A more meaningful message is now displayed when trying to checkout a license of the wrong version.
- If you are using a license server to serve floating licenses (as opposed to using a standalone license) then Reliability Workbench 14.0 requires the Isograph License Server 11.16.2.0. The Isograph License Server 11.16.2.0 automatically installs the FlexNet lmadmin license server. The Isograph License Server 11.16.2.0 can be downloaded from the customer area at https://www.isograph.com/customerarea. If you wish to use LMTools instead of lmadmin then the requisite 11.16.2.0 LMTools components can be downloaded from the customer area.