



RiskCAT50128_V411.e_Product_Description

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RiskCAT50128_V411.e

Product_Description

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*Dieses Handbuch gibt eine Einführung in die
Werkzeug-Funktionen und erläutert die Installation,
Deinstallation und Benutzung.*

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1 Short description of RiskCAT50128

Prerequisite to produce and certify high quality software is to know about the functional and non functional requirements imposed on the software. These requirements generally result from two different sources. One source is the specific requirements of the customer or producer e.g. based on their applications or marketing strategy. The other source is requirements imposed on software by the state of the art represented e.g. by national or international standards.

RiskCAT50128 is a tool of Code Analyzer Tool Set (CATS) for requirements capturing from standards thereby providing the starting point for high quality software development and products. The state of the art in software for railway control and protection systems is provided to a large extent by IEC 62279. The design of RiskCAT50128 is modular and widely configurable. It is possible to adopt the tool to modifications and enhancements of the standards applied as well as the extension to additional standards or other technical rules.

The work tasks assisted by RiskCAT50128 are

1. Selection of risk parameters,
2. Evaluation of the safety integrity level based on the risk parameters selected,
3. Configuration of the risk matrix used by RiskCAT50128
4. Manual pre selection of software safety integrity level,
5. Structured overview on the recommended measures,
6. Selection of individual measures,
7. Selection of groups of measures ,
8. Selection of measures related to activities,
9. Selection of measures related to objects,
11. Copying the actually marked measure into the clipboard,
12. Edit and change notes for each individual measure
13. Overview on terms defined in the measures texts
15. Retrieval in the original standards implemented,
15. Context related retrieval in the original standards clause,
16. Context related presentation of explanations to the clause
17. Context related presentation of terms
18. Project (session) storage in a file,
19. Project (session) reload from a file
20. Project (session) overload from a file
21. Result storage as RTF-file
22. Presentation of additional risk graphs
23. Document templates
24. CaliberRM export of measures actual selected
25. Definition and positioning of bookmarks in the standards implemented

Important advantage of the tool supported approach is the possibility to vary interactively risk parameters, risk classes and sets of process and realization measures defining alternative or optimized sets of measures to reach specified quality, safety or reliability targets.

The purpose of RiskCAT50128 is to assist the user in application of the IEC 62279. However, it is of course not the purpose of the tool to replace the standards. Anyhow the detailed and precise wording of the standards clauses needs to be considered to claim conformance with the standards. RiskCAT50128's condensed presentation of the standards contents has been established for the purpose of ease of work, overview and general navigation.

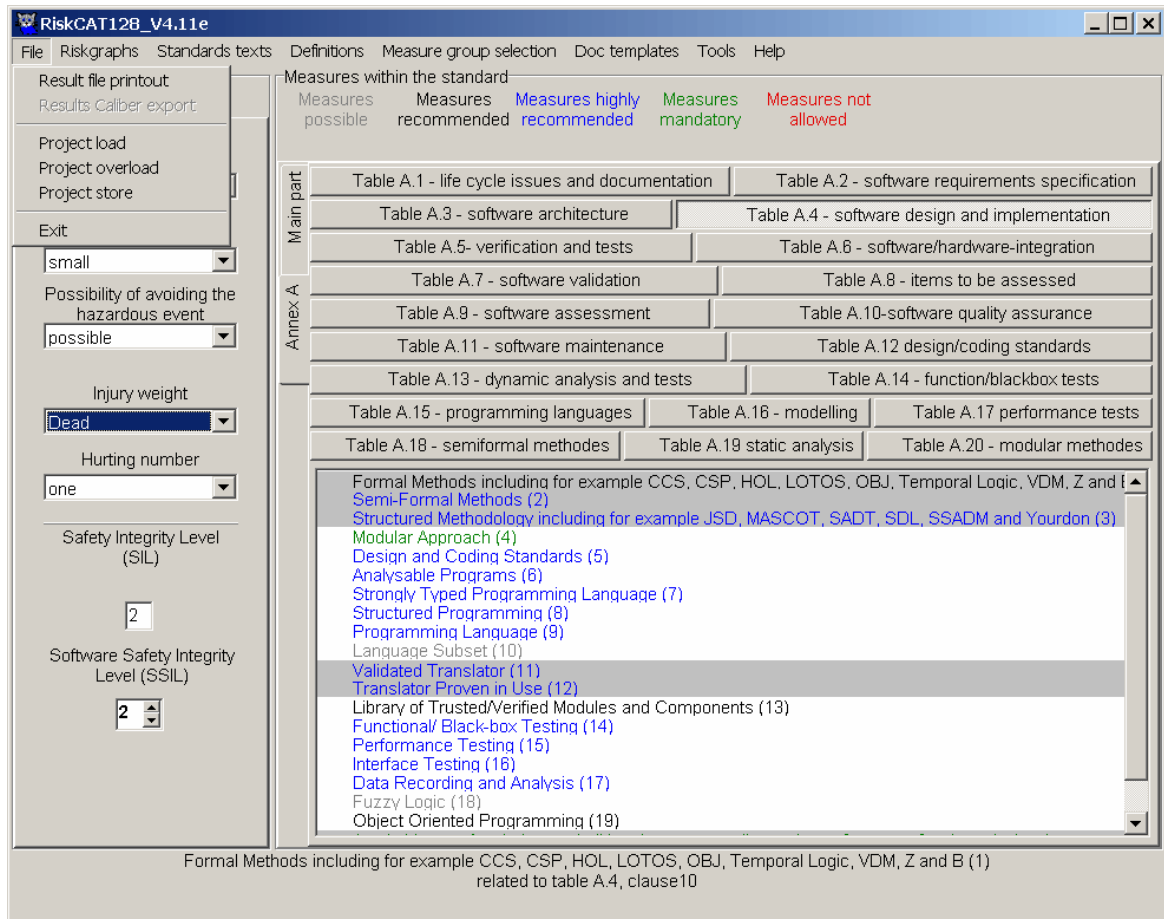


Figure 1: RiskCAT50128 screen

RiskCAT is designed for use by embedded systems software professionals. Experience of using Microsoft Windows® on PCs is required.

2 Application Area of RiskCAT50128

Main activities supported by RiskCAT are:

- to capture the requirements available from IEC 62278 and IEC 62279 for high quality software and high quality software production
- to support retrieval in the standards
- to assist in identification of the requirements to be applied in development
- to produce checklists for the purpose of quality control
- to provide a means for
 - company specific frames of prescribed measures as well as
 - company specific interpretations of measures

3 RiskCAT50128 Components

To run RiskCAT the following files must be available:

- The executable runtime image RiskCAT50128_<%Progvesion%>.exe
- The help files RiskCAT50128_<%Progvesion%>.hlp and RiskCAT50128_<%Progvesion%>.cnt
- Glyph & Cogs XPDFViewer IEC activeX component
- IEC 62278 and IEC 62279 standard files

4 Input to RiskCAT50128

File input to RiskCAT are project files which may be used

- Project files (xml format) to restore recent tool sessions or
- Project files (xml format) to start with the company specific or project specific set of requirements.
- Riskgraph configuration files to restore a individual risk graph configuration
- Hazard logfiles to continue the collection of hazards, risk parameters and SIL
- Documentation templates to edit project related documents

All other input is interactively by the user.

5 Result data of RiskCAT50128

Besides interactive results already mentioned above in the short description, RiskCAT50128 produces:

- project files in (xml format) (on demand) and
- text result files (rtf format).

An example for a (very short) result is given below.

IEC 62279 results

Riskparameters:

Hurting number: several

Injury weight: Wounded

Residence frequency in the hazardous area: frequently

Probability of the unwanted occurrence: small

Possibility of avoiding the hazardous event: impossible

SSAS: 2

Measure table structure:

Area - Phase			
Measures related to Area - Phase	Source	Rel.	Sel.
Measure note if defined			

Measures selected:

B1 Hauptteil - K4 Ziele u Konf			
To conform to this standard, it shall be shown that each of the requirements have been satisfied to the software safety integrity level defined	4.2	M	X
Where a requirement is qualified by the words "To the extent required by the software safety integrity level", the tables detailed in this standard should be used	4.4	M	X
If a technique or measure is ranked as highly recommended (HR) in the tables then the rationale for not using that technique should be detailed and recorded either in the Software Quality Assurance Plan	4.5	M	X
If a technique or measure is proposed to be used that is not contained in the tables then its effectiveness and suitability in meeting the particular requirement and overall objective of the clause shall be justified and recorded in the Software Quality Assurance Plan	4.6	M	X
Compliance with the requirements of a particular clause shall be assessed by the inspection of documents required by this standard, other objective evidence, auditing and the witnessing of tests.	4.7	M	X
This standard requires the use of a package of techniques and their correct application. These techniques are required from the tables and detailed in the bibliography	4.8	M	X

6 RiskCAT50128 - Data Sheet

Program name	RiskCAT50128
Program version	V411.e
Program size	1,55 MByte (approx)
Hardware	PC
Operating system	Microsoft Windows 2000, NT, XP
Main memory	128 MByte
Hard Drive	20 MByte free disk space
Video subsystem	Screen resolution 1024 x 768 or higher
Language of screens	English
Help and user manual	English

Additional third party software

Obligatory and supplied on RiskCAT installation CD:

- XPDFViewer ActiveX Control®
- pdf files of IEC 62278 and IEC 62279 standards

