



**RAM Commander**  
Reliability and Safety Software

30 YEARS OF SYSTEM SAFETY LEADERSHIP

# **RAM Commander**

Reliability and Safety Software

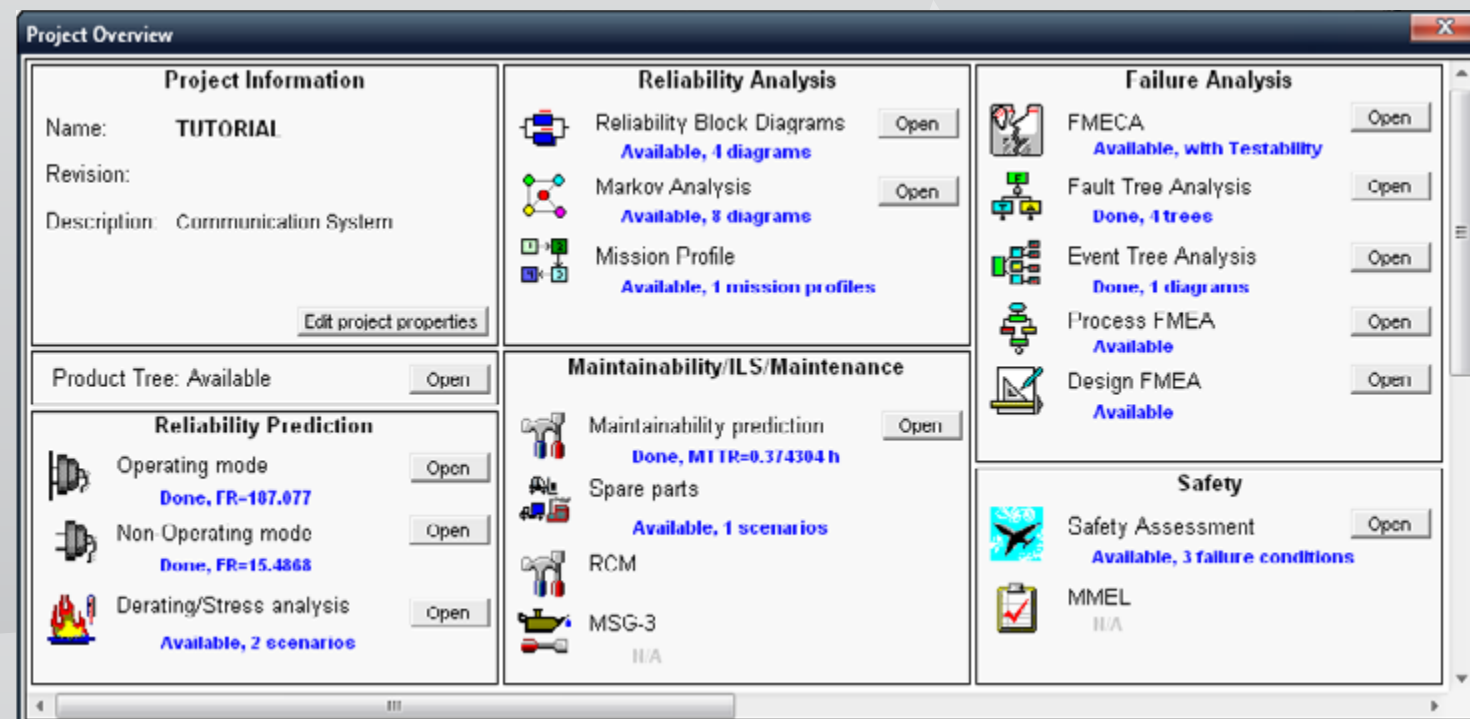
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## The Most advanced RAMS Toolkit in the Market!

All RAMS Analysis in One Package:

- MTBF calculation
- RBD
- FMECA
- FTA
- MARKOV
- ETA
- FHA
- SSA
- RCM / MSG-3



RAM Commander by ALD is far more than just a Reliability & Safety Software – it is a comprehensive RAMS toolkit covering all tasks required from reliability and safety engineers as well as designers' need for a quick MTBF Evaluation, Availability Calculation, Maintainability, Safety and Risk Analysis.



The main block of RAM Commander is the Bill of Material, which can be either imported from external applications or built manually in RAM Commander. The Product Tree (BOM) forms the basis for the rest of the RAM Commander RAMS modules which are interdependent and can be accessed by a one-click switch; from Reliability Prediction to FMECA and Testability, RBD, FTA, etc.

RAM Commander is a modular application - modules may be used and purchased separately, or as an integrated RAMS toolkit.

RAM Commander Software supports the following Reliability Prediction methods:

**Electronic Components Reliability Prediction Methods:**

MIL-HDBK-217 (All versions), RADC-TR-85-91, Reliability Toolkit (1995), 217Plus, ALCATEL, BELLCORE Issue 5,6, BRITISH TELECOM HRD4, HRD5, CNET RDF93 rev. 02/95, IEC 62380, UTE C 80-810, FIDES Guide 2004, 2009, ITALTEL IRPH93, Telcordia SR-332 Issue 1, 2 & 3, Siemens SN 29500, GJB 299C, Stress/Strength Analysis, GPRD (for user defined failure rates).

**Mechanical Components Reliability Prediction Methods:**

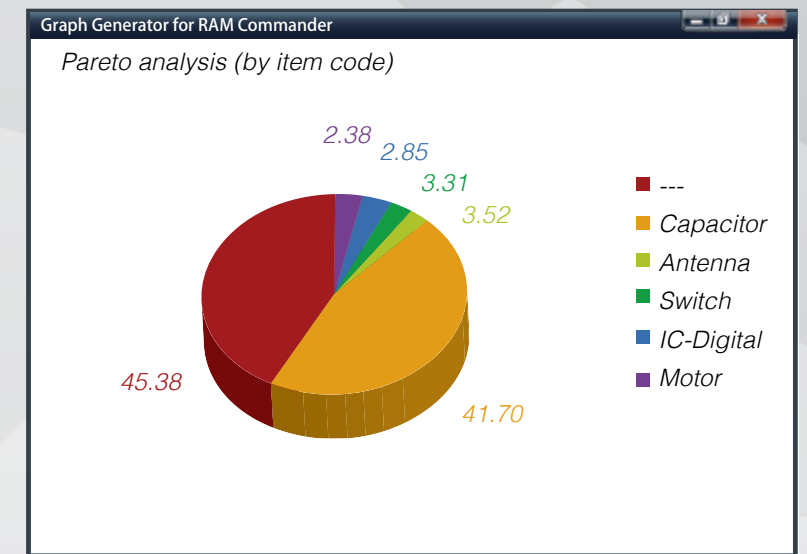
NSWC-98/LE1 Mechanics, NPRD-95, NPRD 2011, Stress/Strength Analysis, GPRD.

**RAM Commander Component Libraries:**

Easy to use built-in libraries containing over 400,000 widely used components by world leading manufactures, include powerful decoding mechanism, user-defined libraries and enhanced search features.

**Importable Product Tree (BOM)**

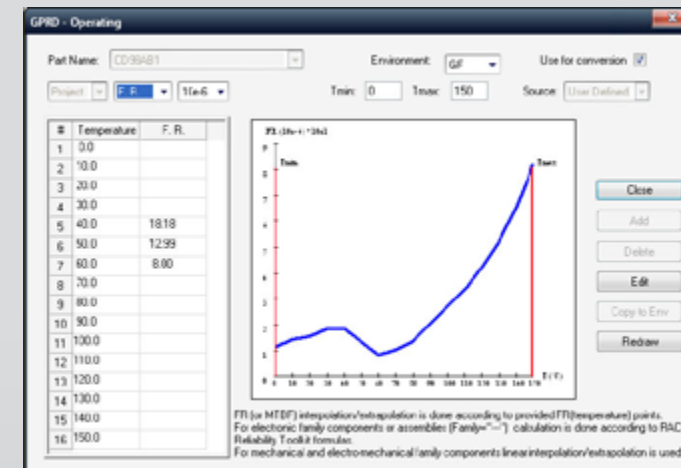
Part Name	Qty	Sup. PR	PR	PR	PR	PR	PR	PR
010000	1	0.1700	---	1.1E+004	0.0000	0.0000	0.0000	0.0000
010001	1	0.1700	---	1.1E+004	0.0000	0.0000	0.0000	0.0000
010002	1	0.1700	---	1.1E+004	0.0000	0.0000	0.0000	0.0000
010003	1	0.1700	---	1.1E+004	0.0000	0.0000	0.0000	0.0000
010004	1	0.1700	---	1.1E+004	0.0000	0.0000	0.0000	0.0000





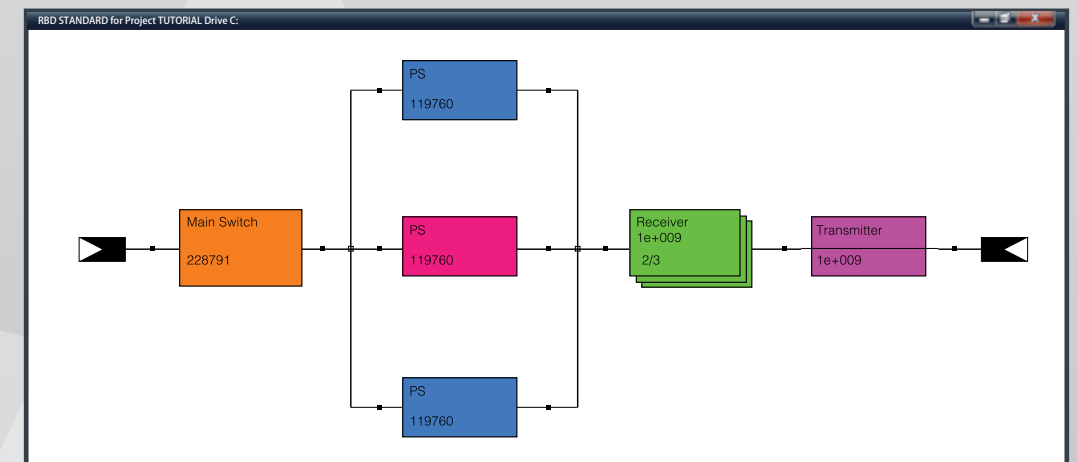
## GPRD - Generalized Part Reliability Data - General Part Data Weibull

A useful general distribution for describing failure time data of mechanical or electro-mechanical equipment with aging, resulting in a Shape parameter (Beta) and a Scale parameter (Teta).



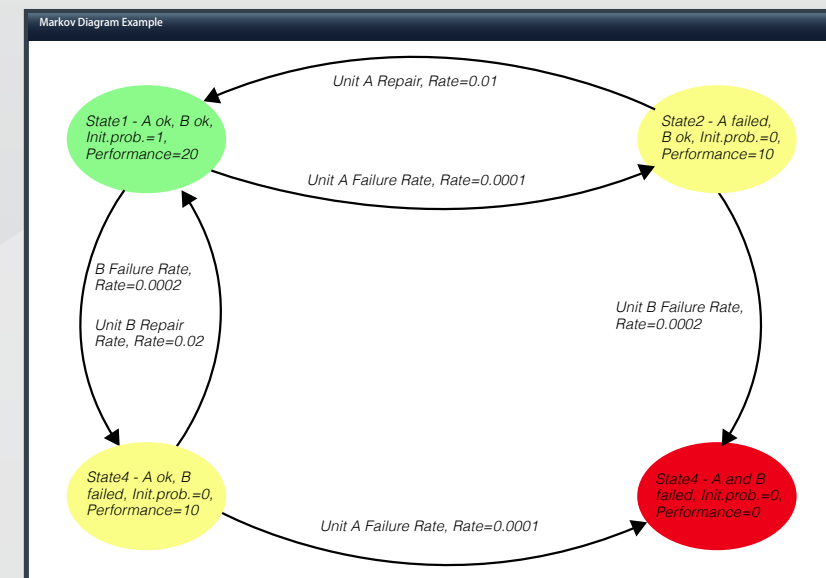
## RBD - Reliability Block Diagrams with Monte Carlo Simulation

Calculation of functional Reliability and Availability analysis of systems with various reliability distributions including all types of redundancy and repair factors.



## Markov Chains

A powerful tool for analyzing the evolution, performance and reliability of physical systems, calculation of steady-state mode, time-dependency mode, availability, unavailability, failure & repair rate & frequency, MTBF, MTTF, MTTR, reliability/unreliability and other system parameters.





## Derating

Provides a tool for defining derating guidelines to analyze the overstressed components under current temperature conditions.

## Maintainability Prediction

Used to predict maintainability of systems and equipment of any type at any level of maintenance.

## MSG-3

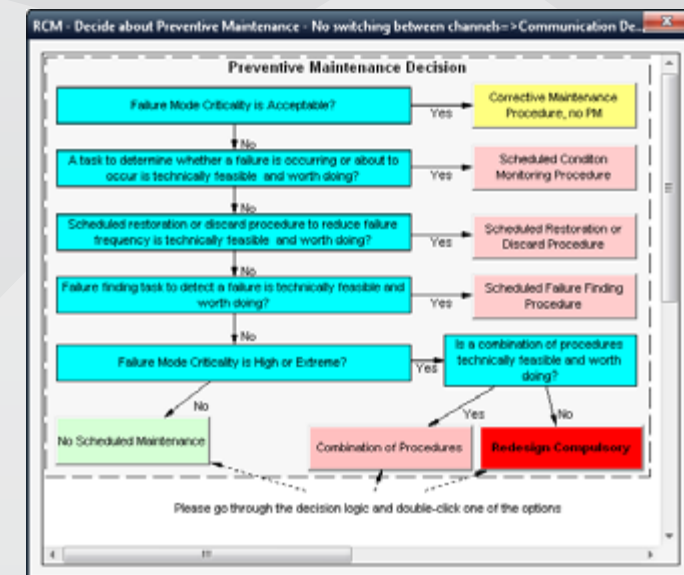
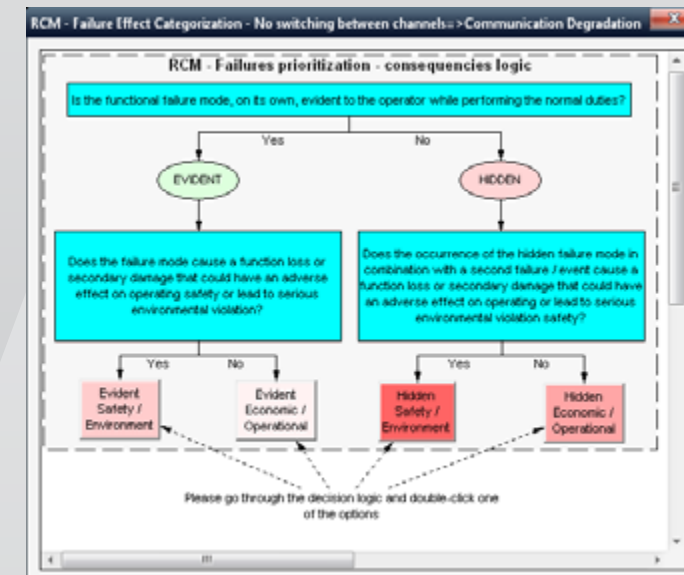
Including System, Zonal and Structural Analysis. Used by aircraft manufactures & aircraft operators to perform aircraft scheduled maintenance development analysis according to ATA MSG-3 procedure.

## RCM

Utilizes a systematic approach to understand how equipment fails and what maintenance tasks can be done to minimize failures, maximize reliability, understand why certain maintenance tasks are performed and eliminate unnecessary preventive maintenance activities.

## FMECA

Serves for automated failure mode, effects and criticality analysis, both hardware and functional approaches fully complies with MIL-STD-1629 and GMP. Integration of Testability features for in-depth testability analysis.





## Process & Design FMEA

Performs P&D potential failure mode and effects analysis based on MIL-STD-1629.

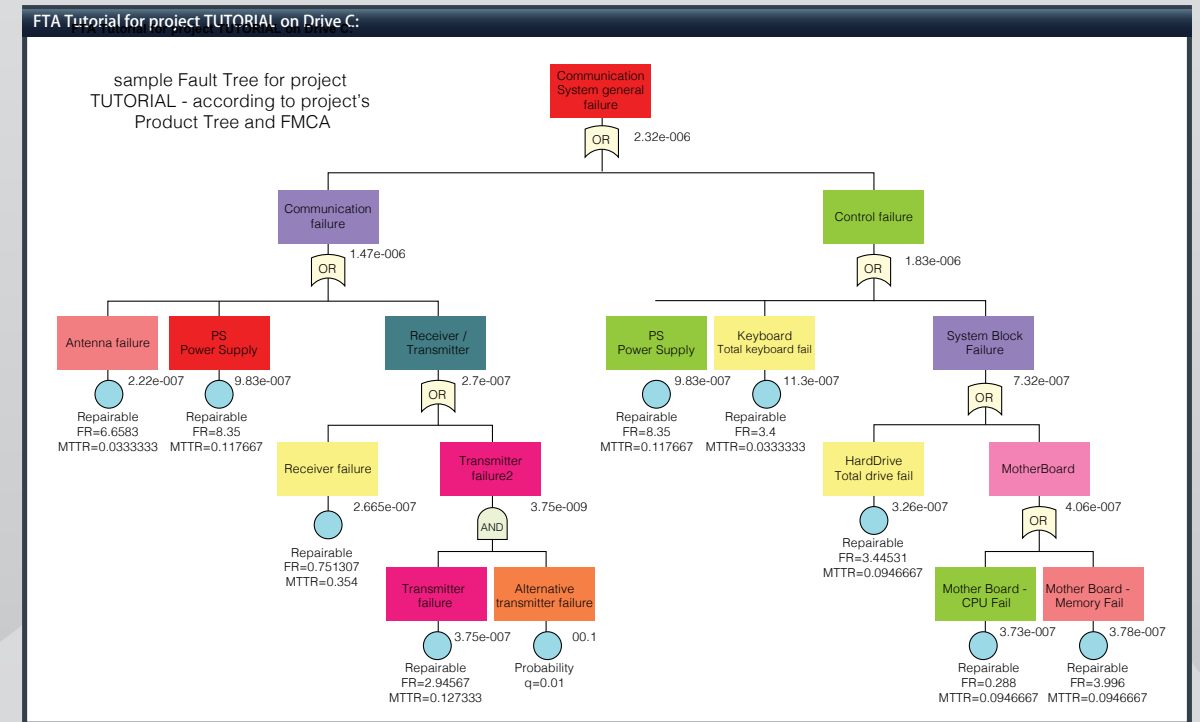
## FTA

A widely used method in system reliability and failure probability analysis, used to determine various combinations of hardware, software and human error failures that could result in specified risk or system failure.

Includes FT+, CAFTA and Aralia SIMtree import.

## Safety Toolkit

Implements safety tasks defined by the various safety assessment standards/ recommendations according to SAE ARP4754 A, ARP 4761, MIL-STD-882, FAR25-1309b.



## Partial List of ALD Customers:

