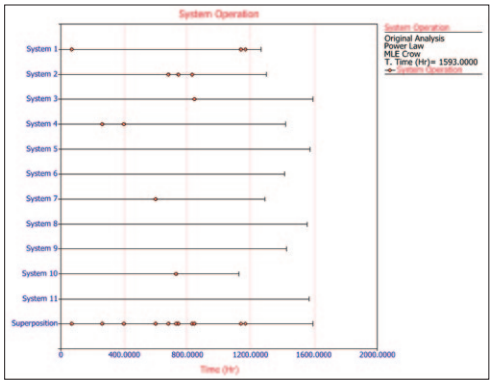
RGA®

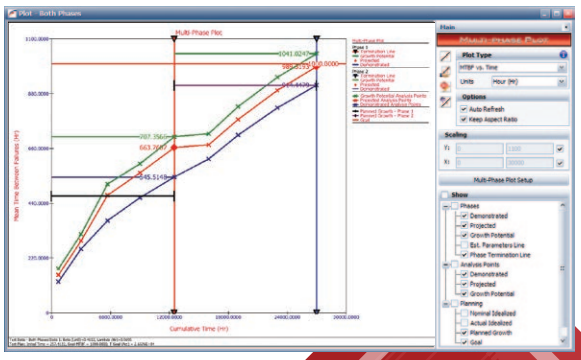
Reliability growth and repairable system analysis

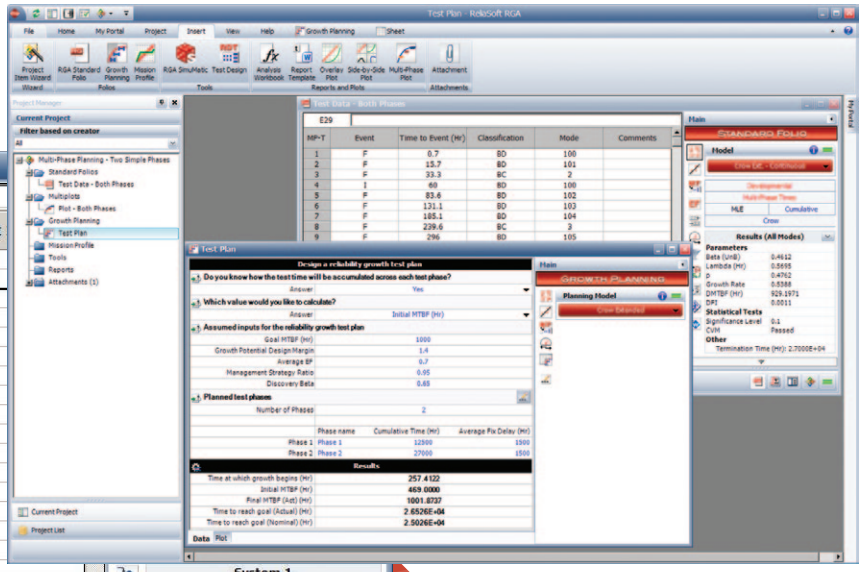


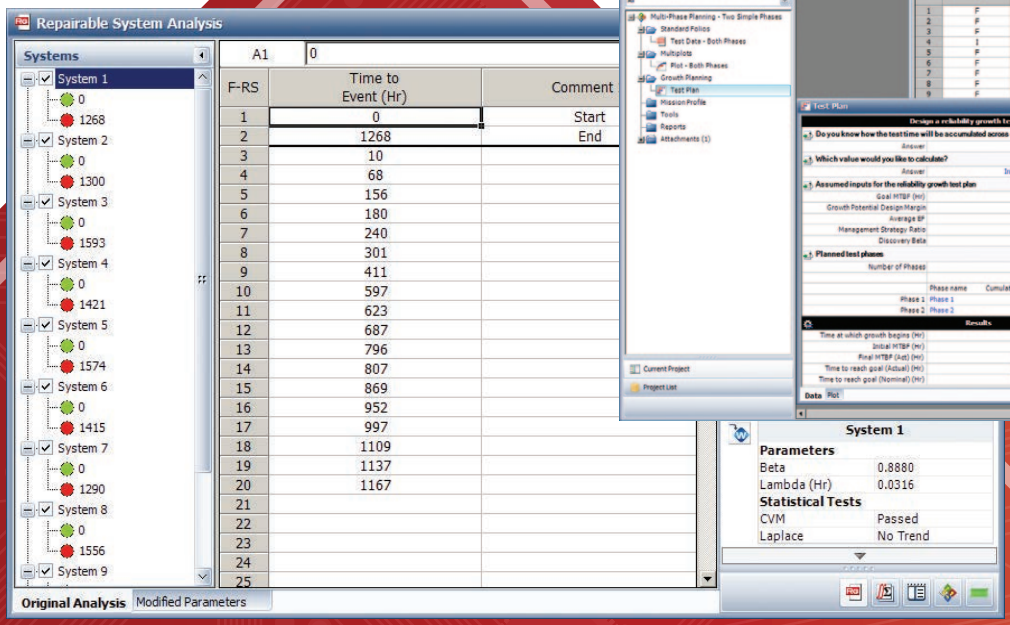
RGA provides all the tools you need to plan your reliability growth strategy and analyze data from developmental tests.

The software also applies reliability growth models for fielded repairable system analysis, which provides optimum overhaul times and other results without the detailed data sets that normally would be required.

RGA is part of the Synthesis Platform®.







http://RGA.ReliaSoft.com

Software Highlights - ReliaSoft's RGA

Data Types

- Times-to-Failure Data
  - Individual or Grouped
  - Multiple Systems
  - Multi-Phase Data
- Discrete (Success/Failure) Data
  - Individual or Grouped
  - With or Without Mode ID
- Reliability Data
- Fielded Systems Data
  - Repairable Systems
  - Fleet Data

Models for Traditional Reliability Growth Analysis

- Crow-AMSAA (NHPP)
- Duane
- Standard Gompertz
- Modified Gompertz
- Lloyd-Lipow
- Logistic

Models for Reliability Growth Projections, Planning and Management

- Crow Extended
- Crow Extended-Continuous Evaluation

Models for Fielded Systems

- Crow-AMSAA (NHPP)
- Power Law
- Crow Extended

Analysis Methods

(*depends on the data type and model*)

- Parameter estimation using Maximum Likelihood or Least Squares
- Confidence Bounds using Fisher Matrix, Crow or Least Squares
- Goodness of Fit Tests

Results and Plots - Traditional RGA

(*depends on the data type and model*)

- MTBF and Failure Intensity
  - Cumulative or Instantaneous
- Expected Number of Failures
- Reliability and Unreliability
  - Average or Instantaneous

Results and Plots - Growth Planning and Management

- MTBF (or Failure Intensity)
  - Demonstrated/Achieved
  - Projected
  - Growth Potential
- Cumulative Number of BD Modes
- Discovery Rate/MTBF for New BD Modes
- Crow Extended Future Projection

Results and Plots - Fielded Systems

(*depends on the data type and model*)

- Conditional Reliability and Unreliability
- MTBF or Failure Intensity
- Expected Number of Failures
- Optimum Overhaul
- System Operation Plot

Reliability Growth Program Plans for Multiple Test Phases

- Growth Planning Folio
  - Idealized Growth Curves
- Multi-Phase Data Sheets
  - Flexible Event Codes
  - Test for Fix Effectiveness
- Multi-Phase Plots
  - Show growth across test phases
  - Track test results against the plan

Mission Profile Folio

- Track actual vs. expected usage
- Convergence points to group test data

Utilities Based on NHPP Model

- Monte Carlo Data and SimuMatic®
- Test Design for Repairable Systems
- Interval Goodness-of-Fit Test

Other Integrated Utilities

- Quick Calculation Pad
- Quick Statistical Reference
- Synthesis Workbooks (spreadsheet and word processing modules combined)
- Function Wizard
- Overlay Plots and Side-by-Side Plots
- RS Draw® Metafile Graphics Editor

Import Types

- Microsoft Excel® Files
- Text Files (*.txt, *.csv, *.prn, *.smc)
- Analyses from RGA 6 and 7

Centralized Data Storage

- Standard Repository
- Microsoft SQL Server® and Oracle®
- Simultaneous Access by Multiple Users
- Shared Analysis Settings and Data
- Flexible User Access Levels

Integration

Integration with all other Synthesis Platform applications.

Multiple Languages Supported

For details, please visit:
http://www.ReliaSoft.com/languages

Available Services

- Detailed User Documentation
- Practical Example Files
- Theoretical eTextbook
- Step-by-Step Example Guide
- Training for Theory + Software
- Professional Consulting Services

Real Power for Real Applications

Some of the benefits of using the RGA software to apply powerful reliability growth models on either developmental or fielded systems data include the ability to:

- Quantify reliability growth achieved with each successive design prototype.
- Determine the feasibility of achieving reliability goals with a given test/fix strategy.
- Calculate optimum overhaul times and other results for fielded repairable systems without the detailed data sets that would normally be required.

Why Upgrade to Version 10? (for details, visit http://RGA.ReliaSoft.com/version10.htm)

- Major upgrades to the Synthesis Platform®, such as an integrated Project Planner with expanded actions tracking, automated watches and alerts, easier to find and filter analyses, batch properties editor for managing resources, better integration with Active Directory® for user account management, and the option to implement a Synthesis Enterprise Portal website.
- Optimum overhaul plot, Crow Extended future projection, improved system operation plot and mode fix list for event reports.
- New Synthesis Workbooks for custom reports, the ability to open multiple projects simultaneously and the option to import data from an external database (via the Synthesis Data Warehouse).