PTC®

the product development company®

Windchill® Prediction

## PERFORM RELIABILITY ANALYSES USING GLOBALLY ACCEPTED STANDARDS

Windchill Prediction (formerly Relex Reliability Prediction) provides a comprehensive, easy-to-use tool to estimate system reliability and MTBF (Mean Time Between Failures).

Windchill Prediction provides the basis for the reliability evaluation and analysis of systems by allowing you to assess reliability metrics early in the design process. Using Windchill Prediction, you can identify the leading contributors to system failure and measure the impact of environment and stress on the system. Intuitive interface tools, including extensive parts libraries and convenient import wizards, facilitate fast data entry and analysis, while helping you maintain full compliance with industry-standard models.

Key Benefits

Calculate Key Reliability Metrics

- Analyze components to predict and calculate the rate at which a product or system will fail

- Calculate failure rate and MTBF (Mean Time Between Failures)

- Prediction calculations are based on established, globally accepted models

- Combine models within a single analysis according to your needs

- Supports mission profile modeling, reliability allocation methods, and the ability to model both active and dormant states

- Supports derating analyses, user-defined parts, quality levels, and environments
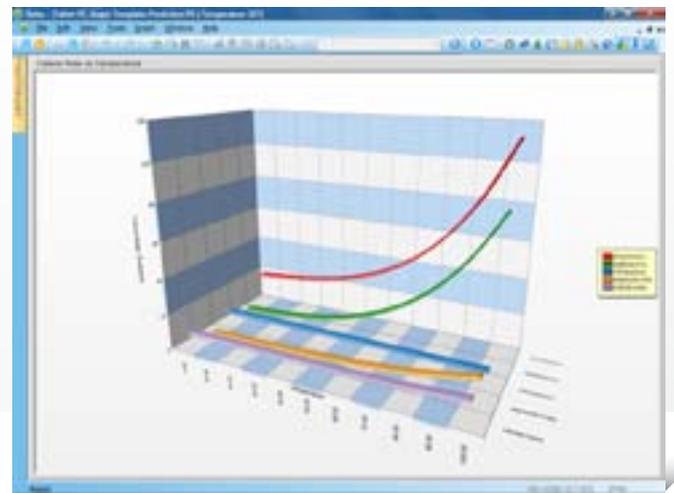
Windchill Prediction creates vivid, flexible graphs with easy-to-use, wizard-based design tools to present key system metrics.

Enterprise Edition Offers Direct Integration with Windchill

- Import a BOM from Windchill PDMLink or Windchill MPMLink

- Launch Windchill PDMLink or MPMLink from within Windchill Quality Solutions to view part information for linked parts

- Receive notification when Windchill BOM changes, check for updates upon startup, or check for updates while you work

- Sync selected parts or entire system tree with new Windchill BOM information

- Upon update, elect to preserve, archive, or delete legacy data

Automates Complex Processes

- Perform series reliability calculations and trade-off studies

- Account for operating conditions during calculation and analysis

- Account for stress parameters of components: temperature, environment, operating or rated voltage, and power stress ratios

Leverage Comprehensive Parts Libraries

- Instantly access extensive NPRD / EPRD databases of component failure rate information

- Update libraries regularly via Web downloads

- Store your own component parts and assemblies in a searchable library with drag-and-drop functionality

Convenient, Intuitive Interface Tools

- Import bills-of-material and other data files quickly and easily using the convenient Import Wizard

- Powerful filtering and search functions let you navigate large amounts of data quickly

- Customizable lists and auto-fill fields speed up the data entry process, letting you focus more time on your analysis

- Supports global data modifications

Features and Specifications

Included Globally Accepted Prediction Standards

- FIDES Guide 2009 and earlier

- MIL-HDBK-217F

- Telcordia

- PRISM

- 217Plus

- RDF 2000

- IEC TR 62380

- NSWC Mechanical

- Siemens SN29500

- Chinese GJB/z 299C

- HRD5

Included Derating Standards

- AS-4613A

- AS-4613B

- AS-4613C

- MIL-HDBK-1547

- MIL-STD-975M

- TE000-AB-GTP-010

Reliability Allocation Methods

- Base, non-normalized

- Base, normalized

- Equal apportionment by components

- Equal apportionment by subsystems

- ARINC

- AGREE

- Feasibility of objectives

- Repairable system

Supported Calculations

- Failure Rate

- MTBF

- MTTR

- Reliability

- Availability

- Mission Profile Results

- User-Definable

Sample Analysis Outputs

- Failure rate vs. operating temperature

- Failure rate vs. environment

- Failure rate vs. operating stress

- Top (n) failure rate contributors

- Reliability vs. time

- Availability

Supported MTBF Adjustment Techniques

- Telcordia Method II: laboratory data

- Telcordia Method III: field data

- Device burn-in

- Process grades

- Bayesian

- Predecessor data

- User-defined

Extensive Parts Libraries

- Windchill Quality Solutions parts library with over 400,000 parts

- NPRD library with over 13,000 parts

- EPRD library with over 17,000 parts

- User-defined library

Input and Output Data in a Variety of Formats

- Easily import from or export to commonly used formats like Microsoft Excel, Microsoft Access, XML, and plain text files

- Create reports in Microsoft Word, Microsoft Excel, Adobe PDF, and Rich Text Format (RTF)

- User-definable, wizard-driven custom graphs and reports

- Dynamically link to other Windchill Quality Solutions modules, such as Windchill FTA, Windchill FMEA, Windchill FRACAS, Windchill LCC, Windchill Maintainability, Windchill RBD, and Windchill Weibull

Available Enterprise-Class Features

- Multi-user environment with login permissions, security features, administrator control, and audit trail functionality

- Database integration at enterprise level supports Microsoft SQL Server 2000, SQL Server 2005, SQL Server 2005 Express, SQL Server 2008, SQL Server 2008 Express, Oracle 9i, Oracle 10g, or Oracle 11g

- Feature-rich FlexNet license management tool

- Integration with Windchill PDMLink ensures a single, up-to-date version of the product BOM

Supported Languages

- English, French, German, Japanese, Korean, Russian, Simplified Chinese

For More Information

For more information on Windchill Prediction, please visit:
PTC.com/products/windchill/prediction