

Reliability Modeling and Prediction

What is it?

A reliability model mathematically defines the interdependencies between hardware/ software/human elements and their combined contributions to failure. A prediction calculates failure rates using that model so that a reliability metric can be quantified to assess design tradeoffs, and as an estimate of operational reliability after a product is delivered.



What's the payoff?

The modeling/prediction/assessment process facilitates greater understanding of the impact of failure mechanisms and modes on critical design performance parameters, allowing an organization to cost-effectively modify the design and efficiently allocate resources to mitigate their impact.



How can we help?

- › Develop a reliability model/prediction of your designs using your data, or commercial failure rate and life methodologies (217Plus™, MIL-HDBK-217, Telcordia, Nonelectronic Part Reliability Data (NPRD), Physics-of-Failure, etc.)
- › Use the results to identify specific areas of reliability risk and recommend approaches to eliminate or reduce them
- › Use models and simulation techniques to perform (or help you perform) tradeoffs to compare results for different design alternatives
- › Tailor reliability modeling, simulation and prediction tools for your company's internal use
- › Perform an objective review of reliability models/predictions performed by others
- › Develop specialized reliability-based tools/databases

