

“On Establishing an Effective Reliability Growth Program: Planning and Data Analysis”

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Reliability growth has been widely used in many different industries, especially in defense related sectors. The first reliability growth standard, MIL-HDBK-189, was created in early 1980s. It provided guidelines on reliability growth planning and data analysis for military and defense related companies. Since then other industries such as automotive and medical device have followed. However, different industries have their unique challenges, although timing and limited number of product prototypes are always in common. In this presentation, we will use the automotive industry as an example to illustrate a general process of conducting a reliability growth program. Topics will be covered in this presentation are:

Commonly used methods on establishing customer/test profiles such as event, load, mileage, road types, trip frequency, and trip duration.

Commonly used methods on setting up targets for reliability growth test in auto industry
Commonly used methods on determining the number of test vehicles. Different data types in reliability growth test in auto industry. Different reliability metrics used in reliability growth test.

Speaker Biography

Huairui (Harry) Guo is a Sr. Reliability and Statistics Specialist in the systems and components reliability group at FCA US LLC. He is working on reliability growth, warranty data analysis, degradation and accelerated life testing, and statistical method applications on quality and reliability engineering. He also provides internal trainings for quality and reliability engineers in the company. Harry obtained his PhD in systems and industrial engineering from University of Arizona in 2004. He is a Certified Reliability Professional (CRP), a Certified Reliability Engineer (CRE) and a Certified Quality Engineer (CQE). He is the winner of multiple awards from IIE (Institute of Industrial Engineers) and SRE (Society of Reliability Engineers). Before joining FCA US, Harry worked for ReliaSoft for over 10 years as the Director of the theoretical development group.
