

New Military Handbook 189C, “Reliability Growth Management”

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SUMMARY

The U.S. Army Materiel Systems Analysis Activity (AMSAA) published the new MIL-HDBK-189C, “Reliability Growth Management,” which is critical for implementing the new Office of the Secretary of Defense (OSD) and Army reliability policies.

BACKGROUND

Reliability growth management procedures have been developed to improve the reliability of Department of Defense (DoD) weapon systems. Reliability growth techniques enable acquisition personnel to plan, evaluate and control the reliability of a system during its development stage. The reliability growth concepts and methodologies have evolved over the last few decades by actual applications to military systems. Through these applications, reliability growth management technology has been developed to the point where considerable payoffs in system reliability improvement and cost reduction can be achieved.

WHAT'S NEW

Reliability growth encompasses 3 areas: planning (prior to test data), tracking (using test data), and projection (using test data and applying fix effectiveness factors). Thirty years of lessons learned has culminated in the recent development of several models in each of these areas. Collectively these reliability growth models are referred to as the AMSAA Visual Growth Suite and are available free of charge to US government personnel and their supporting contractors.

One of the most significant models to note is the Planning Model Based on Projection Methodology (PM2). It develops a system-level reliability growth planning curve that incorporates the developmental test schedule and corrective action strategy. Benefits include risk reduction, construction of feasible reliability test programs, and bridging the gap between engineering efforts and program constraints with the overall reliability program.



CONCLUSION

AMSAA published MIL-HDBK-189C, “Reliability Growth Management,” in June 2011 to reflect recent development of reliability growth concepts and methodologies based on applications to military systems. Comments from Reliability Subject Matter Experts within the Army, Navy and Air Force were incorporated. The updated handbook supports new OSD and Army reliability policies and was posted to the Acquisition Streamlining and Standardization Information System (ASSIST) database for use by all of DoD.

BIOGRAPHY

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