

## **Development Process Software Prediction Model**

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This reliability model provides a prediction of the delivered software and a growth profile for how the reliability is projected to grow over time, after release to the field. This model uses the CMMI reliability process rating system project the quality of the delivered code. This process rating is further tempered by the code extent, operational profile measures, and the developer's historical field experience. This model will set a standard for code reliability performance. This estimate can be upgraded as inspection and test data are obtained.

#### **Bio:**

Dr. Samuel Keene: Consultant; Past-President of IEEE Reliability Society; IEEE Fellow. Dr. Keene has been a Six Sigma Senior Master Black Belt since 1999. He consults and teaches six sigma, requirements development, and project management throughout the world. He leads Six Sigma initiatives via Black Belts, Green Belts, Champions, and DFSS, both in hardware and software. He certifies new Black Belts and Green Belts. He and 12 other experts developed the body of knowledge standard for the ASQ Black Belt Certification exam. Dr. Keene has been the software and system reliability lead on several military and aerospace programs. He has taught at George Washington U, Prairie View A&M, and the U of Colorado. His PhD is in Operations Research from the U of Colorado. He also holds BS and MS degrees in Physics and has completed his MBA course work. Dr. Keene is a Recognized International Resource in the R&QA field. Among his honors: IEEE Reliability Engineer of the Year (1999); ASQ Allan Chop Education Award (1999), IEEE Education Award (2000); and the IEEE Millennium Metal (2000). In IEEE, he has served as President of the Reliability Society (RS), and is presently on the IEEE Technology Management Council and was VP of RS Technical Activities. He founded the IEEE RS Denver Chapter, where he currently serves as the chapter chair. He produced 10 video tutorials: "Software Development", "Software Reliability," and "Concurrent Engineering" for NASA, NTU, and the IEEE. He has published over 200 technical papers and book chapters. Sam was the co-principle developer of the PRISM reliability model. He has also worked on updates to the MIL HDBK 217 models.