Data Collection and Analysis using the Minitab Statistical Tool

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Abstract:

Basic experimental design and data collection and analysis techniques will be shown. First there will be examples of mistakes made in taking experimental data and using that to draw erroneous conclusions. The importance of taking the right data will be shown. The technique of determining the gage of the data, to verify its measurement capability will be taught. Then determining the appropriate sample size will be demonstrated. Basic statistical analysis techniques will be demonstrated. Lastly the power of Design of Experiments will be shown. Every experiment should have DOE underlying it. This is the most effective and efficient testing technique.

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.