Future Ground System Software Estimation and Metrics
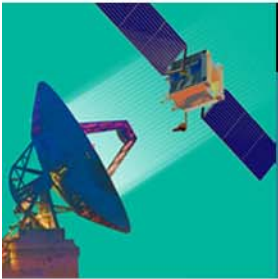
Working Group Preview

Barry Boehm, USC Systems Engineering Research Center;
Bradford Clark, USC and SW Metrics;

Ray Madachy, Navy PGS;
Wilson Rosa, AF Cost Analysis Agency

Working Group Session 11F

Future ground system software will have more complex sources of size and effort such as its use of model-driven and other types of software generators; its use of net-centric services; its involvement in systems of systems and families of systems; its need to more rapidly adapt to change; and its involvement in evolutionary acquisition and more agile methods. These bring with them the need for a next generation of software metrics and estimation methods, such as the incremental development productivity decline factor for estimating the reduction in productivity for later increments in evolutionary or incremental development. USC is working with the Air Force Cost Analysis Agency on the definition of such estimation methods and metrics, and on the development of a guidebook including their definition and use in first-order productivity estimation for various classes of software, including ground systems software. This working group will review and iterate drafts of these definitions and estimation factors for ground system software.