

GSAW 2012 Tutorial F:

Introduction to Ground System Development

Length: Half day

Overview:

This tutorial will begin with a ground system overview covering the major functional areas within a ground segments, the interrelationship between major functions, and the modes of ground system operation. Next ground systems transmit and receive functions will be discussed; common transmit and receive elements and subsystems will be described. The tutorial will provide COTS Lessons Learned, including case studies on past problems when using COTS components and on how to successfully use COTS in ground systems development. Finally the tutorial will discuss current and future ground system trends with case studies on current ground system architectures and discussion on future technology trends and implications for ground system architectures. Class examples and exercises will be drawn primarily from issues that confront designers, builders and users of satellite ground systems.

Instructors: James Anderson, Donald Town, James Shneer, The Aerospace Corporation

Biographies:

The instructor team includes senior members of the Aerospace Corporation technical staff. The average years of industry experience for the team is 30.

J. V. Anderson:

B.S. in Information Technology, University of Phoenix

Over 30 years experience in all aspects of ground system acquisition and system engineering with emphasis in modeling and simulation; test planning, test definition and execution; requirements definition and analysis, system deployment, and operations.

J. A. Shneer:

B.S. in Mathematics, George Washington University

Over 41 years of experience in program management and systems engineering. Responsible for requirements definition, source selection, site selection, system and software design, development, test, deployment, operations and retirement for over a dozen major satellite ground systems and public safety computer-assisted communications systems.

D. E. Town:

Ph.D. in Applied Mathematics, Brown University

M.S. in Mathematics, The Ohio State University

B. A. in Mathematics/Physics, DePauw University

Over 25 years at the Aerospace Corporation with engineering experience in satellite ground system acquisition support, Independent Readiness Reviews, ground system engineering studies, and ground system test and integration support. Acquisition activities supported

include software development and test and the development of requirements, operational concepts, and ground architectures. Ground system and software support for Aerospace Concept Design Center (CDC) Space Segment, System Architecture and Ground Systems Teams.

What Participants Should Expect to Learn:

Exposure to tutorial material on topics of high current interest in satellite operations ground systems. Increased awareness of ground station transmit and receive functions, COTS lesson learned, and current/future trends.

Who Should Attend:

Personnel responsible for the staffing, management, acquisition, development, and/or maintenance of ground systems. No specific ground system expertise is required. Material is DOD-centric.