

## **GSAW 2014 Tutorial B:**

An Overview of Ground Systems for Satellite Operations and Updating Legacy Ground Systems for Future Needs

**Length:** Half day

### **Overview:**

#### Tutorial Detailed Objectives

An Overview of Ground Systems for Satellite Operations and Updating Legacy Ground Systems  
Ground Systems Overview

- Increased awareness and understanding of:
  - Major functional areas within Ground Segments
  - Interrelationship between major functions
  - Modes of operations

Ground Systems Transmit and Receive Functions

- Become familiar with the basic functions for transmit and receive
- Gain exposure to common transmit and receive elements and subsystems

Managing and Using Commercial Off the Shelf Products

- Case studies on past challenges when using COTS components
- Case study on how you can successfully use COTS in development

Evolving Legacy Ground

- Updating legacy systems to meet new requirements / missions

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

### **Biographies:**

#### **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.

#### **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 The Aerospace Corporation's Concept Design Center (CDC) Space Segment, System Architecture and Ground Systems Teams.

### **Description of Intended Students and Prerequisites:**

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.

**What can Attendees Expect to Learn:**

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