

## **GSAW2009 Tutorial H:**

XTCE Tutorial

**Length:** Half Day

### **Overview:**

The XTCE tutorial will present principles of the CCSDS/OMG XTCE standards for describing telemetry and tele-command information using XML. Benefits and potential will be discussed concerning its use in information exchange, and a conceptual multimanufacturer, vendor, government approach to adapting an interoperable control center to a new satellite in 48 hours. Participants will learn to construct XTCE documents using the primary XTCE elements that describe telemetry and commanding. XTCE elements pertaining to individual telemetry item descriptions will be covered including bit length, data type, format (i.e. IEEE-754), calibration and alarm information. Presentation of XTCE elements related to packaging: descriptions for packets or TDM frames will follow, and then lead into a similar discussion concerning commands, arguments and command packaging. Finally a simple telemetry packet and command will be shown as an example, applying what was previously discussed. The tutorial will conclude with a brief discussion of creating and parsing XTCE files using Java and XSLTs.

**Instructors:** Kevin Rice, Global Science & Technology, Inc.; Brad Kizzort, Harris Corporation

### **Biography:**

Kevin Rice - Involved with OMG and CCSDS XTCE efforts since its inception in 2000, co-authored the XTCE OMG specification, and the various CCSDS books, including the blue book, the green book and upcoming magenta books. A software developer with a broad range of experience including CCSDS related space systems. Education: Computer Science University of Maryland

Brad Kizzort is a Systems Engineer in the OS/COMET product group at Harris Corporation. He has over 25 years experience in developing monitoring and control systems. He also currently serves as co-chair of the Space Domain Task Force within the Object Management Group consortium. He was involved with the SDTF during the original publication of XTCE and was chair of the revision task force for XTCE 1.1.

### **Who Should Attend:**

Basic familiarity with XML and XML Schema would be useful and of course traditional space based telemetry and commanding. Basic familiarity with object oriented concepts.