

GSAW 2010 Tutorial G:

XML Telemetry and Command Exchange (XTCE) Tutorial

Length: Half Day

Overview:

This tutorial will present principles of the CCSDS/OMG XML Telemetry & Command Exchange (XTCE) standard for describing telemetry and tele-command information using XML. Participants will learn how to use its major elements and attributes to describe:

- Telemetry parameters including calibration and limit checking
- Telemetry formats (such as CCSDS packets or minor frames)
- Command parameters and arguments
- Command formats and additional aspects of commanding like verification

Examples will be given of these various areas and a single cohesive real world example will be presented that ties it all together.

In addition aspects of the GOVSAT project will be presented which is an inter-agency effort to standardize on a specific XTCE usage. If time permits revision issues for XTCE1.2 will be presented.

For developers, the tutorial will conclude with examples and lessons learned for parsing and converting XTCE files using Java and XSLTs.

Instructors: Kevin Rice, Global Science & Technology, Inc.; Brad Kizzort, Harris Corporation; Gerry Simon, Integral Systems, Inc.

Biographies:

Kevin Rice has been involved with OMG and CCSDS XTCE efforts since its inception in 2000. He co-authored the XTCE OMG specification, and the various CCSDS books, including the blue book, the green book and upcoming magenta books. He has been a software developer with a broad range of experience including CCSDS related space systems. He holds a degree in Computer Science from University of Maryland.

Brad Kizzort has developed satellite command and control solutions for over 20 years in defense, civil, and commercial applications. He has worked in the reusable software products group at Harris Corporation, Atlantic Portfolio Analytics & Management, Level 5 Research, and Scientific Systems & Services. He is currently the Chief Systems Engineer for the OS/COMET(R) Product group at Harris Corporation.

Gerry Simon is a Systems Engineering manager for Integral Systems. Gerry first presented XML as a Spacecraft database Spacecraft Ground System Database Interchange technology at GSAW in 2000. Gerry worked with industry and government partners within the OMG and CCSDS to advance this idea

from concept to completion - now known as XTCE. Gerry chaired the OMG XTCE finalization task force. Gerry has a masters in computer engineering, 20+ years in aerospace and is known to enjoy German music played by lederhosen wearing accordion players.

What Participants Should Expect to Learn:

Focus Issues: Interoperability and standards and rapid system development

Who Should Attend:

For developers, the tutorial will conclude using the examples and lessons learned for parsing and converting XTCE files using Java and XSLTs.