**GOES-R Proving Ground AWIPS II System Administration Course Syllabus**

**Purpose**

The purpose of a multi-day course held at the National Weather Service Training Center in Kansas City is to educate the proving ground partners and testbed liaisons about the process required to develop plug-ins, ingest various satellite-related data formats (e.g. netCDF4, McIDAS AREA), and display those images and products. It is intended to incorporate elements of the system administration course offered to NWS Information Technology Officers (ITOs).

**Prerequisites**

Attendees should have previous knowledge of Java and Python (including numPy), with a pre-existing understanding of foundational object-oriented programming concepts, as well as familiarity with the basic structure and hierarchy of the AWIPS II code.

*All attendees should bring a laptop with the latest version of the AWIPS II software. Completion of daily programming exercises will be required.*

**Objectives**

Upon successful completion of the course, attendees should know:

* How to build deploy a new plug-in from the Eclipse AWIPS Development Environment (ADE)
* How to interface a pre-built plug-in with the Environmental Data EXchange (EDEX) and Common AWIPS Visualization Environment (CAVE)
* Basic AWIPS II troubleshooting (with or without ADE), including directory structure of logs, and general log file interpretation
* The concept of end points and location of end points for satellite data, as well as use of the Local Data Manager (LDM) to feed data
* The basics of the AWIPS II localization process, including XML syntax, particularly related to satellite data, derived products, and color maps
* The structure of the postgres databases (for metadata and static tables) and simple commands to add or filter entries
* Constraints of the current GINI and McIDAS AREA decoders (e.g., allowable navigations, bit depths)
* Details of components of the netCDF4-CF file structure necessary to reproduce that format for use with a AWIPS II future decoder
* OpenGL Shading Language syntax (GLSL)
* Process for submitting code into the baseline and other related governance issues

**Length**

The course will require approximately three to four days of on-site learning.

*Last updated December 20, 2011, by Jordan Gerth, CIMSS/SSEC*