

Geo-Targeted Alerting System Transition to Operations

General

The Geo-Targeted Alerting System (GTAS) Project is a joint effort between the Federal Emergency Management Agency (FEMA), the National Oceanic and Atmospheric Administration (NOAA). As part of the Integrated Public Alert and Warning System (IPAWS), GTAS is a FEMA supported pilot project to identify future requirements of how National Weather Service (NWS) Weather Forecast Offices (WFOs) can provide state and local government emergency management agencies with high- resolution toxic plume and critical weather information. GTAS also provides emergency managers with an integrated public warning capability using Common Alerting Protocol (CAP) messages that are disseminated to the IPAWS warning aggregator. Thus, the basis for this project is to provide advanced capabilities to state and local government Emergency Operations Centers (EOC) to enhance public safety in the event of an atmospheric toxic release or severe weather events.

Pilot Project Demonstrations and Requirements Gathering

The National Oceanic and Atmospheric Administration's (NOAA) Global Systems Division (GSD) is leading the development of the prototype GTAS servers and client application. GTAS servers and clients are deployed to various state and local government emergency management agencies along with their respective local NWS WFOs. For each pilot demonstration site the WFOs are provided a high-resolution toxic plume model that's initialized with very high-resolution wind and atmospheric stability gridded data. The GTAS client applications ingest, process and display the plume data along with other advanced weather information that will be available from NWS WFOs in the future. Routine training sessions are performed, toxic release scenarios are practiced and user feedback is gathered from each demonstration site. User feedback is used to make changes and upgrades to the GTAS clients and servers.

GTAS Transition to Future Operations

The NWS is in the midst of a multi-million dollar modernization of its forecast and public warning system, the Advanced Weather Information and Processing System-II (AWIPS-2). The original AWIPS forecast and warning system will be replaced with AWIPS-2 through a series of software builds and version releases to WFOs nationwide. The first version of AWIPS-2, planned for initial release in 2012, will emulate exactly the functions and capabilities that exist today in the current AWIPS. Successive software releases will include new products, functions capabilities.

The integration of GTAS requirements (and other upgrades) occurs through the Operations and Services Improvement Process (OSIP). OSIP is the NWS requirements-based management process for adding new products and capabilities. OSIP is structured so that needs throughout the NWS can be identified and solutions to those needs can be developed and integrated into AWIPS-2.

GTAS OSIP integration into AWIPS-2 goes through a process that passes through four “gates”. Each gate represents the next step forward to complete the integration into AWIPS-2 and readied for deployment to NWS field offices. The work that IPAWS is conducting with development and deployment of GTAS demonstration systems into NWS WFOs and their respective EOCs is providing the input and needed documentation to develop a “Statement of Need” which is required to pass through Gate-1.

Below is a diagram showing how these new capabilities are initiated, from the collection and validation of need (Gate-1) through deployment (Gate-4) into AWIPS 2. GTAS Gate-1 documentation should be completed by November 2010.



