



## Overview

Emergent Space Technologies, Inc. has developed a generic system to page satellite operators in the case of unexpected satellite conditions. The paging system was designed to easily integrate with ground systems using Goddard Mission Systems Environment Center (GMSEC) standards.

## Background

Under budget pressure, NASA missions have eliminated operations staff and introduced paging system to page operators if an irregularity occurs. With the acceptance of NASA's Goddard Mission Services Evolution Center (GMSEC) ground system architecture, many missions require the paging system to be GMSEC compatible.

As ground systems modernize, missions are consolidating their automation logic to a single, powerful automation engine. Whereas previous paging systems monitored the state of the satellite and had their own logic for when to send a page, new paging systems must leave the logic to other tools and focus only on sending a page when told.

## Features

Emergent has built ANSR, a 100% reliable, GMSEC compatible paging system. ANSR uses no logic, but listens via GMSEC for commands to page an operator or group.

ANSR can work on a closed or open network. ANSR can notify via a pager, cell phone, email, or pop-up window. ANSR can recognize acknowledgement by the operator and supports call chains if no acknowledgement is received. ANSR requires no integration costs; it is easily installed and comes with graphical tools for configuring who can be paged.

## Reliability

The paging system is the most critical link of an unstaffed ground system, and ANSR offers a fully reliable solution. Each component of ANSR can be duplicated for redundancy, and the system will failover if problems occur. ANSR provides contingencies for all systems not under its control. For example, if the paging provider is not available ANSR can try a different paging provider, and if the internet is not reachable ANSR can email or send pop-up windows to computers on the local-area network.

## Missions Using ANSR

- Tropical Rainfall Measuring Mission (TRMM)
- Small Mission Explorers (SMEX)
- Terra

### Planning to use ANSR

- Aura
- Aqua
- Space Technology 5 (ST5)
- Global Precipitation Monitor (GPM)

