Global Broadcast Service (GBS)

Proficiency Code: A

The *Global Broadcast Service (GBS)* capitalizes on the popular commercial direct broadcast satellite technology to provide critical information to the nation's warfighters. The *GBS* system is a space based, high data rate communications link for the flow of information from the United States or rear echelon locations to deployed forces. The *GBS* mission provides warfighters with a one-way, high data rate, and high volume intelligence information to forces garrisoned, deployed, or on the move. *GBS* disseminates IP-based real-time video and large data files (up to 4+ GB in size) over-the-air (24 Mbps per transponder) to garrisoned and deployed combat forces. The first fielded variant of the *GBS* was in Bosnia in 1996. Also special nodes were set up in the aftermath of Hurricane Katrina in 2005.

Currently, *GBS* broadcasts via communication payloads on military satellites (Ka band) and commercial satellites (Ku Band). *GBS* transmit sites in Norfolk Virginia, Sigonella Italy, and Wahiawa Hawaii currently service 600+ *GBS* receiver suites deployed worldwide at Army, Marine, Navy and Air Force ground sites and on shipboard and subsurface platforms.

GBS is not intended to replace existing Military satellite communications) MILSATCOM systems in any way. Instead, *GBS* uses a "push and store" method to distribute high-bandwidth information for local relay, thereby saving critical two-way MILSATCOM systems from having to handle every field request. To accomplish this, the *GBS* "pushes" a high volume of packaged data to widely dispersed, low cost receive terminals like Eyaktek's Satellite Receive Suite, whose function resembles the set-top smart cable television storage box used in your home.

The other thing that makes *GBS* so attractive is the ability to provide high-volume data directly to 18-inch antennas, allowing significant volumes of data to be streamed and stored in devices that can move with units in the field. Ground terminals with antenna diameters of 0.6 to one meter receive data at rates up to 24 Mbps per transponder from either of the two 500-nautical-mile diameter spot beams. Data rates up to 1.5 Mbps can be achieved through the 2000-nautical-mile diameter spot beam. Data is transmitted to the transponders through fixed and transportable transmitters.