

BSS

Best Source Selector

KRATOS | RT LOGIC



Overview

The Best Source Selector (BSS) is a high-performance solution designed for telemetry applications requiring constant evaluation and automatic selection of the best source of data. Manual operation of the selection process is also supported to account for anomalous conditions or requirements for constant person-in-the-loop. The system is flexible and highly configurable for specific mission needs.

Application

The BSS employs an advanced algorithm that selects and switches a set of telemetry streams based upon real-time telemetry stream quality. Multiple sets of user-configurable parameters can be saved and restored to enable rapid operational configuration. The system interfaces to a variety of non-blocking matrix switches to perform the selection function, and includes support for Range Safety, Range User, and analog IRIG streams.

The BSS Server, housing up to four digital front-end processor cards, provides the real-time telemetry monitoring capability of the user-selected channels. Each digital front-end processor card accepts six inputs and simultaneously performs frame synchronization on each. Quality of Signal for each channel is then determined by the onboard Field-Programmable Gate Array (FPGA) using user-defined parameters. The high-speed BSS Server utilizes each processed channel's signal quality to determine the best available source of data, and outputs the selected data accordingly.

The user can set several parameters to configure the behavior of the automated switching control. The user also has the option of manually selecting any configured group of signals to be relayed by overriding the automatic algorithm.

Configuration and operational monitoring and control are available at the built-in display. In addition, the Graphical User Interface (GUI) can be run on a remote display (requires Ethernet connectivity) and the socket-based API (utilizes the OMG GEMS standard) allows for custom integration into user environments.