

Satellite On-board Processing Technology Demonstration

The objective of the experiment is to establish a two terminals demo for utilizing satellite on board processing technology with for the future development of deployable interoperable communications for commercial and government partners (SouthComm, NorthComm, DISA, INS, etc.).

The system architecture to be used is DVB-S/DVB-RCS with the Amerhis on-board processing platform embarked in AMAZONAS (61°W) satellite, for broadband communications utilizing multi-beam, oriented to mesh connectivity and multimedia applications with ground terminals with IP connectivity.

Among many features that can benefit potential commercial and government customers are the deployment of VSAT networks utilizing one-hop mesh connectivity, allowing almost real time applications, full cross connection, and satellite multicast utilizing DVB-RCS standard terminals. There is a considerable link budget improvement because of the regenerative characteristics of the on-board processing technology and utilization of transponder saturated carriers. Besides that, it is possible to provide up to 32 simultaneous connections per user terminals (RCST).

The demo will demonstrate mesh services with lan interconnection with three quality of service classes (QoS), allowing multiple applications such as Internet access, audio and video conferencing (access to ISDN) and dynamic multicast.