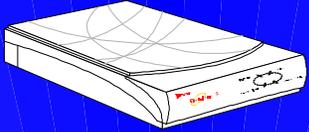


Orbitor
3000



APPLICATION NOTE

Orbitor Supports Satellite Links !

Orbitor Satellite Support (Modulo 128) is now included as a standard feature on the Orbitor 3000 leased-line platforms. It is intended for use in applications where end-to-end transmission of data regularly encounters delays. Delays are inherent with satellite transmission paths as data must travel a great distance to/from an earth-orbit satellite, causing signal response delays of two seconds or more.

Satellite Support differs from the default Modulo 8 mode in that instead of allowing 7 (8 minus 1) packets to be 'outstanding' (waiting for ACKnowledgement) as in the default mode, Modulo 128 allows up to 127 packets to be outstanding. This extended ACK period provides the extra time needed where delay-prone links like earth-to-satellite installations are used.

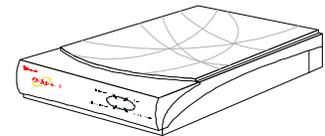
The use of the Satellite Support Option is generally intended for links speeds of 64K and below which are typical satellite link speeds,

though it may be used at higher speeds.

Satellite Support is not limited to Satellite transmission and may be found to be useful under many circumstances where delay over the WAN circuit is lengthy.

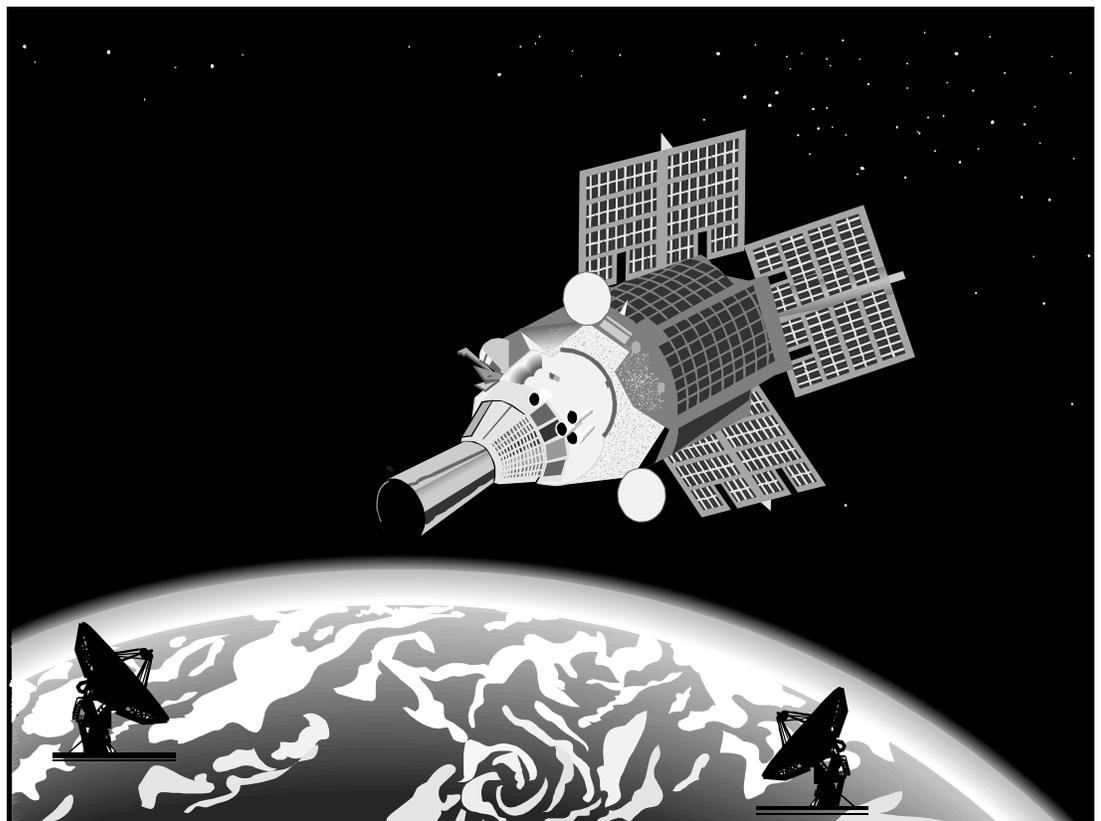
With Satellite Support enabled, a sending Orbitor at site "A" can send up to 127 frames onto the link before it will expect to receive an ACK of the first frame from the receiving Orbitor at site "B".

Without this option enabled, 7 frames can be outstanding before an ACK is expected. With terrestrial, and in particular with fast, high-reliability digital lines, the standard Modulo 8 acknowledgement scheme is sufficient.



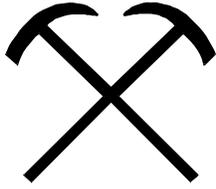
See Application on Page 2

- Improves performance on troublesome, delay-sensitive links.
- Creates a fault-tolerant internetwork.
- May also be used in terrestrial internetworks.
- Simple enable/disable operation.
- Data compression supported over satellite link.
- Included with Orbitor 3000 bridge/routers.



The Instant Connection

Develcon



Global Exploration

This company is a world leader in resource exploration and mine development. It has well over a dozen mines scattered throughout the Americas, Asia, Russia, and is now involved in a joint venture in China. Exploration is an ongoing activity on every continent with 1996 already showing signs of becoming a record year for exploration.

Because most exploration efforts are usually in inaccessible, often mountainous regions, communication via traditional methods is rarely possible.

To provide the exploration and survey camps with the means to contact their respective regional operations centers, a satellite communication system has been deployed for use in the field.

Installed in a briefcase-sized carrying case, the system permits voice, fax and data to be up- and down-linked via the IMMARSAT-M/B satellite network at speeds of up to 64kbps from any location in the world.

Regional centers gather and process field data for daily reports to the head office, and occasionally need to allow a field camp to 'pass through' critical data directly to the head office.

Where possible the company utilizes conventional terrestrial links back to the head office, though with the recent acquisition of the satellite communication system there is a need for satellite-capable inter-office routers to route data.

The company is also considering an offer by the satellite service provider to move a portion of the company's terrestrial traffic over the satellite links to take advantage of an attractive volume pricing package offered by the service provider.

Develcon's Orbitor 3000 IP/IPX Bridge/Routers with Satellite Support were chosen after an initial demonstration proved their ability to handle the delay-prone satellite traffic.

Also, compression was specified on the Orbitors to further increase the throughput over the satellite links (speeds above 64kbps are very expensive via the satellite links).

The Company is also impressed with the security features offered by the Orbitors. Not only can they be configured to talk only to their partner Orbitors, but the filtering capabilities are such that only authorized traffic is allowed to activate and utilize the satellite links.

