

**ALPHA LYRACOM SPACE COMMUNICATIONS, INC.
SATELLITE CONTROL CENTERS AND ALLIED TELEPORTS**

PAS-1 Operations Control Center:

Homestead International Gateway Teleport
143 North Flagler Avenue
Homestead, Florida 33031
Phone: 305-247-7055
Facsimile: 305-245-3720
Station Manager: Wil Zarecor
24-Hour Satellite Control Center
Ad-Hoc bookings, goodnights and trouble reports

Headquarters/Main Office:

Alpha Lyracom Space Communications, Inc.
One Pickwick Plaza
Suite 270
Greenwich, Connecticut 06830
Telephone: 203-622-6664
Facsimile: 203-622-9163
24 hour traffic number: 203-622-8704
Broadcast Services Group:
Jack Albert: Vice President
Mike Antonovich: Manager, Video Services
Steve Cadden: Supervisor, Video Services
Future ad-hoc and contract bookings, inquiries and general
information - 9 am to 6 pm EDST

Independent U.S. Earth Stations licensed to access PAS-1:

Cable News Network Atlanta, Ga
7.0 meter Ku, transmit/receive Europe
404-827-1816

CONUS Communications Co. Washington, DC
4.6 meter Ku, transmit/receive Europe
202-955-7370

Crescomm Transmission Services Holmdel, NJ
7.0 meter Ku, transmit/receive Europe
201-739-2874

Dallas/Fort Worth Teleport Irving, Tx
6.1 meter Ku, transmit/receive Europe
214-869-4622

Independent U.S. Earth Stations licensed to access PAS-1:

EDS Spectrum Corp Detroit, Mi
4.5 meter Ku, transmit/receive Europe

EDS Spectrum Corp Plano, Tx
7.0 meter Ku, transmit/receive Europe

GE Americom Vernon Valley, NJ
9.0 meter Ku, transmit/receive Europe
800-255-6122

Group W Satellite Comm. Stamford, Ct
7.0 meter Ku, transmit/receive Europe
203-965-6300

Microspace Communications Corp. Raleigh, NC
7.0 meter Ku, transmit/receive Europe
919-850-4515

Professional Video Trans. Serv. Washington, DC
5.0 meter Ku, transmit/receive Europe
202-775-0894

Simmons Satellite San Diego, Ca
5.0 meter Ku, transmit/receive Europe

Atlantic Satellite Northvale, NJ
9.2 meter Ku, transmit/receive Europe
201-784-2841

Century III Orlando, Fl. Inc. Orlando, Fl
6.1 meter Ku, transmit/receive Europe
407-297-1000

Mobile Satellite Comms. New Kensington, PA
5.6 meter Ku, transmit/receive Europe
412-337-1888

Megastar, Inc. Dallas, Tx
Ku, transmit/receive Europe
214-224-0556

Vision Accomplished Inc. Santa Monica, CA
Ku transmit/receive Europe
213-450-1601

Pan American Satellite (PAS-1)

It's been a long time coming, but Alpha Lyracom's PAS 1 satellite is operational and looks to have most of its capacity filled.



By Walter L. Morgan

Just as Superbird and JCSat have brought competition to Japan and Astra has brought competition to Europe (See *Satellite Communications*, June 1990, p. 29 and July 1990, p. 20), the Atlantic and South American markets now are served by more than one system.

Alpha Lyracom (also known as Pan American Satellite or, simply,

PAS) has completed the arduous consultation of its satellite systems with Intelsat. Alpha Lyracom Space Communications Inc. (ALSC) is the exclusive sales and marketing agent of PAS-1 satellite services.

PAS-1 has been in operation at 45° west (315° east) longitude since June 1988. As shown in the accompanying figure, its beams cover the

Caribbean, South and Central America at C-band, in addition to Europe and North America at Ku-band.

It has been reported that PAS-1 has leased all of its Latin American beam transponders for video services and that its trans-Atlantic traffic is booming. Capacity on both C-band and Ku-band transponders is available for data services. Life, however, has not always been this easy for Alpha Lyracom.

The original filing was for a C-band-only satellite covering South and Central America using a \$200 million Hughes HS-393 spinner (the same type now used for SBS-6 and JCSat). After considering refurbishing either the Westar or the Palapa satellites recovered by the shuttle, Alpha Lyracom struck a deal with Contel ASC for the sister satellite to ASC-1 (See *Satellite Communications*, June 1983, p. 58). ASC-1 has a mixture of 36 and 72 MHz transponders and operates at both C and Ku bands.

Having acquired the satellite, ALSC had to find a launch vehicle. Ariane-space, looking for a commercial customer for its first Ariane 4 launch, offered a special price as an incentive. Alpha Lyracom accepted the deal and PAS-1 was launched June 15, 1988. The Intelsat consultation was done in pieces (the initial process only covered five of the 18 transponders). These Intelsat consultations expire at year-end 1998.

The six single polarization 72 MHz

Ku-band transponders are powered by 16.2 watt TWTAs. Three transponders serve North America (conus beam) and three serve Europe (Europe beam). A common uplink beam allows for accessing either beam from both sides of the Atlantic. A conditional FCC authorization for these Ku-band transponders was acquired by purchasing Cygnus Satellite, another separate satellite system, in 1986-87.

European Beam

The European transponders are being used by Galavision (a U.S.-Spanish language news and entertainment service) to provide its programs to a downlink in London. A full 72 MHz transponder is reserved for ALSC data services, including International Digital Service (IDS) and VSAT; a transponder is provided to Microspace Communications to distribute FM² (a registered trademark of Wegener Communications Inc.) one-way audio and data traffic to Europe. Another transponder provides fixed-schedule syndication services for news and program distribution to European broadcasters. Two transponders are used for ad hoc service, business television and special event distribution. Galaxo Pharmaceuticals uses PAS-1 for business teleconferencing.

Conus Beam

The three North American transponders (Europe to U.S.) are used by news services and the TV networks for news, sports and other events. CBS News carried live coverage from the Berlin Wall and Eastern Europe using flyaways via a conus beam transponder.

C-Band Services

The 12, 36 MHz transponders use SSPAs rated at 8.5 watts. The six 72 MHz C-band transponders use 16.2 watt TWTAs. There are two uplink and four downlink beams. The downlink coverages include a southern beam, central beam, northern beam and a Latin beam.

The Southern beam is centered on Argentina and Chile and provides services to Television Federal (Canal 11 — Buenos Aires), Television Nacional de Chile and the Chilean Telephone Company (CTC). The coverage in this area is at 38 dBW. This beam also covers Paraguay and Uruguay.

The central beam is focused on Peru, but also covers Ecuador, Bolivia and important business centers in the south of Brazil. Peruvian customers include four national TV networks, the government of Peru and a consortium of mining companies.

Northern Beam

The beam center is on the Colombia/Venezuela border. It also provides coverage of Central America, the Caribbean, Mexico and ALSC's homestead, the Florida Teleport, which is the main point of entry into the United States. (It's near Miami at the -9 dB point on the antenna pattern.) Customers on this beam include Radiografica Coastarricense S.A., the San Isidro teleport of the Dominican Republic, Empresa Hondurena de Telecomunicaciones (Hondutel), Guatemala and regional data networks. Part-time video services on the north beam have included news coverage from Nicaragua, Peru

and Chile for carriage to North American broadcasters, as well as special event program distribution for sports and entertainment.

Latin Beam

This is a broad area coverage beam extending from Florida to the southern tip of South America. Its five video transponders are used by CNN, ESPN, Galavision, TNT and ALSC's part-time video service. Two transponders are reserved for ALSC VSAT and IDS data services. Customers include Citibank, Associated Press, Contel Federal Systems, Boeing and Latin American bank networks. Power ranges from 25 to 37.5 dBW.

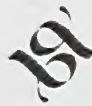
The *New York Times Magazine* reported a 1989 gross revenue of \$17 million for Alpha Lyracom through the operation of its PAS-1 bird. Estimates of Anselmo's investment in PAS-1 range from under \$120 million to more than \$200 million. The CNN deal alone could be worth \$20 million over a period of 13 years if all of the contract options are exercised. □

About The Author

Walter L. Morgan is a consultant with the Communications Center in Clarksburg, MD.

Summary Table

Parameter	Value and Units
Owner/Operator	Alpha Lyracom
Manufacturer & Series	GE Astro, Series 3000
Launch	June 15, 1988
Launch Vehicle	Ariane 401
Lifetime (fuel)	13.25 years
Orbit Location	45° west
Transponders	
(36 MHz C band)	12 at 8.5 watts
(72 MHz C band)	6 at 16.2 watts
(72 MHz Ku band)	6 at 16.2 watts
Satellite GTO mass	1,200 kg (2,640 lbm)
Verification Date:	June 1990



ALPHA LYRACOM
SPACE COMMUNICATIONS

The following countries have coordinated with Intelsat under Article XIV of the Intelsat Agreement for the Pan American Satellite System:

North America

Mexico
United States

Central America

Belize
Costa Rica
Guatemala
Honduras
Panama

South America

Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Guyana
Paraguay*
Peru
Suriname
Uruguay*
Venezuela

Caribbean

Antigua & Barbuda
Aruba
Bahamas
Dominica
Dominican Republic
Grenada
Haiti
St. Kitts & Nevis
St. Lucia
St. Vincent & Grenadines
Trinidad and Tobago

Western Europe

Austria
Belgium
Denmark
Federal Republic of Germany
France
Ireland
Italy
Luxembourg
Monaco
Netherlands
Portugal
Spain
Sweden
Switzerland
United Kingdom

Eastern Europe

Albania
Bulgaria
Czechoslovakia
German Democratic Republic
Hungary
Poland
Romania
Soviet Union

August 1990

* Pending September Board of Governors meeting.

PAS-1 Clients and End-Users:

ABC Broadcast & Operations
Advent Communications Ltd.
Allen-Bradley Europa
Antenna 3 TV Spain
Associated Press
ARD (West Germany)
Arts & Entertainment Network
Atlantic Satellite
BAF Communications
Banco del Pacifico
Boeing
British Telecommunications International
Business TV Corporation
Canal 2 TV (Peru)
Canal 4 TV (Peru)
Canal 13 TV (Peru)
Canal Plus (France)
CBS International
CBS News
Citibank
CNN
Compania de Telefonos de Chile (CTC)
Contel Federal Systems
Crescomm Transmission Services
C-Span
Deutsche Bundespost
EDS
El Tiempo
Empresa Hondureña de
Telecomunicaciones (HONDUTEL)
ESPN International
European Broadcasting Union
Eurovisa
Federal Express
Fujisankei Communications
Galavision
GE Americom
Glaxo
Globo International Ltd.
Golden Gator Productions
Group W Satellite
Hewlett-Packard
IDB Communications Group, Inc.
Keystone Communications
MacNeil-Lehrer Reports
Miami Children's Hospital
Microspace
MTV Music Television
MWIL Network
NASA
NBC
The Network Group, Atlanta
NHK Satellite Operations
Organization de la Television
Iberoamericana
Panamericana TV (Peru)
Private Satellite Network
Production & Satellite Service
Professional Video Services Corp.
Radio Caracas Television (Venezuela)
Radiografica Costarricense
RAI Corporation
Rede Manchete de Televisao (Brazil)
Retelevision
RTL Plus (West Germany)
Satellite Management International
Satellite Network Systems
SAT-1 (West Germany)
Sea World
Sky - TV
Spin TV International
STARS - Houston Teleport
Sure Shot Productions
Telemundo
Telespazio, S.p.A
Telepuerto San Isidro S.A.
Televisa S.A.
Television Federal (Argentina)
Television Nacional de Chile
Texas Instruments
The Network Group
Trans World International
Turner Broadcasting System
TV Marti
TVI - London
United Latin TV
University of Florida
Univision
UNOCAL
Uplinger Enterprises
U.S. Department of Defense
Venevision (Venezuela)
Videostar
Visnews
WCIX
WNET
World Plan Executive Council
WSVN
WTN Worldwide Television News
ZGS Television Productions