



# ORIONNET

## *Linking Poland to the West*

*by Daniel B. Freyer*

**A**s Orion Network Systems (ONS) puts the final touches to its international partnership to launch two satellites for Atlantic Basin services in 1993-1994, the Rockville, Md., company's carrier subsidiary, OrionNet Inc., already has started extending VSAT networks across the Atlantic. ONS recently announced, with a live video teleconference between its executives located at the company's headquarters outside of Washington, D.C., and Polish telecommunications officials in Warsaw, the introduction of its EURONET 100 rooftop satellite private network service.

Kevin Power, vice president for international at OrionNet, says, "The EURONET 100 service provides reliable, cost effective communications services for corporations operating in Europe and the United States. The need for such services is rapidly developing in Eastern Europe."

In the two-hour transatlantic videoconference, ONS demonstrated several applications of its new VSAT-based services product. The demonstration was organized by OrionNet in conjunction with Polaska Poczta Telegraph i Telefon (the Polish PTT) and Vesatel, a joint venture of Swedish Telecom International and the Netherlands PTT. It capped a full day of technical exchanges and a seminar for Polish Ministry, PTT and academic officials in Warsaw.

### **NEW OPPORTUNITIES IN EUROPE**

The dramatic political changes in Eastern Europe and reductions in East-West tensions over the past two years have

sparked new opportunities for trade, joint ventures, and foreign direct investment. Newly-found freedoms have made Eastern Europeans more eager than ever to import Western technology and know-how. Satellite communications has played a noted role, transmitting television news out of Eastern Europe, and offering Eastern Europeans such as such as Hungary's reported 150,000 backyard dish owners a view to the West.

The establishment of new offices, plants and distribution facilities linked to overseas sites, as well as increased cultural contacts with the West, are beginning to strain both domestic and international communications infrastructures to their limits. Eastern European telecommunications administrations are finding that a poor telecommunications infrastructure can be a deterrent to foreign investment, thereby impeding economic growth.

Poland's telecommunications is a case in point. About one in six international calls dialed from Poland is completed. According to Achmad Chadran, senior analyst with the New York-based market research consultants Northern Business Information (NBI/Datapro), "The network in Warsaw is in such a sorry state that it is common for users to call out of town and ask a rural operator to send the call back into Warsaw just to get through." Poles wanting a new telephone line are said to face a thirteen-year wait in some locations.

Three million out of Poland's population of 38 million people have telephone service, a penetration rate on par with other Eastern European rates, and about one fifth of typical



*Vesatel president Lillemor Larsson and Polish PTT and Ministry of Communications officials and representatives from the Technology Institute of Wroclaw participate in transatlantic videoconference.*

Western European telephone penetration rates. The limited number of international communications circuits from Poland is leading to some public network bypass solutions including the establishment of microwave links and transit circuit through Denmark.

To its credit, the state-owned Polish PTT, which is regulated by the Ministry of Communications (Poland's signatory to the ITU, Intersputnik and Inmarsat) has been increasing its efforts to improve Poland's international and domestic communications. Ten billion dollars is being invested in a long-term telecoms development program. Part of this program involves taking advantage of the liberalized flow of technology to the Warsaw Pact members caused by the reduction in East-West tensions.

Prior to June 1990, when certain Coordinating Committee for Multilateral Export Controls (COCOM) rules were relaxed, the export of digital communications equipment to Eastern European countries had been prohibited. The VSAT terminals and video teleconferencing equipment used in OrionNet's demonstration would have been embargoed for export to Poland under the old COCOM rules. Currently, however, Poland's mostly analog and electromechanical network is being upgraded by Alcatel digital switches and has been augmented recently with a 5ESS international switch from AT&T. Although Poland is not an yet Intelsat or Eutelsat member, it has been using these organizations' facilities, and the World Bank recently approved a loan for the installation of a 15.5 meter Intelsat earth station.

### **SEIZING THE MOMENT**

Against this backdrop, Krzysztof Slomczinski, director of international relations, and his colleagues at the Polish PTT have been actively exploring new international communications options for Poland. During discussions with the Polish PTT regarding service for a specific customer, Orion and its European correspondent Vesatel were asked to develop and

provide a seminar on VSATs for Ministry and PTT staff. The idea of an international videoconference demonstration as part of a live seminar program made perfect sense.

Orion teamed up with Vesatel and the PTT officials to put together the all-day program. Vesatel, which offers "rooftop-to-rooftop" VSAT services between countries in Northern Europe and North America, was established in 1988 as a wholly-owned subsidiary of Swedish Telecom International (STI). The company became a joint venture between STI and The Netherlands PTT in November 1990, and currently operates about 600 VSATs in 17 countries. Vesatel president Lillemor Larsson chaired the Warsaw end of the videoconference panel, while ONS president John Puente chaired the lively discussions from the United States. Simultaneous translations in Polish and English were provided through the same link for participants.

The demonstration VSAT system used a 2.4 meter antenna installed on the roof top of the PTT building in Warsaw, and another antenna located at Orion's headquarters in the United States. The 256 Kbps full-duplex international VSAT link was used for digital interactive video, voice, data and graphics transmissions during the demonstration. It was the first live two-way videoconference between Poland and the United States using VSATs.

In countries like Poland where dedicated local access and domestic backhaul circuits to international gateways are not readily available on a commercial basis, the VSAT solution is difficult to beat for rapidly bringing a site on-line to the rest of the world. Until recently, there have been no digital international private line services from Poland, so customers requesting leased lines had only the option of analog service. Kara Kent, a Washington D.C.-based consultant who advises foreign businesses and institutions on how to set up office operations in Poland, says, "A problem with many of the telephone lines, even ones hooked up to the new international switch, is that they are unreliable and can not be used



*OrionNet and Vesatel engineers install VSAT on roof of Polish PTT at pl. Malachowskiego in Warsaw. The building in the background is the Palace of Culture and Science.*

with faxes or computer modems." Adds Kent, "That's why the Orion solution is so great."

### ROOFTOP USA TO ROOFTOP EUROPE

"As a rooftop service, EURONET 100 delivers a transatlantic communications service for companies operating in Europe and the United States without the additional burden of local access and national backhaul associated with cable and satellite gateway solutions," says OrionNet's Power.

Applications include voice, data, facsimile, two-way videoconferencing, E-mail, and distributed printing. For example, using EURONET a company can establish full-time dedicated voice, fax, and data links, and schedule interactive videoconferences on a periodic basis. EURONET 100 service is currently available from the United States to the United Kingdom, Germany, and Sweden with services planned to the Netherlands, Poland and additional countries. Orion's inventory of its to-spec VSATs is backed up by blanket purchase agreements with equipment manufacturers. The EURONET offering compliments OrionNet's international gateway services, which provide universal access via U.S. domestic fiber networks for hybrid network configurations.

As a result of enthusiasm generated by the conference, Polish PTT officials expressed their desire to continue such cooperative efforts with OrionNet, particularly in the field of national and international telecommunications training. Indeed, Poland may be taking the lead in the adoption of VSATs in Eastern Europe. The Polish Academy of Sciences has been meeting with the European Space Agency (ESA) regarding Poland's joining that body and areas for cooperation including VSATs. According to NBI/Datapro's Chadran, whose firm projects an Eastern European private line market growing from \$111 million in 1990 to \$353 million by 1994, "The potential for private lines in virtually all of Eastern Europe is very high, because the public networks

have such low penetration." However, Eastern Europe appears to be only part of the Orion strategy.

### COUNTDOWN TO LAUNCH

The EURONET offering is bringing new VSAT possibilities to Europe today through innovative use of leased Intelsat space segment. Even more capability is expected when Orion's dedicated satellite system—the first specifically designed for Atlantic Basin VSAT networking—becomes operational. Small, rooftop units will be able to uplink and downlink from virtually all the key U.S. and European cities, from either North America or Europe, or both simultaneously, through high-powered spot beams (49.0-51.7 dBW EIRP).

"At the moment, the throughput of the earth station is limited by the power of existing transatlantic satellites," says Power, "but with the huge step up in power of the Orionsats, the throughput of the same 2.4 meter VSAT terminals used in Poland will jump to the T-1 [1.544 Mbps] or E-1 [2.048 Mbps] level, that is, by a factor of six." Transatlantic links, intra-regional North American and European services, or service targeted at specific countries, whether two-way or broadcast, will all be possible with Orionsat.

With the EURONET product line of its carrier subsidiary, and its Orionsat international partners announced to include British Aerospace Ltd., Matra, General Dynamics, and Nisho Iwai Corp., ONS appears poised to compete head-on in European and North American international business communications services in the 1990s. ■

*Daniel B. Freyer is manager, financial analysis, for Asia Pacific Space & Communications Ltd., and writes on communications issues from Washington, D.C.*