



# Teleports: offering added value

Regional gateways are the vital link in the chain of satellite communications. They distribute a wide range of communications all over the world and also provide added value. Sam Baird finds out what a regional gateway is, what it does and how the role of the teleport is changing.



*Nittedal Teleport, photo courtesy of Telenor.*

**Without a gateway, the satellite in orbit would** be rendered useless but what is this gateway? Regional gateways are the key to our reception of phone calls, the Internet, IPTV, mobile TV, HDTV, VoIP and many other services used across the world every day. The gateway itself is owned and managed by the service provider for the country in which the gateway is located. It receives the transmissions from orbiting satellites, processes the calls and then switches them to the appropriate ground network. The function of a regional gateway is to provide an interface between the country where it is located and the land-based network. It connects the satellite with

the public switched telephone network (PSTN). A gateway may be independent if it receives its own unique set of channels or a redundant gateway if it receives the same set of channels as at least one other gateway. A gateway usually comprises three or four dish antennas, a switching station and route operating controls. The gateway provides seamless integration with local or regional telephony and wireless networks. Aside from underpinning the satellite communications industry, regional gateways or teleports are playing a much wider role. According to the World Teleport Association (WTA), the teleport industry is worth a substantial US\$13 billion and is re-



- Narrowcast DTH services provided on a turnkey basis;
- Hybrid enterprise and government network integration and connectivity to link remote facilities into the enterprise network;
- Distribution of high value data and video feeds to closed distribution networks;
- Digital content development, management and distribution through private and public networks;
- Distance education and training networks;
- Internet and VoIP backbone services for government, enterprise and ISPs; and
- Mobile telephony backhaul for regions with no fibre connectivity.

### A changing role for the Teleport sector

The WTA, the trade association of the satellite industry 'from the ground up', published a report in October – 'New Markets, New Services, New Competition' focusing upon the changing applications, technologies and competitive dynamics of the global teleport sector. For the report, WTA surveyed senior executives of companies at the core of its membership – teleport operators delivering customised communications services in highly competitive markets using local, ground-based infrastructure.

The report highlights the diversity of income sources that teleport operators currently tap into, with the largest portion coming from media and entertainment at an average of 35 percent. Surprisingly, many respondents ranked mobile telephone backhaul as high a priority market as the traditional business of television/radio contribution and distribution.

"The teleport sector was once the creature of the broadcast industry, deriving at least 90 percent of its revenues from television programme contribution and distribution," said Robert Bell, WTA Executive Director and the author of the report. "The survey results clearly indicate the importance of mobile backhaul as one of the fastest-growing lines of business for many operators and the changing landscape of the teleport sector."

Another key change in recent years has been the growth of non-transmission services. More than half of operators provide their customers with systems design, engineering and integration services, conditional access services, as well as video or audio production and post-production. However, transmission services remain at the core of operations, with 100 percent of respondents providing satellite and 76 percent providing fibre transmission. Twenty-three percent reported that they were already deploying WiFi, WiMax and other wireless solutions for last-mile connectivity.

As teleport operators add services to their portfolio and both satellite carriers and integrators develop and operate their own teleports, the lines between sectors is beginning to blur. The survey report explores both the levels of current competition between teleport operators, carriers and integrators, and the perceived degree of threat in the future. The survey reveals that overlapping business growth opportunities are putting teleport operators and satellite carriers into competition for the first time, and suggests that the means they find to manage this commercial tension will help determine their future success.

"We've seen significant changes in the industry over the past few years as operators and carriers begin to play in the same sand box," added Bell. "Independent operators, however, have proven their adaptability by creating diverse businesses serving a broad range of customers. Through open dialogue and exploring issues and opportunities, there should be little doubt that the teleport sector will continue to thrive."

Astrium Services has opened its new teleport in Toulouse, thereby adding a satellite infrastructure network in France to the existing networks the company already has in the United Kingdom and Germany.

With the new teleport, Astrium Services can now offer its government and commercial customers an increased satellite communications capability, particularly for VoIP (Voice over Internet Proto-

sponsible for 15 percent of the world satellite communication revenue. Historically, the bent-pipe transponder circuit provided basic uplink and downlink services, but now they are actually responsible for a plethora of sophisticated services that add value. Today, gateways are used for the following:

- Origination and distribution of TV channels in both real-time and via store and forward;
- TV and radio programme production, post-production and hosting;



col) telephony services, Internet access, company intranet and networks, and secured VPN (virtual private networks). The services are intended for customers who need to communicate between their European head offices and their dispersed locations all over the world. The teleport offers a specific solution to any customer's particular need.

Astrium Services has set up a dedicated unit in Toulouse to develop and market teleport services and associated networks solutions. In particular, the company is responsible for setting up and implementing the technical offer: adapting the services offered by the teleport to specific customer requirements, designing and installing remote station networks at the sites concerned, and operations, maintenance and customer support.

The first customer is the Economat des Armées (the French equivalent of the NAAFI in the UK) of the French Ministry of Defence, which chose Astrium Services to provide the PASSEREL™ telecommunications services for the personal needs of troops involved in external operations.

Based on the iDirect hub technology, which optimises the satellite resource, and thus allows a competitive service cost, the Toulouse teleport has three large Earth stations currently operational: two in C-band and one in Ku-band. Its favourable geographic location serves a very wide area from Asia to the Americas, and several satellites can be used according to the geographical requirements of the customers' networks. The teleport has the latest IP technology, provides billing systems and secure transmissions, and is interconnected with the public switched telephone networks (PSTN) and Internet backbone. The teleport is operated by the London Satellite Exchange Ltd, a subsidiary of Astrium Services, which has set up a dedicated 24/7 unit at its centre in Toulouse. This company also provides the customer support.

For Eric Béranger, the CEO of Astrium Services: "The decision to invest in and build a teleport in Toulouse shows our determination to innovate and respond to our customers' needs. With the services

offered by the teleport, we can now add another dimension to our already extensive range of services. We are proud to have built the first teleport in Toulouse, and to have contributed to the creation of jobs and of satellite communication service activities in the town."

### Globecast named as a Top Teleport Operator

Every year, the WTA announces a list of the world's top teleport operator and, in November, for the fourth year running, GlobeCast has enjoyed a high ranking on both the 'Global Top Twenty' and 'Independent Top Twenty' categories.

The list, which provides a unique look into the diverse teleport sector of the global communications industry, is conducted by surveying teleport operators around the world on their facilities, services and business results. According to the World Teleport Association, these rankings provide a unique insight into the often unappreciated realities of the teleport sector.

GlobeCast came second in the 'Independent Top Twenty' category, which excludes operators and recognises companies based on revenue from all sources.

In addition, GlobeCast was sixth in the 'Global Top Twenty', which ranks companies based on revenues from all customized communications sources and includes operators of teleports, satellite fleets and fibre networks.

This ranking is an affirmation of GlobeCast's strength in its traditional business, while 2008 also saw a number of developments to reinforce its growing role as a content and media management company, including the acquisition of French software company NETIA, the recent upgrade of its London playout centre at Grays Inn Road and the addition of an entirely new playout suite in Singapore. These changes will enhance GlobeCast's range of services and its geographical reach through 2009.

### Changing face of Teleports

Describing a teleport as simply a regional gateway and a means of



Fucino Space Centre, Italy, photo courtesy Telespazio.



getting communications to their destination is probably not quite doing justice to them as they are now serving quite diverse purposes. The advent of new technology and applications such as Mobile TV, IPTV, VoIP and cellular backhaul is pushing them towards extending their service offerings and is also putting them into competition with integrators and carriers. The fact that teleport operators are being pushed out of their comfort zone is surely a good thing for the industry and introduces new competition. Teleports no longer only serve their bread and butter broadcasting sector but have now found huge demand for cellular backhaul, for example. This is bound to be a huge part of business in the EMEA region where it seems that backhauling is one of the most popular applications of today. Teleports all over the world are thriving and it will be interesting to see how their new business plays out. ●

### WTA Global Top Twenty-One

- Level 3 (USA)
- Intelsat (Bermuda)
- SES Global (Luxembourg)
- Eutelsat (France)
- Stratos Global (USA)
- GlobeCast (France)
- EchoStar Satellite Services (USA)
- Telesat (Canada)
- Arqiva Satellite Media Solutions (UK)
- CapRock Communications (USA)
- Globecomm Systems (USA)
- Thaicom (Thailand)
- Schlumberger (UK)
- Hispasat (Spain)
- Telecommunications Systems (USA)
- AsiaSat (Hong Kong)
- Spacenet (USA)
- Gascom (Russia)
- RRsat Global Communications (Israel)
- Satlynx (Luxembourg)
- Measat (Malaysia)

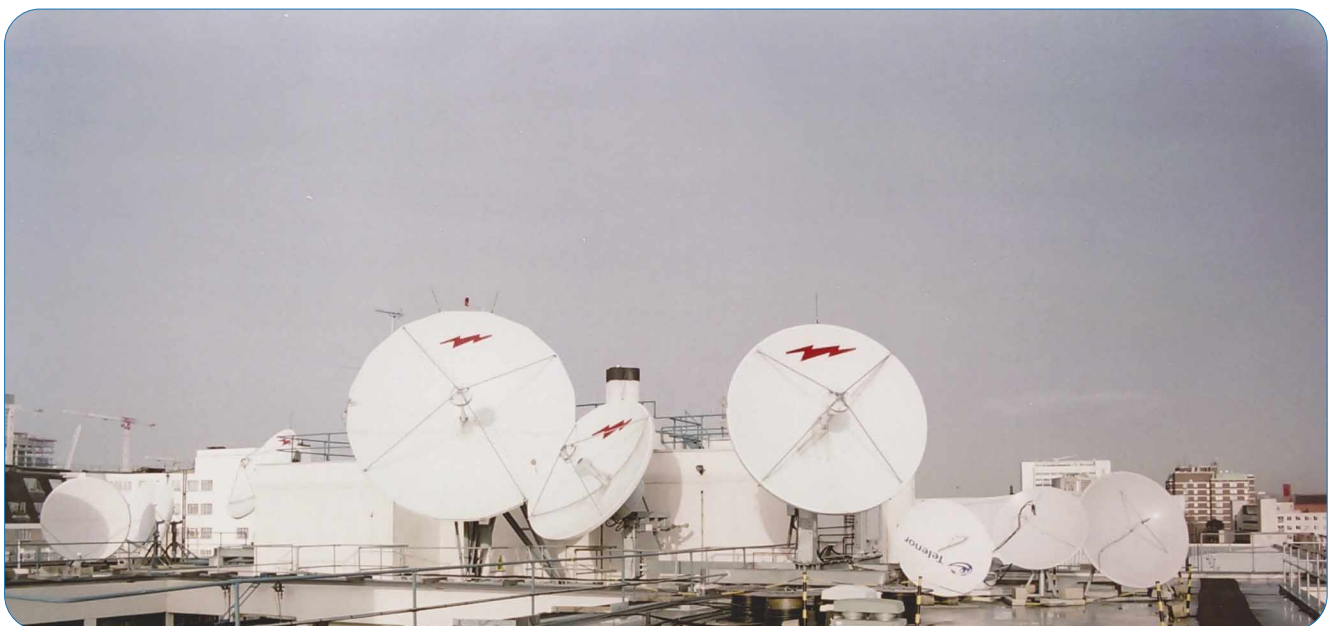
### Global Independent Top Twenty

- Stratos Global (USA)
- GlobeCast (France)

- Arqiva Satellite Media Solutions (UK)
- CapRock Communications (USA)
- Globecomm Systems (USA)
- Schlumberger (UK)
- Telecommunications Systems (USA)
- Spacenet (USA)
- RRsat Global Communications (Israel)
- Broadpoint (USA)
- Emerging Markets Communications (USA)
- Telepuerto Internacional Buenos Aires (Argentina)
- Satlink Communications (Israel)
- ATCi (USA)
- Telekom Austria (sat-related only) (Austria)
- Essel Shyam Communications (India)
- Skyport International (USA)
- Jordan Media City (Jordan)
- Newcom International (USA)
- CET Teleport (Germany)

### The Fast Twenty-One

- CapRock Communications (USA)
- Arqiva Satellite Media Solutions (UK)
- Skyport International (USA)
- Satlink Communications (Israel)
- Emerging Markets Communications (USA)
- Gascom (Russia)
- Measat (Malaysia)
- Stratos Global (USA)
- ATCi (USA)
- Central European Telecom Services (Germany)
- CET Teleport (Germany)
- Globecomm Systems (USA)
- RRsat Global communications (Israel)
- EchoStar Satellite Services (USA)
- Level 3 (USA)
- Telepuerto Internacional Buenos Aires (Argentina)
- Telecommunications Systems (USA)
- Schlumberger (UK)
- du (Emirates Integrated Telecom Co.) (UAE)
- Essel Shyam Communications (India)
- Telekom Austria (sat-related only) (Austria)



London Teleport, photo courtesy Telenor.