



## Satellite Mediaport Services: Gateway to the Future

by Mody Schreiber

Over the past decade the global telecom industry has been in the grip of massive transformation, propelled by unstoppable growth in data navigated by software across a growing open network system with an ever-increasing appetite for delivering localizing scalable cloud-compute capabilities to the cloud edge as the shared means for optimizing and transacting our aggregated needs.

This frenzy is driving major changes in the satellite industry. To form a part of this dynamic reorganization, satellite services need to become cloud-enabled i.e. fully integrate into this expanding ecosystem over compatible digital standards that extend network orchestration to targeted edge points.

satellite and ground segment operators offering a proliferation of new applications to industry verticals for connecting a host of end points within large geographical footprints over new technologies and proprietary non-terrestrial platforms.

Today's global telecom landscape has also formed a 'monolith', one in which digital technologies produce dynamic network connections across a cloud merging terrestrial and non-terrestrial networks. This requires satellite services to transition from reliance on proprietary technologies to a digitalized IF standard that over a community of cloud-resident of dials interfaces and manages both ends of QoS preference-driven networks.



5G has already initiated important software routing standards that seamlessly combine 'new generation' (or NGSO) network segments with terrestrial networks, and thus create a unique opportunity for satellite networks to drive this open orchestration.

There are parallels between the trends and transformations visible today with the first introduction of satellite services in 1965 that transformed the global telecom system. These introduced 'bent pipe' telecom services distributed across the globe through a politically manufactured monolith made up of national telecoms, each bound by common rules; standardized earth stations and operations. In the 1980's, fed by private equity, this monolith exploded into a multitude of independent

This technological re-organization is accompanied by closer collaborations across the satellite industry in the provision of services and also between government and private enterprise in the design, manufacturing and operation of satellites and of space launch vehicles and transmission systems. In a rearguard action, a number of 'legacy' service satellite operators are seeking to shore up their revenue decline, resulting from the loss of their non-terrestrial services to cloud-enabled networks, by extending their ownership share over non-terrestrial service supply chains and its revenue segments as far down as the physical network connection with the end-customer (e.g. Hispasat with Axess and Intelsat with Gogo).

**Satellite Mediaport Services' ground segment proposition**

Going forward, it is a safe bet to assume that satellites will retain their "specialist" telecom positioning, one that rests on their unique advantages in wide geographies; in mobility and increasingly in the delivery of high-speed and low-latency service wherever it may be needed.

Multi-orbit service orchestration leverages these unique advantages by allowing QoS preference stacking for aggregated non-terrestrial network services, at costs reduced by higher levels of infrastructure or gateway utilization – sometimes referred to as the 'common denominator' effect.

Optimal 'new generation' satellite deployment will require agile dynamic analysis and allocation of their power resources between inter-satellite links; gateway landings and limitations imposed by capacity bottlenecks over selected geographies and shifting frequency coordination limitations. Ground segment deployment and its value assessment forms a part of that dynamic complexity.

Like all teleports, the SMS Teleport is a highly-managed 'real-estate' complex. It is strategically positioned for uplinking to satellites in a 'clean' RF environment and is protected by perimeter fencing and other security systems.

We maintain and plan new on-site connectivity across all teleport sub-systems, both colocated as well as fully owned and managed; the availability and distribution

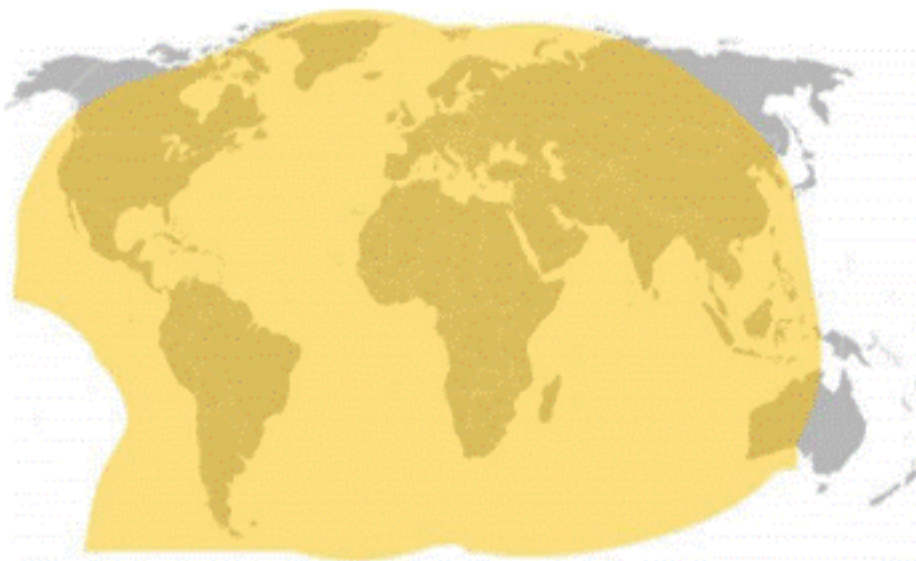
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of power, with automated switching for uninterrupted service protection; the communication between all operating systems tied to automated IT software management and control reaching active service components, including qualified Earth Stations and their associated electronics- all carefully backed-up in automated design to ensure highest QoS performance levels.

***Our customers depend on satellite networks for their business***

The SMS Teleport and its service is designed for global service providers, whose businesses require gateway operations and for whom satellite networks form a key part of their operation.



**Satellite Mediaport Services' combined C-Ku- and Ka-band service footprint from Rugby, UK.**



### Defining the siting for one of our 3 additional remotely operated uplink locations of SMS's 360° global satellite monitoring service.

Twelve years ago, Satellite Mediaport Services embarked on a brave and ambitious building plan that aimed to provide uplink capability, in high capacity, to every potentially relevant satellite slot within our orbital arch extending from 600E to 600W, thus creating an aggregated ground segment infrastructure with solid common denominator economic value. We believed then - and experience has borne this out - that our infrastructure growth would strengthen our position as the teleport of choice for our existing customers.

Over those 12 years, whilst the ground segment part of the satellite industry was under pressure to contract and consolidate its activities, the SMS Teleport grew by 30% in each successive year. It is now nearing its targeted uplink capacity. In the process we have attracted major global service operators and TV broadcast embracing over 350 television channels.

Our infrastructure has expanded and renewed, but our range of services has not materially changed over that period. It includes:

- Transmission and reception;
- RF uplink and downlink;
- IP connectivity & backhaul;
- VSAT / multi-site link operations
- One-way or two-way Internet backbone connectivity via satellite;
- Network / Hub Hosting;
- Hosting / maintenance of customer furnished equipment (CFE);
- Satellite capacity;
- Worldwide lease line interconnection;
- DVBS2 + SCPC services;

- Data Storage and backup;
- Colocation.

In 2021, using our management's considerable experience in the implementation and operation of global uplink / turnaround projects and solutions and responding to a requirement initiated by one of the top international news agency customer, the SMS Teleport designed and began to implement a remotely uplinked 360° global satellite monitoring solution extending our core service footprint across the globe from four additional sites in the Middle East; SE Asia and the USA.

#### **The Future**

Ground segment 'real estate' is all about highly-managed infrastructure aggregation and operation as a service.

As digitalization shapes and alters the global network hues, we expect to see higher granularity focus on data management and QoS grading with greater involvement by the large data players, for whom control of network operation is central to their business.


SMS Teleport's accumulated know-how in service provisioning combined with relentless dedication to Ground Segment QoS; wide infrastructure base for uplink activities and highly responsive customer focus will remain essential ingredients for effective satellite communication services gateway. Even our larger customers will find it hard to compete with our real-estate capabilities. Our prime attraction as a service provider with these advantages is the fact our business does not compete with our customers. Our business is devised as an indivisible part of their operation, focused on a service bottleneck whose \$ cost to our customers is very low in relation to the potential inconvenience and expense resulting from having to divide their operation between smaller sites, and more importantly, the potential cost of any system failure that is not avoided or mitigated by our singular dedication to



## Satellite Mediaport Services readying for LEO gateway services

perform service at a highest level of QoS.

Our incessant teleport physical infrastructure build-out has proved a well-founded strategy, attracting leading global operators who seek a solid basis for their ground segment operation.

Down the road, for the end customer, QoS is increasingly measured in scalability and speed across virtualized end points and not in real geographies. Looking into the future, there will be a need for more investment to elevate Satellite Mediaport Services gateway 'real estate' into higher reaches as an 'edge presence' for end customer QoS. In practice this will leverage our aggregated real estate advantages by enhancement of additional network value chain capabilities. The strategic proximity to England's industrial heartland and its major cities makes our teleport exceptionally well positioned take this next step to realise its edge presence potential. 



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For more information on Satellite Mediaport Services go to: [www.sms-teleport.com](http://www.sms-teleport.com)