

# Azure Space, KSat, RBC Signals, SSC, Viasat RTE: Satellite ground station expansion is still accelerating

written by Peter B. De Selding January 7, 2022



*Troll, Antarctica, ground station. Credit: KSat*

PARIS — Ground station capacity providers **KSat**, **Microsoft Azure Space**, **RBC Signals**, **SSC** and **Viasat RTE** are in full-throttle expansion as large sums of cash are invested in new satellites and constellations.

All of them are moving toward cloud-based virtual operations as customers demand a broader range of service.



*Stephen Kitay, Microsoft Azure Space. Credit: Euroconsult video*

“It’s not just about the antenna,” said Stephen Kitay, senior director for Microsoft’s Azure Space. “It’s antennas to low-latency connections back to computing services with artificial intelligence, integrated automation and

scheduling.”

Addressing the **Euroconsult World Satellite Business Week** here Dec. 15, Kitay said a new Azure Orbital/Azure Space customer, whom he did not name, “wants 22 sites across the globe to support their constellation.”

That’s just one customer.



*Christopher Richins, RBC Signals. Credit: Euroconsult video*

Christopher Richins, chief executive of RBC Signals, which has an expanding network of global ground stations, said the bull market for space investment started with launch services, then moved to satellite networks and “is now flowing down the operational chain to ground station operators.

“Communications links with the ground is the essential third step,” Richins said. “Without that there is no business in space. We’re on contract for multiple expansion projects across the globe.”

Richins and others said the concentration of Earth stations at the poles, a natural requirement for Earth observation satellites in sun-synchronous orbit, is extending to mid-inclination orbits to reduce latency and increase overflight frequency for more populated areas.

All these companies said the days of building a dedicated ground network for a given customer and then letting the ground station sit half-used is over. Ground stations now are multi-tenant installations where data from multiple customers can be processed through the same antennas.



*Rolf Skatteboe, KSat. Credit: Euroconsult video*

The money flowing into space in general, and now ground stations as well, has lifted the values of all the players and postponed any thought of industry consolidation, said Rolf Skatteboe, chief executive of KSat.

“We have realized we can’t do everything ourselves anymore and we are seeking partnerships,” Skatteboe said. “Mergers are of course one thing. But the Americans have destroyed that market because everything is terrible expensive these days.

KSat has recently installed 43 new antennas for its global network and is putting in six more at the Troll site in Antarctica. A customer interfacing with one KSat ground station can interface with the entire network, through one API, with one destination of the customer’s choice.

Skatteboe said there is no end in sight for the growth of the ground station business now that multiple constellations, small and large, have secured at least some funding.

That has put pressure on ground station networks to be everywhere a customer will want data downloaded.

“A satellite might like data from a certain region, and the next day it might have data from another region,” Skatteboe said. “One KSat goal in 2022 is to fill the gaps. We have six gaps left to do a total mass coverage at any time.”



*Miranda Pirrie, SSC. Credit: Euroconsult video*

Miranda Pirrie, president of satellite management services at SSC of Sweden, said even veteran customers are now asking for full-service offerings. “They all want it faster and cheaper and they want us to do it for them, and advice on how to do it.”

Pirrie said SSC shares the view that partnerships will be essential but it should be limited to deals where the partner “is really core to adding value, and you can outsource without the risk that you are dis-intermediated in the future,” Pirrie said. “We tend to keep more in-house ourselves but work with partners for scale-up without threatening the core aspects of the value chain.”

Viasat Inc., best known as a telecommunications satellite operator and broadband hardware provider, started full operations of its **Real-Time Earth (RTE)** business in 2021 and recently opened a station in Ghana.



*John Williams, Viasat RTE. Credit: Euroconsult*

“We will reach our initial global footprint in about six months through three new stations — in Sweden, South Africa and Japan,” said John Williams, Viasat vice president for RTE. Five more stations are being planned, he said.

In addition to serving outside customers, RTE is preparing for what Viasat hopes will be a network of satellites compatible with the Link 16 terrestrial military network.

Viasat has won a contract for an initial Link 16-compatible satellite in low Earth orbit from the **U.S. Air Force Research Lab** as part of a program called **XVI**.

Viasat is building a global constellation of three large Ka-band broadband satellites and RTE will also be serving that network.

Williams said customers are starting to insist on having at least two ground station providers to assure broad geographic coverage.

Azure Space’s Kitay said Microsoft had established relationships with KSat and with Viasat RTE and is active in promoting industry standardization with an as part of an industry group called **DIFI — the Digital Intermediate Frequency Interoperability Consortium** — support standards for the virtualization of modems.

Kitay said government agencies, seeking to avoid being locked in to a single vendor, like the idea. The **U.S. Navy, U.S. Space Force** and the **Defense Information Systems Agency (DISA)** are on board.

Industry members include **Kratos, iDirect, Communications & Power Industries LLC (CPI), Comtech, DataPath, Datum Systems, Inc., Gilat Satellite Networks, SES, ST Engineering iDirect and Wavestream.**