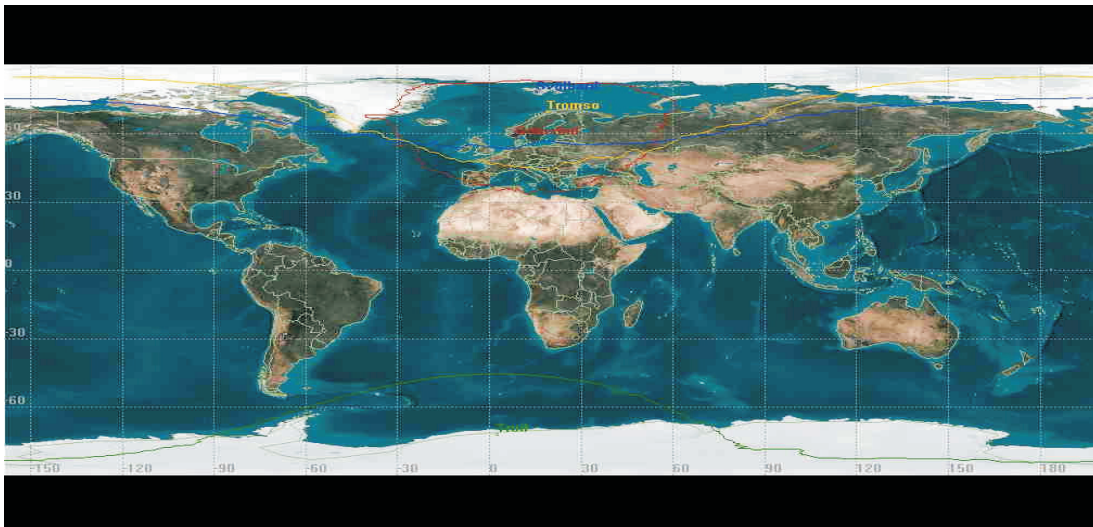


Data receiving via Kongsberg Satellite Services network

Reliability and Near Real Data - a demand from the users.



Increasingly higher demands to reliability, to near-real time data, larger transfer capacity and an increasingly number of meteorology and environmental satellites provide KSAT with possibilities to develop the world's best network in order to receive and transfer these types of data.

Through three receiving stations, KSAT can receive data from all satellite orbits over the northern hemisphere and 12 of 14 from the southern. In addition, they can deliver near-real time data within the footprint area from Svalbard, from Tromsø in Northern Norway, from Grimstad in Southern Norway and from the Troll station in the Antarctica. Marked as Pole to Pole service, KSAT can offer access to the satellites every 50 minutes for twelve of the daily 14 orbits.

Due to this unique infrastructure the company has over a relatively short timeframe built up a long list of customers, where EUMETSAT is among the most valuable because the long time horizon for the programme. ESA and NASA are other very important customers, together with the Indian ISRO and the Japanese JAXA. NASA and NOAA have also invested money in the fibre cable, thus, they have

rights connected to the use of this. NOAA gets data from the POES and the Coreoils satellites via the cable; furthermore NPOESS (National Polar-Orbiting Operational Environmental Satellite System) and the NPP (Preparatory Project - a risk reduction mission for NPOESS) are served via Svalbard.

Reliability service is highly prioritised for the customers and Managing Director at KSAT, Rolf Skattebo, via E-mail told us that the main station at Platåberget, Svalbard, transfers data via the optical fibre cable between Svalbard and the mainland. To ensure safety and reliable service there is a double set of cables at the bottom of the sea and there is redundancy both at Svalbard, under the water and when the signals reach the mainland. KSAT delivers this connection in cooperation with Telenor Svalbard. The large radio transfer station at Isfjord Radio is unoperative at the moment, but it is possible to use a radio link via Platåberget and Telenor's communication satellites in an emergency.

The stations can carry out a long series of services for satellite operators, but the main focus remains observing Mother Earth. Satellite operators around

the world have seen the cost-saving services to receive data from one station for all orbit of a satellite. Since it additionally is possible to receive near real time data from both to nearly the whole of Europe from the station in the Southern Norway, and for much of the Antarctic area from the Troll Station, KSAT can offer a unique service for the operators. To be

able to receive data from one station is a dream for all operators of satellites in polar orbits, as is high capacity fibre cables from Svalbard to the Northern Norway, and from that, data transferring through the commercial terrestrial networks around the world. Moreover, data can be transferred via commercial communication satellites, the only way from Troll, but also very useful service from the other stations.

Receiving stations for the Kopernikus programme is also an important marked area for KSAT, especially for the Sentinel - 1 C-band SAR. Quick access to new data is the key to be able to deliver near real time data for among others the European Maritime Security Agency (EMSA) with regard to ship and oil monitoring service in the whole of Europe.

The near pole stations are important for several reasons. The station system is also chosen as ground stations for the Galileo programme, and at this time sensor stations have been built for the programme. Stations near both poles provide unique possibilities to control the quality of the signals.