



CASE STUDY: NETTING THE BENEFITS OF MX-DMA MRC

Netting the Benefits of Mx-DMA MRC

According to the UN Food and Agriculture Organization, the Chinese fishing industry accounts for 15% of the world's catch each year and is a highly competitive sector. For fishermen, life at sea can be challenging, with many spending extended periods away from home, often over 200 days a year. The experience can be isolating for fishermen, especially if there is no provision for internet connectivity so that they can keep in close contact with family, friends, customers and vendors and to keep in touch with government updates.

Ningbo BIRDSAT is one of the largest private satellite communication companies in China. Its business scope

includes the design and development of satellite communication systems as well as the manufacture of VSAT equipment and its operation in the field. The fishing market forms BIRDSAT's core business with Chinese coastal fishermen the main users of the company's products and solutions.

Challenge

BIRDSAT identified a requirement in the sector for the provision of satellite connectivity for fishing vessels to meet the rising demand for mobile connectivity at sea. With fishermen wishing to utilize their mobile devices whilst at work as they do anywhere else, access to satellite communications is a true differentiator and today forms an



important part of an employee's decision-making process in terms of which vessel to work on. The addition of VSAT connectivity to a vessel enables fishermen to access communications for morale, welfare and recreational purposes, as well as for general daily operational needs such as reporting catch and to access governmental information.

Solution

ST Engineering iDirect provided BIRDSAT with its Newtec Dialog® multiservice platform featuring Mx-DMA MRC return technology. Mx-DMA MRC is an efficient, dynamic new technology designed to seamlessly adapt to changing network traffic and link conditions. One of its self-organizing aspects is that it can optimize for jitter delay based on the type of traffic, such as voice or video, and maximize the utilization of available bandwidth resources. It supports the deployment of large amounts of fixed and mobile terminals with mixed service types, operating industry-leading efficiencies at the lowest possible cost.

BIRDSAT was drawn to the platform particularly because of its flexibility and high-level of integration but also because of the bandwidth efficiency and flexibility in the return technology. This allows services with continuously changing rates (from a few kbps up to 100 Mbps) to run as they would with MF-TDMA, but at SCPC efficiency.

Results

In upgrading to Mx-DMA MRC, BIRDSAT have noted a significant increase in bandwidth efficiency. In turn, this has helped to decrease the satellite bandwidth cost and the time required to operate the system, thus reducing Opex. The overall service quality has also been further improved. From a perspective of efficiency, BIRDSAT has found that the Mx-DMA technology has resulted in higher efficiency that is superior to other available offerings. For multicast services, BIRDSAT experienced high-quality video during high throughput (10Mbps) transmissions.

The newly implemented Dialog system has been deployed across 500 vessels so far and is being used for a variety of popular applications including instant messaging and video streaming such as WeChat, Tiktok, VoIP services and mobile TV services. The combination of flexibility and highly efficient return technology has enabled BIRDSAT to fulfil market requirements as well as achieving better Return on Investment (RoI) due to reduced Opex and satellite bandwidth savings.

"The different service prioritization is the focal point of BIRDSAT in the future. We believe that the Mx-DMA MRC technology will provide more choices for us. We can now provide even better services to our customers."

-Zhang Xinmin
Chief Operating Officer, Ningbo BIRDSAT

The Future: more choice, more flexibility

Through the adoption of Mx-DMA MRC, BIRDSAT can be more flexible in its service offering and plans to deploy new satellite networks based on the return technology. At the same time, it will work to enhance its products and services in order to explore new business models, exploiting the different service prioritization for different users, and to develop new services with high-bandwidth and high-reliability for the users with specialized demands. The company views Mx-DMA MRC as a differentiator that will enable it to provide more choice both today and in the future.