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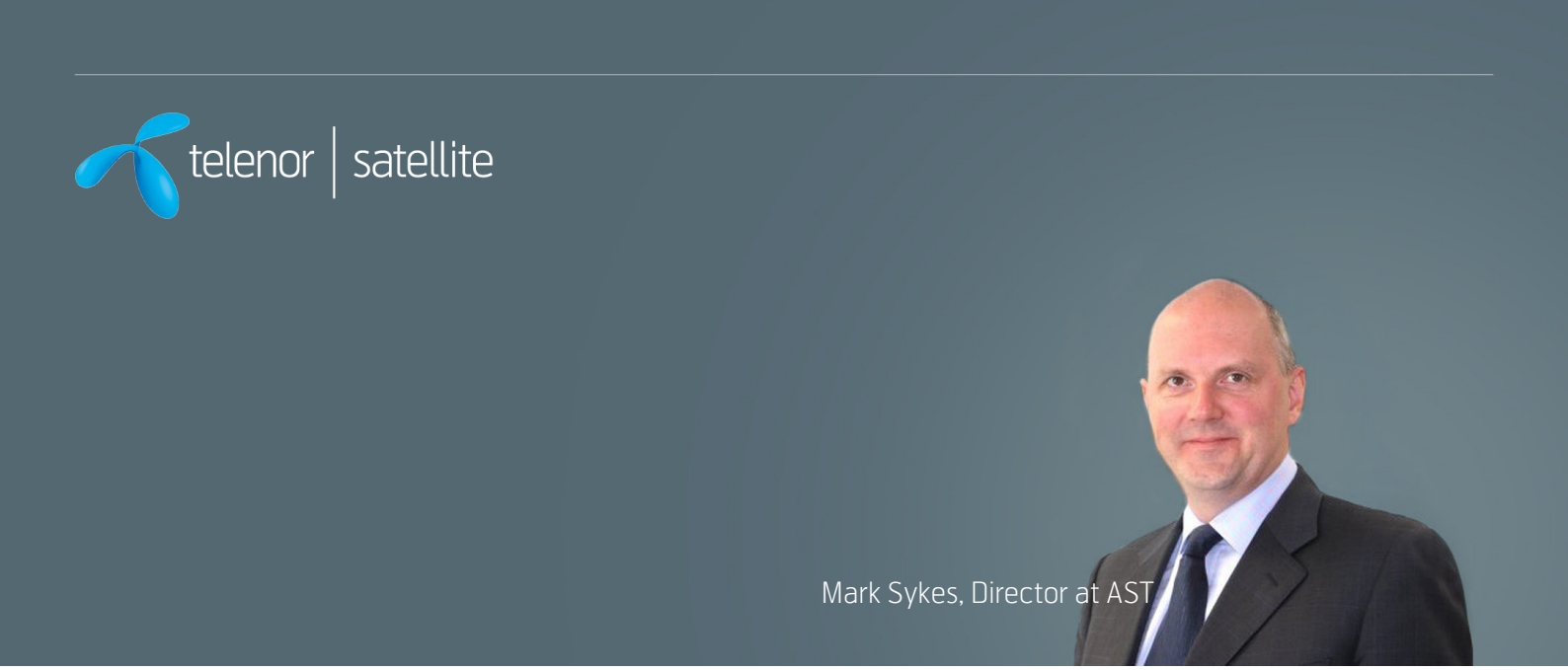
# Introducing Telenor's THOR 7 Ka band mobility service

For use on superyachts to passenger ships, Telenor's newly launched Ka band mobility service provides high-powered capacity to facilitate the ever increasing demand for bandwidth and reliability at sea.
But how is it really performing? Telenor Maritime and AST, both of whom were on our BETA testing programme, share with us their experiences on THOR 7's real capability:




**Mark Sykes, Director at AST, discusses the need for small antennas and how important Ka band services are for maritime communication services both today and tomorrow.**

**What type of vessels do you provide your managed services to and which applications are driving your business?**

Our markets in maritime tend to be mainly the middle tier vessels such as OSVs, Tugs, Research and Survey, LNG transportation ships, higher end fishing, leisure yachts and super yachts. We see most demand for operational applications and crew welfare. Over the last few years the trend towards mobile devices has been huge. The crew welfare market is become ever richer with the applications delivered. It used to be about making phone calls but now crew have their own phones so they can use all their data apps. However, they also want to watch TV and stream videos. So the demand in the crew welfare segment alone has gone up orders of magnitude never seen before. Add to this the growth in monitoring assets onboard vessels, which has also increased dramatically. It's not just about positioning data, maps, weather and the basic operational environment. It's about predictive management systems so that you know you will have spares available for systems as you come into port, for example. If you combine the criticality of running an efficient operation together with the need to layer the management of the ship and the crew requirement, the need for data is increasing dramatically. It's almost a perfect storm for demand. Of course in delivering supply to that demand our customers want to pay the minimum possible whilst ensuring they get the most out of their communications spend. That's where AST's new INTEGRA network comes in - control and management of the communications link at the application level - a truly unique capability.

**Can you tell us about existing service limitations and the difference that the THOR 7 BETA testing has made?**

One of the main ways in which the THOR 7 testing has helped is in terms of the use of smaller antennas. I must admit to being a little sceptical in the beginning, as to whether a 60cm versus a 1m could make that much difference but it really does. Also, the way you install some new Ka band antennas is significantly easier compared to the way in which antennas used to be installed. That makes a big difference on some vessels. I also think that the value that is being delivered is another step forward. If you put all those things together: the usability, the ease of installation, the cost and the size and weight of a 60cm antenna it makes a big difference for some vessels. Then combine these things with the track record that Telenor Satellite has in delivering reliability, robustness and customer service to service providers like AST, it is different to what we have seen before. A big improvement has been made.

**How important is access to Ka band services for you as a provider of managed services at sea?**

Ka is becoming an ever more critical and popular band to complement Ku. But it has different performance characteristics - better in very many respects. A lot of people talk about rain fade as an issue. On the two Ka systems we have tested on THOR 7, we have not experienced any rain fade issues. At the moment, our experience is that Ka band delivers a really good service and its price performance is very compelling. I think demand for Ka band will increase as long as it is delivered in the right way for the customer.

**What is your overall assessment of the THOR 7 offering?**

We have been very pleased with it. We have used a lot of different VSAT systems and vendors, but if you blend all the factors together and assess the proposition as a whole: Telenor Satellite as a provider, the price performance, Ka band, ease of installation, we are very excited by it. We think it has real market potential. We have already seen significantly more uptake during the BETA testing than we would have expected. In THOR 7 we are seeing very good market demand, especially in new sectors for VSAT, albeit regional, in markets where we have not seen that level of demand previously, so we are very optimistic. All our BETA customers will now become commercial customers and all those that have been waiting for the programme to complete will now be jumping on the bandwagon and it's exciting for us!

Jan Erik Norli,
CSO, Telenor Maritime

**Telenor Maritime's CSO Jan Erik Norli, discusses how THOR 7 has made a difference in supporting their commercial position.**

**Can you tell us about existing service limitations prior to THOR 7?**

People constantly wanted to use their phones and tablets on board vessels, and this was when we hit a constraint in our VSAT connectivity. A fleet of 10-15 vessels with an average size of 800-1200 passengers could be covered by as little as 20Mbps or perhaps less, giving each person around 100kbps. However, with so little bandwidth, if you want to do something on your smartphone it simply won't work. Today, ship owners understand that they need to have a Wi-Fi system. As a BETA test participant on THOR 7, we now have a fully-fledged Wi-Fi system up and running on the ferry Color Fantasy, with the capacity of roughly 68 Mbps supporting that one vessel. People are very happy as it works well, and they are also willing to pay for it which is the main thing.

**What difference has the THOR 7 BETA testing has made to your business?**

Through the THOR 7 BETA test, we have cracked the code in terms of pricing. The average price per Wi-Fi ticket on vessels is now affordable and fully comparable to Wi-Fi land-based tickets. This is quite an achievement. It is a very similar experience to a 4G network on land, which changes according to the amount of users it is dealing with. If there are a lot of people using it, the speed drops. This is exactly what we see on board ferries as well. However, we can now give a minimum QoS, so it is a guarantee of quality.

**How important is access to Ka band services for you as a provider of managed services at sea?**

We couldn't have done what we have done without the access to Ka band. It is as simple as that. If the Ka band solution had not shown up at the time that it did, we couldn't have achieved what we have on board Color Fantasy. In terms of the apps that ferry companies can offer, we are in the midst of a paradigm shift as they can be used for so many applications on board a vessel from ordering food, booking tables to locating your car on the ferry. It would not have been possible without Ka band - you have to have the bandwidth to accommodate it.

**What is your overall assessment of the THOR 7 offering?**

As a mobile operator, we are coming from the QoS perspective. If we don't have the right QoS to deliver into the end users' hands, we would not be doing our job and the end user would not be happy to use our service. If you want cheap satellite coverage, you can get it, but mobile users will not have a good experience. If you want a quality, managed service that is up and running 24x7 I would say that the Ka band provisioning from Telenor Satellite is a good thing for you. We value it. If you want a service that is reliable, that you can trust with your operational services and effectiveness of business on board your vessels, then go for Telenor Satellite.