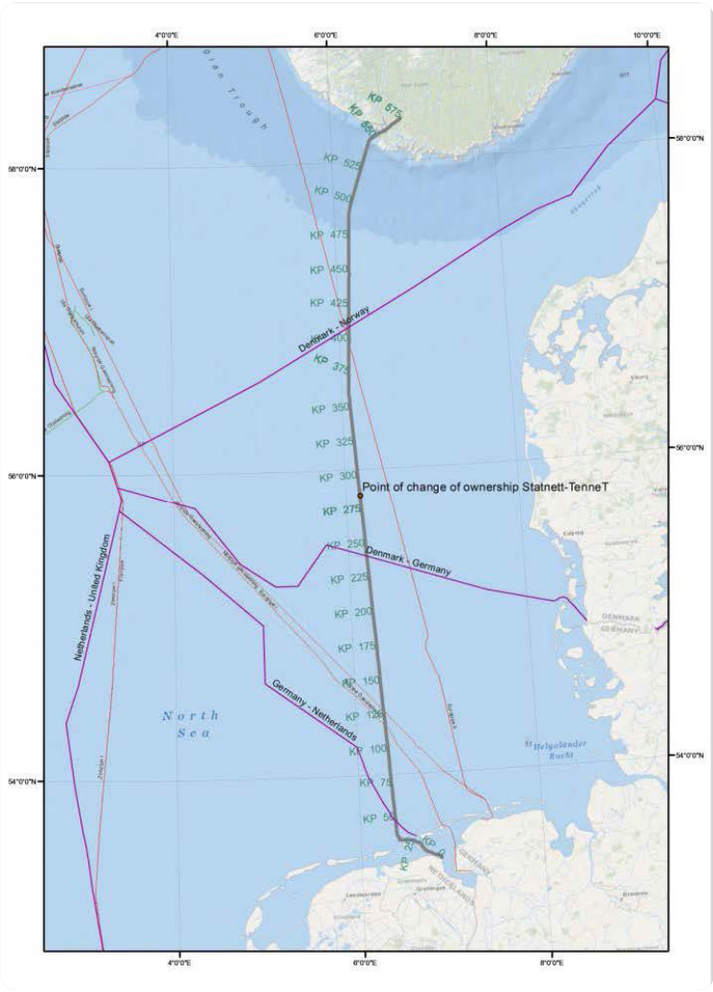
Engineering
Excellence
Underwater

SMD ARTEMIS



Company: Statnett

Location: North Sea

Artemis system: Artemis Passive Live

Cable type: HVDC power cable

Detection range: 6m

Vehicle: Work Class ROV

Background

Statnett is the system operator of the Norwegian power system, owning and operating the transmission grid to deliver a reliable national power supply. In 2014, a survey was required on NorNed, an operational HVDC power cable connecting the Dutch and Norwegian power grids. The cable had previously been surveyed with an alternative system; however results were unreliable at sections due to limitations with the detectability range.

SMD Artemis was selected to deliver high-speed tracking of live assets without interrupting power transmission.

The improved range capability of SMD Artemis provided a viable alternative for the planned survey.

The Challenge

— Operating in challenging North Sea weather conditions..

— Accurately tracking an existing signal within a live HVDC cable.

— Delivering precise results at greater burial depths where alternative systems have demonstrated limitations.

— Maintaining continuous and stable tracking, despite environmental and operational complexities.

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The Outcome

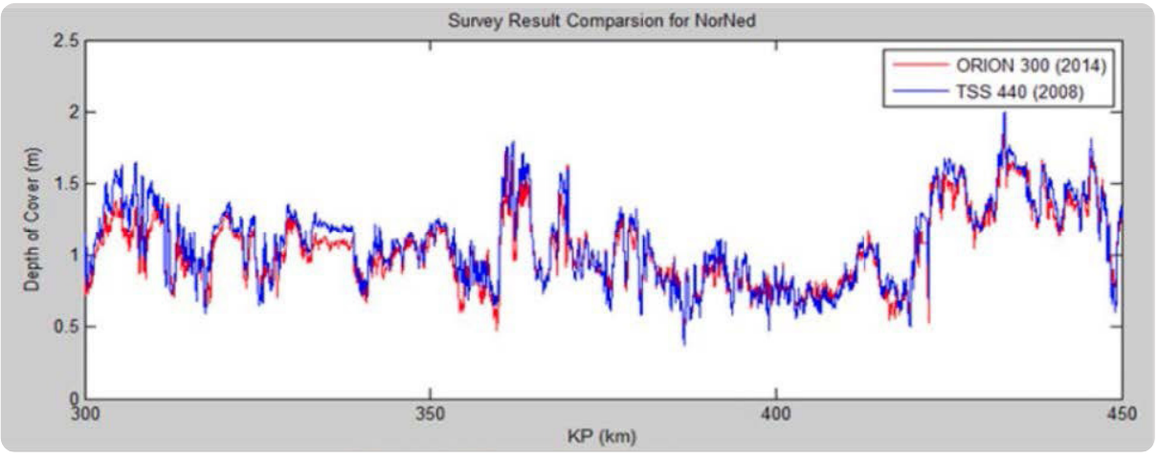
"The comparison data between SMD Artemis and TSS demonstrated comparable results, with Artemis the data is collected data twice as fast and at a higher altitude."

Ole Petter Hobberstad, Project Manager
Statnett

SMD Artemis successfully tracked a 100Hz signal in Statnett's HVDC cable at a speed of 1.5 knots, significantly enhancing both the accuracy and efficiency of the overall survey. The system's stable tracking performance and reliable real-time data output enabled effective survey without interrupting NorNed cable operations.

The cable remained fully operational throughout, eliminating transmission downtime, minimising risk and reducing potential impact on Statnett's end customers. Additionally, the ability to conduct the survey at higher speeds and altitudes contributed to reduced operational costs and shortened project timelines, demonstrating the system's suitability for complex, real-world offshore environments.

SMD Artemis maintained exceptional stability despite challenging North Sea conditions, where environmental factors can affect accuracy. The data collected by SMD Artemis was compared directly to that of Statnett's legacy cable tracking system, TSS, revealing significant performance improvements.



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Get in Touch

Artemis systems are now available for hire through global rental company RTS.

For more information on Artemis systems, please contact:

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