

Case Study

European Marine Energy Centre (EMEC)



Repeatit delivers real-time data, voice and video backhaul over the water for the European Marine Energy Centre.

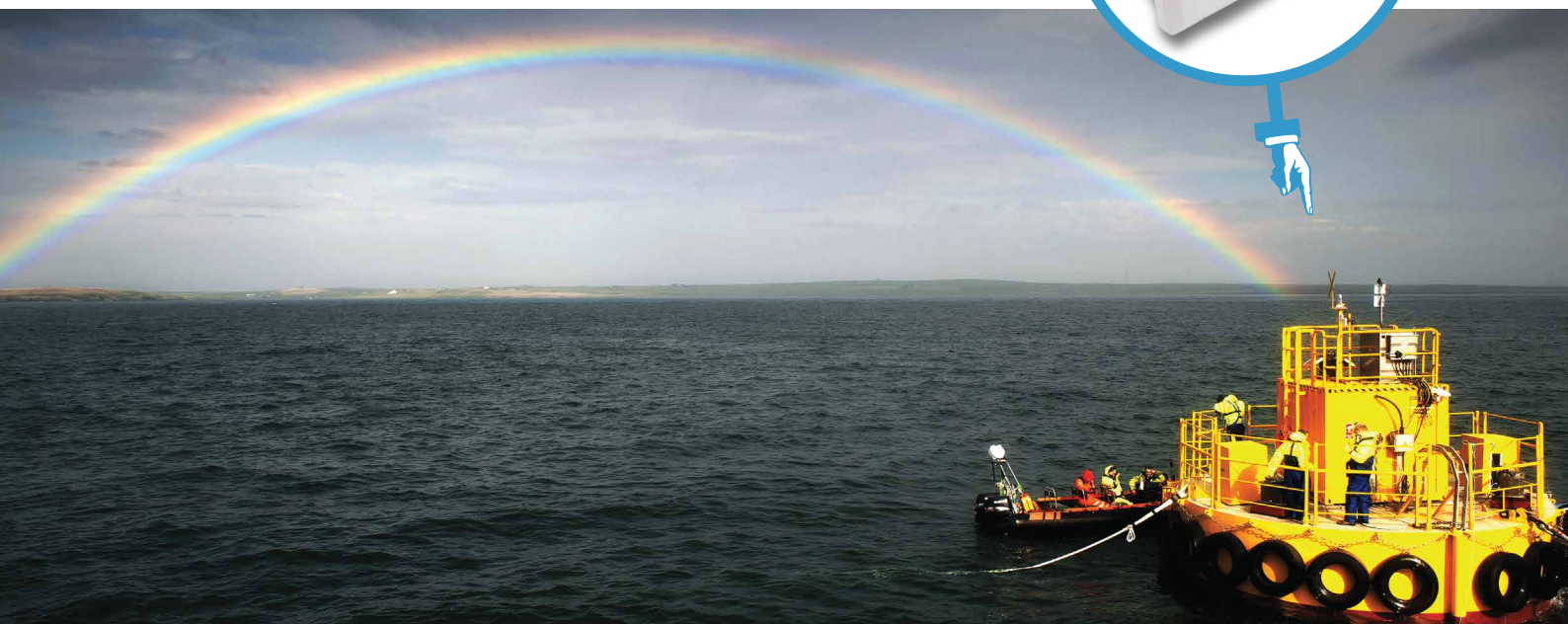


The Challenge:

The European Marine Energy Centre (EMEC) had a requirement to collect real-time data from wave & tidal energy devices from its Orkney Ocean Testing Range located 6km from the shore on a stationary buoy. Not only did EMEC need to deliver the critical wave & tidal test data from the stationary buoy back to the shore, it also needed to reliably transmit CCTV security images to protect the highly valuable test equipment. EMEC needed a solution capable of sustaining a rock-solid connection and would still work reliably even with the harsh sea environment.

The Solution:

EMEC turned to Rapier Systems due to its experience and expertise in wireless and challenging environments. Using wireless analysis software, a hybrid Point to Point & Multipoint Repeatit wireless solution was planned avoiding any obstacles that would affect the real-time performance required. Given the unique location for the deployment, involving substantial tidal movement, as well as the harsh marine environment, Rapier Systems specified a solution which could cope with the pitch, roll and rotational



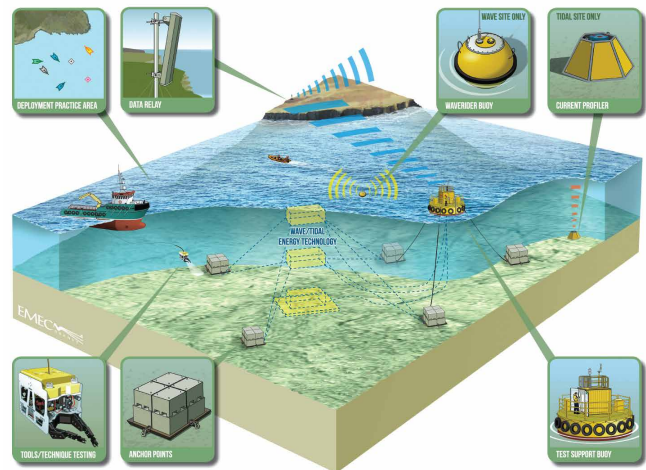
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forces being placed on the buoy, as well as being able to cope with the somewhat corrosive nature of the surroundings.

After a Repeatit solution was planned, a fully operational trial was installed to demonstrate the benefits of Repeatit's technology. The trial needed to show how the Repeatit equipment could overcome the rotational and vertical movement of the buoy to maintaining communications.



After demonstrating the ability to maintain a strong wireless connection cope with tough sea conditions, buoy rotations & vertical movements the system was signed off for deployment carried out by Rapier Systems.

The Outcome:

Rapier Systems carried out a successful installation of the Repeatit solution connecting the ground station to the buoy 6km at sea. Since the installation, EMEC has experienced unmatched wireless reliability with the Repeatit solution successfully transmitting the real-time test data and CCTV video back to the ground station.

“Repeatit’s TDD technology enabled us to deliver a strong, reliable and dependable solution to the European Marine Energy Centre”

Richard Watson, Rapier Systems

