

Finding the sweet spot between subsea and data centres



When Datacloud Global Congress returns from a two-year hiatus, Aqua Comms CEO **Nigel Bayliff** will be there to give his assessment of the data centre industry. The 30-year industry veteran explains to Saf Malik how Datacloud can help connect data centres and subsea networks

During the past 10 years, Aqua Comms has put more of its equipment into data centres than traditional cable landing stations, indicating that the ways how the two sectors can collaborate are increasing.

The company's CEO, Nigel Bayliff, says it is landing the power sections and cores of cables in areas near to cities in order to reach data centres.

"There we will put out submarine line termination equipment from Ciena, so that we're actually inside the data centre rather than 10 miles away," he says. "That's a change that has happened through efficiency."

Bayliff is an industry veteran with more than 30 years' experience in telecoms, having worked as an operator, a purchaser and a developer of significant submarine cable systems. Always keen to delve into new opportunities for subsea when they appear, the data centre environment is presenting a new and exciting one for those in connectivity, including Bayliff.

In his view, the various configurations that data centres come in has created an

ecosystem that Aqua Comms must get access to. And there is potential for the subsea industry to work hand-in-hand with data centre developers.

"A cable landing station isn't a data centre, but you can combine some of the parts of them and put them together," he says.

This is why Bayliff will take the opportunity to explain subsea's "side of the fence and what we're looking for" and to learn about challenges the data centre industry is facing, during the Datacloud Global Congress.

"It's the same thing the other way," he is keen to note. "[The data centre industry] wants to hear about the factors that make landing and hosting a submarine cable important for them, too."

Bayliff believes this dialogue will help his industry understand how to maximise potential partnerships, although he admits partnering with hyperscalers will not suit a "one size fits all" approach.

Given the projected growth of the data centre industry, Bayliff's comments are unsurprising. In 2020, the data centre services market was valued at US\$48.9 billion, and Mordor Intelligence predicts it will be worth \$105.6 billion by 2026.

Ventures

Aqua Comms is owned by Digital 9 Infrastructure (D9), which last year raised £95.2 million in a share offering.

The investment company bought Aqua Comms in April 2021 for \$215 million and in recent times has ventured deeper into the data centre space.

After Aqua Comms' acquisition, Bayliff said that its parent company would help to "accelerate our expansion into new systems and new products in both the Atlantic and new geographies".

D9 also acquired Iceland's Verne Global for £231 million in September 2021, and announced plans to invest £50 million to expand Verne's 40-acre data centre campus in Iceland by 10MW. Then in December, D9 spent £15 million to acquire SeaEdge UK1 – a data centre and subsea fibre landing station on the coast of Newcastle, England – which the firm says is the UK's largest data centre campus.

However, Bayliff notes the majority of his conversations have been with companies that were running and operating data centres before there were data centre campuses within the same investment stable.

1999-2002	Director of network operations, NTL/Virgin Media
2002-2008	Senior vice-president of operations and construction, FLAG Telecom/Reliance Globalcom
2009-2014	Chief executive/general manager, Huawei Marine Networks
2014-2016	Senior advisor, Pro4 Solutions
2017-2019	Non-executive director, Deep Blue Cable
2018 – present	Non-executive director, Ontix
2016 – present	CEO, Aqua Comms

facilities exempt from Virginia's sales and use taxes, prompting more companies to build data centres in the area. To qualify for the tax break, a provider must spend \$150 million and create between 25 to 50 new jobs in the area.

This tax break, and close access to Dominion Virginia Power and the Potomac River for cooling, means the typical cost per megawatt in Data Center Alley is 28% lower than the US average.

The location's other advantage is it provides access to countless redundant fibre optic loops, enabling crossconnect opportunities for businesses and ISPs throughout the region.

"Then there are some big private data centres from the likes of Meta and AWS," Bayliff says. These hyperscalers have been investing in data centres over the past few years, which along with the pandemic fuelling its continued growth, has helped

New Jersey to Ireland and Denmark. Denmark's data centre market is expected to grow substantially in the coming years, according to the Danish Datacenter Industry Association. The total capacity of colocation data centres in the country is expected to increase from 33MW in 2021 to a predicted 136MW in 2024 – growth of 412%.

This projected growth was evident when Google and Facebook both acquired large tracts of land in the country within the same week in October 2021. Google acquired 120,000 square metres in Taulov, in Denmark's Fredericia Municipality, while Facebook acquired 212 hectares in Andrup, in the Esbjerg Municipality.

Bayliff says Aqua Comms will not limit itself to one region, but is looking at the "next big location and the next big hub" for data centres. In his view access networks, long-haul networks and data centre hubs are converging, and capitalising on this convergence requires picking a common location, similar to what happened in the north of Spain.

"Bilbao had no cables until MAREA landed there in 2017, and suddenly there's three transatlantic cables, a bunch of backhauls and a carrier neutral data centre being deployed around Bilbao," he says.

Competition

Bayliff says that increasing neutrality and competition has meant that data centres are being pushed out further toward the sea, which works in some countries, but not others.

Take Slough, for example, which is 91km from the nearest coastline yet is a major interconnection point for the UK with multiple subsea landings. For Bayliff, Cornwall, on the south coast of England, and Dublin in Ireland would be better alternatives, as the landing stations there would only be a few hundred miles away from other landing stations.

"If there are three cables on the east coast of Ireland, putting a data centre there allows you to use traffic from those three cables," he says.

Yet competition in the data centre industry continues to increase with development costs lowering from \$10-\$15 million per megawatt to \$6-\$9 million per megawatt, meaning more data centres could be built, providing more opportunities for partnerships with companies within the space.

Bayliff believes it is essential Aqua Comms lays the groundwork for partnerships now.

"We're not going to go to every country," he says. "But we will go to 20 to 30 countries around the world and put down solid Aqua Comms equipment in those countries." 

“A cable landing station isn't a data centre, but you can combine some of the parts of them and put them together

Nigel Bayliff, CEO, Aqua Comms

Aqua Comms is in a good position to forge partnerships, particularly in and around the UK. The firm recently announced the launch of its CeltixConnect-2 (CC-2) and North Sea Connect (NSC) subsea systems as part of its ownership of the Havhingsten cable system. CC-2 connects Ireland and the UK with landings into the Isle of Man and brings a resilient, high fibre count connectivity between key hubs for carrier, cloud and content markets.

The sweet spot

When it comes to the types of partnerships he is looking to build at Datacloud, Bayliff says he is trying to find the "sweet spots" where a data centre, a cable and a general marketplace can be improved with significant investment. He cites various locations around the United States, with one being Data Center Alley in Ashburn, Virginia, around 34 miles from Washington, DC.

The area is home to around 40 colocation data centres and has been called the data centre capital of the world. This is partly due to legislation passed in 2009 making qualified data centre

make the data centre industry one of the fastest growing investment sectors in recent time.

In addition, there are carrier-neutral data centres that allow for interconnection between many colocation and interconnection providers, Bayliff says.

These are all locations Bayliff says Aqua Comms is "very interested" in. Although he clarifies that while the firm aims to tap into the "big hyperscale hubs", generally the company will be targeting a region, rather than a particular type of data centre.

Although, he is keen to establish the differences between types of data centres.

"The problem is when someone thinks about data centres, they immediately think of a specific type," he says. "But there's a rich difference between an edge data centre in Newcastle versus a core hyperscale data centre in the middle of Denmark."

"In Denmark, hyperscale data centres are all within a 50-mile radius of one another, and that's because it is a good mix of latency spread, reasonably priced electricity and connectivity," he explains.

Aqua Comms already has a presence in Denmark via its America Europe Connect-2 (AEC-2), which runs from