

# Making waves in Europe



A NUMBER OF NEW SUBSEA CABLE SYSTEMS ARE LANDING IN EUROPE, NOT ALL OF THEM IN FAMILIAR LOCATIONS. GUY MATTHEWS EXAMINES THE CHANGING FACE OF THE CONTINENT'S CONNECTIVITY.

Europe is far from poorly served by subsea cable connectivity. From multiple trans-Atlantic systems to a mesh of Mediterranean links, there are routing and pricing options that take traffic to anywhere in the world cheaply and at speed.

Now a new clutch of systems are being launched, or are at the advanced planning stage, that aim to bring something fresh to the mix, landing at innovative destinations and funded by a non-traditional mix of backers.

Going live in early 2018, for example, was MAREA, a joint investment by Facebook, Microsoft and Telefonica subsidiary Telxius. It's a 6,600km, 160Tbps cable that runs from Virginia Beach in the US to Bilbao on the north coast of Spain.

Facebook is also part of the consortium behind the planned Havfrue cable, set to connect the US with Ireland, Denmark and, eventually, Norway, and scheduled for launch in the second half of 2019. An additional participant in the project is Google Cloud which is also behind Dunant, a four-fibre pair cable system, which will span more than 6,400km between Virginia and France's Atlantic coast.

The ground-breaking Havfrue consortium is completed by Irish submarine cable operator Aqua Comms, already the owner of Ireland's first dedicated fibre-optic

network between New York, London and Dublin.

Nigel Bayliff, CEO of Aqua Comms, talks of a 'new era' for Europe's subsea cable sector, one characterised by innovative routing: "Aqua Comms is leveraging its newest route with AEConnect-2, offering connectivity across the pan-Atlantic hyperscale data centre industry," he says. "We're enabling interconnection between the north east of the US and Denmark, as well as offering loop resilience in Ireland."

Conspicuously, none of the major new European projects has a landing in the UK, once considered a *de rigueur* destination for pretty much any trans-Atlantic network. In fact of all the new European cables launched since 2015, only one has a British landing.

Not so surprising and no cause for conspiracy theories, argues Alan Mauldin, research director with analyst firm Telegeography: "A lot of the European cables being built are going to new places, which on balance is a good thing," he says. "It brings more geographic diversity."

He describes the idea that Brexit is behind the avoidance of the UK as 'a ludicrous concept': "It's more a matter that the owners of these cables, many of them content providers, are looking out for greater overall diversity. We're seeing a similar process on the trans-Pacific route where cables are opting to focus less on

Japan and more on places like Hong Kong and Singapore."

He points out that a comparable phenomenon is playing out in the Mediterranean where new cables like AAE-1 and SEA ME WE 5 are landing in a mix of familiar and new locations. AAE-1 comes ashore in Bari on Italy's Adriatic coast as well as in better served locations like Open Hub Med in Sicily and Marseille. SEA ME WE 5 lands in Sicily and France too, as well as Turkey.

There is strong logic for cables that connect the US directly with Scandinavia, contends Mattias Fridström, chief evangelist at Telia Carrier: "The Nordic countries are currently a prime spot for new webscale data centres, due to their extremely good power price ratio, combined with close to zero CO2 emissions from renewable energy sources," he says. "I think this will lead to a need for more cables going directly from North America to the Nordics. One is already on its way, landing in Denmark, and I believe that a few more will be needed to cover requirements in the coming years."

He describes as 'interesting' plans for an Arctic cable over Russia's north coast: "But the cost compared to the benefit makes it hard to complete," he fears. "Only governments can agree on a project like that, not operators themselves."

Despite the drive to establish new and diverse landings, the most popular



European cable destination shows no sign of losing its appeal. Some 13 submarine networks run out of Marseille, connecting to dozens of countries across Europe, Africa, the Middle East and Asia, making France's second largest city a key gateway for carriers, ISPs and CDNs seeking to deliver content and services beyond Europe.

Delphine Masciopinto, CCO of Internet exchange France-IX, explains that many of these cables benefit from a direct connection into one of the company's three Marseille PoPs, located in Interxion's massive MRS2 data centre:

"By landing direct in a data centre, these cables can offer better value, better performance and are more reliable," she says. "There are not many places in the world that can match this."

Masciopinto believes there are many strong reasons why Marseille's appeal has held up so well despite competition from around Europe and the middle East: "There's diversity of routing options, a market open to competition, and carrier neutral facilities," she says. "As long as all the cables that land there provide something different, there's no difficulty with having so many. Between them they provide redundancy."

There are those who, while accepting the importance of Marseille, believe it is healthy that other European hubs emerge to challenge it.

Retelit, the Italian provider of infrastructure and data services, has established a landing station at Bari on Italy's east coast as a landing for the AAE-1 subsea cable in which it is a stakeholder.

The cable also lands at Marseille and Open Hub Med in Sicily.

Giuseppe Sini, head of Retelit's International Business Unit, says it is vital for his customers in Asia and the Middle East to have the option of a landing in the centre of the Mediterranean, avoiding, should they wish it, traditional routing via the Sicily Channel with its history of cable damage.

"It's particularly important for content providers and OTTs to have different and diverse routes such as we offer," he argues. "These players often feel they do not have the time to wait for traditional consortiums to sort out new routes, so in many cases we are seeing them build and operate cables of their own, sometimes partnering with each other and sometimes with operators. The operator is often critical to these projects as they can help with licensing issues."

He expects to see fresh consortiums enter the cable sector over the next few years, disrupting the market further with landings in places like Italy and Spain: "This has certainly been our strategy, to provide alternative landings," he says. "We're currently planning a new one in northern Italy, close to Genoa. The idea is a mesh that connects to all the data centres in Europe."

Javier Héctor Lloret, senior strategic sourcing manager, submarine cables, at BICS agrees that OTT influence is increasingly critical in determining where cable land, and that multiple routing

or Pakistan," says Lloret. "This serves to reduce latency and increase diversity of the international traffic used by China's telecom operators."

So is the European cable sector approaching any kind of saturation? Will this latest wave of new systems be enough to sustain it for the foreseeable? It is difficult to see this being the case given steadily rising traffic volumes as well as a growing hunger for the resilience that comes with greater diversity.

"Analysts are predicting extremely healthy growth in subsea European cables, in other words cables terminating in or traversing Europe," claims Peter Zwinkels, vice president, global submarine solutions with vendor Infinera. "Capacity is set to more than double in the next two years. We would say that the market requires more cables than are currently planned to cope with this."

There is also the matter of the aging nature of much trans-Atlantic infrastructure: "Many of the trans-Atlantic cables are getting pretty old, and at some point we'll start to see cables turned off," foresees Telegeography's Mauldin. "This means we might see new cables to provide a comparable route."

Telia's Fridstrom agrees: "Many cables still in use across the Atlantic are about 20 years old," he points out. "We have seen a few new cables recently but there is still a need to replace these older cables even though most of them have been upgraded several



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**Giuseppe Sini**, head of international business unit, Retelit

options are seen as key to protecting their traffic: "The fact that the OTTs plan their main backbone to link their data centres, located in different parts of Europe, is the reason we are seeing them use these alternative routes."

He also believes there may be some influence spinning out of China's Belt and Road initiative. While much of its telecoms infrastructure side has been focussed around terrestrial developments across the wide open spaces of central Asia, there is also an indirect but significant subsea aspect to the strategy, he claims: "We're seeing the opening of new submarine routes that ultimately reach China, via Myanmar

times. The technology of 2018 cannot be compared to that of 20 years ago, which is why we are running out of positive business cases supporting an upgrade of an old cables."

The case for further cables across the Atlantic and for new options in the Mediterranean seems solid. The current wave of European cable initiatives may in fact be merely the vanguard to an extended phase of innovative developments. ☐

**The Dec/Jan issue of Capacity includes our annual subsea special report. To get involved contact Natalie Bannerman at [natalie.bannerman@capacitymedia.com](mailto:natalie.bannerman@capacitymedia.com)**