

Most Advanced Optical Solution on a Transatlantic Subsea Cable with the Highest Reliability and Diverse Terrestrial Route

Aqua Comms AEC-1 (America-Europe Connect-1) & CeltixConnect



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Aqua Comms' London-Dublin-NYC direct wavelength connections provide unprecedented security and reliability. It has the shortest, shallow water length with full burial directly connecting the US and the UK, and the fastest provisioning times for on-net PoPs for 10G / 100G (by availability).

- **IRISH SEA:** 2-Fully diverse cables: CeltixConnect / EirGrid with diverse landing stations in Ireland and the UK.
- **SLA 99.9%:** Fully diverse terrestrial routes in the US, Ireland and the UK with dual / diverse Irish Sea Crossings. Full optical protection on terrestrial and Irish Sea routes with the highest transatlantic SLA availability.
- **Encryption:** Wireline speed (100Gbps) encryption supported directly between data centres in North America and Europe.
- **Growth:** Latest subsea coherent equipment design facilitating unprecedented capacity growth at 15 Tbps/ fibre pair. Future upgrade ready for advanced modulations, e.g. 8QAM.
- **Latency:** 67.83ms Secaucus: Equinix NY5-Slough: Equinix LD6.

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Transoceanic Dialogue An Interview with Aqua Comms CEO Nigel Bayliff on AEConnect



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"Diversity is one of the key assets of our network. Customers want to be able to use diverse crossings and dark fibre paths, and going into Ireland gives us that USP, because no other cable travels the same route as ours does."

That is the view of Aqua Comms CEO Nigel Bayliff when we ask what benefits the America-Europe Connect (AEConnect) subsea cable brings to transatlantic systems.

"The whole communications industry is based around a basic human need to communicate with each other, so it will always attract people who want to do things differently."

AEConnect, spanning a 5,536 km route between Long Island in the US and a landing station in Killala in Ireland, had its final splice in November 2015 and went live in January 2016. The US side sees diverse backhaul fibre in place to Points of Presence (PoPs) at 800 Secaucus, 111 8th Ave, 32 Ave of the Americas and 60 Hudson. In Ireland, it connects with all of the major data centres in Dublin, plus two diverse crossings in the Irish Sea, with diverse fibre from Wales to London.

Another key aspect to the route chosen by Aqua Comms is that the cable avoids waters that are fraught with fishing activities and other obstacles that often damage cables. AEConnect also transverses the minimum length of shallow water along the continental shelf on both sides of the Atlantic while additional armoring and deeper burial were obtained to further mitigate potential damage. This means AEConnect is less vulnerable than other transoceanic cable systems.

"Our cable is interesting and unique in a couple of aspects. Firstly, it is the only cable that lands wholly on the coast of Ireland, and it has been a long time since that happened," Bayliff explains.

"From a diversity perspective, the route avoids all of the shallow water that it can, off the coast of Long Island and it goes straight out across the continental shelf and into deep water, which is safer for cables. It goes across

the mid-Atlantic ridge in a benign area, misses heavy fishing areas in the Flemish cap and lands in Killala, which is a very interesting location. It has the security of being in deep water as much as possible, that's why Ireland is good."

"It avoids the busy shipping channel in the English Channel, Bayliff adds. "By its nature, it is more protected and provides direct connectivity to the digital economy of Ireland. Ireland has spent a lot of time and money building that footprint and Aqua Comms is committed to supporting this long-term strategy to service that market."

Upon launch, the cable supported 13Tbps per fibre pair, and was fitted with stubbed branch units for further expansion. It also has latency speeds amongst the lowest of those crossing the Atlantic – around 53.9 milliseconds.

It has various optical client interfaces available, with dark fibre services, coherent wavelength services for 100Gbps and 10Gbps with OTU2, OTU4, OC192, STM64, LAN PHY and WAN PHY interfaces. Bayliff adds: "Since arriving, I've looked closely at the asset and it is a very high quality asset with built-in potential for future expansion throughout its life. It's been built to the latest coherent technology and buried in the right places. It is over one year since the final splice and we've already had a good operating year. It has performed well on both the physical transmission layer and Ciena-based optical network layer."

And what's next for Aqua Comms, now that AEConnect is live and in use? Bayliff says it will continue to monetise the cable, while its next steps will be determined by customer demand.

To those looking at AEConnect as a possible route, Bayliff adds: "If you have a problem, we are here to help. We've got capacity ready to connect. We have a dedicated team of people who can connect you quickly, because we have a very efficient process to accomplish that."

