

Case Study

Delivering Fiber to The Queen Mary

Location: California, USA

Date: Spring 2012

Reducing FTTx outside plant install costs by 60 percent

Background

Dramatic reduction in total OSP FTTx install cost required

The installation of fiber into The Queen Mary had to be commercially viable. It needed to find an installation method and product set that provided 50-60 percent saving verses traditional trench, blow and splice methods. Otherwise the project was a non-starter.

Required an easy 'leave behind'

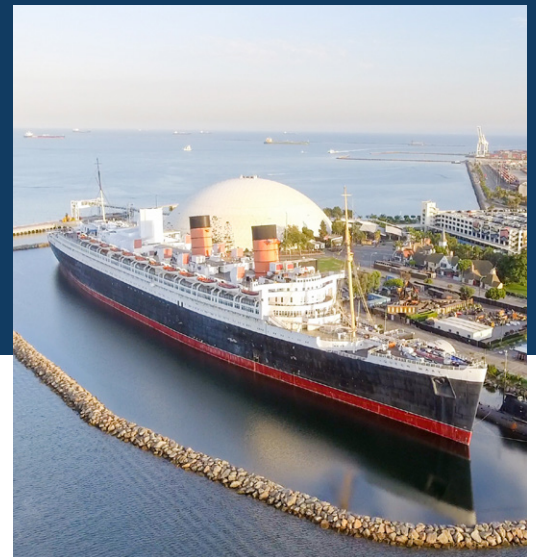
The Queen Mary planned to constantly evolve and required the ability to make on-going changes to the network. Therefore, the network solution required a 'leave behind' product that would not require high maintenance or extra skills for the in-house network team to make changes or expand the number of end points.

Solution: Challenge One

How Ancom Communications achieved the 60 percent reduction in cost of install with PPC FTTx products:

Micro trenching & 10 mm OD TuffDuct® Ultra (microduct)

- ✓ Micro trenching was believed to be the best alternative excavation method to trenching
- ✓ This install method required a non-traditional and more capable FTTx cable and duct
- ✓ The duct needed to be very slim, approximately 10 mm OD to fit the trench
- ✓ It needed to be flexible enough to be routed around tight corners
- ✓ Tough enough to withstand the high temperature of Bitumen back fill
- ✓ PPC FTTx products were specified and allowed Ancom Communications to micro trench



OSP Installer

- ✓ Engineer Anthony Andrews from Ancom Communications, Inc
- ✓ Utility Consulting, Engineering & Construction Services work were performed by John Griffin Construction, Inc

The Job

To install fiber from a point of presence (POP) high fiber count node to The Queen Mary birthed at Long Beach, CA, USA and the surrounding site. Allowing multiple retail, events and attractions throughout the site to be networked, using fiber.

Total Length of Install

5 mile (1.6 km)

Delivering Fiber to The Queen Mary

The impact of micro trenching on cost

- ✓ It was quicker and easier than standard trenching
- ✓ What would normally take half a day of digging could be achieved in 30 minutes
- ✓ More speed meant less man hours
- ✓ Less cost for back fill and patch up
- ✓ Less disruption to the client and their customers
- ✓ Less machinery was required

What attracted Ancom Communications to PPC microduct

- ✓ The slim 10 mm OD microduct fitted easily
- ✓ TuffDuct® Ultra resisted the high temperatures of Bitumen
- ✓ TuffDuct® didn't "pinch" on tight corners

Ancom Communications were able to micro trench 95 percent of the 5 mile (1.6 km) route, which kept cost to a minimum. PPC flexible microducting allowed the remaining 5 percent to be installed above ground, routed up, over and around major obstacles and existing utilities. The very small bend radius achieved by PPC microduct, cable and couplers meant a fast route could be found swiftly.

Solution: Challenge Two

Prior knowledge that the final network had to be easily "left behind" and easily maintained or extended meant that a single product manufacturer was required that provided an FTTx OSP solution as a complete package. Sourcing multiple products from different manufacturers did not appeal.

Ancom Communications set out the criteria that would be required of the optimum product set for this project.

The criteria required:

- ✓ Micro trench compatibility as described previously
- ✓ Future-proof, easy swap in and out of fiber in the future
- ✓ Pre-terminated nodes, that could be installed by unskilled staff
- ✓ Pre-terminated cable that could be pulled through microduct without needing a blowing rig
- ✓ The ability to connect and add fiber cable without the need for splicing

Ancom Communications investigated the product solutions that were available - only PPC appeared to have a complete solution that ticked all the boxes.

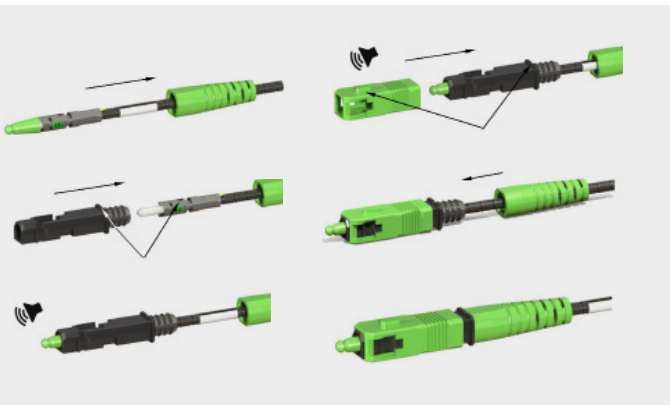
The result was a dramatic saving in the cost, the easy plug-and-play nature of the products meant that the install itself was much easier and quicker than a standard blown fiber and splice solution. It created a lot less disruption to the client and connections happened without delay.

The pre-terminated nodes and cable solution made the ever changing communications requirements of The Queen Mary future-proof and easily adaptable.

Maintenance and changes can now be done by non-expert technicians, allowing in-house employees to safely pull fiber out, reconnect duct, push fiber back and make a connection without the need of a splice.

Conclusion

Micro trenching is now viable when using PPC products. This project has proved that traditional trench, blow and splice methods are costly, time consuming and disruptive. Many more projects will be able to benefit from the dramatic 60 percent saving that engineers and installers such as Ancom Communications Inc can now achieve.



Patented QuikPush® cable assembly with SC connector removes the need for specialist fiber engineers