

A rapid installation for NYMEX's London futures exchange



Specialist contractor PCCabbling has installed the cabling infrastructure for The New York Mercantile Exchange's (NYMEX) new London futures exchange using HellermannTyton's pre-terminated RapidNet solution. PCCabbling completed the 2000+ outlet installation and 21 Open Frame CER in just three weeks. The time saving, flexibility and reduced risk achieved using RapidNet meant that the very ambitious project deadline was met comfortably.

NYMEX

Background

NYMEX is the world's largest physical commodity futures exchange and trading forum for energy and precious metals. The wide array of trading markets provided by the Exchange include futures and options contracts for crude oil, gasoline, heating oil, natural gas, electricity, gold, silver, copper, aluminium, and platinum.

Opened for business in September 2005, under the NYMEX Europe Limited brand, the new futures exchange at 131 Finsbury Pavement, London handles open outcry trading for Brent crude oil and Northwest Europe gasoil futures contracts. When it came to organising the IT requirements at 131 Finsbury Pavement, NYMEX's IT Director Raj Pillai recognised the importance of investing in a structured cabling system that would more than meet the daily demands placed upon it by the exchange's traders and be able to cope with future growth. A reliable network infrastructure is vital to NYMEX, with computer equipment and data intensive applications playing a mission critical role in their daily operation, delivering voice and IT data services to the trading booths, desks and service areas. "On the exchange we aim to handle our customers' technology needs as efficiently as possible. We therefore need to have the technology infrastructure in place to make this possible," comments Pillai. "The effectiveness of our exchange is in a large part dependent on the speed, quality and reliability of the IT infrastructure."

Taking the brief

HellermannTyton Approved Network Sciences Partner PCCabbling was approached by main building contractor IBEX and invited to discuss the structured cabling requirements for 131 Finsbury Pavement. The scope of work was issued in March in a comprehensive specification document which included details for the communication room rack and frame configuration, the application distribution for voice, data and other services, layouts and the connectivity expected of the cabling infrastructure.

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Peter Crawley, Managing Director, PCCabling explained: "The thing that struck us immediately was that for a job of this size – more than 2,000 outlets in all - the strict four-week window allowed for completion of the design and installation work presented a massive challenge. The aggressive project timeframe dictated that a traditional installation could not be successful without mobilizing large numbers of staff and incurring prohibitive costs and management through extended working windows. PCCabling have installed RapidNet successfully on numerous other demanding projects so knew it was the only workable solution for the NYMEX requirement. RapidNet is so quick and efficient to install compared to a traditional approach and just as importantly, we knew we could rely on HellermannTyton's service, support and ability to deliver."



"We put forward RapidNet as a solution that was standards compliant, would provide a quality cabling system, and importantly, one which could be installed within the demanding project schedule," explains Crawley.

After submitting initial ideas to IBEX, PCCabling was given the opportunity to meet with NYMEX's New York IT team via a video conference. Crawley comments: "NYMEX was unfamiliar with the RapidNet solution so we needed to convince them of its qualities and benefits. As the meeting was taking place by video conference we needed to organise for samples to be shipped to New York. HellermannTyton's support was fantastic. Within 24-hours samples had been dispatched from their manufacturing facility in Northampton and had arrived with the team in New York. This really helped get NYMEX's acceptance of RapidNet." After agreeing the strategy of using RapidNet – despite having to deliver under aggressive timescales – IBEX demonstrated a positive and flexible approach to the deployment of the system. Working in partnership with the NYMEX IT team and appointed contractors, they brought in to the solution and managed the construction of infrastructure pathway requirements for this project and the future.

System design



NYMEX specified a fully compliant Low Smoke Zero Halogen Cat 5E UTP structured cabling system to service the trading area on the first floor from the communications equipment room (CER) located on the building's ground floor. A detailed outlet distribution was also specified to ensure all identified applications were delivered throughout the building to support the business over the new infrastructure.

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PCCabling set out the RapidNet structured cabling solution with strategically placed 6 or 12 port Cat5E RJ45 grid outlet points (GOP) in locations as defined in the specification document. The numbers of outlets required to support the applications were verified against supporting drawings detailing the required coverage to the trading booths, desks and service areas. GOPs were presented as pre-terminated units either at ceiling level for applications such as market data feeds, audio visual equipment and wireless access points, or below the floor for the floor-level distribution.

Chatsworth open patching frames and equipment racks were situated in the ground floor CER, where all horizontal cabling stems from. The cabling and CER interlinks were all pre-terminated to minimise the time required in this critical space. All cabling to serve the first floor was routed via basket pathways and agreed routes for high and low level distribution. Cable matting was installed to create a pathway in the sub-floor void on the first floor and also to protect the cabling plant. The six and/or 12-way RapidNet GOP was then located in the void and secured in place. Final connectivity to the trade booths was via four-port RJ45 quad boxes or tech plates in the floor. These assemblies were also pre-terminated and colour coded, then fitted once the main cabling was in place. With the cabling routed via the ceiling and floor voids, a number of locations required containment in order to provide pathways and drop positions to equipment locations such as the plasma screens.

To complement the flexibility of the RapidNet cabling system, PCCabling allowed for a three-metre cable loom to ensure there is enough slack beneath the floor or in the ceiling for future moves, adds and changes. Horizontal cable management within the cabinets and racks was also provided and all cable looms were Velcro tied to the basket and/or tray pathways. For defined outlets such as Wireless Access Points where only two ports were needed, PCCabling complemented the RapidNet infrastructure with traditionally terminated outlets, which were more cost-effective and practical for the requirement.



Conformance and full system compatibility were 'point to point' from the CER frames using products from the HellermannTyton portfolio.

Pre-terminated benefits

The design of the new infrastructure provides maximum flexibility to accommodate future changes or developments of NYMEX's business need while meeting all the existing requirements. The solution supports all current standard applications and protocols such as Gigabit Ethernet.

Using RapidNet brought three overriding benefits to the project:

Speed of installation Peter Crawley explained: "Using traditional methods, the installation and termination of a typical 24-port patch panel takes approximately 1.25 hours. Of this time, we would spend several minutes screwing the patch panel into the rack using cage nuts and screws, the rest of the time is spent terminating the 24-horizontal cables to the rear of the patch panel. A typical 42U cabinet may contain 28 x 24 port patch panels in one rack. The length of time spent terminating these panels would be on average 35 hours. The size and scope of the NYMEX project meant that it would have taken the equivalent of a four-man team working for about 12-weeks. With the RapidNet solution, it was possible to reduce the installation time so much that we were only on-site for three weeks."

The rapidity of the installation over traditional methods meant, most importantly, that the project deadline could be achieved, but RapidNet's installation speed also meant that disruption on site was minimised. "IBEX was keen to minimise the numbers of suppliers on site at one time, so as to ensure the smooth running of the complex fit-out. RapidNet is so straightforward and labour efficient to install that we could manage with a small team without compromising the final project deadline, the quality of the workmanship or network performance," comments Crawley.

Reduced risk

NYMEX, as with most businesses, is naturally adverse to taking risks. Using RapidNet for the project means that every thing is pre-terminated and 100% quality assured by HellermannTyton so performance is never compromised. When you're working under pressure mistakes can sometimes happen. Cable termination is particularly time consuming and difficult so this is often the area where mistakes occur. RapidNet by nature of the fact that it arrives pre-terminated removes this element of risk altogether. With RapidNet all the cabling hardware comes from one source rather than multiple suppliers so again risk is reduced. Crawley explained: "We've been working with HellermannTyton for more than ten years. We know that we're going to get excellent service so we won't be left waiting for stock to be delivered. It will arrive when we needed it and the products will be of a high quality and perform to specification so the project program can be successfully achieved. HellermannTyton's 25-year system guarantee of which PCCabling is a Network Sciences Partner is also a key element in reducing risk for end-customers. It is reassuring to know that HellermannTyton has the capability in-house to answer questions on technical issues if we require further help."

Flexibility

Inevitably during the course of the installation a number of potentially critical problems arose such as the client changing or adding to the requirement. Crawley comments: "If we had been using a traditional approach, this would have incurred significant time delays re-terminating patch panels. This could have impacted on our ability to meet the final project deadline and created commercial issues. Because RapidNet's patch panel cassettes snap in and out with ease we were able to take any changes in our stride, dealing with them quickly and effortlessly. Ultimately, RapidNet made project managing the installation a challenge that we could comfortably control."



Raj Pillai, IT Director, NYMEX concludes: "The design and installation of the cabling infrastructure at 131 Finsbury Pavement has been first rate. Given that we only had a four-week window to complete the cabling installation many people told us it couldn't be achieved or that we would have to pay significantly over the odds. PCCabling introduced us to RapidNet and assured us they could deliver to deadline with no compromise to performance. They didn't disappoint and neither did the RapidNet solution. A superb job and a superb product."

Ewan Wilson, Managing Director, HellermannTyton said: "RapidNet is one of our newest and most innovative solutions and cements HellermannTyton's position at the forefront of structured cabling. RapidNet addresses the critical issues for cabling installations such as quality control, consistent repeatable terminations, installation time and the human resource required on site to complete a successful project on time and within budget. It's great to see RapidNet being used in projects like NYMEX. It further demonstrates our track record in the successful provision of highend cabling solutions for many of the UK's biggest cabling projects".

