

Networked for World Cup Potential



As we see an increased number of 'next generation' stadia being developed around the UK, a factor that is not often considered is the importance of quality network infrastructure and its significance in the day to day running of the modern football stadium.

The development at *stadiummk* has been steadily growing in size since it first started in February, 2005. The plan was always to progress the development over a number of years but it already includes a 22,000 seat stadium and a 127 room 4 star hotel, with an indoor arena well on its way. With the recent news that the stadium was selected as a host stadium for England's bid for the 2018 World Cup, to meet FIFA criteria of 40,000 clear seats, *stadiummk* will see an additional 21,000 installed if the bid is successful when announced in December 2010.

As you would imagine with any new stadia, technology plays a pivotal role in the day to day operations, not to mention its importance come match day or for any staged events. The stadium alone relies on a number of different technologies including CCTV, turnstile automation, shop and ticket office sales, plus all the technology needed to support the media.

All of this technology is linked up and connected to a series of switches and comms cabinets around the stadium, 13 to be exact. Each of these comms cabinets is then linked back to a central main comms room. Each of the satellite comms rooms and the main comms room are linked together using HellermannTyton Cat5E cable and Global panels.

Add to the stadium network infrastructure a 4 star hotel with 127 rooms and the complexity of the network starts to take shape. Each hotel room has two telephone connections, a data connection and the television runs over IP meaning that each room has four Cat5E cables providing its connectivity.

The hotel rooms are located over 3 floors with 2 dedicated comms rooms situated on level 4. On the ground floor the main comms room is used to connect all services at ground level, the same comms room that links the rest of the football stadium. On level 3, the AV room is located. The AV room is a comms room that hosts all the television equipment for the hotel rooms that delivers the TV services over IP. The AV comms room also acts as a back up to the main comms room if there were any problems. Both the main comms room and the AV room are connected to the 2 dedicated hotel comms rooms on level 4.

Building upon an existing infrastructure installed by an M&E contractor, the main installation of the network infrastructure in the stadium and hotel was carried out by Lynx Networks of Milton Keynes. Lynx has been installing network systems and cabling for over 20 years employing over 50 personnel. Lynx Networks were chosen for the *stadiummk* project for several reasons, Martin Bullen, Project Manager comments 'We've been working with Steve Ward and MK Dons for a while now, even when they were playing at the National Hockey Stadium, so the relationship with the football club and the Network Manager was well established.'



Lynx opted to specify HellermannTyton for the project, installing 1000's of metres of Cat5E cable and over 60 Global Cat5E patch panels. Martin Bullen explains 'Choosing HellermannTyton for this project was a fairly straight forward decision. We install a lot of HellermannTyton in projects and know exactly what we are getting. Quality, performance and reliability were key factors but responsiveness and customers service levels from HellermannTyton are always second to none.'

Steve Ward, *stadiummk* Network Manager adds 'Reliability and performance is essential. When you have CCTV running over IP on match days, any problems could jeopardise the game from a policing and health and safety point of view. Add to that the turnstiles, ticket office and shop sales, the network needs to be reliable and robust to ensure the smooth running of the club. Having worked with Martin for a number of years, I trust his judgement with what he installs and have never been disappointed.'

HellermannTyton's Cat5E cable and Global patch panels are manufactured to the highest quality at their production facility in Northampton. Every port of every product that leaves HellermannTyton is tested to meet or exceed industry standards. Global patch panels represent quality and performance offering 24 ports in 1U with dual labelling fields for detailed network identification.

The *stadiummk* project has so far reached in excess of 1,500 points when combining the stadium and the hotel. This is set to increase imminently with the construction of the new indoor arena and the additional 21,000 seats required for the stadium to meet the world cup bid and FIFA criteria.

The hotel boasts conference facilities for over 1,500 delegates including conference rooms, a ball room and several upper floor bedrooms that double up as executive corporate boxes on match days with balconies that over look the pitch. All of these facilities rely on the television, data and voice services that the network infrastructure delivers.



This large scale installation project faced a number of challenges along the way. The stadium and hotel complex was completed over a number of planning and construction phases which gave Lynx some unique challenges to overcome. Martin Bullen recalls 'There was a stage in the development where we were working in a shell, the hotel design had yet to be finalised so there were areas where we could work and others where we had no plans to work to.'

The MK Dons football team had already moved in to the ground and were playing their League One matches at the stadium whilst the hotel was still under construction. Martin Bullen adds 'one of the biggest challenges was the fact that we were working around a live football club where directors, management, players and club staff were all trying to get on with their day to day jobs. '

Martin Bullen continues 'As an MK Dons fan and with Lynx being a sponsor of the football club it gives me a great sense of pride and satisfaction to be involved with the behind the scenes operations of the club, knowing that the network we have installed is playing a pivotal role in the running of the stadium.'

HellermannTyton have an extensive portfolio of projects in the sports and leisure industry that have their products and systems installed. Ewan Wilson, HellermannTyton Managing Director, summarises 'We see our cabling and network solutions installed in number of commercial developments for financial institutions, data centres, schools and hospitals. To add football stadia to our portfolio demonstrates how flexible our products are. To be involved with the *stadiummk* project is fantastic on a local level and the successful application for a 2018 world cup host stadium really does make the project an even more satisfying one.'

Case Study Classification	
System	Field Terminated
Performance Standard	Cat5E
Segment	Sports and Leisure

About HellermannTyton

Founded in 1988, HellermannTyton Data Ltd is an established leader in the design, development and manufacture of innovative network infrastructure solutions for both LAN and WAN environments. The company offers a broad range of quality, high performance structured cabling products including Deca¹⁰; the unique pre-terminated, 'plug & play' RapidNet™ system; iD intelligent infrastructure management; and a full range of market leading closures for Broadband applications incorporating the patented Cablelok™ mechanical seal. Based in Northampton, the company is part of the global HellermannTyton group with operations in 34 countries worldwide.

About Lynx Networks

Lynx Networks has over 20 years experience working with customers to provide industry-leading quality in all aspects of PC networking and computer services. Whether it's a complete multi-server solution or just the data cabling or wireless networking aspects, their team of over 30 in-house technicians are trained and qualified to deliver.

