

Agile, Reliable and Cost Effective Network Deployment Solution meets the Fluctuating Education Facility Challenges



Londonderry High School, New Hampshire, USA

Londonderry School District IT department easily provisions network access anywhere within the school facilities meeting unforeseen scheduling on a timely basis.

Background

In the summer of 2009, the IT staff at the Londonderry School District was challenged with the task of providing a WiFi feed from the sport fields at the Londonderry High School to facilitate local live broadcasting for various scholastic sports and games during the upcoming school season in a cost effective manner.

“This is an important community service which will enable fans of Londonderry athletics the ability to enjoy not just school sports in real time but this project is a building block for expanding our ability to offer other streaming services, including community service and educational content, over the internet”, said Shawn Coe, Director of Technology for the Londonderry School District.

Scope of the Project

Although the concept is simplistic, it is certainly not an easy feat given the distance from the fields to the IT server room/CATV feed was over 1000 feet, which exceeds the 330 feet distance limitation on a typical CAT 5 cable run. The direct WiFi link from the stadium to the server location was considered but there is no simple line of sight clearance for an easy WiFi link. All the equipment and installation required to meet serious ‘outdoor’ environmental considerations, such as the need to withstand and be protected from the harsh New England seasons, would be an expensive capital expenditures.

THE CHALLENGE

Fluctuating facility environments demands a cost effective, quick and reliable delivery of networking solutions.

THE SOLUTION

Electric Connect® solution is designed to enable high speed Ethernet packets to traverse over many different transmission mediums: in-premise electrical wiring, extended distance for twisted pair wires and long distance coaxial cables. This ‘Virtual CAT5™’ capability allows vast opportunities for solving many physical networking infrastructure connectivity deployment related problems cost effectively and can span multiple market segments and applications.

“It is just not economically feasible given all the trenching, laying of underground pipes, drilling through the cinder block wall/roof with good weather sealing practices and the need to power intermediate outdoor repeaters for such CAT 5 deployment”, Shawn recalls.



The Aboundi Solution

An alternative deployment idea was brought in by Aboundi, Inc., a Nashua, New Hampshire company, when Shawn was introduced to its Electric Connect® capabilities.

Jointly, it was discovered an existing coaxial cable was previously installed for an originally planned cable video channel link but had been abandoned for some time. A pair of Electric Connect® series of products effectively turned the abandoned coaxial cable into a ‘Virtual CAT5™’ network infrastructure which facilitated a localized WiFi access point termination at the stadium press box from the IT server room without ever drilling, digging, laying PVC pipes, providing electrical power, addressing environmentally protected equipment housing installation needs nor pulling any cables to accomplish the task.



“The cost savings and time savings was un-measurable” Shawn recalls. “All equipment deployed are mobile and can be moved or removed for storage pending event requirements, therefore, the ability for the maximum equipment utilization and preservation in cost savings was just unprecedented.”

Electric Connect® Expansion

Once the value proposition of the Electric Connect® was discovered, additional application opportunities began to reveal themselves and the Electric Connect® quickly permeated into a multi-facet networking solutions for various un-planned needs.

Various Projects – One Solution for ALL!

Londonderry High School

– Live Scholastic Sports Broadcasting

Londonderry Middle School

– Multi Purpose Function Facility

– Teachers’ Room Conversion

Moose Hill School—Kindergarten

– Special Education Lab Facility

– Additional Teachers’ Desk Setups

Multi-Purpose Function Facility

At Londonderry Middle School, lunch is served at the gymnasium as it doubles as a cafeteria during the lunch hours.

The Electric Connect® solution replaced the original WiFi set up as the new solution provides a faster and more stable Point-of-Sales (POS) networking connectivity performance for the portable POS stations which are normally stored away.

All equipments on the station are preconfigured via the Electric Connect® device providing the power connection, surge protection and data connectivity. These stations are immediately networked once plugged into to the ceiling extension cords which is normally retracted during other functions.



Teachers' Function Room Conversion

A smaller class room was converted into a three teachers function room within an existing room without a nearby networking connection at the Londonderry Middle School. Although there is a network port on the wall in the room, the CAT5 cable was severed somewhere along the path sometime in the past. Hence, instead of significant time and effort devoted to tracing such ambiguous problems, Electric Connect® allowed a quick networking set up to accommodate such unexpected networking access need without delay.

“The Electric Connect® devices provided instant network accessibility to all desks once these teachers have decided on the facility arrangement”, said Ron Campo, the school district IT engineer. “It would have been a daunting task to trace such a problem if we were required to fix the problem with the traditional CAT 5 way such as re-pull the CAT5 cable.”

Special Education Lab Facility

A special education lab facility for the kindergartners was established within a larger open room at the Moose Hill School. There was one network accessible port adjacent to the room and several connections are needed within this room. The Electric Connect® devices allowed such sharing of the network access via the electric power grid within the room via the adjacent room with ease.

“The versatility of the Electric Connect® was just wonderful”, commented Shawn. “I could not emphasize enough of its versatility and cost saving for the school district during its deployment. We have added teachers' desks, set up additional function facility not planned initially, discovering disconnected network jacks on the wall yet re-enable network access, all with a simple plug-and-play ease.”



“The cost saving and time saving was un-measurable” **Shawn Coe, Director of Technology for the Londonderry School District** recalls. “All equipments deployed are mobile and can be moved or removed for storage pending event requirements, therefore, the ability for the maximum equipment utilization and preservation in cost savings was just unprecedented.”

“The Electric Connect® devices provided instant network accessibility”, **said Ron Campo, School District IT Engineer.**

A Proven Partnership and Product from Aboundi

“We would like to expand even further applications with the Aboundi products now that we have a fairly good knowledge on their products’ capabilities”, said Ron.

“There are still further potential opportunities that we could explore with Aboundi solutions and further enable our school district wide education efficiency yet achieving greater cost saving objectives. One of the interests is the Mobil Lab project where preconfigured laptops and instant WiFi access can be easily achieved with these equipments.”

Conclusion

Now, not only can the Londonderry School District IT department easily provision network access anywhere within the school facilities meeting unforeseen scheduling on a timely basis, but they can also assist in provision town wide area networking services through the utilization of the best of available technologies at their disposal for frequent occasions such as town events, distant learning, course content and training and etc.

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Why Electric Connect[®]

Cost Saving & Time Saving & Easy

- No New Cable[™] !
- Turns electrical outlets, phone jacks, existing CATV F-type outlets and expired CCTV cables into high bandwidth local area networking infrastructure.
- Easy to extend the Ethernet connection beyond 100 meters.
- Easy to deploy - No need to drill holes and no business activity down time.
- Flexibility - Provides easy removal and reinstall which preserves capital investment.
- No need to obtain Low Voltage cable installation permit.
- Eliminate oversight installation which may result in violation of Plenum cabling code requirements.
- Easy to use embedded diagnostic tool - Capable of providing Certificate of Performance for project acceptance.
- Easy to maintain - When the network breaks it is easy to find and identify the problem.

Lower the Total Cost of Ownership!



Aboundi, Inc. is the leading company providing POS/Retail/Hospitality, Small to Medium-sized Businesses (SMB), Municipals and Enterprises with commercially advanced and yet cost effective networking deployment solution encompassing the existing/legacy copper wiring as their networking infrastructure. Our combined solution of 'Electric Connect[®]' together with 'WebEyeAlert[®]', an enterprise class open IP based remote video surveillance monitoring and management software platform solution provides very effective and yet powerful value propositions for productive business operations.