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Converged networks and the retail environment

Converged networks can be of tremendous benefit to the multiple retail sector, namely shopping centres and malls. Historically, individual tenants have sourced and provided services such as telephony, internet connectivity, internal shop security and access control themselves. This often leads to inefficiencies due to duplication of materials and security risks from multiple contractor deployment in the building.

"A converged network is a single integrated IT network and structured cabling system which supports numerous building automation applications and services," says Bradley Hemphill, Managing Director of Electrical Engineering Solutions (EES).

EES is amongst others, at the vanguard of conceptualising, designing and project managing the delivery of technology solutions to the built environment.

The architectural and engineering world are increasingly specifying converged networks for new developments, sometimes referred to under the umbrella of Connected (Commercial) Real Estate (C(C)RE). As knowledge and experience in utilising facilities in these intelligent buildings grows, so too does confidence, leading to adoption of technological advances in previously untapped market sectors.

A recent case study in the United States, using the same technology available in South Africa, demonstrates one clear benefit to tenants in a San Diego retail centre. Here tenants receive high speed wired and wireless connectivity when utilising the buildings network. This realizes an estimated saving of 75% on the data and line rental rates they would otherwise incur via individual contracts with service providers (SPs). In turn the building owner/manager can derive income for providing this service, recovering both capital and operational costs for managing the network.

Further benefits from creating an Internet Protocol (IP) based retail environment include opportunities for connected mall advertising. Here one would install passive LCD screens strategically around the shopping mall environment, linked to an external or internal content manager, providing opportunity for retailers to reach beyond their static shop location and inform shoppers of daily specials, refurbishment status or other relevant news. "In addition a converged or 'intelligent' network is vital for synchronizing automation of the various building systems, such as power and lighting, ventilation, access and security," Hemphill explains. "The use of a single integrated network replaces the use of numerous separate networks or applications for each of the systems. In many instances the separate networks have been operating on non-compatible platforms."

So along with the direct benefits to retail tenants from shop services, one could also generate savings by adding all the other discrete systems, like lighting control, power management, ventilation and air-conditioning, onto the network. These savings would benefit both retailers and building owners.

As less cabling is required in a converged network than in a traditional installation of independent networks, the amount of materials used and waste generated is reduced, lowering the immediate impact on the environment. All this goes towards demonstrating commitment to Green issues, ultimately leading to better ethics around responsible management and sustainability.

"Another advantage of a converged network in a retail environment is that add-on costs for providing services to tenants are marginal, as the base-infrastructure and equipment already forms part of the original investment", continues Hemphill.

Although larger floor area chain-store retailers, such as some of the fashion and clothing outlets will likely prefer to leverage on their national data SP and network Service Level Agreement, (SLA), they could still benefit from mall advertising and in-store wireless continuity, amongst other things.

EES is currently engaged in upgrading technology in an existing retail centre, as a pilot converged network project, for a multiple retail site owner/managing enterprise.

As increasing numbers of stakeholders gain awareness of the advantages of applying a single managed network to all the traditional technical services, now recognised in industry as a Converged Network, the demand for professionals to apply their knowledge in this area will increase. This is expected to see a greater appreciation of design value in the retail centre development sector, and hence a growing demand for it.

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Electrical Engineering Solutions (EES) company profile

Electrical Engineering Solutions (EES) is an ISO 9000, professional services company, offering engineering, project management and business management services in all sectors of industry

throughout Africa and other emerging markets.

It is a leader in project managing the provision of Information Technology (IT) solutions to the built environment. Integral to its business is intelligent infrastructure, the implementation of which entails the convergence of IT and Building Automation Systems (BAS).

A benefit of intelligent infrastructure is that it facilitates energy management, thus contributing to the urgent global objective to establish a green environment. EES is a member company of the Green Building Council of South Africa.

The firm is proud to have played a significant role in the 2010 World Cup in the special systems design of five infrastructure projects: Cape Town Stadium, Nelson Mandela Bay Stadium in Port Elizabeth, Cape Town International Airport, King Shaka International Airport (KSIA) north of Durban and the Gautrain Sandton Station.

Based in Cape Town since 2001, the firm also has specialist experience in communication networks and related IT, security systems and 11kV and 400V electrical systems that support intelligent infrastructure.

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