



## *The University of Adelaide*

# BMS Network

**A** new integrated BMS Network at the North Terrace Campus will help Property Services staff and maintenance Service Providers improve their understanding and control of building HVAC costs and thereby reduce energy consumption.

### **Reason for the BMS Network**

The University of Adelaide North Terrace campus comprises a large number of buildings in general resembling a small city. Most buildings contain some form of individual, computerised Building Management Systems (BMS) which are standalone and act independent.

To improve their understanding of BMS systems, Property Services commissioned engineering firm, Systems Design Engineering Pty Ltd (SDE), to complete a detailed comprehensive BMS audit and review.

SDE completed the audit and confirmed that various BMS systems are not interconnected or centralised. Consequentially building systems cannot be remotely interrogated by Property Services staff or the various maintenance Service Providers, resulting in higher than necessary energy consumption and maintenance costs.

These factors motivated Property Services to invest in the North Terrace Campus BMS Network.

### **Project Overview**

The BMS V-LAN Project is currently underway and includes the deployment of a campus wide, new dedicated network data cabling system to approximately 30% of existing campus buildings and their associated standalone BMS systems.

A single "Enterprise" Server PC will also be connected on the Campus Network which will act as a Web Server such that all other PCs required to access the associated BMS systems from any where on the V-LAN, can do so by browsing via standard Windows Explorer based software and no other required specialist software.

BMS systems will therefore be interconnected and be capable of interoperation with each other for the first time.

The University has also adopted an industry open protocol standard for BMS communications language including BACnet, Lon and OPC to ensure all future new BMS systems can interoperate via the V-LAN simply and easily.

### **Energy Savings Ahead**

The economies that can accrue from a well-designed integrated network control system can be substantial.

The University can expect very significant improvements in performance as well as reduction in energy and maintenance costs typically \$5.00 - \$10.00 per square metre per year that are directly attributable to integrated network Control solutions.

**Predicted Energy Savings:**  
**Approx 1,700,000 Kw.hr pa**

**Greenhouse Gas Savings:**  
**Approx 1600 Tons of CO<sup>2</sup> pa**