INTEGRATED CONTROL Ltd

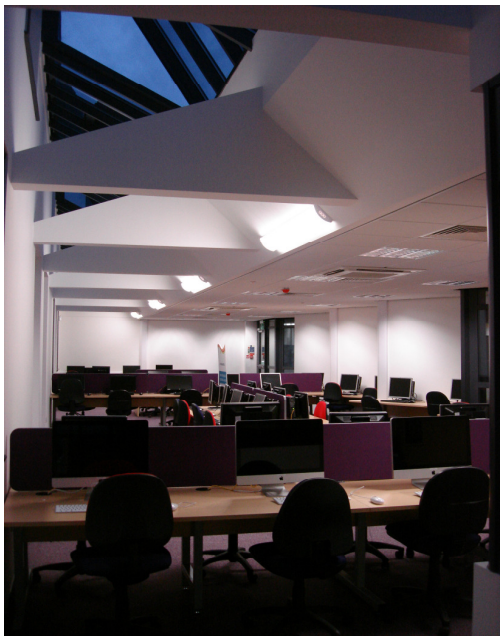
105 Chestnut Drive, Sale, Cheshire M33 4HS.

Case Studies For C-BUS Control and Management Systems

Project : Library—Lighting and Energy Control	Project No	Revision
Client : Builders	**8057**	**A**

Project Introduction :
Integrated Control Ltd (ICL) in association with Nortec Electrical Services won a project in Lancashire where an intelligent lighting control and energy management system was needed to control a new Library fit out. The contract was let on a design, supply, install and commission package for all the full electrical services including voice and data networks, security systems and the lighting controls.
The system chosen by ICL for this project was C-Bus, a product manufactured by Schneider Electric. On this project Relay, 0-10Volt and DSI Dimmer modules were used to control the lighting and SchedulePlus a software solution running on a standard windows PC would be the main control and user interface for the entire system.

The building was constructed over two phases. The first phase was to construct the front admin offices, and meeting rooms. The second phase was to construct the ground floor library and second floor study areas, complete with large computer clusters. The ground and first floor CBUS networks were split into 2 segments and upon completion of phase 2 both phases were linked together to provide a fully networked solution for both phases.
The lighting system is fully automated with a combination of timeclocks programmed in the software and PIR presences detection. In some areas like interview rooms and small meeting rooms the PIR sensors were configured using the software to work on absence detection only, this combination gave the user a maximum saving on energy usage. In larger meeting rooms and admin offices local control was afforded with the use of intelligent wall switches.
The front facade of the building was constructed with a full glass wall, so ICL incorporated daylight harvesting to enhance energy savings. We used CBUS 360 Deg multi-sensors and enabled a minimum light level to be set, from then on the internal light sensor would automatically adjust the light level to maintain that level.
To provide additional energy management time clocks were added in the software to control vending machines and water boilers usage. These would automatically turn off when the building is not in use. Additional control functions were programmed to reduce the amount of lights that are automatically switched on by the PIR's during out of hours, so in the late evening whilst the build is being cleaned, or whilst a night watchman does his rounds, the lighting has been configured to only switch 50% of the lighting on, again trying to reduce the amount of energy used when it is not needed.



To provide an additional service to the client the entire system is remotely managed by ICL from our Manchester Office, we are able to log into the building or the central control system via the internet to change any aspect of the control system, so items like PIR timers or light level thresholds can be simply adjusted by ICL with any need to attend site.

System Summary :

Total Networks :- 2
Total Circuits Controlled :- 163Circuits
Total Switches :- 33 Total PIR's :- 115
Network Interfaces :- 166 CBUS units