Delta™ CONTROLS
A Delta Group Company

CASE STUDY

# O3 SENSE

## ENHANCING THE USER EXPERIENCE

**Head Office**
17850 56 Ave. Surrey
BC Canada V3S 1C7

**Phone/Fax**
Tel.+1 604. 574. 9444
Fax +1 604 574 7630

info@deltacontrols.com
**www.deltacontrols.com**

## Background

A major university wants to ensure the comfort and wellbeing of students while reducing energy consumption and protecting investments of room equipment. With an existing Building Management System monitoring and controlling the facilities across the campus, they wanted to integrate emerging technology to improve their occupant's experience.

## Challenge

In student housing dorm rooms, the requirement is to improve sanitation, reduce vandalism on thermometer wall stats and conserve energy when the occupant is not in the space or when the occupant window was opened. Currently facility operations are unable to shut down the air when the occupant is not in the area or when the occupant opens a window because the dorm rooms lack occupancy capabilities.

## Solution

Remove and replace existing thermometer wall stats and install ceiling mounted O3 Edge Hubs. The placement of the O3 Edge eliminated the need to sanitize wall stats and reduced vandalism and overrides. The O3 Edge has a better vantage point in the room for occupancy, sensing motion, sound, and thermal load monitoring for occupancy, so when an area is unoccupied, or a window is opened, air conditioning is shut down.

## Benefits

A pilot was set up to compare the O3 Edge temperature verses the existing smart thermostat. The temperature readings from the O3 were far more linear and consistent. The comparisons were able to show how energy savings can be realized. The vantage point of the ceiling mount O3 provided better accuracy on temp sensing resulting in a quicker response to the controller.

**Head Office**
17850 56 Ave. Surrey
BC Canada V3S 1C7

**Phone/Fax**
Tel.+1 604. 574. 9444
Fax +1 604 574 7630

info@deltacontrols.com
**www.deltacontrols.com**

### Accurate temperatures

With more accurate temperature sensing and a better vantage point of the area under control, occupant comfort in the space has improved dramatically.

### Board occupancy sensor

The user is now able to use the on-board occupancy sensor on the O3 Sense to put the units in temperature setup and trust when the area isn't occupied that the temperature can still be maintained.

### Wireless configuration

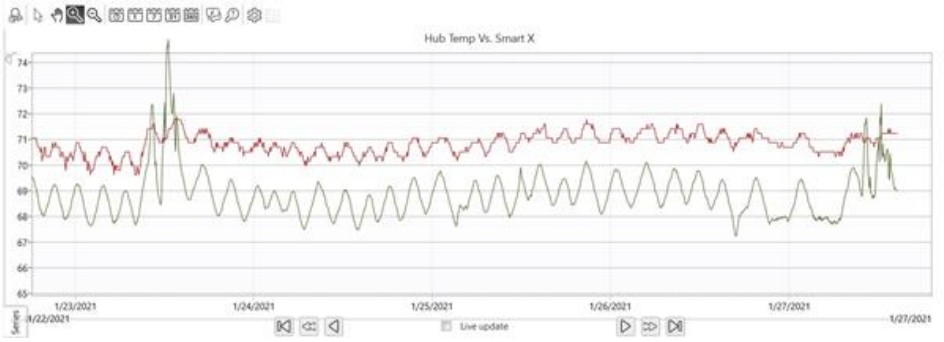
The O3 wireless configuration allowed devices to be set up ahead of time for ease of commissioning on site via the mobile app with minimal disruption. As the O3 uses open protocols and is BACnet native, it seamlessly integrated into the existing BMS.

### Multi-sensor

With seven different sensors onboard, the O3 utilizes Sensor Fusion to enhance occupancy detection and temperature reading. The O3 reacts fast when you leave the room—turning off lights, reducing heating and ventilation, saving you money.

## Final design

- Cat 5 wire to each Hub that was added to the existing BACnet IP BMS fieldbus daisy chain.
- O3 Edge Installed on the ceiling, Completed the commissioning via the O3 Setup App.
- Temperature and occupancy detection monitored against existing BMS sensors.




**Head Office**
17850 56 Ave. Surrey
BC Canada V3S 1C7

**Phone/Fax**
Tel.+1 604. 574. 9444
Fax +1 604 574 7630

info@deltacontrols.com
**www.deltacontrols.com**