CAN2GO Building Automation System

Case study - Historical Building Basilica Cathedral of St. John the Baptist

Situation

The St. John the Baptist Cathedral, in St. John's, Newfoundland, was Consecrated in 1855. On its Centenary, in 1955, His Holiness Pope Pius XII raised the Cathedral to the rank of Minor Basilica. The title is restricted to certain churches, truly outstanding for their historical, artistic and ecclesiastical importance.

It goes without saying that a retrofit in such a building, would have to be done with extreme care. This was the task at hand In 2011, when Basilica administrators decided to improve heating control for increased comfort and energy efficiency.

Objective

Spread temperature sensors and thermostats throughout the Basilica for improved monitoring, control and comfort.

Do so without passing wires.

Integrate the new control and sensing points to the Basilica's BACnet system, which is linked to Mitsubishi heat pumps installed as part of the retrofit.

In short: integrate wireless points to BACnet to provide the desired control without any invasiveness.

Diagnosis

Use energy harvesting EnOcean thermostats and sensors to provide the necessary sensing without wiring.

Use CAN2GO controllers to integrate the wireless EnOcean devices to the BACnet system. The CAN2GO units network wirelessly, enabling them to gather all the EnOcean points without wires. They also directly convert the EnOcean points to BACnet points, providing seamless wireless-to-BACnet integration for the project.

Solution – CAN2GO bridges the gap between wireless and BACnet

Providing the energy savings and comfort of building automation without invasiveness.

1

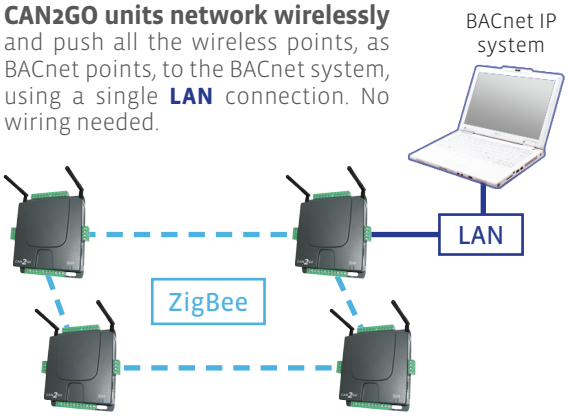
CAN2GO units discreetly installed inside the heating units of the Basilica. Their external antennas provide great wireless range despite the metal casing of the heating units.

2

Each CAN2GO integrates neighboring wireless sensors and thermostats based on the EnOcean energy harvesting technology. No wiring needed.

3

CAN2GO units network wirelessly and push all the wireless points, as BACnet points, to the BACnet system, using a single **LAN** connection. No wiring needed.



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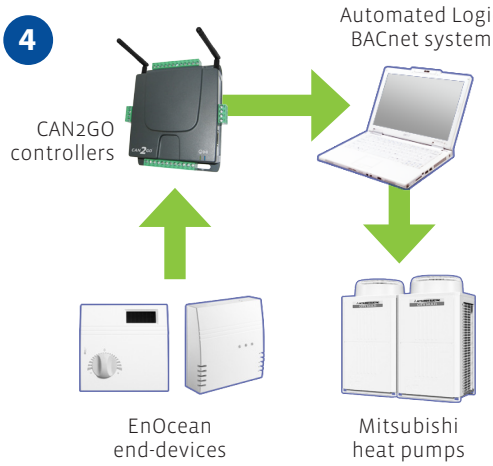

CAN2GO connects everything together: integrating wireless points; networking wirelessly; converting the points to BACnet; pushing the BACnet points via the LAN to the third party BACnet system.

Quote from the system integrator

"Due to the historical significance of the Basilica and the lack of wiring options, there was a requirement that wireless temperature sensors be used in the main church area. Since there are about 80 heat pump fan coils installed in this area and in many smaller rooms and hallways, we used 20 EnOcean thermostats and 10 UN2 CAN2GO controllers. All of the CAN2GO controllers communicated via Zigbee. The CAN2GO system was very easily integrated into our DDC front end through Bacnet and allowed us to provide accurate heating control in the church. CAN2GO provided excellent product support throughout the project."

- Barry Goulding, Newfoundland HVAC

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