

# Sontay Preserves History at Guildhall Art Gallery

The Guildhall Art Gallery in London is benefiting from state-of-the-art temperature and humidity monitoring thanks to Sontay's innovative SonNet wireless system.

Installed with the minimum of disruption to the gallery space as part of the gallery's Building Management System (BMS), the new Sontay sensors are helping to lower energy costs as well as protecting the famous artwork on display.

Established in 1886, the Guildhall Art Gallery is home to a selection of historic pieces including seventeenth century portraits, Pre-Raphaelite masterpieces and the world famous Magna Carta. The gallery was in need of temperature and humidity sensors to monitor the space conditions, control the energy being consumed and protect the artwork. As the art gallery is a listed building, a wired solution was not an option so Hertfordshire-based controls specialist, Comfort Controls, chose Sontay's SonNet wireless system.

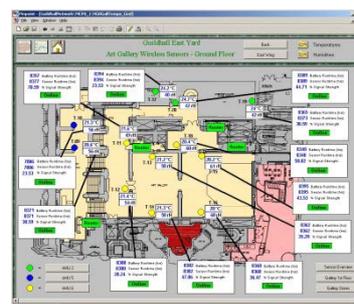
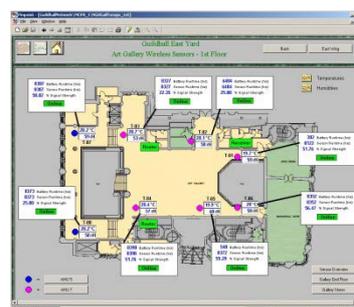
Previously, the Guildhall Art Gallery functioned without any space temperature sensors. Instead, temperature and humidity was controlled by duct mounted sensors and readings in the space were manually taken by a member of staff using a hand held device with the data. This was extremely inefficient. Comfort Control identified that a room-based system could provide much more accurate, automatic readings and deliver a far more reliable, user-friendly and robust solution for the gallery.

Following a site survey, Comfort Controls installed twenty five temperature and humidity sensors throughout the upper and lower gallery, which were connected via hardwired routers to the Schneider Electric BMS.

"Installing SonNet was really easy and a great option for a historic building such as the Guildhall Art Gallery," says Kris Mitchell, Technical Director at Comfort Controls, "Without any space condition monitoring, unnecessary energy was



*Guildhall Art Gallery*



*The temperature and humidity within the Guildhall Art Gallery needs to be closely monitored and controlled*

being wasted, and the artefacts on display were being put at risk. By fitting SonNet, the Guildhall Art Gallery is now able to monitor and control its energy use, resulting in better conditions for the artwork on display.”

The battery powered SonNet devices in the gallery are designed around a robust 2.4 GHz, 802.15.4 self-healing tree topology. This eliminates concerns with reception and reliability often associated with existing ‘point-to-point’ wireless systems. If a sensor detects a problem with the signal, it will automatically re-route to find the strongest available path to the receiver. Interference with other radio devices in the same frequency spectrum also been addressed through a proprietary algorithm which continually adapts to site conditions.

Using Sontay temperature and humidity sensors in spaces such as art galleries or museums makes a huge difference to the preservation and condition of the displays. For example, if the level of humidity is low, paintings will release moisture into the atmosphere, which can cause them to dry out. In contrast, if the atmosphere has a high level of humidity, the painting will absorb moisture which may threaten the integrity of the painted surface. By using sensors, galleries such as Guildhall can quickly react if there is a change in the atmosphere, preventing any damage to the sometimes priceless pieces of art.

A BACnet JACE control unit from Tridium was installed as part of the project to ensure the sensors ran smoothly with rest of the BMS. By using the BACnet communication protocol, the readings from the SonNet system can be combined with other applications in the BMS to improve energy efficiency and indoor air quality. The information is logged into the system with the data used to alter the energy being used by each component.

### Sontay ... project key facts

#### The Project

- Guildhall Art Gallery was established in 1886 and houses historic pieces including the Magna Carta
- The Art Gallery required temperature and humidity sensors to monitor the space conditions, control the energy being consumed and protect the artwork
- The team at the Guildhall Art Gallery were monitoring the temperature and humidity on hand held devices

#### The Requirement

- It was decided a room-based system could provide much more accurate, automatic readings
- It would also deliver a far more reliable, user-friendly and robust solution to the gallery

#### Sontay Products Used

- Sontay's SonNet wireless sensor system – 25 wireless sensors were installed in the upper and lower galleries
- Site survey kit



*Installing SonNet was really easy and a great option for a historic building such as the Guildhall Art Gallery*

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