



The British Museum: Pollutant Monitoring in Museum Display Collection

THE CHALLENGE

We were approached by the British Museum who were concerned about prolonging the life of their collections. Artefacts and other materials emit compounds, which cause further deterioration to other artefacts in the collection. They needed a way of monitoring these pollutants, specifically Volatile Organic Compounds (VOC), in order to identify a way of controlling the emissions. The British Museum required a better understanding of how much of these VOCs are being produced by their artefacts, as well as a better understanding of requirements for ventilation and environmental management of displays. A wireless solution was a high priority requirement as their current solution does not provide

information about the environment within a display cabinet as it requires wires.

OUR SOLUTION

We integrated a broadband VOC sensor into our FlatMesh product. A trial network was deployed in one of the rooms at the British Museum, having 2 nodes in a display cabinet with medieval artefacts and another outside, monitoring the ambient pollutants.

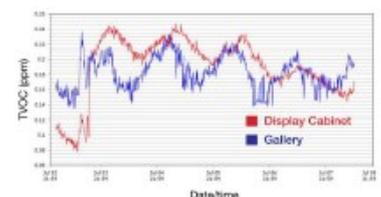
Our solution allowed for a very quick installation and having no wires meant that the display cabinet environment was not altered by having the sensors in place.

THE OUTCOME

Our quick deployment has shown how easy it would be to implement a wireless monitoring solution across the entire museum, within display cabinets and monitoring the rooms as well. The data acquired has shown some interesting results, such as a strong relationship of VOC density to temperature.

The data has led to more questions, and there are plans to extend the network to also include humidity and temperature sensors to larger areas.

We are also looking into miniaturizing the existing sensors so that they are more discrete when placed in display cabinets.



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