Radio fire detection for Tettnang Castle with SWING

Wireless technology provides high detection reliability and helps preserve the historical building structure.

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The project
Tettnang Castle is beautifully situated in Germany’s Upper Swabia region. The high standards the Counts of Montfort-Tettnang held for their stately residence are still reflected in the castle today. Tettnang Castle was designed and furnished in the 18th century. Back then, only the best artists were engaged by the owner. The spectacular Baroque interiors are still among the finest in the region. A highly reliable fire detection system was needed to protect employees and visitors as well as the historically significant artwork.

The challenge
Filled with impressive art and stuccowork from the 18th century, Tettnang Castle is a historically important landmark. For the museum and the offices, which are housed in historical rooms, the customer needed a fire protection system that preserves the valuable interior in two ways: by reliable fire detection and by wireless installation. For other parts of the building, such as the basement or attic, cabling could be used. Combining a wired fire protection system with the SWING radio fire detection system, Siemens was able to offer the ideal solution.

Tettnang Castle, one of the most beautiful castles in Germany's Upper Swabia region, needed a fire detection system that is highly reliable and can be installed without cabling.

Answers for infrastructure.
The solution
The customer selected SWING from Siemens, which proved to be an excellent choice to protect and preserve the historically valuable interior of Tettnang Castle. SWING uses mesh technology, which means that all wireless network devices communicate with their direct neighbors. This ensures outstanding connection reliability because at least two redundant paths are available to transmit information from the device to the gateway. Furthermore, the unique ASAtechnology™ (ASA = advanced signal analysis) from Siemens makes the SWING detector immune to deceptive phenomena like dust or steam – thus preventing costly false alarms.

To protect the museum and the offices, 167 SWING detectors were installed. They communicate with ten SWING gateways which are connected to a 4-loop control panel. In addition, 133 wired detectors ensure reliable fire protection in the basement and attic of Tettnang Castle. 13 manual call points increase the fire safety even further.

The benefit
The customer and Siemens were both very happy with the solution. In fact, several more projects are already in the planning phase. The customer was especially impressed by the intelligent and safe wireless technology SWING offers. Since no cabling was needed, the original building structure remained untouched. Moreover, SWING could be installed quickly without interfering with the museum’s opening hours.

Highlights
- SWING – ideal for historical buildings since original interior remains untouched
- Mesh technology – for safe wireless communication with at least two redundant communication paths
- ASAtechnology from Siemens – for highest detection reliability and immunity to deceptive phenomena
- Wireless technology – easy and fast installation without disturbing ongoing business processes
- Combination of wired and radio devices with equally high availability and reliability