A Wi-Fi infrastructure in 39 schools, with full remote management

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– Aurélie Challes, Head of Technical Services for the Coutances mer et bocage community

cnPilot e410
- 802.11ac Wave 2
- 2.4 & 5 GHz
- 2x2 MIMO

Overview

The Coutances Mer et Bocage Intermunicipality, founded in January, 2017, gathers 49 municipalities located in the center-west of the Manche department in France, with a total population reaching 48.500 people. Its capital, Coutances, has more than 10,000 inhabitants.

One of its first major decisions in 2017 is the realization of an ambitious project of IT equipment for the 39 schools under its authority – kindergartens and elementary schools, both for pupils and teachers. Since it is one of the only intermunicipalities in France to have obtained full management abilities over its schools.

The goal of the project is to create one to three mobile classrooms per institution, each equipped with digital tablets, laptops and an Internet access, for 3,800 pupils and about a hundred teachers and administrative employees.

An invitation to tender was issued mid-2017, covering the supply of 216 tablets, 300 laptops and about a hundred surveillance cameras, as well as the installation of a Wi-Fi network for all of the 39 schools, the Coutances City Hall and some other administration buildings, in order to connect the users to the Internet.
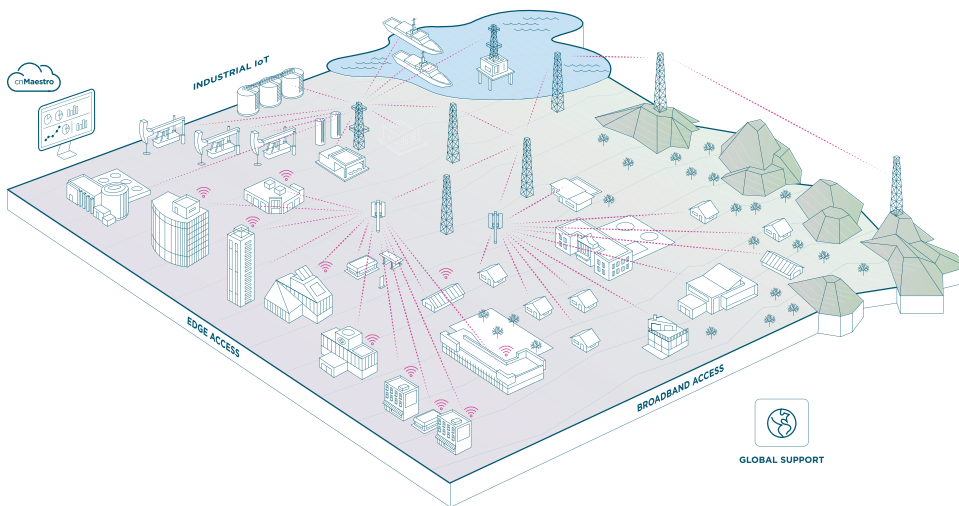
Challenge

For the part devoted to the Wi-Fi network, it's the solution recommended by the services provider Easy W3, based on Cambium Networks equipment, which won the tender, because it fully complied with the specifications. The infrastructure had, indeed, to meet a certain amount of priorities. Besides the offering of excellent levels of reliability and performance, it had be easy to install by non-technical people, and entirely manageable and configurable from a remote location, without any need for a technician on site. Furthermore, the electric power supply of each access point has to be switched off and back on at will, without disrupting its reboot and normal operation.

THE cn**Pilot**™ DIFFERENCE

- Installed quickly in 39 schools
- Indoor Wi-Fi in classrooms
- Easily supports 300 simultaneous users

Why Mairie de
Coutances Chose
Cambium Networks

- Easy to install

- Superior reliability and performance

- Fully managed infrastructure by
  cnMaestro cloud-based system

Solution

The deployment of the 155 Cambium Networks cnPilot e410 Wi-Fi access points, supporting the 802.11ac standard, which started in May 2018, is almost completed today. Only around ten of them are installed in the town hall and in various administrative services, the rest is deployed in the schools. The whole infrastructure is entirely managed by a cloud-based Cambium Networks cnMaestro controller. Each mobile classroom in the 39 schools is equipped with a Wi-Fi access point, and each institution has its own ADSL connection to the internet. The Wi-Fi network administration is provided by the technical services of the city of Coutances, which also took care of the installation of the access points. An SSID has been set up for the pupils and teachers, and another SSID dedicated to the users in the administrative services, connected to the Active Directory, will soon be deployed.

Each access point in the classrooms is equipped with a power switch which allows to turn it off whenever the network is not used. Thanks to this network, pupils and teachers can access educational apps on tablets or PCs, as well as a digital workspace and video platforms such as YouTube.

So far, an access password has been configured for the pupils, and another one for the teachers. But the network access solution will evolve eventually to a captive portal.

Results

Since its installation, already operational in some of the schools in September, 2018, the Wi-Fi infrastructure works perfectly, and it is unanimously approved by users.

"Before that, some schools were equipped with patchwork Wi-Fi solutions, and had to manage the technical problems and possible breakdown themselves," Aurélie Challes, Head of Technical Services for the Coutances mer et bocage community said. "Today, from a technical point of view, everything is standardized and under centralized management. It's all very simple to administer and offers us a great operating flexibility. From the users' side, the Wi-Fi infrastructure has become almost transparent. They don't have to go through inconvenient failures and worry about maintenance anymore, everything is remotely managed."