

Great Public Wi-Fi for a Grand Noumea City

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- ANAEL GREIVELDINGER, NETWORK ENGINEER, INTELIA

Overview

INTELIA IS A COMMUNICATIONS SERVICE PROVIDER and systems integrator based in Noumea, New Caledonia, in French Polynesia and in Wallis & Futuna. A well-versed integrator, Intelia has direct experience with multiple communications technologies, and is frequently called on to provide consultation.

Challenge

THE STRONG AND INCREASING DEMAND FOR WI-FI CONNECTIVITY, LED THE TOWN OF Paita, close to Noumea, to contact Intelia about designing and deploying a city-wide free Wi-Fi network.

Greiveldinger describes the situation. “Before our installation, there was almost no public Wi-Fi coverage anywhere. Citizens needed to use their mobile devices and pay with their own data subscription. The few public Wi-Fi hotspots that did exist were limited to the library and other public buildings. The client’s main goal was to supply internet connectivity for web browsing, email, light streaming, and social networks for all people who needed it.”

Working closely with the municipality on another project, the client asked them to create a field trial to test out the results.

“The trick was to find the best solution that would match the financial criteria and also the technical criteria,” says Greiveldinger. “Municipality budgets are really tight, so the focus was on cost, and that focused out technical team on how to construct a reliable network without compromising efficiency and the user experience.”



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Solution

IN ADDITION TO A TECHNICAL SOLUTION, INTELIA PRESENTED A FINANCIAL SOLUTION. “WE ADVISED THE client that they would be able to sell advertising space on the system. Over time, this would be able to generate a ROI on the service, which is not often the case with Wi-Fi public deployments. This kind of approach was innovative for New Caledonia, and the client was interested in including it in the trial.”

To reduce operating costs and avoiding leased lines, Intelia decided to build a 5 GHz wireless backbone from the town hall to the major central place in the city, over a distance of 3 km. There, they installed two cnPilot™ E500 outdoor Wi-Fi access points (AP) from Cambium Networks on the backbone itself at major locations, including the bus terminal and the main city square.

“The great advantages of the cnPilot E500 is its ability to build a mesh network,” continued Greiveldinger. “We use this capability on the main site to strengthen the Wi-Fi coverage, as it is rather a large area surrounded by schools and stores. We’ve also connected a community center for young people.”

“We chose Cambium Networks because we were looking for something rugged, with industry certifications, and able to do 802.11 b/g/n/ac on the same access point. The cnPilot E500 offers the possibility to increase coverage and capacity just by chaining AP either by cable (with the second GigE port PoE) or by Meshing antenna, requiring just AC power on site.



Network management is as much a key element as the access point technology. “Concerning the Wi-Fi manager, we have split our approach: we use cnMaestro™ for monitoring of the entire network and we use Encapto to manage captive portal and user experience (quotas, logins, statistics....). The cnMaestro cloud-based Wi-Fi management solution is a free solution and allows us to lower the CAPEX to the minimum.”

Encapto recently added a download limit capability to their solution that integrates with cnPilot enterprise access points. This is a key feature recently delivered via a joint development by Encapto and Cambium Networks.

cnPilot™ E500 Outdoor WiFi Access Point
802.11ac dual band access point with MIMO
16 SSIDs supporting 256 concurrent users
Cloud-managed via cnMaestro. on-site controller option available



Results

“THE NETWORK IS IN PLACE AND CUSTOMER IS SATISFIED WITH THE SERVICE,” SAID GREIVELDINGER. “THIS was our first deployment of Cambium Networks products and we are very pleased. We live in a harsh Pacific island environment and we were looking for something rugged, with a good quality/price ratio. I was convinced by IP67 & UV rated certifications of the outdoor equipment and the performances were amazingly attractive compared to price. The user interface is well designed and the ability to see backup configuration in plain text is a must.”

The network is consistently supporting 200 users per day, and the system has had no problems. “In consultation with the municipality, we decided to have the network available from 6 am to 6 pm, and to limit the throughput to 1 Mbps per user with a limit of 500 MB per hour, allowing any user to login again after the end of the session,” said Greiveldinger. “With cnMaestro, the modifications were easy. In minutes, we set the Wi-Fi opening schedule and bandwidth limitations. The cnMaestro free cloud management system is very convenient. It allows us to monitor the entire network in a blink of an eye.”

Going forward, Intelia plans to add more sites to spread the free Wi-Fi to other areas of the city.