COMMSCOPE®

RUCKUS®

City of Coquitlam

ICT blankets city with RUCKUS® Wi-Fi

Coquitlam

Poor Wi-Fi performance couldn't support ICT's vision for city-wide free Wi-Fi

Coquitlam, British Columbia, is a very connected city, served by sky trains, highways and buses. Coquitlam is also one of the first cities in North America to build its own fiber optic network. "Business, public services and safety, education, tourism—everything that makes a great city is strengthened by connectivity," says Darren Browett, ICT's Technical Services Manager.

However, the fiber network alone wasn't enough. The City wanted to provide widespread public access in city facilities and parks. Technically, the city already had Avaya access points (APs) deployed in municipal buildings and some parks. However, it was quite unpopular with staff and residents. The coverage was spotty and inconsistent, and in some cases poor radio positioning was causing channel contention and further hindering performance.

"We had daily complaints from frustrated users. Coverage and signal strength were less than favourable. Users couldn't even move around within a building without dropped connections," says Tom Martinson, Network Administrator. "We have a small network team, and we spent a lot of time throughout the city trying to fix problems. We had limited visibility and diagnostics. In fact, the controller interface was often a misleading and inadequate tool when dealing with the complaints coming in."

It was time to disconnect the old Wi-Fi.

The ICT team had to find a partner that had a successful track record for citywide Wi-Fi deployments. They chose OptiNet, a network integration company based in Richmond, British Columbia.

"FreeNet has to work in a wide range of environments and meet diverse and dynamic demands," says Don Johnson, Business Development Manager, Optinet. "This is a rapidly growing city with a big vision for connectivity. Beyond the determination to correct past problems, they wanted to take a big leap forward.

One of the city's many points of pride is the vast green corridor — over 80 municipal parks and natural areas covering 2,200 acres (890 hectares).

Our recommendation was RUCKUS; it's the one vendor that we knew could enable Coquitlam to realize its full vision for FreeNet."

Turning on a new era for mobile connectivity and smart city services

Deployment began with 18 municipal buildings, which includes the city hall and the community centers. "Reliability and coverage in these interior spaces had been the source of most of the complaints we used to get," says Browett. "As soon as we ripped out the old APs and deployed the RUCKUS APs, the problems disappeared. We went from daily complaints to none."

ICT designed wireless services for city business and mobile devices, for external contractors and of course FreeNet for the general public. Coquitlam also deploys an emergency command trailer at major events as the hub for emergency responders such as Coquitlam Fire/Rescue and the RCMP. "If there's a RUCKUS AP in the area we can spin up an SSID and password for them, providing a secure, high-performance communications channel for the duration of the event," says Martinson. "Even if they relocate the trailer, the odds are we'll still have an AP within range. The RUCKUS APs have the usual PoE functionality, but they also provide an SFP port, dedicated AC power input and another PoE output port. That creates huge flexibility in how we deploy them. In general, the RUCKUS gear really lets us get creative in how we effect these changes."

One of the city's many points of pride is the vast green corridor — over 80 municipal parks and natural areas covering 2,200 acres (890 hectares). These outdoor areas present different Wi-Fi coverage challenges, ranging from coverage for sports fields to outdoor concert venues.

"What we were after was a Wi-Fi infrastructure that is fast to configure, deploy and monitor. We needed something that makes sense and performs to our demands and expectations." says Martinson. "RUCKUS has done a really good job on the SmartZone interface. We can see the entire network from a single dashboard and zero in on issues in no time. It takes minimal resources to implement changes, such as setting up SSIDs or making security changes with short notice. It has an elegance to it."

"Our initial proof of concept with RUCKUS was an indoor deployment of three radios. That in itself was a resounding success but these radios excel even more in outdoor applications. The range is amazing." says Martinson. "Seeing this much difference with the RUCKUS radios was a real breath of fresh air, and with this kind of coverage we needed fewer radios. OptiNet helped us with the deployment strategy and performed heat map testing after the fact to verify coverage. They've been excellent. "FreeNet is ready for new areas, big events and smart city initiatives

FreeNet continues to expand with a mandate from City Council. ICT is currently deploying RUCKUS APs throughout the Poirier campus, southwest of the city center. Poirier has both outdoor

and indoor arts and recreational facilities, including a playground, tennis courts, the Centennial Rose Garden, a bowling green, the sports and leisure complex with a 5,000-seat arena, a senior's center and more. "The signal strength is so good that in some areas such as parking lots where we didn't deploy APs, people still get five bars." says Martinson.

FreeNet is now scaleable for Coquitlam's largest public events; The BC Highland Games, Le Festival du Bois (Francophone festival), The Teddy Bear's Parade and Picnic, The Summer Concert Series, and the biggest day of all, Canada Day. "Part of our mandate is to provide a welcoming and secure online experience for all our residents and visitors. We are proud of our city and our events, and now we can be proud of our wireless coverage too." added Browett. "These events are probably the biggest test for FreeNet performance, coverage and reliability. But we have a high degree of confidence in RUCKUS Wi-Fi."

Browett says that the extended coverage and easy management gives the ICT team confidence about keeping up with city changes. "With the old Wi-Fi, we had a tough time responding in a timely manner. It's amazing how fast we can respond to requests now. Our experience with RUCKUS has been one hundred percent positive."

> "Our initial proof of concept with RUCKUS was an indoor deployment of three radios. That in itself was a resounding success but these radios excel even more in outdoor applications. The range is amazing Seeing this much difference with the RUCKUS radios was a real breath of fresh air, and with this kind of coverage we needed fewer radios. OptiNet helped us with the deployment strategy and performed heat map testing after the fact to verify coverage. They've been excellent."
>
> **Tom Martinson**
> **Network Administrator**

The ICT team is looking at the possibility of putting some IP-based applications on the Wi-Fi network, like lighting controls, video cameras, and asset tracking. They've already established a design for managing irrigation controllers. "RUCKUS has given us the foundation to take that leap forward we envisioned," says Browett. "The more we deploy, the more requests we get. It's exactly the response we wanted—supporting new ways to connect our city."

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

COMMSCOPE®

commscope.com
Visit our website or contact your local CommScope representative for more information.

CS-114328-EN (02/20)