



# Case Study

Linking Isolated Rural Areas Without Landlines  
Longreach Local Council, Australia



## RAD's Wireless Airmux Connects the Outback

It's hard to imagine any place that's more remote than the Australian Outback. Given that 90 percent of Australians live in urban areas along the coastline, the ten percent or so who reside in the country's interior are spread far and few between.

Seven-hundred kilometers inland from the Queensland coast lies Longreach, a town of approximately 3,000 inhabitants. When the state government decided to amalgamate rural Local Government Areas, Longreach was merged with two other jurisdictions into the Longreach Regional Council, whose 40,638 square kilometers (approximately 15,690 square miles) contain just 4,700 people.

After the amalgamation, it was decided that in order to maintain proper public services across such a large territory, all pre-existing local government offices would continue to be maintained, although they would now be subordinate to the Council's headquarters in the town of Longreach. The challenge, however, was that the desktops in those disparate offices would have to be connected to Longreach even though landline infrastructure did not exist and a wireless solution would be hampered by the lack of a line of sight.

For that reason, R.V.C., a RAD partner in Australia, suggested linking Council offices by installing RAD's Airmux-400 wireless multiplexers. The Airmux-400 is a carrier-class broadband multiplexer that can deliver both native Ethernet and TDM services over a single wireless link in sub-6 GHz frequencies. The high-capacity Airmux-400 radio system provides net throughput of up to 100 Mbps and a range of up to 120 kilometers (75 miles).

### Application

Wireless connectivity in isolated rural areas

### Challenge

Connect remote desktops to a central network when landline infrastructure is absent

### Solution

RAD's Airmux wireless multiplexers

### Benefits

- Quick installation
- Auto-configuration
- Transmission over licensed and unlicensed frequencies
- Weatherproof

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Craig Poustie, the Longreach Regional Council's ICT Administrative Officer



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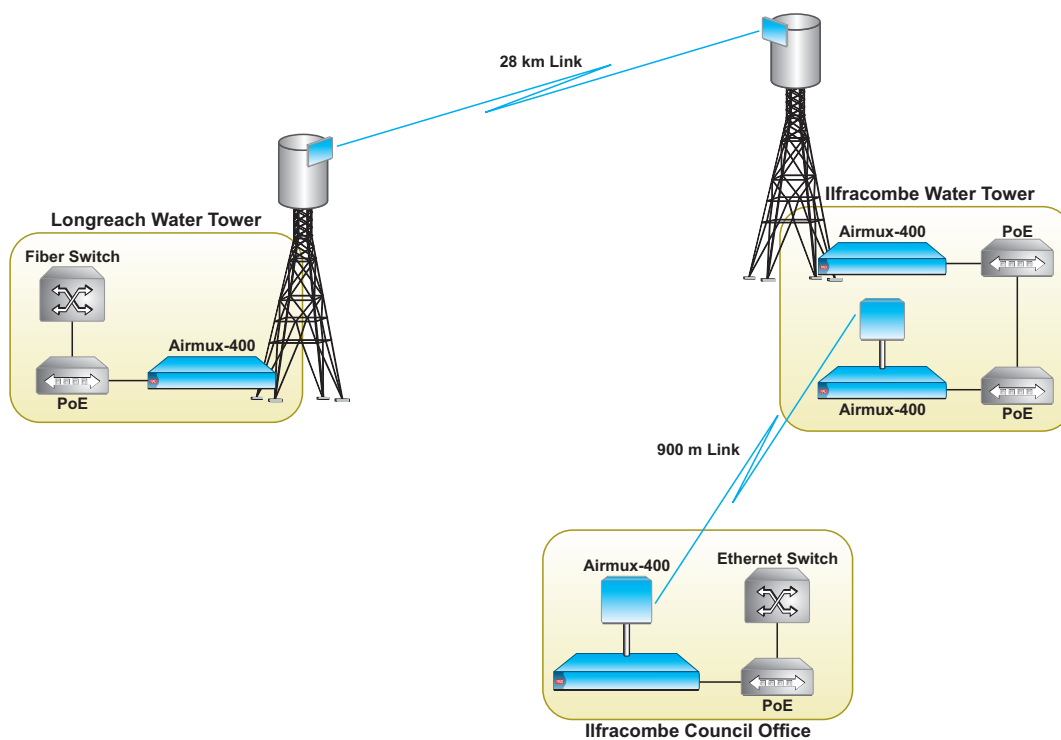
"Everybody said it wouldn't work because there's no line of sight, so local officials agreed to have R.V.C. install it only as long as we would take it down if it wouldn't function," states Ian Donald, R.V.C.'s Queensland Regional Manager. "But now they're convinced," he adds. "They're all ecstatic."

## Transmits over Unlicensed and Licensed Frequencies

Donald installed Airmux multiplexers on Longreach's water tower, at a relay site 900 meters away and also 28 kilometers from the Council office in the tiny settlement of Ilfracombe. The Airmux's auto-configuration was a major reason why the Council offices could be connected on the spot once the hardware was up and running. No less important is the fact that the Airmux can transmit over unlicensed as well as licensed frequencies.

"We are extremely pleased with the results of using RAD's Airmux-400, and the installation was very professional, with some of the best customer service I have ever seen," commented Craig Poustie, the Longreach Regional Council's ICT Administrative Officer. "The performance of the RAD radio links has been flawless."

The Airmux is particularly well-suited to this sort of application because RAD's quality control standards require it to withstand adverse weather conditions. The device's reliability, therefore, is not compromised by the Outback's severe heat.



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Craig Poustie, the Longreach Regional Council's ICT Administrative Officer

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