# Case Study

## Linking Isolated Rural Areas Without Landlines
### Longreach Local Council, Australia

**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

## RAD's Wireless Airmux Connects the Outback

It's hard to imagine anyplace 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.

On the Tropic of Capricorn, 700 kilometers inland from the Coral Sea, lies Longreach, a town of approximately 3,000 inhabitants. When the Queensland state government decided to amalgamate shires, or rural Local Government Areas, Longreach was merged with two other jurisdictions into the Longreach Regional Council, whose 40,638 square kilometers are home a lot of sheep and cattle but to just 4,700 people. To put this in more globally familiar terms, the Longreach Regional Council covers an area just about the size of Switzerland but whose resident population is less than that of the ski resort of St. Moritz.

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 the headquarters' network in Longreach even though the infrastructure to do so did not exist.

For that reason, R.V.C., a RAD partner in Australia, suggested linking Council offices by installing RAD's Airmux wireless multiplexers.

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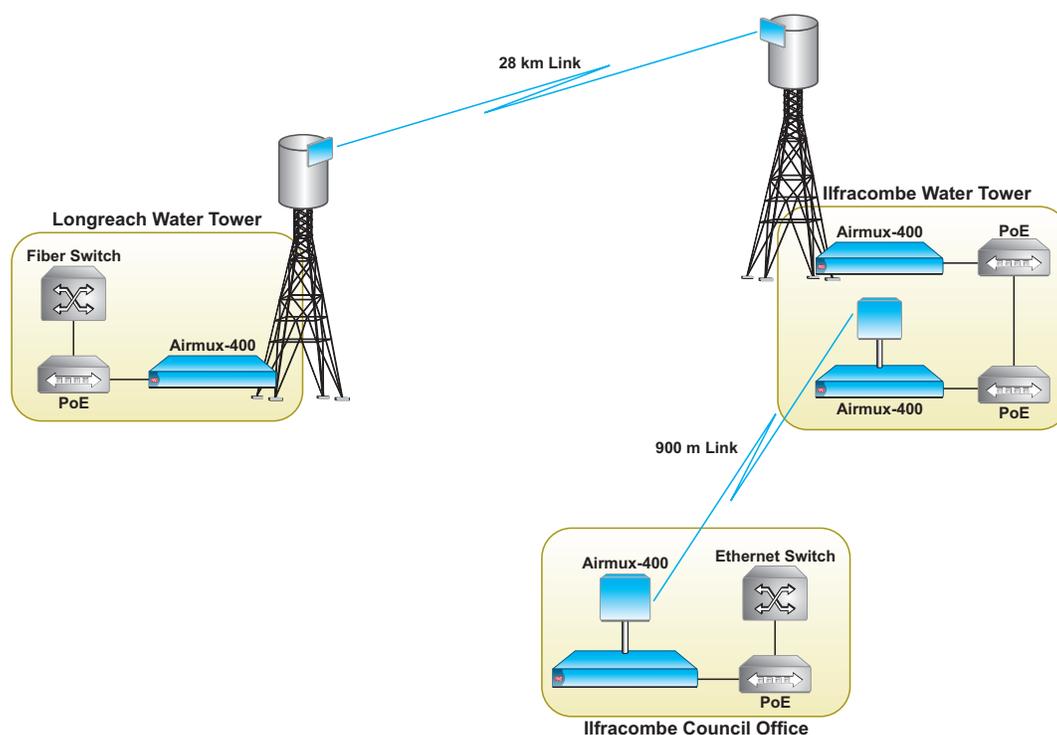> Craig Poustie, the Longreach Regional Council's ICT Administrative Officer

"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 estatic."

## 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 settlement of Ilfracombe (population 269). 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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R.V.C.
ICT Consulting & Administration

RAD
data communications