

Field Operations save the water and the day

Responsible for identifying and resolving interferences to signals and radiocommunications services, members of the ACMA's Field Operations Section spend much of their time on the road and on a mission. When the team was called to investigate an incident affecting Queensland Urban Utilities in February, they took with them the newly purchased Rohde and Schwarz PR100 receiver to help track down the interference.

Queensland Urban Utilities contacted the ACMA's Brisbane office on 18 February to report severe interference to their water distribution and sewerage control system in the southwest of the city. Their point-to-multipoint system consisted of a base station and some 90 remote sites. The system had not worked correctly for more than 24 hours and technical officers were so concerned about the situation they requested a change to the licensed frequency.

Within minutes, a temporary license was arranged with the help of Mark Williamson, Senior Frequency Assigner at the ACMA. The alternative frequency allowed Queensland Urban Utilities to move off their affected frequency but also meant that their technicians now needed to visit the 90 remote sites to reprogram the new frequency. As this process would take days, the priority remained to identify and fix the interference.

The task was allocated to Field Operations officers Cameron Bell and Michael Cooper. As a matter of course before departing the office, the team made use of the in-house monitoring equipment to hear the interfering signal and get a direction to the signal. They then left to meet a technical officer who connected the ACMA's equipment to Queensland Urban Utilities' antenna so the characteristics of the interfering signal could be seen.

Since the interfering signal had already been observed with the ACMA's equipment, Mr Bell and Mr Cooper made their way to the highest spot at the base station where they were able to obtain a bearing of the signal. Armed with the bearing, they began searching for the signal's location. Using the newly purchased Rohde and Schwarz PR100 receiver and its associated aerials, the team followed the signal through the south-western suburbs, stopping every now and then to reassess the situation.

Eventually they located a Brisbane City Council water pumping station between the base station and Mount Coottha and it was from here that the team believed the interfering signal was being transmitted. As they drove past the station, the signal reduced significantly, which confirmed their suspicions.

The Field Operations team then called a Queensland Urban Utilities technician, who met them onsite to turn the transmitter on and off and confirm they had found what they were looking for. The antenna at the pumping station was very directional towards the base station, explaining why the Queensland Urban Utilities technicians were unable to see the interfering signal from there the previous night when they had themselves attempted to locate the signal.

Queensland Urban Utilities technicians were very appreciative of the ACMA team's response time and rectification of the situation. Another job well done. 🛠️



ACMA Field Operations officers Cameron Bell and Michael Cooper using the new Rohde and Schwarz PR100 receiver.