

Network Maintenance and Monitoring

The heart of any wireless network is the infrastructure which provides the “last mile”, or in many cases, the “last 100km” of communications. Items such as Access Points, Repeaters, Wireless Routers/Bridges, RoIP Links and Broadband IP/Microwave Links are critical in ensuring the performance, integrity and reliability of the network is maintained.

Since these items all utilize wireless technology from the very smallest to the largest of networks, then additional maintenance challenges present themselves over traditional IT elements. Along with Radio Frequency (RF) layer; the trait all these items have in common is that an antenna system is required to efficiently radiate signal outwards, and receive signals coming in. If element is compromised in any way, the network begins to perform poorly in terms of reliability and quality of service. Reduced signal means data errors which result in multiple re-tries of bad packets leading to poor throughput and lost voice quality.

AA Radio maintains large wide-area networks such as the Optus mobile telephone network in regional Victoria; through to specialized hybrid voice and broadband data networks such as Monash Health.

To successfully maintain a wireless network, the correct diagnosis and treatment system issues is vital. Some of the things that need to be considered include:

- Technical performance of the RF electronics
- Losses or problems with the feeder distribution and passive components or connectors
- Integrity of the lightning protection system
- Alignment and integrity of the antenna and its mounting supports
- Interference and RF noise floor from co-site or other sources

- Physical obstructions or absorption in Fresnal Zones of directional links
- Environmental issues adversely affecting fade margins



AA Radio has the skills, equipment and resources to keep all types of wireless networks operating at their optimum and to restore them to full operation as quickly as possible in the event of failure. With multiple support points of presence in Victoria, Regional locations can be supported as well as the greater Melbourne Metropolitan area. Depending on how the network is designed and implemented, AA Radio can offer 24/7/365 technical response if required.

A regime of scheduled preventative maintenance can be tailored to head off future problems by identifying potential failure and deteriorating items before they become critical.

As your network needs evolve and change with your business, AA Radio can assist with full turnkey system delivery, engineering, project management, installation and technical support services.