

## Analogue to Digital Migration

Many users of analogue two-way radio are now entering a phase where their systems need modernising. This can be due to a number of factors such as:

- Spectrum licensing changes such as ACMA Narrow banding legislation
- Current functionality no longer meets business operations or staff requirements
- Age of existing equipment means support is no longer economical
- Spare parts and repair tools or jigs are no longer available

Some customers will elect to stay with an analogue platform, while many will decide to leverage the functionality that only a digital system can provide. Whatever the motivation for change and the technology platform chosen, a successful migration strategy will be pivotal in obtaining the maximum return on the project investment.

### Potential Issues

As with the introduction of any new technology to a business, a poorly executed migration can lead to many problems with staff and company systems which can be very difficult to recover from. Negative perceptions by even a few users can rapidly spread to other users and create a groundswell that can sometimes not be contained. Functionality that was available in the analogue system but not in the new digital system can also lead to problems.

There are many examples of digital systems having to be “dumbed down” to try to stop these objections, or in some cases, even abandoned at great cost to both the customer and the supplier.

By their nature, digital systems use vocoders to encode the voice, rather than analogue modulation, which is a more natural representation of voice over a radio channel. As a result, digital voice can sound metallic or “strange” to a user who is accustomed to an analogue system.

Digital systems introduce vocoder delays and feedback echo, which are not present in an analogue system.

### Migration Philosophy

A properly designed digital system will take into account existing analogue users and technology, and provide a framework where a graceful cutover to digital is inherent.

With over 120 years of radio system design, implementation and support experience in our management team, AA Radio is uniquely positioned to provide our customers with a migration strategy that will ensure a smooth transition to a fully operational digital system.

AA Radio has the skills and experience necessary to advise on the potential issues that need to be managed, and can assist with direct services such as project management, user training and field support.

