



BENGALLA MINING COMPANY

THE CLIENT

Rio Tinto Coal Australia manages the Bengalla Mining Company on behalf of Coal and Allied and other Joint Venture Partners. Situated in the Upper Hunter Valley, NSW, the mine has operated since 1998.

SITUATION

The Bengalla Mining Company required an upgrade of their radio communication system. The previous system created a number of frustrations for the mine's growing operations, the most prominent being communication black spots.

For an open pit operation, the landscape is continually changing with spoil dumps created from the mining overburden. These spoil dumps interfere with the radio transmission and create radio black spots in the coverage area (Figure 1). When large earth moving equipment is required to work in these black spot areas, significant health and safety concerns are raised.

Blasting is an important part of Bengalla's operation. For the new system to be a success the mine required the capability to notify everyone on the network of any blasting activities.

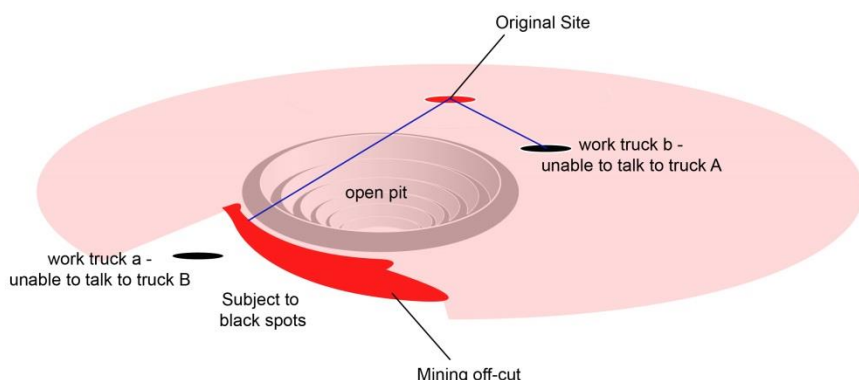


Figure 1



LOCATION

NEW SOUTH WALES,
AUSTRALIA



EXPERTISE

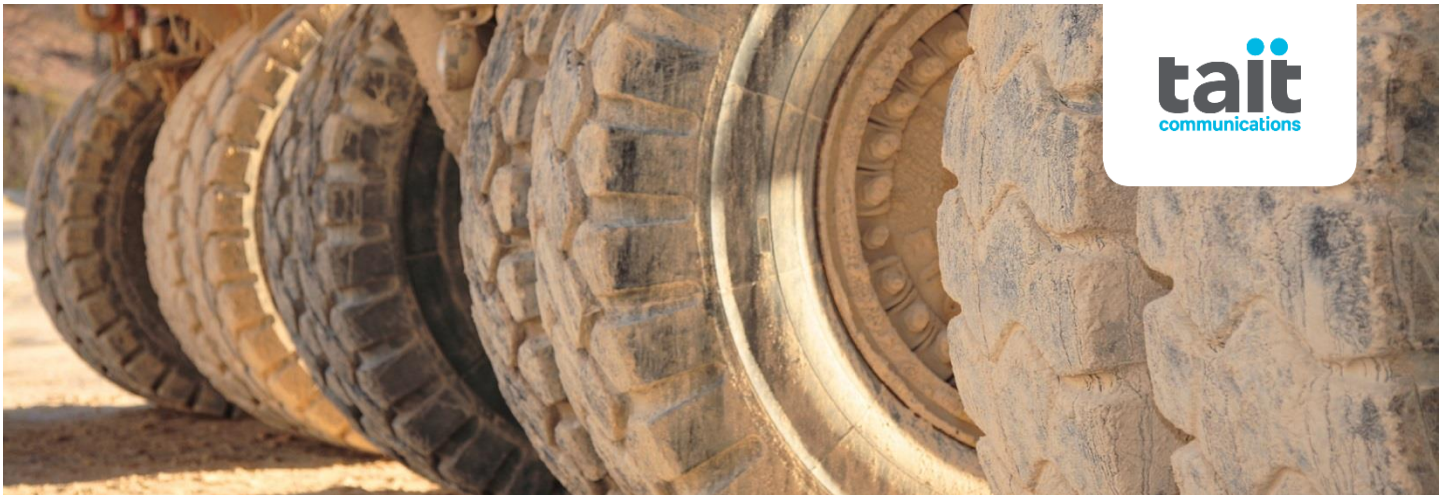
MINING

SOLUTION OVERVIEW

- ▶ TaitNet QS2 simulcast/conventional system
- ▶ Blast tone generator

BUSINESS BENEFITS

- ▶ No more black spots and no need to change channels
- ▶ Operations not interrupted by the new installation
- ▶ Blast Tone Safety
- ▶ Communications ensured throughout the mine are heard loud and clear no matter what the location



RESPONSE

Tait and Tait Solution Partner General Communications (GenCom) provided Bengalla Mining Company with a cost effective, flexible upgrade. The new two-site VHF system had the capability to notify everyone on the network of any blasting activities. To remove the mine's radio black spots, simply installing another conventional channel to provide a larger coverage area was not going to solve the problem. For operators of heavy machinery, concentration is paramount and having to continually change channels between sites is a distraction. Additionally, if a radio user were to forget to change channels the problems from the previous system would reoccur. To overcome this, a Tait QS2 Simulcast channel was installed. Dedicated to production, those talking on the QS2 channel can go anywhere in the coverage area without having to change channels in-between the two sites (Figure 2).

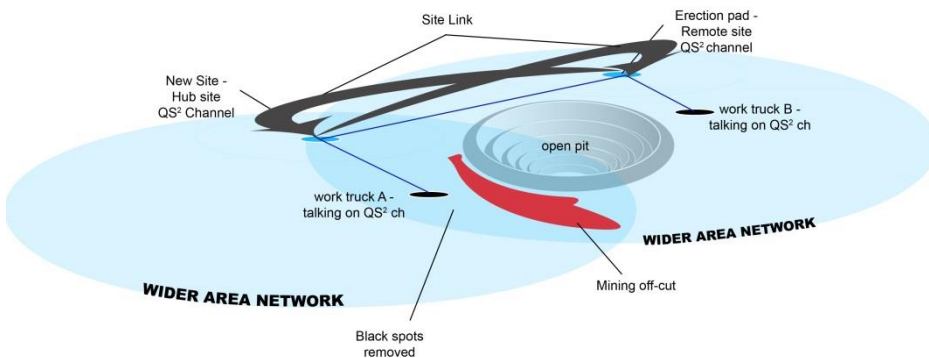


Figure 2

The QS2 installation process was another advantage for Bengalla's situation. Bengalla, operating 24 hours a day didn't have the luxury of stopping production to reprogram their 100-plus radios. The unique ability of Simulcast to reuse frequencies meant the new QS2 channel could be installed seamlessly without any radio reprogramming required, minimising any downtime installing the new system may have caused.

OUTCOMES

Operating 24 hours a day, seven days a week, it was important that the transition between the new and old radio systems be as seamless as possible, to ensure production downtime was minimised. The complete changeover from the old system to the new took less than 10 minutes, and was seamless to users, apart from significantly improved coverage in the black spot areas.