



- Wide-area coverage
- Minimal operational costs
- Single-unit repeater capabilities
- **Remote diagnostics**
- ARQ and FEC error recovery



## **STI** Engineering

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## Crescendo Continues its Tracking Success

In an increasingly competitive industry, successful mining vehicle and asset monitoring can be the key to improved efficiency, productivity and reduced operating costs.

Black Box Control and STI Engineering have developed a system allowing for vehicle tracking and telemetry solutions in remote areas. The solution is ideal for asset monitoring and tracking within pockets of interest or in areas with limited telecommunications coverage.

The system has been successfully installed on 16 haul trucks at the Koolyanobbing mine site in Western Australia. Each truck has a Black Box InVehicle-Recorder (IVR) monitoring unit and an STI Engineering radio modem on board.

The IVR provides the source data required to understand its location (via GPS), processes the telemetry data and manages the communications link. The STI Engineering VHF Crescendo data radios are in turn being used for the communications link back to a central location.

The Black Box Control software allows the data from the central site to be examined from anywhere in the world through an internet connection. Parameters such as location, direction of travel and activity levels can be monitored, as well as user-defined alarms notifying of exception conditions such as extreme temperatures, vehicle inactivity, or when an asset has left an area of interest.

With dedicated addressing and store-and-forward capabilities, the STI Engineering data radios are ideal for wide-area networks and live logging of multiple remotes.

The intelligent data radios eliminate problems traditionally associated with complex RF links, such as data collisions and packet duplicates.

Unique features such as Automatic Recovery Requests (ARQs) and Forward Error Correction (FEC), ensures total data reliability and make the STI Engineering data radios the pick of the bunch for use in RF-noisy environments such as a mine site.

At Koolyanobbing, geographical constraints have been overcome by installing multiple single-unit repeaters to extend the RF coverage. Should an asset leave the coverage area however, the IVR is capable of storing data and report back to the base when coverage is regained.





