A flexible global telemetry and IoT solution that enables anyone to implement their own remote monitoring and automation ideas straight out of the box

Don Scott MSc (Hydrogeology), MBA (Technology Management), AusIMM, AMEC, ADIA
Managing Director of both Gecko Telemetry and Pennington Scott
email: don@penningtonscott.com.au

Collecting manual data in the field is costly, the data is often incomplete or unreliable and driving about in remote regions has safety risks. Automation (also known as sensory control and data acquisition or SCADA) offers productivity and safety gains for remote work through more efficient use of resources. There are three levels of automation:

- **Remote monitoring** - where sensory data is sent automatically from the field without needing field staff;
- **Remote automation** is where the system itself makes pre-determined optimal control decisions (such as operating pumps or actuated motors) in real time based on the sensory data without needing to consult the operator.

Despite the large gains that automation offers, it is not as widespread in the mining industry as you would expect. The reasons are that automation needs reliable wireless communications, plus an effective way of processing the huge volumes of received sensory data. Given that most mines lie outside mobile coverage, until now the only reliable wireless solution has been to install expensive communication towers which, coupled with the high cost of propriety automation software, has placed automation out of reach of most mine operators.

Gecko Telemetry offers a solution to both these problems. By capitalising on technological advances in reliable satellite, mobile (LTE-M) and LoRa wireless data communications, we have developed a complete and robust, ready-to-deploy global data communications solution, which together with powerful online “Internet of Things” data visualisation and automation tools, now brings remote monitoring and automation within reach of almost everyone.

this presentation will discuss the value of remote monitoring and automation applications using real life examples of each taken from remote mining and exploration projects in Western Australia.