

Case Study: ARTC



Background

The Australian Rail Track Corporation Ltd (ARTC) was formed in 1997 to provide a 'one stop' shop for all operators seeking access to the national interstate rail network.

ARTC was created to improve performance and efficiency of interstate rail infrastructure and is overseen by the Minister for Transport and Regional Services and Minister for Finance and Administration on behalf of the Commonwealth.



Situation

ARTC had previously implemented pull-sensors along the escarpment on a section of the track between Wollongong and Moss Vale, NSW. The unique track alignment through this area is situated on a rock ledge, therefore prone to rock falls. The line is a major freight feeder for Port Kembla harbour, the third largest harbour in NSW.

The system was designed so that when the sensors were triggered, an alert was sent to ARTC staff and rail traffic would be stopped until a visual site inspection was performed. The site inspection involved a three hour round trip on-road and on-track, a high cost in terms of labour and vehicle expenses, compounded by the fact that a high proportion of the alarms were non-critical events that did not block the track or require attendance at the site.



Solution

ARTC became aware of RMTeK through industry suppliers and approached the company to seek assistance with a solution that would provide remote vision of the rock fall sensor site. After working closely with ARTC engineers, RMTeK delivered an Internet Protocol camera solution with on-board industrial controller, RMCam.

Installing an RMCam at the troubled section of the track means that when rock fall sensors are triggered, the line supervisor and management are able to view, in real-time, the section of the track in question.



Result

The introduction of an RMCam has given ARTC the ability to immediately make a visual assessment of the track, enabling more efficient rail movement through the area. Eliminating a compulsory site visit means that for false alarms, tracks can reopen immediately and traffic can flow.

Situations can arise where knowledge of what is actually happening in the remote location results in operational efficiencies and large cost savings. In one instance, a sensor was triggered and

upon viewing the site, a large tree had fallen on the track disturbing track alignment and damaging track-side signalling services. ARTC personnel were able to arrange for heavy machinery and trade qualified staff to attend the site. Previously, the line supervisor would have driven to the site before being able to diagnose the issue and arranging to fix it. This particular case happened late in the afternoon and was rectified by nightfall. In the past, there would have been an overnight delay.

Trains that sit stationary at an approach stop signal can cost owners in excess of \$50 per minute of delay, a cost that ARTC can be liable for. With the RMCam in place, ARTC has reduced the average length of a typical delay from 120 minutes to less than 20 minutes.


