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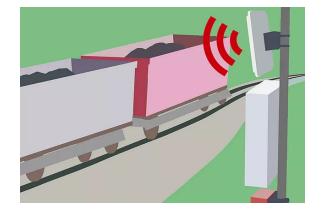
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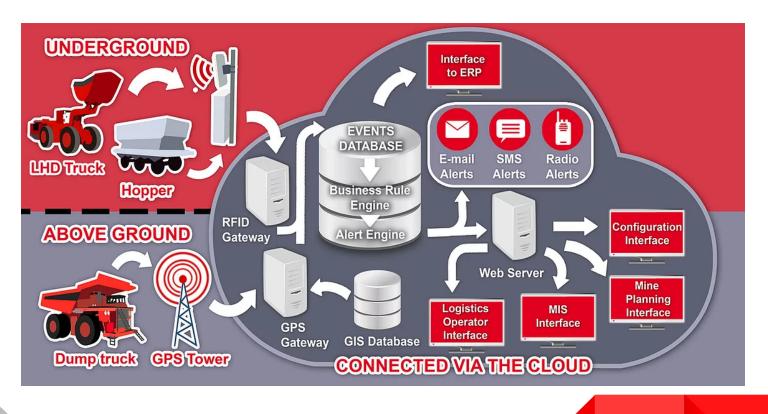
SmartHaulage

An Automated Haulage Tracking and Management System

Product Overview

SmartHaulage is an automated RFID tracking and management system that helps mine managers keep track of hopper, LHD and dump truck movement, as well as tonnage moved, maintenance, and safety regulations both underground and on the surface. Manual inputs are often unreliable, but with SmartHaulage all data is reported in real time and is easily accessible through our Cloud-based reporting system.





How SmartHaulage works:

- The hoppers, LHD trucks and dump trucks are tagged with rugged RFID tags.
- Fixed RFID readers are installed at key points. Movement of haulage equipment is detected by RFID readers and GPS is used to measure the productivity of each vehicle on a second by second basis. This data is sent to the Events Database.
- SmartHaulage will then compare the event data with the rules in the Business Rule Engine. Business rules are initially configured for each mining area as it is specific to the layout of each mine and its operations. The following exceptions can be set to trigger alarms: routes not allowed, min/max travel time between points, min/max waiting time per point, min/max number of visits per shift per point, etc.
- When vehicle movement exceeds the parameters set by the Business Rules, alarms are generated on the screen of the Logistics Operator Interface and can also be sent via email, SMS or radio. The control center can then contact the driver and advise the most appropriate action.
- The MIS Interface allows for comprehensive reporting per vehicle per shift with data such as: ROM tonnage moved, ROM tonnage output, ROM cycles completed, % process uptime, % process downtime scheduled, % process downtime unscheduled, % equipment downtime scheduled, and more.
- All data captured and produced by the system will be synchronized and uploaded to the Cloud in real time, where authorized employees can log in to their SmartHaulage accounts at any time to access it.



Further Information: www.techsolutions.co.za/rfid-haulage-vehicle-tracking Contact: <u>sales@techsolutions.co.za</u>