

Torsa's Total Detector collision avoidance system has been successfully deployed in European and South American mines. Recently the DMV Group has implemented Total Detector in its underground operations in San Dimas in Durango State in Mexico. In North America Total Detector is represented by Canada's Provix, who is currently deploying the system for in service testing at a number of surface and underground operations. Provix's video integration expertise has provided the groundwork for expanded functionality such as onboard and network viewable video, in addition to engineering industrial grade and mil-spec component hardware.

Provix notes that "unique amongst similar offerings, the system does not require any infrastructure deployment for proximity detection and collision avoidance which allows for rapid implementation with reduced costs. Equipment based antennas, working in conjunction with an onboard CPU running the Android OS create a peer-to-peer network that operates between equipment, vehicles, personnel, tagged hazards and assets. The collision avoidance system utilises active RFID tag technology to provide a visual and audible alarm to heavy equipment operators. The waterproof touchscreen tablet display provides both the location and type of tag detected to provide the operator with the specific position of any other vehicles, pedestrians or tagged hazards in relation to their vehicle position. Portable tags have extended battery life, operating for up to four months without Provix Total Detector monitor recharging, providing for functional asset tracking and hazard identification."

Fully enabled as an independent and standalone collision avoidance system when deployed on vehicles and equipment, Total Detector has been designed to being fully expandable as a mine-wide system control solution. Utilising existing WiFi infrastructure, the active RFID tags provide logistical data for interoperability with mine management software allowing for asset tracking, personnel location, traffic control, material distribution, emergency response, as well as the ability to reduce costs associated with ventilation management. The open source Android OS allows for specific filtering and PLC establishment that can be further user defined.

Total Detector allows for flexible operating parameters based on the application or environment. Advanced Active RFID technology allows for Dynamic Detection range changes on the fly, to suit equipment moving from one application or area to another. Adjusting detection ranges and flexible geofencing also reduce unnecessary alarms leading to rapid operator acceptance. Elimination of metal to metal contact, while ensuring that all personnel are immediately identifiable to heavy equipment operators is the basic premise of any collision avoidance system. Using Provix IP cameras in conjunction with the easily discernible RFID tag display, equipment operators have full visual awareness of their surroundings, ensuring safe operations, while simultaneously allowing for production efficiency gains through enhanced vision capabilities. In surface operations, Total Detector is fully GPS enabled allowing for enhanced surface tracking, collision avoidance and informed equipment location



deployment. Combining RFID technology, GPS and WiFi compatibility, Total Detector is a failsafe solution for reducing interactions between personnel, vehicles and equipment.

Total Detector has been approved as a wireless radio system certified for use as a collision avoidance and proximity detection system in both surface and underground mining by the FCC and Industry Canada.

Contact PROVIX at 888 434 0253 or sales@provix.net for information on the enhancing safety at your mine with the Total Detector System.



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