



HighService
Technology

FleetSafety®

Collision Avoidance System for
Mining Vehicles



English Version



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Mining Vehicles

Collision avoidance system - FleetSafety®

One of the biggest risks for people that affront mining activity is related with equipment movements and vehicles inside the mine. This type of accidents drives significant losses, especially at having interaction between light vehicles with heavy equipment. Moreover, risk is even higher in places where people transit.

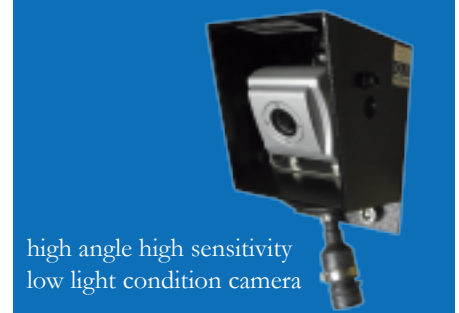
The **FleetSafety** collision avoidance system developed by **HighService Technology** is a protection tool for mining equipment operators and vehicle drivers at the mine. By raising visibility up to 360 degrees around equipments, providing alerts in front of other equipments, vehicles, people or objects on the interaction area, defining safety areas depending on vehicle speed and direction of equipments and optimizing the given information quantity to operators, it is achieved the best engagement between productivity and safety.



LCD 8" Touchscreen



TX / RX
(transmission &
reception).



high angle high sensitivity
low light condition camera



LCD 8" Touchscreen



Monitor Control Unit





Our collision avoidance system is designed conceptually on multiple systems in cascade:

The operator has a TAG that provides identification and at the same time protects him of being hit. This TAG beeps and vibrates in order to alert any eventuality. Once the operator is inside the equipment or vehicle, the vehicle identifies both of them.

Among mining equipments and vehicles, the system detects their presence in its nearness, defining an influence area. This area varies depending on the equipment type, its speed and direction, besides other variables, and represents the area for which it will transit. The vehicles communicate with each other directly, providing their identification and reporting their areas of influence. If these areas are overlapped, there is real potential of collision, alerting both operators. This is an autonomous safety LOOP and does not depend on additional systems.

Above this link, there is a supervision link. The positioning information and movement of each equipment or vehicle is sent several times per second to the mine vehicle control center. This communication includes status and influence area of each vehicle, indicating in turn whether there is a collision possibility.

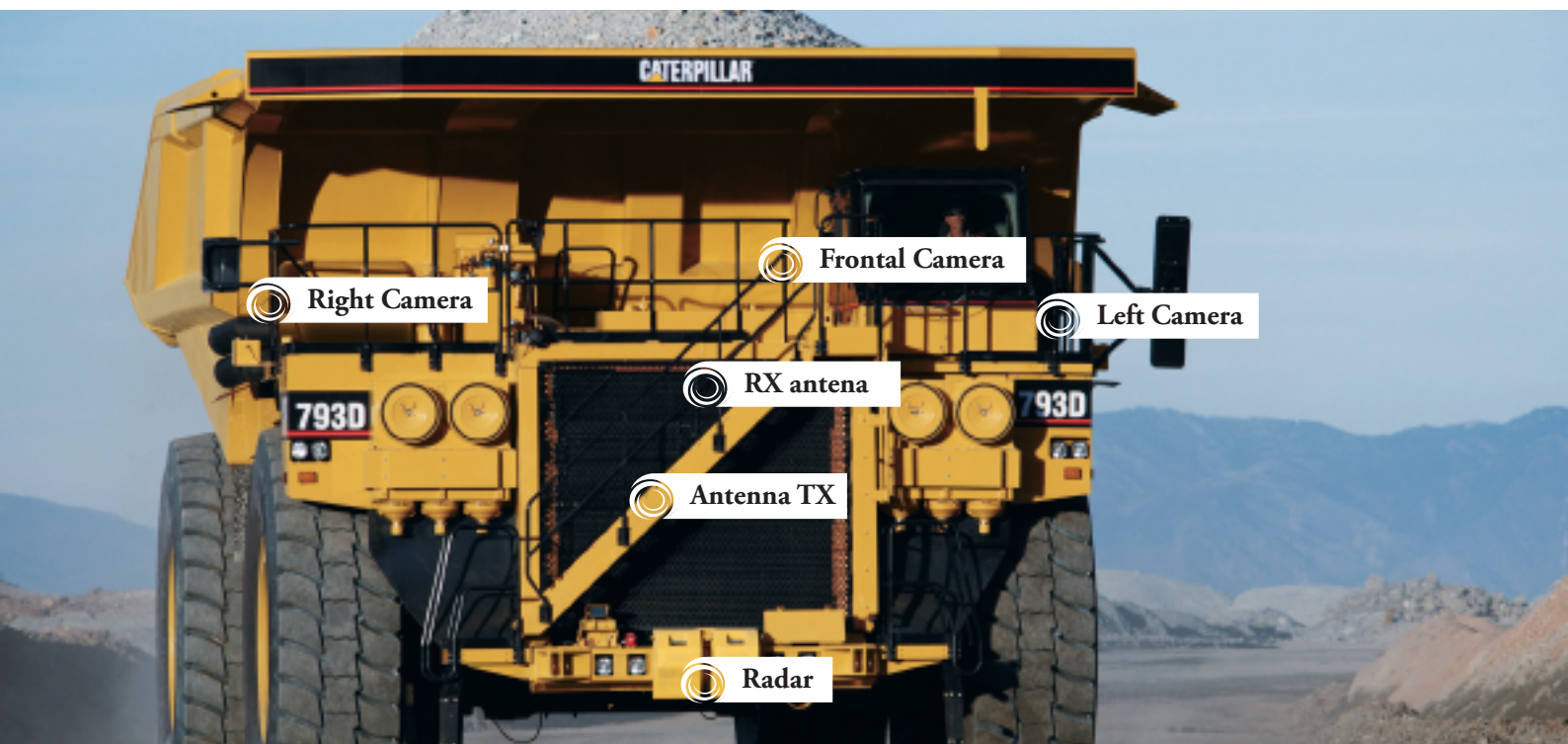
In case of a collision warning, the center is informed immediately, showing in real time what is happening. Different types of alarms can be set.

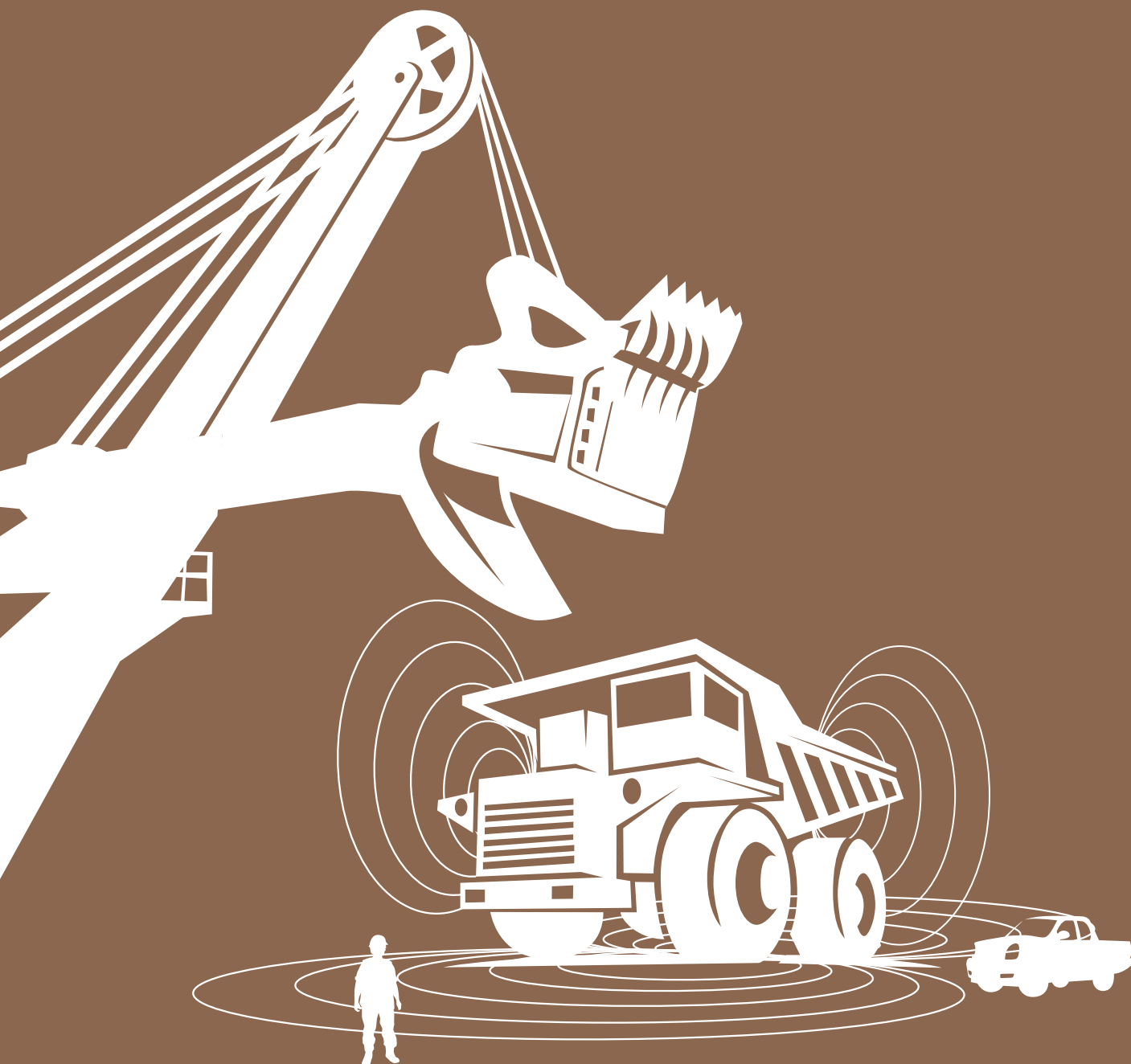
In turn, each vehicle is equipped with a black box that stores the information obtained by the anti collision device, video from cameras and even the sound of the cabin if it is required.

Area of influence functioning

Applicable to:

- Power shovels
- Bulldozers
- Haul trucks
- Auxiliary trucks and equipment
- Light vehicles and pickups
- Visit vehicles
- Operators
- Risk and obstacle areas.





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