



Integrating PreView Radar with Vehicle Braking Systems for Airport Efficiency



Integrating PreView Radar with Vehicle Braking Systems for Airport Efficiency

The next time you are at an airport, take a look out the window. Observe all the activity that takes place when a plane is getting ready to take off, or just after landing. You'll see vehicles of all shapes and sizes delivering luggage and supplies, people on foot, and the massive airplane that will carry you to your destination.

Everything you see is moving quickly, yet in perfect harmony. One wrong move and everything can come to a screeching halt. This results in delayed flights and unhappy customers. It's the ground handling service and support personnel that address the many service requirements of a passenger aircraft between the time it arrives at a terminal and the time it departs on its next flight. They are the unsung heroes of air travel. Speed, efficiency, and accuracy are important in ground handling services in order to minimize turnaround time and ultimately, increase revenue.



It was no surprise when a major airline had a safety concern with their ground crew lavatory service trucks, so they had to look for an out of the box solution to correct the issue before it got out of hand.



The Problem: Specialty Service Needs Custom Safety Solution

A specialty service truck is required to get very close to airplanes to empty the contents of the lavatory during a limited time between flights. They must do this while maneuvering through a busy airport with multiple vehicles and workers on foot. Although uncommon, there is always the threat of a service truck coming too close to the plane and bumping it. Even the slightest little tap between service equipment and the plane, requires a maintenance person to ensure there was no

structural damage to the delicate fuselage exterior. This results in a break in the efficiency, and delays the airplane crew and passengers.

The Solution: PreView Radar

A lead engineer thought about it, and decided there had to be a way to stop the lavatory service truck automatically from hitting the airplane. After some careful research, he decided to integrate the brake lock system and PreView Radar Object Detection system to meet his needs.

PreView Radar met their key requirements to implement: detection of both stationary and moving objects, ability to work through extreme vibration, and provide a consistent detection pattern in the most extreme weather conditions. Finally, PreView sensors utilize standard communication protocols, allowing him to integrate the braking system to automatically stop the vehicle before it could make physical contact with the airplane.



The Result: Downtime is Minimized

The lavatory service truck now automatically brakes within three feet of the airplane, ensuring the airplane and service truck do not collide for an on-time departure. Most importantly, the ground crew can continue their synchronized movements safely and down time is minimized.