

Fire-Rescue Department

Pierce Manufacturing, Collision Avoidance Mitigation System (CAMS)

Ted Moran, Assistant Fire Chief
Business Operations



Roadway Emergencies

- Roadway emergencies are inherently dangerous environments
- Oncoming vehicles pose risk to First Responders
- Impact to apparatus or scene has potential of catastrophic consequences
- SDFD positions apparatus to provide scene protection for victims and emergency personnel





CAMS Prototype

- Mounted on Engine 18 in Normal Heights, Council District 9
- Designed as a warning system to preemptively notify first responders of impending impact from oncoming vehicles
- Technology originally developed for auto racing
- Has been adapted for roadside safety



CAMS Prototype on Engine 18



Data Collection

- Data collected during normal vehicle operations
- Uses radar point cloud data to detect and track vehicle position
- Low resolution video used for visual reference to verify radar capture
- Apparatus parking brake must be set and emergency lights illuminated.
- Restrict data collection to when apparatus is actively on scene of an emergency
 - City Streets
 - Highway





Collision Avoidance Mitigation System



Status

- Radar Online
- Camera Online
- Data Recording Active
- GPS Active

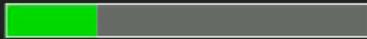
Storage Utilization



Processor Utilization



RAM Utilization



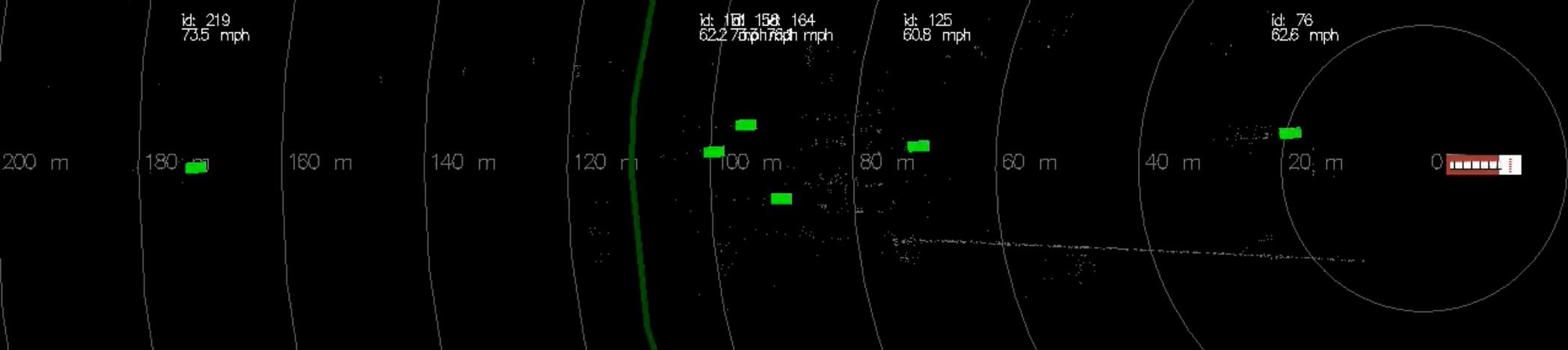
Messages:

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[3:10 PM] Vehicle Tracking Active
[3:10 PM] Camera online
[3:10 PM] First radar samples received
[3:10 PM] Initialized
[3:10 PM] System starting

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Vehicle Tracking





Mission Beach Lifeguard Station Emergency
Fire-Rescue Department

THANK YOU

