Protecting Roadway Workers with an Electronic Overlay – a Demonstration

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Key Presentation Take-Aways

- The Problem: Insufficient TAW Protection
- A Solution: Electronic RWP Safety Overlay
- eRWP Performance Update
The Problem: Insufficient TAW Protection

- Between 1997-2014 (post-RWP rule) = 46 fatal roadway worker incidents (source: FAMES)
- Human Error Factors
- NTSB Safety Alert (SA-066)
- Industry Awareness: California Mandate
The Solution: Electronic RWP System
Safety Overlay

- What is it?
- What does it do?

ZONEGUARD
Safety in your own hands
The Solution: Electronic RWP System Safety Overlay

ZoneGuard Components:

Train Alert & Detection Modules (TAM) (TDM)  Worker Alert Nodes (WArN)
The Solution: Electronic RWP System Safety Overlay

Train Alert & Detection Module Overview:

- Four Sensors
- Redundant Tech
The Solution: Electronic RWP System Safety Overlay

Worker Wearable Device Overview:

- Three versions
- Charging station
- Alarm system
  - Physical
  - Audible

Worker Alert Nodes (WArN)
The Solution: Electronic RWP System Safety Overlay

- Fixed (Permanent)
- Portable
The Solution: Electronic RWP System Safety Overlay

• Customer Demos
eRWP Performance Update: Data Review
eRWP Performance Update: Data Review

TDMS = GREEN
TAMS = RED
eRWP Performance Update: Data Review

• MTA Configuration:
  – 43 TDMS, 56 TAMS = **99 total devices**
  – Wearable Devices = **180 total devices**
    • 140 Worker Wearables
    • 20 Watchman/Lookout Wearables
    • 20 RWIC Wearables
Obstacles: Placement of radio network
- Elevation changes, line of sight obstructions, limited mounting height, catenary poles too close to track for mounting, installing on active tracks

Solutions:
- Mounting design
- Quick installs

eRWP Performance Update: Data Review
eRWP Performance Update: Data Review

Detection Data September 4 – September 10

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eRWP Performance Update: Data Review

• What does the data show?
  – The importance of multiple sensors
    • Environmental factors
    • One type of sensor = false alerts, missed detections
Future ZoneGuard Integrations

- ZoneGuard’s web portal
- Lighter and more efficient portable system
- PTC integration
- On-board component
QUESTIONS?

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