Tab 15



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Sensor Detection Technologies for Bicyclists & Pedestrians

(D)





Sensys Networks, Inc. was founded in Berkeley, CA in 2003

<u>Markets/Industries:</u> Traffic, Tolling, Parking, Rail

Sensor Technologies:

RFID, ANPR, Radar, Video-AI, Wireless Magnetometers



"True" Bicycle Presence Detection in Shared and Dedicated Lanes

- First Technology that:
 - Differentiates between bicycles & vehicles
 - Detects all bicycle types
 - Works in various weather conditions
 - Eliminates line-of-sight occlusion
 - Works seamlessly with existing detection
- Improve Safety by Optimizing Green Time
 - Allows bicycles time to safely cross
 - Traffic still flows when bicycles not present





MicroRadar sensor for Ped Detection



- MicroRadar Sensor embedded in pavement
- Detects pedestrians with pulsed radar signal
- Communicates wirelessly to traffic signal cabinet
- Detection notification to traffic signal controller
- Configurable detection zones
- Add-on to existing Sensys equipment





Basic Concept – Virtual detection

- 1. Individuals' smartphones with the Sensys App are the sensors
- 2. GPS & Bluetooth antenna detects traveler at agency-defined points
- 3. System notifies the traffic controller of presence for signal control
- 4. App informs traveler they have been detected by the signal



- > Initial implementations have been for <u>bicyclists</u> (scooters too).
- > Testing currently for transit priority and freight optimization
- Could potentially be used for <u>pedestrian</u> detection

GMG System Architecture





Santa Clarita Commuter Trail

- GMG deployment to improve bicycle safety, mobility & driver awareness along a 3-mile bi-directional cycle track.
- Improvements include blank-out signs to warn right-turning drivers to yield to oncoming bicyclists when present
- 300' advanced detection for cyclists to improve progression
- Feedback signs illuminate when cyclists have been detected





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Questions & Additional Information

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