

Introducing MHAV™

Multi-Modal Hazard Avoidance

Bringing Transportation Safety to Smart Cities and the Autonomous and Semi-Autonomous World

sfara.

<MobiledgeX>

solace.

ACCEDIAN

Why the world needs MHAV

C-V2X and the future of transportation

The airline industry provides one of the safest modes of transportation in large part due to technology. That industry mandates the use of a Traffic Collision Avoidance System (TCAS) that uses transponders to share location data amongst planes to identify potential collisions.

On our roadways, where far more lives are at stake on a daily basis, we lack such a foundational and necessary safety mechanism.

And yet, as the world works to overcome the challenges of autonomous transportation, a chaotic transition is already taking place. Cars from the 80s, 90s, and 2000s drive side by side with technologically advanced semi-autonomous and autonomous vehicles. That disparity will continue to grow into the foreseeable future.

One of the biggest challenges to realizing autonomous transportation is getting all modes of transportation to communicate with each other and with infrastructure. Cellular communication, known here as C-V2X, is the fastest and most economical route.

Without C-V2X, or massive infrastructure investment, the most technologically advanced autonomous features will still communicate, as they do today, primarily with themselves, using only line of site technologies to navigate and avoid collisions. But they won't be able to predict potential collisions, which provides the opportunity for corrective measures.

MHAV creates an infrastructure that opens communication amongst all modes of transportation, including vehicles, bicyclists, pedestrians and others, for beyond-line-of-site collision avoidance and predictive trajectories.

In essence, we've created for our roadways a safety infrastructure similar to that used in the ultra-safe airline industry.

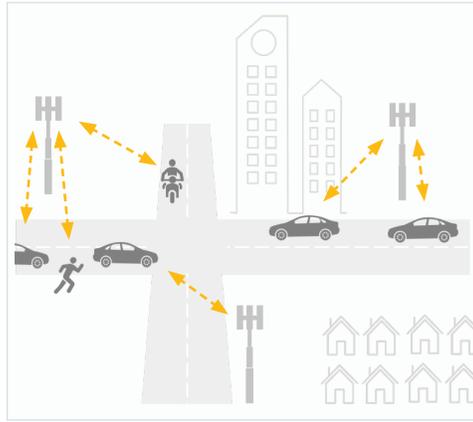
As a result, we are pleased to introduce the Multi-Modal Hazard Avoidance (MHAV), brought to you by Sfara, MobiledgeX, Solace and Accedian.

How we created MHAV™

Sfara assembled a partnership of four global technology players offering leading-edge solutions covering all necessary aspects of an MHAV deployment.

This includes multi-modal, mobile crash detection, data prioritization, network compatibility and security.

Together, these partners offer an unparalleled opportunity to propel the transportation revolution forward with a solution that works today, not in some distant future.



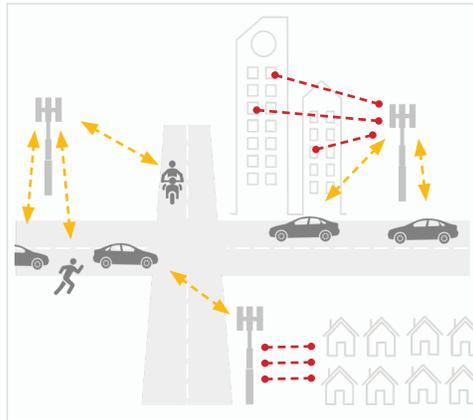
sfara.

Sfara connects mobile devices to enable MHAV, making mode of transportation irrelevant

Sfara's mobile AI uses the hard sensors in ubiquitous smartphones and data from the edge to precisely determine location for use in anonymized situational mapping and predictive trajectories.

Why it matters

No other solution offers multi-modal detection by smartphone. Plus, embedded solutions, which exclude non-vehicular transportation, don't have a globally ubiquitous infrastructure in place.



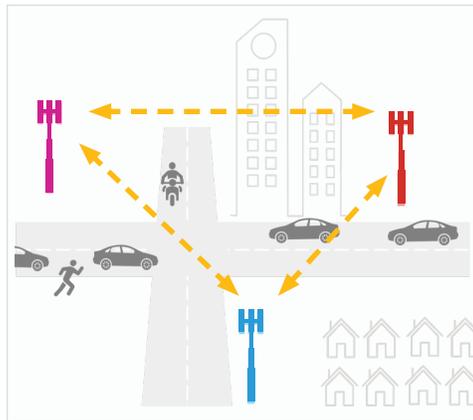
solace.

Solace prioritizes MHAV data flow ahead of non-critical data

Solace extrapolates data sent to the cloudlets in the cell towers, prioritizes that data and then shares it as needed amongst cloudlets, giving priority to MHAV safety and emergency data.

Why it matters

In split-second, life-or-death driving situations, safety data must override other network traffic, such as people binge watching streaming shows or using augmented reality apps.



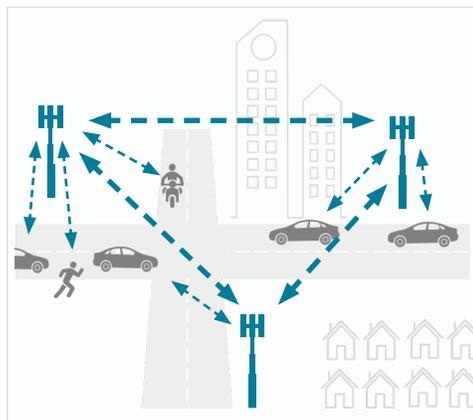
<MobileEdgeX>

MobileEdgeX creates localized cloudlets that allow MHAV data to work seamlessly across competing network infrastructures

MobileEdgeX cloudlets exist on the edge, which provides the ultra-low latency necessary for split-second decision making in driving situations and seamless data exchange through all participating carrier networks.

Why it matters

Without agnostic cloudlets on competing infrastructures, MHAV could only work in limited geographic zones, causing huge gaps in data.



ACCEDIAN

Accedian Monitors MHAV Network Performance & Security

Accedian provides Cloudlet network and application performance as well as auditable telemetry, user attribution, intrusion detection and forensics.

Why it matters

Critical safety data must be performant and secure, but it must also be auditable and offer network and application transactional attestation and threat forensics that can detect or predict performance impairments or intrusions.