



MCAP Operational View



**Mobile
Computing
Application
Platform**



Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 12 JAN 2011		2. REPORT TYPE Briefing Charts		3. DATES COVERED 12-01-2011 to 12-01-2011	
4. TITLE AND SUBTITLE MOBILE COMPUTING APPLICATION PLATFORM VEHICLE HEALTH MANAGEMENT				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Andrea Simon				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army TARDEC ,6501 E.11 Mile Rd,Warren,MI,48397-5000				8. PERFORMING ORGANIZATION REPORT NUMBER #21446	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army TARDEC, 6501 E.11 Mile Rd, Warren, MI, 48397-5000				10. SPONSOR/MONITOR'S ACRONYM(S) TARDEC	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) #21446	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT N/A					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 6	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



MCAP Vehicle Health Management

- Vehicle Readiness Management
 - Diagnostics, Prognostics
 - Capacity to Perform
 - Fuel level
 - Inventory of assets on-board
 - Monitoring and Assessment of after-market functionalities

[Home](#) - [Health](#) - [ABC News OnCall](#) - [Pain Center](#)

Deadly Delays Plague Ambulance Services

Not Nearly Enough Ambulances to Go Around, Officials Say

By ANNE-MARIE DORNING

Jan. 18, 2008

abc NEWS
35 comments

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Deborah Payne, Rotan Lee, Ricky Badway and Danny Rumph all have something in common. They're dead. And they died after waiting anywhere from 19 minutes to more than an hour for an ambulance in Philadelphia.

The latest incident occurred just a few weeks ago, in the early morning hours on

Local National World Politics Business Education Health Science NECN

The Boston Globe **LOCAL NEWS UPDATES** UPDATED Saturday, 2:15 PM
From the Metro staff at The Boston Globe

Fire truck in fatal crash had brake problems in October

A new cardiac (ABCN) January 10, 2009 04:28 PM [Email](#) | [Comments \(15\)](#) | [Text size](#) [-](#) [+](#)

And so Payne and the firefighters waited. And waited. According to the fire department timeline, an emergency vehicle finally reached Payne about an hour after her first call, only to break down. Payne died while waiting for a second EMS vehicle to arrive.



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



MCAP "Safety Critical Software"



- Vehicle to Vehicle (V2V) Collision Avoidance
 - Fault detection of failed transponder (device)
 - Communication failure (network)
 - "Hacker"
- Examples:
 - Two or more vehicle entering a common intersection from different directions
 - Leader-follower convoy
 - Traffic signal pre-emption
- Remote Control:
 - From mobile device, web connected device
- Examples:
 - Electrical generator
 - Lighting, cameras, fire hoses, tow trucks
 - Patrols, Supply



Sensing
Technology

Safety
Considerations

Connected,
Autonomous
Vehicle

Infotain./
Telematics

Also, Safety Critical Systems,
Wireless Technologies, and Ad-
hoc vehicular systems



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



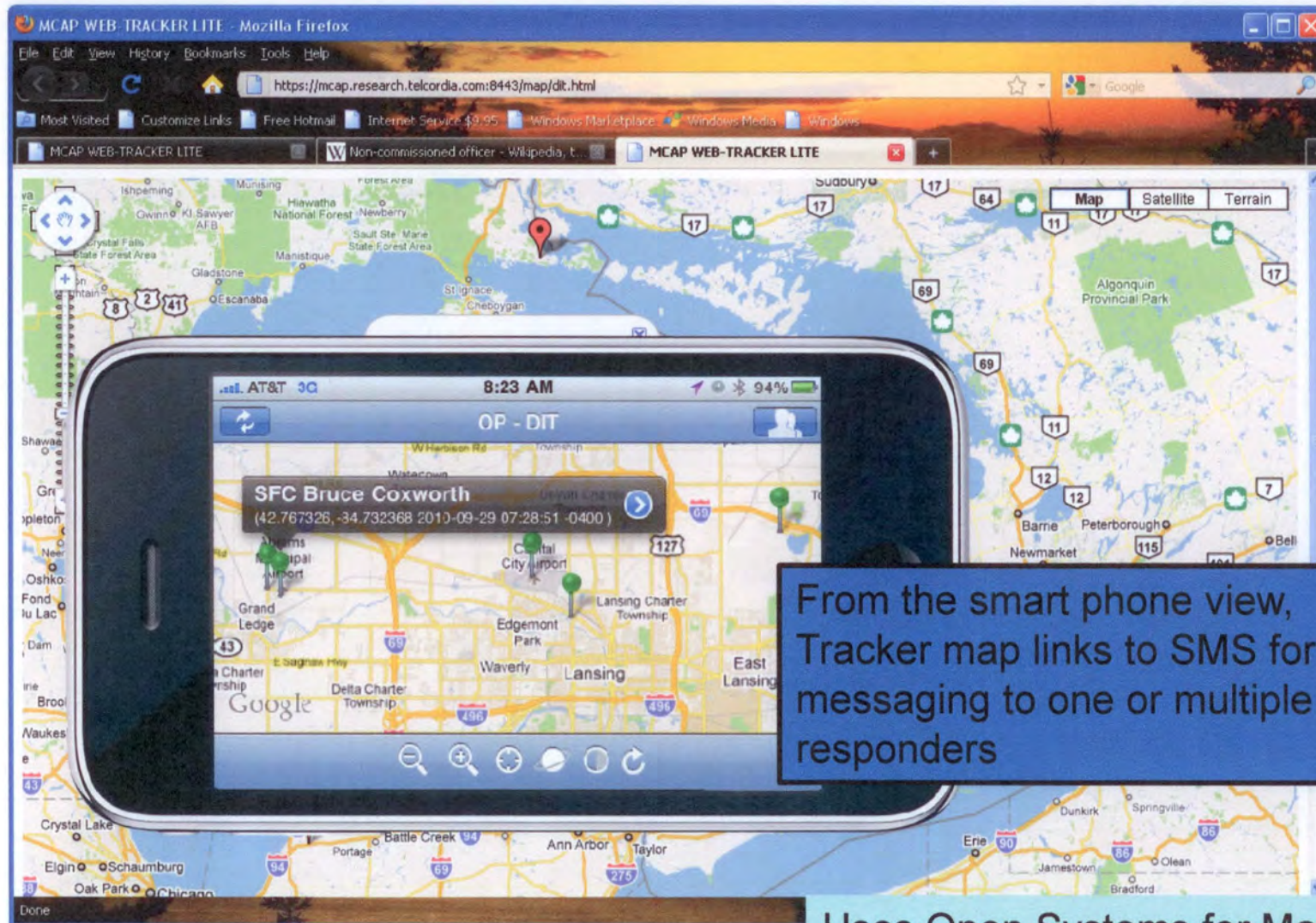
MCAP



- Backup



MCAP Tracker: Web (for EOC Display)



From the smart phone view,
Tracker map links to SMS for
messaging to one or multiple
responders

Uses Open Systems for Maps



MCAP In-Vehicle



Vehicle Health Assessment

- Vehicle vital signs - talking on the CAN bus
- Assess ability of vehicle to execute response

Vehicle Asset Tracking and Control

- Assessment of additional capability to serve mission
- Adding functionality for remote control of vehicle assets

Vehicle to X

- V-2-V Collision detection and avoidance
- V-2-Traffic signals and control, navigation
- V-2-I for asset sharing

Vehicle as a Communications Conduit

- More power / longer range to back-end
- More power / longer range from dismounted Soldiers / Responders
- Alternate schemes for comm denied to back end including satellite, hardwired, portable cell towers

