Radiofrequencies in Cars: A public health threat

Vehicles with V2V & V2I cost per vehicle 150 – 300 USD

Wireless Beams & Sensors in Modern Vehicles

RADARS AND WIRELESS SENSORS IN MODERN CARS

Vehicle Sensors
- Lane departure system
- Night vision
- Front object CCD camera
- Front airbag sensors
- ASCD
- Nighttime pedestrian warning
- Drowsiness sensors
- Front object laser radar
- Nighttime pedestrian warning IR sensor
- Active park assist
- Tire pressure sensor

Event data recorder (EDR)
- Positioning system
- Communication facility
- Display
- Computing platform
- Rear radar

Forward radar

EMF presentation by Dr. Th. Metsis 2017

© beaudaniels.com
CARS: THE MOVING RADAR CONCEPT

Pre-Crash
ACC Stop & Go
Parking Aid
Blind Spot Detection

77GHz Automotive Radar System

Detection of vehicle crash: emergency message broadcast to vehicles in zone of danger
Passing lane closed
Vehicle platooning
Service Center
Vehicle cooperation triggered

“Tis in your blind spot!” message erupted due to deep fade

Drive-thru Internet: videoconferencing with overseas business partners

Roadside unit (RSU)

V2x: V2V + V2I

Safety and Services

Emergency Services
Navigation
Entertainment
Connectivity Module
V2V
V2I

Integration Enablers

Driver Assist

Lane Departure Warning
Emergency Braking
Active Cruise Control
Side Assist/Blind Spot Detection

Injuries scale 1-5
Property damage

5.5 Million Police Reported Crashes
33,020 fatalities
2.7 million MAIS 1-5
6.3 million PDOV
$721 billion

3.8 Million Multi-Vehicle Crashes (69%)
13,328 fatalities
2.1 million MAIS 1-5
5.2 million PDOV
$416 billion

3.7 Million 2 or 3 Vehicle Crashes (68%)
12,788 fatalities
2.0 million MAIS 1-5
5.1 million PDOV
$401 billion

3.4 Million Light Vehicle-to-Light Vehicle Crashes (62%)
7,325 fatalities
1.8 million MAIS 1-5
4.7 million PDOV
$319 billion

Injuries scale 1-5
Property damage

0.7 Million Single-Vehicle/Pedestrian/Cyclist Crashes (31%)
1.7 Million

0.05 Million Crashes involving 4 or more Vehicles (1%)
0.3 Million Other Multi-Vehicle Crashes (6%)

Federal Register / Vol. 82, No. 8 / Thursday, January 12, 2017 / Proposed Rules