

COE400 – Digital System Design

iCar

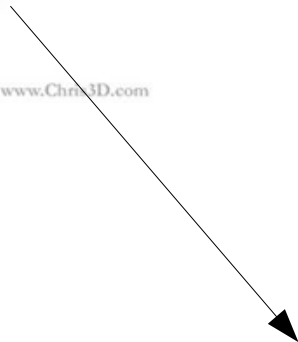
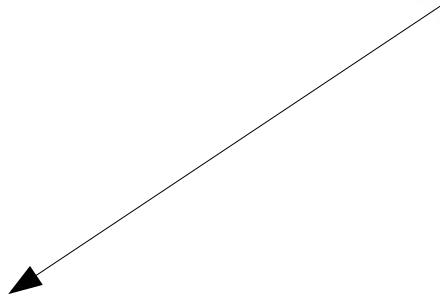
smart car automated system



There will be a new generation for our cars ...!



iCar © 1999 Chris O'Riley www.Chris3D.com



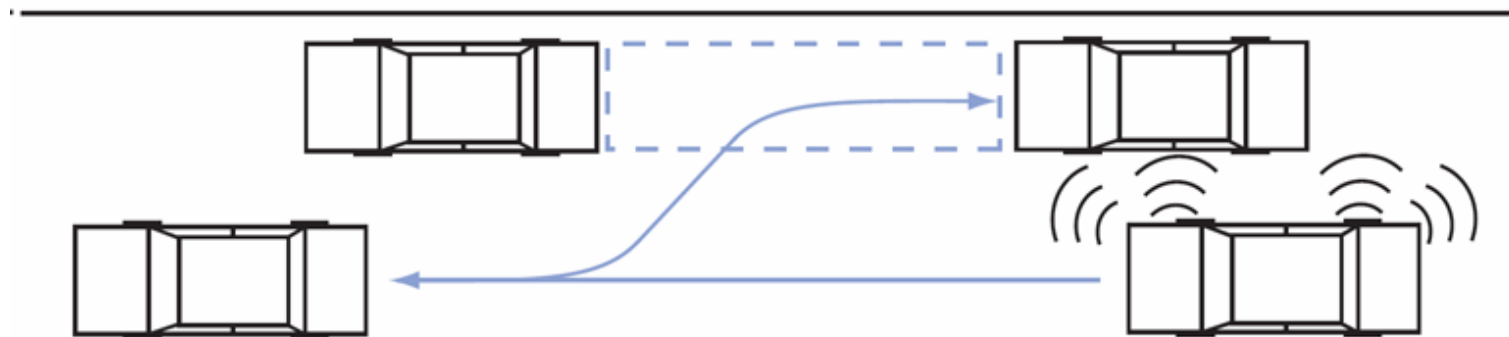
**Auto-Parking
System**

**Navigation &
Context aware
system**

Black Box

Auto-Parking System

- smart car can park itself automatically
- Hardware: sensors, infrared cameras, ...
- Software: algorithm, image processing, ...



Navigation & Context-Aware System

- smart navigation system: GIS + GPS
- Context-Aware: controlling lamps, speed, air conditioner, ...



Black Box for Cars

- logs for the car before and after accidents
- records for: speed, velocity, pressure force, directions, force directions, ...
- can be used easily for accident simulations

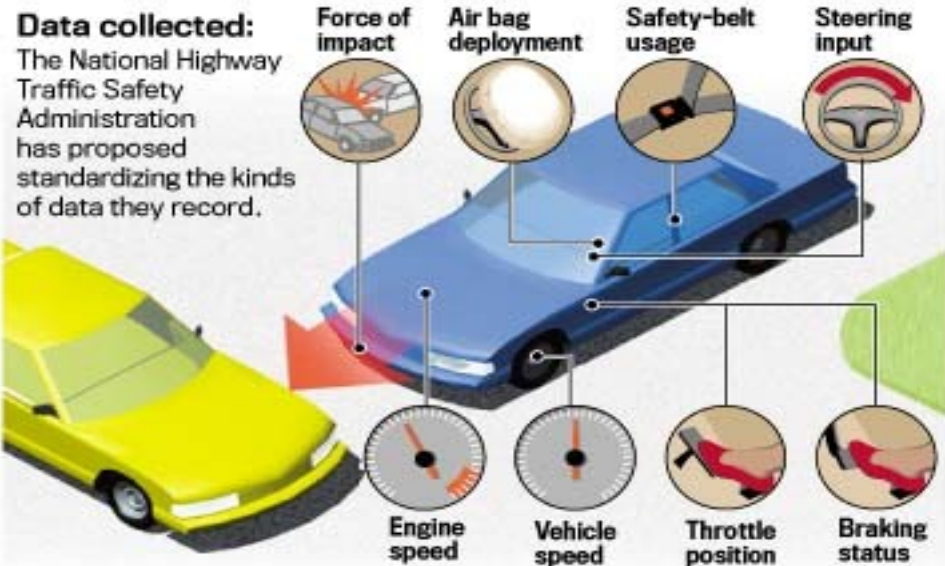


Photo by Thue; from Wikimedia Commons
(commons.wikimedia.org)

How to explain this to mom and dad?
(a car crash in Denmark)

Automotive black boxes

The devices, also known as event data recorders, are usually part of the computer system used to deploy air bags.



Source: National Highway Traffic Safety Administration

Tim Summers / The Detroit News

Features

- Three different systems ...
- can be sold as an independent component
- can be developed and improved separately
- combine software and hardware
- can be done ... !

Questions

Suggestions

Ideas