Secure Vehicle Communication

SEVECOM

Mission
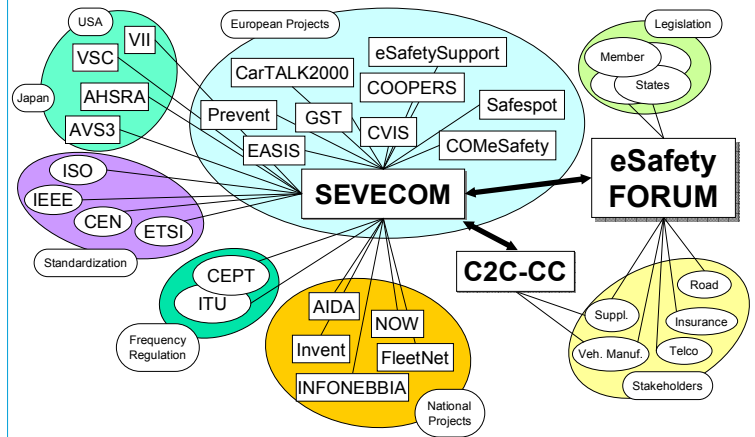- Define a consistent and future-proof solution to the problem of V2V/V2I security

Focus
- Communications specific to road traffic
  - Messages related to traffic information
  - Anonymous safety-related messages
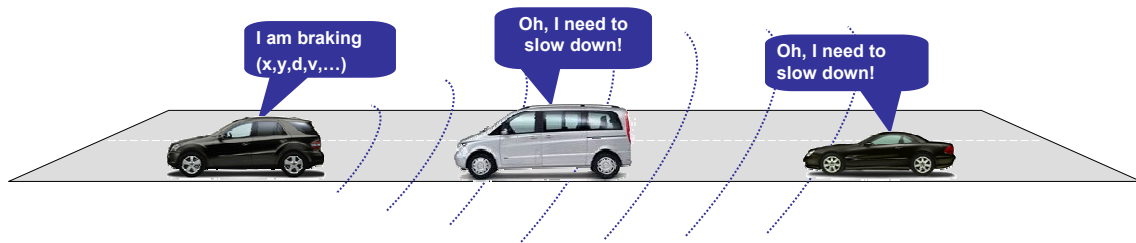 - Liability-related messages

Approach
- Collaboration with eSafety projects
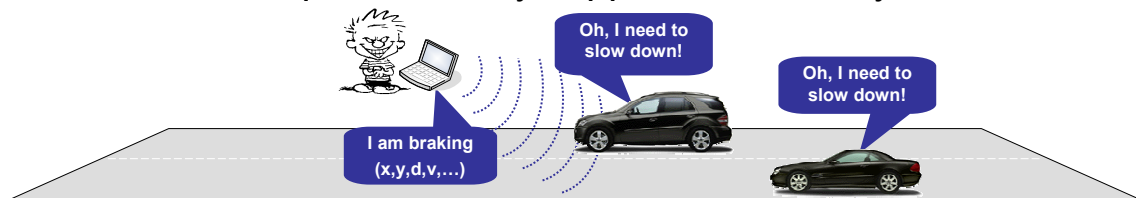- Collaboration with the C2C consortium

Research and Standardization

USA, VII, VSC, AHSRA, AVS3, Japan — European Projects — CarTALK2000, eSafetySupport, COOPERS, Prevent, GST, Safespot, EASIS, CVIS, COMeSafety — **SEVECOM** — **eSafety FORUM** — Legislation, Member, States — ISO, IEEE, CEN, ETSI, Standardization — **C2C-CC** — CEPT, ITU, Frequency Regulation — AIDA, NOW, Invent, FleetNet, INFONEBBIA, National Projects — Suppl., Road, Veh. Manuf., Insurance, Telco, Stakeholders

Sharing information among vehicles helps to improve safety

I am braking (x,y,d,v,…) — Oh, I need to slow down! — Oh, I need to slow down!

However, inadequate security support could easily result in…

Oh, I need to slow down! — Oh, I need to slow down! — I am braking (x,y,d,v,…)

Architecture and security mechanisms
- Provides the right level of communication and in-vehicle protection
- Addresses issues such as liability versus privacy

Fully addressed topics
- Key and identity management
- Secure communication protocols (including secure routing)
- Tamper resistant devices and decision on crypto-system
- Privacy

Investigated topics
- Intrusion detection
- Data consistency
- Secure positioning
- Secure user interface

Consortium

Information Society and Media — Safety — TRIALOG — EPFL — DAIMLERCHRYSLER — universität uulm — CENTRO RICERCHE FIAT — PHILIPS — BME

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