General Overview
CSA 79GHz project

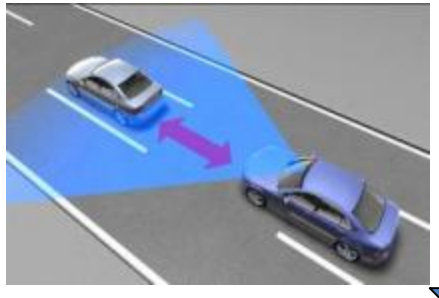
Geneva, November 7th, 2012

Motivation for the Project (1)

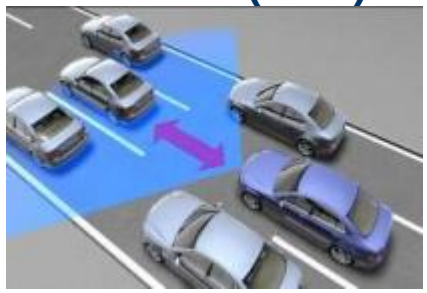
- Radar based driver assistance systems are evolving from additional “comfort functions” to systems providing essential functions for car safety
- These safety functions demand for better object discrimination: this requires higher available bandwidth
- With systems operating in the current available narrowband frequency ranges in 24GHz and in 76GHz the demand for better object discrimination cannot be fulfilled.

Motivation for the Project (2)

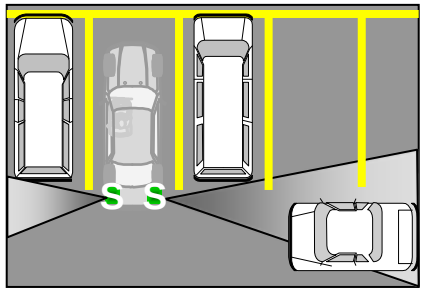
Progress of radar based Driver Assistance Systems



Adaptive Cruise Control (ACC)



ACC Stop&Go



Rear traffic crossing alert

From Comfort to Safety Applications:

1998 ACC (Adaptive Cruise Control)

… Distance warning

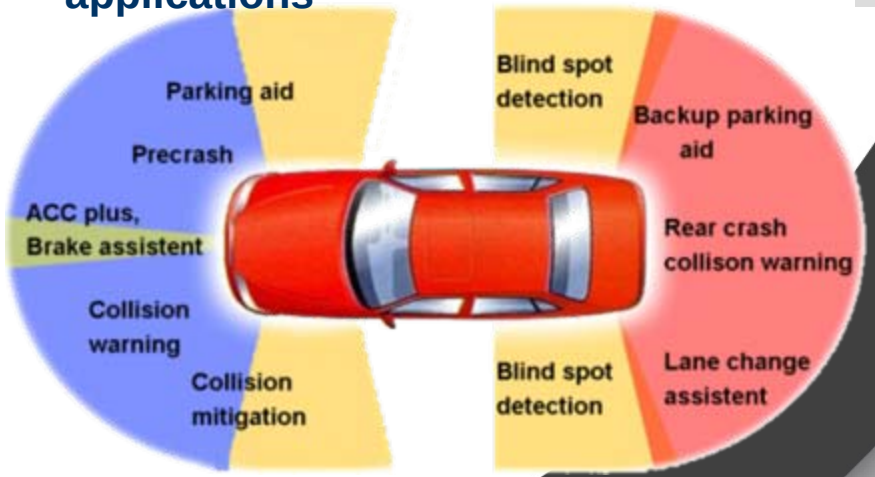
… Collision Warning

… Collision Mitigation
(from Partial Braking to Autonomous Emergency Braking)

… Blind Spot Monitoring, Lane Change Ass.

… Active Blind Spot Assistance
(ADAC Blue Angel 2011)

… future even more sophisticated applications



Blind Spot Monitoring

Lane Change Assist

79GHz

Motivation for the Project (3)

• Following these requirements the “79GHz band” (77-81GHz) was identified in Europe as the most suitable frequency band for long term and permanent deployment of high resolution automotive radars (2004/545/EC)

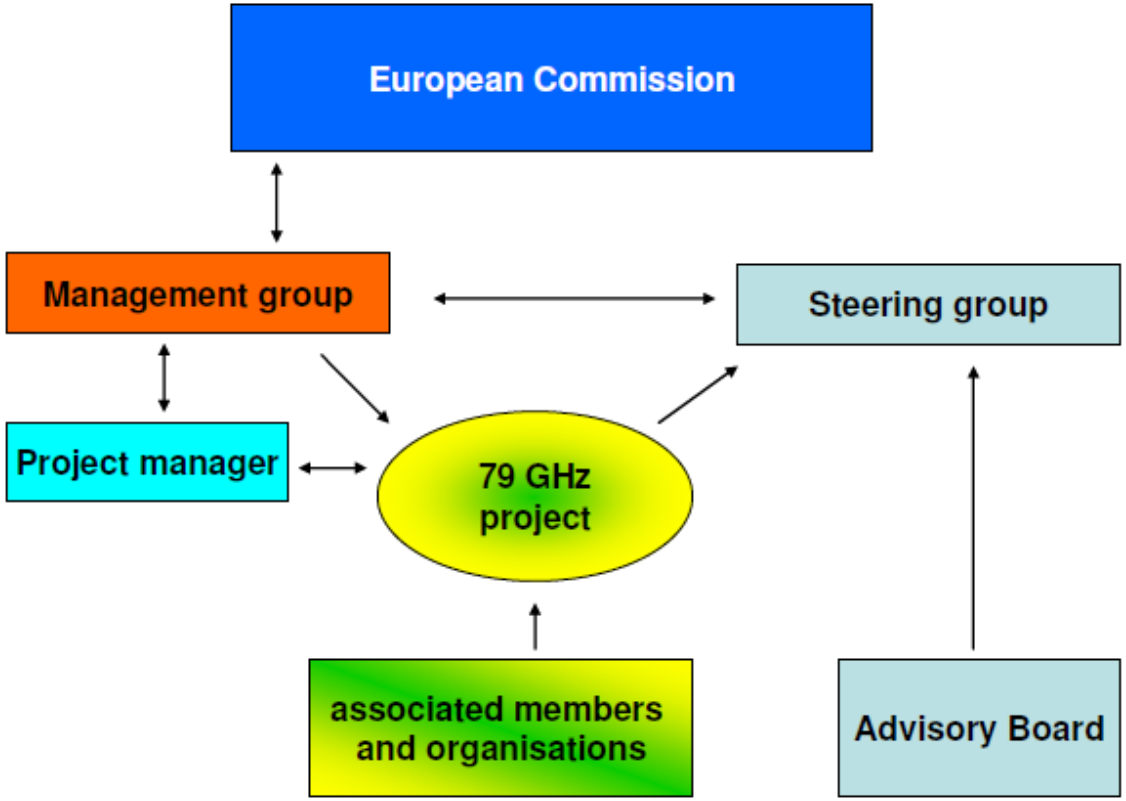
Motivation for the Project (4)

• To generate a harmonized regulation for the 77- 81GHz band similar to the already existing regulation in Europe (2004/545/EC) in as many key countries as possible.

• A stable, permanent and globally harmonized frequency band for high resolution automotive radar equipment is important for the automotive components industry to make the substantial investments necessary for deployment of 79 GHz.

Introduction to CSA 79GHz (1)

•Project Structure



Introduction to CSA 79GHz (2)

- Project partners
- The management group is formed by the project members and chaired by the project manager

Introduction to CSA 79GHz (3)

Associated Members

Project Objectives (1)

• Initiate and implement a “79GHz” regulation within the project runtime in as many key countries of interest as possible

• Harmonizing the “79GHz” regulation in the key countries with the EC decision (2004/545/EC)

Project Objectives (2)

- Develop and implement a structure for a global acting automotive frequency group:
- To act as contact point in discussions with national/international regulatory bodies and other stakeholders
- To develop a unified view of all involved stakeholders on all questions related to current and future frequency bands for automotive radar applications
- To develop future strategies for potential new frequency bands for automotive applications