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# OMG Technical Meeting

3 October 2002, Helsinki

## Hard Real Time CORBA - Project (IST 37652)

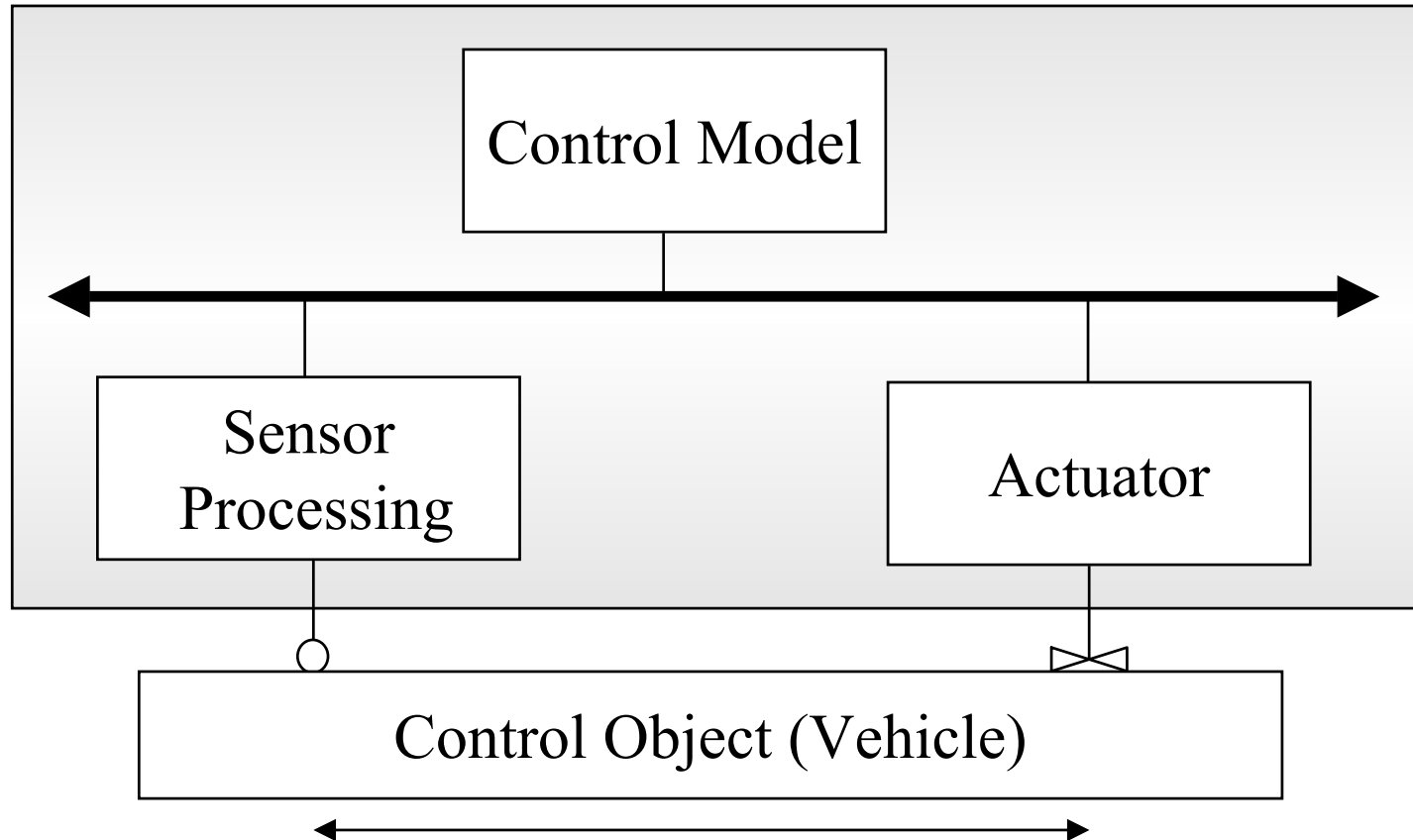
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## Motivation (1)



Distributed control applications are hard real-time applications and usually require small jitter.

## Motivation (2)

In **distributed control applications**, a distributed information system closes a **control loop** to keep a target system in a controlled state. As controller complexity grows, there is a strong need of having good architectural support for the construction of **modular, software-intensive, real-time** applications.

## Motivation (3)

**Complexity** is a real engineering challenge and **distributed object technology** has proved useful in dealing with this problem.

One of the leading technologies in this field is the **object request brokering** model proposed by the **CORBA** specification from the Object Management Group.

## Motivation (4)

**Timing is critical** in control applications due to dynamic effects that can be derived from **delays** or **jitter** due to the software/hardware path.

While present CORBA specifications do address real-time issues they mostly deal with resource control for soft real-time systems. This is **not enough** for certain types of distributed control systems.

## Objectives of the Project

- Investigate ways for making CORBA suitable for hard timing constraints
- Defining a CORBA pluggable transport for hard real-time applications
- Testbeds for demonstrating the suitability for closed control-loops

## Additional Facts

### Partners:

- Polytechnic University of Madrid
- Lund University
- Technical University of Vienna
- SCILabs Ingenieros S.L.

### Duration:

Started on July 1<sup>st</sup>, 2002 with a planned duration of 1 year

# Who is interested in joining a Control Systems working group?