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Intelligent transport systems — Adaptive Cruise Control systems — Performance requirements and test procedures

Systèmes intelligents de transports — Systèmes stabilisateurs de vitesse adaptés — Exigences de performance et modes opératoires

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 15622 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This second edition cancels and replaces the first edition (ISO 15622:2002) which has been technically revised.

Introduction

The main system function of Adaptive Cruise Control is to control vehicle speed adaptively to a forward vehicle by using information about: (1) ranging to forward vehicles, (2) the motion of the subject (ACC equipped) vehicle and (3) driver commands (see Figure 1). Based upon the information acquired, the controller (identified as "ACC control strategy" in Figure 1) sends commands to actuators for carrying out its longitudinal control strategy and it also sends status information to the driver.
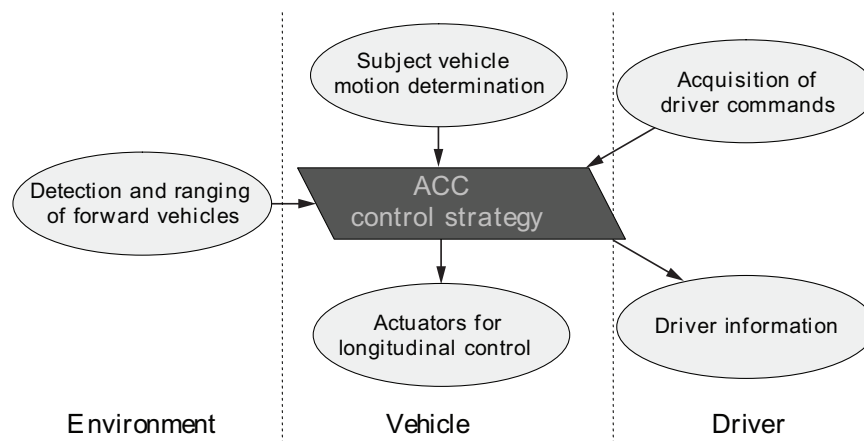
Figure 1 — Functional ACC elements

The goal of ACC is a partial automation of the longitudinal vehicle control and the reduction of the workload of the driver with the aim of supporting and relieving the driver in a convenient manner.

This International Standard can be used as a system level standard by other standards, which extend the ACC to a more detailed standard, e.g. for specific detection and ranging sensor concepts or higher level of functionality. Therefore, issues like specific requirements for the detection and ranging sensor function and performance or communication links for co-operative solutions will not be considered here.