

Connected and Automated Mobility (CAM) – Vocabulary

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Foreword

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The provisions of this document are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. "organization" rather than "organisation").

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1 Scope

This document defines terms, abbreviations and acronyms for the connected and automated mobility (CAM) sector.

It covers terms relating to connectivity and automation of roadgoing, land-based vehicles and their users. It does not cover terms that are manufacturer-specific.

The vocabulary includes some terms (e.g. automated passenger service, user-in-charge) that have specific uses in Britain and have been defined according to their use in that context. Terms that are not specific to British usage have been defined in accordance with their wider use.

This document is for use by organizations involved in the CAM ecosystem (for instance insurers, regulators, legislators, CAM manufacturers, operators and consumers).

2 Normative references

There are no normative references in this document¹⁾.

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.

3 Terms, definitions and abbreviations

3.1 Terms and definitions

3.1.1 abort criteria

conditions defined through risk assessment that necessitate termination or non-initiation of the automated driving system (3.1.10) during authorized testing

3.1.2 active safety system

vehicle (3.1.123) system that uses sensor input and processing to detect evidence of increases in road risk (such as an impending collision or loss of traction) and takes preventative or mitigating action

NOTE Preventative action may take the form of providing an advanced warning or providing the human driver with assistance in vehicle control; for example, by applying the brakes.

3.1.3 actor

entity with the capability to act and react in a scenario (3.1.100)

[SOURCE: BS ISO 34501:2022, 3.16]

3.1.4 adaptive cruise control (ACC)

vehicle (3.1.123) system that attempts to maintain the vehicle at a driver-selected target speed and following distance, using sensors and actuators to regulate vehicle speed

NOTE 1 The purpose is to keep a safe distance relative to other slower moving vehicles ahead before reverting to the set speed when the lane clears.

NOTE 2 Some early adaptive cruise control systems, especially those vehicles with manual transmission, are not capable of bringing the vehicle to a complete stop and require the human driver to intervene to do so. Systems that are capable of controlling the vehicle to a stop have a variety of additional names such as 'Stop & Go'.

NOTE 3 Some adaptive cruise control systems (e.g. those conforming to Regulation (EU) 2019/2144 [1], known as the General Safety Regulation), do not allow the driver to set the maximum speed above the speed limit. Some manufacturers offer adaptive cruise control systems that automatically slow the vehicle in advance of a change to a lower speed limit (see 3.1.57 intelligent speed assistance).

3.1.5 advanced driver assistance system (ADAS)

vehicle (3.1.123) system that supports human drivers by performing a part of the dynamic driving task (3.1.34), by assisting human drivers to drive safely, by intervening to prevent an unsafe situation from developing or by providing safety relevant information and warnings

NOTE Examples include adaptive cruise control and advanced emergency braking system.

3.1.6 advanced emergency braking system (AEBS)

active safety system (3.1.2) that uses sensors and computer processing to detect when the ego vehicle (3.1.38) has an imminent risk of collision with an object in its path and applies the brakes automatically attempting to mitigate or avoid the collision, even if the driver takes no action

NOTE 1 AEBSs may use different sensor types (e.g. camera, radar, lidar), work in different driving conditions (e.g. highways, urban) and act on the ego vehicle (3.1.38) in different ways (e.g. only slow the vehicle or bring it to a complete stop).

NOTE 2 This term was referred to as automatic emergency braking (AEB) in previous versions of this vocabulary.

3.1.7 advanced trial

testing or trialling of an **automated driving system (3.1.10)** or **remote driving (3.1.92)** on public roads without a **safety driver (3.1.98)** present in the vehicle or within line of sight of the vehicle

NOTE Those planning to conduct advanced trials in the UK should contact the Centre for Connected and Autonomous Vehicles (CCAV).

3.1.8 authorized self-driving entity (ASDE)

entity that puts an automated vehicle forward for authorization for use as self-driving and is responsible for its safe and lawful behaviour

NOTE 1 This may be the vehicle manufacturer or software designer or a joint venture between the two.

NOTE 2 This term and definition is adapted from the Law Commission of England and Wales and Scottish Law Commission joint consultation paper 3 (2020) [2] and replaces the previous term “automated driving system entity (ADSE)”.

3.1.9 automated driving

when the **dynamic driving task (3.1.34)** is performed by the **automated driving system (3.1.10)**

NOTE 1 An automated vehicle driving itself is performing automated driving.

NOTE 2 Automated driving may operate for some or all of a journey depending on the capabilities of the system, the suitability of infrastructure, any other constraints on its operational design domain (3.1.78) and the preferences of the user-in-charge (3.1.120).

NOTE 3 With reference to self-driving features, the Law Commission of England and Wales and Scottish Law Commission joint report (2022) [3] extended this definition with the condition that the vehicle drives “safely and legally, even if an individual is not monitoring the driving environment, the vehicle or the way that it drives”. This was refined in the Automated Vehicles Act 2024 [4], which indicated that safe automated driving would adhere to safety principles prepared by the Secretary of State. These would secure that “(a) authorised automated vehicles will achieve a level of safety equivalent to, or higher than, that of careful and competent human drivers, and (b) road safety in Great Britain will be better as a result of the use of authorised automated vehicles on roads than it would otherwise be”.

3.1.10 automated driving system (ADS)

hardware and software that are collectively capable of performing the **dynamic driving task (3.1.34)** on a sustained basis, regardless of whether it is limited to a specific **operational design domain (3.1.78)**

NOTE 1 This definition is adapted from SAE J3016 [5] and is used specifically for driving automation systems that can deliver SAE level 3, 4, or 5 driving (the generic term driving automation system [3.1.33] covers systems that deliver SAE level 1 to 5 driving features).

3.1.11 automated lane keeping system (ALKS)

vehicle (3.1.123) system which is activated by the driver and which keeps the vehicle within its lane for travelling speed of 130 km/h or less by controlling the lateral and longitudinal movements of the vehicle for extended periods without the need for further driver input

NOTE 1 Definition adapted from UN Regulation No. 157 [6] Uniform provisions concerning the approval of vehicles with regard to Automated Lane Keeping Systems [7].

NOTE 2 ALKS up to 60 km/h keeps the vehicle within its lane of travel, whereas ALKS up to 130 km/h are required to be equipped with lane-change capability.

NOTE 3 Vehicles using ALKS are still subject to speed limits according to vehicle class and road type (e.g. the UK speed limit for cars, motorcycles, car-derived vans and dual-purpose vehicles on motorways is 70 mph / 112 km/h)

3.1.12 automated passenger service

transport provision for passengers using **automated vehicles (3.1.14)** on public roads

NOTE 1 Requires specific regulatory approval and operates within an operational design domain.