

TECHNICAL REPORT

Conceptual model of standardization for multimedia car systems and equipment
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONCEPTUAL MODEL OF STANDARDIZATION FOR MULTIMEDIA CAR SYSTEMS AND EQUIPMENT

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IEC TR 63038, which is a technical report, has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
100/2628/DTR	100/2692/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
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- replaced by a revised edition, or
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INTRODUCTION

This document is initiated by the study session 5 in TC 100/AGS and made by stage 0 project, PT100-9. The study session 5 was formed to study car related issues of TC 100, the study session 5 proposed stage 0 project, it was approved and assigned as PT 100-9.

The equipment and systems under the scope of TC 100 are firstly used in residential domains such as in home, school, office, etc. And now these are used in mobile domains such as in car, train, airplane, ships and with individuals as movable, carryable or wearable device. These new domains require different specifications from the conventional residential domains.

PT100-9 focuses on the car domain. As a preliminary, this document provides an example of the conceptual model of car related issues under the scope of TC 100, and then it details possible standardization items that are car related.

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CONCEPTUAL MODEL OF STANDARDIZATION FOR MULTIMEDIA CAR SYSTEMS AND EQUIPMENT

1 Scope

This document specifies the conceptual model of multimedia systems and equipment utilized for cars and describes possible standardization items.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC TR 61998:2015, *Model and framework for standardization in multimedia equipment and systems*

IEC TS 62045-1:2006, *Multimedia security – Guideline for privacy protection of equipment and systems in and out of use Part 1: General*

IEC 62227:2008, *Multimedia home server systems – Digital rights permission code*
IEC 62227:2008/AMD1:2012

IEC TR 63038:2016
IEC 62443 (all parts), *Industrial communication networks – Network and system security*
<https://www.iec.ch/comm/industrial-networks/Network-and-system-security>
9ae7c6efd13b/iec-tr-63038-2016

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

Infotainment system

system for integration of Information and entertainment

3.1.2

main AV system

<car> main audio, video and multimedia system installed in cars

3.1.3

working and functional mode

<car> mode in which various cars work and function correctly

3.1.4

UX mirroring

user experience mirroring

3.1.5

picture navigation

<car> navigation with geotagged pictures

3.1.6

smart device

mobile computing device with communication function

3.1.7

smart car

car containing computing and communication functions, interfaces, and sensors to provide advanced user interface and user experience

3.2 Abbreviated terms

CAN	Controller Area Network
DRM	Digital Radio Mondiale
HUD	Head Up Display
IP	Internet Protocol
ITS	International Temperature Scale
LAN	Local Area Network
OBD	On Board Diagnostics
SDO	Standards Development Organization
UX	User eXperience

4 Overview of the car system

The TC 100 system model as described in IEC TR 61998:2015, is basically similar to the model as used for cars. However, specific attention has been paid to the specificities related to cars.

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One model from the viewpoint of data communication is described in Figure 1. Whether the application area is car, home or any other kind of domain, this model is applicable. The system model for cars, as described in this document, basically uses this model as audio, video and multimedia systems and equipment, and as infotainment system.

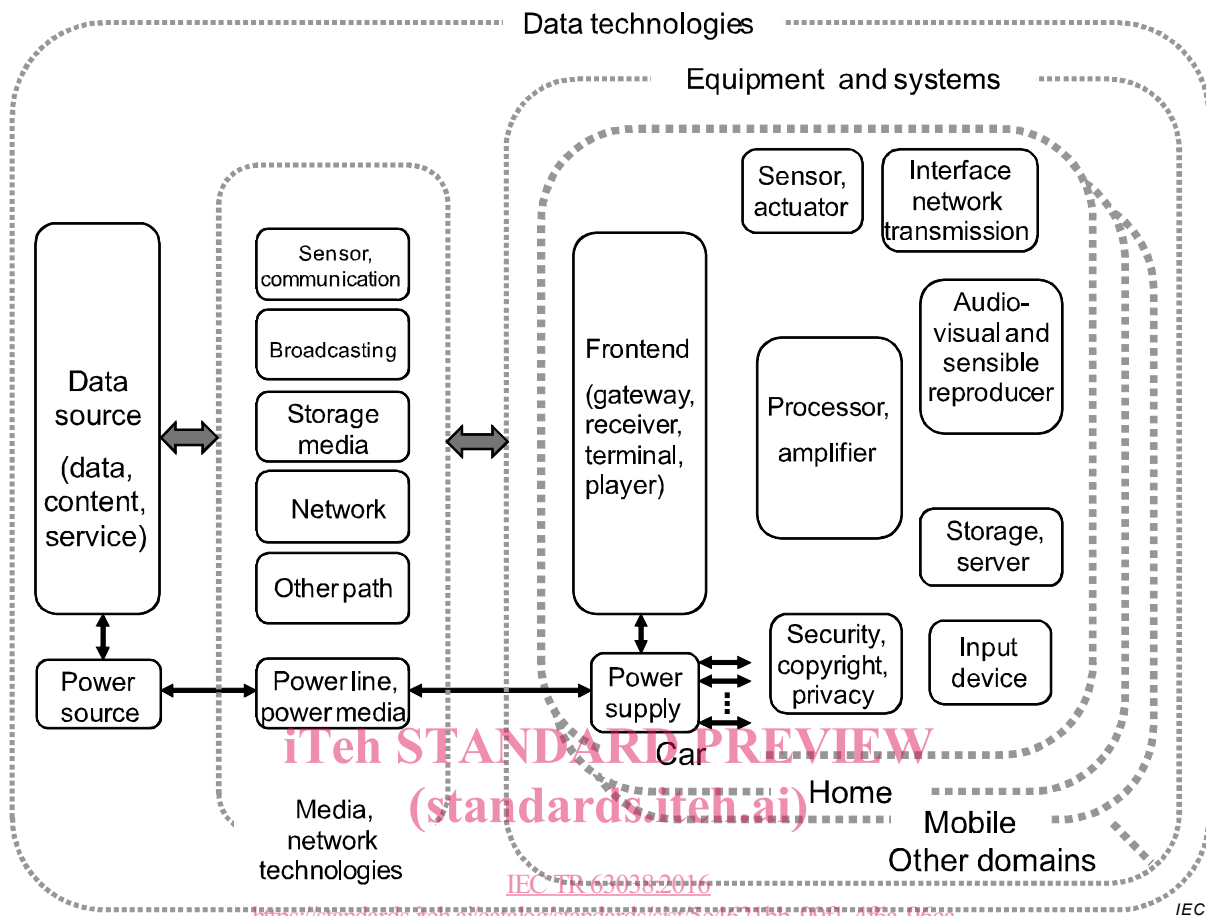


Figure 1 – TC 100 system model for data communication

The communication model between the system and user is described in Figure 2. In this document the TC 100 model is applied to cars. Typical users are drivers, passengers, and pedestrians as well as users in other domains.

The communication between TC 100 models is described in Figure 3. This communication is between the TC 100 model via user and TC 100 model, the TC 100 model via user and the TC 100 model via use, and the TC 100 model and the TC 100 model.