



Business plan for a DIN SAE SPEC project
according to the PAS procedure on

**“Terms and definitions related to
testing of automated vehicle
technologies”**

Status:

For developing the DIN SPEC (PAS), adoption 2018-09-14

Requests to participate in the project are to be submitted to
joachim.lonien@din.de¹

Recipients of this business plan are requested to name all patent rights known
to them to be relevant to the project and to make available
all supporting documents.

Berlin, 2018-09-14

¹ Applications for participating in the project and comments on the business plan that are not received by the deadline do not need to be taken into consideration. Once constituted, the project workshop will decide whether or not to consider the comments received in good time.

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1. Status of the business plan

- For internal commenting
- For public commenting (publication)

This business plan is intended to inform the public of a new **DIN SAE SPEC** project. Any interested party can take part in this project and/or comment on this business plan. Please send any requests to participate or comments by e-mail to joachim.lonien@din.de.

Once this business plan is published, the Chairman of DIN's Executive Board decides whether or not the project is to be carried out.

If the project is accepted, all those who have applied for participation or have commented on the business plan by the deadline will be invited to the kick-off meeting of the project workshop.

- For developing the **DIN SPEC (PAS)**, adoption on **2018-09-14**

2. Initiator and other workshop members

- Initiator:

Person/Organization	Brief description
Dr.-Ing. Adrian Zlocki, fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen	As a partner in the automotive industry, fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen offers innovative solutions and engineering services. Understanding the vehicle as a complete physical, energetical and informational system, fka develops solutions relating to the key themes of energy efficiency, safety and driving pleasure - driving innovations. Corresponding to its main areas of work, fka comprises ten departments: body, vehicle concepts, chassis, drivetrain, acoustics, electric/electronics, driver assistance systems, thermal management, driver experience as well as strategy & consulting. This wide range of competencies enables analysing and optimising the vehicle as a whole paying attention to the complex interactions between its individual subsystems. Powerful computer resources, latest commercial simulation software, various workshops and numerous testing facilities support fka's activities. fka carries out specialised and interdisciplinary development tasks, supplemented by technical and strategic consulting.

- Other potential participants:

This **DIN SAE SPEC** will be developed in a consortium (temporary body) that is open to any interested party. The participation of other experts would be helpful and is desired. It is recommended that

- Automobile companies (OEMs) and suppliers
- Consulting companies
- Researchers, Research projects
- Test track operators

take part in the development of this DIN SAE SPEC.

- Confirmed participants at the kick-off meeting:

Adrian Zlocki	fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen
Aria Etemad	Volkswagen AG
Houssem Abdellatif	TÜV SÜD AG
Daniel Bartz	Fiat Chrysler Automobiles (FCA)
Joachim Taiber	International Transportation Innovation Center (ITIC)
Jeff Blackburn	Metamoto Inc.
TBA	EUCAR (L3Pilot project)
John Tintinalli	SAE

- Participants who have approved this business plan (consortium members) at the kick-off meeting:

Person	Organization
Adrian Zlocki	fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen
Christian Rösener	Ika Institut für Kraftfahrzeuge (RWTH Aachen)
Thomas Bock	Samsung Smart Machines
Benjamin Koller	TÜV SÜD Auto Service GmbH
Daniel Bartz	Fiat Chrysler Automobiles (FCA)
Joachim Taiber	International Transportation Innovation Center (ITIC)
Steve Sill	U.S. Department of Transportation
Jens Kotte	Ford
John Tintinalli	SAE International

3. Objectives of the project

3.1. General

As Automated Vehicle (AV) research and development intensifies and nears projected commercialization, various industry stakeholders have expressed an urgent need to establish a common language and understanding among industry stakeholders, particularly with regard to the latest technological developments around AV testing. In the current discussion on automated driving, specific terms such as “controlled environment” or “scenario” are frequently misrepresented or used in multiple contexts. Terms also differ among countries and even within them.

The urgency to harmonize AV testing language is great, as it is a necessary precursor to the development of any AV testing standards that should follow.

To meet this urgency, SAE and DIN propose to bring their constituent stakeholders to jointly develop a co-branded, bi-lingual (German/English), standard. This document will then be offered for international adoption and translation into other languages to facilitate communication among all stakeholders of the automated vehicles industry.

3.2. Planned scope

This bilingual (German/English) DIN SAE SPEC defines terms pertaining to simulation and other testing environments of these technologies. The DIN SAE SPEC serves as a tool for upcoming developmental steps and research activities, as well as a facilitator to improve communication between international partners.

The standard is supposed to provide a glossary and a common understanding of a complex, interdisciplinary field.

This document will not define terms regarding levels of automation, nor will it include terms and definitions covered by SAE J3018, nor will it define terms regarding vehicle parameters.

The scope of this DIN SAE SPEC is limited to terms not covered elsewhere.

This DIN SAE SPEC is directed towards researchers, developers, test track operators, testing facilities, and automobile suppliers- and manufacturers.

4. Work programme

4.1. General

The aim of the project is to develop a DIN SAE SPEC according to the PAS procedure (see www.din.de/go/din-spec-en). The DIN SAE SPEC shall be

consistent with published standards and shall not contradict any DIN Standard or SAE Standard.

The tentative starting date is **2018-09-14** (kick-off meeting). The project duration will be approximately four months.

The meetings to draw up this DIN SAE SPEC will be held in English (language of meetings, minutes, etc.). The DIN SAE SPEC will be prepared and published in English and German.

NOTE The projected cost (see 6.) covers one language version only. Please keep in mind that other language versions involve additional expenses which shall be agreed on separately. If another language version is desired, Beuth Verlag/DIN can provide a translation. Requests for translations are to be submitted after the DIN SPEC manuscript has been adopted for publication.

A draft for public commenting will not be published.

4.2 Work plan

A total of three meetings are planned over the course of five months.

The kick-off meeting has taken place on **2018-09-14** at FKA in Aachen.

The second meeting is scheduled for **2018-10-11** at DIN in Berlin.

The third meeting is scheduled for **2018-12-03 and -04** at SAE in New York City, USA.

At the kick-off meeting, the consortium for developing the DIN SAE SPEC was constituted, and further organizational issues and the subject of the work were agreed on.

In between physical meetings approximately eight web conferences will be organized by DIN, during which the content of the DIN SAE SPEC will be presented, discussed and adopted. The content of the DIN SAE SPEC can also be drawn up by individual workshop members or in working groups.

Dates of further meetings and/or web conferences are to be agreed on within the workshop in consultation with DIN.

5. Organization of the consortium (temporary body)

This project is governed by the rules of procedure for developing DIN SPEC PAS. All interested parties and workshop members are requested to inform themselves of these procedures by going to www.din.de/go/din-spec-en.

The consortium will be constituted during the course of the kick-off meeting. The kick-off meeting will not take place until the business plan has been

published and approved by DIN's Executive Board. The consortium shall comprise at least three members from different organizations. It is not necessary that these members come from different areas and represent different stakeholders. By approving this business plan, the interested parties declare their willingness to participate in the consortium and will be formally named as consortium members, with the associated rights and duties. Participants at the kick-off meeting who do not approve the business plan are not given the status of a consortium member and are thus excluded from further decisions made during the kick-off meeting and from any other decisions regarding the project.

If an organization (e.g. an association) sends a non-employee to the consortium, this person shall be authorized by the organization, who shall provide proof of this to DIN.

Each consortium member is entitled to vote and has one vote. If an organization sends several experts to the consortium, that organization has only one vote, regardless of the number of experts it sends. Transferring voting rights to other consortium members is not permitted. During voting procedures, decisions are passed by simple majority, not counting abstentions.

Generally, the consortium is closed once it is constituted. The current consortium members shall decide whether any additional members will be accepted or not.

During the kick-off meeting, the workshop members shall elect a consortium leader, who is responsible for content management and any decision-making and voting procedures. The leader is supported by the respective DIN Project Manager, whereby DIN will always remain neutral regarding the content of the DIN SPEC. Furthermore, the DIN Project Manager shall ensure that DIN's rules of procedure, rules of presentation, and the principles governing the publication of DIN SPEC have been observed. Should a consortium leader no longer be able to carry out his/her duties, the DIN Project Manager shall initiate the election of a new leader. The core task of the workshop leader is content management.

The DIN Project Manager is responsible for organizing and leading the kick-off meeting, in consultation with the initiator. Further project meetings and/or web conferences shall be organized by the DIN Project Manager in consultation with the consortium leader.

If workshop members cannot be present when the DIN SAE SPEC or its draft is adopted, an alternative means of including them in the voting procedure shall be used (e.g. in writing, electronically).

All consortium members who voted for the publication of the DIN SAE SPEC or its draft will be named as authors in the Foreword, including the organizations which they represent. All consortium members who voted

against the publication of the DIN SAE SPEC or its draft, or who have abstained, may not be named in the Foreword.

To allow the legal reproduction and distribution of results for the purposes of project work, the consortium members grant DIN rights of use on the basis of the copyright that will accrue to them for the results of their work on the DIN SPEC. The transfer of these utilization rights does not prevent the consortium members from using and further developing the knowledge, experience and findings they bring to the project.

Consortium members are requested to inform DIN of all patent rights known to them to be relevant to this DIN SAE SPEC project.

Subsequent changes to the planned scope or the resource planning of the business plan require a two-thirds majority of all members, as well as the approval of DIN and SAE.

6. Resource planning

Each consortium member shall bear the costs of participation in the project.

If the Chairman of DIN's Executive Board approves the project, the initiator of the project will then conclude a contract with DIN and Beuth Verlag.

The performance of this project will incur costs for DIN to a total of **€ 28.666** excluding VAT. Sharing the burden of these costs is a prerequisite for membership in the consortium.

By approving this business plan, consortium members declare their willingness to bear their share of the project costs, which is based on the number of consortium members.

Each member is to declare this willingness to take on his/her share of costs by individual agreement with the initiator.

This project may incur costs for the leader of the consortium who will share these costs by individual agreements with each member.

If the consortium is expanded later, the additional consortium members shall pay the initiator the same fee to cover costs as the original consortium members.

Any surplus arising from this shall be managed in trust by the initiator and shall be used for any additional project-related purposes (e.g. testing, marketing activities, etc.).

Should there still be a surplus once the project has been completed, this shall be divided equally among all workshop members. That is, costs for each individual member are going to decrease.

7. Related activities

The subject of the planned DIN SAE SPEC is not at present the subject of an existing standard. However, there are bodies, standards and/or other technical rules that deal with related subjects and thus need to be taken into account - and involved or incorporated, where necessary - during this project.

8. Contacts

- Consortium leader:

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- Project manager:

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- Project initiator:

fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen

Annex: Project schedule (preliminary)

DIN SPEC project	2018												2019		
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar				
Initiation															
1. Request and review (2017-07)															
2. Business plan drawn up															
3. Publication of business plan															
Workshop phase															
4. Kick-off meeting / consortium constituted															
5. DIN SPEC (PAS) drawn up															
6. DIN SPEC adopted by the consortium															
Publication															
7. Review and release by DIN															
8. Publication of DIN SPEC (PAS)															
Milestones															

- K** Kick off
- M** Project meetings
- W** Web conference
- A** Adoption of DIN SAE SPEC (PAS)