

Printed information

Participants will get supporting documents with information about RCAS and abstracts of all lectures at the registration desk.

Attendance fee and registration

Demonstration and workshop are meant to provide information and professional discussion about RCAS and the used technologies. No attendance fee will be charged. A registration is required until 3rd May 2010 using the fax form.

Project management

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Organisation

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Address of Event

Prüfcenter Wegberg-Wildenrath (PCW)
Friedrich-List-Allee 1
41844 Wegberg-Wildenrath

Fax response: +49 (531) 295-3402
Until May 3, 2010

Registration

Demonstration & Workshop
„RCAS –
Railway Collision Avoidance System“

name: _____

first name: _____

title: _____

company: _____

adress: _____

tel: _____

fax: _____

e-mail: _____

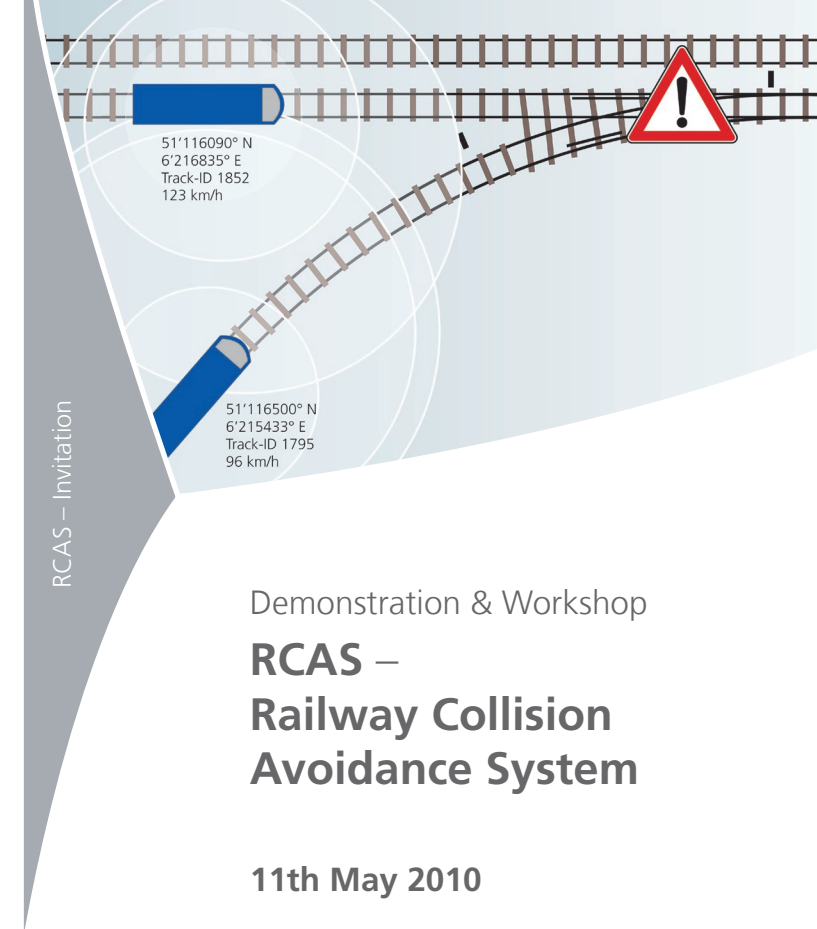
I register to the Demonstration & Workshop.

My preferred time slot for the demonstration drive:

- morning
- afternoon
- no preference

place, date: _____

signature: _____



RCAS – Invitation

Demonstration & Workshop
**RCAS –
Railway Collision
Avoidance System**

11th May 2010

Prüfcenter Wegberg-Wildenrath

INVITATION + PROGRAM



**Deutsches Zentrum
für Luft- und Raumfahrt e.V.**
in der Helmholtz-Gemeinschaft

Demonstration & Workshop

RCAS – Railway Collision Avoidance System

On May 11, 2010 the German Aerospace Center will present the railway collision avoidance system RCAS at a rail testcenter in Wegberg-Wildenrath near Dusseldorf with demonstrations and lectures.

RCAS is a collision avoidance system that is based on latest communications and sensor technologies and does not require components mounted along tracks. It is designed as a safety overlay system particularly suitable for tracks without technical safety systems, shunting yards and construction sites. The system evaluates the situation in each train based on information which is exchanged via direct train-to-train communications, such as position, speed, routings and size of the trains. At the event, participants can get an impression of the functionality of RCAS on board of a proof-of-concept demonstrator in a real train.

In the workshop part of the event the scientists will give information about the functionality of RCAS, technological enablers such as train-to-train communications, optical components and sensor-based map-matching as well as on operational, technological and certification relevant requirements.

Being a project of DLR's transportation research, RCAS involves the Institute of Communications and Navigation, the Institute of Transportation Systems and the Institute of Robotics and Mechatronics. With its fundamental research DLR works on novel solutions and thereby provides a basis for future realisations in cooperation with industrial partners.



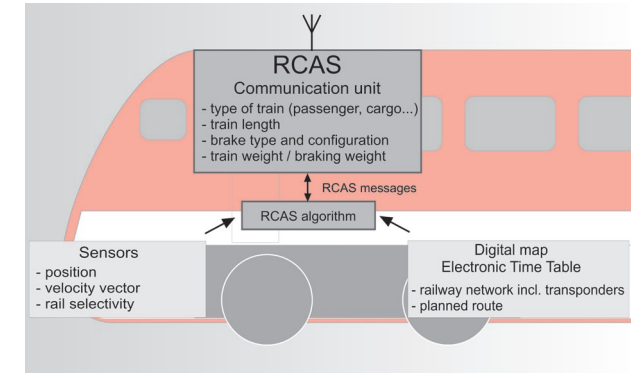
Program

- 09:00 Registration und allocation of time slot
Coffee
- 09:30 **Welcome**
General introduction of RCAS and its functionality, briefing for the procedure of the demonstration
Prof. Dr. Thomas Strang
DLR-Institute of Communications and Navigation

From 10 a.m. on, we provide the opportunity of half-hourly demonstration drives. The time slot will be announced at the registration desk.

Technologies used by RCAS

- 10:00 **Ad-hoc-communications in railway systems**
Cristina Rico Garcia
DLR-Institute of Communications and Navigation
- 10:30 **Opportunities and limits of satellite positioning**
Thoralf Noack
DLR-Institute of Communications and Navigation
- 11:00 **Optical technologies used by RCAS**
Dr. Anko Börner
DLR-Institute of Robotics and Mechatronics
- 11:30 **Sensor-based map-matching in rail transport**
Katrin Gerlach
DLR-Institute of Transportation Systems
- 12:00 Snack and exhibition of RCAS-models and posters
- in parallel **General introduction of RCAS and its functionality, briefing for the procedure of the demonstration (repetition)**
Dr. Andreas Lehner
DLR-Institute of Communications and Navigation



RCAS in the operational and technical context of railway systems

- 12:30 **Requirements for the implementation and application of RCAS**
Dr. Michael Meyer zu Hörste
DLR-Institute of Transportation Systems
- 13:00 **RCAS in the technological context of operations control**
Dr. Michael Meyer zu Hörste
DLR-Institute of Transportation Systems
- 13:30 **Functional safety validation for the implementation proof-of-safety**
Markus Talg
DLR-Institute of Transportation Systems
- 14:00 **Summary and discussion**
Prof. Dr. Thomas Strang
DLR-Institute of Communications and Navigation
- afterwards **Introduction of the test vehicle RailDrIVE® (on-site)**
Katrin Gerlach
DLR-Institute of Transportation Systems

Presentations will be given in German language based on English slides. English information will of course be given on request.