INFORMATION SOCIETY TECHNOLOGIES (IST) PROGRAMME

AIDE
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Authors:

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1	23/03/2007	draft
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Expected Participants

No	Partner	Name	Initials	Role
	VTEC	Johan Engström Emma Johannson	JE EJ	
	BMW	Klaus Bengler	KB	
	PSA	Estelle Chin	ES	
	INRETS	Annie Pauzie	AP	
	Bosch	Maria Rimini Döring Winfried König	MR	
	TNO	Wiel Janssen	WJ	
	Bast	Christhard Gelau	CG	
	OPEL	Harald Berninger	HB	
	DCX	Stefan Mattes	SM	
	ULEEDS	Natasha Merat	NM	

Additional People to which this agenda is distributed

No	Partner	Name	Initials	Role
	ISO TC22 SC13 Chair	C.Heinrich (DCX)	CH	ISO/CEN
	ISO TC204 Chair	Michael Noblett	MN	ISO
	ISO TC204 Vice Chair	Hironao Kawashima	HK	ISO
	ISO	W.Sicks	WS	ISO-Admin.
	VTEC	J. Arfwidsson		AIDE Coord.

Workshop Intention

Results of the AIDE project will be presented to ISO experts to discuss their relevance or usability for future standardization acitivities.

The duration of the workshop should not exceed one day and the workshop was linked for organizational reasons to the WG8 spring meeting.

Meeting location

UNI

Italian Organization for Standardization

Milan Headquarter

Via Sannio 2,

20137 Milano

Italy

Meeting location

Cf. attached file UNI Hotel 2007.pdf

Agenda

Date		
Time	**Topic**	**Presenter**
9.30-10:00	Welcome Introduction of AIDE-Project to Participants	**Christian Heinrich**
10:00-10:30	**Definitions and glossary** **The presentation will introduce the glossary that has been developed in AIDE. The starting point was the existing glossary developed in the EAST project which primarily included terms related to electronics architecture. In AIDE, a number of new definitions for key human factors-related terms have been added, largely based on existing ISO definitions.**	**Johan Engström**
10:30-11:00	**Results on Peripheral Detection Task** **This talk will outline the results of experiments conducted in Sub Project 2 of AIDE: Evaluation and Assessment Methodology. Results will discuss the suitability of the Peripheral Detection Task (PDT) for the safety assessment of IVIS and ADAS during driving.**	**Natascha Merat**
11:00-11:30	**Visual Demand Measurement (VDM) Tool** **The talk will introduce the VDM Tool, a software tool for quick and efficient analysis of automatically recorded eye movement data. The tool, which was partly developed in the AIDE project, supports data management, basic signal processing, data visualisation as well as computation of a range of different visual demand metrics (including the ISO 15007 metrics). The current, first version, of the tool is optimised for the Seeing Machines Facelab system. However, in principle the tool is compatible with most modern eye tracking devices.**	**Johan Engström**
11:30-12:00	**Driving Simulator metrics/measurements** In a series of driving simulator experiments several metrics were compared and evaluated regarding their sensitivity to measure distraction effects. The second presentation will present work on more detailed operational definitions of driving performance metrics developed within AIDE. In particular, the work has focused on (1) a modified version of standard deviation of lateral position which takes into account the effect of task duration and (2) a new metric for steering wheel reversal rate which showed enhanced sensitivity to existing versions.	**Klaus Bengler** **Johan Engström**
12:00-13:00	Lunch break	
13:00-13:30	**Subjective workload measurement** Work conducted was to recommend the most suitable workload subjective method to evaluate IVIS and ADAS, and AIDE system, among existing methods.3 experiments were achieved on road or in simulator to evaluate the sensitivity, the advantages, the drawbacks and the limits of three existing tools (questionnaires) dedicated to evaluate several components of workload of different natures: the PSA-TLX (PSA-Task Load index), the DALI questionnaire - (Driving Activity Load Index), the BMDMW (Behavioural Markers of Driver Mental Workload)	**Estelle Chin**
13:30-14:00	**Warnings integration** **Technological developments as well as experimental results from the AIDE project related to warnings**	**Johan Engström**

	integration will be presented. This includes results from short-/long term experiments demonstrating the importance of integration, as well as the information management architecture developed in the project to enable efficient HMI integration.	
14:00-14:30	**SP-3 Contents**	**Harald Berninger**
14:30-15:00	Occlusion – EOT Experimental research is presented which examines the so called Enhanced Occlusion Technique (EOT). Starting from the "conventional" occlusion technique (ISO 16673) the basic hypothesis was that the sensitivity of the occlusion metrics could be improved by the requirement of additionally performing an acoustic tracking task during an occlusion experiment. Our results confirm this expectation, i.e. EOT actually resulted in increased sensitivity of TTT, TSOT and the occlusion index R for IVIS tasks with differing levels of complexity.	**Christhard Gelau**
15:00-15:30	**I-TSA** **The increasing number and complexity of in-vehicle information systems (IVIS) and advanced driver assistance systems (ADAS) require an accurate and timely assessment of their impact on traffic safety already during the development process. The I-TSA evaluation tool, developed within the German research consortium INVENT, offers a standardized procedure for the assessment of traffic safety based on the driving error occurrence in up to 10 categories of parameters (e.g. the category "longitudinal control" includes the errors in speed, time headway and time to collision). It has been applied in several simulator and real traffic experiments with consistent results and high discrimination power. Its flexibility of application make it interesting for different environments and development stages.**	**Winfried König**
15:30-16:00	**Results on Lane Change Test** **Three studies on the LCT are presented. A study on "Origins of workload" was carried out to test whether a refined analysis on LCT would allow to distinguish cognitive distraction from visual distraction. A second study employed a modified version of the LCT to assess adaptive IVIS interfaces. Annother study investigated the effects of scenarios and simulators. The results are discussed in the light of other related work.**	**Stefan Mattes**
16.00 – 17:00	Summary and adjourn	**Klaus Bengler**

List of WG8 Participants

1. Akira Ohtani (Japan)
2. Christian Heinrich (Germany)
3. Dave Benedict (US)
4. Dave Hoffmeister (US)
5. Dave Weir (US)
6. Dean Chiang (US)
7. Gunnar Lanstad (Sweden)
8. Helene Tattegrain-Veste (France)
9. Hiroshi Uno (Japan)
10. John Shutko (US)
11. Kenji Marunaka (Japan)
12. Laurence Rognin (France)
13. Motoyuki Akamatsu (Japan)
14. Robert Friberg (Sweden)
15. Winfried König (Germany)