



HUMANIST Newsletter

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Source: ERT

Editorial



Dear Reader,

HUMANIST is a very promising project, because it proposes a new way of organising European scientific Excellence with interaction with Stakeholders. This innovative governance is a great change at European level but also at International level where the European example of structuring the supply side of research is well known. It is also well known that HUMANIST NoE is preparing the next generation of researchers and organising the Network of research Infrastructures.

The project is a place of scientific exchanges where Researchers can easily discuss with their peers and develop new ideas through new cooperation, collaborations or workshops.

The new way of performing research on Human Centred Design applied to road ITS in Europe will carry on through the setting-up of the next generation of researchers. A special issue of the newsletter is presenting the actions achieved for this purpose.

Jean-Pierre Médevielle

CEO of ERT,

Deputy General Director of INRETS.

Life of the Network

Main Actions of the 3rd Year

THE 3RD YEAR OF THE PROJECT IS FINISHING. IT IS NOW TIME TO HIGHLIGHT THE MAIN OUTCOMES AND EVENTS OF THE YEAR.

In the framework of the mobility programme, 9 Post-Doc and 9 PhDs are presently performing their research. Thank to the infrastructure sharing programme, 12 joint research projects are financed. These different research works will be the main scientific outcomes of HUMANIST.

The year has been also full of scientific events:

- ▶ A conference on European Guidelines for the Application of New Technologies for Driver Training and Education.
- ▶ A Conference on Drivers' Needs: Various Drivers - Similar Needs?
- ▶ And two joint workshops with Aide IP, one on Methodologies for Safety Evaluation, and one on Naturalistic driving studies.

The training activities were carried on with the successful organisation of a tandem-learning seminar for HUMANIST PhD students, and of a Seminar on Intelligent Transport Systems Design and Safety for ITS professional.

HUMANIST partners identified their scientific roadmap on Human Centred Design for ITS and contributed to the development of the FP7 Workprogramme on ICT for Mobility.

At last, the preparation of the future of HUMANIST was a major activity of the network during the year. Partners found an agreement on the kind of joint activities they want to perpetuate. ■

Writer: C. Brusque (INRETS)

Preparation of FP7

PROPOSITIONS OF THE NoE

The launching of the 7 FP is an important event for the scientific community. The NoE identified several research topics where investigations and data knowledge gathering would deserve to be supported in the coming decade.

HUMANIST topics have been widely disseminated as propositions through other relevant networks and among industrials. Members from the network and the coordination team participated actively to the process run by the DG INFSO to build up the content of the Work Programme ICT for Mobility call, which referred directly or indirectly to these identified topics. Nowadays, partners are working on setting up final proposals for submission in collaboration with external stakeholders. ■

Writer: A. Pauzié (INRETS)



Scientific Events

2nd Conference on

«Drivers' Needs: Various Drivers - Similar Needs?»

WORKSHOP IN TURKU, FINLAND: 28 - 29 SEPTEMBER 2006

In HUMANIST Task Force A the main goal is to identify user needs concerning various ITS. The Second Conference on "Driver Needs: Various Drivers - Similar Needs?" aimed at the goal, both in form of presentations as well as following discussions and workshop. The conference was organized by VTT and held in Turku, Finland on September 28-29, 2006.

The conference was a success and despite the timing close to ITS world congress, it gathered together over 30 HUMANIST partners and other interested bodies. Representatives of Finnish organizations: Taipale Telematics, Liikenneturva and Finnish Motor Insurers Centre also participated in the conference, presented their organizations interests in the HUMANIST field and co-sponsored the conference with VTT.

Altogether 19 papers were presented in the conference. Papers were divided into six sessions based on their specific topic in the area of driver needs: 1) Measuring driver behaviour and needs, 2) Driver characteristics; age and gender, 3) Professional drivers, 4) Integration of information, 5) Special needs and 6) National characteristics.

The main findings of the conference are as follows:

- ▶ Needs and wants of individual drivers and users in general differ from those of society. There is a great challenge to bring these two viewpoints closer together.
- ▶ Drivers cannot be considered being one homogenous group represented by an "average" driver. They vary for instance by age, gender, country of origin and driving experience. There is also variation between needs and wants of individual driver based on e.g. traffic and weather situation, his or her motivation for the trip, alertness and also emotional state.

▶ Based on recent findings, driving is still the safest mode for elderly people. Additionally, when taking into account the low-mileage bias in statistics, the elderly cannot be simply said to be more risky than other driver groups. Therefore, to enhance the mobility of elderly people their needs and requirements should be taken as one of the main focuses in the development of ITS.

▶ Enhancing drivers' knowledge of the opportunities and of the limitations of new technology might also contribute positively to traffic safety. ITS could also be used to educate individual drivers to understand their own driving style and the risks they are taking. A new viewpoint is also to give not only negative feedback but also rewarding drivers when they are driving safely.

▶ ITS are not only technology inside the vehicles but also implemented in the roadside. In addition, the availability of pre-trip information has been improved due to better data of e.g. traffic situations. User interface and information ergonomics both play a crucial role in driver-technology-interaction and therefore in the driver's ability to perform safely his primary task, driving. ■

Writers: M. Penttinen, V. Anttila, H. Sandberg (VTT)



Source: VTT

Active listening and demonstration, Turku, Sept. 2006.

HUMANIST/AIDE: «Naturalistic Driving Studies»

WORKSHOP IN MUNICH, GERMANY: 13 SEPTEMBER 2006



Source: DLR

Two lanes, higher velocities, higher traffic density.

On September 13, 2006 a joint HUMANIST/AIDE workshop on "Naturalistic Driving Studies" was carried out at BMW premises (FIZ) in Munich/Germany. This event was motivated by the fact that there are meanwhile several studies analysing driving behaviour in a naturalistic context. These studies follow an observational (non-experimental) approach and try to investigate driving behaviour on a descriptive level, in order to specify driver needs from observations and/or describe the impact of certain measures or systems on observed driving behaviour.

However, as by definition these studies do not follow an experimental approach there are concerns about their validity which are arising from numerous alternative explanations for the results produced. This means that some minimum methodological requirements need to be defined in order to ensure valid results from these kind of time consuming large-scale studies. This joint HUMANIST/AIDE workshop was a pilot step towards this goal.

The key questions underlying the five presentations and subsequent discussions were targeted at the rules to be followed when planning Naturalistic Driving (ND) studies, in order to reduce the financial and organisational efforts of such studies, produce interpretable sets of data, analyse existing data, strengthen the possible conclusions to be drawn.

The key note lecture was given by Jim Sayer (UMTRI, U.S.A.) who can be considered as an expert with tremendous practical experiences with ND studies. He gave a comprehensive review of research projects performed by his institute in the area of field operational tests (6 projects during the last 12 years). It became clear that the UMTRI ND-data archive is a product of both Engineering Research Domains and Human Factors research. Results on the effects of secondary tasks on driving performance can therefore be considered as a product of specific way of analysing the available data on naturalistic driving performance guided by a set of research questions. Jim Sayer's presentation



Scientific Events

ended with several conclusions on the conditions under which drivers decide to perform secondary task activities while driving (when driving skills are least needed) while leaving open the methodological issue of exposure.

The discussion following the five presentations (full versions available on the HUMANIST website) focused on the following three general issues:

- ▶ understanding of the utility of ND studies compared with other methodological approaches
- ▶ interpretation of results
- ▶ exchange between data analysis approaches

Writers: C. Gelau (BAST), M. Baumann (CUT)

As a result of the discussion it was concluded that ND studies can be used to generate hypotheses and also to test hypotheses but if data are used to test hypotheses it has to be considered that these were gathered under completely uncontrolled conditions. However, in most cases experiments are the more suitable approach to test hypotheses. It was further concluded that an interesting advantage of ND in comparison to experiments lies in the fact that the relevant variables are on a continuum and not discrete treatments and that another advantage of ND-studies lies in the fact that they describe individual

behaviour, i.e. they provide information about intra-individual and inter-individual variance.

Finally it was pointed out that all descriptive statistics are only usable within the limits of the sensors being used and a video protocol is necessary as confirmation of physical constellations and in depth-understanding of context related driver behaviour. The potentials of data-mining tools need to be further investigated and a detailed documentation of data and (pre-) processing procedures is essential. ■



Source: UMTRI

Road departure FOT Data

Dissemination Activities

HUMANIST was there...



▶ TRA Conference

Gothenburg

The Transport Research Arena Europe 2006 (TRA) took place in Gothenburg, Sweden on 12 - 15 June 2006.

At the requirement of the organizing committee, the HUMANIST NoE has been presented by Annie Pauzié (INRETS) at a press briefing on the SAFETY DAY, 13 June, at 13h30. The presentation focused on HUMANIST's main research activities on road safety, in addition to objective and principle of research networking at the European level.

Furthermore, a paper untitled "Human Centred Design for In-Vehicle Information Systems and Advanced Driver Assistance Systems functions", Annie Pauzié, INRETS, has been presented at the "Human Machine Interface" session the 14 June.



▶ ITS Congress

London

The 13th World Congress on Intelligent Transport Systems and Services has been hold on 8-12 October 2006, in London, United Kingdom. In this framework, a Strategic Session has been organised by Wolfgang Höfs, Project Officer EC/DG InfSo on "HMI for safer, smarter and cleaner vehicles - new challenges ahead". Vehicles on our roads are fitted with more and more Advanced Driver Assistance Systems (ADAS), Infotainment

equipment and other electronic tools, which make driving safer, smarter and cleaner. Even nomadic devices such as PDAs and cellular phones are brought into cars temporarily and are operated by their drivers whilst driving. This situation makes the design of appropriate interaction between users and systems extraordinarily challenging. Research projects from the 6th EU Framework Programme are working on solutions for these challenges. In this area, the European Statement on Principles for Human Machine Interfaces has recently been revised. Main activities of the HUMANIST Task Force on "Transfer of Knowledge" have been presented in this session under the title "Networking research towards future HMI solutions".



▶ IST Event

Helsinki

In the framework of the IST Conference 2006 hold in Helsinki, Finland on 21 - 23 November 2006, the EC DG InfSo organised several Networking Sessions in parallel with the Plenary Sessions and the Exhibition. These Networking Sessions aimed at providing an open forum for exchanging views and ideas on how to

address challenges for future research in the area of IST and a meeting place for communities that possibly never worked together before. In this framework, HUMANIST & ETNITE co-organised a session "Education, Training and Human centered Design for Intelligent Transport Services", Loïc Courtot, ERT, Annie Pauzié, INRETS, Cesare Raviglione & Monica Schettino, ERTICO. Presentations covered the issues of ITS that creates a new opportunity for the driving task, with perspective of improvement in terms of road safety, but which deserves specific care to the design of informative and assistive functions. Indeed, acceptability, behavioral adaptation and safe use from the heterogeneous drivers population have to be ensured, to avoid creating new critical contexts, and opposite expected results. Interactive debates has been conducted on design, development and operation of ITS, design guidelines related to road safety issues, and new vocational skills by available training and universities programmes. ■

Writer: A. Pauzié (INRETS)

Training Activities

Relationship with ETNITE on Training Issues

11 OCTOBER 2006, JOINT SESSION ON THE ITS CONFERENCE IN LONDON.

One main activity of HUMANIST as any other NoE is to develop training activities. Other types of Network are also dealing with such topic.

For instance, ETNITE aims at improving the scope and quality of ITS training and education in Europe. The ETNITE project leans on the EDUNET network which is a self-sustaining Pan European organisation created in May 2004 and which gathers together eight universities with Ertico-ITS Europe. The main objective of EDUNET network is to promote co-operative efforts at European level to create new teaching material and organise courses, to encourage the sharing of resources and exchange of information, as well as to undertake other initiatives to

raise the general awareness of ITS.

As HUMANIST and ETNITE/EDUNET are both Networks that are dealing with training and ITS, the relationships between both Networks were quite obvious. The discussion between both Networks is very fruitful as each Network can bring its own background. HUMANIST is having a lot of experience of training for young researchers and training for professionals and ETNITE/EDUNET has developed a good knowledge of Stakeholders wants and needs through workshops. The objective in the future is to enhance the interactions and that each Network could benefit of the other Networks experience. ■

Writer: L. Courtot (ERT)

Steps Towards a European Master

EUROPEAN MASTER COURSE ON HUMAN FACTORS AND NEW TECHNOLOGIES IN TRANSPORT

The European Master course on Human Factors and new Technologies in Transport proposed in the frame of HUMANIST NoE will offer a unique programme in European higher education to future researchers working or applying to work in the transport field. This course aims at extending and promoting the knowledge on Human Factors and Ergonomics produced within the HUMANIST consortium and should contribute to lead the decision making for the design and the implementation of ITS and specific regulations aiming at a higher performance and, consequently, endorsing safety.

A set of universities and research institutes agreed to set up this course and share responsibilities in lectures and direction of students for their master thesis. So far, the Portuguese Instituto Superior de Educação e Ciências (ISEC) and the French University of Lyon 2 (in cooperation with INRETS) have submitted this project to their ministry for validation and expect a starting in September 2007. In the next future, it is expected that other university partners will be involved in setting up this course. ■

Writers: A. Simoes (ISEC), A. Fort (INRETS)

Agenda of ITS Events

June - December 2007

AALBORG - DENMARK

► 18-20 June 2007

6th European Congress and Exhibition on Intelligent Transport Systems and Services.

For further information:

<http://www.itsineurope.com>

LYON - FRANCE

► 18-21 June 2007

20th Enhanced Safety of Vehicles Conference Innovations for Safety: Opportunities and Challenges.

For further information:

<http://www.esv.nhtsa.dot.gov>

BEIJING - CHINA

► 9-13 October 2007

14th World Congress on ITS.

Network Events

March 2007 - April 2008

INTERNAL MEETINGS

► 14-15 March 2007, Bron, France.

Executive and Assembly Meeting, Task Forces meetings.

WORKSHOPS AND CONFERENCES

► September 2007, Vienna, Austria
TFC Workshop on Interest and Use of joint-Cognitive Models for Human Centred Design.

► April 2008, Lyon, France
HUMANIST Conference on Human Centred Design for ITS.

TRAINING EVENTS

► 21-22 June 2007, Bron, France.

HUMANIST Tutorial on Safety and Design of New Transport Technologies.

Special issue

In the framework of the eSafety initiative, the DG InfSo announced the publication on the 6 February 2007, in all official EU languages, of the Commission Recommendation of 22 December 2006 on safe and efficient in-vehicle information and communication systems: Update of the European Statement of Principles on human machine interface.

TRL, BAST and INRETS, partners from HUMANIST and co-chairmen to the Working Group HMI, participated actively in cooperation with industrials to set up this document. A special issue of the next HUMANIST Newsletter will cover this event.



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