

NEARCTIS: Objectives and partners

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NEARCTIS:

Network of

Excellence:

Advanced

Road

Cooperative

Traffic management for the

Information

Society

Context

- Main issues faced by road traffic management:
 - Safety
 - Environmental concerns
 - Energy consumption
 - Congestion as a limitation to mobility
- A new opportunity to solve those issues:
 - Integration of cooperative systems into traffic management

Opportunity

- The European community wants to generalize the positive results obtained with some of the Networks of Excellence (e.g., HUMANIST)
 - A subject socially useful for the European countries
 - A set of research teams where each of them is near the critical size
 - An open academic question, and especially to an interdisciplinary approach

Objectives of NEARCTIS (1/2)

- Gather most of the European academic community working on road traffic management
 - Traffic modeling,
 - Traffic control,
 - Communication and positioning technologies
- Build a virtual research institute and inside it
 - Integrated research program
 - Common shared resources
 - Policy and structure for results and methods dissemination
 - Integrated training capabilities

Objectives of NEARCTIS (2/2)

- Ensure a strong link between
 - The teams involved in the network and **the academic community (in Europe and overseas)**
 - The teams involved in the network and **the stakeholders of the traffic system**
 - In a virtual research institute
 - Integrated research program
 - Common shared resources
 - Integrated training capabilities

Joint Program of Activities (1/3)

- Two structures:
 - Traffic management and strategies
 - Types of research fields

Joint Program of Activities (2/3)

- Types of research fields
 - Modeling
 - Traffic flow , Assignment,
 - Environmental and Energy impacts
 - Individual behavior VS Flow modeling
 - Optimization and control
 - Communication
 - Positioning and tracking
 - Geographic information
 - Vehicule/infrastructure and Vehicle/Vehcicle communication
 - Deployment and implementation issues
 - System architecture
 - Interoperability
 - Uncertainty and robustness
 - Evaluation methods
 - Technical, Economical, Environmental, Safety issues

Joint Program of Activities (3/3)

- Traffic management and strategies
 - Global services
 - Information and control of cooperative systems
 - Door to door guidance
 - Fleet management
 - Shadow toll systems
 - Motorway corridors
 - Information and route guidance
 - Travel time information
 - Dense urban networks
 - Coordinated freeways/signal control
 - Freeway management
 - Managed lanes
 - Incident management
 - Shared multimodal/multi users networks

FIVE WORK PACKAGES

- WP1:
UCL **RESEARCH PROGRAMS:
DEFINITION AND COORDINATION**
Refers to the main disciplines required
(5 tasks)
- WP2:
TUC **CASE STUDIES:
IDENTIFICATION AND ASSESSMENT**
Refers to the main categories of travels / networks
(5 tasks)
- WP3:
Southampton **EDUCATION, TRAINING AND DISSEMINATION**
Refers to transversal activities towards students and
professionals
(5 tasks)
- WP4:
TUD **CAPITALISATION AND COMMON RESSOURCES**
(3 tasks)
- WP5:
INRETS **COORDINATION**
(3 tasks)

Partners

- ERT (Europe Recherche Transport), France
- INRETS (Institut National de REcherche sur les Transports et leur Sécurité), France
- DLR (Deutschen Zentrums für Luft- und Raumfahrt), Germany
- EPFL (Ecole Polytechnique Fédérale de Lausanne), Switzerland
- Imperial (Imperial College London), UK
- TUC (Technical University of Crete), Greece
- TU Delft (Technische Universiteit Delft), Netherlands
- UCL (University College London), UK
- U.Southampton (University of Southampton), UK

Associated Partners

- 3 types of partners are associated to NEARCTIS:
 - Academic partners
 - Industrial partners
 - Traffic operators
- 60 associated partners have already joined NEARCTIS
- Other associated partners will join NEARCTIS by the beginning of the project (next summer)
- The project is still open for other partners who would like to be associated to NEARCTIS

CONCLUSION

- NEARCTIS should start at the beginning of next summer
- Connections will have to be established with projects on similar fields
- New potential partners who would like to be associated to NEARCTIS should contact us