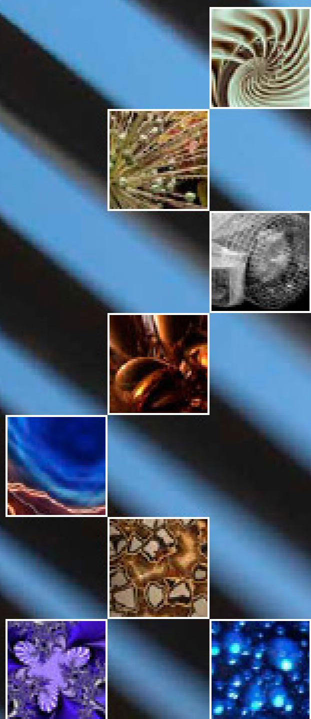
# Hellenic Institute of Transport
## annual report 2005

Centre for Research and Technology Hellas
CE.R.T.H.

**Hellenic Institute of Transport**
**H.I.T.**



January 2005

## A NOTE FROM OUR DIRECTOR

The year 2005 was a very important year for the Hellenic Institute of Transport, from many aspects. Firstly, its research work was increased sharply both in terms of the number of research projects and the annual turnover, which was 40% higher than in 2004.

The evaluation of the work done in the period 2000-2005, which took place in April 2005 and was conducted by a foreign external auditors committee assigned by GSRT, was very positive and supportive to HIT's status as a center of excellence and high quality scientific services provision in the field of Transport at Greek and European level.

The year 2005 there was also an evident increase in the cooperation of HIT with the Public Sector of Greece and especially the decision making and policy formation authorities in the field of Transport. Finally, the reorganization of HIT's services (project sectors) was implemented showing that they correspond better to the needs for integrated research programs, co-operations, networks of excellence, coordination of research objectives and more efficient operation of HIT itself.

I would like to thank all our research and administrative personnel and externals experts that contribute to the Institute's rapid development and its pan-European recognition as a center of excellence for transport research. I would also like to thank the central administration and the administrative personnel of CERTH (the National Center for Research and Technology of Greece in which HIT belongs) for the constant support and excellent cooperation, at all levels.

*Prof. G.A. Giannopoulos*
*Director Hellenic Institute of Transport*

*January 2006*

# TABLE OF CONTENTS





# PREFACE

Research in the field of Transport, as in many other scientific fields in Greece is in need of capable research organizations that will be able to play a key role in research activities using the needed research infrastructures. Research in the field of transport in Greece is entering a new era of development and maturity that is being characterized by:

- The establishment of high quality research infrastructure at national level.
- The financial subsidy of research programs by national organizations - mainly General Secretariat for Research and Technology and ministries as the Ministry of Transport and the Ministry of Environment, Public Works and Planning.
- The structure improvement of Greek research organizations from the aspect of project realization and monitoring.
- The substantial participation of Greek research organizations in the field of Transport at European Level and mainly due to the establishment of the European Research Area by the EU.

In 2005, HIT's main areas of activities were in the following areas:

- Implementation of Intelligent Transport Systems.
- Impact evaluation of the use of Transport Systems, especially in the field of security, environment and energy consumption.
- International cooperation.
- Strengthening its position as the National Center for research and document support to policy making.

During this past year of operation, HIT managed to validate its research infrastructures as it commenced the implementation of its electronic node, which consists a complex and pioneer system for information data and services provision in the field of Transport at Greek and European level.

An increase in HIT's sectors' action was also noted, which continued the implementation of previous projects and launched a noticeable number of new ones. It can be said that overall the year 2005 was a year of intense and substantial scientific activity at all levels.

annual report 2005

# SHORT PRESENTATION OF THE INSTITUTE

*Figure 1: H.I.T. premises.*

## Legal Status/Headquarters

The Hellenic Institute of Transport (HIT) is an Organization devoted to the promotion and execution of Transport research in Greece. It was established in March 2000, by Presidential Decree 77/2000 as part of the National Centre for Research and Technology Hellas (CERTH). It is a “private status” legal entity under the supervision of the General Secretariat for Research and Technology of the Ministry of Industry.

Its headquarters are in Thessaloniki, Greece. HIT is located in the Thessaloniki Technology Park 6th Charilaou-Thermi Avenue.

A HIT’s branch office also runs in Athens since 2004, in the area of Alimos.

## Mission Statement

Our fundamental mission is to provide the services of a centre of excellence in the field of Transport with highly specialized research expertise offered to government and other public and private organizations and bodies, and to provide support for the conduct of Transport research in Greece. It is also devoted to providing support to Ministries and other governmental bodies for the formulation of Transport policy.

The scope of services covers all areas of Transport and in particular the organization, operation, planning and development of infrastructure, standardization, economic analysis, management, vehicle technology and impact assessment of land, maritime, air, and multimodal transport services. HIT co-operates and interacts with similar organizations and Institutes in the EU and other countries, and represents Greece in relevant international fora.

*Figure 2: CERTH headquarters with HIT’s building in the middle.*

The specific areas of HIT’s priority activities, can be described as follows:

- Scientific and research support for transport policy formulation to Ministries and other Organizations involved in Transport Policy and Control in Greece.
- Specialized research in the field of Transport.
- Organization and operation of a documentation centre in the field of Transport.
- Development and maintenance of databases covering important areas of Transport Operation in Greece.
- Transport research evaluation and appraisal.
- Support of standardization work in the field of Transport and issuance of handbooks, rules and guidelines concerning the operation of the Transport system.
- Investigation of user requirements and adaptation of transport research results to industry.
- Technology transfer and dissemination of research results to the transport industry and the transport users.
- Facilitate exchange of personnel, especially young scientists, between relevant organizations and companies.
- Promotion of bilateral as well as multilateral co-operation between Greece and other countries in the field of Transport, with emphasis on the countries of South East Europe.
- Representation of Greece in International Organizations and Committees
- Organization of training and professional education Seminars and Programmes.
- Contribution to quality control in the field of Transport.
- Publication and dissemination activities (including Conferences and regular publications).

# ORGANIZATIONAL STRUCTURE

## Organization Chart

The current organogramme of the Institute, valid from mid 2004, is shown in Figure 3:

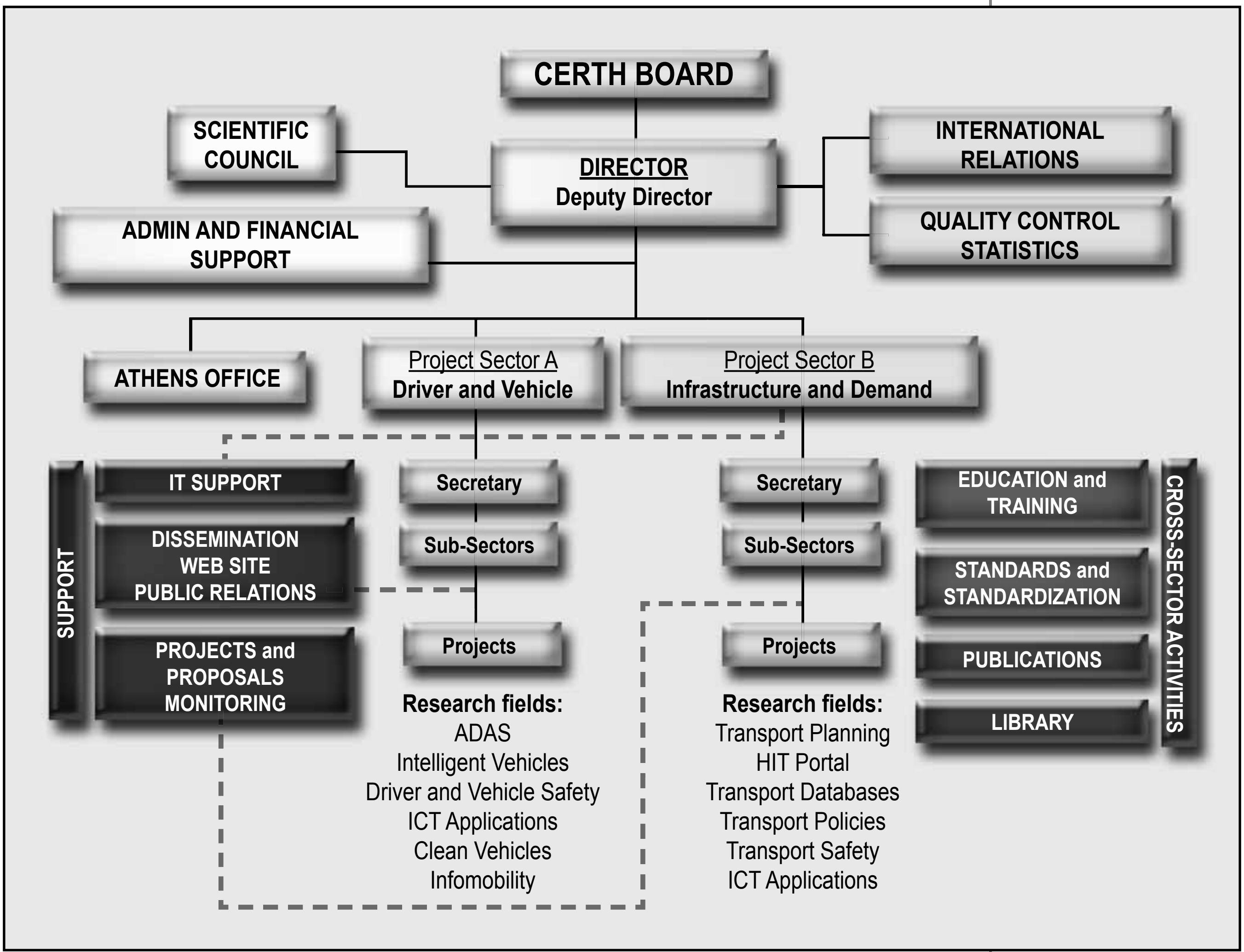



*Figure 3: HIT organization chart*

In 2005, the Scientific Council of HIT, consisted of: Prof. G. Giannopoulos, Prof. G Kanelaidis, Dr. E. Bekiaris, Dr. G. Aifadopoulou and Dr. Y. Tyrinopoulos.

The main feature of the Organigramme of HIT is its two (2) Operational Sectors:

- Sector A : ***Driver & Vehicle***, Dr. E. Bekiaris
- Sector B : ***Infrastructure & Demand***, Dr. G. Aifadopoulou

The notion of an "Operational Sector" is that of a large unit dedicated to a specific scientific field and equipped and staffed appropriately for this purpose. The size of an Operational Sector depends on the number of projects it has at any given point in time.

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## Human Resources 2005

HIT employed in 2005 a total of 29 scientific and administrative personnel, and had short term contracts with a total of 36 external experts.

### A. RESEARCHERS

- Prof. G. Giannopoulos, Civil Engineer - Transport Planner, Director.
- Prof. G. Kanellaidis, Civil Engineer - Transport Planner, Deputy Director.
- Dr E. Bekiaris, Mechanical Engineer - H.I.T. Principal Researcher A΄.
- Dr. G. Aifadopoulou, Civil Engineer - Transport Planner, H.I.T. Principal Researcher C΄.
- Dr. Y. Tyrinopoulos - Transport Planner, Researcher D΄.

### B. SCIENTIFIC AND ADMINISTRATIVE PERSONNEL (in alphabetical order)

- M. Morfoulaki, Dipl. Civil Engineer - Transport Planner.
- E. Portouli, Mechanical Engineer.
- A. Tsioutras, Civil Engineer, MSc Environmental - Transport Planner.
- E. Gaitanidou, Civil Engineer, MSc Transport.
- K. Kalogirou, Software Engineer - MSc in Digital Signal Processing at Communication Systems.
- A. Kortsari, Civil Engineer.
- M. Panou, Electronics Engineer & Computer Engineer.
- V. Papakostopoulos, Dipl. in Psychology - MSc in Ergonomics.
- M. Gemou, Mechanical Engineer.
- A. Mousadakou, Mathematician.
- F. Mikiki, MSc Civil Engineer - Transport Planner.
- P. Voudouris, Surveying Engineer, MSc GIS.
- E. Gagatsi, MSc Civil Engineer - Transport Planner.
- G. Haralampous, MSc Civil Engineer - Transport Planner.
- E. Chrisohoou, MSc Statistics & Operation Research - Mathematician.
- St. Nikolaou, Software Programmer.
- P. Liapis, Economics Science.
- P. Georgopoulos, MSc Mechanical Engineer.
- St. Dimopoulou, Administrative Responsible.
- V. Papadimitropoulou, Business Administration, Administrative Support.

### C. ADMINISTRATIVE PERSONNEL

- I. Koukouloudi, Executive Secretary.
- A. Kostouli, Administrative Secretary.
- A. Christodoulou, Administrative Secretary.
- K. Katsareli, Administrative Secretary.

# RESEARCH INFRASTRUCTURES 2005

## Premises

HIT is currently housed in the Thessaloniki Technology Park – 6th Km Charilaou - Thermi Road. The current housing is considered to be temporary and the necessary procedures (through the Centre for Research and Technology Hellas) for the construction of new buildings in an area of 20 acres that has been purchased next to the premises of the Technological Park, are under construction.

The new buildings will contain 1500 square meters of office space and 1000 square meters of underground laboratories.

*Figure 4: Virtual representation of CERTH's future premises with HIT's building in the front.*

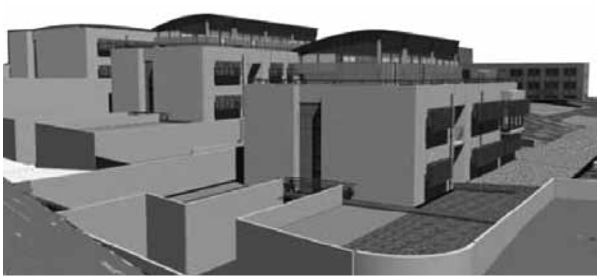


*Figure 5: Virtual representation of CERTH's future premises (the first being HIT's building).*

## Center of Excellence for Driving Behaviour

Within the framework of the operational programme COMPETITIVENESS of the Ministry of Development, Measure 3.3, Action line 3.3.1, Act 3.3.1.2 "Excellence in Research and Technological Organisations supervised by the Greek General Secretariat for Research and Development" a Centre of Excellence on driving behaviour issues was created within the Hellenic Institute of Transport. The Centre is equipped with a research vehicle able to record and analyse on-line driving behavioural parameters as well as able to simulate advanced driving assistance systems, a semi-dynamic driving simulator and a virtual reality system with software specific for transport applications.

### Research Vehicle for Driving Behaviour

The research vehicle is a Lancia Thesis 2.4 20V Emblema model. It is equipped as follows:

- Front obstacle detection radar, providing information about front obstacles (distance, relative speed).
- Lane recognition camera, providing information about vehicle position relevant to the lane.
- GPS.
- Eyelid sensor and software, providing information regarding eyelid movements, which are useful to estimate level of driver's hypovigilance.

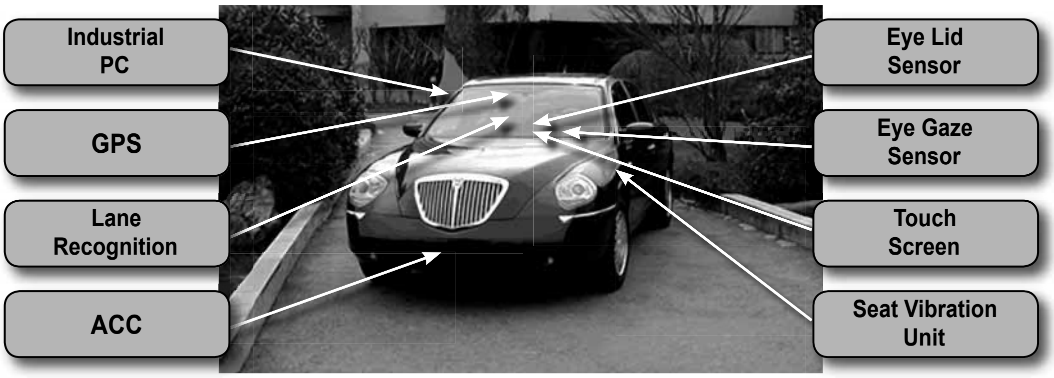



*Figure 6: Overview of the research vehicle for driving behaviour.*

- Eye gaze sensor and software, providing information on the focus of attention of the driver at each specific time moment.
- Electronic unit, which collects information from the vehicle electronic system and exports them to the central PC for processing. Such information include: acceleration pedal position, brake cylinder pressure, vehicle longitudinal speed and acceleration, yaw rate, steering wheel angle, lights status, wipers status, external temperature, etc.
- Main PC to record and store all information as well as on-line process it.
- Touch screen integrated in the vehicle dashboard driven by the main PC, so as to provide warnings to the driver.
- Special warning lights integrated in the central mirror and seat vibration unit, both driven by the main PC so as to provide adequate warnings to the driver.

Using the systems of this research vehicle, the functionalities of several advanced driving assistance systems can be simulated as well as their HMI. In this way, it is possible to perform ergonomy studies for such systems as well as studies on user acceptance. Furthermore, the driving behaviour can be analysed in detail and safety studies regarding vehicle and road interventions can be conducted.

*The touch screen.*

*The central mirror.*

*The eyelid sensor .*

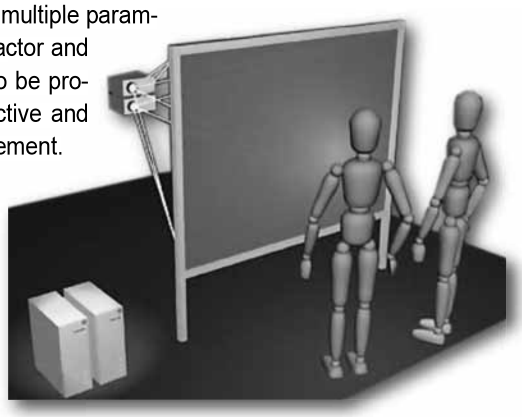
## Virtual Reality System

*Figure 7: General overview of the HIT virtual reality system.*

This is a single wall cave system and is used for the realization of structural, ergonomical and other safety and assessment analyses, which require the simulation of a series of various procedures, performed by the Hellenic Institute of Transport.

For the implementation of the above research scopes, the VR system has adapted a number of software tools, which give the potential for the visualization and manipulation of 2D and 3D CAD files in immersive environment, which includes cuts, disassemblies, measurements, rotations, lightning, etc. in real time. This application framework may prove to be useful for engineers during the phase of design and revision and moreover for the products marketing and exploitation, by means of their demonstration.

By means of the use of human models and their multiple parameterisations, there is also the potential for Human Factor and Risk Analyses, before the final physical product is to be produced and commercially exploited. It is a cost-effective and flexible tool aiming at the qualitative product advancement.



There are a lot of software tools that could be adapted in the HIT VR system aiming at the implementation of more complex and sophisticated analyses, whereas the potentials for the system advancement to a three, four, five or six walls system (VR cave) is considered as a foreseen and feasible perspective within near future.

## Driving Simulator

The HIT driving simulator is built around a Smart cabin equipped with sensors. The position of all control levers, windshield wipers, blinker, ignition key and light switch is transmitted to the driving computer. All operational elements, steering wheel, accelerator pedal, brake pedal, gearshift lever and handbrake lever, provide nature-true force reactions. The gearshift functions like in the real car either as automatic or “softtip” with incrementing and decrementing the six gears and with reverse gear.

The sight system includes five large-screens, each having a width of 2 m. There is on-screen projection with consumer video projectors with 2500 ANSI-lumen. The sound system generates original sounds according to the situation (starter, engine noise, horn, screeching of tires, drive wind, rain, etc.). The vibration device creates nature true vibrations of the car according to the revolvation of the simulated engine.

The simulator is equipped with specialised software which allows the development of special driving scenarios, according to the purposes of each study. There is surrounding traffic with at the most 30 road users with artificial intelligence, comprising passenger cars, trucks, pedestrians and cyclists. They observe the traffic rules, the distance from the foregoing vehicle and observe the speed limits, come to a stop before red lights and crossing traffic, accelerate and decelerate in a natural way and may be passed. For traffic education and training the behaviour patterns may be modified, so that aggressive, very slow, unskilled or drunken drivers may be simulated.

The software includes various courses (standard course, hill course, round course, roadnet, highway), sight- and roadsurface conditions (nice weather, fog, rain, snow, night) and various modes (i.e. driving under various alcohol consumption rates). There are also specific software modules related to elderly drivers behaviour assessment.

The simulator is adequate to study dangerous situations, which would not be safe to test on real traffic conditions, like for example overtaking, driving under the influence of alcohol, etc.

*General overview of the driving simulator.*

*Driver's field of view.*

## Research Vehicles

The basic vehicle research equipment of HIT is a number of clean vehicles that were acquired in the framework of various research projects. They are used to survey the impacts from the introduction and of clean vehicles in the urban traffic. These vehicles are described below.

### Electrically Assisted Bicycles

The electrically assisted bicycles are used so as to assist the rider in propulsion. Each bicycle weights approximately 38.5 kg and can carry up to 80 kg. The maximum speed is 20 km/h and the maximum driving range is 35-50 km.

*Figure 8: The electrically assisted bicycles.*

### Electrical Mopeds

The electrical moped EVT combines high technology with environment protection, easi-ness of use, smooth acceleration and portable charges. It includes a motor on the wheel for greater efficiency and reduced power consumption, a smart digital controller, overheating protection systems and two modes of operation (economy and reinforced), energy level LEDs and negligible noise.

*Figure 9: Electrical moped during charging.*

### Hybrid Vehicle Toyota Prius

The hybrid vehicle TOYOTA PRIUS is being used – in parallel to the electric two-wheelers – in surveys regarding technologies of clean vehicles as well as for drivers' pilot training.

A special recording device was installed on the vehicle, which stores data regarding fuel consumption and driving behaviour. This data can be sent via GPS to a center for monitoring and consulting purposes. The vehicle was also equipped with a wireless smart card reader. This smart card is used so as to activate the automatic operation of the entrance bar to a dedicated parking place.

*Figure 12: System recording driving and consumption data.*

*Figure 10: HIT's hybrid vehicle.*

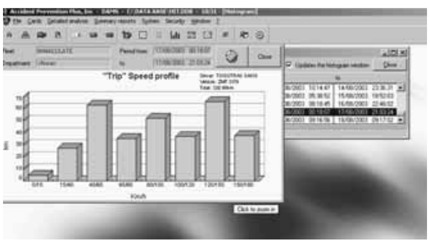



*Figure 11: Analysis of driving data.*

# RESEARCH ACTIVITY

## Research Projects

Table 1 shows in brief HIT's scientific activities in 2005. Its on-going projects for 2005 were 51, of which 20 started within 2005 while the rest 31 are projects were previously launched. At the same time 40 proposals were submitted in 2005, 9 of which were approved. Of the 51 active projects in 2005, 13 will expire within 2006.

**TABLE 1: Brief presentation of HIT's projects 2005**

| BRIEF PRESENTATION OF HIT'S PROJECTS 2005 | |
|---|---|
| ON-GOING PROJECTS 2005 | 51 |
| PROJECTS WITH STARTING DATE IN 2005 | 20 |
| PROJECTS WITH STARTING DATE IN 2001-2004 | 31 |
| PROJECTS PROPOSALS 2005 | 40 |
| APPROVED PROPOSALS 2005 | 9 |
| PROJECTS EXPIRING IN 2006 | 13 |

Table 2 shows in summary the details of the active projects in 2005, while the proposals submitted are presented in Annex B.

**TABLE 2: Active projects 2005**

| ACTIVE PROJECTS 2005 | | | | | | | |
|---|---|---|---|---|---|---|---|
| NO. | ACRONYM | FINANCIAL INITIATIVE & PROGRAM | FULL TITLE OF PROJECT | RESPONSIBLE FOR HIT | HIT BUDGET (EURO) | DUR. | ROLE OF HIT |
| 1. | IMMACULATE | LIFE ENV (LIFE02 ENV/GR/000359) | Improvement of urban environment quality of air and noise levels. | E. Bekiaris | 586.000 | 01/09/02 28/02/05 | COORDINATOR |
| 2. | AGILE | QoL (QLK6-CT2002-00118) | Aged People Integration, mobility, Safety and Quality of Life Enhancement Through Driving | E. Bekiaris | 432.538 | 01/04/02 31/03/05 | COORDINATOR |
| 3. | NOVEL | GSRT | Center of Excellence on Driver Behavior Issues in the Centre for Research and Technology Hellas | E. Bekiaris | 400.000 | 01/05/02 30/04/05 | LEAD PARTNER |
| 4. | INFORMED | LEONARDO (EL/02/B/F/PP-114010) | Integrated system for an advanced and life-long training methodology of dangerous goods drivers and trainers | E. Bekiaris | 188.961 | 30/12/02 29/12/05 | COORDINATOR |

| NO. | ACRONYM | FINANCIAL INITIATIVE & PROGRAM | FULL TITLE OF PROJECT | RESPONSIBLE FOR HIT | HIT BUDGET (EURO) | DUR. | ROLE OF HIT |
|---|---|---|---|---|---|---|---|
| 5. | IDEA | LEONARDO (B/02/B/F/PP-110.350) | An Innovative vocational training scheme for assessing the Driving ability of Elderly and disAbled | E. Bekiaris | 68.589,59 | 15/12/02 14/12/05 | PARTNER |
| 6. | BOB Campaign | DG TREN-04-ST-SO.37968 | "BOB"- Campaign in Greece | E. Bekiaris | 240.000 | 1/9/04 31/12/05 | PARTNER |
| 7. | ISLANDS | QoL (QLRT-2001-01637) | Integrated System for Long distance psychiatric Assistance and Non-conventional Distributed health Services | E. Bekiaris | 20.000 | 1/1/03 31/12/05 | ΥΠΕΡΓΟΛΑΒΙΑ |
| 8. | ADHIRITO | GSRT | Human Network for the Strong Promotion of Road Safety in Greece | E. Bekiaris | 70.000 | 10/5/03 10/5/05 | LEAD PARTNER |
| 9. | CREDIT | SOCRATES (110311-CP-1-2003-1-GR-GRUNDTVIG) | Valuing Knowledge and competencies acquired through experience and their accreditation for elderly workers | E. Bekiaris | 51115 | 1/10/03 1/10/05 | COORDINATOR |
| 10. | SENSATION | IST (IST-507231) | Advanced sensor development for attention, stress, vigilance & sleep/ wakefulness monitoring | E. Bekiaris | 1.395.744 | 1/1/04 31/12/07 | COORDINATOR |
| 11. | IM@GINE IT | IST (IST-508008) | Intelligent Mobility AGents, Advanced Positioning and Mapping Technologies, INtEgrated Interoperable MulTimodal location based services | E. Bekiaris | 560.711 | 1/1/04 30/4/06 | COORDINATOR |
| 12. | ASK-IT | IST (IST-2003-511298) | Ambient Intelligence System of Agents for Knowledge-based and Integrated Services for Mobility Impaired users | E. Bekiaris | 1.337.618,36 | 1/10/04 30/9/08 | TECHNICAL MANAGER |
| 13. | HYWAYS | DG TREN (DG TREN 502596) | The Development and Detailed Evaluation of a Harmonised, European Hydrogen Energy Roadmap" | E. Bekiaris | 116.800 | 1/4/04 31/3/07 | PARTNER |
| 14. | PREMIA | DG TREN (TREN/04/FP6EN/ s07.31083/503081) | R&D, demonstration and incentive programmes effectiveness to facilitate and secure market introduction of alternative motor fuels | E. Bekiaris | 198.800 | 1/5/04 31/4/07 | PARTNER |

| NO. | ACRONYM | FINANCIAL INITIATIVE & PROGRAM | FULL TITLE OF PROJECT | RESPONSIBLE FOR HIT | HIT BUDGET (EURO) | DUR. | ROLE OF HIT |
|---|---|---|---|---|---|---|---|
| 15. | AIDE | IST (IST-1-507674-IP) | Adaptive Integrated Driver-vehicle InterfacE | E. Bekiaris | 546.810 | 1/3/04 28/2/08 | PARTNER |
| 16. | PREVENT | IST (FP6-507075) | Preventive and Active Safety Applications | E. Bekiaris | 532.000 | 1/2/04 31/1/08 | PARTNER |
| 17. | INTUITION | IST (IST-NMP-1-507248-2) | Network of Excellence on VIrtual Reality aNd VirTUal Environments ApplIcaTIONs for Future Workspaces | E. Bekiaris | 216.500 | 1/9/04 31/8/08 | PARTNER |
| 18. | HUMANIST | IST (507420) | HUMAN centered design for Information Society Technologies | E. Bekiaris | 320.000 | 1/3/04 28/2/08 | PARTNER |
| 19. | APROSYS | SUST DEV- TRANSPORT (FP6-PLT-506503) | Integrated Project on Advanced Protection Systems | E. Bekiaris | 50.000 | 1/8/04 28/2/06 | SUBCONTRACTOR |
| 20. | UPTUN | G1RD-CT-2002-00766 | Low-cost durable innovative Upgrading methods for fire safety in existing tunnels | P. Papaioannou | 237.006 | 01/09/02 31/08/06 | PARTNER |
| 21. | IMONODE | INTERREG | Integration of cargo transport Modes and Nodes in the CADSES area | G. Giannopoulos | 1.200.000 | 1/12/02 31/10/05 | COORDINATOR |
| 22. | CITY PORTS, INTERREG IIIB CADSES | INTERREG IIIB | CITY PORTS | G. Giannopoulos | 401.334 | 1/7/01 30/06/04 | PARTNER |
| 23. | GILDANET. INTERREG IIIB CADSES | 2A031 | GILDANET INTERREG IIIB CADSES | G. Giannopoulos | 808.700 | 1/12/02 31/10/05 | PARTNER |
| 24. | INTELLECT | GSRT | INTELLECT | G. Giannopoulos | 34.840 | 1/11/03 30/4/06 | PARTNER |
| 25. | OSE–INFRA-STRUCTURE | OSE | Management and Maintenance of the Integrated Infrastructure Quality System of OSE for the years 2003-2005 | G. Giannopoulos | 190.000 | 21/4/03 30/04/06 | LEAD PARTNER |
| 26. | OSE – SERV-ICES | OSE | Management and Maintenance of the Three Years Duration Integrated Control System of the Passenger Transport of OSE | G. Giannopoulos | 199.000 | 04/03 04/06 | LEAD PARTNER |
| 27. | PREVENT | LEONARDO | Develop a training programme to improve work zone safety | G. Giannopoulos | 90.500 | 1/10/03 30/9/05 | LEAD PARTNER |

| NO. | ACRONYM | FINANCIAL INITIATIVE & PROGRAM | FULL TITLE OF PROJECT | RESPONSIBLE FOR HIT | HIT BUDGET (EURO) | DUR. | ROLE OF HIT |
|---|---|---|---|---|---|---|---|
| 28. | RESCUE | RCM | A Catastrophe Response and recovery transport and logistics decision support system | G. Aifadopoulou | 33.613,44 | 10/4/04 30/12/05 | SUBCONTRACTOR |
| 29. | ROSE 25 | Kuratorium | INVENTORY AND COMPILING OF A EUROPEAN GOOD PRACTICE GUIDE ON ROAD SAFETY EDUCATION TARGETED AT YOUNG PEOPLE | E. Bekiaris | 1.500 | 7/4/04 31/3/05 | SUBCONTRACTOR |
| 30. | EUR2EX | 6th FP NOE | European Rail Research network of Excellence | Ch. Pyrgidis | 20.300 | 1/1/04 31/12/07 | PARTNER |
| 31. | TRANSFORUM | 6th FP POLICIES-3.2 | Scientific forum on transport forecast validation and policy assessment | G. Giannopoulos | 76.660 | 15/12/04 14/2/07 | PARTNER |
| 32. | PREVENT | Ministry for the Environ-ment, Physical Planning & Public Works | Develop a Training Program to Improve Workzone Safety | G. Giannopoulos | 18.644 | 1/9/05 31/10/05 | SUBCONTRACTOR |
| 33. | RIPCORD | TREN-04-FP6TR-SO7.36406/506184 | Road infrastructure safety protection – Core- Research and Development for Road Safety in Europe / Integrating and Strengthening the European Research Area (2002-2006), Sustainable Surface Transport | E. Bekiaris | 142.250 | 1/1/05 31/12/07 | PARTNER |
| 34. | IN-SAFETY | TREN-04-FP6TR-SO7.38213/506716 | Infrastructure and Safety | E. Bekiaris | 443.285 | 1/2/05 31/1/08 | PARTNER |
| 35. | MISS | TST3-CT-2004-516235 | Monitor Integrated Safety System | Y. Tyrinopoulos | 140.525 | 1/1/05 31/12/06 | PARTNER |
| 36. | GRACE | TH/ASIA PRO ECO/03(101300) | Integrating Environmental Concepts in the Asian Maritime Transport Policy | Y. Tyrinopoulos | 160.019 | 7/6/05 6/6/07 | COORDINATOR |
| 37. | SASTH | SASTH | Integrated system for quality assessment of the OASTH passenger services | G. Aifadopoulou | 105.000 | 20/4/05 31/12/05 | SUBCONTRACTOR |
| 38. | Municipality of Trikala | Municipality of Trikala | Technical consultant for intelligent transport system design, implementation management and monitoring | G. Aifadopoulou | 51.941 | 14/7/05 13/7/06 | SUBCONTRACTOR |
| 39. | | Hellenic Ministry of Trans-port & Communications | Institutional upgrade of the driving training in Greece | G. Giannopoulos | 84.052 | 3/10/05 31/3/06 | SUBCONTRACTOR |

| NO. | ACRONYM | FINANCIAL INITIATIVE & PROGRAM | FULL TITLE OF PROJECT | RESPONSIBLE FOR HIT | HIT BUDGET (EURO) | DUR. | ROLE OF HIT |
|---|---|---|---|---|---|---|---|
| 40. | REORIENT | Institute of Transport Economics (TOI) | Implementing Change in the European Railway System | G. Aifadopoulou | 152.880 | 18/4/05 17/4/07 | SUBCONTRACTOR |
| 41. | KOMVOS | GSRT | Infrastructures in order to support the research in the Transport sector: Development of a PORTAL for transport data management and processing in HIT | G. Aifadopoulou | 1.275.039 | 1/10/05 31/10/07 | LEAD PARTNER |
| 42. | AKMON | GSRT | Integrated digital system for the provision of routing and distribution services from HIT | G. Giannopoulos | 355.350 | 1/10/05 30/9/07 | LEAD PARTNER |
| 43. | TRANS-AID | MARIE CURIE MTKD-CT-2004-517191 | Transfer of Knowledge in Transport Infrastructure Financing | Y. Tyrinopoulos | 39.531 | 26/4/05 25/4/08 | PARTNER |
| 44. | HILAS | IP (AIP4-CT-2005-516181) | Human Integration into the Lifecycle of Aviation Systems | E. Bekiaris | 126.901 | 1/6/05 31/5/09 | PARTNER |
| 45. | VIRTHUALIS | IP NMP2-CT-2005-515-831 | Virtual Reality and Human Factors Applications for Improving Safety | E. Bekiaris | 433.560 | 1/5/05 30/4/09 | PARTNER |
| 46. | | RCM | HIT's equipment upgrading | Y. Tyrinopoulos | 200.000 | 1/7/05 31/12/06 | LEAD PARTNER |
| 47. | ASIAMAR | AUTH | Assistance in Intermodal and Maritime Transport | Y. Tyrinopoulos | 6.295 | 1/4/05 30/11/05 | SUBCONTRACTOR |
| 48. | Siatista - Krystal-lopigi | | Socio-economic study for the construction of the vertical axis Siatista – Krystallopigi | G. Aifadopoulou | 45.000 | 1/5/05 31/7/05 | SUBCONTRACTOR |
| 49. | DANGEROUS AXIS | TREDIT | Dangerousness study of the National Road Network axis and sections hierarchy for the road safety level improvement studies | G. Giannopoulos | 33.613,45 | 1/12/05 31/3/06 | SUBCONTRACTOR |
| 50. | | SALONIKA PARK AE | Demand and economic evaluation study for two underground parking stations in Thessaloniki – Antheon Depot and Ippokratio Depot | G. Aifadopoulou | 9.000 | 15/11/05 28/2/06 | SUBCONTRACTOR |
| 51. | | ΕΕΟΠ | Promotion and vindication of road safety in Greece, in the context of informative and educational actions of CERTH/HIT | E. Bekiaris | 24.000 | 21/11/05 31/5/06 | |

## Publications by HIT's Scientific Personnel (2005)

### A. Books & Journals

1. **Giannopoulos, G.A.,** (2005), *"Implementation of a Data Communication System for the Adriatic - Ionian Sea Area",* Transition Review Studies, No.39, Volumme XII, Springer Wien New York, April 2005.
2. Stefani, O., Blach, R., Hoffmann, H., Sulzenbacher, H., **Bekiaris, E.,** Mueller-Spahn, F., Bullinger, A.H., *"Next generation virtual reality systems: future challenges",* In. Applied Technologies in Medicine and Neuroscience, Bullinger, A., Wiederhold, B., Meise, U., Mueller-Spahn, F. (eds.), Verlag Integrative Psychiatrie, Innsbruck, p. 1-12.
3. Bullinger, A.H., Stefani, O., Sulzenbacher, H., **Bekiaris, E.,** Mueller-Spahn, F., Mager, R., *"Death of the dinosaurs, Next generation immersive visualisation systems",* In. Applied Technologies in Medicine and Neuroscience, Bullinger, A., Wiederhold, B., Meise, U., Mueller-Spahn, F. (eds.), Verlag Integrative Psychiatrie, Innsbruck, p. 31-36.
4. Penzel, T., Becker, H.F., Lekka, I., **Bekiaris, E.,** *"New sensor development for the detection of sleepiness in the work and traffic environment and sleep laboratories",* In. Applied Technologies in Medicine and Neuroscience, Bullinger, A., Wiederhold, B., Meise, U., Mueller-Spahn, F. (eds.), Verlag Integrative Psychiatrie, Innsbruck, p. 104-110.
5. Amditis, A., Lenztiou, Z., **Bekiaris, E.,** Cabrera, M.F., Bullinger, A.H., *"The overall architecture of the ISLANDS system: Towards a modular non-cpnventional telepsychiatry system",* In. Applied Technologies in Medicine and Neuroscience, Bullinger, A., Wiederhold, B., Meise, U., Mueller-Spahn, F. (eds.), Verlag Integrative Psychiatrie, Innsbruck, p. 141-152.
6. Nalmpantis, D., Naniopoulos, A., **Bekiaris, E., Panou, M.,** Gregersen, N.P., Falkmer, T., Baten, G., Dols, J., *"TRAINER" project: pilot applications for the evaluation of new driver training technologies",* In: Traffic and Transport Psychology, Geoffrey Underwood (ed.), Oxford: Elsevier, 2005, ISBN: 0-08-044379-6, p.141-156.
7. Bullinger , Alex H., Hemmeter, Ullrich M., Stefani, Oliver, Angehrn, Isabelle, Mueller-Spahn, Franz, **Bekiaris, E.,** Wiederhold, Brenda K., Sulzenbacher, Hubert and Mager, Ralph: *"Stimulation of Cortisol During Mental Task Performance in a Provocative Virtual Environment",* In Applied Psychophysiology and Biofeedback, Springer Science + Business Media B.V., Formerly Kluwer Academic Publishers B.V. , ISSN: 1090-0586 (Paper) 1573-3270 (Online) , DOI: 10.1007/s10484-005-6378-y, Volume 30, Number 3, September 2005, p. 205 - 216
8. **Bekiaris, E.,** Stevens, A., *"Common risk assessment methodology for advanced driver assistance systems",* Transport Reviews, Vol. 25, No. 3, p. 283-292, May 2005.
9. Bullinger, A.H., Estoppey, K., **Bekiaris, E.,** Spillmann, M., Sulzbacher, H., Mueller-Spahn, F., Mager, R., *"Untersuchung zur Benutzer-Akzeptanz einer neuropsychologischen Testbatterie zur Beurteilung der Fahrtauglichkeit von aeltern Fahrzeuglenkern",* Neuropsychiatrie, Band. 19, Nr. 1/2005, p. 25-33.
10. Boilé M., Theofanis S., **Mikiki F.,** (2005) *"Oil spills in maritime transport: call for actions",* Journal of the Transportation Research Board, *"Inland Waterways, Ports and Channels and the Marine Environment",* No1909, Washington D.C.

### B. Publications in Conferences

1. **G. Aifadopoulou,** *"Facilitating Trade along panEuropean corridors n° X, V and Adriatic Ionion via planning of freight and logistics centres: the IMONODE project recommendations"*, European Conference of Ministers of Transport - Joint OECD/ECMT Transport Research Center, May 2005.
2. **G. Aifadopoulou,** V. Mizaras, E. Bekiaris, A. Manos, N. Spanoudakis, *"Service network enabler of multi-modal transport information & booking services: A Greek case study",* 5th European Congress and Exhibition on ITS, Hannover, June 2005.
3. **Mikiki F., Morfoulaki M.,** (2005) *"Work zone safety: The PREVENT training programme",* 3rd Road Safety Congress, Patras, October.
4. Boilé M., Theofanis S., **Mikiki F.,** (2005) *"Oil spills in maritime transport: call for actions",* 84th Annual Transportation Research Board Meeting, Washington DC.

5. **Mikiki F.,** Ricci S., Braghuin S., Bruni S., Vadillo E., (2005) *"European Railway Research Network of Excellence (EURNEX) : Meeting the European education and training needs in the railway sector"*. 2nd international conference on railway transports d evelopment, Athens, December.
6. Lu, M., **Bekiaris, E.,** Wevers, K., *"Improvement of the forgiving and self-explanatory nature of roads",* 12th World Congress on ITS, San Francisco, 2005
7. Lu, M., Wevers, K., **Bekiaris, E.,** *"Technical feasibility of safety related driving assistance systems",* 18th ICTCT Workshop, Helsinki, 27-28 October 2005
8. Polychronopoulos, A., **Gemou, M.,** Danielson, L., Amditis, A., **Bekiaris, E.,** *"Design of a friendly HMI combining multiple sources of warnings for the Lateral Safe applications",* Proc. of the 24th Annual Conference on Human Decision Making and Manual Control, EAM 2005 (on CD), Athens, 17-19 October 2005, ISBN No: 960-254-657-3.
9. **Bekiaris, E., Panou, M., Kalogirou, K.,** *"In-Vehicle configuration of IM@GINEIT",* Proc. of the 24th Annual Conference on Human Decision Making and Manual Control, EAM 2005 (on CD), Athens, 17-19 October 2005, ISBN No: 960-254-657-3.
10. **Bekiaris, E., Papakostopoulos, V., Gemou, M., Gaitanidou, L.,** *"Experimental Study on Different HMI Design Options for Lateral Safe Applications",* Proc. of the 24th Annual Conference on Human Decision Making and Manual Control, EAM 2005 (on CD), Athens, 17-19 October 2005, ISBN No: 960-254-657-3.
11. **Gaitanidou, L., Panou, M., Bekiaris, E., Aifadopoulou, G.,** *"Development of assessment tools and best practices for safe road infrastructure development and management – the RIPCORD-ISEREST EU project",* 3rd National Conference on Road Safety, 10-11 October 2005.
12. **Bekiaris, E., Gaitanidou, L., Tsioutras, A.,** *"Telematic applications targeting on the achievement of a forgiving and self-explanatory road environment - Modeling road safety conditions - The IN-SAFETY project",* 3rd National Conference on Road Safety, Patras, 10-11 October 2005.
13. **Bekiaris, E., Panou, M.,** *"The fitness to driver (based on the research projects AGILE and IDEA)",* 1st FERSI Scientific Road Safety Research Conference, 7-8 September 2005, BASt, Bergisch Gladbach, Germany
14. **Bekiaris, E., Gaitanidou, L.,** *"The use of telematics in enhancing infrastructure safety – the IN-SAFETY approach",* 1st FERSI Scientific Road Safety Research Conference, 7-8 September 2005, BASt, Bergisch Gladbach, Germany
15. **Bekiaris, E., Gemou, M., Panou, M.,** *"Towards an integrated in-vehicle HMI for ADAS and its application for lateral collision warnings",* 1st FERSI Scientific Road Safety Research Conference, 7-8 September 2005, BASt, Bergisch Gladbach, Germany
16. **Bekiaris, E., Gaitanidou, L., Kalogirou, K.,** *"IN-SAFETY project: Towards road fatalities reduction through the enhancement of forgiving and self-explanatory roads",* 1st FERSI Scientific Road Safety Conference, 9-10 September 2005, Cologne, Germany.
17. **Bekiaris, E., Kalogirou, K., Panou, M.,** Amditis, A., *"The use of Intelligent Agents for provision of driver information in a self-explanatory and personalized way",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.
18. **Panou, M., Bekiaris, E.,** *"HCI in driver training, from novice to elderly drivers",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.
19. Hagenmayer, L., **Bekiaris, E.,** *"Towards guidelines for the development of HCI elements for drowasy operators in transportation and process control",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.
20. **Bekiaris, E., Panou, M.,** Widlroither, H., Bauer, W., *"HCI for collaborative systems and towards a self explanatory environment",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.
21. Hagenmayer, L, Maberger, C., **Bekiaris, E., Nikolaou, S.,** *"Preliminary guidelines for the personalisation of the HMI of Hypovigilance-Management Systems",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.
22. **Nikolaou, S., Gaitanidou, L., Bekiaris, E.,** *"The need of interactive training tools in ITS use training: Collaborative work within HUMANIST Network of Excellence",* HCI International 2005, 22-27 July 2005, Las Vegas, Nevada.

23. Tattegrain Veste H., Bellet T., Boverie S., Kutila M., Viitanen J., **Bekiaris E., Panou M.,** Engström, J., Agnvall, A., *"Development of a Driver Situation Assessment Module in the AIDE Project",* IFAC World Congress, 4-8 July 2005, Prague.
24. **Panou, M.,** Cacciabue, N., Cacciabue, P. C., **Bekiaris, E.,** *"From Driver Modelling to Human Machine interface Personalisation",* IFAC World Congress, 4-8 July 2005, Prague.
25. **Bekiaris, E., Gemou, M.,** Zacharis, S., *"IST tools development for the advanced training of the dangerous goods drivers and trainers",* ITS Europe, 1-3 July 2005, Hannover Germany.
26. **Panou, M., Bekiaris, E., Gaitanidou, L.,** *"A holistic approach on in-car HMI elements to formulate a strategy for integrated and personalised ADAS/IVIS HMI",* ITS Europe, 1-3 July 2005, Hannover Germany.
27. **Bekiaris, E., Nikolaou, S.,** Peters, B., Anund, A., *"Driver fatigue monitoring, detection & warning: AWAKE project final results",* ITS Europe, 1-3 July 2005, Hannover Germany.
28. Penzel, T., Becker, H.F., Lekka, I., **Bekiaris, E.,** *"New sensor development for the detection of sleepiness in the work and traffic environment and sleep laboratories",* Proc. of the 1st International Conference on Applied Technologies in Medicine and Neuroscience (ATMN), Basel, June 6-10, 2005, p.103-110.
29. P. Papaioannou, A. Deloukas, **Dr M. Morfoulaki,** D. Zissopoulou, Maria Peleka *"Thessaloniki Metro: Traffic and Operation aspects - Socioeconomic Impacts",* Conference for the Development of Rail Transport, Athens, December 2005.
30. **Haralampous, G.,** *"The Contribution of the Sea Motorways to the European Transport Policy",* European Conference of Transport Institutes, Young Researchers Seminar 2005, May 2005

## Participation in the Postgraduate Studies Program «Planning, Organization and Management of Transport Systems»

HIT is one of the three co-organising entities of the Postgraduate Course: “Planning, Organization and Management of Transport Systems”, which is jointly organized by HIT and the Civil and Rural & Surveying Engineering Departments of the Aristotle University of Thessaloniki.

For more information please visit: **http://hermes.civil.auth.gr/pgtransport**

## Organization of Training Seminars

**Results of the 1st International Study week on “Advanced Transport Modeling and Tools”**

The 1st International study week on “Advanced Transport Modeling and Tools” has been completed with great success. The seminar was organized by the Hellenic Institute of Transport of the Centre of Research and Technology Hellas at the SANI Resort in Chalkidiki on 5-9- September 2005.

The objective of this International study week was to comprehensively cover the issues of advanced demand and supply modeling, which are increasingly used in order to perform traffic management and planning tasks as well as supply and demand management techniques.

The program of the Seminar was divided in three parts:

a) The first part of the seminar undertook an in-depth study of discrete choice models and their applications and provided the participants the opportunity to be familiarized with problems of data collection, model formulation, testing, and forecasting. Practice through laboratory exercises was done on computers available for each student using software statistical packages. The aim of this part was to estimate and test discrete choice models from real data usage.
b) The second part dealt with advanced supply models. Both Steady State and Time Varying Traffic Assignment Models were covered. Analytical and simulation based traffic assignment models were demonstrated with emphasis on practical applications in management and impact analysis. Participants learnt about traffic simulation, dynamic traffic assignment (DTA), origin-destination estimation and prediction for real-time applications, traffic flow models, traffic control and guidance systems, and off-line evaluation methods using the simulation and assignment tools of VISTA and DYNASMART.
c) In the last part of the Seminar the combined distribution, mode choice and assignment models were presented.

The course lecturers were internationally-regarded teachers and researchers in their fields:

1. Prof. David Boyce, Northwestern University, USA (Professor Emeritus, University of Illinois at Chicago)
2. Prof. Laurie Garrow, Georgia Institute of Technology, USA
3. Prof. G. Giannopoulos, Head Hellenic Institute of Transport and professor at the Aristotle University of Thessaloniki, Greece
4. Prof. Frank Koppelman, Northwestern University, USA
5. Prof. Hani Mahmassani, University of Maryland, USA

6. Prof. A. Stathopoulos, National Technical University of Athens, Greece.
7. Prof. A.K. Ziliaskopoulos, senior researcher Hellenic Institute of Transport, and Northwestern University, USA

The seminar was attended (as students) by representatives of Greek organizations and universities (OASA, Egnatia Odos, Attiki Metro, TREDIT, HIT, National, Technical University of Athens), undergraduate students of Aristotle University of Thessaloniki as well as from the Technical University of Madrid.

**"Improving the safety in work zone areas"**
**Thessaloniki, 25 October 2005**

This training seminar aiming at road safety in work zone areas was organized by Hellenic Institute of Transport as coordinator of the PREVENT project along with the Ministry for the Environment, Physical Planning and Public Works that co-finances the project. The seminars took place on Tuesday October 25, 2005 at CERTH/HIT headquarters in Thessaloniki.

The seminar was attended by engineers from the Ministry and its supervised authorities.

The training was divided in 3 sessions. The first session presented the European project PREVENT that is coordinated by HIT and is financed by the Leonardo Da Vinci program, co-financed by the Ministry for the Environment, Physical Planning and Public Works. The theoretical training on the content of the national specifications concerning the work zone areas signaling took place in the second session. Finally, in the third session the e-tool of the project was presented. The e-tool constituted the basic product of PREVENT project and includes all the theoretical part of the specifications and also an evaluation procedure of the understanding of the educational material through practical – graphical exercises of proper work zone signposting.

**ADHRITO:**
**A Human Network For The Powerful Promotion Of Road Safety In Greece**

## A. Postgraduate students training in using and supporting vehicles of antilitter technology

At November 2002 the research project IMMACULATE began, which aims at the improvement of the air quality and the reduction of noise levels in urban areas, through a pioneering combination of clean car technologies (all types, electrically supported bicycles, electric motorbikes, hybrid cars and air gas mini-buses) with like advanced technological systems in the transportation field, (like information management systems, management and telematics, smart cards technology, forms of transportation management).

The equipment which was offered to H.I.T. in the frame of the above project (hybrid vehicles and electrified motorbikes) constituted the **beginning of similar seminars**. The disposal of Thessaloniki C.U. speedway and the use of Megara motorway, whose exclusive use has Safetrack, are imposed.

The Seminar took place in January – February 2005 and the colloquists were: D. Negas, Dr. F. Stergiopoulos, Dr. E. Nathanail, A. Tsioutras, M. Panou, E. Gaitanidou, G. Gargeros, N. Tsadaris, S. Chatzipanagiotou, K. Michailidis, K. Mavrakis, I. Tsiormpatzis, P. Lazaridou.

## B. Training of driving school instructors on issues of ecological driving (eco-driving)

The Seminar aimed at the development of ecological consciousness and new ways of driving, ways that will target in fuel economy and therefore in lower emissions of pollutants, cleaner atmosphere and better quality of life in urban environments.

**The way of driving the clean vehicles** and especially the hybrid ones, may and/or should **differ from driving a conventional one** in order for the driver to exploit the full potential of the first one and therefore achieve the desirable which is lower consumption and emissions.

The Seminar took place in January – February 2005 and the colloquists were: D. Negas, Dr. F. Stergiopoulos, Dr. E. Nathanail, A. Tsioutras, M. Panou, E. Gaitanidou, G. Gargeros, N. Tsadaris, S. Chatzipanagiotou, K. Michailidis, K. Mavrakis, I. Tsiormpatzis, P. Lazaridou.

### C. Training of postgraduate students in evaluation of macro/micro simulation programs

The simulation of road circulation was imported when the calculation of circulatory need and flow via computers was still in the beginning. Computer simulation became a widespread tool in transport engineer with wide field of applications, from scientific research, until planning, education and operation. Transport systems constitute an exceptional field of application for research that is based on simulation and planning techniques. Transport systems also constitute a region of application where the use of analytic tools, even if particularly important, it is limited in the level of sub-system and sub-problem. The reasons which favour the use of simulation in the analysis of transport problems are those that stand for all simulations: the problems that emerge from the analytic resolution of question under review, the need for control, evaluation and proof of proposed plan before its implementation, research (learning), and the education of people. The theory of circulatory flow and the models of simulation are categorized in microscopic, macroscopic and mesoscopic. **The microscopic models** are based on the logics of vehicles that follow and usually are exigent in the calculations, but are precise in the representation of circulatory development. **The macroscopic models** are based on the medium movement of team of vehicles that improves their calculating output but makes the representation in detail. Mesoscopic models are found between the two previous categories and balance the precision of representation and the calculating output.

The Seminar took place in April 2005 and the colloquists were: Ass. Prof. K. Grammenidou, Dr. E. Nathanail, G. Gargeros, Prof. A. Naniopoulos, D. Nalmpantis, Dr. G. Aifadopoulou, Dr. M. Morfoulaki, A. Tsioutras, T. Moschovou, E. Gaitanidou, P. Lazaridou.

## FINANCIAL RESULTS

The basic economic data of HIT's activity for 2005 are shown in Table 3 and schematically presented in Figure 13.

**TABLE 3: Financial results 2005 (Euros)**

| FINANCIAL RESULTS 2005 | |
|---|---|
| **INCOME RESOURCES** | **2005** |
| Total Budget of EU funded research projects | 1.787.274,31 |
| Total Budget of National funded research projects | 1.332.731,83 |
| Income from Services | 576.790,74 |
| Total annual turnover | 3.696.796,88 |

**HIT's Income Distribution**

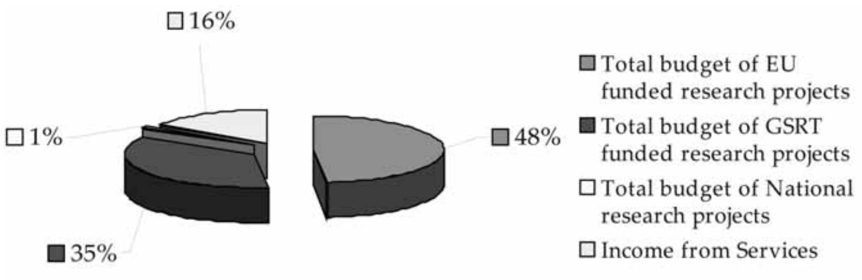
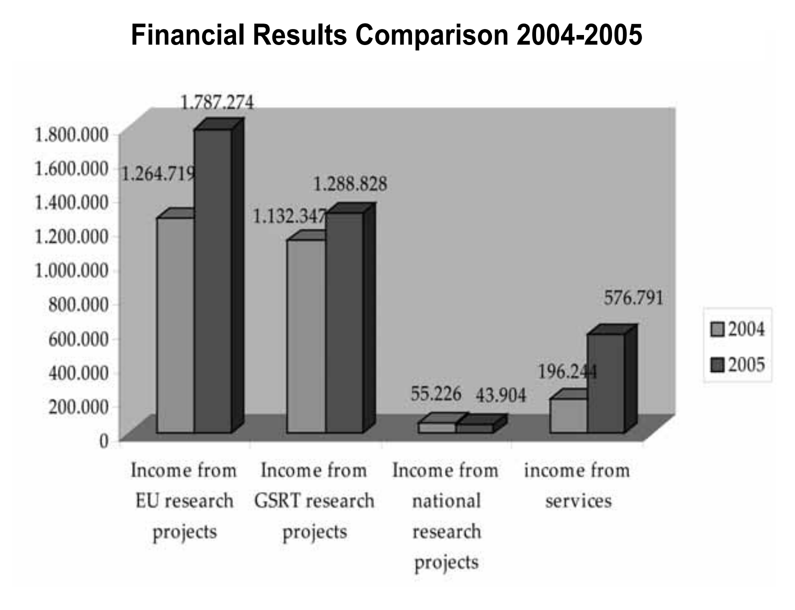



*Figure 13: HIT's income distribution by source*

Table 1 shows that the main income resource of HIT for 2005 was the EU funded research projects (48%), while the National funded research projects constituted 35% of the total budget. These are almost exclusively projects funded by the General Secretariat for Research and Technology (GSRT). As far as income from Services and National funded research projects are concerned, these are 16% and 1% correspondingly.

It's worth mentioning that in 2005 GSRT's percentage in HIT's income was reduced from 43% in 2004 to 35% (Figure 8-2). This reduction is due to the corresponding increase in the rest income sources which means that for the year 2005 HIT shows an improvement as far as its economic viability is concerned. This fact is also substantiated by the increase of the fully funded National projects from 196.244 euros in 2004 to 576.790 in 2005.

When compared to 2004 the Annual Turnover of 2005 was increased by 40%.



# INTERNATIONAL COOPERATION AND DISSEMINATION ACTIVITIES

## International Cooperation

### ECTRI – European Conference of Transport Research Institutes

In January 2003 the European Conference of Transport Research Institutes- ECTRI was officially established as an international non-profit Association under French law, in Lyon, France. HIT constitutes a founding member of ECTRI.

In January 2003 the Director of HIT, Prof. Giannopoulos, was elected president of ECTRI for the period 2003-2005 and in March 2005 was re-elected for the period 2005-2007.

### SETREF – South East European Transport Research Forum

The South East European Transport Research Forum (SETREF) is an international non-governmental and non-profit association of organizations in South East European countries devoted to the promotion of transport research and education. It was established in Thessaloniki, Greece, in April 1997 and its headquarters are in Thessaloniki within the building of HIT.

SETREF has currently 33 member Organizations, with most of which HIT has close relations.

For more information please visit: **http://hermes.civil.auth.gr/setref**

### ERTICO – European Road Transport Telematics Implementation Co-ordination Organization

ERTICO is a Europe-wide, not-profit, public/private partnership for the implementation of Intelligent Transport Systems and Services (ITS) in Europe. It was established in 1991 at the initiative of the European Commission as well as key members of the European ITS industry and national governments, ERTICO is open to any European organisation or international organisation operating substantially in Europe. ERTICO's mission is to promote and support the implementation of ITS in Europe, ensuring sustainable mobility, travel satisfaction and high economic returns. By joining ERTICO, organisations can work more effectively together and achieve vital synergies across sectors and across national boundaries to create a dynamic and successful European ITS market.

CERTH became the first Greek institution joining ERTICO in 2003 with its two Institutes, HIT and ITI.

### FERSI – Forum of European Road Safety Research

The Forum of European Road Safety Research Institutes (FERSI) was established in 1991 to bring together these national research organisations to provide a common focus for road safety research at the European level.

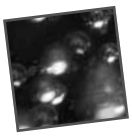
HIT became a member of FERSI in 2004.

## Cooperations in Greece

In Greece HIT has a permanent cooperation with AUTh and specifically with the Transport Research Laboratory, Civil Engineering Dept., as well as with the Transport Research Team of the Rural and Surveying Dept. This cooperation constitutes mainly on the participation of HIT in the organization and conduct of the Postgraduate Program on Transportation, which was launched (for the first time in Greece) in September 2003, but also in common research projects.

HIT also cooperates systematically with the Hellenic Institute of Transportation Engineers (SES) co-organizing the International Conference on Transportation Research in Greece that takes place every two (2) years. They also cooperate for a number of other Conferences and events.

Finally, by carrying out for them studies and research programs HIT cooperates with all the main institutions of the country in the field of transport., such as the Ministry of Transport, the Ministry of Aegean, the Ministry of Environmental, Planning and Public Works, the Region of Central Macedonia, OSE, OASA, SASTh, OLTh, etc.



## Dissemination Activities

In the context of its promotion and work acknowledgment, HIT organizes every year conferences and meetings on issues relating to its scientific fields, participates in relevant exhibitions and cooperates with scientific magazines. At the same time, the viewpoints and stances of HIT as a National Institution for Transports in Greece are expressed through a number of media interviews.

The above-mentioned activities of HIT for the year 2005 are presented below in more detail:

### Organization of Conferences – Meetings

The following conferences and workgroup meetings were organized in 2005.

***"Towards a practical confrontation of the parking problem in urban areas: technologies and new off road parking spaces development procedures" 21 March 2005, Athens***

The conference, which was fully sponsored by Nik. I. Theocharakis S.A., was a great success having also a major participation. The majority of the participants came from the field of constructions as well as the Local Self-Government.

Interesting suggestions were made covering all issues concerning parking off road, such as the European trends in parking areas construction, the relevant Greek legal framework (new developmental law), the Hellenic Ministry for the Environment, Physical Planning & Public Works policy and actions on parking areas, financial issues and banking participation in the financing of parking stations, technologies and technical specifications of certain cases of projects and stations. The experience gained from the construction and financing of parking stations in Greece was particularly analyzed and the use of New Technologies in their organization and operation was presented.

During the discussions, a multilateral and significant exchange of views and suggestions as well as a very fruitful discussion took place. It was a common ascertainment and suggestion the imminent need to face on a long-term basis the parking problems in urban areas and the cooperation prospects in general between the national and private sectors in the development of new parking areas.

All participating institutions agreed upon the need to continue these events aiming at the effective and documented stance of all involved parties.

***OECD / ECMT / World Bank Regional Round Table 134:***
***«EUROPE AND CENTRAL ASIA: TRADE IN TRANSPORT SERVICES, MARKET ACCESS AND TRADE FACILITATION», Thessaloniki, 12-13 May 2005***

The Hellenic Institute of Transport in cooperation with the World Bank and the European Conference of Ministers of Transport (ECMT) as well as the Joint OECD/ECMT Research Center organized a Regional Round Table to strengthen their networks in the region, to support decision-making in the European transport policy field and to have an appropriate forum for the exchange of experiences. The event took place in Thessaloniki at Hyatt hotel on May 12th and 13th 2005.

Experts from the World Bank, the Organization for Economic Co-operation and Development (OECD), the European Conference of Ministers of Transport (ECMT) as well as representatives of the scientific community and the greater research field, in transportation, from Europe, Asia and the United States attended the Round Table. The director of the Hellenic Institute of Transport, Prof. G. Giannopoulos, chaired and coordinated the Round Table while the topics considered and discussed were:

- WTO process of liberalization of transport services,
- Interaction of transport policy with other policy areas (competition, environment) and integration
- Measurement of market frictions and trade facilitation
- Trade facilitation measures as researched by a flagship World Bank Project on European Central Asian transport links.

***"Towards improved safety for workers and drivers in work zone areas: the PREVENT training programme", Thessaloniki, 23 September 2005***

In the overtone of the meeting aiming at road safety in work zone areas entitled "Towards improved safety for workers and drivers in work zone areas: the PREVENT training programme" organized by HIT, the coordinator of PREVENT project, on September 23, 2005.

Prof. George Giannopoulos, Director of HIT, opened the meeting giving a short presentation regarding the number of HIT actions in the field of road safety and education in general. HIT has been recognized, in European level, as a Center of Excellence on drivers' education issues.

General Secretary of the Public Works Directorate of Ministry of Environment Planning and Public

*Partial view of CERTH/ HIT's Pavilion.*

Works Mr. G. Tryfonidis as well as Mr. G. Tsigros representing the General Secretary of the Region of Central Macedonia Mr. G. Tsiotras provided a welcoming speech.

The workshop was divided in 3 sessions presenting the European project PREVENT that is co-ordinated by HIT, financed by the Leonardo Da Vinci program and constituted the occasion for this event, reporting the experiences of other countries participating in the project: The Netherlands, Czech Republic, Slovenia while the representatives of the Ministry of Environment Planning and Public Works, Technical Chamber of Greece, SES, Traffic Police and EGNATIA ODOS S.A. presented their experience and point of view for the Greek reality.

Prof. G. Kanellaidis, as coordinator of the ARROWS project, which constituted the basis of the national specifications in Greece, pointed out, in his script to be read in the meeting, the lack of the project's reference within these specifications.

***Conference on the development of transport and logistics terminals and intermodal operations in SE Europe, Ministry of Transport and Telecommunications, Athens, 21st October, 2005***

The one-day conference for the development of Freight Centers and Intermodal transport took place successfully at the premises of the Ministry of Transport and Communications on the 21st of October 2005 in Athens. The event was attended by a wide variety of participants from the national and international transport and logistics industry, representatives from the commercial chambers, regional authorities and Freight centers.

During the conference the main results and recommendations of the three-year research project IMONODE were presented, primarily regarding the development perspectives of Intermodal transport and logistics in the area of South East Europe. The project proposes the development of Intermodality through the rational development of the terminals and their services where the regional economies are developed enough to support their credibility and viability.

*HIT's Research Vehicle at Zappeio Building, Athens.*

## Other Dissemination Activities

The Hellenic Institute of Transport, has a permanent column in several scientific or professional magazines in the field of Transport in Greece.

During 2005 the following articles were published in such magazines:

- The «Sea Routes»: a chance that shouldn't be unexploited, January-February 05
- What is missing from S.E. Europe in infrastructures and services?, March – April 05
- Greek ports: Provided services quality indices: a weapon in competitiveness, May – June 05
- Europe and Asia: new horizons in international co-operations in the field of transport and the new communication and information systems, July - August 05
- International co-operations in the field of combined transports, Informatics – a Neuralgic factor, September - October 05
- Greek ports: reinforcement of the development and competitiveness prospects, November - December 05

*CERTH's Pavilion inside Zappeio Building, Athens.*

## Participation in Exhibitions

### 3rd Exhibition for Research and Technology

The Hellenic Institute of Transport (H.I.T.) was the only Institute which represented the Center for Research and Technology Hellas (C.E.R.T.H.) at the "3rd Exhibition for Research and Technology", which was organized by the General Secretariat for Research and Technology, Ministry of Development.

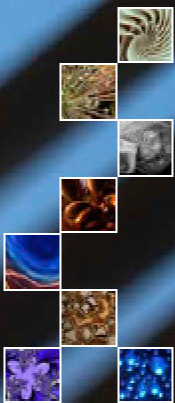
The exhibition was held from the 10th to 18th of May 2005, in Florina, Greece. Its main target was the information and education of the general public and students for the research work and results, with a simple and convenient way. Almost all exhibits came out from results of research programs.

### 2005 "Week for Research and Technology"

35 Greek Research Institutes and Technological Organizations presented their products at the 1st "Week for Research and Technology", which was held in one of the Historical Buildings of Athens, "Zappeio", from the 30th of June till 7th of July, 2005.

HIT participated at CERTH's Pavilion presenting its relevant research work, as well as the Research Vehicle equipped with the Advanced Driver Assistance Systems (ADAS). The vehicle concentrated almost all media and civilian's interest.

Hellenic Institute of Transport



**HELLENIC INSTITUTE OF TRANSPORT**
6th km Charilaou - Thermi road
P.O. Box 361 • GR-570 01 Thermi - Thessaloniki
tel.: +30 2310 498 263 • fax: +30 2310 498 269
e-mail: hit@certh.gr • web: www.hit.certh.gr