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OSSA

Open framework for Simulation of transport Strategies and Assessment

Project details	
Domain	Policy Assessment and Tools
Duration	from 01/03/2000 until 01/02/2003
Website	
Other sources	Transport Research & Innovation Portal

Governments and local authorities have identified the use of traffic simulation tools as a way of enabling transport policies that can reduce pollution in cities, improve traffic safety on the roads. It will ensure that policy risks are identified and mitigated at the earliest possible opportunity.

Urban traffic control (UTC) system manufacturers desperately need toolkits for modelling and simulation of urban road traffic operation for scale-up and design of new functionality and to improve the operation of existing ones. The growing traffic congestion and environmental pollution in urban road networks are driving this need even further.

UTC will help to improve the quality of the traffic controllers and improve their operability.

There currently exist at least 50 traffic simulators in Europe with varying qualities of functionality. Hence it would be more useful to develop an open framework which would be used to integrate the best features of the existing simulators.

Most importantly, no matter how sophisticated a simulator technology is, it is of limited use to UTC designers, operators and other users without an easy-to-use graphical user interface. Virtually all the existing simulators are deficient in this respect.

This project falls within the Promoting Competitive and Sustainable Growth programme.

Recently there have been dramatic developments in both traffic simulation software technology and UTC operation in that these two areas can now be interfaced. [HIPERTRANS](#) project, that was part-funded by the 4th Framework Programme was able to develop a sophisticated and high performance traffic simulator and integrate it with real-live UTC system. Many more UTC companies and local authorities offered by integration of simulators with live UTC systems.

The OSSA project addresses the need to produce a user-friendly and meaningful traffic simulator to end-users. It aims to achieve this by means of advanced visualisation capabilities and analysis tools for the simulated results in order to access the effects of transport policy scenarios on urban traffic. It also simulates the effects of urban traffic on the environment.

The objective of OSSA will be to develop a standard OPEN simulation framework that will provide interconnectivity with other simulators and systems: UTC systems, dynamic O/D matrix, co-simulators (emissions), data sources: GIS, UTC data, etc. The Framework will also permit the modelling of equipment present on the road at intersection level.

The project will start by studying existing simulation tools and identifying their different modules: simulation engines, simulation models, data entry, demand

models, visualisers, analysers, etc. In parallel a comprehensive study of the user requirements concerning simulation, visualisation and analysis capabilities will be conducted. UTC system capabilities as well as policy objectives will also be studied in this context with a view to establishing a reliable decision making structure. With the result of both studies the project will produce technical specifications for the necessary developments. It will also study traffic models, environmental models, and policy models, and policy models and then translate these into technical formulae and scenarios. These specifications will then be implemented and integrated into the 1st OSSA Prototype. The fully integrated system will be finally demonstrated in a high profile way before users and a general public. The final product will be exploited by the consortium partners.

Coordinator

- [ETRA Investigación y Desarrollo](#) (ES)

Partners

- [Municipality of Alicante](#) (ES)
- BKD Consultants Ltd (UK)
- [Transportation Research Group \(University of Namur\)](#) (BE)
- [Institut National de Recherche en Informatique et en Automatique](#) (FR)
- [Institute for Transport Sciences](#) (HU)
- [City of Manchester](#) (UK)
- [Planung Transport Verkehr AG](#) (DE)
- [TRL - Transport Research Laboratory](#) (UK)
- [University of Westminster](#) (UK)
- [WS Atkins Consultants](#) (UK)