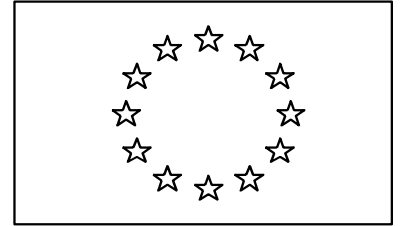




Republic of Cyprus



Report on National Activities and Projects Regarding ITS Priority Areas

According to Directive 2010/40/EU &

National Law:

«Ο ΠΕΡΙ ΠΛΑΙΣΙΟΥ ΑΝΑΠΤΥΞΗΣ ΤΩΝ
ΣΥΣΤΗΜΑΤΩΝ ΕΥΦΥΩΝ
ΜΕΤΑΦΟΡΩΝ ΣΤΟΝ ΤΟΜΕΑ ΤΩΝ
ΟΔΙΚΩΝ ΜΕΤΑΦΟΡΩΝ ΚΑΙ ΤΩΝ
ΔΙΕΠΛΑΦΩΝ ΜΕ ΑΛΛΟΥΣ ΤΡΟΠΟΥΣ
ΜΕΤΑΦΟΡΑΣ ΝΟΜΟΣ 2012»

Adopted on 16 November 2012

Date of Report: December 2012

Implementing – Co-ordinating Agency:

Public Works Department,
Ministry of Communications
and Works,
165 Strovolos Avenue,
2048 Strovolos,
Nicosia,
Cyprus

Contacts:

Mr Michael Lambrinos

Tel: 00357-22800226

Fax: 00357-22800228

e-mail: mlambrinos@pwd.mcw.gov.cy

Ms Elpida A. Epaminonda

Tel: 00357-22806643

Fax: 00357-22498910

e-mail: eepamenonda@pwd.mcw.gov.cy

Mr Aristotelis Savva

Tel: 00357-22800227

Fax: 00357-22800228

e-mail: asavva@pwd.mcw.gov.cy

1 CYPRUS ITS – AN OVERVIEW

Cyprus has an extensive main road network built primarily after 1980s, which connects the Island's main cities, in the area controlled by the Government of the Republic of Cyprus. The total length of the main road network is approximately 2450 Km which is maintained by the Public Works Department (PWD), of the Ministry of Communications and Works, of which 257 Km are motorways of which 182 Km form part of the Cyprus Trans-European Transport Network (TEN-T). There are approximately 5150 kilometres of urban, rural and forest roads which are maintained by municipal authorities, regional authorities and the Forestry Department.

Congestion levels, mainly in urban areas, but also on motorway sections close to the urban centres, have been increasing continuously with the situation in some areas becoming critical.

Like other member states of the European Union, the Government of Cyprus continues to invest in improving and expanding this network and is examining the deployment of Intelligent Transport Systems to maximise its capacity and safety, make a positive impact on the environment and reduce congestion levels.

2 STRATEGIC APPROACH TO ITS DEPLOYMENT IN CYPRUS

2.1 Strategic planning

The “Study for the design and implementation of ITS in Cyprus and the development of a GIS application” was co-financed by the European Union Transition Facility (77%) and the Government of Cyprus (23%). The project was of the overall value of €1.1 million. It started in October 2007 and finished in December 2008.

The project was executed jointly by Delcan International Ltd (Canadian) and Tredit SA (Greek) and included the following activities:

1. Examination of existing situation in Cyprus in terms of the legal, political and operational framework in relation to the introduction of such systems
2. Examination of existing ITS systems deployed and any strategic intentions from the agencies to expand such systems
3. Examination of ITS deployment in other EU states and developed countries, such as US, Canada and Japan
4. Final list of projects, through consultation and filtering based on maturity and priority indicators, which progressed to the design and feasibility stage
5. Design of selected systems and feasibility study
6. Specifications of systems and preparation of contract documents
7. Set up of an ITS Control Centre to handle future deployment of ITS
8. A GIS application that provides web-based capabilities

2.2 Planned ITS applications

The following systems were justified and designed as part of the above mentioned co-funded project:

1. **Advanced Traffic Management System** – this covers the deployment of ITS systems on the Nicosia to Limassol Motorway, on the last fifteen kilometre section from Ayia Barvara to the entrance of Nicosia. Its purpose is to increase safety by provision of information on queues (Queue End Warning) and management of traffic and incidents.
2. **Advanced Traveller Information Services:** the system purpose is to provide trip information to the potential road user, so effective travel decisions are made such as choice of mode, choice of route and timing of the trip.
3. **Temporary ITS Systems for construction zones** – mobile systems such as CCTV, Variable Message Signs, Radar Detectors that could be used to manage traffic around and through road construction zones.
4. **Priority to specific vehicles at Signalised junctions:** the system can give priority to Public Transport and Emergency Vehicles at signalised junctions
5. **Weigh in motion System** – the system facilitates the enforcement of limits to axle weight for lorries.
6. **Parking Availability System** – provision of information to road users on parking availability in car parks that are monitored by the system.
7. **Public Transport – Ticketing System** - the system would facilitate the issuing and validation of bus tickets in Cyprus
8. **Public Transport – Fleet Management & Passenger Information Services** – the system would facilitate the management of public transport fleets and the provision of information to passengers
9. **ITS systems to be deployed for the new Bus Terminal in Solomou Square, Nicosia** – CCTV for security and display equipment for information provision.

2.3 ITS Control Centre

The project delivered an ITS Control Centre that is situated within the premises of PWD Headquarters in Nicosia and gives the ability to manage ITS that would be deployed in Cyprus in the coming years. Moreover, the GIS used by PWD has been developed into a web-based system, allowing viewing and usage over the internet.

3 EXISTING ITS APPLICATIONS IN CYPRUS

3.1 Overview

In Cyprus the following ITS applications are currently in operation:

- **Adaptive Traffic Signal Control System:** In an effort to improve congestion in urban areas, the Government of Cyprus introduced in 1993 an Urban Traffic System for the adaptive central control of traffic-signalised junctions. The

system is operated from the Headquarters of the Public Works Department (PWD) in Nicosia and facilitates the control of 90 junctions in Nicosia, Limassol and Larnaca. The current system is SCOOT ver 4.5-Siemens ver. 24.4. The system is used for traffic lights optimization and its main scope is to reduce junction delays and traffic congestion.

- **Traffic Counters:** There are about 40 counters which are installed in motorways, inter-urban and rural network. The traffic counters receive data for traffic flow, speed and weight axles; the data collected are used for maintaining a statistical database for conducting traffic studies and for road pavement maintenance.
- **Weighing Stations:** there are seven (7) locations where permanent weighing stations are installed by roadside, where sample checks of heavy vehicles is undertaken by the traffic police.
- **Automatic information regarding available parking spaces in Nicosia City Centre:** There is an existing system providing real time information to drivers for parking space availability at the car parks. The coverage area of the system includes 5 car parks which are integrated.
- **A GIS and Highway Management System (HMS)** has been also developed, with EU funding, for managing information regarding the primary road network in Cyprus. The system is located at Public Works Department Headquarters in Nicosia.
- **3-D GIS for Cyprus TEN-T & TMC Coding** has been developed, with EU TEN-T funding, which recorded the whole of the interurban Cyprus road network and all street furniture and structures on that corridor. As part of the project, the Cyprus interurban network was coded with the view of enabling the development of Traffic Message Channel (TMC) Services.
- **Advance Traffic Management Systems** - The PWD is progressed with the construction of the necessary ITS infrastructure on the Nicosia to Limassol Motorway (ducting for power and communication cables), on the last fifteen kilometre section from Ayia Varvara to the entrance of Nicosia. This was done as part of the upgrade of this motorway section (construction of a great separated junction and widening to six lanes).
- **A number of fleet management services and route guidance systems** are being developed by private initiative, but are not widely used by the public sector or the industry, however they are gaining ground as they have proven their effectiveness in improving operations and result in savings. Public Sector departments promoting the use of these systems are the Public Works Department, the Emergencies Hospital Service, the Police and the Cyprus Wild Life Service.

4 PARTICIPATION IN EUROPEAN ITS PROJECTS

Cyprus has joined EASYWAY - ITHACA since February 2008 and has been participating in meetings and co-ordination of ITS actions with the other member states, under an “observer” status of the 2007-2009 EasyWay programme. However, Cyprus was in good position, due to the co-funded study, to participate in the next funding programme EASYWAY II 2010-2012.

Cyprus is also participating in the INTEREG EU Programme 2007-2013 and under that programme has gained funding to progress implementation of ITS projects.

Furthermore a project co-funded by the EU TEN-T programme by 50% with the title “A feasibility study for establishing regular public transport inter-city links with airports, ports and major tourist destinations in Cyprus that will use the Cyprus Motorway Network” includes the coding of the Cyprus TEN-T with the view of enabling the development of Traffic Message Channel (TMC) Services. The project is of total value of €1.5m and has been completed in Spring 2012.

5 ITS SYSTEMS BEING DEPLOYED – CYPRUS FIVE YEAR PLAN

The Ministry of Communications and Works plans to continue the investment in ITS, understanding the need to manage better its mobility networks using the latest Telematic Applications. In addition, the Ministry will pursue better co-operation, on a formal basis, with other public authorities and private sector to promote the co-ordinated deployment of ITS in Cyprus.

The intended actions are outlined under each Priority Area referred to in the ITS Directive 2010/40/EU.

5.1 Priority Area I: Optimal Use of Road, Traffic and Travel Data of the Directive 2010/40/EU

Through the EU INTEREG Programme Greece – Cyprus 2012 – 2013 a pilot project is being promoted with the aim to improve information provision to road users regarding travel times, congestion, roadworks on the interurban road network and primary road network of Nicosia. It will also provide information regarding availability of parking in the city of Nicosia. A web multimodal routing application will be developed.

The project shall be implemented in 2013. The overall project is of total cost of €1.4m of which €0.8m is the cost of the project that would be carried out in Cyprus. The cost is co-funded by the INTEREG programme by 80%.

If the project is successful, the Public Works Department will expand this system to cover the primary road network of all Cyprus, including access roads to ports, airports, major economic development areas and tourist destinations.

The expansion will depend on the funding available over the next five years, considering the current economic difficulties. However, Cyprus will continue taking advantage of EU funding opportunities to this end and the new telematic applications which do not require deployment of heavy ITS infrastructure.

Public Transport Ticketing, Fleet Management and Passenger Information Systems, designed as part of the ITS Study, were included in the contracts signed with the Public Transport operators on the 2 December 2009. Under these contracts, the Public Transport Operators are required to deploy the above ITS systems within three years from signing. Admittedly, there has been a delay in the deployment of these by the operators. But the Ministry of Communications and Works is pursuing the matter for the earliest possible implementation. Considering the size and complexity of such a project, as well as the current economic situation, the Ministry estimates that these systems will be in place in the next three to four years.

The ITS Systems designed for the Bus Terminal in Nicosia City Centre are currently being procured by the Municipality of Nicosia with the help of the Ministry of Communications & Works and the Public Works Department. It is estimated that the system will be in place by the end of 2013.

Projects for which EU funding will be pursued through ITS Calls on TEN-T corridors and other EU programmes such as INTEREG include:

1. Deployment of an ATMS system on the Nicosia – Limassol motorway network, from the entrance of Nicosia to Agia Varvara
2. Development of multimodal information tool connecting various Infomobility Applications together, namely road, public transport, airport and port systems.
3. Investigate the use of new technologies for obtaining data regarding mobility conditions on networks, for example using probe data, with the scope for providing information to users and responsible agencies on delays experienced in the various mobility networks.

5.2 Priority Area II: Continuity of traffic and freight management ITS services

Cyprus current activities are limited to projects for developing multimodal infomobility tools and shall include information for Air and Sea travel.

Cyprus is an island and does not have cross-border traffic. In that respect, the multimodal infomobility tools could only be extended to provide information on corridors such Motorways of the Sea.

Cyprus is currently considering such project proposals with other member states and these, once developed, shall be submitted for EU funding through the TEN-T or INTEREG programmes.

5.3 Priority Area III: ITS road Safety and Security Applications

Cyprus is following closely the developments on the e-safety initiative and is participating in the “i-car support” forum. Future Cyprus strategy on the matter is linked with the further development of the 112 Emergency Service.

The “e-call” service is currently under development, and will be in place by 2015.

Projects such as the deployment of ATMS system on the Nicosia – Limassol motorway network from the entrance of Nicosia to Agia Varvara, also aim to enhance safety of the road network and prevent queue end collisions.

5.4 Priority Area IV: Linking the Vehicle with the Transport Infrastructure

Cyprus is now developing its first ITS services and shall follow the lead of the car and ITS industries which are established in countries that have invested in ITS systems for decades.

Once such technologies and systems have been proven for their effectiveness and efficiency, Cyprus will consider their use within the projects mentioned previously. It is expected that such Telematic applications will reduce investment costs and improve effectiveness.