USER NEEDS INTERVIEW

Introduction



The objective of this interview is to collect the views of road managers and operators on:

- intelligent systems currently used to operate their road network
- solutions needed for the future.

Identity



Name of interviewee	-
Name of organisation	***City Road Administration Warsaw***

Type of organisation *(tick as appropriate)*	**Public road authority**	Toll road operator (public / private / semi-public)	
	Police	Other (please state : _____)	
Geographical Responsibility *(tick as appropriate)*	National	**Local (City of Warsaw)**	
	Regional	Other (please state : _____)	
Responsibility for *(tick all that apply)*	Motorways	Expressways	Major roads (national roads)
	Secondary roads	**Local roads and streets (roads and streets in Warsaw)**	**Other** (e.g. Tunnel, Bridge), please state: **Warsaw tunnels and bridges**

Position of interviewee *(job title)*	**Chiefs of Departments, Department 's workers**
Roles of interviewee	**Management, traffic planning, winter maintenance**
Responsible for *(number of persons approx.)*	**About 300**

Open Questions

1 What are the main problems you currently face in managing your network (traffic and infrastructure)?
Give proposals and classify them by priority. For each problem: What measures are you taking, have taken in the past, are planning to take in the future?

Priority	Problem description	Measures	Finished	Ongoing	Planned *(definite)*	Planned *(not yet definite)*	Time scale*
1a	Traffic density on the roads and bridges of Warsaw	The measure is made in about 100 selected points by the loops system. The results contain the car speed and type classes. The results are used to plan the traffic management in the city.		X	X		Made every half of a year.
1b	Road surface state	The measures are made by specialized equipment for pavement marking system. The results are used to plan the road maintenance and repairs.			X		

* Be as precise as possible, e.g.: *"Measure started in 2002 and ongoing", "Measure definitely planed to start in 2006", "Aim to implement around 2008 but not definite"*, etc

Open Questions (continued)

1

Priority	Problem description	Measures	Finished	Ongoing	Planned *(definite)*	Planned *(not yet definite)*	Time scale*
1c							
1d							

* Be as precise as possible, e.g.: *"Measure started in 2002 and ongoing", "Measure definitely planed to start in 2006", "Aim to implement around 2008 but not definite"*, etc

Open Questions (continued)

2 How will planned measures be financed? (Direct financing from own funds / BOT (Build Operate and Transfer / PPP (Public Private Partnership), etc.

Direct financing from the own funds

3 What is the approximate split of spending between road building, road maintenance and installation of new equipment on existing roads? / How has this split evolved?

Most of spending is given for the road building and existing road repairs

Equipment installations contain mostly the traffic lights systems.

Big installation of the new equipment is planned for the 2006-2008 years when the Traffic Management System will be introduced in the city

4 If you could choose one ITS or traffic management solution to improve safety, what would it be?

Traffic Management Systems for the traffic jams decreasing. The traffic is the most important problem in such a big city like Warsaw.

5 If you could choose one thing to improve predictability of journeys (reliability of journey time information), what would it be?

As above the good management system with data from as much as possible crossroads and well developed driver information system.

Open Questions (continued)

6 What degree of traffic control could you accept? (concerning speed enforcement, use of electronic toll tags to gather data, etc)

Speed enforcement with a good shortest/fastest way description system (signs, etc.)

7 What causes the most damage to the your road network today?

The heavy trucks. At the moment we are building the ring roads so most of the cars is travelling near the city centre and on the roads heavy loaded by the local traffic.

8 What system(s) or process(es) do you currently use to reduce this damage?

Improve the main roads construction to increase the load capacity.

9 What do you understand by “Intelligent Roads”?

Safe and friendly roads for the drivers. Equipped with the traffic/WIM systems and speed enforcement. Roads which can adapt to changes in the traffic.

Targeted Questions

→ For each Item (which corresponds to a technical task in INTRO), please state what measures you are taking at the moment / have taken in the past / are planning to take in the future (tick appropriate box)

10 **Surface safety monitoring** *(INTRO WP2)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
A. Stopping distance and skid resistance	The pavement state measures	X	X	X		The measures are made on the part of the network each year
	2					
	3					

The INTRO project aims to develop models to link stopping distance to dynamic micro-slip data and to static skid-resistance measurements. This is to better understand these relationships for two pilot phases (information to drivers and to road authorities). This information could for example be used in winter to recommend variable speeds according to the measured conditions.	**Comments (if any):**

Targeted Questions (continued)

10 **Surface safety monitoring** *(INTRO WP2)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
B. Real time information for maintenance data	**1**					
	2					
	3					

The INTRO project aims to conduct a pilot demonstration of information on slippery roads to road maintenance authorities. This is to enable them to differentiate between ice/snow that needs clearing and bad surface conditions that need repaving. Data will be processed and displayed using a GIS (Geographical Information System) interface. The test will take place using probe cars near Vienna, Austria.	**Comments (if any):**

Targeted Questions (continued)

10 **Surface safety monitoring** *(INTRO WP2)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
C. Real time information to drivers regarding road surfaces	**1**					
	2					
	3					

The INTRO project aims to provide road surface-related information (mainly stopping distance) to drivers via an appropriate in-vehicle HMI (Human-Machine Interface). This will be based on data from floating cars with an on-board micro-slip measurement system (which provide this data to a central server), and also from static road surface data (for floating cars without micro-slip data).	**Comments (if any):**

Targeted Questions (continued)

11 **Pavement conditions and infrastructure production** *(INTRO WP3)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
A. Intelligent pavements (pavement management, lifecycle and deterioration sensors)						
	2					
	3					

The INTRO project aims to improve the management of the maintenance of the network (pavements and bridges) through smart methods of predicting the deterioration process and actual condition. The aim is to measure pavements in unobtrusive ways and make the information accessible at low cost. This includes a demonstration of sensor methods including in-situ sensors (such as loops, cameras and weigh-in-motion).	**Comments (if any):**

Targeted Questions (continued)

11 **Pavement conditions and infrastructure production** *(INTRO WP3)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
B. Remote pavement sensing from vehicles	**1**					
	2					
	3					

The INTRO project aims to demonstrate the use of data provided by sensors fitted to standard vehicles ("probe vehicles") for improving the monitoring of pavement condition, and hence maintenance. This will concentrate on monitoring comfort and safety of the ride, as well as road defects such as rutting.	**Comments (if any):**

Targeted Questions (continued)

12 **Traffic and safety monitoring** *(INTRO WP4)*

Problem description	Your measures	Finished	Ongoing	Planned *(definite)*	Planned *(not yet definite)*	Time scale*
A. Data sensing for road, weather and traffic including Probe Vehicle / FCD (Floating Car Data) Technology	Traffic measures made on the 100 points with a possibility of connection with the weather data from other City systems.		X			Made every quarter.
	2					
	3					

The INTRO project aims to establish key traffic indicators, and to develop methods to calculate or estimate them using existing data sources for sensor-based measurement of traffic parameters. This includes analysis of data quality from using conventional single data sources and how this influences derived data (traffic flow, density, speeds, travel time, etc)	**Comments (if any):**

Targeted Questions (continued)

12 **Traffic and safety monitoring** *(INTRO WP4)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
B. Data fusion of data from different sources for providing a comprehensive picture of network conditions	**1**					
	2					
	3					

The INTRO project aims to design and develop a data fusion module accepting and combining information and data from traffic detectors and other sources, for assessing the traffic conditions on the road network and detecting critical traffic situations. This task involves fusion of travel time data and traffic data, link travel time correction, etc.	**Comments (if any):**

Targeted Questions (continued)

12 **Traffic and safety monitoring** *(INTRO WP4)*

Problem description	**Your measures**	**Finished**	**Ongoing**	**Planned** *(definite)*	**Planned** *(not yet definite)*	**Time scale***
C. Safety indicators for monitoring traffic condition ***(inter-vehicle distance, speed variance, etc)***	**1**					
	2					
	3					

The INTRO project aims to develop methods allowing relevant safety indicators to be estimated using traffic parameters. This will help traffic managers and drivers have a real-time overview of the safety level on different parts of the road network. This will be done by analysing accidents (only accidents linked to traffic conditions or road surface) on 6 sections of road network across Europe and using this data to build and validate models of safety indicators.	**Comments (if any):**

Targeted Questions (continued)

13 **General**

A. Which out of the above are in your opinion the most important/most useful approaches?

From out point of view the most important is point WP4 with research of connection between the traffic and weather situation. The traffic changes during the different weather conditions are a big problem in our city so the results of that work could be very useful for us.

We are next year starting to build a Traffic Management System so maybe we could use some results of the work.

B. What risks do you see?

The implementation of the weather-traffic algorithm into the Traffic Management System.

14 **This is the end of the interview. Do you have any other comments?**

No.