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	**Roger Siegrist**
Name of organisation	***Swiss Federal Roads Authority (FEDRO)***

Type of organisation *(tick as appropriate)*	Public road authority	**Public**	
	Police	Other (please state : _____)	
Geographical Responsibility *(tick as appropriate)*	**National**	Local	
	Regional	Other (please state : _____)	
Responsibility for *(tick all that apply)*	**Motorways**	**Expressways**	Major roads (national or trunk roads)
	Secondary roads	Local roads and streets	Other (e.g. Tunnel, Bridge), please state: _____)

Position of interviewee *(job title)*	Leader of Traffic Management of Switzerland
Roles of interviewee	Responsible for future traffic management of road after 2008, pending on new law being setup. Also involves in planning and operations
Responsible for *(number of persons approx.)*	5

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	Reduce time lost						
1b	Reduce accidents (related to the above as accidents cause time lost as well)	'VISION ZERO' undertakes specific measures to prevent fatalities and serious injuries		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.

National fund

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?

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

Not one solution but a package solution such as ramp metering, speed control, danger warning on some area in the urban network and education or awareness program.

Swiss introduced lower drink driving alcohol limit (from 0.8 to 0.5) and recent result shows a third reduction in accidents.

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

Pre-trip and on-route travel time information

Open Questions (continued)

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

Important but not FEDRO's responsibility

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

HGVs

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

WIM systems for weight enforcement

9 What do you understand by "Intelligent Roads"?

a system that helps reduce drivers' errors

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	**1**					
	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 Real time information not so useful but Quality Audit is being developed**				X	
	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)	**1**					
	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** Eureka Logchain Footprint - A European cooperative project aims to develop an innovative and cost effective method to identify road and rail vehicles by means of their "footprint" as characterized by dynamic load, noise, vibration and gaseous emissions induced by the vehicle.		X			July 2004-February 2007
	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	**1 A national traffic management program is being developed at this moment. This includes a national traffic centre to monitor traffic and collect traffic data from sensors and possibly floating car data.**				X	2008
	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 By means of a national traffic centre for collecting traffic and pertinent data. Data fusion of data may not be included**				X	2005
	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): Issue was raised regarding headway versus capacity problem. Concern is that if all drivers drive at a safe headway of say 2 seconds, then there will be lack of capacity o the road.**

Targeted Questions (continued)

13 **General**

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

In-vehicle systems are cheaper than systems on road. Further more on road system will be in selective position only.

Easy information for driver pre-trip and on-route have good cost benefit.

B. What risks do you see?

Technological solutions have high cost of investment, operate and maintenance and short life span.

cost Intelligent

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