Minutes of Meeting

Date: 18-19/01/2005
Location: Madrid (Isdefe)

Object: First MITRA Workshop

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NB: these minutes are considered agreed by the participants, unless comment communicated to the author within 5 (five) working days.

Agenda:

Day 1:
Registration, welcome & objectives of Workshop.
MITRA Overview.
General Instructions & Guidelines.
Operational Scenarios Overview.
Discussions:
- Nominal/Alert Scenario.
- Crisis Scenario.

Day 2:
Objectives of Day 2.
Consolidation of user requirements.
Risk knowledge platform.
Feedback from system implementers.
Results and Conclusions of the 1st Workshop.
Users involvement in the Advisory Committee.

Participants	Company	Day 1	Day 2
BAUMANN, Stefan	Telematica E.K.	X	X
BOUET, Remy	INERIS	X	X
BOUISSOU, Charlotte	INERIS	X	X
CITORES, Mónica	COTESA	X	X
DE LA ROSA, Marta	Isdefe	X	X
FONTAINE, Françoise	INERIS	X	X
GUILLY, Stephan	ENSOSP - ELOSYSTEME	X	X
IRIBAS, Paloma	Ministerio de Fomento of Spain	X	X
LOUETTE, Eric	METATTM. DTT/DSCR.	X	X
MARTÍN-ALEGRÍA, Roberto	Civil Protection (Castilla y León)	X	X
MATA, Karin	CEPSA	X	
MOYA, Mario	Isdefe	X	X
NOVILLO, Alberto	DEIMOS Space	X	X
PALMA, José Julio	Generalitat de Catalunya	X	
PERARNAUD, Didier	Advanteam & Partners	X	X
PRESUTTO, Franck	M3 Systems	X	X
QUIROGA, Javier	SAMUR+Civil Protection Madrid	X	X
RECUERO, Antonio	Isdefe	X	X
REIN, Helmut	BMVBW	X	X
SANZ, José Luis	Fire Brigade Madrid	X	X
SORIANO, Jesús	FEIQUE	X	
SPECKMANN, Heike	Fire Brigade Duisburg	X	X
SUÁREZ, Natalia	Isdefe	X	X
TIXIER, Jérôme	EMA	X	X
URDILLO, Ursula	Isdefe	X	X
VOGT, Konrad	Deutsche Bahn AG	X	X
FERNANDEZ, Carlos	DEIMOS Space		X

NOTE: The slides presented during the meeting are attached to the present minutes.

1. Introduction & welcome (Ursula Urdillo, Isdefe)

Presentation of the participants.

2. Objectives of the 1st MITRA Workshop (Ursula Urdillo, Isdefe)

See attached presentation [DAY1_MITRA_1st Workshop_Welcome].

The main objective of the 1st MITRA Workshop is to agree the list of user requirements defined for MITRA System with users feedback. Additionally it will be also discussed the user requirements feasibility within the project.

3. MITRA Overview (Franck Presutto, M3Systems)

See attached presentation [DAY1_2005_01_17_Overview MITRA].

4. General Instruction & Guidelines, discussion (Ursula Urdillo, Isdefe)

See attached presentation [DAY1_MITRA_1st Workshop_General instructions].

It was highlighted to the participants that the discussions about the user requirements would be performed through the MITRA Baseline scenario. This scenario had been elaborated using as input the requirements collected in interviews made to different experts from selected profiles of interest to MITRA purposes.

5. User Requirements elicitation: Overview of Operational Scenario (Antonio Recuero, Isdefe)

See attached presentation [DAY1_MITRA_1st Workshop_Scenario Overview].

Next lines summarise first users impressions based on the presentation.

The scope of the study should be defined in more accurate way. What are the functionalities we need, who are the Users, Stakeholders, Actors?. Take into account the fact that users *do have* their own system.

Main results from past experiences:

- Do *not* try to monitor *all* the traffic of dangerous goods in a given zone: 10 to 20 % of the traffic, e.g. 2000 trucks: too heavy, too many people for little result.
- Concentrate on emergency situations: definition of the start point of the emergency, in conformity with the navigation standards.
- Categorisation of dangerous goods.
- Legal situation: some requirements exist in some countries as to the data to be produced/ stored/displayed → to be taken into account.

- It might be interesting to transfer data to the driver himself: he could be able to act during the ~10 critical minutes.

In relation to monitoring displays are useful if they are used for:

- Monitoring the zone of an accident, to avoid over-accidents (re-routing/stopping other dangerous transports).
- Following a dedicated transport for any reason (e.g. nuclear goods).

6. Baseline Scenario (Natalia Suarez, Isdefe)

See attached presentation [DAY1_MITRA_1st Workshop_Baseline Scenario].

Nominal situations

Nominal display, cargo identification the data to be added to the user requirements presented in the scenario are:

- Truck company owner.
- Align all displayed information on the existing regulation (ADR/RID/ADNR/MDG/ICAO-TI) (e.g. do not use “very flammable liquid” but “Packing Group n° II”).
- Identify the data bases.
- Blue circles (zones of dispersion) to be removed.
- Time tag.

Following users opinions it seems that the more useful functionality of the MITRA system is the decision-making support tool. Information provided in nominal situation (monitoring) are more interesting for other uses for example:

- Security (e.g. terrorist attacks) purposes.
- Fleet management system for transporters companies.
- An economical model could be looked for: saving in insurance fees vs. cost of system.

The system should be used to provide information in simple format to the existing systems of the different security forces. The system could be viewed as a “functional” layer on top of existing systems.

Alerts situations

According to users opinion alert situations presented were globally judged **unrealistic** due to the following reasons:

- Does not lead to an action.
- Generates false alarms.
- Requires lot of staff.

The reasons provided to reject the different types of alerts are presented were:

- Over-velocity: most vehicles run close to the maximum allowed speed, so a lot of false alarms would be generated.

- Common intersection of dispersion areas of incompatible products: occurs too often in motorways, too much false alarm.

- Dangerous vehicle in a sensitive and access restricted zone (e.g. hospital) : it would be better close the road to this kind of traffic.

Nevertheless users established that the system could help to manage concentration of dangerous goods as is stated in new National regulations.

After the discussions users finally agreed the following meaningful alert situations:

- Deviation of a particular vehicle from a pre-planned route (e.g. radioactive transport).
- Any alert situation detected by the on-board equipment and sensors (temperature, pressure,...).
- Any alert situation detected by the driver.

Emergency situations

Emergency, for the sake of this study, is a situation requiring an action beyond the control of the driver, involving at least one of the civil security bodies (fire brigade, police, SAMUR…), but not requiring the involvement of all public services (a crisis or catastrophe situation).

In relation to the emergency triggering it was stated that it should be produced by the next means:

- Phone call (112 or other) ➔ be able to enter the system and “mark” a vehicle designated as being in an abnormal situation (e.g. by witnessing road users).

- Automated triggering conditions:

  - Shock detectors are proven by past studies.
  - Vertical detectors (for “soft” accidents).
  - Accidental door opening.
  - Gas leakage sensors.
  - Over-temperature.
  - Over-pressure.
  - Red button.

It seems that the optimum choice would be an automated emergency triggering system complemented by a manual system able to confirm or cancel the alarm.

The effect of these alerts could be an automatic sending of priority message following applicable European standard e-call (could be SMS to the 112, to be confirmed).

Emergency information to be transmitted:

The data to be added to user requirements presented in the scenario are:

- Use European standardised localisation information for road/street identification, coordinates,…

- Use normalised information for risk warning, in the standard order:

  - Primary and secondary risk id number.
  - Packing group for risk level identification.

- Should conform to the information given in the paper transport document filled-in by the consigner, which is allowed to be conveyed by electronics means, e.g.:

  - Cargo amount at departure.
  - Current cargo amount.

- Time of the accident.

- Optional additional information pertinent to estimate the gravity of the situation as environmental information (e.g. presence of lake, river…) no for use by the local services, but for more global use.

- Optional field to accident circumstances (number of victims, type of accident…).

Meteorological information:

Useful only:

- To roughly display circles or “egg shapes” around vehicles locations.
- As input to MITRA models, if required.
- Accuracy of the meteorological data is critical (e.g. risk of precipitation in case of chlorine gas).

Risk assessment information:

- To be displayed in users native language.

Hospitals:

- Add list of hospitals prepared to receive contaminated victims (optional field to be fed with data from ambulance system).

1. Objectives of Day 2 (Ursula Urdillo, Isdefe)

See attached presentation [DAY2_MITRA_Objectives of day 2].

2. Conclusions of results of Day 1 (Diddier Perarnaud, Advanteam & Partners)

Included in minutes of Day 1.

3. Risk Knowledge Platform (Françoise Fontaine, INERIS & Jerome Tixier, ARMINES)

See attached presentation [2005_01_18_MITRA_WP2.12_Safety services requirement].

To provide a better understanding to the users about the MITRA system a presentation about the risk knowledge platform were provided.

A question about how to enter the cargo information into the system was raised. These were the main conclusions:

- A permanent knowledge of the contents of the transports is not acceptable (confidentiality of data about transporters activity). An acceptable way could be to access the consigner's database on occurrence of an accident. The problem is how to make sure that the link is available.

- A solution can be to implement at big transporters premises a mini-MITRA system allowing them to both manage their fleet and to sent relevant information to the central MITRA and the civil security operator. For small transporters, a central service in a secure environment (confidentiality…), could be proposed.

- Information shall be redundant in order to keep the information even in case of destruction of the on-board system.

Validation the accident information (first responder): somebody goes on the accident spot, communicate by his usual means (radio, cellular…) to the MITRA operator who enter the data into the system.

MITRA should be designed as if all data are made available, with the possibility to work with partially available data: e.g. nobody yet had time to go on the accident spot ➔ no witness data available, or the consigner did not provide cargo data.

4. Consolidation of user requirements

This table contains the review of the information that should be contained by the system in the crisis situation as well as the information flow produced among the actors.

What?	When created?	When transmitted?	Who?	How?
Vehicle id	Registration into the system	Real time	Automated	Wireless network

What?	When created?	When transmitted?	Who?	How?
Position	Real time	Real time	Automated	Wireless network
Vehicle / tank characteristics	Registration into the system	Resident in DB	Owner	
Cargo UN number and name	Each new transport	RT or resident in DB	Consigner	?
Cargo hazard id	Each new transport	RT or resident in DB	Consigner	?
Cargo amount (initial)	Each new transport	RT or resident in DB	Consigner	?
Cargo status	Real time	Real time	Automated	Wireless network
Type of accident	After accident	After accident	First responder	Radio, mobile phone…
Type of vehicle	After accident	After accident	First responder	Radio, mobile phone…
Dangers	RKPF creation	After accident	RKPF	Internet
Cargo hazard characteristics	RKPF creation	After accident	RKPF	Internet
Precaution to be taken	RKPF creation	After accident	RKPF	Internet
Procedures	RKPF creation	After accident	RKPF	Internet

5. Feedback from system implementers (Alberto Novillo, DEIMOS)

Interface to external databases is to be assessed: it is out of question to adapt to a large number of databases.

Feasibility of the "additional layer" concept seems difficult for the two following reasons:

- this additional layer would need to be developed on top of existing systems, which are highly heterogeneous depending on the countries. This would drastically increase the complexity of the system.

- the consortium partners have committed towards EC to install a "stand-alone user monitoring terminal" at the premises of the end-users, on which will be installed the 2D and 3D Human-Machine Interfaces. They have not envisaged so far developing a distant application, accessible through the Internet by any user having a terminal connected to the Internet.

Regarding the on board terminal (OBT) a priori no easy way to store tank characteristics onboard and to transmit it to the ground server. No interface to the driver is foreseen, neither hardware (e.g. PDA) nor software (enabling to trigger alerts). They are also not foreseen temperature, pressure, verticality, and shock captors. Therefore it will be very difficult to enable the driver to enter information in the system (parameters of the cargo), to trigger an alarm, or to receive information transmitted from the ground in case of an accident.

It is however very easy to envisage to create a radio link, enabling a person arriving on the location of the accident (civil or intervention team) to contact the end-users and to confirm the accident.

The plannification of the routes is not foreseen in the frame of the project. Therefore a comparison of the actual route with the planned route will be difficult to perform.

6. Results and conclusions of the workshop (Ursula Urdillo, Isdefe)

See attached presentation [DAY2_MITRA_1st Workshop_Results & Conclusions].

Attendances were very much appreciated for their participation.

7. User involvement in the Advisory Committee (Franck Presutto, M3Systems)

See attached presentation [Users involvement].

- User Requirements Review, 18 February 2005 (Madrid).
- System Definition Review, mid-May.
- Include transporters into the Advisory Committee (FIATA, IRU, CEFIC…).

Advisory committee: review documentation and comments (user & system requirements).