Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods
Bern, 14–18 March 2016
Item 6 of the provisional agenda
Reports of informal working groups

4 January 2016

Report of the informal working group on telematics (Bordeaux, 6 – 8 October 2015)

Presentations made during the workshop – Introduction presentation

Workshop on the Use of Telematics for Dangerous Goods Transport

Tuesday 6th October

Introductory presentation
History of the work on « telematic » in the RID ADR joint meeting

Claude Pfauvadel
Chef de la MTMD
(MEDDE – DGPR)
Chairman of the Joint meeting

The « Joint Meeting » and TDG regulations

Develops the common part of the regulations for the transport of dangerous goods by the 3 Land modes. (RID ADR ADN)

- The regulations are binding for :
  - Operators (carrier, consignor, loader, consignee...)

    an operator must follow the requirements when carrying or preparing for carriage
  - Authorities

    Authorities may not deny conforming tranports (international agreements)
- All 3 modes agreements cover about 48 contracting parties including all EU members.
- The regulations are harmonized with worldwide conventions concerning maritime (IMDG) and air transport (ICAO TI)

Consequences for ITS applications and important things to remember

For ITS Applications to be used wider than in « in house systems » the conditions need to be defined in the DG regulations

The regulations already provide a complete frame concerning the content of required information. (that work doesnt need to be done again)

The regulations already mention ITS as possibilities

- Chap 1.10 (security) option for tracking and tracing of HCDG
- Chap 5.4 documentation possible use of EDI provided equivalence with paper as regards legal value (depends on acceptance by Competent Authority)
-

The regulations are amended on basis of a 2 years periodicity (next version 2017 is already decided)

The « telematic » WG

Initial proposal from the European Commission- DG MOVE (doc ECE/TRANS/WP.15/AC.1/2007/17)

Terms of reference (see doc ECE/TRANS/WP.15/AC.1/108/Add.3 on www.unece.org):

1. Consider what information provided by telematics enhances the safety and security of the transport of dangerous goods and facilitates such transport. In particular, consider who might benefit from the provision of such information and in what way, having regard, inter alia, to: consignors, transport operators, emergency responders, enforcers, regulators;

2. Consider necessary parameters for telematics systems, and examine if existing systems meet these parameters and what further developments might be necessary;

3. Consider the cost/benefit analysis of utilising telematics for the purposes identified above;

4. Consider what procedures/responsibilities might be necessary to monitor the information captured by telematics and how access to data should be controlled; and

5. Consider interfaces and synergy with other systems.

The « telematic » WG

The TOR are complemented by 15 working items inter alia :

15. Draw up a proposal for the amendments to ADR/RID/ADN that will be required by the telematics facilities decided upon;

16. Draw up a summary description of necessary standards to complement the regulations.

The WG is composed of TDG experts and ITS experts from different participating countries.

The mandate has no time limit given the complexity of the issue

TDG EXPERT PART
« who does what » in TDG

- Summarises all information related to TDG :
  - A) in the transport document
  - B) other information (certificates, placardings...)
  - C) possible new requirements made possible by telematics (anomaly alerts …)
  -
- Summarizes some « use case » (who needs it what for...)

No.	INFORMATION	WHO IS IT FOR?															WHAT IS IT FOR?	WHEN IS IT NEEDED? [3]	HOW IS IT PROVIDED?	AVAILABILITY		USE OF TELEMATICS		
		Driver / Crew	Shipper/Consignor/ Sender[1]	Freight forwarder	Consignee	Loader	Carrier	Tank-wagon operator	Packer	Filler	Tank-container operator	Manager[2] Infrastructure	Public: Competent authority	Public: Emergency responders	Public: Enforcement bodies	Public: Security bodies		All information in the transport document under A is necessary before and throughout the journey. This column only indicates particular circumstances where this information needs to be available.		Operational	In case of incident/accident	Technical feasibility	Better availability in case of incidents/accidents	Possible operational advantages for public authorities or enterprises
A.	Entry in the transport document or documents attached to the transport document																							
1	UN number 5.4.1.1.1 (a) [+ 5.2.1 + 5.3.2]	X	X	X	X	X	X	X	X	X	X	X		X	X	X	Identify DG	Initial incident, initial enforcement, initial security	Transport document [, package markings, plates]	Y	P R: Y	Y	Y	Y
2	Proper Shipping Name 5.4.1.1.1 (b) [, 5.2.1.5, 5.2.1.6, 5.2.1.7]	X	X	X	X	X	X	X	X	X	X	X		X	X	X	Identify DG	Later in incident, clean-up, later enforcement	Transport document [, package markings Class 1 & 7, sometimes Class 2]	Y	P	Y	Y	Y

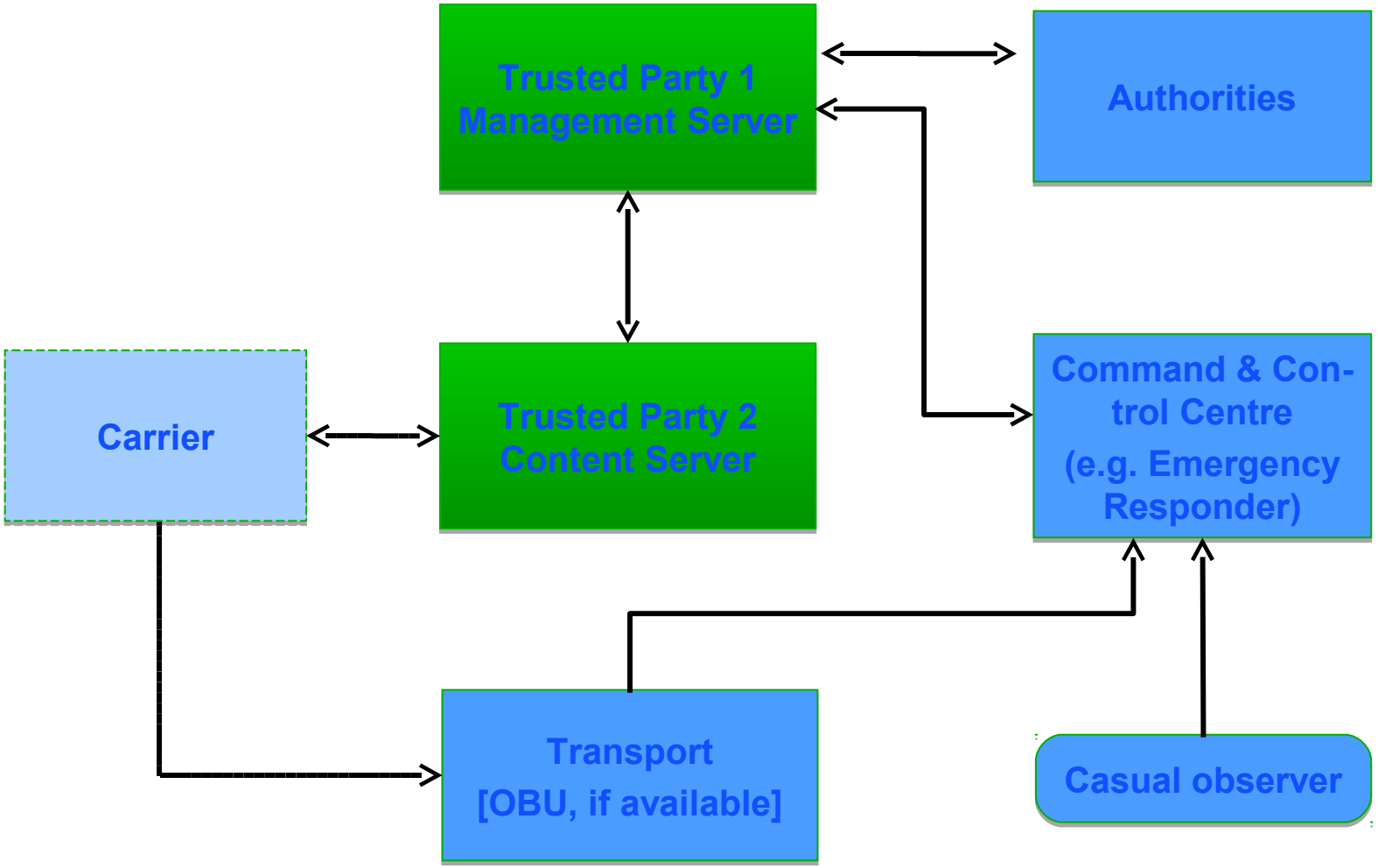
ITS EXPERTS PART
« Architecture »

- Definition of a DATA model for all the DATA in the spreadsheet
- The data model has been completed with the modelling of the position in line with the results from SCUTUM
- The minimum required to allow accesibility to relevant data for both operators and public authorities is to define an « architecture » making connexions possible between different systems in place.
- A concept of such architecture has been approved by the RID/ADR/ADN Joint meeting as an appropriate way to follow for the use of ITS in TDG

ARCHITECTURE basic points

- No regulations for authorities or emergengy responders : *Their internal behaviour and how they make use of the system is entirely up to them*
- Existing public key infrastructure would be used
- Internet backbone
- Two level « trusted party » interface:
  - **TP1**
  - Provided by an official organisation
  - Provides services for Access control
  - Management of trusted certification bodies
  - Management of black lists Management of roles and rights
  - Registration of certificates
  - Stores service end-points, vehicle IDs and related attributes for each DG transport
  - **TP2**
  - May be provided by an company in house system or a service provider
  - Stores transport related DG information (transport documents, certificates, dynamic data) and metadata (e.g. vehicle ID) for the time of transport

Telematics system high-level architecture



Advantages of the achitecture

- Simple and practical: it is related to the way transport documentation is elaborated now
- It may be implemented quickly: Two immediate and consensual uses : electronic documentation and emergency response
- It may be done without major changes in existing systems already used (interface aspect)
- Flexibility to allow evolution: other use have been mentioned such as statistics or traffic management...

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Other presentations in the Workshop

- The work started some years ago it is therefore useful to have some information on recent evolutions concerning ITS in the view of the UNECE and the EU
- Information on other related projects
- GEOTRANS MD is a pilot project that aims at testing the architecture

THANK YOU FOR YOUR ATTENTION