EU EIP SA4.5

4th List of consolidated user requirements on data exchange

Liaison and harmonisation on interfaces for data exchange

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1. Deliverable

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2. Preface

This report describes the activities conducted during the 2019 year for the sub-activity 4.5 of the EU EIP project dealing with the topic of “Liaison and harmonisation on interfaces for data exchange”.

TABLE OF CONTENTS

1. Deliverable 1
2. Preface 3
1. Introduction 5
   1.1. EU EIP Harmonisation cluster (activity 4, extract of Grant agreement) 5
   1.2. Liaison and harmonisation on interfaces for data exchange (sub-activity 4.5) 5
   1.3. Deliverables 6
2. Issues and problems encountered 7
   2.1. New priority needs 7
3. List of new user requirements 7

1. Introduction

This chapter reminds the scope and objectives of the EU EIP project as well as the SA 4.5 obligations according to the Grant Agreement signed with INEA.

1.1. EU EIP Harmonisation cluster (activity 4, extract of Grant agreement)

The scope of EU EIP is to bring forward ITS harmonisation through three lines of action:

- EC ITS Directive Specifications. Whilst the Specifications are under the responsibility of the EC, the EU EIP will collect real-life experiences from the application of those specifications and will comment – if and where possible – on draft versions of the EC Specifications or provide recommendations for improving the existing ones.
- Continued development of tools for interoperable ITS. Development of specific tools instrumental to continuity and interoperability of ITS services guidelines for optimal data and service quality.
- Extension of ITS harmonisation into new areas. The work in Activity 4 includes development of tools supporting ITS harmonisation in new and growing areas like Cooperative ITS Systems and interfaces towards urban road networks and other transport modes.

Regarding the strategic data exchange domain, EU EIP will aggregate & harmonise the various user requirements and ensure dissemination of results and recommendations through strong liaison and cooperation with relevant organizations such as DATEX II, TISA, POLIS, ETSI, INSPIRE, Amsterdam Group, C-ITS Platform, TN-ITS and other potential stakeholders.

Liaison and harmonisation on interfaces for data exchange (SA 4.5) is one of the sub-activities within this harmonisation cluster.

1.2. Liaison and harmonisation on interfaces for data exchange (sub-activity 4.5)

Data-exchange requirements vary significantly according to region, supported services or specific implementations. Deployment of ITS services in different Corridors as well as conclusions from the harmonisation activities carried out in EU EIP (e.g. on Deployment Guidelines or out of the Expert Groups) will inevitably lead to different user needs regarding data-exchange.

These different requirements need to be considered for the future standardisation process of data exchange, in particular the development of common data structures as part of the CEN/EN 15167 family of European Norms (DATEX II Data), as well as future exchange protocol standards to be developed by ISO TC204 WG9, based on the DATEX II Exchange specifications.

It should be noted here that the stakeholders are organised in the EU EIP project and have to phrase their requirements here, whereas the DATEX II Program Support Action (PSA) is mainly the technical work bench to implement the agreed requirements. Hence, harmonisation of

requirements has to be essentially carried out in EU EIP SA4.5, whereas the technical realisation of the agreed requirements will be in the PSA.

The sub-activity objectives are:

- to collect EU EIP user requirements coming from the ITS Corridor projects, EW Deployment Guidelines and others sub-activities
- to forward the information related to new user requirements to DATEX II PSA.

1.3. Deliverables

Every year a deliverable listing the annual new user requirements related to data exchanges (from corridors, DG, and others EU IP sub-activities leaders) will be elaborated. According the SA4.5 workplan this deliverable is foreseen with the following basic structure:

1. Introduction
2. Issues and problems encountered
3. List of new user requirements and comments

2. Issues and problems encountered

2.1. New priority needs

The initial SA4.5 tasks objectives were to collect and aggregate new data exchanges requests coming from corridors or EU EIP sub activities.

After one year of collaboration between bodies and DATEX II program partners it appears that:

- Corridors project new data exchanges requests' are directly managed with Datex II projects because dedicated WP are focused on this subject and strong links are already in place with sometime same people involved in both projects
- regarding EU EIP there is no specific new data exchanges requests
- the main EU EIP priority needs concerns the Deployment Guidelines update process with the objective to compile in a common format and in a dedicated annex all DG services DATEXII profiles

Consequently, SA4.5 leader suggested that SA4.5 participate to the DG update process by elaborating the DG Datex II profiles to be integrated in the DG Annex, main actives EU EIP SA4.5 partners agreed to use their resources to perform this work.

This proposal was submitted to the JTS members during the London JTS Meeting in London at the end of year 2017 and validated. It was agreed that SA4.5 participate to the DG update process by elaborating the DG Datex II profiles. Partners will use the SA4.5 resources to perform this work. This work was launched early 2018.

3. List of new user requirements

As explained in chapter 2 the new requirements are mainly dedicated to propose Deployment Guidelines DATEX II profiles.

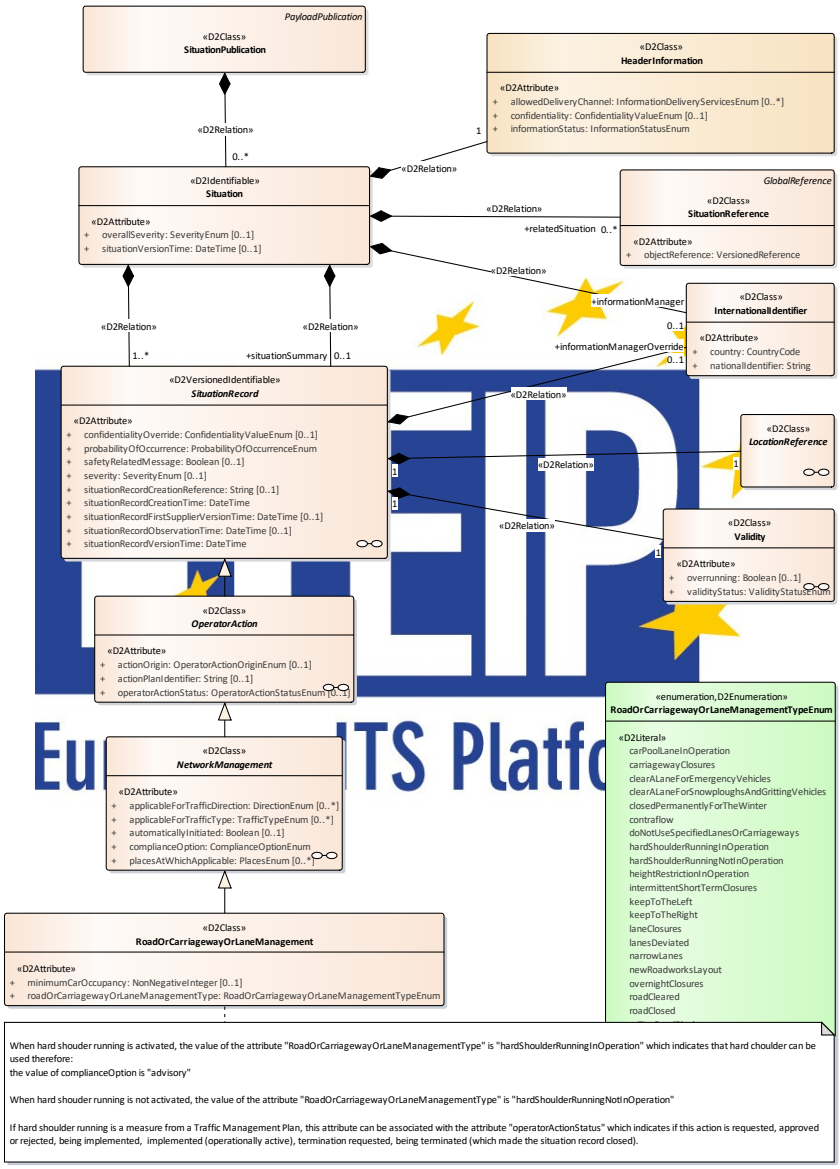
Some profiles have been elaborated in close cooperation with the DATEX II PSA team during a dedicated common EU EIP / DATEX II PSA meeting hold in Aix-en-Provence, September 6th -7th 2018 using a new tool included in DATEX II V3 allowing configuration of DATEX II profiles.

The DG DATEX II profiles have been developed with the perspective to **select in the model the minimum of classes and attributes allowing to guarantee the data exchanges among traffic managers and services operators compatible with the Directive Action b requirements.**

Work was performed to propose classes and attributes for five guidelines:

- Hard shoulder Running
- Weather Information service
- Dynamic lane management
- Ramp metering
- Overtaking ban

The following schema presents the DATEX II profile for the DG Hard shoulder running.



During 2019 year the draft DATEX II profiles were submitted to SA4.5 and DATEX II PSA teams for verification and comments.

Experts found some mistakes in the proposed DG profiles where some classes were missing. It appeared that these missing elements resulted to some bugs in the DATEX II tool. The DATEX II tool was corrected consequently by the DATEX II team.

The cooperation between both projects were ensured through the participation of SA4.5 representatives to 2 DATEX II PSA meetings (September in Aix en Provence, December in Firenze).

In parallel the annual SA4.5 meeting was organized in Firenze with participation of DATEX II PSA representative experts. The objectives of the meeting were:

- Identification of Deployment Guidelines with DATEX II profiles easily feasible
- Identification of Deployment Guidelines with DATEX II profiles complexly feasible
- Identification of Deployment Guidelines with DATEX II profiles impossible
- Evaluation of the workload to produce the references DG profiles
- Proposal for performing and finalizing the work in 2020 during a workshop combining DG leaders identified in EU EIP Activity 2 and DATEX II experts (location and dates)

Resulting to this meeting the following list of user requirements for 2020 work was elaborated, the list identifies the level of difficulty for elaborating the DG profiles and the DG coordinators who will have to participate to the dedicated workshop for finalizing DG profiles.

N°	Title	Responsible	Difficulty E/M/D/V/I	Remarks
1	TIS-DG02_Forecast and realtime event information	Alice Bazile / Alain Rème	D/Time consuming	Implementation of RTTI (DA962)Use cases assessment : best practices collected or particular example Eg : Mandatory use of AlertC? Advisory OpenLR?
2	TIS-DG03_Traffic Condition and Travel Time Information Service	Jaqueline Barr	D/Time consuming	Reference profile will be done only for the Interface 2 of the DG for the trafficStatus attribute and for travelTime. For Interface 1, Interchange Agreement will be needed among partners.
3	TIS-DG04_Speed limit information service	Jaqueline Barr /Peter Mc Gillion	E/	Reference profile can be provided in Situation publication but also based on METR for both interfaces (1 or 2)
4	TIS-DG06 Weather Information Services	Carmen Petrisor	M/	Making the mapping between the Part5 of Datex II and the matrix in the guidelines
5	TIS-DG07_ Co-Modal Traveler Information	Reiner Dölger / Mihai Niculescu	I/	Mixing NETEX, SIRI, and Park & Ride Information seems to early now
6	TMS-DG01_Dynamic Lane Management	Francesco Trallori	D/	Reference profile can be provided in Situation publication but also based on METR
7	TMS-DG02_Variable Speed Limits	Karolina Hedberg / Ari Sirkiä	E/	Reference profile can be provided in Situation publication but also based on METR
8	TMS-DG03_Ramp Metering	Paul Wadsworth	E/	Mandatory link TIS-DG03 (Traffic condition) Advisory link TIS-DG02, TMS-DG05
9	TMS-DG04_Hard shoulder running	Paul Wadsworth	Easy	Mandatory link with Speed limit TIS-DG04 Advisory link TIS-DG03, TIS-DG02, TMS-DG05
10	TMS- DG05 Incident Warning and Management	Louis Hendriks	D/	Mandatory link with TIS-DG02, TIS-DG03 Advisory link with TMS-DG02, TMS-DG01, TMS-DG03 TMS-DG04
11	TMS-DG06_HGV Overtaking Ban	Alice Bazile / Alain Rème	E/	Mandatory link TIS-DG03 (Traffic condition) Advisory link TIS-DG02, TMS-DG05, TIS-DG06
12	TMS-DG07_ Traffic Management Plan for Corridors and Networks	Jessica Rausch	I/	TMS-DG07 have to take into account Part 8 of Datex II and wait for update
13	F&L-DG01_Intelligent and Secure Truck Parking	Ronald Jorna	I?	F&L-DG01 have to take into account Part 6 of Datex II Existing model will be very obsolete
14	F&L-DG 02_ Access to Abnormal Goods Transport Regulations	Arne Lindeberg /Nils Heine	?	This guideline is linked with authorisation of authorities, Infrastructure and traffic manager