

Workshop WG Automation

Minutes

Lausanne – EPFL

02 December 2014 – 09:00 – 16:00

1 Agenda

08:30 – 09:00	Registration	
09:00 – 09:30	Introduction: objectives of the meeting	<i>Bastiaan Krosse(TNO) Joakim Svensson (VOLVO)</i>
09:30 – 10:00	Overview on the current status of the activities	<i>Joakim Svensson (VOLVO)</i>
10:00 – 10:20	H2020 WP216-2017 scoping and role of the WG in the recommendations input process	<i>Maxime Flament (ERTICO)</i>
10:20 – 10:45	Status of the activities per sub-WG	<i>Sub-working group Leaders</i>
10:45 – 11:00	Coffee Break	
11:00 – 12:30	Status of the activities per sub-WG Expectation and Objectives of the Automation WG for 2015 Contribution from EU Project to the sub-working group & Collaboration opportunities between EU projects	<i>Joakim Svensson (VOLVO) Bastiaan Krosse(TNO)</i>
12:30 – 13:30	Lunch	
13:30 - 14:30	European activities on regulatory aspects: presentation of the VRA activities on regulatory needs (D3.2.1)	<i>Presentation and discussion moderated by Maxime Flament (ERTICO)</i>
14:30 – 15:00	Review of the targets and actions for 2015	<i>Joakim Svensson (VOLVO) Bastiaan Krosse(TNO)</i>
15:00 – 15:30	Meeting plan in 2015	
15:30 – 16:00	Plan of 2015 European and international meetings (e.g. ITS World Congress in Bordeaux)	

1 Main contacts

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2 Minutes

The meeting starts with a round table presentation followed by presentation from Joakim Svensson.

The main objectives of the meeting are:

- Discuss harmonization and complementarity of inputs from sub-working groups and contribution from European Projects
- Report and discussion on latest meeting of the trilateral WG in Tokyo – present the master document
- Present the current work on regulatory issues and discuss next steps
- Expectation and plan of the activities in 2015

An overview of the current status of the activities is provided by Joakim Svensson on the following points.

Bastian Krosse is introduced to the audience as the new co-chair of the Automation WG.

The recommendation for H2020 (2016-2017 call) have been submitted to the European Commission: feedback from the EC is very positive.

ERTRAC task force provided a preliminary document (the version is expected in 2015 (Feb/March)). The topics discussed are complementary to those of the iMF Automation WG. The preliminary document circulated by ERTRAC is structured in the following chapters:

3 - Scope and objectives

4 - Common definition

5 - EU and International Situation

- Actions beyond the EU
- EU member states initiatives
- EU Platform Activities

6 - Key challenges and objectives (contribution to CLEPA)

7 – Roadmap

Several contributions are taken from the iMobility Forum and this should be referred in the document provided by ERTRAC. Joakim underlines the importance of having a common view towards the developments of automated. Input from WG should be acknowledged by ERTRAC: it needs to be mentioned in some way. Each figure should have a reference to iMobility, when it is the case. The final version of the document should be send around in the WG

Introduction to international collaboration

Regarding the International Collaboration the following points are discussed:

- Bibendum Challenge: the workshop reached an agreement on different paths for the deployment of Automated Vehicles
- SIP Tokyo:
 - the workshop was followed with different break-out sessions.
 - around 25 million \$ per year have been allocated. This is the first time that cross discussion on transport is on-going in a coordinated way between different Ministries and industry.
 - Each OEM has planned its own demonstrator at own cost.
 - For Digital Infrastructure DRM is now involved. Digital Infrastructure was mentioned 18 months ago and is picking up in speed in both US and EU. They are interested in international collaboration between US and JPN. It is good to have a match with the sub-working group.
- 3AWG
 - USA roadmap has been published
<http://www.its.dot.gov/strategicplan/index.html>
The US they have compiled a technology timeline (currently a draft not for distribution)
 - A Master document structure has been drafted by Maxime Flament and it will be used in order to consolidate the discussion held during the meeting.
 - The organisation of the WG has been discussed considering the following members:
 - Co-chair
 - Facilitators
 - Technical Experts (on invitation)

The list of the contributors with contact details will be inserted in the master document so this is clearer.

- Collaboration plans are reported in the plan session. The structure of the document has been discussed the previous meeting.
- Digital infrastructure. There is a good alignment with US and JAPAN. There was a very good discussion in order to consider the “Benefits and impact next step”. In MG 3.6 RIA ATS proposal methodology for impact analysis will be proposed.
Inputs could be received from Adaptive and AutoNet2030. US representative want to give more input to the ADASIS Forum for the electronic horizon. Some activities are running in CityMobil2.
It is relevant to keep the momentum with Japan.
Michel Parent mentions also the importance of the physical Infrastructure could be discussed also in collaboration with urban planners. Stephan Dreher has left HERE and Maxime Flament is currently leading the sub-working group on Digital Infrastructure but needs support.

H2020 WP216-2017 scoping and role of the WG in the recommendations input process (by Maxime Flament)

(Flament VRA WP2 WP2016-2017.pptx)

The main topics discussed were:

- 1) H2020 Societal Challenge: “Smart, green and integrated transport”: policy context, Transport context and broader context
- 2) Expected contribution from the program
- 3) Overview of the main areas

SMART, GREEN & INTEGRATED TRANSPORT		1. Resource efficient transport that respects the environment	2. Better mobility, less congestion, more safety & security	3. Global leadership for the European transport industry	4. Socio-economic & behavioural research & forward looking activities for policy making	
Aviation	1 AREAS / ACTIVITIES ↓	1.1. Cleaner & quieter aircraft, vehicles & vessels	2.1. Reduction of traffic congestion	3.1. Next generation of transport means	4.1. Data, models & scenarios	
Rail						
Road		1.2. Smart equipment, infrastructures & services	2.2. Mobility of people & freight	3.2. Smart control systems	4.2. User needs & behaviour	
Waterborne						
Urban						
Integrated Cross-modal		Logistics	1.3. Improving transport & mobility in urban areas	2.3. New concepts of freight transport & logistics	3.3. Advanced production processes	4.3. Transport economics
		ITS				
		Infrastructure				
Socio-economics				2.4. Reducing accident rates & fatal casualties & improving security	3.4. Exploring entirely new transport concepts	4.4. Policy support

- 4) Automated Road Transport – The New Frontier
- 5) Automated Transport Challenges

Presentation of the status of each Working Group

iMF AWG Roadworthiness (by Alvaro Arrue)

- 1) iMF AWG Roadworthiness summary (by Alvaro Arrue) (iMF AWG Roadworthiness summary.pptx)
 - Discussion on the output of the WG:
 - Topic list regarding standards and testing needs
 - Main technical challenges identification
 - Recommendation for the EC – H2020 (2016-2017)
- 2) Challenges & Needs identified
 - Standardisation
 - Certification
- 3) Recommendations and challenges to be addressed in H2020

During the discussion some actions have been proposed. More involvement from external partners is needed: for instance RDW, DEKRA, (DLR, IKA as VRA partners) (for 2015, try to get a bigger part of the community). PP29 involvement is interesting, but not easy. The countries are more oriented to stick to scheme of the 1958 agreement: if one component is tested and admitted in one country, then also to be used in others. This would lead to maximum harmonization. An extension of the 1958 principle would be needed, or a totally new framework. Communication is excluded in that discussion (only on vehicle level) (e.g. discussion on E-Call). How this influences the harmonization and changes in legislation on EU level is very important and the topic for a workshop on testing methodology in 2015.

Connectivity (Lytrivis Panagiotis)

Slides on the status of the group are presented (iMF_WG_AUT_V2X_status_v0.1.ppt).

- Several physical meeting (& virtual) meetings since the establishment of the sub-groups.
- The main outcome so far:
 - 2 pager available incl. definition, vision, subtopics of interest, possible collaboration with EU-US-Japan, relevant stakeholders etc.
 - Recommendations for WP 2016-2017 regarding connectivity
- The next steps are:
 - Clarify the target of the sub-groups within the next period
 - Harmonise our work with other sub-groups (check for interdependencies)
 - Integrate/consider inputs from ongoing EC Projects (iGAME, AutoNet2030, AdaptIVE) or worldwide activities (mainly US and Japan)

Relatively good input could be to get from the different EU projects. There could be the possibility of a workshop in the last week of March (27-28/03) in 2015 in Helmond (together with plug test and i-GAME meeting was suggested). It could be interesting also from the perspective that many of suppliers will be there. Most important step is to come to a joint result (what are the next steps, needs for V2X in relation to automation) of AdaptIVE, Autonet2030 and iGAME.

Maxime Flament comments that the group should focus on the aspects related to the automation focusing on the Activity of Adaptive (for instance for the scenarios they have identified and the requirements, e.g. latency, etc...). Specific requirements related to the use of maps and additional kind of messages should be considered.

Human Factors (Nick Reed)

Nick Reed illustrates the status of the WG. The activity of HF Auto is mentioned as source for the activity of the group. The current document on the status of the WG should be refined and updated. The different levels of automation are taken into account:

Level 2 and 3 transition control: how does it change the driver behaviour?

Level 4 and 5: driver tasks are more fully automated – benefits of automated transport.

The next steps will be focused on collecting input from other projects that are currently running. Maxime Flament also suggests to HMI WG of IMobility Forum

Deployment Path (Joakim Svensson)

The following points are mentioned:

- Activity in collaboration with ERTRAC/EUCAR
- The input discussed during the 3AWG
- The Next steps mainly focused on:
 - Figures to show uptake speed.
 - Specific meeting, Polis, FEHL etc.
 - Intersection

For Urban Environment a more close interaction with cities, for instance involving POLIS is foreseen.

Evaluation of benefits

The task leader is not participating to the meeting. The main point discussed is how to create a methodology and how to get input from. Bastiaan Krosse mentions the Dutch activity on this point.

The sub-working group should submit a proposal, as it has been done in order to discuss the FESTA methodology. This could be inserted in the proposal MG3.6 in collaboration with VTT, Chalmers and IKA.

Digital Infrastructure (Maxime Flament)

The main current R&D needs (EU) have been illustrated:

- Create a Digital Infrastructure framework between public authorities and map providers including: Governance, Role and responsibilities, Roadmap towards a digital infrastructure and Regulations.
- Investigate impact/benefits of shift of investments between roadside furniture (post signs) and digital infrastructure.
- Define cloud-based spatial data infrastructure for highly automated driving
- Demonstrate applications using accurate mapping and precise localisation
- Demonstrate an “automated” map data feedback loop

Decision and Control Algorithms

The sub-working group leader didn't participate to the meeting.

2014: Main achievements

Mainly the following aspects are mentioned:

- Status of the WG (deployment path, result from the automation WG)
- EC Recommendation (H2020)
- Digital Infrastructure in the Trilateral WG

Activities for 2015

The sub-working group input should be consolidated by the producing some new input:

- 'White paper' which could be organised as a single message or separate contributions;
- US-JP-EU Collaboration: 'Master document';
- At the end of 2015 the Deliverables of the 2nd Period of the

The sub-working group content should be integrated by considering the following actions:

- Provide more Figures, numbers, references... to strengthen the message.
- Connect to results from different ongoing EU projects (concrete links to deliverables)

Table 1 summaries the main targets and the relevant actions discussed during the meeting.

Table 1: targets and actions for the sub-Working Group

Area	Target 2015	Action
Digital Infrastructure	Get input from ongoing EU projects. 3AWG Collaboration ISO	TBC
Roadworthiness	Input from relevant EU stakeholders (OEM , testing bodies, vehicle admission bodies)	1 day workshop with: TUC, UTAC, DECRA, DLR.
Human Factors	Consolidate result from EU projects Anchor result outside group	Adaptive SP3, HFAuto, Autonet 2030, Participate in Clepa, ERAPA, EURONCAP, ISO, traffic operators meetings?
Connectivity	Consolidate result from EU projects Consolidate with OEM, suppliers and ETSI	Input/workshop: EU (Adaptive, iGAME, Autonet2030) Meeting with ETSI,
Evaluation/Benefits/Impact	Consolidate results from project/US 3AWG Collaboration	Call 3.6 on methodology
Regulatory needs	List current regulatory concerns	Workshop (iMobility Legal, EUCAR, CLEPA, ACEA..):

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Deployment Paths	Figures to show uptake speed. Intersection/infrastructure	Review of existing reports+implementation roadmaps Meeting with Polis and Fehr
Control and Decision	TBC	TBC

European activities on regulatory aspects

The European activities on regulatory aspects of Automation are presented by Maxime Flament (ERT). The presentation is mainly based on the D3.2.1 “Regulatory needs and solutions for deployment of Vehicle and Road Automation (Draft1)” which report the activity carried out, during the first period of VRA, focusing on the identification of the relevant persons

Several current activities at European and national level are mentioned:

- Study SMART2010/0064 Definition of necessary vehicle and infrastructure systems for automated driving
- DG MOVE study on action 5.2 Liability aspects related to ITS applications
- iMobility forum Automation WG: Sub-WG on regulatory needs
- European Commission “Platform for the deployment of C-ITS in the EU”

For European MS, Germany, The Netherlands, United Kingdom, France, Sweden, Finland, Greece, Other EU member states are taken into account.

Other parts of the world United States, Japan, Singapore are mentioned along with International activities - UNECE, Standardisation (ISO, SAE) – and European and national projects:

- HaveIT, InteractIVe, SARTRE, COMPANION, Citymobil2 WP26, AdaptIVe Response4
- DRIVE Me (SE), HF Auto (NL), NL DAVI, FR ABV

The participants of the Workshop agreed on the possibility to organise a Work regulatory issues (see who will be involved). The topics of the Workshops should be discussed

A letter of support could be requested to the national authorities (e.g. the Dutch Ministry)

The target topics and the actions of the sub-WG on Decision and Control Algorithms should be completed along with the actions for the Digital Infrastructure group.

Events planned in 2015

- January: Phone meeting with sub-group leaders
 - Structure of 'white paper document'
 - Target and actions of each sub-group
- February: sub-working groups input from EU projects/Stakeholders.(alt. Workshop Brussels)
- Mars/April Physical meeting (Brussels):
 - Current input in in 3AWG master document
 - Finalise whitepaper document structure and review of action plan+ feedback from concerned stakeholders
 - VRA2 content
 - Plan additional meetings
- May: Phone meeting, follow actions.
- September:
 - Report (VRA) from each working group
 - Physical meeting: Report and whitepaper, ITS Bordeaux preparation
- October: Dissemination of results at ITS Bordeaux
- December (physical meeting)
 - Final 'whitepaper'
 - Plan 2016

The initiatives for the **ITS World Congress in Bordeaux** were discussed.

A series of session focused on the Trilateral Cooperation should be proposed.

Session 1: 90 Min

- Status and plan of activities in each region (US 2015-2019 plan, JP SIP, EU H2020)
- EU-US symposium outcome (DG RTD, US DOT)
- Summary of 3AWG and results

Session 2: 90 Min

- Digital infrastructure, short presentation: 10 min
- Connectivity/Security , short presentation: 10 min
- Panel discussion, 60 min

Session 3: 90 min

- Evaluation & benefits , short presentation: 10 min
- Human factors , short presentation: 10 min
- 'Roadworthiness' testing and certification , short presentation: 10 min
- Panel discussion

Session 4 (90 min): Deployment initiatives: UK, Sweden, US Truck platooning, SIP OEM (Toyota)

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Additional initiatives could be developed on the following topics:

- ITFVHA, Sunday :
 - Ask RB
- Session Digital infrastructure
 - Here, Continental
- Adaptive
- iGame/Autonet 2030
- Human factors :HF Auto /ADAPTIVE
- Regulatory issues: Response 4/CA DMV/IIHS/CityMobile 2
- Companigon/Peleton/US platooning (2 projects)