DOITS
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Working Group Meeting
citizenM - Amsterdam
2018.04.24

Attendees:

Name	*Company*
Sjef van Gool	Astrata
Dean Croke	Blockchain (BiT)
Jim Crawley	Haldex
Aleksandar Opacic	Microlise
Allan Herbert	Microlise
Peter Forsberg	Scania
Paul Verheijen	TomTom
Robin Fellows	TomTom
Arie van der Jagt	Transics
Peter Huysmans	Trimble
Jan Unander	UNIC AB
Marcus Berglund	Vehco
Uwe Muench	Verizon Connect
Peter Santén	AB Volvo

Objective with meeting

The meeting had the following action points:
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1) Get an understanding of BlockChain as phenomenon and audit BC in the context of DOITS mission
2) Propose action to enable "Handshake" between Truck/Trailer by exchanging VIN numbers over CAN
3) Wish list of issues to address
4) Discuss if DOITS can be established in a more formalized format.

1) Get an understanding of BlockChain as phenomenon and audit BlockChain in context of the DOITS mission.

Dean Croke from BiT was invited to give his views on what BlockChain's impact will be on the transport industry. (see enclosed presentation)

A clear note was made that BlockChain is still on the "Buzzword" level but that the interest is high from many large companies throughout the logistics chain.

The vision of BlockChain is to create ONE open distributed system built on the BC technology that will make data accessible to all actors that want to use the infrastructure.

The reality is that today quite a few companies utilize the technology to build their stand-alone solutions where Amazon stands out as having created probably one of the most advanced.

BlockChain is justified through its ability to prevent from manipulation of the data once it has been sent. This is true as the data encrypted is distributed to large number of servers. Hashtags are used to give a message it's identity and the number of alternative hashtag IDs are 1^{256}. This makes it hard to interpret and manipulate.

Advantages with BlockChain are that it will speed up payment and reduce the risk from manual interference that creates human errors and delays the process to carry out the "paperwork".

However, one quality risk is when generating the initial message that often is done by human interaction. A fault stays as a fault throughout the BlockChain if not corrected.

Data that is generated by a "machine" that can deliver trusted quality data is a reliable component in a BlockChain infrastructure.

However, is BlockChain a technology that is looking for its needs or where is it on its lifecycle?

There are other more specific offers like eCMR that also focus on making the paper handling within transportation more efficient.

Dean raised the question "Who creates demands for freight?" They should be setting the requirements on the transport companies that includes the truck and trailer as wells as containers.

Warehouse management was pointed out as companies that need data to improve their efficiency and their use cases and existing software have to be considered when implementing the BlockChain concept. Companies that are already looking into this are e.g. Maersk as well as IBM.

In this context DOITS ambition to create a handshake of VIN between trailer and truck is a good example of a suitable BlockChain function that also delivers value to the transport industry.

For more information on BlockChain see enclosed ppt. from Deans presentation.

2. Actions to enable "Handshake" between Truck/Trailer by exchanging VIN numbers over CAN

DOITS mission is to create a VIN handshake between the truck and the trailer over CAN *in both directions*.

The confirmation of the correct VIN handshake should be communicated to the driver as well as to the external parties involved in the specific transport. This is time sensitive information that is needed to avoid crucial mistakes.

If the trailer VIN is available on the EBS CAN, theoretically the driver could get the information directly from the trucks electronic system and have it displayed in the truck's electronic instrument cluster. But to reach fleet managers, a wireless channel in telematics unit is necessary and can be delivered either via the OEM's on board telematics unit or a telematics box fitted by an after market Fleet Management Solutions provider.

If the understanding is correct, already today Haldex, Wabco and Knorr-Bremse broadcast the trailer VIN number (or the number that is tapped into the field for the VIN number) via their EBS CAN to the truck.

The trailer VIN is therefore broadcasted on the EBS CAN to the truck but if there is not standardised (agreed) how this data will be captured and made available via the on-board FMS interface, the full time sensitive functionality cannot be achieved. Cloud based solutions like rFMS are not considered to be able to live up to the real-time requirements.

In a Mercedes-Benz press release of March 6:th 2018 they inform that in their "Mercedes-Benz Uptime" concept, data from the EBS system will now be available, se below. You find the full press release from Mercedes-Benz attached.

"With immediate effect Mercedes-Benz Uptime will also receive trailer information from the tractor unit via the conventional trailer socket, the pneumatics interfaces and communications interface (CAN-bus) and send it to the customer portal via the Truck Data Centre and the Mercedes-Benz Service server. The basic functionality can be depicted for a very high number of trailer variants. On the basis of the data shown in the customer portal the fleet manager is thus able to initiate repairs. In order to use this extended feature, customers do not have to invest in new hardware – the new services are automatically activated free of charge for Mercedes-Benz Uptime customers."

It is fair to presume that in the "Mercedes-Benz Uptime", as an additional feature the trailer VIN or the registered trailer IDs tapped into to the EBS system will be captured where it is available.

The challenge DOITS address is to make the truck/trailer VIN handshake to <u>support all fleet managers</u> independent of what truck or trailer brands they run or what Fleet Management Solution they prefer to use.

In an even wider perspective, all stakeholders involved in the transportation chain would benefit as it enables them to ensure the correct combination of trailer and truck for that transport as well as give the position and time stamp for connect /disconnect.

A challenge for an OPEN VIN – VIN handshake is that not all (Mercedes-Benz seem to have built their proprietary solution) truck manufacturers have implemented the functionality to deliver the trailer VIN via their FMS interface. An attempt to give an overview see enclosed ppt "Explanation VIN exchange situation".

A decision taken by ACEA FMS Standardisation Group HDEI on June 7;th 2017, is that the European heavy trucks will ask for the trailer VIN and deliver this data via a new *rFMS version*. However, it has been noted that rFMS might not deliver the information within the accepted time window.

ACEA FMS Standardisation Group HDEI has given DOITS the assignment to advise "what to ask?" and waits for our proposal.

That questions might already been answered as the ISO 11992-2 : RGE12, "*Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles,* regulates both trailer and truck VIN specifications.

DOITS (Data Openness In Transport Solutions) overall mission is to identify specific key data/ information areas that if harmonized by the truck and trailer manufacturers, will deliver a high

value for the end users but also support all commercial stakeholders to use this in their own product and service development processes.

DOITS focus on win-win initiatives as that is the only method that justifies openness and contribution willingness by the commercial companies that are needed to make a real change.

Important companies in this process are:
- EBS-suppliers
- Truck manufacturers
- Trailer manufacturers
- After Market Fleet Managements Solutions providers

Ideally there is an exact balance of interest between the parties that decide to support an initiative. In reality some have more to gain than others but all parties will identify own benefits when contributing to the improvement the transport industry's efficiency, safety and it's strive for reducing negative environmental impact.

Important in the process are the trailer manufacturers. Besides them being the customers of EBS systems they also have access to the EBS data and use this together with their trailer telematics units to strengthen their business cases.

In this context it is important to also to solve how *trailers will get the truck VIN* to enable trailer manufacturers to deliver the handshake information as well as for opening up for own product development.

During the meeting it was stressed that trailer manufacturers should attend at the DOITS meeting and to get their commitment to do so will be based on what benefits they will see.

Also the meetings would benefit from the participation of key players in the logistic industry to confirm that DOITS focus on issues that are of real importance fro this industry.

Actions

J Unander (JU) will intensify the dialogue with major Trailer manufacturers to make them willing to participate and contribute at the next DOITS meeting.

Truck OEM's Scania and Volvo committed themselves to check internally the prerequisites for fulfilling the steps needed to finalize the VIN handshake, in both directions, between truck and trailer. JU will follow up the results.

JU will contact major players in the logistics/ transportation industry to invite them to the next DOITS meeting.

3) Wish list of issues to address

JU have asked the participating companies to propose a wish list of issues that DOITS as group is suitable to harmonize. This can be e.g.:
- important individual data
- data consolidated into measures (similar to idling)
- functionality (exchange of truck/ trailer VIN)

Action
Participating members generate a list of prioritized issues and send to JU.

4) Discuss if DOITS can be established in a more formalized format.

At the meeting JU presented the situation of DOITS, how it is organised today and what the perceived challenges are to further improve the effect of the work done by the DOITS working group.

DOITS was initiated in 2012 when JU was hired on a part time consultancy contract, as Executive Director of Telematics Valley. In 2015 JU decided not to prolong the contract with Telematics Valley but was asked if UNIC AB (Ltd. company owned by JU) was prepared to continue to manage DOITS also after leaving Telematics Valley. This was accepted by JU.

To keep the continuity in the administration of the yearly DOITS membership fee, Telematics Valley has against a fee handled the invoicing process.

Telematics Valley has since 2015 changed strategy towards being a more Swedish national organisation and DOITS is perceived to be outside the scope.

At the meeting, JU presented a proposal to establish a not for profit organisation named DOITS based in the Netherlands. This organisation should be the umbrella for DOITS working group's activities and the main advantages would be an own well-defined identity that will be extremely valuable to e.g.:
- Approach companies /stakeholders that are essential to guarantee that the initiatives taken by DOITS working group are implemented
- Attract outside specialists to participate and feed the DOITS working group with essential knowledge
- Communicate DOITS achievements to make the initiative known and respected in the industry

Comments from the working group are:
- It is important that DOITS is defined as a neutral entity that organises the meetings and keeps up the momentum in the processes
- DOITS do not represent the participating companies brand names
- DOITS focus is on issues that include trucks, trailers ability to support the transport industry.

Action
JU will formulate a clear definition of DOITS with its vision, mission and operative responsibilities that will be distributed to the participating companies.

As the definition of DOITS has to be accepted by the working group before it can act as a fiscal entity, an agreement is made with Telematics Valley to administrate the invoice process for the yearly fees also for 2018.

A list of participators with their e-mail addresses were requested that is enclosed.

2018.05.07

Jan Unander