

DOITS

Working Group Meeting Hilton – Schiphol, Amsterdam 2023-11-14

Attendees:

Ulrika Allén	AddSecure
Jan Unander	DOITS (Moderator)
Lukasz Rozanski (On-line)	EU DG GROW
Jim Crawley	Haldex
Paul Pounder	Microlise
Alex Opacic	Microlise
Walter Gerling	Schmitz Cargobull
Jonas Jepson	Traton
Giovanni Cacciola	Trimble
Henrik Liske	Volvo
Tommy Rosgardt	Volvo
Neil Purves	Webfleet
Arie van der Jagt	ZF Transics

Objectives with meeting

The meeting had the following action points:

- 1) Data Act – “Access to vehicle data, functions and resources” – Report on progress since May 2023 and discussion on consequences for the vehicle manufacturers (trucks and trailers) and After Market Solutions Providers.
 - Participating On-line, Lukasz Rozanski, Legal Advisor DG GROW
- 2) Status of the situation for the Truck and Trailer VIN handshake.
- 3) Introduction of an initiative to enable tire manufacturers to harmonize/ standardise data exchange with the objective to reduce unplanned stops due to tire problems.
 - Presentation by Neil Purves - Bridgestone
- 4) Challenges and Opportunities using EV truck data.
 - Presentation by Ulrika Allén - Addsecure
 - Discussion how DOITS as a forum can act to improve usability of EV Truck generated data
- 5) Bodybuilder ID – Presentation of a vision to complement with data to vehicles/trailers that defines their functionality more in detail.
 - Presentation Tommy Rosgardt – AB Volvo

1. Data Act – “Access to vehicle data, functions and resources”.

Actually, since the last DOITS meeting there are no significant new decisions taken. However, there are currently no formal obstacles from the implementation of the Data Act and “Access to Data, Functions and Resources”.

The ambition is to have the amendment ready at the end of 2023.

A specific issue is the Amendment 818 – Type Approval regulation that is a crucial factor for the Data Holders, in DOITS perspective, the Truck and Trailer OEMs. This issue is to be addressed to take care of legal consequences.

Expected scope of the process is to access peoples data but with the responsibility from the Data Holder to respect the GDPR but still provide access to the data to 3:rd party players.

There is a different view on Raw data and Processed data where processed data in the vehicle is out of the scope. Also “Trouble codes and battery condition is outside the scope.

Not all data, but what will be included is data used to meet “EVERYTHING THAT IS AVAILABLE FOR THE OPERATIONS OF THE TRUCKS”.

Data holders do not have to share data that is building up an application.

Proposal will be a long list of requirements for access to functions and resources enabled by the manufacturers for themselves as well also to be shared to the 3:rd parties.

Vehicle manufacturers have to be transparent i.e. there is an obligation to reveal:

- What data
- Format
- Data function
- Ways to make this available

However, (See Data Act) there has be a limit to acquire ID from 3:rd parties.

Also, there is a limitation that vehicle manufacturers do not have to share functions that have implications on Safety, Security and Liability.

Manufacturers have to price the access to data, functions and resources.

The “Delegation” from the Commission can make a statement of WHAT MUST BE ENABLED TO THIRD PARTIES.

It will be a list, but the Commission will take Cost for supplying the access to data, functions and resources into considerations as well as the impact on Safety and Security.

A pragmatic view is used where the Commission will understand the impact of cost for the dataholders to generate the data, functions and resources.

Also, there is not justified to making access to data functions and resources available if there is no need from 3:rd parties.

Lead time: Manufacturers to adapt end of 2023.

It is also a question when the new Council will be operating as the election for the new Parliament has to be carried out.

There is a difference between Car and Truck Delegation and Trucks will come as a second step.

2. Status of the situation for the Truck and Trailer VIN handshake.

The updates from the 2 truck manufacturers are:

Traton – There is a decision taken within Traton to implement the function to pick up the Trailer VIN.

A pilot for general communication trailer/ truck is ongoing with ZF and the VIN will be a part of that. This will also support the function that the trailer picks up the Truck VIN.

No time schedule was presented.

Scania did a test to pick up Trailer VIN a couple of years ago and the challenge was not technical but the data in the VIN-field was too often non-standardised and therefore more or less useless.

Schmitz Cargobull did earlier a test in their system to estimate the quality of the data in their trailers EBS systems and their findings are:

- *37% have the correct 17 characters trailer VIN*
- *41% have the shortened 7 characters VIN*
- *22% have characters in the field for the VIN that has no connection to the standardised VIN at all*

Volvo – The ability to pick up Trailer VIN is already implemented.

Trailer VIN on the CAN can be picked up from the backend service platform. Decision is also taken that the trailer will be able to pick up the truck VIN but that is scheduled in time to fit in when an upgrade is made to the relevant electronic features and the plan is that this will be accomplished at latest 1 1/2 years from now.

The functionality will only be possible in new trucks.

There are some challenges with backward compatibility.

From ACEA rFMS perspective they have standardized how to transport this data:

Snapshot data

- - trailerNo
- - **trailerVin**
 - trailerIdentificationData - trailerType
 - **customerTrailerName**
 - trailerAxles
 - trailerAxlePosition
 - trailerAxleLoad
 - trailerAxleLoadSum

Triggers

- - **TRAILER_CONNECTED**
- - **TRAILER_DISCONNECTED**

These are all O – Optional and if and when this will be Mandatory to provide the data amongst the truck manufacturers, is still to be seen.

There was a dialogue on the ACEA rFMS process in general and besides being a slow process rFMS is the tool that exist and something that should be expanded.

Questions around the ability to deliver “real time” data due to that the data has to be transported to the cloud and back again minimizes the use for real time critical applications.

However, the term “real time” is illusive as it can mean 1 ms or 1 hour due to the application.

Handshake of VIN business case

It was pointed out during the meeting that the internal priorities within truck and trailer OEMs (or all companies) are based on calculating business cases and the handshake of VIN competes with other proposals.

However, the situation is that In 2021, road tractors and semi-trailers accounted for more than three quarters (77.8 %) of EU road freight transport measured in tonne-kilometres, while in vehicle-kilometres they accounted for nearly two thirds (65.1 %).*

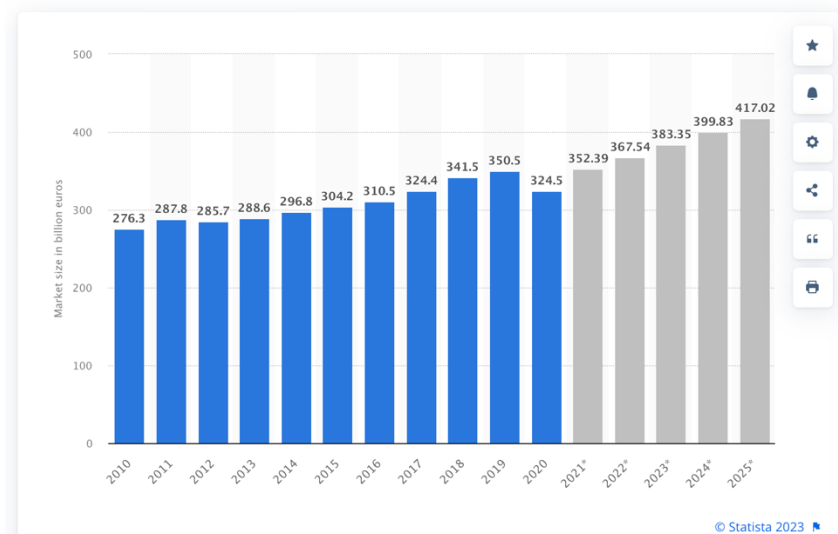
*Source Eurostat

Therefore, making sure that transport of goods on semitrailers is done in a safe, secure, and of course efficient way, have to be a fundamental task for all actors in the transport ECO-system.

How logistic planning systems, transport companies, trucks and trailers interact to handle the flow of goods is decisive for the outcome.

Size of the road freight market in Europe from 2010 to 2025

(in billion euros)



We don't know the total potential of building functionalities where the correct truck and trailer VIN is needed, or can make a significant difference, but to put everything into context we need to look at the total value of transported goods that is estimated to almost 400 billion EUROS per year where around 2/3 of the transports are made by tractor/semitrailer.

Gross profit equals revenues – cost and profitability within the transport sector is extremely tight. All ways of reducing cost will be appreciated as it hits the “last row” in the balance sheet.

We can create an opportunity to improve the efficiency in the transport sector through a rather low-cost investment (but hard to prove obvious business case) with the handshake of VIN between truck and trailer.

A document was produced earlier by DOITS, provided to the truck OEMs as input to their decision of prioritizing the implementation of truck/ trailer handshake – both directions and the following use cases were mentioned as examples:

Security

- 1) Truck VIN to trailer - Thieves use trucks to steal trailers and if there is no confirmation that the truck and trailer is paired correct, e.g. a function can be initiated to block the brakes if wrong truck VIN is trying to connect to the trailer. Even if not all thefts can be avoided, a solution would reduce the number of successful thefts. There are many examples of stolen trailers as described on : <https://www.allynintl.com/en/news-publications/entry/european-cargo-thefts-becoming-more-sophisticated>
- 2) Trailer pooling services based on a commercial agreement should specify the truck and trailer VIN and enable a confirmed, standardised handshake between the two vehicles at the pick-up to ensure that no criminal action is taken to steal the semitrailer.

- 3) TIP that lease and rent out trailers has stressed that their customers are asking for the correct Truck VIN to the trailer as they want a reliable standardised unique ID to keep control of their trailers.
- 4) In the UK the Fleet companies do not accept servicing vehicles if they cannot supply the correct VIN number.

The list of use cases on security can be made longer and will be so when the function is implemented.

Besides the security functions also efficiency related challenges can be addressed.

- 5) Trailer VIN to truck - IKEA were invited to join a DOITS meeting and explained their situation with high demands on accuracy of ETA at the stores and the challenges to keep track of their goods as a trailer could change towing truck and transport company on its way to the store. Losing control of where their goods and who tows it causes manual processes to keep up the logistic efficiency.
- 6) The fundamental issue that the truck picks up the wrong trailer still applies and a handshake between trailer truck would minimize this problem.
- 7) Trailer and truck VIN handshake both ways - TIP is also an independent full-service lessor for trailers, trucks and EVs and invest in their own leasing fleet and provide value-added services to customers (compliance, maintenance, digital, roadside etc) beyond financing. This means that they need to have control over the pairing of trailers and trucks to serve fleet operators better by continuously improving fleet uptime, breakdown avoidance, and overall TCO.

A prerequisite for a secure and reliable function is that the exchange of the VIN numbers should be carried out through the existing CAN bus network.

CONCLUSION

The full potential of creating the VIN handshake will be revealed when the transport companies can access and trust that the data is 100% correct.

3. De-facto standard, Tire communication

Presented by Neil Purves – Bridgestone. (see enclosed ppt presentation)

There is a figure, not statistically proved but used in the industry, that around 70% of all unplanned stops in the transport industry is caused by tire problems.

Often a tire damage is connected to an object (nail etc.) that cause the leakage and the tire pressure will go down slowly. It can take days or even weeks until the problem is observed.

Bridgestone wants to find a way to give more information to the driver, fleet operators and the society to reduce the unplanned stops.

There is enough information generated from the tire that can be collected to prevent most unplanned tire maintenance.

The human behavior is often the problem when the driver ignore the warning-lamp and waits until it is too late to avoid down-time.

Trailers TCAN is not reliable, so it is important to find other ways to transmit the trailer data to reach the complete ECO-system that besides the transport companies are key actors amongst the truck and trailer OEMs, Brake and Tire suppliers.

Most important is to identify “slow leakage” as that will solve most of the problems and the trailers are major cause of tire problems. That is also where most blow outs happen.

The difference in cost for a transport company if it can, by using TPMS, plan a stop to repair a tire is 10 folded. A figure used is that a planned stop cost €60 and an unplanned €600.

There is a standardisation process on-going but those processes tend to be slow in the implementation. Therefore, a proposal is made to create a de-facto standard that will involve the key actors in the ECO system that will agree on fundamentals that will start up the process.

VDA is involved in the process and have a TPMS as well as a CA group addressing this issue. There is also a team that work towards ISO to get the standardization specified and accepted.

To reach this de-facto standard there are hurdles to pass and the major issue is to find a consensus on what is good for the transport companies will be an opportunity for all actors in the ECO-system and competition will be based on the company that can make the best offer will be the winner.

Bridgestone has a dialogue with Jan Unander on a plan to initiate the process and start up the momentum to create commitment from the key players to support the initiative and work towards a de-facto standard necessary to reach the vision.

4. Challenges and Opportunities using EV truck data.

Ulrika Allén from AddSecure presented findings from the survey “Key Challenges for Commercial Fleets in the Transition to Electric Vehicles”. (see enclosed)

The OEMs gave their picture of how they have to adapt to new technical prerequisites coming from solving problems in previous versions of their EV trucks as well as using new technical solutions to improve next version.

The consequence is that there are no initiatives to standardise data definitions or how to access it yet. A general perception amongst OEMs was that accessing data from their EV trucks was maybe not useful as they produce that low volume yet and specifications changes continuously.

At the last DOITS meeting in May 2023 a report was made on the status of ACEA's HDEI working groups (**Heavy Duty Electronic Interfaced**) work connected to EVs. A copy of the reply is enclosed to this report. Please note that all parameters are Optional.

One important factor is that the rFMS is based on a Q&A version "Pull data" but the future ambitions are towards a "Push" version where request of data is specified and pushed out to users according to an agreement. A Push solution will off-load the data-load on the electronic system that is one reason for this ambition.

However, the response from the After Market Service Providers was that they need to learn how to work with EV-data and do understand that it is not possible to deliver accurate and reliable values yet especially cross brands and what data that will be available and how it is specified will change over time.

Action

It was decided that the After Market Service Providers will make a wish list of 4 (four) parameters they consider important and want to start to work with bearing in mind no responsibilities from the OEMs as regards the outcome of using the data.

Jan Unander will coordinate the wishes from the After Market Service Providers to create a priority list and provide the OEMs with this request. The OEMs will review the request and respond if and how this request can be met.

5. Bodybuilder ID – Presentation of a vision to complement with data to vehicles/trailers that defines their functionality more in detail.

Presented by Tommy Rosgardt, Volvo

Examples are refrigeration units or tail lifts.

The use cases are many besides allocating the right equipment for the job also maintenance planning would benefit from a more precise definition of the "body".

To have the equipment ID attached to the trailer or truck will be a great benefit for digital services, which will give customer benefits.

There are already equipment suppliers that provide this data but the vast majority do not.

There are a number of ID features that needs to be considered in the DIN 4630 work

- Unique ID
- Type
- Features

- Etc.

Where to add the data was discussed – It needs to be explicit IDs for the different units. But to handle the relations could it be combined in the 17-character VIN number?

In the extension also data on how the equipment is used would be useful e.g. up/down movements of the tail lift.

2023.11.27

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