

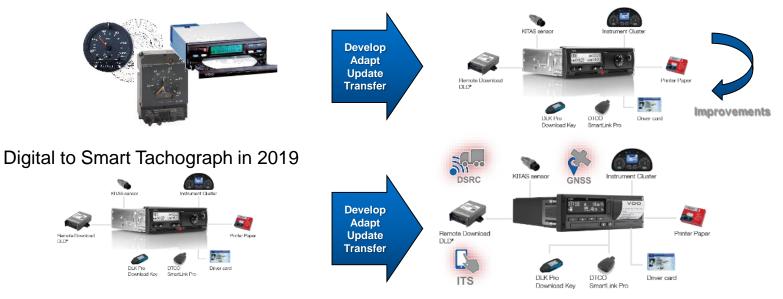
Smart Tachograph – The New Tachograph Generation Transition and the Tachograph manufacturer's approach to it

IRU and CORTE Meeting in Brussels on 7th of February 2018

by Egon Warkentin

Introduction of the new tachograph generation Historical development of the tachograph system

- > The tachograph business is currently passing through the second loop of generation change:
 - > Analogue to Digital Tachograph in 2006



- The new technologies to be implemented in the tachograph system are a challenge but also an opportunity for all stakeholders
- A successful introduction of the new generation will be made possible through close collaboration between stakeholders and can be used as a blueprint for future projects, e.g. On-Board Weighing System

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Areas affected by Transition towards Smart Tachograph Tachograph as a part of an interlocked system



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Areas affected by Transition towards Smart Tachograph Equipment, Stakeholder and Processes

	Fleet Operator	 Knowledge Software based tools to administrate the Tachograph data
	Enforcer	 Knowledge Software based tools to administrate the Tachograph data New equipment (e.g. DSRC* Reader)
	Driver	 Knowledge Software based tools to administrate the Tachograph data
	Workshop	 Calibration Equipment GNSS* Unit (Verification of the functionality) DSRC* Unit (Verification of the functionality) Sealing Distribution*
	Cards	 All types of the cards are affected Security related improvements New data structure
	Vehicle	 Vehicle Unit (Security related & technological improvements) Motion Sensor (Security related & technological improvements) GNSS* Unit (Positioning) & DSRC* Unit (Remote Enforcement) ITS Interface* & On-Board Weighing Interface*
* addition to already known or existing	g elements	



Areas of activity for a Tachograph Manufacturer Some examples for the areas of activity

Fleet Operator	 Download equipment adaptation Consultancy on legal compliance Updates for the software based tools to administrate the Tachograph data and data related services
Enforcer	 Trainings as part of knowledge transfer process Equipment adaptation or sourcing Updates for the software based tools to administrate the Tachograph data and data related services
Driver	 Trainings as part of knowledge transfer process Download equipment adaptation Consultancy on legal compliance
Workshop	 Maintenance equipment adaptation or sourcing Trainings as part of knowledge transfer process Spare parts supply chain validation
Vehicle	 Vehicle Unit validation Motion Sensor validation GNSS Unit & DSRC Unit installation ITS Interface & On-Board Weighing Interface implementation



Areas of activity for a Tachograph Manufacturer Detailed examples for the areas of activity

> VEHICLE UNIT

- Security improvements:
 - Improvements on hardware and software
 - Implementation of the new tampering measures
 - Interoperability between the generations

> New interfaces:

- Interoperability between communication partners -> standardisation
- Verification of the functionality (DSRC & GNSS in WS)
- Implementation into the vehicle architecture

MOTION SENSOR

- Security improvements:
 - Improvements on hardware and software
 - Implementation of the new tampering measures
 - Interoperability between VU manufacturers
 - Interoperability between the generations
 - Adaptations due to new requirements for sealing

MANAGED SERVICES

- > New data structure
 - Update of the download and analysis tools
- Additional data due to the new interfaces
 - Implementation of the new services
 - Adaptation or improvement of the existing services



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Thank you for your attention!



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