



Project of EU Legislation on On-board weighing equipment

Bernardo MARTÍNEZ
Road Transport Unit (DGMOVE)
bernardo.martinez@ec.europa.eu



Legal framework

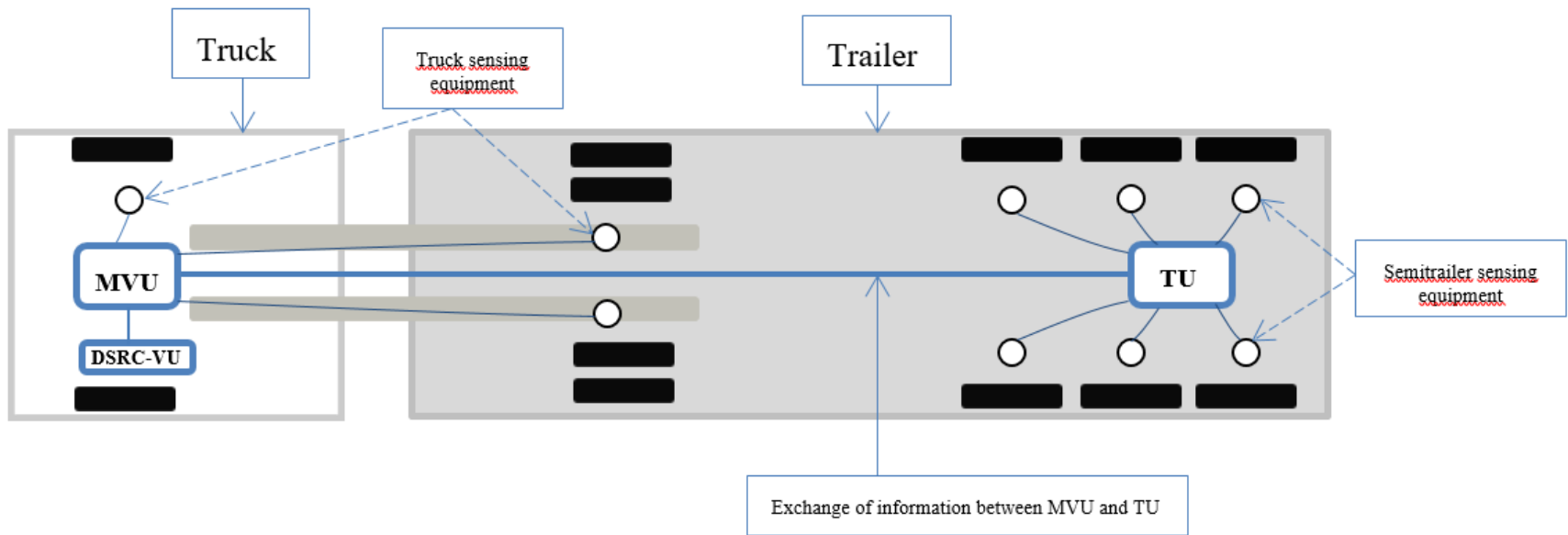
Directive (EU) 2015/719, amending Directive 96/53/EC on weights and dimensions

- By 27 May 2021, Member States must take measures to identify trucks or buses which may have exceeded the maximum authorized weight... → Preselection
- Choices: on-board weighing equipment or weigh-in-motion
- Axle weight is optional
- Empowerment to the Commission to adopt

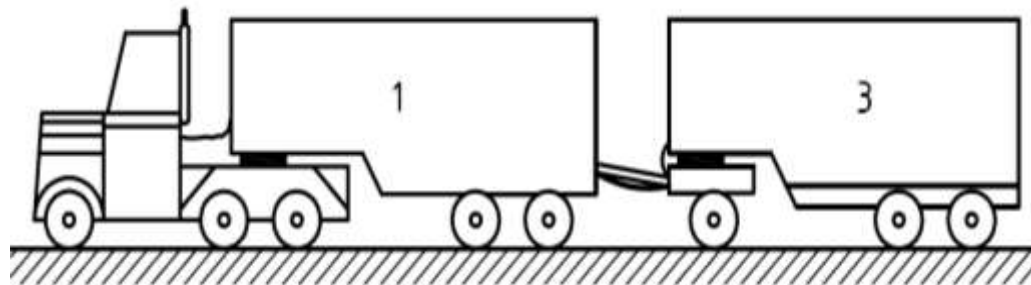
Goals set out in the Directive

- Interoperability: information readable by competent authorities from all EU Member States. Communication based on DSRC standards
- Compatibility: all vehicles of the vehicle combination **"speak"** the same language
- Reliable: secured system (tamper-proof)
- Accurate: medium accuracy (5%)

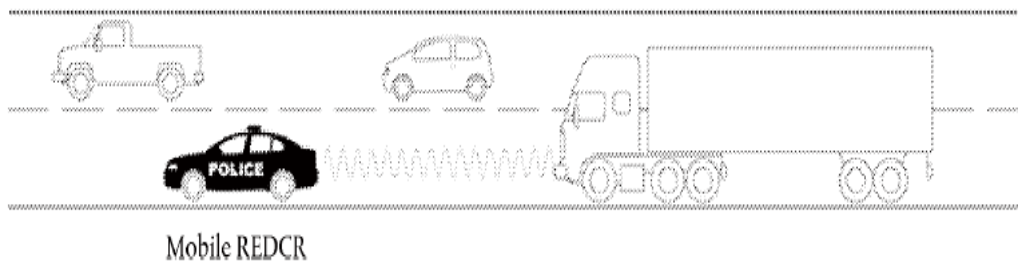
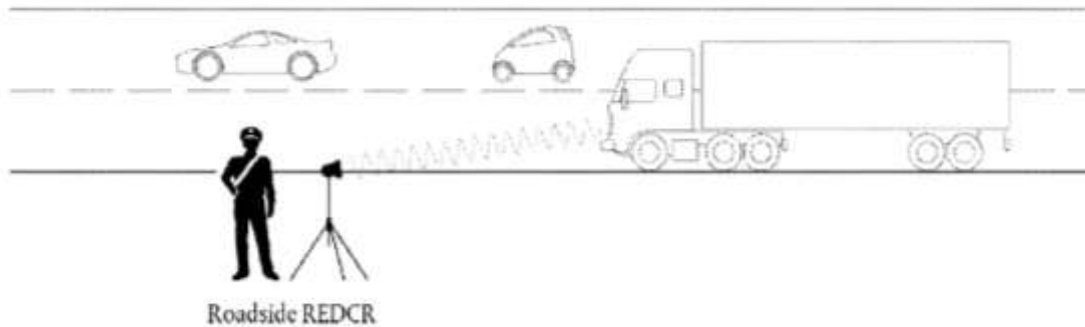
Layout: example truck-semitrailer



Different possible configurations



Two communication profiles



Information to be sent to authorities

Total weight of the vehicle

Time recorded total weight

Axle weight (up to 10 axles)

Date last two inspections motor vehicle OBW

Date last two inspections of max. two trailers

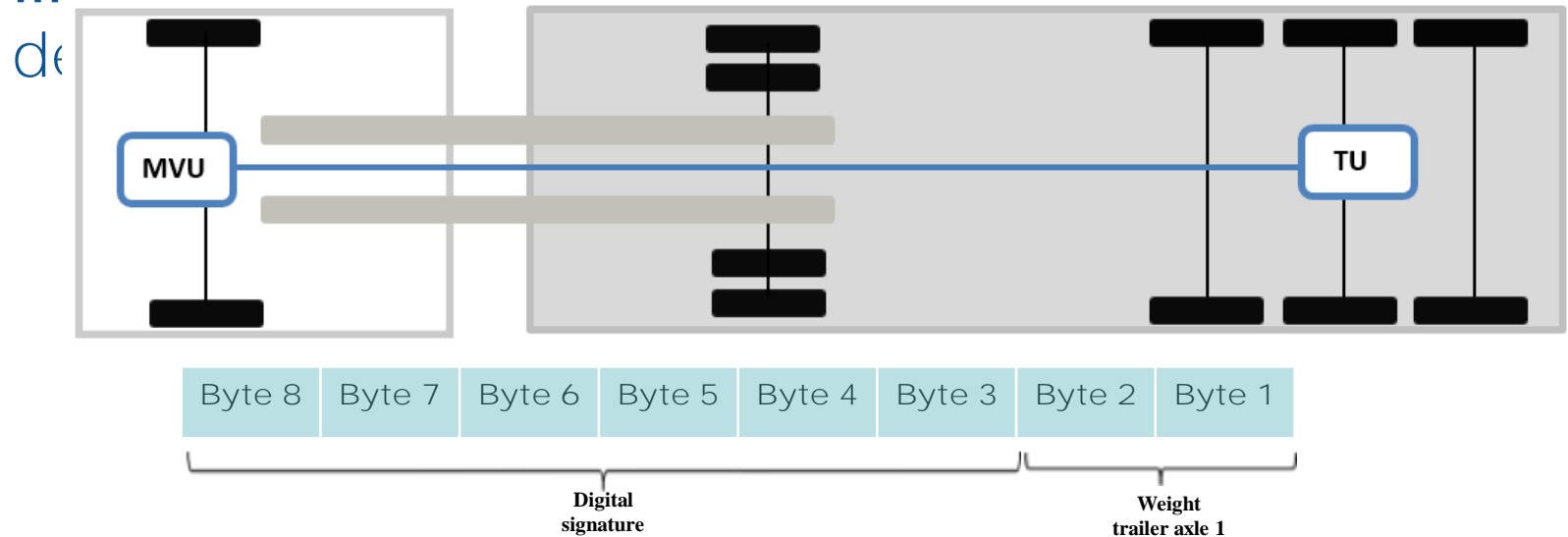
Communication error

Security breach attempt

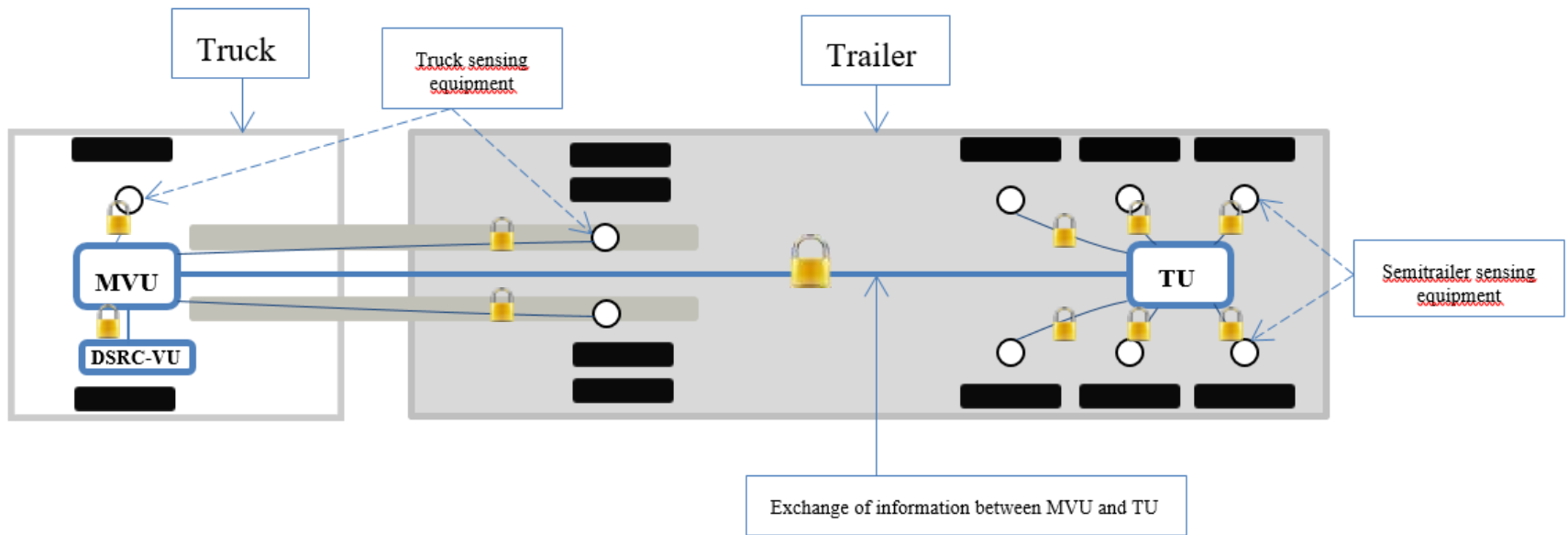
Power supply interruption

Data transmission

- CAN – based (ISO 11992)
- Complemented with specific messages
 - Total weight and axle weight
 - Communication errors
 - Security breach attempts
- ...and secured (protection against fake

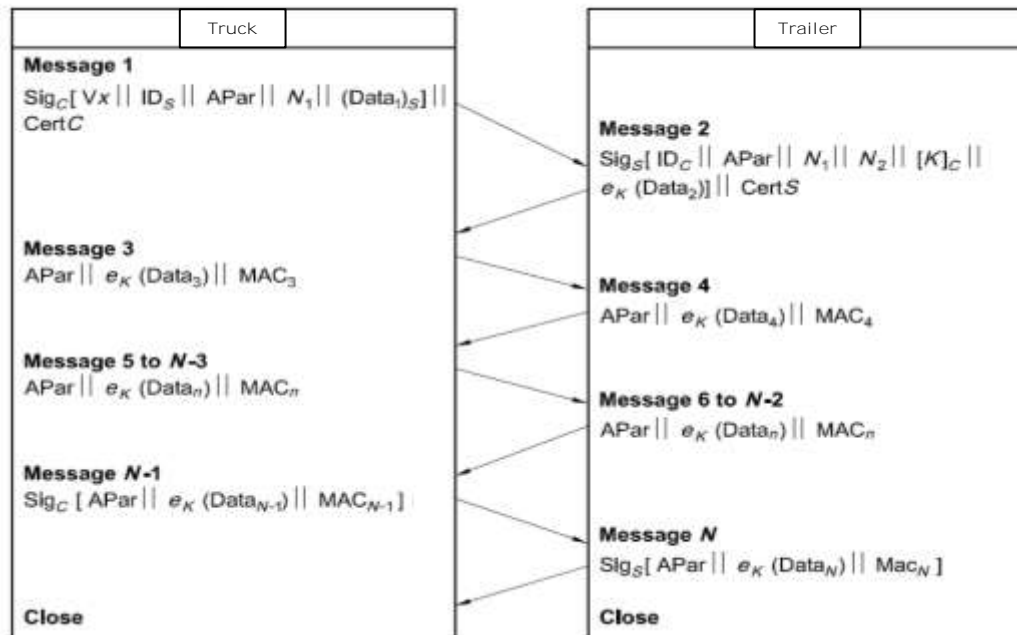


What to secure?

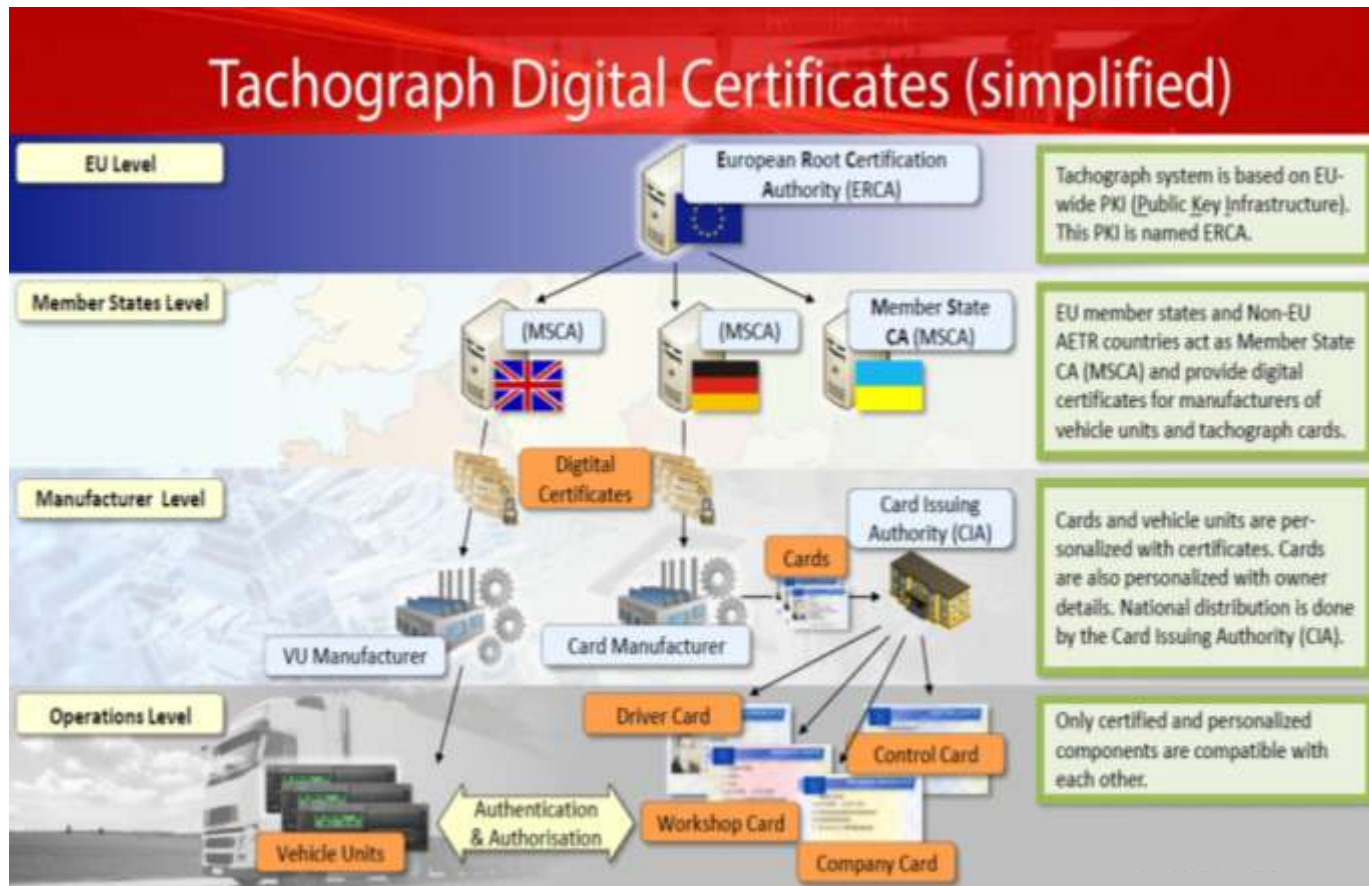


Truck-trailer secured communication

Mutual authentication and exchange of information in accordance with ISO 15764



Pyramid of trust



Additional threats

- Environmental attacks (electromagnetic)
- Hardware or software modification
- Interruption or reduction of the power supply
- Gain knowledge about the keys being used to secure the information
- Modify stored data

MVU, TU and sensors will have to be security-certified against the Common Criteria Scheme

Obligations for Member States

- Authorise workshops for technical checks (systems to be checked every two years)
- Publish list of workshops
- Set up the infrastructure for electronic certificates
- Publish list of manufacturers having received a digital certificate

Next steps

- Discussion in the group of experts on on-board weighing equipment until mid-may
- Adoption in the Road Transport Committee
- Publication: Q3-Q4 2018



Thank you