



# Memorandum of Understanding

## EU Commission – UNECE

### History, Status and Perspectives

## Some historical aspects



Back in 2008, in view of the forthcoming deployment of the digital tachograph on vehicles involved in international journeys on the territories of UNECE AETR (European Agreement Concerning the Work of Crews of Vehicles engaged in International Road Transport), it was necessary to establish a Memorandum of Understanding in order to formally identify:

- the root certification authorities for non-EU AETR countries;
- the procedures for identifying national authorities in non-EU AETR countries and subsequent national European Root Certification Authority (ERCA) policy approval plus regular auditing;
- the laboratory for interoperability certification for non-EU AETR countries.

The MoU entered into force in January 2009.

The MoU is established between UNECE, DG MOVE and the JRC.

With the MoU, the UNECE recognizes the JRC as the AETR Authority for Root Certification and for interoperability certification for the non-EU Contracting Parties to the AETR.

## Current Status



In total, 49 countries are currently using or finalizing the implementation of the digital tachograph: the 27 EU countries and 22 non-EU AETR countries (last national authority identified: Uzbekistan).

Georgia is preparing for identification.

Until now, there has been no signs from Turkmenistan.

Potentially, three ERCA policies have still to be approved (Uzbekistan, Georgia and Turkmenistan).

Leaving apart these few remaining authorities to be identified, the work carried by the JRC for the non-EU AETR countries is identical to that provided to EU countries, notably:

- ERCA signing sessions for initial or renewal of national certificates;
- Follow-up and verification of national authorities audit;
- Interoperability certification of new tachograph equipment;
- Maintenance of the database with national authorities details

The MoU expires the 30 June 2012, and the parties agreed to continue working together until a new agreement is settled.





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Class	Chip	Master File Size (bytes)				Security Certificate	Answer To Reset	Id.	
		DRC	WSC	CTC	COC				
A	A0	Infineon SLE66CX322P	24959	26646	24559	24487	DCSSI-2003/12	3B 97 13 C0 FF B1 FE 35 1F 83 A5	00
	A1		11411	11088	11219	11147		05 01 01 02 A3 01 5D	1A
	A2		24959	26646	24559	24487	M-2006/04	3B 97 11 C0 FF B1 FE 35 1F 83 A5	
	A3	Infineon	11411	11088	11219	11147	DCSSI-2007/20	3B 97 95 C0 2A 31 FE 35 D0 00 48	00
	A4	SLE66CX360P E	24959	26646	24559	24487			01 05 A3 11 3C
B	B0	Philips P8WE5032	23671	23601	23915	23889	BSI-DSZ-ITSEC-0172-2003 BSI-DSZ-ITSEC-0287-2005-MA-01	3B BB 18 00 C0 3E 31 FE 65 47 26	04
	B1	ATMEL AT90SC24036 RCU Rév. B	24906	29061	24348	24348	NSCIB-CC-09-11192-CR ANSSI-2009/24	44 20 54 53 4D 20 31 2E 30 B7	35
C	C1	Philips P16WX064V0 C	24959	29061	24559	24487	BSI-DSZ-ITSEC-0267-2004	3B DF 94 FF C0 80 B1 FE 45 1F 03	04 39
	C2						BSI-DSZ-ITSEC-0267-2004-MA-01	00 6A D2 76 00 00 28 04 15 FE 10	
	C3	Philips SmartMX P5CC036V1D					BSI-DSZ-CC-0358-2006	03 00 90 00 68	
	C4	NXP SmartMX P5CC037V0A					BSI-DSZ-CC-0661-2011	3B DF 94 FF C0 80 B1 FE 45 1F 03	
D	D0	Infineon SLE66CX322P	11411	11088	11219	11147	BSI-DSZ-CC-0242-2004	00 6A D2 76 00 00 28 04 15 FA 10	04
	D1		20001	20023	19959	19887	BSI-DSZ-CC-0272-2004	04 00 90 00 6B	02
							3B DD 18 FF C0 80 B1 FE 45 1F C3		
							00 68 D2 76 00 00 28 04 04 71 00		
							90 00 A9		
							3B DD 18 FF C0 80 B1 FE 45 1F C3		
							00 68 D2 76 00 00 28 04 09 71 00		
							90 00 A4		
							3B 9A 96 C0 80 31 FE 7D 00 64 05	06	
							7B 01 01 31 80 90 00 C5	7B	
							3B 9A 96 C0 10 31 FE 5D 00 64 05	05	
							7B 01 02 31 80 90 00 76	7B	

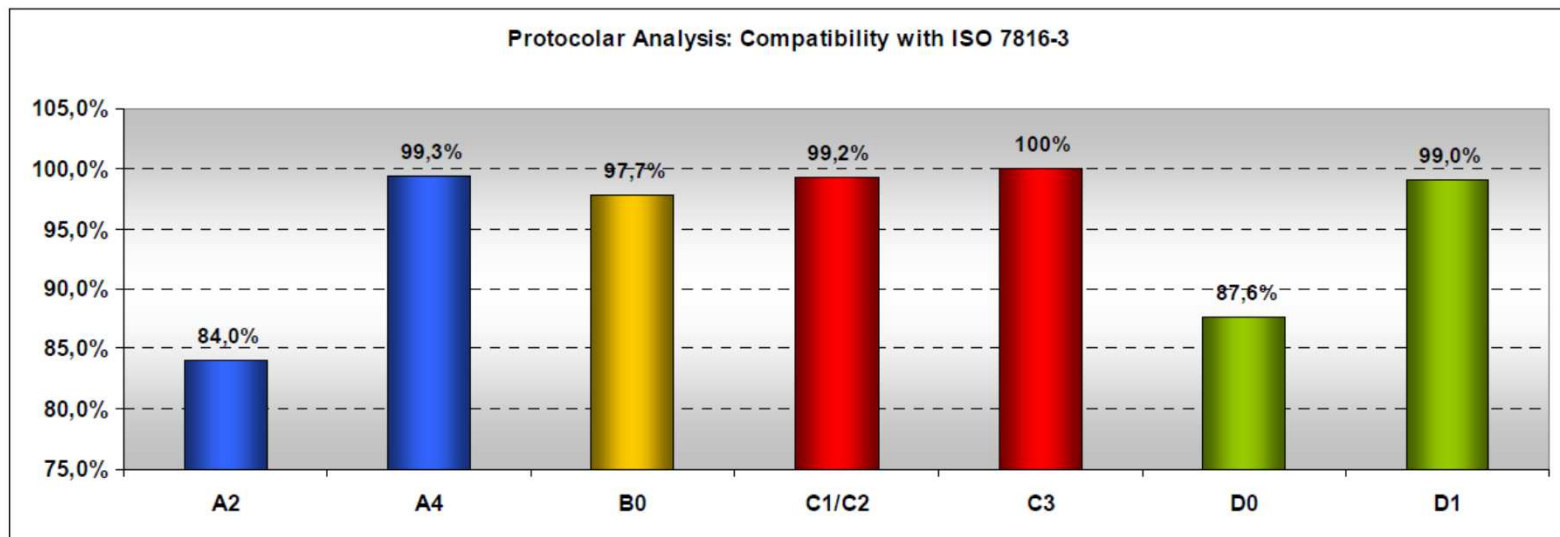
## Interoperability Process (DT Cards & VUs)

- ***Preliminary phase - step 1 of 3***
  - Request from Industry (following web guidelines [http://dtc.jrc.ec.europa.eu/interoperability\\_laboratory.html](http://dtc.jrc.ec.europa.eu/interoperability_laboratory.html))
  - Preparation of the draft Service Contract between JRC and the Contractor
  - Signature of the Contract
  - Reception by DTLab of the specimen to be tested, 5 set of cards (driver, workshop, control and company) or 4 Vehicle Units, and a copy of the Security and Functional certificates
  - Recording of the test request on the DTC web site (*Requirement 280*); [http://dtc.jrc.ec.europa.eu/test\\_requests.html](http://dtc.jrc.ec.europa.eu/test_requests.html)

- ***Test Phases - step 2 of 3 (for DT cards)***

- **Technical reception**

- Check of the Class/Type of Digital Tachograph card (DTLab classification). If necessary creation of a new entry.
- Check of the compatibility with ISO 7816-3 (Protocolar and electrical);
- Personalisation cross check (mutual authentication);
- Initial download of the DT cards.



- **Test Phases - step 2 of 3** (for DT cards)(continue)
  - **Interoperability**
    - Calibration of the FOUR recorders constituting the set of reference and pairing with the TWO types of motion sensors available on the market;
    - Simulation, on each recorder, of a driver activity, including overspeeding and
      - Company activity (lock-in);
      - Controller activity.
    - Cross check of the driver activity: all activities performed on a recorder A must be correctly read on a recorder B, etc...



- ***Test Phases - step 2 of 3 (for VUs)***
  - **Technical reception**
    - Activation of the VUs under testing;
    - Cleaning of the records on all cards of the set of reference.
  - **Interoperability**
    - Calibration and pairing with motion sensors using each workshop card of the set of reference (13 items);
    - Simulation, using each driver card of the set of reference, of a driver activity, including overspeeding and
      - Company activity (lock-in) – using each company card of the set of reference;
      - Controller activity - using each control card of the set of reference .
    - Cross check of the driver activity: all activities performed on a recorder A must be correctly read on a recorder B, etc...

- **Conclusion Phase- step 3 of 3 (DT cards & VUs)**
  - Data Analysis and completion of the test phase - [http://dtd.jrc.ec.europa.eu/test\\_requests.php](http://dtd.jrc.ec.europa.eu/test_requests.php)
  - Preparation and issuing of the Interoperability Certificate - [http://dtd.jrc.ec.europa.eu/tachograph\\_cards\\_status.html](http://dtd.jrc.ec.europa.eu/tachograph_cards_status.html)
  - Preparation and issuing of the technical report or of the attestation on the tests performed
  - Transmission to the Contractor of the technical report/attestation and of the original copy of the interoperability certificate
  - Recording on the DTC web site of the final reference for the type approval certificate - [http://dtd.jrc.ec.europa.eu/tachograph\\_cards\\_status.html](http://dtd.jrc.ec.europa.eu/tachograph_cards_status.html)

## Multiple Interoperability Labs ?



Interoperability certification is usually performed in a single laboratory, possibly independent from any national interest

- procedures and test equipments must be unified,
- test must use a single set of reference equipment,
- the reference set is precisely constituted from the accumulation of previously certified equipments (cards and units).

Every time e.g. new cards are type approved, and as explained before, JRC asks for 5 sets of 4 DT cards (one for each recording equipment manufacturers, in order to performed tests in parallel, and 1 spare).

In order to possibly open the interoperability certification to other laboratories, various scenarios need to be discussed.



## **SC1**

The tests and the DTLab continue in JRC ISPRA. Costs are shared between the users. The MS of non-EU AETR countries will be asked to contribute to the running costs of the DTLab.

## **SC2**

The DTLab remains in Ispra, but becomes Joint UNECE / EU Commission interoperability lab for the Tachograph System, with a new identification and image. In complement to this, the current JRC team would be extended and open to external actors, to possibly host experts from non EU-AETR countries.

## **SC3**

A new single lab is created, following an open procedure based on a call for tender, with precise specifications and obligations for the candidate labs. When the new lab is identified, the JRC team will be involved in the knowledge and reference set transfer.



## SC4

Creation of multiple interoperability labs.

Difficulties:

- Full equivalence between the labs: cross validation exercises will be necessary.
- Transition period will be needed to create the new and multiple reference equipments. For the cards, a minimum of 5 years is necessary (driver cards expiry time) before having new labs operational.

For the second point, JRC can play important roles: creation of new set of reference equipments (by requesting additional sets of 5 DT cards), training of new labs crew, or cross validation campaigns. It is to be noted that the **SC 2** here before could be a transitory option until the new interoperability labs are up and running.

Additional constraints:

- Centralization of the information and certificates in a centralized repository (website)
- Establishment of a Management board and edition of rules for conflicts resolution
- Regular cross validation to ensure certification equivalence.

## Conclusions



A large spectrum of activities is performed in the frame of this MoU between EU Commission MOVE and JRC, on one part, and the UNECE on the other part.

While the idea to change the term of the MoU is accepted and understood, the technical and budgetary constraints of the operation should be carefully assessed before any decision.

The running costs of the ERCA services are currently covered by DG MOVE budget (in the context of an Administrative Arrangement between MOVE and JRC).  
For the Interoperability DTlab, the budget is partially provided by DG MOVE, with a complement coming from industry paying each certification at relatively friendly 'real costs' compensation level.

FYI, the current fixed costs for industry are:

**5,200 EUROS** for maintenance interoperability testing on cards (new personalisation of existing type approved cards);

**10,000 EUROS** for **full new** cards interoperability testing;

**12,500 EUROS** for Vehicle Unit interoperability testing.

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