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Source	:	Mr. Alan McInnes, convenor
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CEN TC 278 Road transport & Traffic Telematics

Working group 14 After Theft Systems for Vehicle Recovery.
Minutes of WG 14 Meeting
22 January 2009 at British Standards Institute, London.

1. Attendance:

Alan McInnes (Convenor) UK   Peter Crinson, UK   Tjip Koopmans, Netherlands
Guus Wesselink , Netherlands   Ton van der Lee, Netherlands   Tony Scorer, UK
Vlastimil Fric, Czech Rep.   Irene Heffernan ,Rep. Ireland   Martyn Randle,UK
          Apologies:
Luc Chambon, France   Kenneth Meanwell, UK   Mark Schwartz
Peter Vyvyan-Robinson   Gilles Ghiran, France   Xavier Castells, Spain
James Dalton, ABI/CEA

2. Update on WG14 suit of Technical Specifications TS 15213-1 to TS 15213-6 incl.

2.1 The Convenor outlined the current situation for WG14. It had investigated and produced a series of Technical Specifications for stolen vehicle tracking systems.

> TS 15213-1   Reference Architecture & Terminology (2005)
> TS 15213-2   Common Status Message Elements (2005)
> TS 15213-3   Short Range Interface/ System Requirements (2006)
> TS 15213-4   Long Range Interface / System Requirements (2006)
> TS 15213-5   Messaging Interface (2006)
> TS 15213-6   Test procedures (2008)

2.2 The original WG14 comprised representatives from Netherlands, Germany, France, Portugal, Spain, Austria and Belgium, Sweden, Denmark, Bulgaria and United Kingdom. ACPO UK and AVc from The Netherlands represented EU police forces, ECATRA for hire vehicle operators, CEA for insurers, Daimler Chrysler for motor manufacturers, whilst system operators and developers included Tracker UK, France and Germany, Thomson CSF (France) and Cebia (Czech Republic).

2.3 Whilst interoperable technology across Europe had attractions, it was recognised that specialist customer needs, infrastructure and the security benefits of different technologies would have a serious impact on the work. This was resolved by splitting the standard into short range and long range systems and including provision that no single system was required and that system development was not to be inhibited as the technology progressed. It was more important that systems should have pan EU capability and common, tested processes.

2.4 CEN Technical Specifications are reviewed after 3 years but, as Part 6 was approved by CEN in August 2008, Parts 1 & 2 were renewed so that a more comprehensive review could take place as Parts 3,4 & 5 are for review in 2009.

3. Future of WG14 and Revision of TS 15213-1 to TS 15213-6.

The following are key points were proposed and discussed by all members present

3.1 The Technical Specifications are still relevant and all should be reviewed so that any changes are carried through the suit. Convergence of vehicle and ATSVR technology has not fully taken place and ATSVR systems are still a specialist market. The Technical Specifications should develop into CEN Standards in future.

3.2 Some systems have emerged with added value, in particular logistics and fleet management systems developed as single platform for asset management. Some systems are incorrectly sold as ATSVR when they do not have the full capability. Fleet management systems are prone to attack or easily removed so security value is lost.

3.3 Compliance with law enforcement procedures for each country is essential. However, in some countries there is no central policy on police response and the only way is through local contacts. This creates a patchy environment and there is no guarantee police will do anything. Companies with bases in both Western and Eastern Europe want seamless tracking across borders.

3.4 Russia is key market, but recovery rates are poor. Removal of ATSVR systems and use of jamming technology is prevalent.

3.5 Need for certified systems, some poor systems still get ARC response, so would enable identification of approved systems. In UK only approved systems get police response. TS 15213-5 Messaging requires updating to include section on certification process with this reflected in TS15213-6 Test Procedures. When testing OEM platforms, just the ATSVR element is applicable.

3.6 **Agreed:** To review Parts 1-5 and from the results update Part 6, Test Procedures.

4. **System jamming**. (Martyn Randle, UK)

Should WG14 make anti-jamming a mandatory feature of ATSVR systems?

4.1 In UK the insurers (ABI) have asked for an investigation of systems claiming anti-jamming capability. Using "jammers" is illegal, even for system operators, so it is difficult for system operators to test their devices.

4.2 Jamming is not seen as a universal problem. Some countries such as Russia appear to have a problem, but cheap, short range devices are available on Internet and evidence of failed jamming found in UK.

 4.3 Concern that OEM fit devices are vulnerable to service data and security details being made available to non-marque service centres. However, whilst normal vehicle servicing information is disclosable, since September 2009 security data is not.

4.4 WG14 should define what is jamming and include "spoofing" i.e. falsification of data or location. It is not possible to claim a system is safe against jamming, it may detect being jammed and/or it may switch communications to avoid jamming. The term Anti-jamming is incorrect; WG14 should investigate and seek to introduce "jamming countermeasures".

4.5 **Agreed:** To progress preliminary investigation on jamming countermeasures. Martyn Randle & Peter Crinson to prepare a first outline of issues.

5. **Goods vehicle crime**.(Ton van der Lee, Netherlands)

5.1 Attacks on trailers and loads are increasing. Whilst the tractor unit may have fleet management/ ATSVR system, the trailer and the load carried may not. Should WG14 introduce requirements for the capability of linking loads to the ATSVR system, or do other standards cover this?

5.2 **Agreed:** The Convenor to establish what existing/proposed standards also deal with asset tracking and the work of CENTC278 WG12 on EVI. Also there is other ISO/CEN work on standards for mobile devices in vehicles. WG14 must link to this as ATSVR systems could be portable.

6. **RESTORE (Remote Stopping of Road Engines) project** (Alan McInnes, UK)

6.1 The Convenor outlined work undertaken by UK law enforcement agencies on remote engine stopping for anti-terrorist and major crime incidents. In 2007-8 proof of concept tests for remote stopping of stationary and moving vehicles were successful and they are moving to commercial prototype stage. If the legal and technical issues are resolved it is inevitable that such technology will be demanded for the protection of high value/high risk vehicles. The results of the work will be passed to WG14 for consideration by CEN TC 278.

6.2 This subject was part of the original WG14 user requirement investigation but it was deleted from the TS as many countries raised questions over legality.

6.3 The Vienna Convention 1968 requires drivers to be in full control of vehicle at all times and as a result Dutch authorities stopped work on a similar investigation. Remote engine stop of a stationary vehicle may be acceptable but not of moving vehicle. Copy document attached.

6.4 **Agreed:** WG14 to inform CEN TC 278 and should RESTORE develop and the legal issues are resolved, it should be brought to WG14 as new work item. It is also noted that remote speed control is a related matter and this too should be kept under review.

7. **Earth moving machinery & construction plant.** (Guus Wesselink/Tjip Koopmans, Netherlands)

7.1 There is an ISO TC 127 (WG6) standard that establishes 4 levels of security for plant machinery. In the UK a new Plant theft/recovery project commences March 2009, supported by insurers with 5 levels of security.

7.2 WG14 should ensure that a link is made to this ISO 127 so that consideration is given to ATSVR systems and also remote engine stopping (non-road plant is not subject to Vienna Agreement.)

7.3 **Agreed:** Convenor to enquire of ISO TC 124 WG6 the relevance of ATSVR and remote engine stop for construction vehicles & plant.

8. **Membership:**

WG14 needs to involve vehicle manufacturers and ATSVR system manufacturers.
KBA Germany. A director of which chairs WP29 (see Vienna Agreement document attached.)
CEA & EUCAR (R&D Committee for vehicle manufacturers)
Agreed: Convenor and members to explore these contacts and report to WG14.

9. **Summary of Resolutions of meeting:**

1. TS 1-5 to be reviewed and checked for the current application of ATSVR technology.

    TS 15213-1   Reference Architecture & Terminology (not allocated)
    TS 15213-2   Common Status Message Elements()
    TS 15213-3   Short Range Interface/ System Requirements (Convenor to approach Luc Chambon)
    TS 15213-4   Long Range Interface / System Requirements   (Peter Crinson)
    TS 15213-5   Messaging Interface (Ton van der Lee)

2. TS 6 to be reviewed in the light of the revision of TS 1-5 above.
    (Martyn Randle)
3. To prepare preliminary report on jamming countermeasures.
    (Martyn Randle & Peter Crinson)
4. Establish a link with ISO TC 204/ CEN TC 278 WG12 re goods vehicles. (Convenor)
5. Notify CEN 278 regarding remote engine stop and monitor developments. (Convenor)
6. Enquire of ISO TC 124 WG6 the relevance of ATSVR and remote engine stop for construction vehicles & plant. (Convenor)
7. Extend WG14 membership to key organisations.(Suggestions to Convenor to invite)

10. **Date/venue next meeting.**

11.00am Thursday 14th May 2009 Thatcham, United Kingdom.

The Motor Insurance Repair Research Centre (Thatcham),
Colthrop Way,
Thatcham,
Berks. RG19 4NR. United Kingdom.
Location and hotel information: http://www.thatcham.org/about/index.jsp?page=10

Meeting closed.

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

CEN TC 278 WG 14 Membership List 2009

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Transmitted by the GRSG Chairman

Informal document No. **WP.29-146-14**
(146th WP.29, 11-14 November 2008
agenda item 8.3.)

REPORT ON TRANSPORT AND SECURITY ACTIVITIES
IN THE AREA OF ROAD VEHICLES

Highlights on regulatory initiatives by WP.29 and GRSG

Legal framework
Two Agreements (the 1958 and 1998 Geneva Agreements) administered by the World Forum for Harmonization of Vehicle Regulations (WP.29) provide the legal framework for the development of new regulations and for the harmonization of existing regulations regarding vehicle safety, environmental pollution, energy saving and anti-theft performance.

WP.29 contribution concerning transport security issues
At its March 2005 session, WP.29 requested the Working Party on General Safety Provisions (GRSG), to advance the development of the prescriptions regarding Vehicle Degradation Systems (VDS) (TRANS/WP.29/1039, para. 26). (VDS are systems fitted to a vehicle aimed at preventing and restricting the vehicle being driven away during unauthorized use. In the context of transport security, VDS can prevent the use of stolen vehicles as "car bombs" in explosive attacks).

Development of VDS work at GRSG

In **April 2002,** GRSG considered a proposal (TRANS/WP.29/GRSG/2001/16/Rev.1) by the United Kingdom (UK) introducing new provisions for vehicle degradation systems, which can be used to immobilize the vehicle after having being reported as a stolen vehicle in a controlled manner. The VDS should be activated by authorized people (e.g. police forces).

In **May 2003**, the expert from Germany introduced new provisions for the VDS (TRANS/WP.29/GRSG/2003/8) to be inserted into Regulation No. 97 (vehicle alarm systems). This new proposal superseded the initial proposal by the UK. The necessary introduction of a new part of Regulations Nos. 97 and 116 (protection of vehicles against unauthorized use) regulating the use of VDS to be harmonised was agreed to be an urgent task, because the market of such systems showed already a variety of such degradation, most of them being immobilising systems without considering any circumstances and the environmental conditions of the vehicles (i.e. traffic situation). This proposal aimed at giving approval authorities the possibility to approve well designed systems and reject/withdraw any other already existing systems showing dangerous behaviour.

In **October 2003,** GRSG considered an updated proposal by Germany on VDS (TRANS/WP.29/GRSG/2003/26)

In **April 2004,** GRSG agreed to set up an informal group of experts for the further development of the proposal. WP.29 gave its consent at its June 2004 session. The members of the informal group discussed in detail the proposal for amending the Regulations Nos.97 and 116. Different approaches from very low-level equipment and functions until very sophisticated and smart systems using GPS signals and detailed degradation measures where developed. The technical basis for the proposal was nearly finished. Reviewing the technical provisions lead more and more to the crucial aspects of use, misuse and security of VDS-Systems. The VDS informal group decided to ask the advice of the GRSG and Contracting Parties. The group agreed not to immobilize the vehicles straight away but to degrade the driving ability step by step.

In **October 2004,** GRSG noted concerns on the possible consequences of an external access to the vehicle electronic systems and on the incompatibility of the VDS with the 1968 Vienna Convention. The Vienna Convention establishes that "every driver shall at all times be able to control his vehicle". Nevertheless, GRSG agreed that the VDS informal group should continue its work. In the meantime, experts were requested to reflect on "vehicle tracking systems" that could be considered as an alternative to VDS.

In **April 2005,** the expert from Germany withdrew the proposal on VDS because the possible external remote access to vehicle electronic systems was not acceptable for his country (see informal document No. GRSG-88-17). He explained that VDS cannot be isolated from other vehicle electronic systems and, therefore, a remote intervention from outside on networked vehicle electronics (e.g. VDS) could allow possible abusive criminal attacks on the vehicle electronics (i.e. software viruses) and may lead to malfunctions of vital vehicle safety and emissions systems e.g. engine, steering controls, braking and stability systems. Since there are still big concerns about the misuse of remote access to vehicle and the necessity of secure and safe electronic encrypting and authorisation measures are not sufficient, the VDS informal group decided to wait until technical and much higher standards will be developed. Meanwhile, GRSG agreed that the VDS informal group should continue working to elaborate requirements for "Advanced Vehicle Security Systems (AVSS)", like vehicle tracking systems. The use of tracking systems today is not in the scope of any Regulation except the fulfilment of the provisions of Regulation No. 10 regarding Electromagnetic compatibility (EMC).

In **October 2005,** GRSG noted that the VDS informal group was awaiting inputs from the industry concerning vehicle tracking systems.

In **October 2006,** the Chairman of the informal group on AVSS informed GRSG that new information on VDS was received from Japan, but that the work of the informal group was still suspended, awaiting more inputs from its participants. The GRSG Chairman invited the experts to reflect on vehicle security issues and consider them at its next session in April 2007.

In **April and October 2007, the**-The secretariat informed GRSG about the decision of the Inland Transport Committee to set up an informal group on Inland Transport Security and that the Terms of Reference of such an informal group were endorsed by the ITC (ECE/TRANS/192, para. 19 and Annex I). Experts interested in the subject were invited to contact their focal point on the matter. GRSG noted that information on the activities of this informal group would be available at the following Transport Division website http://www.unece.org/trans/main/its/its.html.

Conclusions

The World Forum for Harmonization of Vehicle Regulations (WP.29) has adopted, in the framework of the 1958 Agreement, Regulations Nos. 18 (Protection against unauthorized use (anti-theft) of motor vehicles), 97 (Vehicle alarm systems (VAS) and 116 (Protection of motor vehicles against unauthorized use), which provide enough security to motor vehicles. The World Forum considers that the update of these Regulations to the technical progress will continue to guarantee such a security.

The informal group dealing with "Advanced Vehicle Security Systems (AVSS)" is awaiting inputs from its participants since October 2005 in order to be able to submit concrete proposals on this area. Since the group is not active, the World Forum recommends suspending working activities of the informal group. Once new inputs are available WP.29 may reconsider the reactivation of the informal group activities.

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