

P1616a

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 05-Oct-2009

PAR Approval Date: 09-Dec-2009

PAR Expiration Date: 31-Dec-2010

Status: Modification to a Previously Approved PAR for an Amendment 1616-2004

Root PAR: P1616a **Approved on:** 19-Mar-2009

Project Record: 1616

1.1 Project Number: P1616a

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Motor Vehicle Event Data Recorders (MVEDRs) Amendment 1: Motor Vehicle Event Data Recorder Connector Lockout Apparatus (MVEDRCLA)

Old Title: IEEE Standard for Motor Vehicle Event Data Recorders (MVEDRs) - Amendment 1: Motor Vehicle Event Data Recorder Connector Lockout Apparatus (MVEDRCLA)

3.1 Working Group: Motor Vehicle Event Data Recorder Brake and Electronic Control Working Group (VT/LT/MVEDR-EC)

Contact Information for Working Group Chair

Name: Thomas Kowalick

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Vehicular Technology Society/Land Transportation (VT/LT)

Contact Information for Sponsor Chair

Name: Dennis Bodson

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Contact Information for Standards Representative

None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 10/2009

4.3 Projected Completion Date for Submittal to RevCom: 12/2009

5.1 Approximate number of people expected to be actively involved in the development of this project: 25

5.2 Scope: Motor Vehicle Event Data Recorders (MVEDRs) collect, record, store and export data related to pre-defined events in usage history. This amendment defines a lockout protocol for MVEDR output data accessibility by securing the vehicle output diagnostic link connector (DLC). This standard does not prescribe data security within the vehicle electronic control units (ECUs) or within the intra-vehicle communication and/or diagnostic networks but instead defines ways and means to permit uniform, but controlled access of electronic scan tools to the DLC for legitimate vehicle emissions status, maintenance and/or repair. This standard also defines a means of maintaining data security on the vehicle via a motor vehicle DLC connector lockout apparatus (MVEDRCLA). The MVEDRCLA is applicable to vehicles and their respective event data recorders for all types of motor vehicles licensed to operate on public highways.

Old Scope: Motor Vehicle Event Data Recorders (MVEDRs) collect, record, store and export data related to motor vehicle pre-defined events. This amendment defines a protocol for MVEDR output data accessibility and security via the vehicle diagnostic link connector (DLC). This amendment does not prescribe data security within the vehicle electronic control units (ECUs) or controlled area networks (CANs), but instead defines ways and means to permit uniform access of electronic scan tools to the DLC for vehicle emissions status, maintenance and/or repair. This amendment also provides a means of maintaining data security on the vehicle CANs via a motor vehicle event data recorder connector lockout apparatus (MVEDRCLA). It is applicable to event data recorders for all types of motor vehicles licensed to operate on public highways, whether offered as original or aftermarket equipment, whether stand-alone or integrated into the vehicle.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: Many light-duty vehicles, and increasing numbers of heavy commercial vehicles, are equipped with some form of a MVEDR. These systems are diverse in function, and proprietary in nature, however, the SAE J1962 (ISO/DIS 15031-3) vehicle diagnostic link connector (DLC) has a common design and pinout, and is thus universally used to access event data recorder information. Data access via the DLC can be accomplished by using scan tools or microcomputers and network interfaces. This same DLC and network interface is also used for re-calibrating electronic control units on a vehicle. Such ECU applications can include restraint controls, engine controls, stability controls, braking controls, etc. This amendment defines a protocol to protect against misuse of electronic tools which use the DLC to erase, modify or tamper with electronic controller or odometer readings, or to improperly download data. Implementation of MVEDRCLA provides an opportunity to voluntarily achieve DLC security by standardizing a MVEDRCLA which will act to prevent vehicle tampering, which can include odometer fraud, illegal calibrations leading to emissions violations and theft of personal data. Adoption of this standard will therefore make the common MVEDR/DLC data more secure and credible while still permitting accessibility to legitimate end users.

5.5 Need for the Project: This project has particular emphasis maintaining event data recorder data security and also preventing odometer fraud . End users of this data include government, automotive industry, medical injury, legal profession, insurance industry, crash reconstructionists and academia researchers.

5.6 Stakeholders for the Standard: Automotive OEMs, Automotive Aftermarket, eTool OEMs, law enforcement crash investigators, vehicle fleets, vehicle rentals, etc.

-- Legal Profession: Those who are qualified to practice law will benefit from the knowledge and understanding that MVEDR evidence is more secure and has greater authenticity if the data is introduced in civil and criminal cases.

-- Law Enforcement: Officials at a crash site will benefit from following proper protocol that provides secure access to the vehicle diagnostic link connector and establishes a chain of custody for evidence.

--Vehicle Telematics: Data protocol developed will enhance the ability of connected vehicles in the process of interchanging electronic data.

--Consumer Protection and Privacy Advocates: This standard will help build a foundation for safeguarding consumer interests to help protect vehicle owners from misuse of data.

-- Automotive industry: Design data based on a large number of crashes of differing severities will be provided. Also, the standard is intended to provide early evaluation of system performance and vehicle design and allow for the global harmonization of automotive safety standards.

-- Insurance industry: The standard will help protect data, and by doing so help in identifying fraudulent claims, which exceed \$20 billion annually, and odometer fraud cases, which is estimated at 452,000 instances per year by NHTSA. Also, the standard is intended to improve risk management, expedite claims, decrease administrative costs, and give insurers needed data to subrogate claims and recover expenses.

-- Government: IEEE P1616a should help in promulgating and evaluating federal vehicle theft and odometer fraud standards, identifying problem injuries and mechanisms, stipulating injury criteria, and investigating defects. State and local officials should be able to obtain crash information on problem intersections and road lengths.

-- Research: The technology outlined in IEEE P1616a should help those in human-factors research better understand such areas as the man-machine interface, crash and injury causation, and the effects of aging, medical conditions and fatigue.

-- Medical providers: Those in the medical field will benefit from help with the on-scene triage of crash victims, improved diagnostic and therapeutic decisions, the ability to allow automatic notification of emergency providers, and information that aids in the organization of trauma and EMS resources.

-- The public: The data that is collected and secured by compliant MVEDRs could help create better policies, and improve vehicle, emergency response and roadway design. Other outcomes may include improved driving habits, lower insurance costs, decreased fraud and reduction in the number of crashes.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 International Activities

a. Adoption

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: Do Not Know

Organization:

Technical Committee Name:

Technical Committee Number:

Contact Name:

Phone:

Email:

b. Joint Development

Is it the intent to develop this document jointly with another organization?: No

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: Do Not Know

Organization:

Technical Committee Name:

Technical Committee Number:

Contact Name:

Phone:

Email:

8.1 Additional Explanatory Notes (Item Number and Explanation): Editorial (non-technical) changes have been made to both the SCOPE and PURPOSE to provide the end user with the exact amendment changes that were made to the IEEE 1616 standard.