



Telematics Task Force

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Talking Points

- Purpose of Task Force
- Who are the members of the task Force?
- Task Force Web Site
- Why is telematics important to the automotive repair community?
 - The future of diagnostics (ETI/TTF Position Paper)
 - Access to Data
 - What data is important to the repair community? (White Paper)
 - Connectivity
 - Data means nothing if you can't access it.
 - Direct Connect Vs. Extended Vehicle

The Challenge

- Telematics is changing diagnostics
 - Vehicle to Tool (V2T) communications
- We want to see collaboration with
 - Vehicle Manufacturers
 - Standards Organizations
 - Vehicle owner groups
 - Aftermarket service providers
 - Application developers
 - Component suppliers

Mission Statement

To empower vehicle owners to direct the service of their vehicles to locations of their choice, and to ensure that those locations have complete access to fully documented vehicle diagnostic data supplied via current and future data portals, including hard-wired connections such as the SAE J1962 connector and on-board or hand-held device telematics systems.

Members of the task Force

- Auto Care Association
- ETI – Equipment & Tool Institute
- AASA - Automotive Aftermarket Suppliers Association
- AAA - American Automobile Association
- AIA - Automotive Industries Association of Canada
- ASA - Automotive Service Association

Task Force Website



www.aftermarkettelematics.org



Why is ETI involved?

Why is telematics important to the automotive repair community?

Future security requirements will Affect the Status Quo



J1962 Connector

- Unsecure connector
- OEMs have and will increase connecting through a gateway
- Future communications might be turned off on moving vehicles
- Encryption might be added
- How will increased security affect future scan tool connectivity?
- What about pass through diagnostics and other OBD agreements?

ETI - TTF – AFCAR Telematics Position Paper

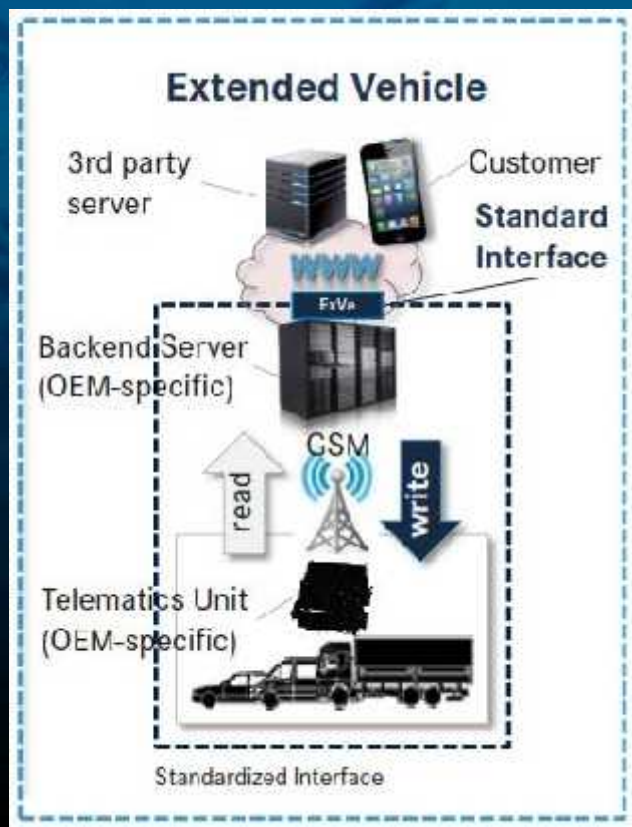
Published in February 2014 - we along with all TTF partners and our European counterparts agreed to the following:

- Car Owners should have Telematics supplier choice
- Vehicles need more security
- Connectivity must be made available to all stakeholders
- Connection should be single point
- Connection should be safe, secure, standardized and multi-client

The TTF asked the industry to work together to develop the Vehicle Station Gateway or VSG.

<http://www.eti-home.org/TT-2015/TTF-position-paper.pdf>

OEM Response



- Some OEMs have expressed opposition to the VSG:
 - They propose an alternative known as Extended Vehicle (ExVe)

Credit to Daimler AG – Dr. Christian Scheiblich for the graphic

What is ExVe? (Daimler View)

- A server based interface offered via the world wide web (WWW).
- Supports a data access for the Remote Diagnostics Support (RDS; ISO 20080) to registered, authenticated and authorized stakeholders
- Supports the design methodology of the standardization project ISO 20077
- Models a data description by defining patterns for appearing (physical) types of data; e. g. a rotation per minute detached of a specific part, like a wheel, a crank shaft, or an axle
- Fulfils the gatekeeper position towards the OEM
- Fulfils the data transparency and the data protection rights towards the customer; right of self-determination

What ExVe Isn't

- Daimler View
 - It is neither specifying any specific hardware system nor any specific programming language (data modelling is separated from the implementation).
 - It is not a defined list of data.
- Currently, In My View
 - It does not describe any form of security
 - It doesn't explain how it will determine how stakeholders get registered, authenticated and authorized
 - It does not describe how complete diagnostics will be, and if a system falls short, what mechanism will be available to force compliance?

ExVe Issues

- OEM descriptions of what ExVe is tells us little or nothing about how it will work, or what we can expect to get.
 - What is the granularity?
 - Will the after market still be able to develop its own diagnostics?
- What happens when OEMs don't want to support an older model year?
 - Older cars are diagnosed differently than newer cars
 - OEMs stop TSBs early in vehicle's life
 - Hardware ages and obsoletes itself
 - Understandably OEMs care little about the older car repair market
 - Many OEMs tend not to aggressively support programs that they are mandated to adopt.

Position Paper Conclusions

- We are not against ExVe. Many members and non-members alike may find value here.
- We are adamantly against ExVe as the only connectivity solution. The VSG must be considered.

TTF Data Definition White Paper

- <http://www.eti-home.org/TT-2015/TTF-data-definition.pdf>
- Purpose: develop a definition of what telematics data the auto care industry needs from vehicle telematics systems to ensure consumers have options for servicing their vehicles.
- Data can be broken down into types
- Which then can be applied to use cases

Data Types

- Driver personal data
- In Vehicle Infotainment
- Forensic information
- Inspection data
- Diagnostic data
- OEM proprietary information
- Intelligent Transport Systems (ITS) Information

Use Case Examples

Remote diagnostics & prognosis	DIY diagnostics	Fleet maintenance & Management	Software development access
State Emissions Tests	State Safety Tests	Motor Club Trip Planning	Local shopping
Infotainment	ITS services – crash avoidance – traffic mitigation	Teen Driver & other tracking programs	Rental Car and other fleet management
Emergency services	Insurance company good driver programs	Roadside assistance	Event data recording
OEM engineering access	Remote reprogramming		

Fundamental Right to Data

- Accessing information has been a fundamental element of vehicle diagnosis and repair since the early 1980s. The Gore-Waxman amendment to the Clean Air Act of 1990 requires that a core set of emissions related data is available on all vehicles sold in the United States after January 1, 1996
- The core set of vehicle data required by the Gore-Waxman amendment to the Clean Air Act consists of approximately 229 standardized Parameter IDs (PIDs) and around 800 related standardized Diagnostic Trouble Codes (DTCs). This is OBD II

Proprietary Vehicle Data

- There are a large number of OEM specific PIDs and DTCs that address all vehicle systems.
- 16,000 DTCs have been defined by SAE, and more are being added on a regular basis as vehicle systems proliferate.
- Current agreements state that if a franchise dealer has the ability to perform certain repairs using OEM equip., aftermarket tool and info. companies must be given the information necessary to create tools and information systems that emulate those of the VM.

Positive Progress

- ASA-Automaker Agreement signed in 2002
- NASTF Agreement
- Massachusetts “right to repair” (RTR) - 2013
- legislation enacted in 2013. Similar to the ASA agreement
- Memorandum of Understanding - 50 state MOU – 2014
- Significant progress on the HD MOU

More Than Just Vehicle Repair

Combining the vehicle data access of enhanced OBD with a telematics system creates some new and unique opportunities for the vehicle, customer, and service repair. A few examples include:

- Customer convenience/information
- Customer contact when maintenance due indicator is illuminated
- Customer contact when the “Check Engine” light illuminates
- Remote diagnostics
- Remote updating of vehicle software to resolve known issues or add new features
- Data analysis on thousands of vehicles to identify failure trends (prognostics)

Some Data Must Be Off Limits

- Event data recorder data as defined in 49 CFR 563.5:
- Non-repair-related bi-directional communication
- Actuation of vehicle components while a vehicle is in motion
- Direct memory access to vehicle computers
- Non-repair-related erasing of info from vehicle systems or components
- Access or control of vehicle safety systems

Solutions

Solutions for accessing vehicle data are both near and long-term. Two options have emerged as likely paths to success.

- Software Development Kit (SDK)
- Continued exploration of a common vehicle gateway
- Our paper mentioned the above two, but now we must also include Extended Vehicle ExVe.

Conclusion

The “if the dealer gets it we should get it” rule of thumb has served the industry well, and there is no reason it cannot be continued into the telematics age. In fact, for the most part the rule does not have to change at all except for the addition of two new concepts.

1. There is no fundamental difference between the diagnostics the VMs have agreed to provide, hooking a scan tool to a vehicle connector, and remote diagnostics, hooking up to a vehicle via radio signal, whether that signal travels 3 feet or 3,000 miles.
2. If the dealer has VM access to prognostics through telematics. Aftermarket suppliers need to have access to the same information so that it can be provided to aftermarket repair facilities. Prognostic data includes things like diagnostic streams or reports, odometer, oil change indicator status, fuel usage, and many more.