

Globalization and Terminology in Diagnostics and Service

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ABSTRACT

Provision of service information in various languages has been a must in the automotive industry. However, in the commercial vehicle industry, it is unclear how manufacturers are managing this daunting task. California Air Resource Board (CARB) 2010 regulations are awakening the commercial vehicle service information managers who are responsible for providing this information according to SAE J2403 terminology. Now is the time to mimic the automotive industry by collaborating on terminology, and in the meantime, begin discussion on how we all manage multiple languages.

INTRODUCTION

CARB 2010 Regulations will soon adopt SAE J2403 Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature—Truck and Bus. This means diagnostic trouble code messages must comply with terminology in the SAE J2403. EPA regulations will require manufacturers to ensure that Web-based delivery of service information will comply with SAE J2403 beginning with the Model Year 2013. The J2403 recommended practice standardizes various terms, abbreviations, and acronyms associated with on-board diagnostics. These regulations have implications not only for the U.S. and English terminology, but for companies who author their diagnostic messages in the U.S. and provide foreign languages, or foreign companies with products targeted to the U.S. Modern translation technology includes effective tools that increase efficiency and quality by using a terminology database to map source text to target text. If regulations will require standardized English terminology in the U.S., this will affect the translation process and serves as the perfect opportunity to standardize other language terminology as well.

CARB 2010

Although the primary target of the California regulation is motor vehicle pollution control devices, in order to keep terminology common across service information, the

impact can be great for an OEM. Volvo Truck Corporation, for example, must update most of its content. This involves both information that must be updated to comply with J2403 and other information that should be updated in order to maintain consistency. According to the legislation, this includes service and repair information, technical service bulletins, training materials, OBD information, in addition to diagnostic information and procedures. One example of an industry-wide term change is using “Diagnostic Trouble Code” instead of “Fault Code”, which would require changes in service information for all automotive interests.

SAE J2403 APPLIED

The terminology items listed in the SAE J2403 are decided within the SAE J1939 task force work, and come mainly from US Truck OBD product development areas. To apply the J2403 terminology to Heavy Duty vehicle aftermarket service information causes challenges. The J2403 terminology is listed as not approved together with corresponded approved terminology and approved acronyms. All existing U.S. English terminology in use for emissions-related information is not mentioned in the standard. A replacement process with monolingual interpretation has to be written and verified for any substitutions.

TRANSLATABILITY

Many of examples in the J2403 standard are not directly translatable and this causes extra struggles for information processes what have multiple languages in use. The same is true for service providers using technologies with translation memories or other translation related tools. In the development of SAE J2450 Quality Metrics for Language Translation – Service Manuals, source and target language had by nature an important role. A final addition can be used in measuring the quality on both. Terminology in the J2403 can be objected out of translation quality practising J2450.

INFORMATION PROCESS

The current J2403 standard includes many object nouns and conditions created with multiple prefixes. Ex: AFTERTREATMENT DIESEL OXIDATION CATALYST REAGENT TANK TEMPERATURE Sensor. Two major problems must be mentioned. Probably all truck and car manufacturers have software process environments with limitations in positions for names. A very common problem in software occurs with cutting of terms from the start direction. A common position limit is approximately 25. The other major problem will be by placing these terms with many prefixes in normal sentences. Where does a certain noun or condition start in the sentence? Finally the information has to be understood by the workshop mechanics as the first preference before any other automotive in-house area.

INDUSTRY FOCUS

TERMINOLOGY - The subject of terminology in the automotive industry as it relates to language translation comes up often. Nevertheless, there is no one standardized multilingual glossary for automotive terms. General Motors has made some of its terminology database available for sale through TM Exchange. The Institute of Automotive Service Excellence (ASE) received a grant from the U.S. Department of Labor to do work which included creating a robust Spanish/English glossary to be used as a tool for Spanish-speaking automotive service personnel to prepare for the ASE exam. But these are not reliable or ample enough to be used as an industry standard to facilitate service information translation.

Terminology management - The Localization Industry Standards Association believes that "More and more companies today realize how standardized terminology management creates revenue opportunities as well as helps reduce cost and increase quality in all communications." In the 2007 publication of "Creating Global Content", a compilation of results of a survey conducted by the Localization Industry Standards Association (LISA), the following is revealed:

It should also be noted that if terminology management is left to translators (as indicated by a number of respondents), then terminology is not being managed at the organizational level, so the organization has no real control over its terminology.²

Car manufacturers – One might gauge the commitment of car manufacturers in the U.S. and Europe to manage their terminology well by their involvement in the Task Force of the SAE J2450 Quality Metric for Language Translation – Service Manuals. Among truck manufacturers based in the U.S., the attention to global terminology is not as evident, although not absent. However, diagnostic messages are a different world from service manuals, and OEMs and translation providers alike admit that OEMs do not manage the diagnostic trouble code terminology well in either the passenger or commercial industries. These new regulations of

terminology should wake up all OEMs to the need for rigorous terminology management in all of its target languages. Using again the example of the term "Diagnostic Trouble Code", which replaces "Fault Code" and "Error Code", these various terms do not have an exact corresponding term in some other target languages.

Translation technology - Much technology exists today – thanks to the growing globalization, internationalization, localization and translation industry (GILT) – to aid the OEM in managing its terminology. One recognized expert in the GILT industry in translation tools is Jost Zetsche, creator of the Translation Memory Exchange and author of "A Translator's Tool Box for the 21st Century". However, some corporations do not want to add or spare personnel to maintain a terminology database. Therefore, language translation providers offer tools to help customers with this process.

EXAMPLE FROM GENERAL MOTORS, OTHERS

General Motors (GM) has experienced the joy of terminology management when it realized that translation quality and cost can suffer not necessarily always because of the translation provider, but sometimes because of the quality of the data supplied by GM. After analyzing translation quality using the SAE J2450 Quality Metric for Language Translation - Service Manuals, they were able to identify problems in the translation process, including translation memory issues, they experienced an incredible improvement in translation quality, time and cost. Therefore, robust terminology management can result in real savings and quality improvements, as also other vehicle manufacturers have experienced such as Mack, Volkswagen and Volvo. Volkswagen saw a 90% reduction in translation costs⁴ by using SDL's services translation technologies, and Volvo Bus⁵ utilized SDL's global information management services to launch its Pan-European dealer information system in 2002.

CONCLUSION

California Government regulations concerning service information terminology are forcing the commercial vehicle industry to look at how they manage terminology today, and have implications not only in English terminology, but other languages as well. This is the perfect opportunity to collaborate among commercial vehicle manufacturers, and establish best practices together to improve the customer experience for all. Globally we need to have standards interacting the same in Europe and the U.S. Therefore, we recommend adopting a terminology database of industry terms for service information, starting with diagnostic trouble codes and messages. This term database should be established in a source language file (English) and be used to translate into other appropriate target languages. Furthermore, a process needs to be established for managing this term database to allow for additions and corrections.