"The trend is to go to open platform telematics"

Everyone talks about "Internet of Things", "big data", and "cloud" services. But nobody wants to buy additional hardware to get access to the CAN-based in-vehicle networks.
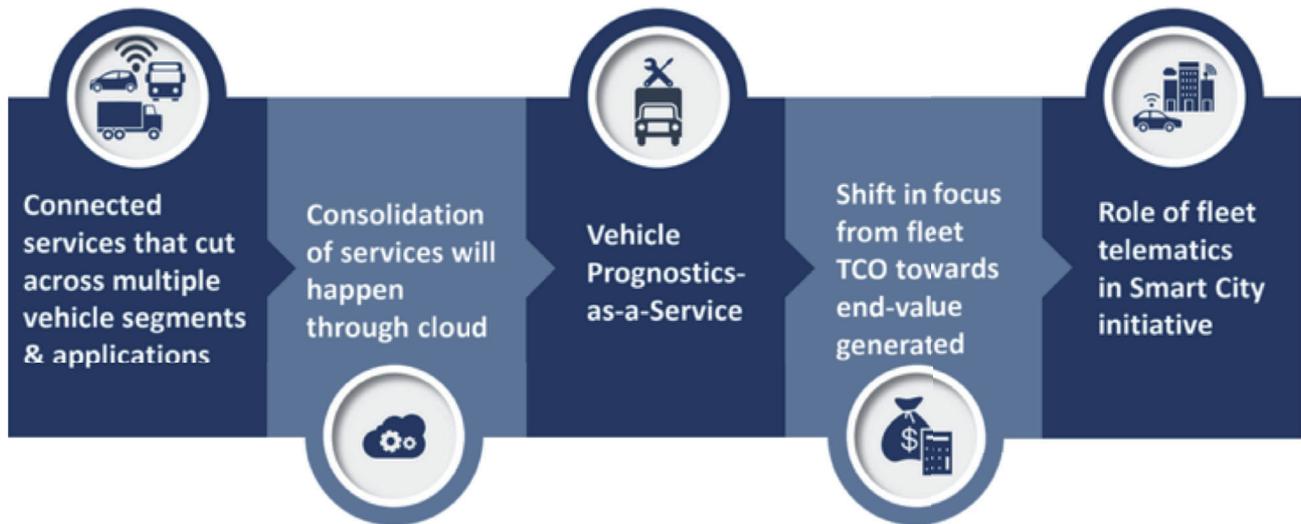
Figure 1: Vision of fleet telematics in 2025 (Source: Frost & Sullivan)

The last two years were intense and in the same time brought an air of change in telematics industry. According to the studies and reports that are available, at this point many acquisitions and optic changes took place in the market. In addition, the requirements in the market are different and the regulations are new. The trend is moving to "smart" cities approach, "smart" mobility and self-driving transportation.

What about the other industries? What are their requirements and what are the trends? How wide is the offer? Can the hardware offered still fulfill all demands? Sure is that technology advances and demographic needs are changing, mobility industry is pushing telematics to come up with new solutions, and the providers are trying to keep up the step with the innovation trends. Everything will go electric or autonomous, everything should be in one place but shared and opened to the others, the data are still the gold but how they are shapes is the real treasure.

In the automotive industry, if we talk about small passenger cars or big fleet of trucks, the main aspect in the discussion is the value gained by using each type of vehicle. Mirroring this into services area the focus is similar and it is moving from TCO (total cost of ownership) to value created. The users are looking for solutions that are more reliable with the possibility of updating them in time without adding any new hardware. Soon we will talk about vehicle as a service, car as a service, or vehicle as a marketplace. The value will consist in the number and quality of the application accessed in each vehicle or telematics devices.

We understood this opportunity and in 2019 we decided to go outside the box in the real way. Even, if we will still maintain the hardware as part of their business, we have decided to open our solutions and license our knowledge to third-party telematics devices that are open platform based. As the recipient of the 2018 for Customer Value Leadership Award for CAN-based solution named by Frost and Sullivan, this move looks like offering to all telematics players the same value for their solutions and products.

Changing the focus from TCO to value growth enables in the same time many other adjacent or complementary opportunities like smart mobility projects, smart cities solutions based on car sharing and ride sharing vehicles, ▷
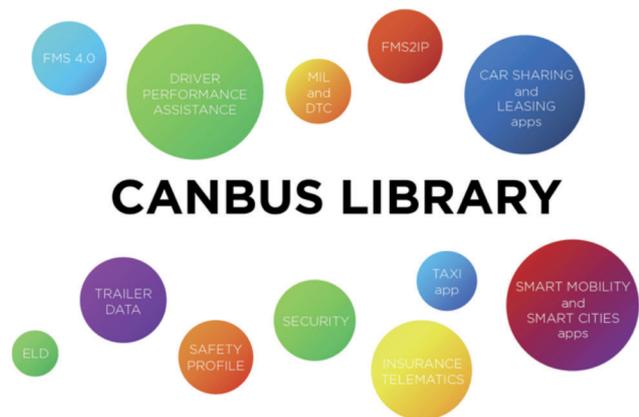
Figure 2: The CAN Library supports a broad range of use cases (Source: Cango)

Figure 3: Bianca Barbu (Chief Marketing Officer, Cango) at the 5th Telematics Confernce in Dubai, March 2019: "All the functionalities that we offered until now inside our hardware are ready to be offered as applications on third party open platform telematics units. In this way we want and we are able to license our knowledge in any telematics devices and it is not only CAN libraries but also we build applications like Driver Performance Assistance, MIL&DTC codes, Tachograph, FMS2IP, car sharing, or any other application that a partner can imagine." (Source: Cango)

smart public transportation. In a world full of sensors and connectivity, being open and prepared for the new challenges is the key to success in telematics business.

Our CAN-related services empower any telematics supplier provider to read any vehicle data in any industry. The approach is quite simple and it is based on an operating system that is free and easy to access: Android. The CAN-related services for Android run in the background of any 3rd party telematics device without any user interaction or interface, except the one for configuring it. The service runs with a higher priority than inactive or invisible activities and therefore it is less likely that the Android system terminates them for resource management.

From now on using our CAN-related service, any 3rd party device will act like a firewall necessary to safeguard against hazards caused by interference with vehicle computer systems.

The main advantage of this type of service is, that based on it, an unlimited type of application can be built. In this way, the final user, instead of paying for a new additional hardware if they need a new functionality or feature for their fleet, will only add the application. Getting this type of solution the final client will gain the most advantages in the first place because there will be no time and costs spent with the installation and integration of a new hardware. Also, there are many advantages for the telematics solution providers because they will always be ready for the new challenges of the market and requirements of the clients.

The main advantages and benefits that the CAN-related service are the flexibility and control. Moreover, in this situation we are talking about real-time remote control with everything settable and a zero rate of failure and 100-percent data accuracy.

The CAN library is the base for any telematics application that can be developed. As mentioned, there is no need to add any new hardware to get the TPMS because there will be an application for it. Also applications for trailer data without any external device or an application for the DTC codes and MIL. One of the most important applications is the Lucas driver performance assistant, which coaches the vehicle conductor in real-time by calculating more than 49 parameters. All the application can be combined with artificial intelligence or machine learning to evolve to predictive traffic, usage-based insurance, avoiding collisions, or anomalies on the road.

The trend is to go to open platform telematics, which opens opportunities for other industries, and helps achieving the objectives related to the regulations around the world in increasing the quality of life by decreasing the CO_2 emission and saving more fuel. This business model proposed by us is the answer to the question: Is there an all-in-one solution that can be updated anytime, over-the-air, with the latest developments on the market and with minimum costs? ◄

Author

Bianca Barbu
Cango
office@cango.ro
www.cango.ro

DIN 4630: The link for vehicle body builders to the cloud

Engineers from OEMs, suppliers, and vehicle body builders develop jointly the DIN 4630 standard. It specifies a CAN-based network using CANopen or J1939 as application layers. The purpose is to transmit via CAN data from the body applications such as tail-lifts or refrigerating units to a telematics unit. The specified network also provides links to the in-vehicle networks, e.g. the FMS (fleet management system) or the body builder gateway. The standard under development also supports the addressing of sub-devices in more complex body applications such as fire-fighting trucks or refuse collecting vehicles. The main use-cases of DIN 4630 are pre-emptive maintenance and condition monitoring. The standard does not specify security measures.

hz

Engineering