IDEMIA

Connected vehicles: At the heart of the IoT revolution

 # BIOMETRIC DEVICES & AUTOMOTIVE

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- In the automotive sector the telecom, payment and security industries all converge to deliver a new mobility experience to drivers and passengers.

- The use of biometry will bring convenience and security for connected car services. Tomorrow, you will be the key to your vehicle.

- With autonomous cars on the horizon, people will have a lot more time on their hands doing what they like, instead of driving.

Whether you realize it or not, we are in the midst of a revolution – an IoT revolution, where simple objects transform into services, communication exists where there once was silence and connectivity has impacted our daily lives in ways we never dreamed of. At the forefront of this revolution are connected cars.

With the adoption of connectivity and the digitalization of mobility services, the automotive industry is undergoing a deep transformation. Today, industry experts predict that the number of connected cars will rise by 35 percent by 2021 1 – showing that this is not merely a passing trend, it is a part of our future. With the mass explosion of connectivity comes new opportunities to use cars as a service, but with it also comes new security concerns that never existed before. Trust of the users and convenience will be fundamental to ensure massive adoption of new services. So let's raise the bar on security, but without adding more constraints. At IDEMIA, we are committed to contributing to bringing security that you benefit from without even seeing it, so you can enjoy the new mobility experience with even greater peace of mind.

Securing vehicle connectivity and communications to ensure safer roads

Not only are more objects connected but they can now communicate independently with each other. In the scope of automobiles, this technology, which will enable autonomous cars to become a reality, is called V2X (vehicle to anything – including infrastructure, vehicles, pedestrians, devices, etc.). When your car can communicate with the stop light a few blocks away, can be alerted of an oncoming emergency vehicle before you can either hear or see it, can prepare for a traffic jam that is around the corner, it makes for a far safer and more efficient travel experience. In fact, the U.S. Department of Transportation estimates that safety applications enabled by connected vehicles can eliminate or mitigate the severity of up to 80% of traffic accidents – a figure which is by no means small, especially when you take into account the spared human lives and expenses involved in these accidents.

These new types of communications demand even greater vigilance when it comes to the security of data exchanged, since it could have a direct impact on driver and passenger safety.

The role of a company like IDEMIA is to work with car manufacturers to integrate security by design in vehicles and maintain it over the vehicle's lifetime. Verifying the identity of data sources, encrypt data to protect its integrity and secure the installation of applications is our day-to-day business. When we secure the connectivity and the communications, you can relax in the driver's seat.

You are the key to your vehicle

Another big leap forward in the connectivity and digital revolution transforming the mobility industry is the ability to verify your identity – with certainty. The magic behind this life-changing convenience has actually been within us all along: our own biometric data. In recent years, experts have come a long way in exploiting this data – scans of our fingertips, iris, face – to simplify our everyday lives. So what does biometrics change in the realm of connected vehicles? Quite simply, your car will be able to recognize you and trust you, and *only* you.

Remember the last time you lost your keys – or worse, locked said keys inside your car? IDEMIA's use of biometric data ensures that these moments will be a thing of the past. Soon, your keys will be dematerialized and with a simple scan of the face, iris or fingerprint, users can unlock car doors and start engines. In terms of convenience, this is not unlike the contactless entry that widely exists today. But if you've followed the headlines, without biometric verification, experienced hackers have found a way to duplicate keys and steal vehicles. The use of biometric data not only creates an effortless user experience, but it also gives car owners the peace of mind that only they can enter their vehicle. Adding the human factor to keyless services also makes it possible to securely transfer digital car keys with the assurance that only the authorized recipient can use them – giving way to possibilities in car sharing, and boosting efficiency in the rental car business.

On the horizon

Tomorrow, biometric recognition capabilities will be directly integrated into the vehicles. Combining a trusted identity and a connected vehicle will open a wealth of new services opportunities, starting with the ability for the car to recognize you and automatically adapt its settings to your needs – from the seat and mirror positions to your digital environment (navigation preferences, Spotify account...). Another example where a trusted on-board identity will simplify your life is in-car payments. As a verified driver, you will be able to pay for gas without needing to swipe your card or even take out your wallet – a process, which thanks to biometric data, is not only stress-free, but risk-free as well.

While the widespread application of these developments is on the immediate horizon, car makers and technology experts have been working on fully autonomous vehicles for years. Once all the security concerns brought by this innovation will have been overcome not only will this change our every day, but it will also yield huge value creation. One of IDEMIA's core goals is to make a critical contribution to growth in the world. We can do so by providing identity solutions for connected vehicles. When cars become reliably autonomous, that means that instead of driving, people will have a lot more time on their hands – to work longer, shop online, participate in leisure activities on their daily commutes.

At IDEMIA, we are committed, more than ever, to contributing to the massive economic growth that connected vehicles will generate, through doing what we do best: creating an Augmented Identity to ensure that only you can be you.

1www.businessinsider.fr/us/internet-of-things-connected-smart-cars-2016-10