

This is how AI will change the way you drive

By [Sherry Zameer](#)

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While there have been some recent setbacks (and there will doubtless be more) it appears that, with the massive investments in R&D, driverless cars *will* one day become a reality. In the meantime, though, the technology being developed with autonomous cars in mind will have immediate benefits in making cars much safer and more user-friendly.



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But future smart cars, however, won't realise if we fail to get security right...

Driverless cars rely on a robust, high-speed communications network

Aside from the algorithms needed to replicate (and then surpass) human reactions and experience, driverless cars rely on a robust, high-speed communications network to connect with data stores and services located in the cloud.

For autonomous vehicles, these networks have to enable complex algorithms and massive data transfers in real time — and with absolute reliability. Such networks will remain out of reach for many developing countries, including much of Africa. While this alone will relegate driverless cars to the pages of futuristic articles, much of the technology can still be used on less sophisticated networks today in order to provide human drivers with useful information and warning systems.



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Car manufacturers are forging ahead rapidly. In 2017, for the first time, half of all new cars came equipped with some sort of connectivity; by 2020, it is predicted, about 250 million connected cars will be on the road.^[1]

Thus, for example, onboard navigation systems are becoming more common — and useful — and will presumably continue to make negotiating our increasingly congested roads easier and safer.

In a similar vein, satellite tracking of vehicles is now routine for commercial vehicles and increasingly used by insurance companies for private clients as well. Uses include analysing driving habits with the aim of incentivising safer habits, and the ability to detect an accident or hijacking for the prompt dispatch of emergency services.

Research into sensor technology

Research into sensor technology for driverless cars is also revolutionising the driving experience. Already many models have proximity sensors to assist in parking, combined with rear cameras. Some cars are even virtually parking themselves, an advance that many drivers welcome.

Other innovations include the use of sensors to alert drivers to potential collisions or dangerous situations.

Then there's the development of holistic communication platforms for vehicles to enable not only better delivery of information and services to the driver, but to enable communication with nearby vehicles.

The benefit of the cloud

The cloud means that new services can be added, and existing ones updated, very easily. It will also mean that smart cars can integrate with the projected smart cities of the future.

“ So, while driverless cars may be some way in the future, connected cars and smart driving are increasingly a reality. ”

However, the one essential foundational requirement for vehicle connectivity to develop freely will be to secure the communications network.



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These systems will not only be repositories of hugely valuable information needing protection, they also need to be able to withstand hackers. Security specialists are working hard to secure the cars of the future today.

Our three-pronged strategy, for example, is to secure the device, secure the cloud and ensure that security is maintained and updated for the lifecycle of the device.

“ Once the vehicles and their communications are seen to be secure, the sky's the limit when it comes to developing

new revenue streams and services by a growing range of companies. ”

So, for the moment at least, don't think "driverless" — think "smart".

[1] [“Driving in the cloud safely on the road”](#), *Business Day* (23 November 2017).

ABOUT SHERRY ZAMEER

Sherry Zameer is Vice President IoT at Gernalto.

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