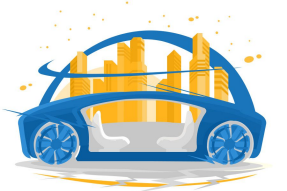


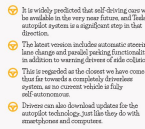
Where Next for CAR TECHNOLOGY?

Car manufacturers are constantly seeking new ways in which to make vehicles more technologically advanced, to the point that the sci-fi concept of robot cars may not be too far away from becoming a reality. What innovations can we soon expect to see in new cars?

AUTOPILOT

- It is widely predicted that self-driving cars will be available in the very near future, and Tesla's autopilot system is a significant step in that direction.
- The latest version includes automatic steering, lane change and parallel parking functionality, in addition to warning drivers of side collisions.
- This is regarded as the closest we have come thus far towards a completely driverless system, as no current vehicle is fully self-autonomous.
- Drivers can also download updates for the autopilot technology, just like they do with smartphones and computers.

ROTATING SEATS

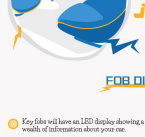


- Another mooted feature of driverless cars is motorised lounge chairs which can rotate to allow for face-to-face conversations while in transit.
- This feature was presented by Mercedes-Benz as a standout characteristic of a concept car at the 2015 Consumer Electronics Show.
- If driverless cars become commonly used, this could be one of the principal ways in which car owners can pass the time rather than having to concentrate fully on driving.

FOB DISPLAY

- Key fobs will have an LED display showing a wealth of information about your car.
- The fob will also be able to start and stop your engine, another move towards keyless entry and ignition.
- You will be able to charge the fob on a wireless charging pad on your vehicle's console.
- Keyless fob displays are destined to give drivers greater control over their vehicle, even when they're not in it.

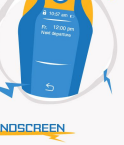
HOLOGRAPHIC WINDSCREEN



- Instead of drivers having to glance downward to check important information such as driving speed, time to destination and directions, the information displays on hologram form on the windscreen, but not in a manner that would be overly distracting.
- The directional information could be especially useful when driving at night, as it will be subtly illuminated when it may be difficult to see the road clearly.
- Also, the capability of displaying directions on a windscreen hologram means that you won't have to worry about your satnav's battery expiring.

COLLISION AVOIDANCE SYSTEM

- An in-built collision avoidance system will alarm drivers if they veer out of their lane, drive too close to the vehicle in front of them or if there is a risk of hitting a pedestrian or object.
- It can also detect lane markings and traffic signs as well as reading speed limits so that it will beep if the driver is exceeding the limit.
- Warning sounds will activate if accurate before a potential threat is detected, giving motorists adequate time to modify their driving accordingly.

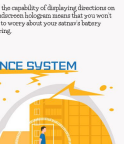


SATELLITE CAR ANTENNAE

- Concept cars have been developed with 6-sided satellite antennae installed as modules on the roof, each possessing the ability to send data to cars at broadband speeds.
- More modules can be added if greater bandwidth is required.
- The antennae can pick up satellite signals from all sides, not just the direction in which they are pointing.
- The antennae can send software updates and provide secure satellite links to motorists who drive their cars in areas that other communication networks cannot reach.

OWNER'S MANUAL APP

- The traditional owner's manual booklet is set to be replaced by an owner's manual app.
- The app can be used for getting information on repairs, maintenance and vehicle features such as the air filter, cruise control, engine oil, brake fluid and fuse box.
- Owner's manual apps are also expected to include instructional videos and 3D overlay images which appear when motorists scan a specific area of their vehicle, e.g. the engine bay.

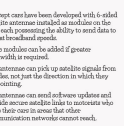


BIOMETRIC VEHICLE ACCESS & START

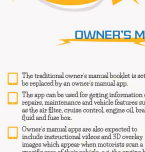
- In recent years, keyless forms of car entry and start have emerged, but this technology could soon be eclipsed by biometric access.
- It is expected that motorists will soon be able to get into their vehicle and start the ignition with their fingerprint.
- There have been suggestions that retinal scanners could also be introduced, but it is more likely that fingerprint readers would come first.

REMOTE VEHICLE SHUTDOWN

- With remote vehicle shutdown, you can disable your car's engine if the vehicle has been stolen or if it is parked overnight.
- The providers of this technology will deactivate the engine if requested and notify the authorities in cases of grand theft auto.
- The authorities will, in turn, be able to locate the vehicle easily through GPS tracking and retrieve it for you.



ACTIVE HEALTH MONITORING



- Ford is reportedly developing health monitoring software which could take the form of sensors in seatbelts or the steering wheel to track your body's vital signs.
- The technology could also be deployed in wearable format, with cars pairing wirelessly with such devices.
- If your vehicle detects that you're suffering a heart attack or losing consciousness, it will assume the controls, pull over in a safe place and notify the emergency services.

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SOUTHSIDE MOTOR GROUP
Kilcock Road, Maynooth, Kildare, Co. Kildare

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