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Flying will be as easy as driving a car

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[The Observer](#)

Flying a light aircraft will soon be as easy - and safer than - driving a car, according to aviation experts.



A consortium of aircraft companies, university researchers, the US government and Nasa is developing a system which will allow the public to fly planes after a few minutes of rudimentary training. The group is combining advances in aircraft design with computer-assisted flight and tracking devices to develop a prototype of a system they have named the 'Highway in the Sky'.



'These improvements will make flying so intuitive that any dummy will be able to do it,' said Keith McCrea, policy co-ordinator for the Virginia Department of Aviation. After a short briefing, a 12-year-old boy recently took off in and landed a light aircraft using the system.



Even for today's private pilots, flying is becoming more and more like driving; the cabin of the SR20 four-seater made by Cirrus Design in Minnesota, for example, is similar to the inside of a family saloon.

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In place of the usual dizzying array of dials, the SR20 has a 26cm video display fed by global positioning system (GPS) data that provides a picture of the terrain beneath the aircraft, with airport, route and weather information superimposed on it. The number of controls has been pared down to a minimum. Another company, Moller International in California, is developing the Skycar, a vehicle capable of vertical take-off and landing. It will be able to fly as high as 30,000ft and carry four people at speeds of up to 400mph. Moller says that once it is in mass production the Skycar will cost the same as a mid-range BMW.

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The company's president, Paul Moller, said: 'It's our intention that it will eventually evolve into a completely automated form of transportation, making you a passenger, not a pilot.'

A private pilot currently has to complete several hundred hours in the air to become fully trained for most conditions. Even preparing for a simple journey involves poring over maps, studying forecasts and calculating wind speeds and fuel consumption.

Each stage of the flight requires the manipulation of several controls, monitoring dozens of gauges, liaising with air traffic control and compensating for weather conditions. 'This could change dramatically over the next decade,' said David Freedman, author of a study to be published next month by the Massachusetts Institute of Technology (MIT).

'The general goal of these programmes will be to make small aircraft as easy and safe to operate as cars - maybe even more so - and almost as inexpensive.'

The Nasa-funded 'Highway in the Sky' uses satellite positioning, digital maps and constantly updated information about air traffic movements to guide a pilot through a series of hoops, or along a dotted line displayed in simulated 3-D on a screen. 'I could take someone with no training and in five minutes have him flying a plane all the way through a landing,' said John Hansman, an MIT aeronautics researcher. While researching his article for MIT's Technology Review magazine, Freedman challenged Hansman to do just that, with his 12-year-old son Alex. When Alex was shown the direction to fly on the type of GPS screen used by private pilots, he called it 'the most confusing thing' he had ever seen.

Then Hansman switched on the 'Highway in the Sky'. Displayed in bright colours was an uncluttered image of the terrain with two parallel lines superimposed upon it, along with a blue cone off to the right. The lines defined the flight path and the cone was the destination airport.

'OK,' said Alex, as he sat at the controls. 'So I just need to aim at the cone, right?'

His father described the ease with which his son then put them on course: 'With the flair of a video game master homing his X-Wing fighter in on the Death Star's lone vulnerable hatch, Alex immediately banked the plane to bring the cone to the middle of the flight path.' On the final approach, Hansman needed only to issue a few verbal instructions for Alex to make a safe landing.

Along with 'Highway in the Sky', a joint project is under way to

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develop 'smartports' by providing computerised air traffic control at hundreds of small, underused airfields, so that light aircraft could be automatically kept precise distances apart and guided during take-off and landing.

The Skycar looks like a cross between a sports car and a tiny jet fighter. On take-off a blast of air from four large power pods, which contain counter-rotating engines attached to turbine blades, is directed downward by louvres, allowing the Skycar to lift straight up.

It can be driven on the road at about 35mph and is compact enough to be parked in a garage. The cabin can be pressurised for high-level flight and in an emergency parachutes would lower the craft and its occupants to safety.

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