

**NEW LAW**

→ A new agreement has been approved by the European Parliament regarding the design of drones. The new rules, which will be enforced to lessen the risk of damage or injury to people on the ground, mean that drones will have to be designed in a certain way, kept under certain weights and only be permitted to fly in specific areas within the EU.

Game of Drones

Drones are on the rise. They are literally taking off for various recreational and commercial uses and becoming an increasingly common sight in our skies. We asked a SAS expert how safe they really are.

By DEIRDRE DOYLE

Photo ALEXANDER BENJAMINSEN

Drones, the common term for Unmanned Aerial Vehicles (UAVs), have for some time been a feature of futuristic TV shows and films, zipping across urban skylines in all manner of shapes and sizes and doing all types of tasks such as delivering pizzas, acting as autonomous taxis and spying on people.

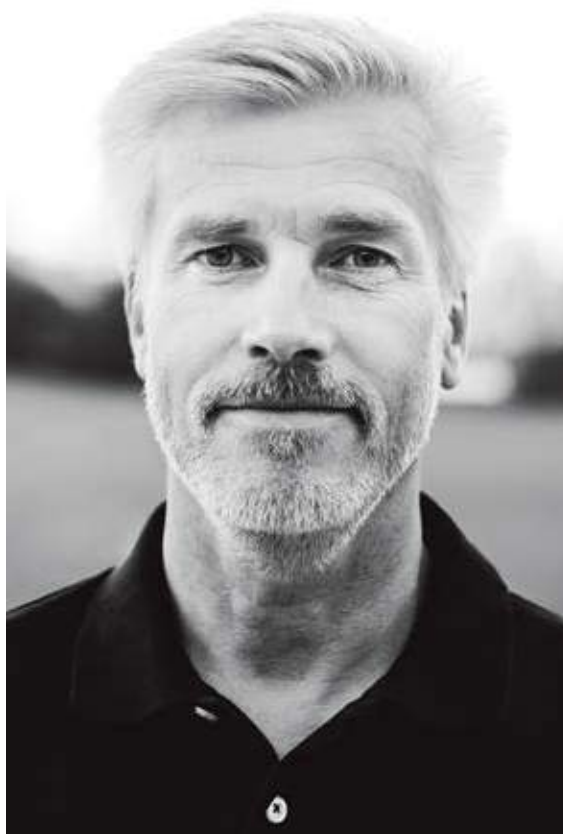
But that future is almost here. And never mind TV, drones can increasingly be seen for real in the skies above our local parks and gardens, normally operated by nearby hobbyists.

But drones are also now being used in many commercial operations for tasks that support safety and rescue services, equipment inspection where manned operations are either expensive or dangerous, aerial photography, crop monitoring and delivery of medicines in environments that are hazardous due to bad roads, distances or the dangers of war.

THE DRONE INDUSTRY is, in fact, already worth billions of dollars, with plenty of investment opportunities in related technologies and services. And like the smartphone, drones could be a game-changing technology.

But is society ready for this aerial takeover? What about privacy concerns and the opportunities for the technology to be misused for crime and warfare (militaries, of course, being among the first to exploit UAV technology)? And what about air safety issues – of particular concern to airlines and frequent air travelers?

Commander Dag Henning Paulsen is perhaps the



SAS pilot Dag Henning Paulsen is a co-founder of a company that develops drones.

'At some point in time, manned and unmanned aircraft will operate safely side-by-side'



NEAR MISS

→ In December 2015, a drone carrying a TV camera narrowly missed the Austrian alpine skier Marcel Hirscher when it came crashing down on the slope just inches behind the defending champion. Following this incident, the International Ski Federation (FIS) banned the use of drones at their events.

right person to ask. As well as being a SAS pilot and a former Norwegian air force pilot, Paulsen is the co-founder of a company that develops UAVs.

“Unmanned aviation is part of the future and at some point in time, manned and unmanned aircraft will operate safely side-by-side,” he says. “The current safety issues are in and around airports. Incidents are often caused by recreational pilots who are unaware of the local regulations, or who do not understand the risks drones present to other aircraft or to people and property on the ground.”

But despite raising these concerns, Paulsen says that mid-air collisions are very unlikely because recreational drones are almost exclusively used for photography purposes, which means the drones are only flown at low levels. And, he adds, there are other factors that limit the risks.

“Manufacturers programmatically limit their products to adhere to emerging regulations, preventing vehicles from running amok,” Paulsen says. “Current battery life limits flight times to under 30 minutes, line-of-sight flying rules apply in most countries and improvements in built-in safety devices all come into play.”

DESPITE THESE BUILT-IN safety checks, it is really the regulatory environment that will have the most impact on the safety of drones as they continue to literally rise in prominence in our lives. And there are several ongoing initiatives around the world to address these issues.

During 2018, the Federal Aviation Administration in the US, for example, will test a system for the safe sharing of airspace at 500 airports across the country. And in September 2018, the International Civil Aviation Organization, the body responsible for reaching global consensus on aviation issues, will hold a second symposium on drone issues at which experts from industry and academia will discuss the safe integration of drones to the airways.

So if you're reading this in your SAS seat and you happen to see a drone, it is almost certainly in a science fiction TV show or film you're watching – for now at least! ○

DRONES FOR BOOK-LOVERS

→ Since late 2016, Amazon has been pioneering tests for a drone delivery service. They aim to develop a service in which deliveries can be made in the area surrounding a local fulfillment center within 30 minutes of customers placing an order. Amazon is testing different types of drones that use GPS navigation and cruise below 120m (400 ft). By placing a portable landing pad in a clear drop zone, customers will be able to receive their orders as the drone touches down and releases the package.