

At an Air Show in China, Drones, Not Jets, Are the Stars

<https://www.nytimes.com/2017/12/28/world/asia/china-drones.html>

WUHAN, China — Need more evidence that China is a global force in technology? Just listen for the low whine of tiny propellers. And look up.

At the World Fly-In Expo, an air show held in the central Chinese city of Wuhan last month, jets, hot air balloons, autogiros and ultralight planes were upstaged by Chinese-made drones.

Remote-controlled flying machines drew crowds at exhibition booths and performed in tight formation, high above the ground. Teams in brightly colored jackets raced industrial drones and competed in events like delivering parcels and spraying plumes of mock pesticide.

Special drones even helped clear the skies of birds before performances by manned aircraft, using loud blasts of noise.

China is the world leader in drones thanks largely to a single company, D.J.I. Founded in 2006, D.J.I. has grown to account for more than 70 percent of the global market, according to Skylogic Research, a drone research firm.

The privately owned company used cheap prices to cement its market share and is frequently lauded as an example of China's ability to compete toe to toe with global rivals in the technology sphere. While it does not disclose financial results, it enjoys financial backing from Silicon Valley investors and has access to suppliers and talent in China's southern manufacturing belt. D.J.I.'s easy-to-fly machines, which can buzz over beaches and hover above scenic mountainscapes, are used by hobbyists and professional photographers alike.

China's drone economy is not just about selfies and aerial video, however.

Drones in China inspect power lines, survey fires and disaster zones, spray crops, and monitor air pollution around factories. In some remote areas, they have delivered packages. Online retailers and logistics companies are aiming to expand drone deliveries by signing more agreements with local governments.

But as D.J.I. courts more industrial customers such as utilities and developers, the company's drones — and the vast quantities of footage taken by their cameras — have come under scrutiny.

United States customs officials said in a memo this year that D.J.I.'s drones were sending sensitive information about American infrastructure back to China. The report, from the Los Angeles office of the Immigration and Customs Enforcement bureau, cited an unnamed source in the drone industry.

D.J.I. — formally named Da Jiang Innovations Science and Technology Company — denied the allegations, saying the memo was “based on clearly false and misleading claims.”

This year, the United States Army also ordered its units to discontinue the use of D.J.I. drones, equipment and software, citing unspecified “cyber vulnerabilities.”

Such concerns have scarcely dampened the public's enthusiasm for drones in China.

In Wuhan, the Ewatt Aerospace Flight Academy is expanding. The school, which is run by the industrial-drone maker Ewatt, was the first in China to be accredited to issue the license needed to pilot heavy industrial drones. Its one-month course attracts people who hope to work either for a drone maker or for another kind of company that needs drone operators.

“More and more people want to learn,” said the school’s dean, Li Chunfei.

They are starting earlier and earlier, too. At Zhongjiacun elementary school in downtown Wuhan, Xiong Sheyu, 11, is a member of the drone club. Under the supervision of a teacher, Yang Lei, students meet every Sunday to fly commercial drones.

They also build their own, which look like giant paper airplanes.

From the school’s playground, Sheyu sends one of them soaring, a Chinese flag in tow. With a remote control, he steers it among the concrete buildings. The cardboard plane, held together by tape and glue, hangs in the air for around 10 minutes.

“I love to see the world from the sky,” Sheyu said.

His father, Xiong Pinggao, added: “Learning to fly drones can make him prouder of the country.”

At the air show, Sam Zhang and Yuan Jiajie laid out more than 100 white drones on a grassy field, preparing for the evening’s entertainment. The two men work for Ehang, a Guangzhou-based company that makes consumer and commercial drones. Ehang is also testing another drone — a small, unmanned helicopter, essentially — that can fly a passenger for 25 minutes at an average speed of 37 miles an hour.

Another business for Ehang: light shows. Mr. Zhang drives a blue truck loaded with equipment all around China, filling the skies above private parties and government events with swarms of colorfully lit drones.

As night falls in Wuhan, Mr. Zhang and Mr. Yuan take their controls. Like a regiment of fireflies, the drones lift off from the ground. They form words and shapes — a plane; a bird’s wings; the letters “WFE,” for World Fly-In Expo — and make the sky dance and swirl with light.