



Business is Abuzz About Drones

'FLYING PHONES' STAND BY TO FILL THE SKY AS ENTREPRENEURS LINE UP FOR THE PAYOFF FROM THIS NEW BUSINESS BONANZA. —DAVID HODES

Flying drones of all sizes are being used for all sorts of things, from delivering pizzas and selling real estate to managing crops and finding missing kids. Some are even launching off a pilot's wrist to fly around with a high-definition camera, like the wearable drone, The Nixie, introduced at the 2015 CES show.

That brave new world of drones is both a dream for business and a nightmare for airspace regulators.

These new commercial multi-rotor drones with gimbaled (single axle pivot support) high-definition cameras range from just a few ounces and less than 1 foot in diameter to around

20 pounds and 8 feet in diameter and cost between \$500 and \$10,000.



Most are ready to fly right out of the box with very little training and no mandatory license—so far.

If the excitement at a drone networking event in April sponsored by the Loudoun Chamber of Commerce and held at the Center for Innovative Technology is any indication, dozens of startup businesses in Northern Virginia are getting ready to jump into the fray, hoping to make a bucket of money using drones for everything from wedding services to fixing telecommunications towers to ... well, the sky's the limit, right?

Already real estate companies such as McEneaney and Associates in Northern Virginia are doing "drone tours." Loudoun Video Concepts is another real estate drone tour company. That is part of the business of Aerial Drone VA, serving the Metro-D.C. area, where, in addition to real estate tours, they



PATRONS AT THE Center for Innovative Technology drone networking event.

also offer drone services for other things like weddings, tourism, reality shows, sports events, construction surveys and on and on.

At the chamber's drone event was one of the largest drone sales companies on the East Coast, IntelligentUAS. According to marketing specialist for the company Daisy Dao, this two-year-old company has experienced growth of 400 percent since it began. Sales for 2014 totaled \$6 million. Founder Tony Ngo

writes on his website that by 2020, “every family will have at least one drone for daily jobs.”

But there’s a catch to all this business buzz. The Federal Aviation Administration, guardians of the U.S. airspace, is not down with what’s up on the drone front and is trying to play catch-up with this rapidly growing industry.

“The rate of change is just crazy, and I think that is what has caused a lot of the problems,” says Tony Mallamas, a former U.S. Air Force engineer who now designs next-generation drones and was showing and discussing commercial drones at the chamber’s networking event. “The fact that we don’t have the regulations means that everybody gets to go out and buy one of these things and try it out whenever they want to,” he says.

The FAA reported 25 near-collisions nationwide between small commercial drones and commercial aircraft last year, including two at Washington Dulles International Airport, where one drone came within 50 feet of a descending jet.

In May, the FAA reminded drone operators that the entire District is off-limits, as are cities and towns within a 15-mile radius of Reagan National Airport.

The FAA is working on rules to integrate drones into the country’s airspace, and after a few missed deadlines, they are slowly trickling out of the agency for industry discussion. It has proposed a framework that includes stipulations that drones have to be less than 55 pounds, always in sight of the operator, flying below 500 feet and less than 100 miles an hour by an operator who passed an FAA test and got a certificate.

But even with all of the regulatory confusion, it’s becoming increasingly harder to clip the wings of the high-flying drone business. The Association for Unmanned Vehicle Systems International predicts that the economic impact of commercial drones in the country will be \$13.6 billion in the first three years after airspace integration efforts are completed, with a total job creation of around 104,000 jobs by 2025. The economic impact in



“She wanted to sign up for the Mom and Tot Fashion Blogging camp.”

Virginia is expected to be nearly \$500 million by 2017.

But drones can be annoying and intrusive as well. At least one company, NoFlyDrones, is working on



IMAGE TAKEN BY drone by Loudoun Video Concepts, a real estate video and photography company.

controlling drone flight patterns over homes. Homeowners can go to their website and enter their home address, which is then sent to a drone manufacturer and programmed into the drone’s software. When that drone comes to that property, it will stop

and hover rather than fly over the property. The company is also working on a map that shows all of the available airspace where drones can be flown in the country—not an easy task, as some airspace is temporarily off-limits for hours or days at a time.

Mallamas says that drone technology has evolved so fast in large part because of Steve Jobs. “A commercial drone is actually a flying phone,” he says. “The sensors are from the phone, and this thing would be \$10,000 if it wasn’t for the fact that they are making the sensors for phones for 5 cents apiece,” he says.

Mallamas’ biggest concern is safety. For example, if you are a part-time photographer with a \$5,000 Nikon, the worst you could do is trip and drop it on someone’s toe. “To go out and buy one of the larger popular commercial drones and lose control of the thing, fly it into a table of some 10-year-olds—you could kill everybody.”