

DRONES...

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I am amazed at the rapid development of the drone industry and the uses to which drones are being put.

Here are a few of the uses so far:

- **Package delivery:** UPS has stated that their plan is substantially complete and will be introduced soon. It has limits for weight, distance delivery address.
- **Weddings and other similar events:** Drones make it easy to record events that are important to family and friends. Viewpoints can include those that an individual cannot do.
- **News gathering:** Many TV channels now use drones to access accident sites and other events of interest to a broadcast.
- **Site inspection:** Viewing construction as it is occurring is valuable to identify problems that may not otherwise be seen. Checking electric and other similar supports can be done with drones without the necessity of having a human climb up a tall tower to inspect.
- **Agriculture:** Drones are used to check field sizes, crop progress and limited spraying, without the dangers associated with crop duster planes.
- **Police and Fire observation of sites:** This saves the need for a human to be in danger.
- **Security:** Drones can inspect premises to identify risks that would be difficult for a human to do quickly and economically.
- **Safety:** Australia has started using drones to survey beach areas for sharks.
- **Photography:** Drones can deliver video and photographs in high resolution of just about anything: Nature, colorful situations, traffic, events and more.
- **Search and rescue:** Drones can access locations that are difficult or dangerous during severe storms, earthquakes, and hurricanes to find survivors and help with rescue.

With the FAA promulgation of Rule 107, individuals and business can operate drones with assurance that they will not run afoul of government oversight. Some of the rules are:

- Line of sight. The operator must keep the drone in sight at all times.
- Night operations not allowed.
- Maximum ground speed of 100mph and maximum altitude of 400 feet.
- Drone must be lighter than 55 pounds
- Operations in commercial airspace (airports, etc.) only with ATC permission.
- Preflight inspection of drone required.
- Remote pilot airman certificate required. Pilot aeronautical knowledge required, unless the operator of the drone already has a pilot license.
- Registration of drone required. Over 500,000 drones have been registered already.

Intel has made some interesting innovations in drone technology. They have available a ready-to-fly drone that incorporates their Real Sense technology. It allows the drone to see conflicts ahead and move to avoid them. So, instead of flying into a tree, its drone can see the tree and maneuver around it to keep on track for the target. See intel.com/aero for more info.

Intel is also working on the ability to control more than one drone at a time. At **Interdrone 2016**, a video was shown of a demonstration of controlling 100 drones at a time over the opera house in Sydney, Australia. It showed the drones circling around in what appeared to be a random pattern and ended with an oval of drones in the sky with “Intel” in blue drones in the center. Most amazing!

The drone market is exploding as to usage. There are many uses today for drones, but the future will open up many more, things we have not even thought of today.