

## What can InterDrone 2015 tell us about the civilian drone industry?

InterDrone 2015 at the Rio Las Vegas Hotel and Casino was the best of the three civilian/commercial "drone" industry conferences I have attended since early 2013. The event was comprehensive and well organized in an efficient space, with a wide scope of exhibitors, classes, expert panels and keynote speakers. Easy to find presentation rooms, with a short walk between rooms. High quality refreshments and lunches. Many conversations at meal tables, in hallways, and in the Exhibition Hall. Presentation files were downloadable near the end of the event through WiFi.

So what does this conference tell us about the state of this rapidly evolving industry?

- a) Manufacturers and distributors of small multicopters continue to profit from sales of "ready/easy to fly" products to almost anyone regardless of technical knowledge, airspace knowledge, operator ability, insurance coverage, or intent. Technical capability of multicopter systems is rapidly increasing: better cameras and gimbals; longer flight times; easier to use ground and airborne equipment with software for visual line-of-sight, beyond line-of-sight, and first-person view (FPV) operation. Marketing of multicopter-centric products continues to outpace marketing of fixed-wing or hybrid products.
- b) Consumers of multicopter products have limited opportunities for education AND hands-on training prior to, at, or after point-of-sale, for example: compliance with local, state and federal laws and regulations; appropriate ground launch and land spaces; performance limitations of a specific product version or configuration; essential pre-flight maintenance and testing; use of

equipment-specific checklists; operations team role coordination; pre-flight and in-flight situation awareness; emergency procedures; vehicle repair (with manufacturer-approved components and testing); liability insurance.

- c) Buyers for business, commercial or public safety purposes can find a range of products from "consumer" to "professional" capability and quality, with an increasing variety of options for performance upgrades or application-specific modifications, for example: high definition video downlinks; camera lense filters; proximity sensors; LiDAR sensors; integrated and weather-resistant ground control equipment; antenna products; carrying cases. The industry is attracting insurance providers, product leasing companies, and multiple funding sources.
- d) Technology inventors/developers can attract Venture Capital and other investors to enable:
  - refinement of products prior to production, sales, distribution and customer support;
  - technology insertions into the components of current or future drone systems;
  - development of more complete drone systems;
  - growth of a company/business.
- e) Federal, state and local regulatory authorities in the United States continue to look for ways to respond to public concerns about reduced privacy and safety, including the safety of travel within the National Airspace System (NAS). More laws are being proposed or passed, often by municipalities below the state level, with the intent of restricting or prohibiting civilian operation of <a href="mailto:small drones/UAVs/UASs">small drones/UAVs/UASs</a>.
- f) Most exhibitors at InterDrone 2015 are based in Asia and North America (a notable exception was Parrot). There were a few exhibitors from European and other countries where there have been many advancements in drone system technology due in part to different restrictions on research and operation. Some exhibitors are established companies transitioning from supplying primarily to military/defense customers. Many exhibitors focused on marketing the technical capabilities of drones to enable small businesses, or on the potential for inserting drone technology into larger, for-profit enterprises or public safety organizations. Several exhibitors focused on products or services related to airspace traffic awareness, voluntary vehicle registration, and management. Overall, there was less emphasis on applying drone technology to environmental research, archeology, search and rescue, and other civilian applications.
- g) The film festival was well attended, with awards for the most impressive films/videos completed with a drone camera.
- h) Globally, the number of "drone" conferences or shows per year appears to be increasing, typically featuring companies based in nearby countries, along with exhibits by the major exporters of consumer and commercial products.

The above is intended as summary observations, and may not have mentioned some kinds or examples of products, services or companies with a presence during InterDrone 2015. Visit <a href="InterDrone News">InterDrone News</a> for additional information about exhibitors and presenters (keynotes, classes, panels).

See InterDrone 2016 for information about the next InterDrone event.

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Keynotes / Film Festival / Lunch

Exhibitor (XactSense)

The YES-Fly Zone