



“Unmanned Aerial Systems’ Commercial Market Progression and Timing”

The Los Angeles Chapter November 2014 Meeting

Presentation by

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We are hearing about it with greater and greater frequency. Just last week the Internet was abuzz with stories about “drones” hovering over the city of Paris. As Larry Osborn, the A&D Forum’s April presenter asserted, unmanned aerial systems (UAS) will one day be “ubiquitous.”

No wonder then that the Forum’s co-founder Ivan Rosenberg saw the value of inviting Ron Stearns to be the guest speaker at November’s meeting. Ron’s presentation provided attendees with a deeper dive into the evolution of unmanned systems, from defense-based to commercial use, a topic he is immanently qualified to speak to given his years of extensive experience in the area.

As Ron explains, “Unmanned Aerial Systems (UAS) have created an indelible space within the U.S. Department of Defense (DoD), with annual procurement and research, test, development and evaluation (RDT&E) spending in the billions annually. Unmanned systems are now part of how the military equips, plans, trains and fights. However, the past three years have seen a flattening of DoD UAS spending, as current fleets are built out while requirements for scarce new builds remain in flux. As DoD UAS enter a sustainment era, manufacturers are looking increasingly to international and especially commercial markets as a means to sustain and grow.”

“What is needed to get this going?” asked Ron, the “this” referring to the transition from defense to commercial.

- A regulated environment.
- Investment community accepting the risks and “bellying up to the bar.”
- Insurers ready to put structure around unmanned systems.
- Certification.
- National Air Space (NAS) integration.
- “Sense and avoid” technology.

- Double and triple redundancies for flying in busy air space.

This journey will be fraught with stops and starts as these issues, and more, are addressed.

What role with the FAA play? Currently, any unmanned aerial vehicle (UAV) is considered “aircraft” in the FAA’s eyes, even ones as small as 2 – 4 lbs. Today, any commercial use of UAVs constitutes a “reckless act,” and the user can be fined. The FAA will ultimately need to be a willing and active partner in this transition. But, “Are they ready to be an enforcement agency?” Ron wonders.

As a possible indicator of their desire to play ball . . . or not . . . the FAA was set to announce plans for small UAS (SUAS) access to the NAS by the end of 2014. That didn’t happen. It has slipped into 2015 with no definitive launch date. The timing of this announcement is vital, as it starts a clock for comments and revisions to enable incremental, commercial UAS access to NAS.

While numbers vary, a study by the Association for Unmanned Vehicle Systems International (AUVSI) pegs the commercial market at \$82 billion over time. G2 Solutions forecasts that commercial UAS use in the NAS will begin to significantly spike between 2016 and 2017, spurred by UAV deliveries of vehicles with Maximum Take Off Weights (MTOW) of 0 – 20 lbs (which represents 44% of use cases).

As these market numbers suggest, there is a world of opportunity for UASs. Ron believes that industries such as forestry, agriculture, mining and oil and natural gas will greatly benefit from the availability of UAVs. Recently, Oregon deployed unmanned rotor-craft to fight fires in the state. Remember the story back in the summer of 2013 when 19 “hotshots” died in a tragic incident in Arizona fighting an out-of-control blaze? Could that have been prevented had they had UAVs overhead?

Ron shared a story of how the commercial use of UAVs is saving lives. In Tokyo, instead of battling traffic congestion, UAVs are being used to ferry blood and organs from hospital to hospital. Asia Pacific (APAC) and Europe are currently the front-runners in commercial UAV use. It is hoped that such successful utilization will become a proof-of-concept breeding ground to move the needle forward in the U.S.

Is commercial UAV use a question of if, or when? Although obstacles exist, listening to Ron, it is only a matter of time and legislation. Much of the technology exists. While there are headwinds slowing the transition of UASs from defense orientation to commercial use, tailwinds are also pushing the conversion ahead.



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