Industry has mixed reaction to FAA's drone proposals

By KATHERINE CONNOR, The Daily Transcript
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The Federal Aviation Administration's long-awaited
regulations for unmanned aerial systems were finally released — albeit in a proposal — Feb. 15, and have been met with mixed reactions from industry.

Panelists at the 2015 Air and Space Law Symposium held Friday at California Western School of Law voiced approval for some components of the small UAS proposed regulations governing the commercial use of systems 55 pounds and under, operating below 500 feet and under 100 miles per hour.

Some were concerned that certain requirements and notable omissions would further derail this burgeoning industry in the United States, which lags behind many nations.

David Heffernan, a member at **Cozen O'Connor**, said the FAA rules would provide an opportunity for commercial UAS uses in precision agriculture, surveying, real estate photography, research infrastructure and inspections. These uses are currently illegal, save for the handful of companies granted a Section 333 exemption.

"But it explicitly excluded some significant areas of application, most notably the opportunity to deliver packages," Heffernan said. "The FAA, in its proposal, has stated it believes once this rule is implemented, that will enable about 70 percent of the potential commercial market for unmanned aircraft to be realized."

Not so, said Allen Bishop, CEO of **Reference Technologies**. Bishop said there's a distinction between 70 percent of the possible market versus 70 percent of active users, which is what the FAA is really allowing with the small UAS regulations. He said large drones are going to be where the economic and societal benefits are derived, and they aren't included in the proposal.

"The FAA's position that this is going to address 70 percent of the market is not true — the market is the value proposition, and that is your power and pipeline inspection," Bishop said. "You cannot do an inspection of 300 miles with an 18-minute flight time and a 55-pound-and-under aircraft — you just can't do it."

There also is concern over the prohibition of night operations and, most importantly, a line-of-sight requirement, which means that the operator on the ground must keep the drone within eyesight. Cameras and live feeds are allowed on these vehicles, but don't count as line of sight.

Dan McShan, CEO of **Syzygyz**, said the technology for sense-and-avoid (essentially installing the intelligence of a pilot inside the aircraft to automatically avoid obstacles) is or soon will be available. The problem here lies more on the legal side of things.

"That's a degree of autonomy that is possible; it's clearly an achievable goal; but it comes with some interesting legal ramifications in terms of responsibility," McShan said. "Whose responsibility is it if it does the wrong thing? Is it my responsibility because I wrote the code that made it do that? Is it the pilot's responsibility?"

Constantine Diehl, director of business development for **UAS Colorado**, said another practical reason behind this piece of the FAA legislation is the existence of older aircraft flying below 18,000 feet under what's called visual rules, as opposed to instrument rules above 18,000 feet, where aircraft fly using sense-and-avoid technology all the time.

"Visual flight rules require you to be able to see outside of the aircraft and avoid other aircraft by seeing it, identifying it and avoiding it," Diehl said.

"There are many aircraft flying today … which don't have any electronic system on board that could in any means interact with existing sense-and-avoid systems in place; the FAA needs to accommodate those older aircraft that still exist and still fly in the airspace."

There are, however, positives in the FAA's proposed regulations. There is not a requirement for a traditional FAA-licensed pilot to fly the craft, nor is there an air-worthiness certification for every system as there is for standard piloted airplanes, both of which will speed the technology's adoption.

"They do recognize in this proposal that it wouldn't be feasible to put unmanned aircraft through a process that sometimes at the FAA can take years to obtain certification for a new aircraft type," Heffernan said. "They recognize that the pace of innovation and development in this area is just moving so fast that their process simply couldn't keep up with it."

However, the process is still slow, and is way behind much of the rest of the world. Diehl said France, for example, has allowed large and small unmanned aircraft systems since 2012, while the United States probably won't finalize these regulations until 2017.

"France has a five-year head start for small UAS operators to test anything they want in a day-to-day commercial operation, find out how the system actually performs when you have to earn money with it and it's not just a scientific experiment," Diehl said. "Five years in this technology is a lifetime."