

Where Will the Drones Take Us?

CAS Ratemaking and Product Management Seminar
March 28, 2017



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The **Federal Aviation Administration** (FAA) estimates that combined total hobbyist and commercial UAS sales will rise from **2.5 million** in 2016 to **7 million** in 2020.





Agenda

- Regulation
- Current Applications
- Potential Exposures
- ISO Response to Drones

Regulation



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FAA Modernization And Reform Act



- Creation and publication of a five-year Roadmap to support safe and efficient UAS operations
- Section 333 Exemption process
- Proposed rules for commercial use published February 2015
 - In part, limit flights to daylight and visual-line-of-sight operations
- Recreational Use

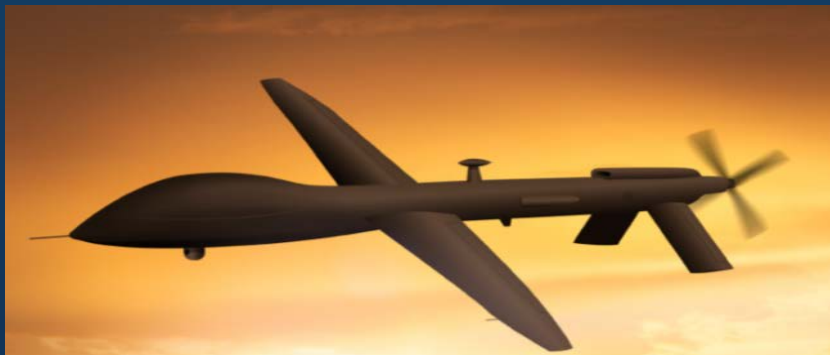


FAA Final Rule - Commercial Use

- Effective August 29, 2016
- Visual line of sight requirement
- Drone speed and Altitude restrictions
- Drone plus Payload
 - weigh less than 55 pounds
- Requirements for a remote pilot certificate with a UAS rating
- Nighttime Restrictions
- No flights over non-participants



Current Applications





Review of Approved Exemptions (Section 333)

- Key findings¹
 - Over **90% are small business** (less than \$1 million revenue)
 - Over 80% are **rotary wing**
 - Almost all **weigh less than 55 lbs**
 - Exemptions most common in **CA, FL, and TX**
 - Median endurance of **45 minutes**

¹ Association for Unmanned Vehicle Systems International (AUSVI) reviewed the first 5,500+ approved FAA Section 333 exemptions
Source: <http://www.auvsi.org/advocacy/exemptions70>



Top 10 Industries Using UAS via Exemption

| Industry / Operation | # of Exemptions |
|----------------------|-----------------|
| Aerial photography | 4,789 |
| Real estate | 3,434 |
| Aerial inspection | 3,144 |
| Aerial survey | 3,040 |
| Construction | 2,789 |
| Infrastructure | 2,331 |
| Agriculture | 2,249 |
| Filmmaking | 1,869 |
| Event | 1,675 |
| Advertising | 1,402 |

Source: AUVSI, [The First 5,500+ Commercial UAS Exemptions](#), September 2016



Inspection - Drones





Agricultural Use - Drones



Potential Exposures



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Potential Drone Exposures – Operation of Aircraft

- Lost link
- Fly away
- Depleted battery
- Pilot skill
- Human factors
- Maintenance
- Nature
 - Weather
 - Operating environment
 - Wildlife



Potential Drone Exposures – Coverage Implications

Liability

- Design/manufacture defect
- Collision
- Data-link transmission failure

Personal Injury

- Invasion of privacy
- Trespass and nuisance
- Infringement and defamation

Property Damage

- First-party property damage
- Perils of aircraft and falling objects
- Business interruption losses
- Hacking



Potential Data Sources

- Data - Major Challenge Today
- Limited Non-Military Drone Usage until recently
- Information from the FAA
- Insurance Loss and Premium/Exposure Information
- Flight information
 - Encryption
 - Flight Logs

ISO - Response to Drones



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ISO Drones Options

- **Liability endorsements implemented 6-1-2015**
 - 3 exclusionary endorsements
 - 3 limited coverage endorsements
- **Commercial Lines property products**
 - Commercial Inland Marine released February, 2016
 - Commercial Property and Capital Assets filed in April, 2016
 - Rating information released/filed in December, 2016
- **Businessowners**
 - Liability endorsements filed in May, 2016
- **Homeowners**
 - Endorsements filed in August, 2016

Questions?



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