



Unmanned Aircraft Systems aka Drones

Issues Facing Cities and Ports



Port of Los Angeles, Navy Days

August 6 and 7, 2014



Port of Los Angeles, Navy Days August 6 and 7, 2014



Tom Zebra

Port of Los Angeles, Tall Ships Festival

August 21, 2014



Primary Concerns

- Public Safety
 - Hazard to manned aircraft in flight
 - Danger to people and property on the ground
- National Security
 - Surveying infrastructure / potential targets
 - Potential to transport explosive devices
- Privacy
 - Government agencies vs private citizens
 - Paparazzi vs rich and famous
 - Neighbor vs neighbor

Public Safety

August 23, 2014

The pilot of a Bonanza B-36 aircraft reported a near miss with a UAS.

The Bonanza aircraft was approximately 4 miles southeast of Van Nuys Airport, at 8000 feet, and traveling north.

The UAS was traveling southeast and passed down the left side of the Bonanza at the same altitude.

The UAS was described as multi-rotor design and approximately 3 feet in diameter.

Public Safety

Air Traffic at the Port of Los Angeles



National Security

November 2, 2012

Rezwan Ferdaus, a US citizen, was convicted after admitting that he had plotted to use UASs packed with explosives to blow up the Pentagon and United States Capital.

Ferdaus obtained materials to equip F-86 drone aircraft with C-4 explosives, conducted surveillance in Washington, and developed plans to detonate them there.

Ferdaus built detonation mechanisms for improvised explosive devices that could be triggered by a cell phone and gave 12 of these devices to FBI agents he believed were members of Al Qaeda.

National Security

August 27, 2014

Officers from the Los Angeles Police Department (LAPD) Elysian Park Academy Tactics Unit observed a drone flying over the Academy shooting range during a training exercise involving live ammunition.

LAPD Air Support immediately responded and located two individuals in the softball field in nearby Elysian Park operating the drone.

The individuals were apprehended and the drone was seized as evidence to support a violation of the Los Angeles ordinance prohibiting the operation of model aircraft in parks.

The investigation revealed that these individuals were using the drone to videotape the training exercise. The drone was approximately 3 feet in diameter and carried a professional film grade camera.

Categories of Unmanned Aircraft Systems (UASs)

- Public UASs
 - Public agency operators for government purposes
- Civil UASs
 - Private operators for commercial purposes
- Model Aircraft
 - Private operators strictly for hobby or recreational purposes

FAA Authorization Currently Required

- Public UASs
 - Certificate of Waiver/Authorization (COA)
- Civil UASs
 - Certificate of Airworthiness or exemption under Section 333 of FAA Modernization and Reform Act of 2012 (FMRA)
 - COA for each operation
- Model Aircraft
 - FAA prohibited from regulating under Section 336 of FMRA
 - Subject to “careless or reckless” under Section 91.13(a) of Title 14 Code of Federal Regulations
 - *Michael P. Huerta v. Raphael Pirker*, NTSB Docket CP-217 (November 18, 2014)

FAA Proposed Regulations

- FAA proposes to add a new Part 107 to Title 14 Code of Federal Regulation
- Allows for routine operation of Small Civil UASs (55 pounds or less)
- Provides safety rules for those operations
- Also contemplates regulations for Micro UASs (4.4 pounds or less)
- Currently a draft (see handouts)
- Public comments due April 24, 2015

FAA Public Safety / National Security Enforcement

- Civil Enforcement
 - Monetary penalties
 - Pilot license / UAS operator certification revocation
 - Other UAS authorization revocation
- Part 91 of FAA Regulations
 - Careless and reckless
 - Unlicensed operator / unauthorized aircraft
 - Violation of Temporary Flight Restrictions (TFRs) published in Notices to Airmen (NOTAMs)
- Proposed Part 107 of FAA Regulations
 - Visual line of site during daylight only
 - Not over persons not directly involved in the operation (Micro UASs may be excepted)
 - Limited to 500 feet / 100 mph (87 knots)
 - Air traffic control permission in Class B, C, D and E airspace (not required in Class G airspace)
 - FAA certified operator

State and Local Public Safety / National Security Enforcement

- Parallel Criminal Prosecution
 - Currently Part 91 of FAA Regulations
 - Upon enactment, Part 107 of FAA Regulations
- Security Laws
 - Louisiana Revised Statutes § 14:337 – criminal penalties for using UAS for surveillance of petroleum and alumina refineries, chemical and rubber manufacturing facilities, and nuclear power electric generation facilities without prior written consent of owner
- General Laws
 - New York Penal Code § 120.20 – criminal penalties for recklessly engaging in conduct which creates a substantial risk of serious physical injury to another person
- Local Zoning Laws
 - Launch and retrieve sites
 - Local permits – film, special event, etc.
 - Operation site safety guidelines

Privacy – Law Enforcement

- Numerous state statutes require a search warrant for law enforcement operation
- *Riley v. California*, 134 S. Ct. 2473 (June 25, 2014)
 - Law enforcement officers may not search digital data on cell phones seized incident to an arrest absent a search warrant
 - Digital data on UASs may also be subject to such protection

Privacy – Paparazzi and Private Citizen

- California
 - California Civil Code § 1708.8(b) – civil remedies
 - Constructive invasion of privacy to capture image, sound, or physical impression of person engaging in a personal or familial activity where reasonable expectation of privacy
- Texas
 - Texas Government Code § 423.001 *et seq.* – criminal penalties
 - Unlawful to capture images (except for 19 enumerated lawful purposes) or to possess or distribute unlawfully captured images
- North Carolina
 - North Carolina General Statutes § 15A-300.1 – civil remedies
 - Prohibits conducting surveillance of property and photography of individuals in non-public places without consent
 - North Carolina General Statutes § 14-401.25 – criminal penalties
 - Unlawful to publish or disseminate images taken through infrared or other thermal imaging technology of individuals, materials, or activities inside a structure without consent



What to Avoid

<https://www.youtube.com/watch?v=vcV71liAMwc>