OH THE DRONE-ABILITIES!: HOLLYWOOD'S DRONE PURSUIT HEATS UP AND THE FAA CAN'T STOP IT♦

INTRODUCTION

Vroom, vroom! James Bond hops on a shoddy Turkish motorbike in pursuit of an antagonist who possesses a confidential list of MI6 agents.[1] A heart-racing chase through the soot-surfaced streets of Istanbul quickly ascends to the rickety rooftops of the largest and oldest covered market in the world.[2] With aerial cinematography championing the scene, shots of Bond and his villain du jour, Patrice, alternate as they race on the parallel pathways atop the Grand Bazaar before "CRASH!" The opening scene of a recent Bond installment, *Skyfall*, tracks Daniel Craig's treacherous rooftop scamper with the assistance of Hollywood's newest toy: pilotless helicopter drones.[3]

Something is stirring in the sky that has the power to turn the world of independent filmmaking[4] on its head. The permissive drone environments of countries like France, Turkey, South Korea, and others have embraced the use of drone technology, or Unmanned Aircraft Systems (UAS), for various Hollywood projects.[5] Within the United States, however, the prospect of implementing drones into the national airspace system (NAS) has been largely grounded by the Federal Aviation Administration (FAA). Much to the chagrin of the FAA, some drones have taken flight.[6] However, the industry remains stuck in a largely nebulous and unregulated quagmire of bureaucracy. Spearheaded by the Motion Picture Association of America (MPAA), seven film and television production studios petitioned the FAA for permission to use drones as a medium for aerial cinematography.[7] These studios requested regulatory exemptions, or Summary Grants of Exemption, to allow the domestic use of UAS for the film and television

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1 SKYFALL (Eon Productions 2012).

2 Istanbul Trails, *How to Prepare For the Grand Bazaar of Istanbul, World's Oldest and Biggest Covered Market*, ISTANBUL TRAILS, http://www.istanbultrails.com/2008/10/how-to-prepare-for-the-grand-bazaar-of-istanbul-worlds-oldest-and-biggest-covered-market/ (last visited Sept. 21, 2016).

3 SKYFALL, *supra* note 1.

4 For the purposes of this Note, independent filmmaking shall include the work of amateur, documentary, and student filmmakers. *See* Stuart K. Kauffman, *Motion Pictures, Moral Rights, and the Incentive Theory of Copyright: The Independent Film Producer as "Author,"* 17 CARDOZO ARTS & ENT. L.J. 749, 750 (1999).

5 Ira Teinowitz, *Hollywood to the FAA: Let Us Use Drones! (Exclusive)*, THE WRAP (Feb. 5, 2013, 12:13 PM), http://www.thewrap.com/movies/column-post/hollywood-faa-let-us-use-drones-76011/.

6 Jason Koebler, *The FAA Gave Us a List of Every Drone Pilot Who Has Ever Been Fined*, MOTHERBOARD (June 1, 2016, 2:20 PM), http://motherboard.vice.com/read/faa-drone-fines.

7 Clay Dillow, *Why the FAA's Approval of Film Production Drones Goes Far Beyond Hollywood*, FORTUNE (Sept. 26, 2014, 4:06 PM), http://fortune.com/2014/09/26/faa-approval-drones-hollywood/. The seven production studios are Aerial MOB, LLC, Astraeus Aerial, HeliVideo Productions LLC, Pictorvision Inc., RC Pro Productions Consulting LLC d/b/a Vortex Aerial, Snaproll Media LLC, and Flying-Cam Aerial Systems Inc. Flying Cam, who won an Academy Award in technical achievement for its work in the James Bond installment *Skyfall*, was the last to be approved for an exemption by the FAA. *Id.*

industry.[8] If the MPAA has its way, camera-equipped pilotless drones may soon become commonplace,[9] thereby elevating the thrill level of the quintessential action scenes with which Hollywood has become synonymous.

The FAA's arguably unenforceable rules designate the use of the skies for recreational uses, such as model airplanes via a hobbyist exemption, while prohibiting commercial uses, such as TKTK.[10] With mounting pressure from drone manufacturers, production companies, and Hollywood, the FAA caved, providing a temporary solution via Section 333 of the FAA Modernization and Reform Act of 2012 (the "MRA").[11] The MRA, signed into law by President Barack Obama, mandates that the FAA integrate small drones,[12] including civil, commercial, and public-use drones, into the nation's airspace.[13] It seeks to advance "aviation safety and [the] capacity of the national airspace system, [and] provide a framework for integrating new technology safely into the nation's airspace."[14]

Section 333 "exists to grant the FAA some flexibility in how it enforces its rules and allows it to grant exemptions to companies that can show very specific use cases, operations guidelines, and vehicle airworthiness to FAA officials."[15] The aforementioned seven production companies filed Section 333 exemptions, which require a showing that their proposed drone operations would: (1) not adversely harm the safety of persons and property in the air and on the ground, and (2) be conducted in the public's interest.[16]

Nevertheless, with commercial applications for drones increasing

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[8] *Unmanned Aircraft Systems Key Initiatives – Section 333*, FED. AVIATION ADMIN., https://www.faa.gov/uas/legislative_programs/section_333/ (last visited Feb. 25, 2016) (hereinafter "*UAS Key Initiatives – Section 333*").

[9] Neal Ungerleider, *MPAA Lobbying for Drones in Movie Industry*, FASTCOMPANY (Jan. 25, 2013, 12:45 PM), https://www.fastcompany.com/3005100/mpaa-lobbying-drones-movie-industry.

[10] Elise Hu, *Drone Journalism Can't Fully Take Flight Until Regulators Act*, NPR, http://www.npr.org/blogs/alltechconsidered/2014/05/05/309742245/drone-journalism-cant-fully-take-flight-until-regulators-act (last updated May 12, 2014, 11:12 AM).

[11] FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, 126 Stat. 11, 11 (stating the reform law is designed to "streamline programs, create efficiencies, reduce waste, and improve aviation safety and capacity").

[12] Press Release, *Press Release — DOT and FAA Propose New Rules for Small Unmanned Aircraft Systems*, FED. AVIATION ADMIN. (Feb. 15, 2015), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=18295.

[13] *FAA Modernization and Reform Act* (P.L. 112-095) *Reports and Plans*, FED. AVIATION ADMIN., https://www.faa.gov/about/plans_reports/modernization/ (last modified Sept. 10, 2014, 2:27 PM).

[14] *Id.*

[15] Dillow, *supra* note 7.

[16] *UAS Key Initiatives – Section 333*, *supra* note 8; *Petition for Exemption*, AIRCRAFT OWNERS AND PILOT'S ASSOC. https://www.aopa.org/go-fly/aircraft-and-ownership/drones/petition-for-exemption (last visited Sept. 22, 2016).

exponentially, the FAA is carefully deliberating an aerial paradigm[17] that will effectively introduce thousands of UAS into congested domestic airspaces like those of New York and Los Angeles.[18] The FAA was under orders from Congress to safely integrate UAS into U.S. airspace by September 2015.[19] Michael Huerta, an FAA Administrator, told National Public Radio that, in writing the rules of drones in open air, the FAA is most concerned with maintaining the carefully-calculated safety strategies that govern America's national air space.[20]

This presents an onerous juxtaposition for lawmakers. The FAA should strike a safe—but progressive—balance between protecting the safety of the public and embracing new technology. The film and television industry, via their Summary Grant of Exemptions, has established a prototype for the parameters of effective drone use, which the FAA should streamline in order to safely integrate drones into the national airspace.[21]

This Note will explore the economic, safety, and regulatory benefits that form the basis of a public policy argument supporting a progressive approach to commercial drone use by Hollywood and independent filmmakers. Further, this Note will demystify the uncertain jurisdiction of the FAA and recommend a solution to the inherent obstacles that plague commercial drone integration within an already congested American airspace.

Part I of this Note introduces the FAA and the history of its regulations, applicable case law, and airspace policy. Part II discusses the current enforceability of FAA policies and the current state of the law as it pertains to commercial drone use. Part III discusses the problems with current FAA policy and the superfluous impediments to drone use in independent filmmaking. Part IV details a stratified legal and public policy argument that seeks to reconcile the complications of current policy.

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[17] Press Releases, *Press Release – FAA Releases Unmanned Aircraft Systems Integration Roadmap*, FED. AVIATION ADMIN. (Nov. 7, 2013), https://www.faa.gov/news/press_releases/news_story.cfm?newsId=15334.

[18] *Top 10 Busiest Airports in the US*, AIRPORT-TECH (Sept. 30, 2013), http://www.airport-technology.com/features/feature-busiest-airports-in-the-us-passengers/.

[19] NPR Staff, *FAA Head: Safety, Privacy Concerns Abound in Regulating Drones*, NPR (May 12, 2014, 11:13 AM), http://www.npr.org/blogs/alltechconsidered/2014/05/05/309746615/faa-head-safety-privacy-concerns-abound-in-regulating-drones.

[20] *Id.*

[21] Ted Johnson, *FAA Expected to Permit Use of Drones on Film Sets*, VARIETY (Sept. 25, 2014, 12:10 PM), http://www.variety.com/2014/artisans/news/faa-expected-to-permit-use-of-drones-on-film-sets-1201313650/.

I. HISTORICAL BACKGROUND OF FAA REGULATIONS AND AIRSPACE POLICY

A. *A Brief History*

Since the FAA's establishment in 1958 through an organic act of the same acronym—the Federal Aviation Act—the agency has been tasked with "develop[ing] plans and policy for the use of the navigable airspace and assign[ing] by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace."[22] The FAA, which has the authority to regulate all levels of American civil aviation, addressed model planes for the first time in 1981 when it issued Advisory Circular 91-57 (AC 91-57) to promote the safe use of model airplanes in response to hobbyists flying model planes after decades of non-enforcement.[23] AC 91-57, as a call for voluntary compliance, asked hobbyists to avoid certain actions: flying devices above 400 feet, within three miles of an airport, near a full-scale aircraft, near populated areas, or near noise-sensitive locations like parks, schools, and hospitals.[24]

The controlling precedent governing the FAA's jurisdiction over domestic airspace is *United States v. Causby*,[25] "a case of first impression"[26] for the Supreme Court of the United States related to ownership of airspace above private property.[27] After Congress enacted the Air Commerce Act of 1926,[28] amended it with the Civil Aeronautics Act of 1938,[29] and later adopted the Federal Aviation Act of 1958,[30] the

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[22] Michael Berry & Nabiha Syed, *The FAA's Slow Move to Regulate Domestic Drones*, WASH. POST: THE VOLOKH CONSPIRACY (Sept. 24, 2014), http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/09/24/the-faas-slow-move-to-regulate-domestic-drones/ (first alteration in original).

[23] FED. AVIATION ADMIN., ADVISORY CIRCULAR 91-57 (1981), http://www.faa.gov/documentLibrary/media/Advisory_Circular/91-57.pdf (hereinafter "ADVISORY CIRCULAR 91-57"); Julianne Chiaet, *Drone Pilot Challenges FAA on Commercial Flying Ban*, SCI. AM. (Nov. 1, 2013), http://www.scientificamerican.com/ article/drone-pilot-challenges-faa-commercial-flying-ban/ (AC 91-57 "essentially asked radio-controlled copter hobbyists to avoid flying their aircraft above 120 meters, and near airports, spectators (for untested planes), full-scale aircraft and noise-sensitive areas," which ultimately created the regulatory paradigm on which subsequent regulations have been based).

[24] ADVISORY CIRCULAR 91-57, *supra* note 23; Berry & Syed, *supra* note 22.

[25] United States v. Causby, 328 U.S. 256 (1946).

[26] *Id.* at 258.

[27] *See generally* United States v. Causby, 328 U.S. 256 (1946).

[28] 1926, 69th Cong. 1st Sess., Rep. No. 1162; FED. AVIATION ADMIN., FAA HISTORICAL CHRONOLOGY 1926–1996, https://www.faa.gov/about/media/b-chron.pdf (last visited Feb. 24, 2016) (signed into law by President Calvin Coolidge, the Act instructed the Secretary of Commerce to foster a new type of trade, air commerce, by establishing air navigation and arranging for the research and development of navigation aids).

[29] *Id.* Signed into law by President Franklin D. Roosevelt in 1938, the Act created a federal agency designed to perform quasi-judicial and quasi-legislative functions of safety and economic regulation; Pub. L. No. 706, 75th Cong., 3d Sess. (June 23, 1938).

[30] Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731.

United States government claimed "complete and exclusive national sovereignty in the air space"[31] of American land.[32] Subsequently, the FAA declared that all air above 500 feet was public domain.[33]

B. *The Foundation:* United States v. Causby

In 1946, husband and wife Thomas Lee Causby and Tinie Causby, the plaintiffs, challenged the unregulated air space below 500 feet,[34] arguing that low-flying planes over their home were scaring their chickens to death—literally.[35] The Supreme Court sided with the Causbys,[36] ruling that landowners own the sky above their homes up to at least eighty-three feet.[37] Consequently, the Court held that a property owner "owns at least as much of the space above the ground as [he] can occupy or use in connection with the land,"[38] an all too general supposition.

In the wake of *Causby*, unsettled legal questions remained. Why does the FAA have jurisdiction over the air between eighty-three feet and 500 feet above ground level? Moreover, why is the FAA levying fines against users operating drones below the eighty-three foot level that landowners own in accordance with *Causby*? The FAA's autonomous jurisdiction has left a cloud of uncertainty over those in the commercial flying industry.[39] "Safety, safety, safety!" has been the rallying cry of the FAA.[40] However, with more planes in the sky than ever before, saturated air spaces are the reason the FAA says that the unclaimed airspace is within their jurisdiction.[41]

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31 John C. Cooper, *Sovereignty: National Air Space Upper*, FLYING MAG., Jan. 1959, at 30.

32 Sovereignty and Use of Airspace, Pub. L. No. 113-234, 108 Stat. 1101.

33 Steve Henn, *Drone Wars: Who Owns the Air?*, NPR (Aug. 1, 2014, 11:58 AM), http://www.npr.org/ blogs/money/2014/05/30/317074394/drone-wars-who-owns-the-air.

34 *Causby*, 328 U.S. at 258 (holding that the ancient common law doctrine *ad coelum*, Latin for "whoever owns [the] soil, [it] is theirs all the way [up] to Heaven and [down] to Hell," had no legal effect "in the modern world.").

35 *Id.* at 259 (Causby argued that he was entitled to compensation under the takings clause of the Fifth Amendment).

36 *Id.* at 264 (Justice William O. Douglas wrote, "if the landowner is to have full enjoyment of the land, he must have exclusive control of the immediate reaches of the enveloping atmosphere.").

37 *Id.* at 263 (stating that eighty-three feet is the height in which the aircraft passed over Causby's land).

38 *Id.* at 256.

39 Loretta Alkalay, *New Rulemaking Creates Uncertainty for Model Aircraft Flyers*, DRONE L.J. (June 28, 2016), http://dronelawjournal.com/new-rulemaking-creates-uncertainty-for-model-aircraft-flyers/.

40 *FAA: Fly Safe With Your Drone*, FED. AVIATION ADMIN., https://www.faa.gov/ news/updates/?newsId=84326 (last modified Jan. 20, 2016, 11:32 AM).

41 *Busting Myths About the FAA and Unmanned Aircraft*, FED. AVIATION ADMIN., http://www.faa.gov/news/updates/?newsId=76240 (last modified Mar. 7, 2014, 4:44 PM).

II. THE STATE OF THE LAW & FAA POLICIES

A. *The Current State of FAA Policy*

The FAA has amended past prohibitions on drone use for commercial purposes—allowing stringent exceptions for journalism and reporting, for example[42]—as it continues to establish long-term guidelines concerning who can fly small drones, and where.[43] Until the FAA develops its official rules about commercial drone flight, the rules regarding drone use will remain somewhat ambiguous.

Unless granted an exception under Section 333 of the MRA, commercial drone flights are currently prohibited in the U.S.[44] Nevertheless, flights near the Chukchi Sea off of Alaska's Western Coast, by Conoco Phillips Oil Company, were approved for commercial and environmental research purposes in 2013.[45] The FAA only granted permission for Conoco's flights after Congress directed the agency to begin permitting flights in the Arctic region.[46] Even FAA exceptions have come with extensive restrictions, including FAA-issued pilot's licenses for UAS operators.[47] The FAA also issued a Certificate of Waiver or Authorization (COA) to BP (formerly British Petroleum) to allow the company to survey pipelines, roads, and equipment at Prudhoe Bay, Alaska—the largest oilfield in the United States.[48]

The current legal landscape reflects a patchwork quilt of regulations, policy announcements, and state laws. In 2005, when drone technology entered the domestic market and airspace, the FAA issued a memorandum for approving drone use.[49] UAS Policy 05-01 stated that drone operators would "be held accountable for controlling [their] aircraft to the same responsible standard as the pilot of a manned

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42 Matt Waite, *The FAA's Drone Rules Are Here: What Does It Mean for Journalists?*, DRONE JOURNALISM LAB (June 21, 2016, 12:50 PM), http://www.dronejournalismlab.org/post/146262852202/the-faas-drone-rules-are-here-what-does-it-mean. The drone activity of journalism programs at public and state universities is considered by the FAA to be commercial use.

43 Hu, *supra* note 10.

44 *Section 333*, FED. AVIATION ADMIN., http://www.faa.gov/uas/beyond_the_basics/section_333/ (last modified Sept. 23, 2016, 9:46 AM).

45 *FAA Opens the Arctic to Commercial Small Unmanned Aircraft*, FED. AVIATION ADMIN.: NEWS & UPDATES (Sept. 24, 2013), http://www.faa.gov/news/updates/?newsId=73981.

46 *Id.*

47 Joan Lowy, *Federal Aircraft Regulations Apply to Drones, NTSB Says*, S. CAL. PUB. RADIO (Nov. 18, 2014), http://www.scpr.org/news/2014/11/18/48156/federal-aircraft-regulations-apply-to-drones-ntsb/.

48 Bill Carey, *FAA Approves First Commercial UAV Flights Over Land*, AINONLINE (June 10, 2014, 12:38PM), http://www.ainonline.com/aviation-news/2014-06-10/faa-approves-first-commercial-uav-flights-over-land (AeroVironment performed the first flight for BP on June 8).

49 FED. AVIATION ADMIN., Unmanned Aircraft Systems Operations in the U.S. National Airspace System—Interim Operational Approval Guidance (Sept. 16, 2005), www.sarahnilsson.org/app/download/960959143/ FAA+policy+05-01.pdf.

aircraft."[50] A blanket prohibition in the FAA's 2007 policy statement, "Unmanned Aircraft Operations in the National Airspace System,"[51] stated that "no person may operate a UAS in the National Airspace without specific authority."[52] Since issuing the new policy, the FAA has formed two different UAS-related Advisory and Rulemaking Committees to provide future recommendations.[53]

Soon after, the FAA established a "special airworthiness certificate" (SAC) for private companies who wished to fly in domestic airspace.[54] In order to satisfy government and *not* commercial demand for drones, public entities that wish to use drones have to obtain a COA, which allows certain police departments, universities, and government agencies to fly drones on a limited basis.[55] Conversely, individuals who wished to use model aircrafts were required to comply with AC 91-57.[56] These certificates have allowed Customs and Border Patrol, the Federal Bureau of Investigation (FBI) and some smaller organizations to fly drones to help make arrests, monitor hostage situations, and scout for drugs and illegal immigration along the U.S.-Mexico border.[57] The FAA has granted few of these certificates.[58] In addition, obtaining a COA requires an ostensibly extraneous showing of "how the drone system is designed and constructed, including software development, control, and quality assurance procedures."[59] Further, the COA application process requires applicants to state the type of drone, and when and where the drone will be flown.[60] According to FAA spokesman Les Dorr, "'[a] private company can obtain a special airworthiness certificate in the experimental category, but experimental certificate regulations preclude

[50] *Id.*; Berry & Syed, *supra* note 22.

[51] Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689, 6689 (Feb. 13, 2007) (to be codified at 14 C.F.R. pt. 91).

[52] *Id.*; Chiaet, *supra* note 23 ("We recognized that unmanned aircraft systems [UAS] would expand significantly and [took steps] to make sure UAS operation [did] not adversely affect safety," said an anonymous FAA spokesperson).

[53] Chiaet, *supra* note 23.

[54] *Special Airworthiness Certificate*, FED. AVIATION ADMIN., https://www.faa.gov/aircraft/air_cert/airworthiness_certification/sp_awcert/ (last modified Sept. 30, 2015, 9:57 AM).

[55] *Certificates of Waiver or Authorization (COA)*, FED. AVIATION ADMIN., http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/aaim/organizations/uas/coa/ (last modified Nov. 14, 2014, 1:20 PM).

[56] *Id.*

[57] DEP'T OF HOMELAND SEC., OFF. OF INSPECTOR GEN., U.S. CUSTOMS & BORDER PROTECTION'S UNMANNED AIRCRAFT SYSTEM PROGRAM DOES NOT ACHIEVE INTENDED RESULTS OR RECOGNIZE ALL COSTS OF OPERATIONS, OIG-15-17 (Dec. 24, 2014), http://www.oig.dhs.gov/assets/Mgmt/2015/OIG_15-17_Dec14.pdf.

[58] *FAA List of Special Airworthiness Certificates - Experimental Category (SACs)*, ELECTRONIC FRONTIER FOUNDATION, https://www.eff.org/document/faa-list-special-airworthiness-certificates-experimental-categorysacs (last visited Sept. 23, 2016, 11:14 AM).

[59] Berry & Syed, *supra* note 22.

[60] *Certificates of Waiver or Authorization (COA) - COA Sample Application*, *supra* note 60.

carrying people or property for compensation or hire.'"[61]

B. *Anarchy in the Sky*

Since the FAA has functioned without formal rules in place, it has relied almost exclusively on cease-and-desist letters and fines, promulgated through memorandums and policy statements, in order to domestically regulate private citizens and entities using drones.[62] As stated in the agency's cease-and-desist letters, the FAA stands by its position that drones cannot be used for commercial purposes and either an SAC or COA is required for flight.[63] Tom Hallman, President of Pictorvision—one of the production companies approved to shoot film and television projects with UAS—corroborated the FAA's letters, stating, "[F]or a number of years, the FAA enforced a de facto ban on the use of UAVs [UAS] for commercial purposes."[64]

The MRA directed the FAA, by order of Congress, to establish a test site program to integrate UAS into the NAS.[65] Accordingly, the FAA granted six sites across the country the right to test commercial uses of UAS.[66] Among the considerations for site selections were geography, climate, infrastructure, safety, and risk factors.[67] The sites evaluate operational risks, safety requirements, complexities of integration into congested airspace, and how air traffic control procedures will evolve with the introduction of UAS into the civil environment, indicating that UAS flights are very much in an experimental stage.[68] The FAA also stated that if drone operations at the test sites "raise privacy concerns that are not adequately addressed by the Test Site's privacy policies, elected officials can weigh the benefits

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[61] Teinowitz, *supra* note 5.

[62] Patrick McKay, *FAA FOIA Response 2-4-14*, SCRIBD (Feb. 4, 2014), http://www.scribd.com/doc/204615520/FAA-FOIA-Response-2-4-14.

[63] *FAA Opens the Arctic to Commercial Small Unmanned Aircraft*, *supra* note 46; Matthew Schroyer, *FAA Cease and Desist Letters Show Agency's Attempt to Control Drone Use in the U.S.*, PROF. SOC'Y OF DRONE JOURNALISTS (Feb. 4, 2014), http://www.dronejournalism.org/news/2014/2/faa-cease-and-desist-letters-show-agencys-attempts-to-control-drone-use-in-the-us.

[64] *Video Production With UAVs: A Conversation with Tom Hallman*, PICTORVISION, http://www.pictorvision.com/ resources/news-2/video-production-with-uavs-a-conversation-with-tom-hallman/ (last visited Sept. 23, 2016, 1:40 PM).

[65] *Fact Sheet – FAA UAS Test Site Program*, FED. AVIATION ADMIN. (Dec. 30, 2013), http://www.faa.gov/ news/fact_sheets/news_story.cfm?newsid=15575.

[66] Center of Excellence (COE) and FAA *Test Sites*, FED. AVIATION ADMIN., https://www.faa.gov/uas/programs_partnerships/coe_test_sites/ (last modified Aug. 4 2014, 11:04 AM). The six tests sites approved by the FAA were the University of Alaska, the State of Nevada, New York's Griffiss International Airport, the North Dakota Department of Commerce, Texas A&M University–Corpus Christi, and Virginia Tech. *Id.*

[67] *Id.*

[68] Mark Memmott, *Test Sites Chosen For Commercial Drone Testing*, NPR (Dec. 30, 2013, 12:17 PM), http://www.npr.org/blogs/thetwo-way/2013/12/30/258390007/test-sites-chosen-for-commercial-drone-testing.

and costs of additional privacy laws or regulations."[69]

The MRA also directed the FAA to "allow a government public safety agency to operate unmanned aircraft weighing 25 pounds or less" under certain restrictions.[70] The bill specified that these UAS must be flown within the line of sight of the operator, less than 400 feet above the ground, during daylight conditions, inside uncontrolled Class G airspace,[71] and more than five miles from any airport or other location with aviation activities.[72] FAA Administrator Michael Huerta stated, "[t]he 2012 Reauthorization law tasks us with integrating small UAS in the Arctic on a permanent basis."[73] Huerta continued, "[t]his operation will help us accomplish the goal set for us by Congress."[74]

The current FAA policy for UAS operations is that "no person may operate a UAS in the NAS without specific authority."[75] "The FAA recognizes that people and companies other than modelers may be flying UAS with the mistaken understanding that they are legally operating under the authority of the Circular."[76] However, AC 91-57 only applies to modelers, and thus *specifically excludes its use by persons or companies for business purposes*.[77] It states that model aircrafts should be flown below 400 feet above the surface to avoid other aircraft in flight.[78]

Individuals or companies currently operating drones are doing so in a legal gray zone, as the FAA has made it clear that it will selectively evaluate Section 333 exemption petitions and authorize them on a case-by-case basis.[79] Despite the FAA's repeated assertions that commercial operations including aerial photography for hire are not allowed, the 2007 policy statement the FAA cites is not legally binding.[80] To issue

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[69] Unmanned Aircraft System Test Site Program, 78 Fed. Reg. 12,259, 12,259 (Feb. 22, 2013) (to be codified at 14 C.F.R. pt. 91).

[70] *Fact Sheet – Unmanned Aircraft Systems (UAS)*, FED. AVIATION ADMIN. (Feb. 15, 2015), https://www.faa.gov/ news/fact_sheets/news_story.cfm?newsId=18297.

[71] FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, 126 Stat. 11, 11; FED. AVIATION ADMIN., CHAPTER 15: AIRSPACE, *in* PILOT'S HANDBOOK OF AERONAUTICAL KNOWLEDGE (2014), https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/17_phak_ch15.pdf (hereinafter "PILOT'S HANDBOOK OF AERONAUTICAL KNOWLEDGE") (stating that "Class G airspace is the portion of the airspace that has not been designated as Class A, B, C, D, or E. It is therefore designated uncontrolled airspace. Class G airspace extends from the surface to the base of the overlying Class E airspace.").

[72] *Id.*

[73] Press Release, *Press Release – FAA Approves First Commercial UAS Flights over Land*, FED. AVIATION ADMIN. (June 10, 2014), http://www.faa.gov/news/press_releases/news_story.cfm?newsId=16354.

[74] *Id.*

[75] FED. AVIATION ADMIN., AIR TRAFFIC ORGANIZATION POLICY, N JO 7210.873 (proposed July 11, 2014).

[76] *Id.*

[77] *Id.*

[78] *FAA Opens the Arctic to Commercial Small Unmanned Aircraft*, *supra* note 45.

[79] *Section 333*, *supra* note 44.

[80] Jason Koebler, *Commercial Drones Are Completely Legal, a Federal Judge Ruled*,

enforceable regulations, the FAA must create a rule and allow the public to comment on it, a procedure commonly undertaken by federal agencies.[81] In accordance with the Administrative Procedures Act (APA) § 553,[82] federal agencies are required to seek public input before rulemaking.[83] The 2007 policy statement was administered without undergoing the requisite APA rulemaking; by sending out cease-and-desist letters the FAA is projecting a level of authority it may not possess. The FAA conceded the administration "currently do[es] not have regulatory standards for commercial operations of UAS," a testament to the capacity of their enforcement capabilities.[84] The FAA's notice and comment period received limited attention, with a minimal number of drone and hobby aircraft enthusiasts responding to its proposed policy for interpreting hobby aircraft rules for the United States.[85]

"A policy statement can't be binding on anyone, including the agency," said Richard Pierce, an administrative law professor at George Washington University Law School.[86] Even Les Dorr, the FAA's own spokesman, stated that it is unclear whether the 2007 guidance is enforceable, and the FAA's legal department has decided against answering the question.[87] However, Secretary of Transportation Anthony Foxx refuted the idea that no jurisdiction exists, stating, "commercial use of drones is not authorized unless the FAA says so." Foxx continued, "[w]hen we find violators, we're going to go after them."[88]

C. *Cease-and-Desist Letters, Fines, and Ambiguous Enforcement*

The FAA has been swift in addressing unauthorized vehicles in the sky, grounding flights, and handing out cease-and-desist letters to anyone and everyone, including dry cleaners in Philadelphia, the

MOTHERBOARD (Mar. 6, 2014, 6:51 PM), http://motherboard.vice.com/read/commercial-drones-are-completely-legal-a-federal-judge-ruled; Jason Koebler, *Drones Could Be Coming to American Skies Sooner Than You Think*, POLITICO MAGAZINE (Jan. 28, 2014), http://www.politico.com/magazine/story/2014/01/drones-faa-lawsuit-coming-to-american-skies-102754; William V. O'Connor et al., *Drones: Much Anticipated Small UAS Notice of Proposed Rulemaking Released by FAA*, MORRISON & FOERSTER LLP (Feb. 17, 2015), http://www.mofo.com/~/media/Files/ClientAlert/ 2015/02/150217DronesFAA.pdf.

81 Notice of Proposed Rulemaking, 14 C.F.R. § 11.5 (2015).

82 5 U.S.C. § 553 (2016).

83 *Id.*

84 Chiaet, *supra* note 23.

85 DRONELAW, http://dronelaw.net (last visited Feb 24, 2016).

86 Koebler, *Drones Could Be Coming to American Skies Sooner Than You Think*, POLITICO MAGAZINE (Jan. 28, 2014), http://www.politico.com/magazine/story/2014/01/drones-faa-lawsuit-coming-to-american-skies-102754.

87 *Id.*

88 Keith Laing, *Drones Reshape U.S. Aviation Policy*, THE HILL (Sept. 3, 2014, 8:01 AM), http://thehill.com/policy/transportation/216464-drones-reshape-us-aviation-policy.

Auburn University College of Agriculture, various media companies, and the Washington Nationals baseball team.[89] In a bit of humorous insight, a Nationals team official pointed out the irony in the FAA's regulations to the Associated Press, "[n]o, we didn't get [the drone use] cleared, but we don't get our pop flies cleared either and those go higher than this thing did."[90] Additionally, the Drone Journalism Lab at the University of Nebraska and the Missouri Drone Journalism Program at the University of Missouri's School of Journalism both received cease-and-desist letters in 2013 for their use of drones as part of a pedagogical exercise.[91]

The FAA has delivered and imposed a standard $10,000 civil penalty on offenders for the use of unauthorized commercial drones, with one known exception:[92] the FAA fined David Zablidowsky just $2,200 for flying a quad-copter drone off a building on East 38th Street in Manhattan.[93] The FAA said Zablidowsky did not receive permission from air-traffic controllers to fly the drone, which hit two high-rise buildings before crashing near Grand Central Terminal, just twenty feet from a pedestrian.[94]

The National Transportation Safety Board (the "NTSB"), an administrative agency, handed down the first decision to interpret the FAA's regulations and ability to impose a fine in 2014. In *Huerta v. Pirker*, Patrick Geraghty, an administrative law judge, granted Raphael Pirker's motion to dismiss the FAA order that fined him for allegedly operating a commercial drone in an unsafe manner.[95] Pirker, an Austrian

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89 Kashmir Hill, *FAA Looks Into News Corp's Daily Drone, Raising Questions About Who Gets To Fly Drones in the U.S.*, FORBES (Aug. 2, 2011, 3:52 PM), http://www.forbes.com/sites/kashmirhill/2011/08/02/faa-looks-into-news-corps-daily-drone-raising-questions-about-who-gets-to-fly-drones-in-the-u-s/ (by sending cease-and-desist letters to media companies, the FAA has determined that drone journalism is to be construed as a commercial use); Dave Kinchen, *Dry-Cleaners Launching Deliveries By Drone in Manayunk*, MYFOXPHILLY (July 13, 2013, 10:34 PM), http://www.myfoxphilly.com/story/22721308/dry-cleaners-launching-deliveries-by-drone-in-manayunk; Megan O'Neil, *2 Drone Journalism Programs Seek Federal Approval to Resume Flying*, CHRON. OF HIGHER EDUC. (Aug. 27, 2013), http://chronicle.com/blogs/wiredcampus/2-drone-journalism-programs-seek-federal-approval-to-resume-flying/45653; Mary Sell, *Agricultural Use of Drones Denied*, TIMES DAILY (July 19, 2014, 11:26 PM), http://www.timesdaily.com/news/article_f7695bec-0fc5-11e4-9810-001a4bcf6878.html; *Nationals Told To Stop Using Drones*, ESPN (Mar. 18, 2014, 3:55 PM), http://espn.go.com/mlb/story/_/id/10629160/washington-nationals-told-faa-stop-using-drones-permission.

90 ESPN, *supra* note 89.

91 O'Neil, *supra* note 89. According to FAA spokesman Les Dorr, the drone journalism program falls within the public agency categorization. Approximately a quarter of applications for certificates of authorization submitted come from academia. *Id.*

92 Jason Koebler, *The US Government is Trying to Fine a Drone Hobbyist for the First Time Ever*, MOTHERBOARD (May 1, 2014, 3:25 PM), http://motherboard.vice.com/read/the-us-government-is-trying-to-fine-a-drone-hobbyist-for-the-first-time-ever.

93 *Id.*

94 *Id.*

95 *Huerta v. Pirker*, CP-217, 2014 WL 3388631 (N.T.S.B. Mar. 6, 2014).

national and member of Team BlackSheep—a company that specializes in creating first-person view aerial videos with remote controlled aircrafts—challenged the seemingly commonplace $10,000 fine[96] levied by the FAA after he used a drone to film a video on the campus of the University of Virginia in 2011.[97] At issue was the interpretation of "aircraft" under federal statutes.[98] Judge Geraghty interpreted the definitions in FAA regulations and determined there was a significant distinction between "aircraft" and "model aircraft." He wrote,

> To accept [the FAA]'s interpretive argument would lead to a conclusion that those definitions include as an aircraft all types of devices/contrivances intended for, or used for, flight in the air. The extension of that conclusion would then result in the risible argument that a flight in the air of, e.g., a paper aircraft, or a toy balsa wood glider, could subject the "operator" to the regulatory provisions of FAA [regulations]. . . . The reasonable inference is . . . that the FAA has distinguished model aircraft as a class excluded from the regulatory and statutory definitions.[99]

Further, Judge Geraghty found that the FAA had no authority over UAS when it imposed the fine on Pirker.[100] He stated, "there was no enforceable FAA rule or [Federal Aviation] Regulation applicable to model aircraft or for classifying model aircraft as an UAS" that applied to a model aircraft like the RiteWing Zephyr II Pirker was operating.[101]

If no comprehensive regulations are promulgated before the FAA's appeal is heard, the NTSB decision will reflect the only interpretation of the FAA's regulations governing commercial drones.[102] "As a general matter, the decision finds that the FAA's 2007 policy statement banning the commercial use of model aircraft is *not enforceable*. It would appear

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[96] *Id.* at *1; Jason Koebler, *The FAA Now Says Flying a Drone in Most Major Cities is Illegal*, MOTHERBOARD (May 2, 2014, 2:28 PM), http://motherboard.vice.com/read/the-faa-now-says-flying-a-drone-in-most-major-cities-is-a-crime. The FAA accused Pirker of violating two Federal Aviation Regulations: Sections 91.13(a) and 91.131(a)(1). The Sections state "that no person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another" and "no person may operate an aircraft within a Class B airspace area except . . . [if] [t]he operator . . . receive[s] . . . ATC clearance from the ATC facility having jurisdiction for that area before operating an aircraft in that area," respectively. *Id.*

[97] Bart Jansen, *Federal Appeal May Define FAA Authority Over Drones*, USA TODAY (July 2, 2014, 5:13 PM), http://www.usatoday.com/story/money/business/2014/07/02/ntsb-drones-faa-appeal-pirker/11793203/.

[98] Gregory S. McNeal, *Yosemite Looks to Ban Drones By Relying on An Absurd Legal Argument*, FORBES (May 3, 2014, 3:40 AM), http://www.forbes.com/sites/gregorymcneal/2014/05/03/yosemite-looks-to-ban-drones-but-the-law-is-not-on-their-side/.

[99] *Huerta*, 2014 WL 3388631 at *2; *see generally* Frederick Schauer, *A Critical Guide to Vehicles in the Park*, 83 N.Y.U. L. REV. 1109 (2008).

[100] Sean Gallagher, *FAA Can't Regulate Small RC Aircraft As "Drones," Judge Rules*, ARSTECHNICA (Mar. 7, 2014, 2:42 PM), http://arstechnica.com/tech-policy/2014/03/faa-cant-regulate-small-rc-aircraft-as-drones-judge-rules/.

[101] *Id.*

[102] *Huerta*, 2014 WL 3388631.

to me to have a very significant impact on other operators," Pirker's attorney, Brendan Schulman, stated.[103] The holding is a setback for the FAA, which held that commercial drone flights are prohibited until the FAA sets rules governing commercial drone use.[104] The FAA is appealing the NTSB's decision.[105] Although the NTSB decision failed to bring definitive clarity to the issue, it did define the positions of the unregulated and regulated arguments.[106]

Even in the wake of *Pirker*, other individuals and smaller private companies continue to operate drones at the risk of fines. Brian Eminger, a stormchaser, could face a $10,000 fine from the FAA after he used a drone to gather ground footage of communities in Arkansas following April 2014 tornadoes that swept the southeastern United States.[107] However, the FAA chose not to comment on whether they plan to pursue the fine.[108] Freefly Cinema, an aerial photography company, has photos on its website of helicopter drones used to film *The Wolf of Wall Street* and a Honda commercial.[109] A Freefly drone also shot footage for a documentary about the U.S. Civil War Battle of Gettysburg that aired on most Public Broadcasting Service (PBS) stations in the U.S. in November 2013.[110] Filmmaker Jake Boritt stated that he received permission to film from the U.S. National Park Service.[111] "It's not something that we did a whole lot of research into," he said.[112]

Another aerial photography company, Fly Boys Aerial Cinematography, was enjoying business success until the FAA contacted them in early 2013, when a drone sighting by an Alitalia pilot near a John F. Kennedy Airport runway resulted in an FBI investigation into the company's activities.[113] The FAA accused them of violating

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103 Mike M. Ahlers, *Pilot Wins Case Against FAA Over Commercial Drone Flight*, CNN (Mar. 6, 2014, 10:07 PM), http://www.cnn.com/2014/03/06/us/drone-pilot-case-faa/.

104 *Id.*

105 *See Huerta*, 2014 WL 3388631, at *3–4.

106 *Id.*

107 *FAA 'Looking Into' $10K Fine For Drone Recording of Tornado Disaster Area*, RT (Apr. 30, 2014, 1:32 PM), http://rt.com/usa/155756-faa-journalist-drone-tornado-investigation/.

108 *Id.*

109 FREEFLY, http://www.freeflycinema.com/freeflyProjects.html (last visited Feb. 24, 2016).

110 *PBS Gettysburg Documentary Filmed by UAS and Funded by Kickstarter*, UAS VISION (July 5, 2013), http://www.uasvision.com/2013/07/05/pbs-gettysburg-documentary-filmed-by-uas-and-funded-by-kickstarter/.

111 Alan Levin, *Illegal Drones Dare FAA to Stop Filming 'Wolf' to Bulls*, BLOOMBERG BUS. (Feb. 14, 2014, 12:00 AM), http://www.bloomberg.com/news/articles/2014-02-14/illegal-drones-dare-faa-to-stop-filming-wolf-to-bulls.

112 *Id.*

113 Liz Klimas, *FAA Halts Man's Drone Photography Business Over Regulations*, THE BLAZE (Mar. 15, 2013, 1:04 PM), http://www.theblaze.com/stories/2013/03/15/faa-halts-mans-drone-photography-business-over-regulations/; Mary Cummings, *What To Do About Drones*, CNN (Jan. 29, 2015, 11:52 AM), http://www.cnn.com/2015/01/29/opinion/cummings-drone-policies/ ("In Washington, the FAA reported nearly 200 drones sighted near other aircraft or restricted

regulations by flying in "Class B" airspace, or airspace in populated areas near major airports.[114] Despite FAA threats, some businesses have decided to operate in the face of regulatory and policy restrictions, as discussed in the following Section.

D. *Fight the Power*

A wide range of businesses, from real estate agents to beer makers, journalists, and Martin Scorcese and the *Wolf of Wall Street*, have ignored the FAA's commercial flight ban—some with success, others without.[115] In January 2014, the FAA decided that Lakemaid Beer's delivery drones violated FAA policy and subsequently issued a cease-and-desist letter, despite the fact that the drones were operating under the 400-foot limit and were arguably closer to hovercrafts than commercial drones.[116] According to Lakemaid's Managing Partner, Jack Supple, "[t]he FAA controls the safety of our airspace all the way to ground level, according to the calls I got from the local inspector and the regional supervisor."[117] Subsequently, Lakemaid had to suspend its service, much to the chagrin of its customers.[118]

Several Hollywood studios and production companies believe drones are so lucrative that they are willing to fly drones, knowing they are illegal, despite the risk of fine or penalty.[119] The downside to that approach is jeopardizing a strong relationship with the FAA for a one-off reward. The FAA has been more lenient with model aircrafts or similar objects flown by hobbyists since they are limited in use and do not have the same performance characteristics of drones.[120]

With the emergence of the New York City Drone Film Festival—a

buildings.").

114 PILOT'S HANDBOOK OF AERONAUTICAL KNOWLEDGE, *supra* note 71.

115 Joel Aschbrenner, *FAA Says Real Estate Agents' Drone Use Illegal*, USA TODAY (July 7, 2014, 6:12 PM), http://www.usatoday.com/story/news/nation/2014/07/07/real-estate-drones-illegal/12299591/; Jeremy Barr, *FAA On Drone Recordings By Journalists: "There Is No Gray Area,"* POYNTER (Jan. 6, 2014, 4:27 PM), http://www.poynter.org/news/mediawire/235239/faa-on-drone-recordings-by-journalists-there-is-no-gray-area/; Bill Chappell, *Beer Drone Can Buzz The Skies No More, FAA Says*, NPR (Jan. 30, 2014, 8:15 PM), http://www.npr.org/blogs/thetwo-way/2014/01/30/269039542/beer-drone-can-buzz-the-skies-no-more-faa-says; Don Steinberg, *Drone Film Festival Hopes to Capture a New, High-Flying Way of Filming*, WALL ST. J. (Nov. 12, 2014, 10:00 AM), http://blogs.wsj.com/speakeasy/2014/11/12/drone-film-festival-to-tout-potential-of-little-airborne-cameras/.

116 Chappell, *supra* note 115.

117 *Id.*

118 *Id.*

119 The majority of fines have been $10,000—assuming the FAA catches wind of the supposed impropriety—and for the cost of a helicopter shoot, the fines may be worth it. However, biting the proverbial hand that feeds you may stave off such behavior by prospective production companies and studios.

120 David F. Carr, *FAA Rules on Drones Vs. Model Aircraft Protested*, INFORMATIONWEEK (July 28, 2014, 9:06 AM), http://www.informationweek.com/government/mobile-and-wireless/faa-rules-on-drones-vs-model-aircraft-protested-/d/d-id/1297572.

short film festival meant to highlight drone filmmaking[121]—comes "the world's first event exclusively dedicated to celebrating the art of drone cinematography."[122] Aerial cinematographer and festival founder Randy Scott Slavin sought to challenge the pejorative perception of drones, stating, "I'm tired of drones being synonymous with questionable legality and FAA regulation. I want to celebrate the art of aerial cinematography."[123] In bombastic opposition to the jurisdiction and enforcement ability of the FAA, the first annual New York City Drone Film Festival debuted in New York City in early 2015.[124] The festival showcased the "most famous viral drone videos" and announced awards for various aspects of drone filmmaking and aerial cinematography.[125]

E. *One Small Step for Drone Kind . . . Acquiring Permissions and Exceptions*

In order to acquire permission for drone use and circumvent the scanty guidelines on commercial use, eligible companies have filed exemption petitions. [126] To qualify for exemptions, the inquiring companies must show that their drone operations will not cause safety hazards and that they are in the public interest.[127] "As reported by the *Wall Street Journal*, the FAA has begun to grant exemptions prior to any indication of an effort to formulate comprehensive rules for such small drones.[128] According to Tom Hallman, President of Pictorvision, "[t]he total weight of the UAV, including camera, lens, batteries and other peripheral equipment, cannot exceed 55 pounds. Plus, there's an altitude limit of 400 feet above ground level, and a speed limit of 57 miles per hour."[129]

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121 Paula Bernstein, *Attention, Filmmakers: There's Now a Film Festival for Drone Footage*, INDIEWIRE (Nov. 15, 2014, 10:03 AM), http://www.indiewire.com/article/attention-filmmakers-theres-now-a-film-festival-for-drone-footage-20141115.

122 NEW YORK CITY DRONE FILM FESTIVAL, http://www.nycdronefilmfestival.com (last visited Feb. 23, 2016).

123 *Id.*

124 Paula Bernstein and Shipra Gupta, *Watch: Here Are the Films That Won the 1st Annual NYC Drone Film Festival*, INDIEWIRE http://www.indiewire.com/2015/03/watch-here-are-the-films-that-won-the-1st-annual-nyc-drone-film-festival-64331/ (last visited Sept. 23, 2016).

125 Deborah D. McAdams, *Dronecam Captures Tech Changing Bulb at 1,500 Feet*, TV TECH. (Jan. 7, 2015), http://www.tvtechnology.com/news/0086/dronecam-captures-tower-tech-changing-bulb-at--feet-/273995.

126 David Schaper, *Lights, Camera, Drones: Hollywood's Lens Gets A Little Larger*, NPR, http://www.npr.org/blogs/thetwo-way/2014/09/26/351731611/lights-camera-drones-hollywoods-lens-gets-a-little-larger (last updated Sept. 26, 2014, 4:08 PM).

127 *UAS Key Initiatives – Section 333*, *supra* note 8.

128 Andy Pasztor, *FAA Weighs Letting Film, TV Industry Use Drones*, WALL ST. J. (June 2, 2014, 4:12 PM), http://online.wsj.com/articles/faa-weighs-limited-commercial-drone-flights1401734327.

129 Beth Elliot, *Video Production With UAVs: A Conversation With Tom Hallman*, TV TECH. (Oct. 24, 2014, 1:45 PM), http://www.tvtechnology.com/article/video-production-with-uavs-a-conversation-with-tom-hallman/273014.

As of now, companies—or petitioners—can submit requests through the MPAA to seek exemptions to the FAA's ban on commercial drones.[130] Film and television companies are among the first to receive approval since "film sets are usually closed environments and the industry has no shortage of aviation and aerial-photography experts."[131] Hollywood companies continue to apply for drone petition exemptions as a result of the FAA's current prohibition of all commercial unmanned activity.[132] Seven companies that make movies and television shows petitioned the FAA for exemptions.[133] The seven companies who have been granted exemptions are choosing the Section 333 route because the petition exemptions provide exception from "general flight rules, pilot certificate requirements, manuals, maintenance and equipment mandates, as well as airworthiness certification requirements."[134]

The FAA is currently only issuing SACs in the experimental category.[135] Experimental certificates are issued with accompanying operational limitations[136] that are appropriate to the applicant's operation.[137] The FAA has issued five experimental certificates for unmanned aircraft systems for the purposes of research and development, marketing surveys, or crew training.[138] UAS issued experimental certificates may not be used for compensation or hire.[139]

The applicable regulations[140] for an experimental certificate explicitly define that the applicant must state the intended use for the UAS and provide sufficient information to satisfy the FAA that the aircraft can be operated safely.[141] The time or number of flights must be specified along with a description of the areas over which the aircraft would operate.[142] The application must also include drawings or detailed photographs of the aircraft and requires an on-site review of the

130 This process may take between two months and a year to get approval. *333 Exemption FAQ*, UAV SYSTEMS ASSOCIATION, http://www.uavsa.org/333-faq/ (last visited Sept. 23, 2016).

131 Alex Brown, *Hollywood Producers Want To Use Drones To Film Their Movies*, NEXTGOV (June 3, 2014), http://www.nextgov.com/defense/2014/06/hollywood-producers-want-use-drones-film-their-movies/85699/.

132 Hu, *supra* note 10.

133 Dillow, *supra* note 7.

134 Ted Johnson, *FAA May Approve Use of Drones for Hollywood Filmmaking*, VARIETY (June 2, 2014, 1:47 PM), http://www.variety.com/2014/film/news/drones-for-filming-movies-1201207578/.

135 *Legal Update: Commercial Use of Drones Currently Prohibited for Most Industries...But Not Hollywood*, BOSE MCKINNEY & EVANS LLP, http://www.boselaw.com/2014/09/legal-update-commercial-use-drones-currently-prohibited/ (last updated Sept. 26, 2014).

136 14 C.F.R. § 91.319 (2004).

137 *Id.*

138 U.S. DEP'T OF TRANSPORTATION, FED. AVIATION ADMIN., CERTIFICATE NO. 7006 0100 0001 7196 2772 (July 10, 2013).

139 14 C.F.R. § 91.319(e) (2015).

140 §§ 21.191, 21.193, 21.195.

141 § 91.319(a).

142 § 21.193(d)(2).

system and demonstration of the area of operation.[143] Thus, since the requirements for experimental certificates are inappropriate for most UAS operators, this exception is unlikely to provide much of an avenue to getting drones in the sky.

F. *The Rise of Section 333 and the Regulatory Framework of Exemptions*

While the FAA, at the instruction of Congress,[144] hastens its efforts to construct a regulatory framework for safely integrating small UAS into routine NAS operations, the agency has utilized the authority of Section 333 under the MRA of 2012 to provide exemptions for film and television companies that the FAA feels meet the requisite requirements for use.[145] "Section 333, 'Special Rules for Certain Unmanned Aircraft Systems,' provides flexibility for authorizing safe civil operations in the NAS by granting the Secretary of Transportation the authority to determine whether airworthiness certification is required for a UAS to operate in the NAS."[146]

Following an announcement by Secretary of Transportation Anthony Foxx and FAA Administrator Michael Huerta on Sept. 25, 2014, the FAA decided to permit the restricted use of drones on movie and television locations.[147] The film and television production industry is a perfect tester for restricted drone use since it operates in tightly-controlled, closed sets.[148]

The Section 333 exemptions circumvent the internal procedure the FAA has in place for commercial drone use, allowing the approved photo and video production companies to operate without a COA as long as they do not pose a threat to either national airspace or national security.[149] "There has been a lot of interest around this technology lately, and I have determined that using unmanned aircraft for this purpose does not pose a risk to national airspace users," Secretary Foxx said on a conference call.[150]

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143 § 21.193(d)(4).

144 NPR Staff, *supra* note 19.

145 *UAS Key Initiatives – Section 333*, *supra* note 8.

146 *FAA Section 333 - Rules for Unmanned Aircraft Systems*, FED. AVIATION ADMIN., http://www.hse-uav.com/faa_section333_special_rules.htm (last visited Sept. 23, 2016); Tony Murfin, *So How Do You Get to Fly a UAS Commercially?*, GPS WORLD (Jan. 14, 2015), http://gpsworld.com/so-how-do-you-get-to-fly-a-uas-commercially/.

147 *Press Release — U.S. Transportation Secretary Foxx Announces FAA Exemptions for Commercial UAS Movie and TV Production*, FED. AVIATION ADMIN. (Sept. 25, 2014), http://www.faa.gov/news/ press_releases/news_story.cfm?newsId=17194.

148 Dillow, *supra* note 7.

149 Johnson, *supra* note 134.

150 Brian Watt, *FAA Decision Paves Way For Drone Use in U.S. Films; Allows Six Production Companies to Use Drones in Filming*, S. CAL. PUB. RADIO (Sept. 25, 2014), http://www.scpr.org/blogs/economy/ 2014/09/25/17349/faa-decision-paves-way-for-drone-use-in-us-films-a/.

The FAA will maintain a watchful eye over the process by implementing the following restrictions: (i) the drones can only be used in closed sets, (ii) they must be operated by certified pilots, (iii) they can only fly up to 400 feet, and (iv) the film producers must notify the FAA of their use.[151] The drone must also be inspected before use and never flown out of view.[152] Night drone operation will remain off limits.[153] Shooting will be limited to scripted productions and therefore will be guided and controlled by the content of the script[154] and "reality television shows or other unscripted events won't qualify for the permits."[155]

The aforementioned television and production companies received exemptions known as Summary Grants of Exemption from the FAA.[156] The language of Section 333 is instructive in providing the scope of the FAA's authority to grant exemptions. Specifically, Section 333 provides Secretary Foxx with the authority to determine:

> (1) If certain unmanned aircraft systems, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight does not create a hazard to users of the national airspace system or the public or pose a threat to national security; and
>
> (2) Whether a certificate of waiver, certificate of authorization, or airworthiness certification under 49 USC § 44704, is required for the operation of unmanned aircraft systems identified under paragraph (1).[157]

This regulatory framework is intended to provide a safe and legal entry into the UAS marketplace by discouraging impropriety of use.[158] The FAA currently promulgates a five-step procedure for requesting FAA approval to operate a UAS for civil purposes besides recreation or hobby:[159]

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151 Justin Bachman, *The FAA Gives Hollywood Its Drones, and Other Industries Will Soon Benefit*, BLOOMBERG BUS. (Sept. 25, 2014), http://www.bloomberg.com/bw/articles/2014-09-25/hollywood-asks-for-and-gets-federal-permission-to-fly-drones.

152 *Id.*

153 Johnson, *supra* note 21.

154 *Id.*

155 Joan Lowy, *Drone Use For Filmmaking Wins FAA Approval*, MANUFACTURING.NET (Sept. 25, 2014, 3:47 PM), http://www.manufacturing.net/news/2014/09/drone-use-for-filmmaking-wins-faa-approval.

156 *UAS Key Initiatives – Section 333*, *supra* note 8.

157 *Public Guidance for Petitions for Exemption Filed under Section 333*, FED. AVIATION ADMIN., https://www.faa.gov/uas/legislative_programs/section_333/how_to_file_a_petition/media/section333_public_guidance.pdf (last updated Sept. 25, 2014).

158 *Id.*

159 *What Can I Do With My Small Unmanned Aircraft?*, FED. AVIATION ADMIN., https://www.faa.gov/uas/publications/model_aircraft_operators/ (last modified Dec. 18, 2015, 3:57 PM) (Hobby and Recreational flying does not require FAA approval but is governed

1. Review the FAA's Guidelines for Submitting a Petition for Exemption.
2. Review the Section 333 Guidance from the FAA's UAS Integration Office.
3. Apply and receive a civil Certificate of Waiver or Authorization (COA).
4. After the aforementioned materials have been review, petitioners may submit a "Petition for Exemption or Rulemaking."
5. After submitting a petition for exemption, petitioners should apply for a COA.[160]

The *Section 333 Guidelines* from the FAA's UAS Integration Office describe information petitioners should submit to the FAA in order for the Secretary of Transportation to grant relief from the airworthiness certification requirements of the MRA.[161] The FAA's Section 333 exemptions impose a 120-day review period for all filings.[162] In addition to a petition for exemption, petitioners must apply for and receive a civil COA in order for the FAA Air Traffic Control Facilities to be aware of prospective processes and operations.[163] After registering with the FAA, the petitioners may submit a "Petition for Exemption or Rulemaking," the last step in the Section 333 process.[164]

Exemptions are a short-term solution, lasting only two years, and they do not address national airspace integration.[165] Large-scale movie studios and production companies are reaping the benefits of Section 333 exemptions,[166] but small business owners or, more appropriately, independent filmmakers, are left without significant recourse.

An unintended consequence of Section 333 may be its equalizing factor, an unequivocal leveler for independent filmmakers. Since

operational limits and informal "dos" and "don'ts."); *UAS Key Initiatives – Section 333*, *supra* note 8.

160 *Petitioning for Exemption Under Section 333*, FED. AVIATION ADMIN., http://www.faa.gov/uas/ beyond_the_basics/section_333/how_to_file_a_petition/ (last modified Sept. 20, 2016).

161 *Id.*

162 14 C.F.R. § 11.81 (2014); *Guidelines for Submitting A Petition for Exemption*, FED. AVIATION ADMIN., http://aes.faa.gov/Petition/home.html (last visited Mar. 1, 2016).

163 *What Can I Do With My Small Unmanned Aircraft?*, *supra* note 159.

164 *Petitioning for Exemption Under Section 333*, *supra* note 160.

165 *Section 333 vs. Part 107: What Works for You?*, FED. AVIATION ADMIN., https://www.faa.gov/news/updates/?newsId=86285 (last modified Aug. 29, 2016, 10:34 PM); Dillow, *supra* note 7.

166 Gregory S. McNeal, *Drones Are Coming to Hollywood: FAA Set to Announce Approval For Use in Filming*, FORBES (Sept. 23, 2014, 1:59 PM), http://www.forbes.com/sites/gregorymcneal/2014/09/23/drones-are-coming-to-hollywood-faa-will-announce-approval-this-thursday/#19b356743b5f.

Section 333 provides a simple and straightforward paradigm for obtaining commercial drone approval, Congress and the FAA appear to have established a regulatory equilibrium for independent filmmakers and major motion picture companies.[167] While the technological barriers to entry have evaporated and the legal barriers have become less intimidating, independent filmmakers may not have the political clout, notoriety, or capital necessary to advance their exemption requests through the process.[168] However, "since the FAA considers petitions on a first-come, first-served basis, the delay means indie filmmakers can position themselves advantageously"[169] on a leveled playing field.

The FAA authorizes UAS operations through its "do no harm"[170] approach by three different means[171]: (i) a COA, which has a sixty-day issuance period, allows public entities—including federal, state, and municipal government entities—to apply, and ensures public interest and overall safety; (ii) Experimental Certification, which allows the FAA to issue experimental certificates consistent with the Code of Federal Regulations but is generally relegated to research, development, crew training, and market survey, and; (iii) Recreational Hobbyists, or individuals who use UAS for recreational purposes pursuant to AC 91-57, consistent with operating standards which include flight below 400 feet.[172]

III. PROBLEM

The FAA cites no relevant federal statutes, federal regulations, or case law to support the jurisdictional claims the FAA purports. American citizens retain a "public right of transit" through the airspace above them.[173] However, there are three sources of domestic drone regulation: federal policy (which includes FAA regulations), state legislation focused on private drone use, and laws of general

167 *Petitioning for Exemption Under Section 333*, *supra* note 160.

168 *Our "Comprehensive Section 333 Exemption Project" Package*, DRONELAW.PRO, https://www.dronelaw.pro/our-3500-section-333-project/ (last visited Sept. 23, 2016) (Although filing a Section 333 exemption is free, the complicated nature of the exemption form may require legal expertise costing upwards of $3,000 in legal filing fees. While larger production companies can afford the legal services, the same fees are cost prohibitive for many independent and documentary filmmakers).

169 Paul Fraidenburgh, *Drone Filmmaking and the Technological Power Shift*, BUCHALTERNEMER (Aug. 13, 2014), http://www.buchalter.com/publication/drone-filmmaking-and-the-technological-power-shift/.

170 Dan Namowitz, *Unmanned Aircraft Tests Must 'Do No Harm,'* sUASNEWS (May 9, 2012), http://www.suasnews.com/2012/05/unmanned-aircraft-tests-must-do-no-harm/.

171 *UAS Key Initiatives – Section 333*, *supra* note 8.

172 *Id.*

173 49 U.S.C. § 40103(a)(1) (2016); *see also* Peter Sachs, Opinion, *Busting the FAA's "Myth Busting" Document*, ARIZ. DAILY INDEP. (Mar. 4, 2014), http://www.arizonadaily independent.com/2014/03/04/busting-the-faas-myth-busting-document/.

applicability for drone use.[174] Both statutory and case law establish that the FAA's authority over airspace is limited by statute to navigable airspace, which is defined as, "airspace above the minimum altitudes of flight . . . including airspace needed to ensure safety in the takeoff and landing of aircraft."[175] If what the FAA claims is true, that would amount to a "taking," more specifically a regulatory taking by the federal government.[176] This assertion was the basis of the claim in *United States v. Causby*.[177]

A. *Paternalism*

An agency's policy does not have any force of law.[178] "General statements of policy [are] statements issued by an agency to advise the public prospectively of the manner in which the agency proposes to exercise a discretionary power."[179] The FAA published a Federal Register notice in 2007 that clarified the agency's policy: "[y]ou may not fly a UAS for commercial purposes by claiming that you're operating according to the Model Aircraft guidelines. Commercial operations are only authorized on a case-by-case basis."[180]

The FAA claims that anyone who wants to fly an aircraft—manned or unmanned—in U.S. airspace needs some level of FAA approval. While "private sector users can obtain an experimental airworthiness certificate to conduct research and development, training, and flight demonstrations, commercial UAS operations are limited and require the operator to have certified aircraft and pilots, as well as operating approval."[181] Thus far, only two UAS model drones—the Scan Eagle and Aerovironment's Puma—have been certified, and they can only fly in the Arctic.[182] Public entities such as federal, state, and local governments and public universities may apply for a COA.[183] "The COA-application process requires applicants to state what type of drone will be flown, when it will be flown and where it will be flown,"

174 Berry & Syed, *supra* note 22.
175 49 U.S.C. § 40102(a)(32) (2016).
176 *Causby*, 328 U.S. at 260-62.
177 *See supra* Part I.B.
178 *See generally* U.S. Dep't of Justice, Attorney General's Manual on the Administrative Procedure Act, Section 3 (1947), http://archive.law.fsu.edu/library/admin/1947cover.html.
179 *Id.* (emphasis added).
180 Eric Michael Gray, *Drone Use Regulation*, CONN. GEN. ASSEMBLY (October 1, 2014), https://www.cga.ct.gov/pri/docs/2014/Full%20Update%20Drone%20Use%20Regulation%20Study.pdf; *See supra* Part II (The Model Aircraft Guidelines require flights remain below 400 feet, three miles from an airport, and away from populated areas. Further, a commercial flight requires a certified aircraft, a licensed pilot, and operating approval.).
181 *Busting Myths About the FAA and Unmanned Aircraft*, *supra* note 41.
182 Sachs, *supra* note 173; O'Neil, *supra* note 89 (Public agencies, including police departments and fire departments, that want to fly drones are not exempt from permit application process.).
183 O'Neil, *supra* note 89.

FAA spokesman, Les Dorr, told VideoJournalistToday.[184]

Flying model aircraft solely for hobby or recreational reasons does not require FAA approval.[185] However, hobbyists are advised to operate their aircraft in accordance with the agency's model aircraft guidelines.[186] In the MRA, Congress exempts model aircrafts from new rules or regulations, provided that the aircrafts are operated "in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization."[187]

The FAA differentiates between model aircrafts and unmanned aircrafts, but the distinction, in actuality, has nothing to do with the aircraft, but rather *the intent* of the operator. As soon as one attempts to use a drone for business or commercial purposes, the FAA will seek to regulate it.[188] Though Section 333 exemptions have been granted to major film and television production companies to operate drones, the exemption framework creates a more difficult route to success for documentary, independent, and student filmmakers.

B. *Safety*

Section 333 exemptions do not go far enough. Drones are safe enough to use for more than just Hollywood exemptions. While the FAA is softening its stance, the operation of drones is emerging from a legal gray area.[189] Limiting drone use to film and television production companies is pigeonholing technological possibility and restricting artists' and filmmakers' ability to use the technology.[190] By allowing Section 333 exemptions, the FAA has recognized its draconian stance, but it is still leaving out private citizens who may want to film their weddings on private property and documentary or independent filmmakers who want to rent or buy the technology to expand the creative possibilities of small-budget and socially important films. In the realm of media, the FAA policies have further limited expansion. Drone journalism, an emerging academic and professional industry,[191] has been subject to the jurisdictional autonomy of the FAA.[192] There is

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184 *Journalism Schools Ask Federal Government to Allow Use of Flying Drones for News Reporting*, VIDEOJOURNALISTTODAY, http://www.videojournalisttoday.com/ethics/Journalism-Schools-Ask-Federal-Government-Allow-Use-Flying-Drones-News-Reporting (last visited Sept. 23, 2016, 4:03 PM).

185 *Busting Myths About the FAA and Unmanned Aircraft*, *supra* note 41.

186 *FAA Opens the Arctic to Commercial Small Unmanned Aircraft*, *supra* note 45.

187 FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, 126 Stat. 11, 11.

188 *Will the FAA Let Hollywood Fly Camera Drones?*, BLOOMBERG BUS. (June 3, 2014), http://www.bloomberg.com/news/videos/b/3969b67a-c78f-444e-ad31-3ea3dadd24eb.

189 *See generally infra* Part II.B.

190 Ryan Hagemann, *FAA Drone Rules Could Kill Innovation*, NISKANEN CENTER (June 21, 2016), https://niskanencenter.org/blog/faa-drone-rules-kill-innovation/.

191 Mark Corcoran, *Drone Journalism Takes Off*, ABC (Feb. 21, 2012, 4:10 AM), http://www.abc.net.au/news/2012-02-21/drone-journalism-takes-off/3840616.

192 *Drone Journalism and the Law*, UNC CENTER FOR MEDIA LAW & POLICY,

no justifiable reason why independent filmmakers, individuals, and small-time entities should suffer harms while well-resourced and connected companies reap the benefits of a lobby-friendly exemption process. By creating a comprehensive and costly exemption scheme, the FAA's actions are disproportionally affecting individuals and independent filmmakers who do not have the resources to follow the FAA's strict guidelines.

Tom Hallman, President of Pictorvision, one of the production companies approved to shoot film and television projects with UAS said,

> [A Pilot-in-Command] must have experience and recent piloting time with the particular model of UAV being used for the shoot. We are required to have a certified Visual Observer who is in voice contact with the pilot during the flight, acting as a safety officer and second set of eyes for the PIC. And when doing filming from the UAV, we are required to have a dedicated camera operator to remotely control the camera and the steering of the gimbal. There is also the requirement for a flight plan of operations to be filed with the local FAA authority three days prior to a UAV shoot, just like we do for manned aircraft filming. And the UAV flight has to be done over what's called a sterile set, where the public is not allowed and where only those production personnel, including actors, are allowed to be during the UAV operation. Maintenance records and inspections, just like we do for manned aircraft, are required for the UAVs.[193]

Because the exemption process is so laborious, it requires substantial resources. For smaller film and television production companies, filmmakers, universities, students, or individuals, those resources are not as widely available and their political clout or lobbying ability is not as significant as that of major production companies. Small time cinematographers do not have the resources to lobby for the rights afforded to the industry giants.

There are arguments that the FAA does not even have jurisdiction over airspace and that drones may operate freely in the absence of state or federal statutory law.[194] In *Shelby County v. Holder*, Chief Justice Roberts, criticizing a voting rights coverage system, remarked that old facts should not be applied where they have no logical relationship to the modern day.[195] Where the law is antiquated, it shall not govern.[196] Though policies and regulations do reflect adaptations to new technology, the black letter law does not, and therefore a change must

http://medialaw.unc.edu/ resources/drone-journalism/ (last visited Sept. 23, 2016).

193 Elliot, *supra* note 129.

194 *See supra* Part II.B.

195 Shelby County. v. Holder, 133 S.Ct. 2612, 2629 (2013).

196 *Id.*

be implemented.

Dan Kanes, a director of photography with Paralinx,[197] stated, "[i]t's much safer than flying a full-size copter. Unfortunately, sometimes there are helicopter accidents."[198] Though rare, deaths on film sets do happen, and multiple deaths resulting from the use of helicopters have occurred in recent years. For example, in February 2014, Sarah Jones, a twenty-seven year old camera assistant, was struck by a train in Georgia while filming *Midnight Rider*.[199] Ms. Jones' death highlights a new sense of urgency for safety on sets, especially in a union-dominated business.[200] On the set of the *Twilight Zone: The Movie*, a helicopter-related accident claimed the lives of actor Vic Morrow and two children.[201] In February 2012, two filmmakers working with James Cameron were killed in a helicopter crash while on location scout off the south coast of Australia.[202] And in 2013, three individuals died in a crash related to a Discovery Channel program in California.[203]

IV. SOLUTION

The Section 333 exemption process promulgated by the FAA, as conceived, makes attaining exemptions for small production companies and independent filmmakers a more difficult process. The step-by-step exemption granting is harmful to independent filmmakers because they do not have the economic or political clout to pass their exemptions through or to effectively lobby the FAA for amicable regulations the way the MPAA does.[204]

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197 Paralinx, a privately owned California company, develops wireless video systems for uses including operation of movie cameras that are mounted on drones. Paralinx was acquired by The Vitec Group in February 2015.

198 Carolyn Giardina, *Drones in Movie Shoots: Debate Rages Despite Safety Claims, Cost Savings*, HOLLYWOOD REP. (June 27, 2014, 8:00 AM), http://www.hollywoodreporter.com/behind-screen/drones-movie-shoots-debate-rages-715311; *see generally* Priska Neely, *Keeping Robots In Line With The Law*, NPR (April 6, 2014, 4:59 PM), http://www.npr.org/blogs/alltechconsidered/2014/04/06/299889188/keeping-robots-in-line-with-the-law (The Department of Defense is concerned with additional unanswered safety questions, including: (1) how to prevent collisions, (2) who bears responsibilities for accidents, and (3) charges accidents would bring and the effects of civil and/or criminal damages.).

199 Scott Johnson, *A Train, a Narrow Trestle and 60 Seconds to Escape: How 'Midnight Rider' Victim Sarah Jones Lost Her Life*, THE HOLLYWOOD REPORTER (March 4, 2014, 2:21 PM), http://www.hollywoodreporter.com/ news/midnight-rider-accident-sarah-jones-death-gregg-allman-685976.

200 *A Guide to Hollywood Unions*, FILMMAKER IQ (Sept. 23, 2012), http://filmmakeriq.com/2012/09/a-guide-to-hollywood-unions/.

201 Giardina, *supra* note 198. The tragic accident occurred in 1982 and the film was released in 1983. Ricky Derisz, *Hollywood's Most Horrific Accident: The Shocking True Story of the Helicopter Crash That Killed the Lead Actor and Two Children*, MOVIE PILOT (Nov. 13, 2015, 5:34 PM), http://moviepilot.com/posts/3635744.

202 *Id.*

203 *Id.*

204 Ungerleider, *supra* note 9.

While the FAA purports to have jurisdiction, the agency's enforcement capabilities are very much up in the air. When the rules were first written by the FAA, there was no discussion nor iota of thought about quadcopters[205] or UAS. Now there is a new, rapidly progressing technology functioning within an antiquated legal scheme. It is seemingly inappropriate for law to govern where the technology it is regulating could not have been conceived at the time of the law's implementation. Thus, in conjunction with cost, safety, and economic incentives, it is in the best interest of the filmmaking community to implement a workable, level regulatory playing field for the governance of drones.

A. *Safety, Safety, Safety*

The descriptive preamble of this Note is a testament to the power and possibilities of drones.[206] Without drones, aerial scenes often require large, expensive cranes and manned helicopters with separate camera crews.[207] Operating a drone is a safer alternative to the regulated flights the entertainment industry currently uses for private set filming.[208] From a creative standpoint, drones allow directors to manipulate angles that the use of cranes or helicopters do not allow for, including lower altitudes like in the third installment of *The Expendables*.[209] Drones are a godsend for Hollywood producers because they provide an opportunity "to capture overhead imagery often from perspectives too low for a helicopter and too high for a crane."[210]

With rules already in place that require UAS flights to be conducted on sterile, controlled sets, the FAA should relax the exemption process so more filmmakers have the opportunity to take advantage of the safety benefits drones confer. Any exterior filming, even without a UAS, generally requires production to block off entire streets or city blocks as to avoid civilians and onlookers disrupting their shots or putting themselves and crewmembers in harm's way, especially where big stunts are involved.[211] As ground-level productions already

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205 Quadcopters are multirotor drones, typically with 4 or more small rotors, that are stronger and more stable than fixed-wing aircrafts. They are the most popular commercial drone on the market due to their small size, precision, agility, power and stability. *What is a Quadcopter?*, DRONE BUFF, http://dronebuff.com/what-is-a-quadcopter/ (last visited Sept. 23, 2016, 5:01 PM).

206 *See supra* INTRODUCTION.

207 Gregory McNeal, *Drones and Aerial Surveillance: Considerations for Legislators*, CTR. FOR TECH. INNOVATION AT BROOKINGS (Nov. 2014), http://www.brookings.edu/research/reports2/2014/11/drones-and-aerial-surveillance.

208 *Id.*

209 Giardina, *supra* note 198.

210 Dillow, *supra* note 7.

211 Nora Carr & Betsy Friedman-Palmieri, *Complaint Box | Lights! Camera! Leave?*, N.Y. TIMES CITY ROOM BLOG (Feb. 25, 2011, 7:29 AM), http://cityroom.blogs.nytimes.com/2011/02/25/complaint-box-lights-camera-leave/comment-page-3/?_r=0.

require several types of permissions, such as the approval of landowners and other affected parties, a difficult exemption process serves as an unnecessary addition to an already tedious process. The incorporation of drones onto sets will ease production complications and help normalize filmmaking processes.[212]

UASs are undoubtedly more advantageous than manned helicopters from a safety perspective. Hallman has stated:

> The biggest difference is really the form factor. It's the size and the weight. Unlike the 3,000-pound, full-sized aircraft, [drones are] 55 pounds or lighter. So it's much easier to use when you get to smaller locations that you couldn't get to with a full-sized aircraft. And because the UAV is powered electrically, it's significantly lighter. It has way less rotor wash, so the blades don't pick up dust like you would with a manned aircraft. With UAVs you can get relatively close to objects and not disturb them or the environment, whereas with a manned aircraft, you're going to kick up a dust storm if you get within 50 yards. And again, if you're doing sound shooting, we can get a UAV much closer without interfering than you could with a manned craft.[213]

Drones, by their nature, offer a prospective solution. "If you place a remote-controlled, unmanned camera in a place that is dangerous to humans, you are also alleviating some of the risks that crewmembers could face," says Kanes.[214] Local 600, the International Cinematographers Guild, offers a union option for filmmakers.[215] The FAA should partner with Local 600 to establish requisite safety protocols and create special designations for drone operators that will lead to greater safety measures on film sets while also removing the risk of using high-powered and dangerous equipment.

The conventional film operations employed by Hollywood use piloted aircrafts that weigh around 4,000 pounds, carry combustible fuel, and fly in close parameters to both actors and buildings. Since drones have a pilot-in-command requirement, there must be an individual controlling the flight of the UAV who is a licensed private pilot with a current third-class medical certificate and a certain minimum amount of experience flying UAVs.[216] UAS provide a safer and cheaper alternative. By weighing just fifty-five pounds, running without combustible fuel, and having the oversight of licensed pilots,[217]

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212 Elliot, *supra* note 129.

213 *Id.*

214 Giardina, *supra* note 198.

215 LOCAL 600 INT'L CINEMATOGRAPHERS GUILD, https://www.cameraguild.com/AboutUs.aspx (last visited Feb. 25, 2016).

216 McAdams, *supra* note 125.

217 Alan Levin, *Drone Pilots are Lining Up to Get Licensed by the U.S.*, BLOOMBERG TECH. (Aug. 29, 2016, 5:00 AM), http://www.bloomberg.com/news/articles/2016-08-29/pilots-for-hire-

drones provide the most progressive and safe filming alternative available to filmmakers.

B. *It's All About the Benjamins*

Cost-efficiency is an important element to the public policy argument supporting immediate, streamlined drone integration.[218] UASs hold great commercial potential. To the Hollywood crowd, UASs offer a new and less expensive way to capture the perfect aerial shot a director must have. On the set of *The Expendables 3*, the emergence of drones as a legitimate filming alternative allowed producers to reduce helicopter filming from thirty-eight days to ten.[219] Though dependent on factors like the characteristics of the actual drone, camera attachments, and the necessity of for-hire drone operators, daily drone rental costs range from $4,500 to $8,000.[220] Alternatively, a helicopter shoot requires, at minimum, a two-person crew—consisting of at least a pilot and a camera operator—the cost of which is closer to $20,000.[221] As it pertained to the importance of UAV savings on the overall costs associated with film production, Tom Hallman remarked:

> One of the biggest cost savings is in getting the equipment to the location. With the unmanned aircraft, it's a bunch of Pelican cases in the back of a truck or excess baggage on an airliner. So when going to an exotic location, shipping the UAV there is not a significant expense. With a manned-sized aircraft, you have to fly to that exotic location at $2,000 an hour—so you can quickly rack up a bill just getting the aircraft to and from, before you even roll a single frame. . . .[T]he costs to operate UAV are significantly less, because we're not burning jet fuel.[222]

With each new day, month, and year, more accessible and affordable UAS come within the reach of small-scale independent filmmakers.[223] However, the regulatory and legal circumstances governing small UAS pose a significant hindrance to prospective aerial cinematographers. Citing his company's and core engineers' extensive experience in the aerial cinematography market, Hallman continued, "[t]hat knowledge and experience is definitely an asset when figuring out the policies and procedures that will satisfy the new FAA

cramming-for-test-as-the-age-of-drones-arrives.

218 Richard Verrier, *Drones Are Providing Film and TV Viewers a New Perspective on the Action*, L.A. TIMES (October 8, 2015, 3:30 AM), http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-drones-hollywood-20151008-story.html.

219 Giardina, *supra* note 201.

220 *Id.*

221 *Id.*

222 Elliot, *supra* note 129.

223 Matthew Sparkes, *Which Drone Should You Buy?*, TELEGRAPH (Dec. 8, 2014, 10:52 AM), http://www.telegraph.co.uk/technology/news/11279235/Which-drone-should-you-buy.html.

requirements."[224]

The drone industry has the power to imbue money and jobs into local communities and smaller industries.[225] The independent filmmaking industry is an obvious beneficiary where the average independent filmmaker operates with an average budget of $750,000 and often leverages his or her own income and savings to make their films.[226] As Hallman stated, "[t]here are expenses with UAVs to meet the FAA requirements. There is a three-man crew mandated by the FAA, so this is not going to be run-and-gun with a single guy and a GoPro setup."[227]

C. *Hurry Up!: Why Immediate Integration is Necessary to Avoid Lost Profits*

The FAA's hesitation to grant broad permissions to production companies has posed an unnecessary impediment to drone integration in the marketplace.[228] Where production companies with political and economic clout are prohibited from flying drones, independent filmmakers are left without significant recourse.[229] The onerous process of submitting and subsequently receiving a Section 333 exemption is a small concession to the pent-up demand from a range of industries that want to use the devices. Still, several hundred Section 333 exemption petitions remain on the desks of the FAA, across all industries not just entertainment and filmmaking.[230]

Former U.S. Senator from Connecticut Chris Dodd, now head of the MPAA,[231] lauded the FAA's decision to grant the initial exemptions as beneficial to both consumers and the job market.[232] Dodd called the FAA's decision "a victory for audiences everywhere" and good news for U.S. production companies.[233] "[W]e are proud to now be on the leading edge of its safe commercial use here at home," Dodd said.[234]

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224 Elliot, *supra* note 129.

225 Mark Henricks, *How Drones Could Change The Future of Business*, AMERICAN EXPRESS: OPEN FORUM (Jan. 23, 2014), https://www.americanexpress.com/us/small-business/openforum/articles/how-drones-could-change-the-future-of-business/.

226 V Renée, *Sundance Infographic Reveals Some Promising and Not So Promising Numbers in Independent Film*, NO FILM SCHOOL (Jan. 12, 2014), http://nofilmschool.com/2014/01/sundance-infographic-numbers-in-independent-film.

227 Elliot, *supra* note 129.

228 Jack Nicas & Andy Pasztor, *Drone Flights Face FAA Hit*, WALL ST. J. (Nov. 24, 2014, 11:14 AM), http://www.wsj.com/articles/drone-flights-face-faa-hit-1416793905.

229 *See generally infra* Part II.F.

230 *Section 333*, *supra* note 44.

231 *Our Story*, MOTION PICTURE ASS'N OF AM., http://www.mpaa.org/our-story/ (last visited Feb. 28, 2016).

232 Watt, *supra* note 150.

233 *Id.*

234 *Id.*

Despite the now 5,552 approved exemptions,[235] the agency's snail-like pace for developing rules and policy to govern the flights of drones has frustrated drone enthusiasts, universities, business owners, and entrepreneurs looking to capitalize on the nascent industry.[236] While industry strongholds—the major film and television production companies and studios—have made headway with the FAA, their success has left a cloud of uncertainty in the dust of their exemption-based victories.[237] "Advocates for greater commercialization of unmanned drones argue that the FAA has needlessly applied a 'zero tolerance' for risk. . . ."[238]

Internationally, commercial drone use is comparatively less restrictive.[239] The laissez faire regulatory schemes that exist outside the United States are generally more conducive environments for companies looking to capitalize on their innovations, pursue investors, and establish their brand in the drone marketplace.[240] In the interest of preventing an industry that is ripe with potential from moving abroad, the FAA should act promptly and overtly to ensure that profits and jobs stay in the United States. There are prevailing public policy arguments—including job creation, safety, and prospective profits—for the more immediate integration of drones into domestic airspace.[241] The industry is projected to provide up to 100,000 jobs and $82 million in economic activity in the next decade.[242]

The owner of an aerial cinematography company, who commented anonymously for fear of drawing more attention from the FAA, said the agency ordered his company not to fly for two years.[243] "Faced with tens of thousands of dollars of fines, plus attorney fees, we elected not

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235 *UAS Key Initiatives – Section 333*, *supra* note 8 (announcing five separate Grants of Exemption to approved companies over the course of three months).

236 Lowy, *supra* note 47 ("A wide array of industries as varied as real estate agents, farmers and major league sport teams are clamoring to use small drones. Amazon wants to use drones to deliver small packages to customers. Congress directed the FAA to safely integrate drones of all sizes into U.S. skies by the fall of 2015, but it is clear the agency won't meet that deadline.").

237 McAdams, *supra* note 125 ("The movie industry managed to get a pass through its lobby in Washington, the MPAA. The TV news lobby, the Radio Television Digital News Association, followed up the MPAA's win by calling on stations to send in drone footage to take to use as ammunition for FAA waivers. Networks and station groups generally are holding back for FAA clarification, though some are forging ahead. KEZI-TV, the Heartland Media-owned ABC affiliate in Eugene, Oregon, deployed its first drone last November. Dubbed "Sky9," it was used to capture overhead footage of a local high school football game.").

238 Bachman, *supra* note 151.

239 James Vincent, *Amazon Tells FAA to Change Drone Laws Or It'll Move Research Abroad*, THE VERGE (Dec. 9, 2014, 7:28 AM), http://www.theverge.com/2014/12/9/7359409/amazon-slams-FAA-for-restrictive-drone-laws.

240 Dillow, *supra* note 7.

241 *See generally infra* Part III.

242 Jansen, *supra* note 97.

243 Chiaet, *supra* note 23.

to do business in the U.S.," the owner said.[244] In the meantime, his cinematography business performed well internationally by fiscal metrics.[245] "I will let other companies take their chances of being fined by the FAA, as I'm sure they are looking for an example company to kill," he continued.[246] Tony Carmean, Chief Marketing Officer of Aerial Mob, stated, "[t]o make a living, we've had to go outside the U.S. borders for the last year."[247] While Carmean waited for the FAA's blessing, Aerial Mob filmed all drone spots exclusively in foreign countries.[248]

The Section 333 regulatory framework in place is insufficient. Though a step in the right direction, it does not nearly go far enough. Demand for civil operation of UAS for commercial purposes is increasing with several businesses and industries that are clamoring to use drones and exploit the technological possibilities. The FAA should act before more money and opportunities fly out the doors.

D. *Pushback*

There is, of course, opposition to the idea that civilian drones should be permitted to operate in the national airspace. Integration theories include nationwide regulations stipulated by Congress and drone federalism: a state-based approach to privacy regulation that governs drone use by civilians.[249] Concerns include privacy-invading technologies by virtue of high definition surveillance technology, infrared cameras, heat sensors, GPS, sensors that detect movement, and automated license plate readers.[250] In her law review Article, Margot E. Kaminski states, "[r]egulating civil drone use will be treacherous, as such regulation potentially threatens First Amendment rights."[251] Certain federal and state laws—which did not contemplate aerial invasions of privacy—already exist that protect citizens against the invasive acts someone might commit with a drone, including trespass laws, anti-stalking laws, Peeping Tom laws, and unlawful surveillance.[252]

There are arguments to be made about potential injuries and

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244 *Id.*
245 *Id.*
246 *Id.*
247 Watt, *supra* note 150 (as of September 2014).
248 *Id.* ("[Carmean] shot a Chevrolet commercial overseas and recently filmed a cell phone commercial in Mexico.").
249 Margot E. Kaminski, *Drone Federalism: Civilian Drones and the Things They Carry*, 4 CAL. L. REV. CIRCUIT 57 (2013).
250 *Using Unmanned Aerial Systems within the Homeland: Security Game Changer?*, *Hearing Before the H. Select Comm. on Homeland Sec.*, 112th Cong. 2–3 (2012) (statement of Amie Stepanovich, Association Litigation Counsel, Electronic Privacy Information Center).
251 Kaminski, *supra* note 249, at 60.
252 *Id.* at 68.

property damage claims that could arise as a result of commercial drone use and use by private citizens. In incorporating drones, it is necessary for the FAA to consider a course of remedy for private actions. Private property owners can allege actionable claims against other private citizens and non-government actors (who are immune from the Fifth Amendment Takings Clause)[253] through various actions in tort, such as trespass and nuisance.[254] The landowner may subsequently argue interference by showing the drone interfered with the actual use of the owner's land.[255]

The FAA has often had to react to technological changes rather than plan for them in advance; however, the FAA paid attention to UAS technology as it evolved. Though the FAA prepared for the uncertainty of developing technology, it was still only somewhat ready to handle UAS entry into the NAS, a notion reflected by the passage of the MRA.[256] The stringent restrictions on drone use stunt the growth of the drone industry and force adherence to regulations such as daytime-only flights and flights within strict sight lines.

CONCLUSION

Whether the FAA likes it or not, drones are coming. In a world of hyper-connectivity and collaborative Internet platform communities, anyone can program or navigate a camera-carrying UAS.[257] For the entertainment industry, the "drone-abilities" are real and, quite literally, waiting in the wings. Cinematographers and studios will have at their disposal a tool that shatters traditional filmmaking while enabling them to direct real, acrobatic, and risky action shots. The modus operandi of the technology age is steadfast, to use new technologies to power innovation and drive the bottom-line, but doing so safely is undoubtedly the prerequisite.

As we enter into the era of the UAS, integration must be deliberate and incremental.

Section 333 is difficult and time consuming to obtain and often not a feasible option for the independent filmmaker.[258] Though the exemptions are a step in the right direction (albeit a small step), the exemption process still suffers from constraints and limitations of its

253 U.S. CONST. amend. V.

254 Michael Berry & Nabiha Syed, *Drones and Laws of General Applicability*, WASH. POST: THE VOLOKH CONSPIRACY (Sept. 25, 2014), https://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/09/25/drones-and-laws-of-general-applicability/?utm_term=.d7727a79f75d.

255 Melanie Reid, *Grounding Drones: Big Brother's Tool Box Needs Regulation Not Elimination*, 20 RICH. J.L. & TECH. 9 (2014).

256 Brandon Bellows, *Floating Toward A Sky Near You: Unmanned Aircraft Systems and the Implications of the FAA Modernization and Reform Act of 2012*, 78 J. AIR L. & COM. 585 (2013).

257 49 U.S.C. § 40103(a)(1) (2016).

258 *See generally infra* Part II.F.

narrow construction.

Drone technologies will continue to reach for the sky as the federal government grapples with how to regulate UAS. But as drone videos continue to manifest on the Internet, the overwhelming majority of drone operators do so in violation of FAA rules. In order to truly embrace the industry, the FAA must relax its regulations and realize the positive consequences of using drones, particularly in the context of independent filmmaking.

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