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July 18, 2018

Ms. Anita Ramasastry
Uniform Law Commission
111 N. Wabash Avenue, Suite 1010
Chicago, IL 60602

Dear Ms. Ramasastry,

I write to express my support for the current draft of the Tort Law Relating to Drones Act, as produced by the Uniform Law Commission's ("ULC") Tort Law Relating to Drones Drafting Committee ("Committee"), which is now under consideration by the ULC at the Louisville meeting.

The Committee's proposal is a thoughtful measure intended to support the development of the Unmanned Aircraft Systems (UAS) industry while respecting, among other important and fundamental rights, the traditional right of a property owner to exclude unwanted intruders from their property. The Committee's adoption of a bright line *per se* aerial trespass rule serves both interests, and is a necessary and beneficial legal and policy development in response to the advent and proliferation of UAS in low altitude airspace near homes and all other structures.

Historically, the common law *ad coelum* doctrine provided that landowners possessed an unlimited column of airspace extending from the ground to the heavens.[1] Under this doctrine, everything from an overhanging tree branch to a manned aircraft flying thousands of feet in the air presented as much a trespass as an unwelcome individual walking across a lawn, allowing the landowner to legitimately demand the removal of the intruder.

Unlimited airspace ownership presented obvious and significant developmental challenges to the nascent manned aviation sector, including exposing pilots flying thousands of feet above ground to liability for a trespass.[2] As aircraft flew longer distances, it became unreasonable to expect pilots to secure avigation easements from hundreds or thousands of individual property owners. Congress responded in 1926[3] by abrogating the unlimited airspace property right, creating a new "navigable airspace" as a federally regulated commons for aviation. Under current Federal Aviation Administration (FAA) regulations, this airspace begins at 500 feet above ground level in unpopulated areas.[4]

The Supreme Court endorsed Congress's 1926 action in *United States v. Causby*,[5] holding that the *ad coelum* doctrine had "no place in the modern world."[6] It did not, however, indicate that property owners

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[1] *See* Bury v. Pope, 1 Cro. Eliz.118, 78 Eng. Rep. 375 (Q.B. 1587). On the rule's history, see, e.g., James D. Hill, *Liability for Aircraft Noise—the Aftermath of Causby and Griggs*, 19 U. MIAMI L. REV. 1, n.3 (1964), and for more contemporary reconsideration, see, e.g., Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 394–97 (2001).

[2] *See*, Jason Snead and John-Michael Seibler, *Seizing the Sky*, Heritage Foundation Issue Brief No. 4565 (May 19, 2016), https://www.heritage.org/crime-and-justice/report/seizing-the-sky-federal-regulators-use-drones-justify-controlling-the#_ftn4.

[3] The Air Commerce Act of 1926, Pub. L. No. 69-254.

[4] 49 U.S.C. § 40102(a)(32). The navigable airspace is defined in statute as "the minimum altitudes of flight prescribed by regulations." The FAA lays out the minimum safe altitudes in 14 CFR 91.119.

[5] 328 U.S. 256 (1946).

[6] *Id.* at 261.

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had lost ownership of *all* airspace above their property. As the Court made clear, "if the landowner is to have full enjoyment of the land, *he must have exclusive control of the immediate reaches of the enveloping atmosphere.*"[7] The Court did not provide an exact height for the "immediate reaches," but rather indicated that a "landowner owns at least as much of the space above the ground as he can occupy or use"[8] even if he "does not in any physical manner occupy that stratum of airspace or make use of it in the conventional sense."[9] In other words, regardless of federal aviation law, a property interest remains in at least some of the airspace above privately-held land.

Despite the lack of specifics, the *Causby* court's bifurcation of the air into privately held "superadjacent airspace" and a higher-altitude public highway worked well enough for manned aviation. Much of the credit for that goes not to the Court's ruling, which carefully left room for the law to accommodate future technological developments, but rather is due to federal aviation regulations that prohibit aircraft from flying at low altitudes or near to structures. Simply put, manned aircraft seldom fly in airspace that could reasonably be construed as the "immediate reaches."[10] Those flights that do frequent low-altitude airspace, such as helicopter flights, are rare in comparison to the anticipated volume of drone flights in the near future.

Today, drones differ in a number of ways from traditional manned aircraft, including the fact that they operate almost exclusively in low-altitude airspace.[11] First, federal regulations generally require UAS operators to maintain altitudes below 400 feet, unless operated within 400 feet of a physical structure.[12] Second, various technical limits, including signal strength and battery capacity, also act to hold many consumer drones close to the ground. Third, many in-demand drone services, including aerial photography and package delivery, require drones to frequently operate in extremely low-altitude airspace near to homes and other physical structures.

Disagreements are already emerging between property owners and UAS pilots regarding whether the latter may legally operate a drone above the former's land without his or her permission. The lack of clearly defined airspace property thresholds post-*Causby* combined with other ambiguities in existing aerial trespass doctrine will do little to resolve these conflicts in a predictable, uniform fashion.[13] This will likely only exacerbate tensions between drone operators and the communities they operate within.

The current aerial trespass doctrine was developed to address manned aviation and is ill-suited to drones. Requiring property owners to prove in any trespass case not only that a drone penetrated the ill-defined "immediate reaches," but also that it caused substantial harm, may all but eliminate the property owner's right to exclude unwelcome drones and remedy a drone trespass. Such a development may well transform backyard airspace into the type of public highway described in *Causby,* which any drone operator has a

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[7] *Id*. at 264 (emphasis added).
[8] *Id.*
[9] *Id*. at 265.
[10] 14 CFR 91.119.
[11] *See*, Jason Snead and John-Michael Seibler, *Cooperative Federalism and Low-Altitude Drone Operations*, Heritage Foundation Legal Memorandum No. 222 (Dec. 15, 2017), https://www.heritage.org/government-regulation/report/cooperative-federalism-and-low-altitude-drone-operations.
[12] 14 CFR 107.51.
[13] To prove an aerial trespass, a landowner must demonstrate both that an intrusion took place in the "immediate reaches" of the airspace, and that said intrusion substantially interfered with the use and enjoyment of the owner's land. This is a fact-dependent inquiry that must be repeated with each new lawsuit.

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legal right to enter. That could become increasingly vexing as one-off drone flights give way to large fleets of autonomous or semi-autonomous UAS engaged in routine, low-altitude commercial activities.

Indeed, during the Committee's discussions on what altitude would be acceptable to define a right to exclude a drone, at least one industry representative expressed his desire that the altitude should be "zero." The public is unlikely to accept such a one-sided policy outcome.[14]

If, however, landowners are able to prevail in aerial trespass cases under the current doctrine, chaotic and unpredictable court orders, applying differing standards, may follow. UAS operators and landowners would potentially enjoy different levels of protection against liability and intrusions upon privacy, while multi-jurisdiction UAS operators would have to adjust their behaviors to account for a patchwork of court orders that may arise and affect their activities. Such an outcome would be far from the uniform legal and regulatory landscape many industry representatives have expressed a desire to achieve.

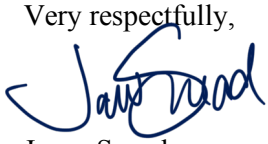
A bright line *per se* aerial trespass rule like that developed by the Committee would balance all concerns mentioned here by extending traditional trespass to land doctrine to include drones. Landowners and UAS operators would have a clear, reasonable, predictable set of rules governing their interactions. And as the saying goes, "good fences make good neighbors."

Not only will property owners be more likely to embrace this technology, comfortable that they are buttressed against unwanted intrusions upon their privacy and property, but drone operators similarly would know with certainty where they can and cannot operate to avoid legal liability. Should lawsuits be filed, the cost and complexity of the resulting cases will likely be substantially diminished under a *per se* rule as compared to the existing, fact-dependent aerial trespass doctrine.

In summary, a bright line aerial trespass standard balances the interests of the nascent UAS sector with the traditional rights of property owners to exclude unwanted intruders from their property. The alternative—reliance on manned aviation's ill-fitting aerial trespass doctrine—will result in unpredictable and skewed outcomes, cumbersome and costly litigation, and may prompt a reactionary public response that would hinder the development of the UAS industry and deprive the public of the myriad benefits this technology has to offer.

I thank the ULC for considering these comments, and look forward to continuing to participate in the Committee's work.

Very respectfully,



Jason Snead
Senior Policy Analyst

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[14] A recent Pew survey indicates that a majority of Americans believe drones should not be able to operate with impunity. 54 percent of respondents indicated they did not believe drones should be permitted to fly near homes. Paul Hitlin, *8% of Americans Say They Own A Drone, While More Than Half Have Seen One In Operation*, Pew Research Center, Dec. 19, 2017, http://www.pewresearch.org/fact-tank/2017/12/19/8-of-americans-say-they-own-a-drone-while-more-than-half-have-seen-one-in-operation/.