

**STATE OF MICHIGAN
IN THE SUPREME COURT**

LONG LAKE TOWNSHIP

Plaintiff-Appellant,

Supreme Court No. 164948

v.

Court of Appeal No. 349230

Grand Traverse CC No. 18-034553-CE

TODD MAXON AND HEATHER
MAXON,

Defendants-Appellees.

***AMICUS CURIAE* BRIEF OF THE ELECTRONIC FRONTIER FOUNDATION
IN SUPPORT OF DEFENDANTS-APPELLEES
AMENDED FOR SIGNATURE**

Thomas Baker (P55589)
Michigan Auto Law
212 Cesar E. Chavez Ave SW, Suite 105
Grand Rapids, MI 49503
Tel: (616) 447-8847
Fax:(248) 254-8084
Email: tbaker@michiganautolaw.com

Hannah Zhao*
Electronic Frontier Foundation
815 Eddy Street
San Francisco, CA 94109
Tel.: (415)436-9333
Email: zhao@eff.org

*Attorneys for Amicus Curiae
Electronic Frontier Foundation
Temporary Admission Pending

TABLE OF CONTENTS

TABLE OF AUTHORITIES ii

STATEMENT OF INTEREST OF AMICUS CURIAE 1

STATEMENT OF THE QUESTION PRESENTED 1

SUMMARY OF THE ARGUMENT 1

ARGUMENT 3

 I. Warrantless UAV surveillance of a private home violates the Fourth Amendment
 of the U.S. Constitution and Article 1, § 11 of the Michigan Constitution 3

 A. Technological advancements require courts to examine, with a critical eye,
 governmental intrusions on reasonable expectations of privacy.....4

 B. UAVs enable different, and far more invasive, surveillance of private spaces
 than traditional manned aircrafts.....7

 C. The Maxons reasonably expected that the government would not conduct
 UAV surveillance of their home12

CONCLUSION..... 13

CERTIFICATE OF SERVICE 15

CERTIFICATE OF COMPLIANCE..... 16

TABLE OF AUTHORITIES

Cases

| | |
|--|---------|
| <i>Arizona v Gant</i> , 556 US 332; 129 S Ct 1710; 173 L Ed 2d 485 (2009)..... | 3 |
| <i>California v Ciraolo</i> , 476 US 207; 106 S Ct 1809; 90 L Ed 2d 210 (1986)..... | passim |
| <i>Carpenter v United States</i> , 138 S Ct 2206; 201 L Ed 2d 507 (2018)..... | passim |
| <i>Collins v Virginia</i> , 138 S Ct 1663; 201 L Ed 2d 9 (2018)..... | 4 |
| <i>Commonwealth v Mora</i> , 485 Mass 360; 150 NE3d 297 (2020)..... | 7 |
| <i>Dow Chem Co v United States</i> , 476 US 227; 106 S Ct 1819; 90 L Ed 2d 226 (1986)..... | 4 |
| <i>Florida v Jardines</i> , 569 US 1; 133 S Ct 1409; 185 L Ed 2d 495 (2013)..... | 12 |
| <i>Florida v Riley</i> , 488 US 445; 109 S Ct 693; 102 L Ed 2d 835 (1989)..... | 4, 6, 7 |
| <i>Johnson v United States</i> , 333 US 10; 68 S Ct 367; 92 L Ed 436 (1948)..... | 13 |
| <i>Johnson v VanderKooi</i> , 509 Mich 524; 983 NW2d 779 (2022)..... | 3 |
| <i>Katz v United States</i> , 389 US 347; 88 S Ct 507; 19 L Ed 2d 576 (1967)..... | 3, 5 |
| <i>Kyllo v United States</i> , 533 US 27; 121 S Ct 2038; 150 L Ed 2d 94 (2001)..... | passim |
| <i>Leaders of a Beautiful Struggle v Baltimore Police Dep’t</i> , 2 F.4th 330 (CA 4, 2021)..... | 5 |
| <i>Long Lake Twp v Maxon</i> , 336 Mich App 521; 970 NW2d 893 (2021), <i>vacated and remanded</i> 509 Mich 981; 973 NW2d 615 (2022)..... | 2, 3 |
| <i>Montclair v Ramsdell</i> , 107 US 147; 2 S Ct 391; 27 L Ed 431 (1882)..... | 12 |

Oliver v United States,
466 US 170; 104 S Ct 1735; 80 L Ed 2d 214 (1984)..... 4

Patel v Facebook, Inc.,
932 F3d 1264 (CA 9, 2019)..... 5

People v Abcumby-Blair,
335 Mich App 210; 966 NW2d 437 (2020)..... 4

People v Antwine,
293 Mich App 192; 809 NW2d 439 (2011)..... 12

People v Katzman,
505 Mich 1053; 942 NW2d 36 (2020)..... 6

People v Radandt,
499 Mich 988; 882 NW2d 533 (2016)..... 4

People v Slaughter,
489 Mich 302; 803 NW2d 171 (2011)..... 2, 3

People v Smith,
420 Mich 1; 360 NW2d 841 (1984)..... 3

People v Smola,
174 Mich App 220; 435 NW2d 8 (1988)..... 5

People v Wafer,
509 Mich 31; 983 NW2d 315 (2022)..... 12

Riley v California,
573 US 373; 134 S Ct 2473; 189 L Ed 2d 430 (2014)..... 2, 5, 7

State v. Davis,
2015-NMSC-034; 360 P3d 1161 (2015) 11

United States v Jones,
565 US 400; 132 S Ct 945; 181 L Ed 2d 911 (2012)..... 2, 5, 6, 7

United States v Knotts,
460 US 276; 103 S Ct 1081; 75 L Ed 2d 55 (1983)..... 6

United States v United States Dist Court,
407 US 297; 92 S Ct 2125; 32 L Ed 2d 752 (1972)..... 12

Statutes

Arkansas Act 293 13

California Civil Code Section 1708.8..... 13

Florida Criminal Code Section 934.50 13

Maine Sec. 1. 25 MRSA Pt. 12..... 13

MCL § 259.322(3) 12

MCR 7.312 (H)(4) 1

Minn, Statues, Chapter 82, S.F.No. 3072 13

Miss. Code Section 97-29-61..... 13

North Dakota Code Sec. 29-29.4-01..... 13

Texas Gov. Code Section 423.002(a) 13

Utah Code Title 63G, Chapter 18 13

Other Authorities

Andrea Peterson, *FBI spy planes used thermal imaging tech in flights over Baltimore after Freddie Gray unrest*, WASHINGTON POST (Oct. 30, 2015), <<https://www.washingtonpost.com/news/the-switch/wp/2015/10/30/fbi-spy-planes-used-thermal-imaging-tech-in-flights-over-baltimore-after-freddie-gray-unrest/>> 11

Angelika Albaladejo, *Are Police Helicopter Fleets Worth the Money?*, MOTHER JONES <<https://www.motherjones.com/politics/2022/12/are-police-helicopter-fleets-worth-the-money/>> 8

Best Drones for Law Enforcement, JOUAV, (Sep. 1, 2023) <<https://www.jouav.com/blog/police-drone.html>>..... 8

ELECTRONIC FRONTIER FOUNDATION, *Atlas of Surveillance*, <<https://atlasofsurveillance.org/search?utf8=%E2%9C%93&location=&technologies%5B88%5D=on>>..... 9

Eric Tucker, *Comey: FBI used aerial surveillance above Ferguson*, ASSOCIATED PRESS, (Oct. 23, 2015), <<https://apnews.com/article/f1a797c9b286412ca72eb85b3cc35a4b>>..... 11

How Much Does It Cost to Become a Pilot? PILOT INSTITUTE, (Feb. 26, 2023), <<https://pilotinstitute.com/pilot-license-cost/>>..... 8

Judi Villa and Dennis Wagner, *Police helicopters becoming commonplace*, POLICE1, (Oct. 3, 2007) <<https://www.police1.com/police-products/vehicles/articles/police-helicopters-becoming-commonplace-pLw7lrP04E5tC6lq/>> 8

Kathryn A. Wolfe, *Feinstein: Drone Inches from Face*, POLITICO, (Jan. 15, 2014, 4:15 PM), <<http://www.politico.com/story/2014/01/senator-dianne-feinstein-encounter-with-drone-technology-privacy-surveillance-102233>> 9

Kristin Houser, *US Army’s solar-powered drone is setting new records every day*, FREETHINK, (Jul 30, 2022) <<https://www.freethink.com/hard-tech/solar-powered-drone>>..... 9

Matthew Sparkes, *Zephyr solar-powered drone smashes record with 2-month-long flight*, NEW SCIENTIST, (Aug 15 2022) <<https://www.newscientist.com/article/2333373-zephyr-solar-powered-drone-smashes-record-with-2-month-long-flight/>>..... 9

Nolan Ryan, *Police drones pit safety vs. privacy concerns in Michigan*, THE DETROIT NEWS, (Jul 31, 2018) <<https://www.detroitnews.com/story/news/local/macomb-county/2018/08/01/police-drones-pit-safety-vs-privacy-concerns-michigan/841613002/>> 10

PIXELCASE, *ANPR in the sky: Drone ANPR is here to stay* <<https://pixelcase.com/drone-anpr/anpr-in-the-sky-drone-anpr-is-here-to-stay/>> 10

Revector, *IMSI & WIFI Catcher Devices for Drones - Location and Surveillance SIM Based Devices*, <<https://www.unmannedsystemstechnology.com/company/revector/>> 10

Sascha Brodsky, *The Air Force’s Drones Can Now Recognize Faces. Uh-Oh.*, POPULAR MECHANICS, (Feb 24, 2023) <<https://www.popularmechanics.com/military/a43064899/air-force-drones-facial-recognition/>> 10

What’s UAV IMSI Catcher and its Advantages <<https://www.hocell.com/newsinfo/576358.html>> 10

Zolan Kanno-Youngs, *U.S. watched George Floyd protests in 15 cities using aerial surveillance*, N.Y. TIMES, (June 19, 2020), <<https://www.nytimes.com/2020/06/19/us/politics/george-floyd-protests-surveillance.html>> 11

Constitutional Provisions

Article 1, § 11 of the 1963 Michigan Constitution 1, 2, 3, 8

STATEMENT OF INTEREST OF AMICUS CURIAE¹

The Electronic Frontier Foundation (“EFF”) is a nonprofit organization that has worked for more than 30 years to protect privacy, free speech, and civil liberties in the digital world. With over 30,000 active donors, *amicus* represents the interests of technology users in court cases and broader policy debates surrounding the application of law in the digital age. EFF has served as amicus in numerous cases addressing Fourth Amendment protections against invasive surveillance technologies. Through direct representation and *amicus* briefs, EFF defends the right to be free from the government’s use of technology to conduct unreasonable searches and seizures. *Amicus*’s interest in this case is the preservation of federal and state constitutional guarantees against unreasonable government intrusions into private life.

STATEMENT OF THE QUESTION PRESENTED

Whether the government’s use of an unmanned aerial vehicle to conduct warrantless aerial surveillance of a private home and backyard violates Article 1, § 11 of the 1963 Michigan Constitution and the Fourth Amendment of the U.S. Constitution.

SUMMARY OF THE ARGUMENT

This arises from Long Lake Township’s warrantless use of an unmanned aerial vehicle (UAV), also known as drones, to surreptitiously spy on Defendant-Appellees Todd and Heather Maxon’s home and backyard. Compared to manned aircrafts, UAVs are significantly cheaper, smaller, easier to operate and maneuver, and quieter. These characteristics make them an excellent tool for clandestine government intrusion upon individual privacy, which was “one of the driving forces behind the Revolution itself.” *Riley v California*, 573 US 373, 403; 134 S Ct

¹ Pursuant to MCR 7.312 (H)(4), amicus certifies that no person or entity, other than amicus curiae, its members, or its counsel, made a monetary contribution to the preparation or submission of this brief or authored this brief in whole or in part.

2473; 189 L Ed 2d 430, 452 (2014). The court of appeals, in its 2021 ruling, correctly found that a warrant was required for the government to conduct aerial surveillance of a private home with UAVs. *Long Lake Twp v Maxon*, 336 Mich App 521, 541; 970 NW2d 893 (2021), *vacated and remanded* 509 Mich 981; 973 NW2d 615 (2022).

Although the U.S. Supreme Court held that there was no reasonable expectation of privacy from surveillance by manned aerial aircrafts over thirty years ago, the guidance in *Carpenter v United States*, 138 S Ct 2206; 201 L Ed 2d 507 (2018) and predecessor cases, demonstrate that modern technology requires fresh evaluation of privacy considerations. In Fourth Amendment cases involving the government's use of technology, the U.S. Supreme Court has sought to "assure [] preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted." *Carpenter*, 138 S Ct at 2214 (quoting *Kyllo v United States*, 533 US 27, 29; 121 S Ct 2038; 150 L Ed 2d 94, 99 (2001)); see *United States v Jones*, 565 US 400, 400; 132 S Ct 945; 181 L Ed 2d 911, 911 (2012) (same). In addition, even if the Fourth Amendment offers no protection, the characteristics of UAVs form a "compelling reason to impose a different interpretation" of Article 1, §11 in finding that a warrant is required. *People v Slaughter*, 489 Mich 302, 311; 803 NW2d 171 (2011) (internal quotations omitted).

A ruling to that no warrant is required in this case would authorize pervasive warrantless surveillance by government agencies across Michigan. Without any restrictions pursuant to Article 1, § 11 or the Fourth Amendment, government officials could observe in detail every movement visible from above a private home, including any coming and going of individuals and interactions between neighbors or friends. This Court should reinforce the foundational guarantee of privacy in one's home and curtilage and require a warrant for the government to engage in UAV surveillance.

ARGUMENT

I. Warrantless UAV surveillance of a private home violates the Fourth Amendment of the U.S. Constitution and Article 1, § 11 of the Michigan Constitution.

In this case, this Court must answer “what limits there are upon [the] power of technology to shrink the realm of guaranteed privacy.” *Kyllo v United States*, 533 US at 13. Here, the government used unmanned aerial vehicles (UAVs), or drones, to repeatedly spy on Todd and Heather Maxon’s home from the air without a warrant. The Court of Appeals, in its March 2021 ruling, correctly found that this action violated the Maxons’ reasonable expectation of privacy. *Long Lake Twp v Maxon*, 336 Mich App 521, 541; 970 NW2d 893 (2021), *vacated and remanded* 509 Mich 981; 973 NW2d 615 (2022).

The Fourth Amendment of the United States Constitution—like Article 1, § 11 of the 1963 Michigan Constitution, whose protections are “construed to provide the same protection as that secured by the Fourth Amendment, absent compelling reason to impose a different interpretation”—protects against unreasonable searches and seizures. *People v Slaughter*, 489 Mich 302, 311; 803 NW2d 171 (2011) (internal quotations omitted). Where an individual has a reasonable expectation of privacy, a search is “per se unreasonable” unless conducted pursuant to a judicial warrant. *Arizona v Gant*, 556 US 332, 338; 129 S Ct 1710; 173 L Ed 2d 485, 493 (2009) (quoting *Katz v United States*, 389 US 347, 357; 88 S Ct 507; 19 L Ed 2d 576, 585 (1967); see *Johnson v VanderKooi*, 509 Mich 524, 538; 983 NW2d 779 (2022) (“general rule is that warrantless searches are per se unreasonable”). Courts must consider the totality of the circumstances in determining whether a defendant had a legitimate expectation of privacy in the area searched. See *People v Smith*, 420 Mich 1, 17-18; 360 NW2d 841 (1984).

The government in this case used a UAV to capture an aerial view, not just of the Maxon’s home, but also of its immediate backyard. The latter is part of the curtilage that “has

been considered part of the home itself for Fourth Amendment purposes.” *Oliver v United States*, 466 US 170, 180; 104 S Ct 1735; 80 L Ed 2d 214, 225 (1984); see also *People v Radandt*, 499 Mich 988, 990; 882 NW2d 533 (2016) (“the front porch, the immediate backyard and back deck are classic examples of areas . . . intimately linked to the home, both physically and psychologically, where privacy expectations are most heightened.”); *Collins v Virginia*, 138 S Ct 1663, 1671; 201 L Ed 2d 9, 19 (2018) (describing curtilage as “an area adjacent to the home and to which the activity of home life extends” (cleaned up)).

Given the novel capabilities of UAVs, this Court should categorically rule that warrantless aerial surveillance of a home with UAVs by the government violates the Michigan and federal constitutional right to privacy. See *Kyllo*, 533 US at 40 (Fourth Amendment line drawing “must not be only firm but also bright—which requires clear specification of those methods of surveillance that require a warrant”); *People v Abcumby-Blair*, 335 Mich App 210, 232; 966 NW2d 437 (2020) (preferring to provide a “clean-line approach” and “categorical rules” to constitutional line drawing instead of leaving it to government agencies).

A. Technological advancements require courts to examine, with a critical eye, governmental intrusions on reasonable expectations of privacy.

This case about UAVs is not controlled by earlier cases rejecting a reasonable expectation of privacy for aerial surveillance above private homes by planes and helicopters with government investigators in them. See, e.g., *California v Ciraolo*, 476 US 207; 106 S Ct 1809; 90 L Ed 2d 210 (1986); *Florida v Riley*, 488 US 445; 109 S Ct 693; 102 L Ed 2d 835 (1989).²

² *Dow Chem Co v United States*, 476 US 227, 229; 106 S Ct 1819; 90 L Ed 2d 226 (1986) is inapplicable here as it concerned the aerial surveillance of an industrial complex. As that opinion explained, such property is “not analogous to the ‘curtilage’ of a dwelling for purposes of aerial surveillance” and is more akin to an “open field.” *Dow Chem*, 476 US at 239.

Although the U.S. Supreme Court in *Ciraolo* found that there was no Fourth Amendment protection for observations seeable “with the naked eye” from a small plane flying 1000 feet in the air, it recognized the possibility of “future ‘electronic’ developments [that] could stealthily intrude upon an individual’s privacy” in the same context. *Ciraolo*, 476 US at 215; see also *People v Smola*, 174 Mich App 220, 222–23; 435 NW2d 8, 9 (1988). UAVs are that anticipated development.

Over the past decade, a growing body of case law has recognized the constitutional significance of advances in surveillance technology that invades a person’s privacy. See, e.g., *Carpenter v United States*, 138 S Ct at 2216-19; *Riley v California*, 573 US at 393-99; *United States v Jones*, 565 US 400, 415-16 (Sotomayor, J., concurring); *id.* at 430 (Alito, J., concurring in judgment); *Leaders of a Beautiful Struggle v Baltimore Police Dep’t*, 2 F.4th 330, 341, (CA 4, 2021) (en banc); see also *Patel v Facebook, Inc.*, 932 F3d 1264, 1272–73 (CA 9, 2019) (looking to Fourth Amendment jurisprudence in analyzing state-law privacy claim). These cases acknowledge that practical considerations regarding new surveillance technologies play a critical role in shaping societal expectations and thus limit application of earlier jurisprudence regarding more primitive methods. See, e.g., *Jones*, 565 US at 415-16 (Sotomayor, J., concurring). Mechanically transposing the holding of manned aerial surveillance cases decided decades ago would be, “in the present day, bad physics, as well as bad law.” *Katz v United States*, 389 US at 362 (Harlan, J., concurring).

When technological advancement upends assumptions implicit in prior decisions, the extension of earlier precedents “has to rest on its own bottom.” *Riley v California*, 573 US at 393 see *Carpenter v United States*, 138 S Ct at 2222 (“When confronting new concerns wrought by digital technology, this Court has been careful not to uncritically extend existing precedents.”);

see e.g., *Jones*, 565 US at 415–16 (Sotomayor, J., concurring). For example, the U.S. Supreme Court did not require a warrant to use “beepers” to obtain location information of a defendant driving on public roads in *United States v Knotts*, 460 US 276; 103 S Ct 1081; 75 L Ed 2d 55 (1983). Nevertheless, thirty-five years later, the Court did require a warrant to obtain location data of a defendant’s whereabouts in public through the more sophisticated means of collecting cell site location information. *Carpenter*, 138 S Ct at 2215. *Carpenter* diverged from *Knotts* due to the difference “between the rudimentary tracking facilitated by the beeper and more sweeping modes of surveillance” that existed in 2018. *Carpenter*, 138 S Ct at 2215.

While UAVs are publicly available, that is not dispositive of whether the government’s use of them to surveil a private home violated a reasonable expectation of privacy. Homeowners must not be left “at the mercy of advancing technology.” *Kyllo*, 533 US at 35-36. In *Jones*, the government used a GPS tracking device, a commercially available gadget. Yet, five Justices agreed that the case intruded on a reasonable expectation of privacy, and all nine agreed that it implicated Fourth Amendment privacy concerns. *US v Jones*, 565 US at 415, 430.

The seismic technological shifts—the rise of UAVs—that occurred in the three decades since *Ciraolo* (1986) and *Florida v Riley* (1989) necessitate a fresh evaluation of the modern aerial surveillance technology used in this case. See *Carpenter*, 138 S Ct at 2219. At the very least, these changes form a compelling reason that the Michigan Constitution protects against warrantless surveillance by UAVs. See *People v Katzman*, 505 Mich 1053; 942 NW2d 36 (2020). Consequently, this Court should evaluate whether the government’s use of UAVs to surveil the Maxon’s home violated a reasonable expectation of privacy given the nature of UAVs.

B. UAVs enable different, and far more invasive, surveillance of private spaces than traditional manned aircrafts.

Technological breakthroughs have altered the character of aerial surveillance since the manned aircrafts used in *Ciraolo* and its progeny. See e.g., *Florida v Riley*, 488 US 445. Those cases all involved manned aircrafts that, by their nature, incorporate natural restrictions on their use. *Ciraolo* involved observations seeable with the naked eye from a small, manned aircraft flying 1,000 feet above the property. *Florida v Riley* involved observations of an officer made “with the naked eye” from a helicopter flying 400 feet in the air. These aircrafts were costly to pilot and maintain, were large and noisy, and flew a significant altitude above the home. These particularities functioned as natural limits to their ability to conduct warrantless surveillance.

Reasonable expectation of privacy is affected by what is feasible, including limitations stemming from the difficulty and cost of surveillance methods prior to recent technological developments. After all, “[t]he traditional barriers to long term surveillance of spaces visible to the public have not been walls or hedges—they have been time and police resources.” *Commonwealth v Mora*, 485 Mass 360, 366–67; 150 NE3d 297 (2020) (citing *Jones*, 565 US at 429 (Alito, J., concurring in judgment)). Practical constraints mean that people simply “do not expect that every . . . action [around their home] will be observed and perfectly preserved for the future.” *Id.*; see *Carpenter*, 138 S Ct at 2217 (reasonable expectation of privacy existed in part because “prior to the digital age,” society expected that the government “would not” and “simply could not” monitor and catalogue a person’s every movement, even those in public). In *Jones*, Justice Alito noted that, before the advent of modern technologies, practical considerations protected privacy because “[t]raditional surveillance for any extended period of time was difficult and costly and therefore rarely undertaken.” *Jones*, 565 US at 429 (Alito, J., concurring in judgment). Technological innovation can remove these protective barriers, decreasing

logistical impediments to long-term surveillance and increasing the ability to evade detection and obtain previously unobtainable information. Cf. *Carpenter*, 138 S. Ct. at 2217–18. In such instances, a warrant requirement maintains the proper equilibrium of privacy protections under the Fourth Amendment and Article 1, § 11.

Due to their qualitative and quantitative differences from older generations of aerial surveillance technology, UAVs pose a multidimensional risk to the Michigan and U.S. Constitutions' protection from government intrusion. Police helicopters require millions of dollars to acquire and hundreds an hour to fly,³ while vendors sell high-tech drones to law enforcement for \$500 or less.⁴ In other words, a police department can buy a thousand or more UAVs for the same amount of money as the cheapest helicopter. Moreover, compared with pricey aviator licenses (or the expense of hiring someone with that expertise), UAV pilot licenses are only about one percent the cost.⁵ Without legal limits, the plummet in the price of aerial

³ In 2021, LAPD spent at least \$27 million in 2021 for “air support,” including roughly \$7 million for new helicopters and equipment, \$5.2 million for maintenance, \$3.6 million for parts, \$1.5 million for labor, \$1.3 million for fuel and at least \$8.5 million in payroll, according to city records. Angelika Albaladejo, *Are Police Helicopter Fleets Worth the Money?*, MOTHER JONES <<https://www.motherjones.com/politics/2022/12/are-police-helicopter-fleets-worth-the-money/>> (accessed Sep 6, 2023); see also Judi Villa and Dennis Wagner, *Police helicopters becoming commonplace*, POLICE1, (Oct. 3, 2007) <<https://www.police1.com/police-products/vehicles/articles/police-helicopters-becoming-commonplace-pLw7lrP04E5tC6lq/>> (accessed Sep 6, 2023).

⁴ Based on an UAV manufacturer, UAVs for law enforcement start at \$500 but increases based on features or training. *Best Drones for Law Enforcement*, JOUAV, (Sep. 1, 2023) <<https://www.jouav.com/blog/police-drone.html>> (accessed Sep 6, 2023).

⁵ FAA Drone Licenses cost \$450 or less while pilot licenses cost tens of thousands of dollars. *How Much Does It Cost to Become a Pilot?* PILOT INSTITUTE, (Feb. 26, 2023), <<https://pilotinstitute.com/pilot-license-cost/>> (accessed Sep 6, 2023).

surveillance will cause an explosion in the frequency of aerial surveillance, as can be glimpsed from the proliferation of drone usage by law enforcement and other government agencies.⁶

Furthermore, UAVs can easily peer inside homes in ways that manned aerial aircrafts cannot. UAVs are much smaller and more maneuverable; for example, they can fit under awnings or eaves, like the one Senator Dianne Feinstein saw from inside her house did.⁷ Further, while manned aircrafts, by dint of their size and noise, provide obvious notice to humans within (and beyond) their area of observation, UAVs are much quieter and smaller, allowing them to surveil their targets surreptitiously. Given these differences, swarms of UAVs can act in increasingly sophisticated, intrusive, and clandestine surveillance that the Court in *Ciraolo* never contemplated possible for manned aircrafts.

UAV surveillance is becoming even more powerful, invasive, and secretive every day and this Court should adopt a rule that considers not only the technology at issue, but also “take[s] account of more sophisticated systems that are already in use or development.” *Kyllo*, 533 US at 36. The barriers to using UAVs, like cost, accessibility, and technological limits, are rapidly decreasing. Solar powered UAVs can fly for months without needing to land for recharging⁸ and have been dropping precipitously in price since appearing on the market. They

⁶ There are at least 1471 police departments that have been documented to operate UAVs across the United States as of 2023. ELECTRONIC FRONTIER FOUNDATION, Atlas of Surveillance, <<https://atlasofsurveillance.org/search?utf8=%E2%9C%93&location=&technologies%5B88%5D=on>> (accessed Sep 6, 2023).

⁷ Kathryn A. Wolfe, *Feinstein: Drone Inches from Face*, POLITICO, (Jan. 15, 2014, 4:15 PM), <<http://www.politico.com/story/2014/01/senator-dianne-feinstein-encounter-with-drone-technology-privacy-surveillance-102233>> (accessed Sep 6, 2023).

⁸ Matthew Sparkes, *Zephyr solar-powered drone smashes record with 2-month-long flight*, NEW SCIENTIST, (Aug 15 2022) <<https://www.newscientist.com/article/2333373-zephyr-solar-powered-drone-smashes-record-with-2-month-long-flight/>> (accessed Sep 6, 2023); Kristin Houser, *US Army’s solar-powered drone is setting new records every day*, FREETHINK, (Jul 30, 2022) <<https://www.freethink.com/hard-tech/solar-powered-drone>> (accessed Sep 6, 2023).

are becoming smaller, quieter, and easier to navigate, cementing them as (in the words of *Ciraolo*) the “future ‘electronic’ developments [that] could stealthily intrude upon an individual’s privacy.” *Ciraolo*, 476 US at 215. At the same time, they are being equipped with increasingly sophisticated surveillance technology. Police and other government officials already use UAVs integrated with automatic license plate readers,⁹ facial recognition systems,¹⁰ infrared thermal imaging sensors,¹¹ cell site simulators,¹² and countless other capabilities. And even if the government does not have UAVs with those capabilities in its possession, it can, as it did in this case, hire private parties with those tools.

Moreover, these technologies are more often deployed against marginalized communities. Governmental authorities have routinely used aerial surveillance technologies against individuals participating in racial justice movements, like those protesting the police

⁹ PIXELCASE, *ANPR in the sky: Drone ANPR is here to stay* <<https://pixelcase.com/drone-anpr/anpr-in-the-sky-drone-anpr-is-here-to-stay/>> (accessed Sep 6, 2023).

¹⁰ Sascha Brodsky, *The Air Force’s Drones Can Now Recognize Faces. Uh-Oh.*, POPULAR MECHANICS, (Feb 24, 2023) <<https://www.popularmechanics.com/military/a43064899/air-force-drones-facial-recognition/>> (accessed Sep 6, 2023).

¹¹ Macomb County Sheriff’s Office in Detroit began using drones that include thermal imaging capabilities in 2018. Nolan Ryan, *Police drones pit safety vs. privacy concerns in Michigan*, THE DETROIT NEWS, (Jul 31, 2018) <<https://www.detroitnews.com/story/news/local/macomb-county/2018/08/01/police-drones-pit-safety-vs-privacy-concerns-michigan/841613002/>> (accessed Sep 6, 2023).

¹² Revector, *IMSI & WIFI Catcher Devices for Drones - Location and Surveillance SIM Based Devices*, <<https://www.unmannedsystemstechnology.com/company/revector/>> (accessed Sep 6, 2023); *What’s UAV IMSI Catcher and its Advantages* <<https://www.hocell.com/newsinfo/576358.html>> (accessed Sep 6, 2023).

killings of George Floyd in Minneapolis,¹³ Michael Brown in Ferguson,¹⁴ and Freddie Gray in Baltimore.¹⁵

Courts are “obligated—as subtler and more far-reaching means of invading privacy have become available to the Government—to ensure that the progress of science does not erode Fourth Amendment protections.” *Carpenter*, 138 US at 2223 (internal quotations omitted). The New Mexico Supreme Court recognized that UAV aerial surveillance involves a different breed of technology than helicopter and aircraft surveillance, and thus Fourth Amendment conclusions regarding the latter do not apply to the former. See *State v. Davis*, 2015-NMSC-034; 360 P3d 1161, 1172 (2015) (reserving judgment on the application of its Fourth Amendment rulings regarding manned aircraft surveillance to instances of “future surveillance conducted by ‘ultra-quiet drones’ and other high-tech devices”). Given the invasive nature of UAVs due to technological innovation, this Court should hold that its use by the government to surveil a private home requires a warrant.

¹³ Zolan Kanno-Youngs, *U.S. watched George Floyd protests in 15 cities using aerial surveillance*, N.Y. TIMES, (June 19, 2020), <<https://www.nytimes.com/2020/06/19/us/politics/george-floyd-protests-surveillance.html>> (accessed Sep 6, 2023).

¹⁴ Eric Tucker, *Comey: FBI used aerial surveillance above Ferguson*, ASSOCIATED PRESS, (Oct. 23, 2015), <<https://apnews.com/article/f1a797c9b286412ca72eb85b3cc35a4b>> (accessed Sep 6, 2023).

¹⁵ Andrea Peterson, *FBI spy planes used thermal imaging tech in flights over Baltimore after Freddie Gray unrest*, WASHINGTON POST (Oct. 30, 2015), <<https://www.washingtonpost.com/news/the-switch/wp/2015/10/30/fbi-spy-planes-used-thermal-imaging-tech-in-flights-over-baltimore-after-freddie-gray-unrest/>> (accessed Sep 6, 2023).

C. The Maxons reasonably expected that the government would not conduct UAV surveillance of their home.

People reasonably expect that the government will not surreptitiously spy on their home and backyards using UAVs. After all, the home is among the most private of spaces under the Fourth Amendment. See *Florida v Jardines*, 569 US 1; 133 S Ct 1409; 185 L Ed 2d 495 (2013). Surveillance of one’s home, backyard, and other curtilage by stealthy and powerful tools such as UAVs is the type of “broad and unsuspected governmental incursions” that the Fourth Amendment was designed to protect against. *United States v United States Dist Court*, 407 US 297, 313; 92 S Ct 2125; 32 L Ed 2d 752, 764 (1972).

The Maxons had an “actual subjective expectation of privacy” that “society recognizes as reasonable” that their home property would not be subject to UAV surveillance by the government or anyone else. *People v Antwine*, 293 Mich App 192, 195; 809 NW2d 439 (2011). A Michigan statute expressly prohibits the use of UAVs to “capture photographs, video, or audio recordings of an individual in a manner that would invade the individual’s reasonable expectation of privacy.” MCL § 259.322(3). Such statutory “positive law” can inform constitutional interpretation. See *Carpenter*, 138 S Ct at 2270 (Gorsuch, J., dissenting) (“positive law may help provide detailed guidance on evolving technologies” and “help establish a person’s Fourth Amendment interests”). To hold there is no reasonable expectation of privacy against government use of camera-equipped UAVs would nullify that statutory prohibition. It also would stand against the Court’s duty “to give effect to every word and phrase in a statute.” *People v Wafer*, 509 Mich 31, 48; 983 NW2d 315 (2022); see *Montclair v Ramsdell*, 107 US 147, 152; 2 S Ct 391; 27 L Ed 431, 433 (1882) (courts should “give effect, if possible, to every clause and word of a statute, avoiding . . . any construction which implies that the legislature was ignorant of the meaning of the language it employed”). This law evinces society’s—and Michiganders’—

understanding that UAV surveillance intrudes on an individual's reasonable expectation of privacy.

Other states have also enacted statutes recognizing the invasive nature of UAVs, reinforcing a reasonable expectation that UAV surveillance of private homes is prohibited. Many states have laws, similar to Michigan's, to protect their activities, like sunbathing in their backyards, against voyeurism, or "peeping Toms." See Arkansas Act 293; California Civil Code Section 1708.8; Florida Criminal Code Section 934.50; Miss. Code Section 97-29-61; Texas Gov. Code Section 423.002(a); Utah Code Title 63G, Chapter 18. Others state legislatures, like those in Florida, Minnesota, Maine, North Dakota, and Virginia, have expressly forbid warrantless governmental UAV surveillance except for narrow exceptions. Florida Criminal Code Section 934.50; Minn. Statutes, Chapter 82, S.F.No. 3072; Maine Sec. 1. 25 MRSA Pt. 12; North Dakota Code Sec. 29-29.4-01.

Finally, *Carpenter* forecloses any argument that UAVs only capture what someone has "exposed" to public view by passersby from above. Exposing the backyard and other curtilage of one's home to aerial view is at least as "inescapable" as using a cell phone, because "in no meaningful sense" does living in a house with a backyard amount to a decision to "assume the risk" of having that home under UAV surveillance. *Carpenter*, 138 S. Ct. at 2220, 2223 (cleaned up).

The state should not be allowed to encroach upon a homeowner's reasonable expectation of privacy in a nation in which citizens "dwell in reasonable security and freedom from surveillance." *Johnson v United States*, 333 US 10, 14; 68 S Ct 367; 92 L Ed 436, 440 (1948).

CONCLUSION

Surveillance technology is more powerful, prevalent, and stealthy than ever before. We must be especially vigilant that venerated democratic ideals like privacy in the home do not

erode as the government employs cheaper and more invasive methods and means. This Court should adopt a bright line rule that government surveillance of a home by UAVs requires a warrant.

September 8, 2023

Respectfully submitted,

Thomas Baker (P55589)
Michigan Auto Law
212 Cesar E. Chavez Ave SW, Suite 105
Grand Rapids, MI 49503
Tel: (616) 447-8847
Fax:(248) 254-8084
Email: tbaker@michiganautolaw.com

/s/ Hannah Zhao
Hannah Zhao*
Electronic Frontier Foundation
815 Eddy Street
San Francisco, CA 94109
Tel.: (415)436-9333
Email: zhao@eff.org

*Attorneys for Amicus Curiae
Electronic Frontier Foundation*

*Temporary Admission Pending

CERTIFICATE OF SERVICE

I hereby certify that on September 8, 2023, the foregoing was electronically filed, causing all parties of record to be served through the MiFile system of the Michigan Supreme Court.

/s/ Thomas S. Baker

Thomas S. Baker

Attorney for *Amicus Curiae*

RECEIVED by MSC 9/8/2023 1:07:33 PM

CERTIFICATE OF COMPLIANCE

I hereby certify that this document complies with the formatting rules in MCR 7.212.

I certify that this document contains 4,013 countable words as calculated by the Word program used and that the document is set in 12-point, double-spaced Times New Roman font type.

/s/ Hannah Zhao

Hannah Zhao*

Attorney for *Amicus Curiae*

*Temporary Admission Pending