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Airborne Argus?: St. Louis, Persistent Surveillance Systems, and Stabilizing the Lofty Aims of Fourth Amendment Jurisprudence

Jacob Schlosser*

On October 10, 2019, St. Louis Mayor Lyda Krewson met Ross McNutt, President of Persistent Surveillance Systems (“PSS”), to discuss a three-year trial of his product. A contemporaneous protest amassed before City Hall. McNutt’s three-plane, 36-camera system monitors thirty square miles from 10,000 feet, taking one photograph a second. When a crime occurs, the operator zooms in on the area, targets a suspect, and zooms out, backtracking the photo-log to follow the pixelized perp. The system can also be used as a live feed.

PSS was implemented in Baltimore without residents’ knowledge from 2016 to 2019. Even so, residents chose to reimplem beginning May, 2020. Residents of Dayton, Ohio, strongly opposed implementation. System opponents fear PSS is too expensive and would target minority

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2 Id.


5 Id.


7 Nightly News (NBC television broadcast Feb. 9, 2019).

8 Rector, supra note 6; White, supra note 4.
populations and innocent bystanders. McNutt claims picture quality is too low for targeting based on race and gender.

Community activist, Cedric Redmon, sees the program as a necessity, providing security in under-policed neighborhoods. He posits privacy in location information is far from reasonable, citing social media location data.

Enforcing the “right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures” requires definition of “unreasonable.”

The traditional “reasonableness” test–trespass doctrine–focuses on property and protected areas. Searches are unreasonable when “persons, houses, papers, and effects” are trespassed upon warrantlessly to obtain information.

Protection of “houses” extends to a “curtilage,” where “intimate activities of the home” occur. A tiny fraction of airspace above the home is protected, but most is public, “navigable airspace.”

The protective efficiency of trespass doctrine has waned as technology advances, leading the Court to develop “expectation of privacy” jurisprudence.

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11 Id.
12 KMOV.com Staff, supra note 9.
13 U.S. CONST. amend. IV.
17 Katz v. United States, 389 U.S. 347, 362 (1967) (Harlan, J., concurring) (stating that prior precedent’s limitation of the Fourth Amendment to trespass was “in the present day, bad physics as well as bad law.”).
Modern Fourth Amendment jurisprudence begins with *Katz*, which rebuked trespass doctrine, concentrating on expectation of privacy. Justice Harlan concurred, applying the now famous two-prong test: (1) a personal, subjective expectation, and (2) society’s acceptance of the expectation as reasonable. *Katz* is used to keep up with technology, sometimes to confounding result.

In *Knotts*, the Court held movement on public roadways “voluntarily convey[s]” details about where a person is and where he is going. Surveillance of the home and curtilage from public roads, unassisted by certain technologies, is also reasonable.

Public airspace provides another point of surveillance. In 1986, the Court upheld naked-eye observation of a fenced-in back yard from 1,000 feet. Justice Powell applied *Katz*, but dissented, proving the *Katz* test can lead to disparate results.

Surveillance duration is also important. In *Jones*, the Court held collection of location information on public roadways for twenty-eight consecutive days was unconstitutional. The Sotomayor and Alito concurrences rely on “mosaic theory,” which recognizes aggregation of public activity can create an intimate picture of a person’s life contrary to privacy interests.

Mosaic theory is adopted by the majority in *Carpenter*, which concerns cell site location information (CSLI). CSLI reports a time-stamped location, in this case, 101 times a day. Such information would have been impossible before the “digital age” meaning society’s expectation is that it

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19 *Katz*, 389 U.S. at 360-61 (Harlan, J., concurring).
20 United States v. Knotts, 460 U.S. 276, 281-82 (1983) (officers used a “beeper” in a drum picked up by a suspect to follow him to his home, even when they lost visual contact).
21 *Id.* at 283.
23 *Ciraolo*, 476 U.S. at 223 (Powell, J., dissenting).
25 *Id.* at 415 (Sotomayor, J., concurring); *Id.* at 430 (Alito, J., concurring).
27 *Id.* at 2218.
28 *Id.* at 2212.
is unobtainable. The Court suggests cell phones are usually in the same location as the owner and, when tracked retrospectively, paint an intimate picture of the owner’s life.Seven days of this information constitutes a search.

Kennedy dissented. Applying *Katz*, he claims location sharing through social media decreases both subjective and objective expectations of privacy. He calls the seven-day threshold arbitrary and argues because CSLI is not as precise and GPS data in *Jones* mosaic theory does not apply. Gorsuch and Thomas directly attack *Katz*, using trespass theory to find against Carpenter.

Kennedy gives credence to Redmon’s social media theory, and wide-spread support for PSS in Baltimore suggests objective, societal approval. If PSS data belongs to the city, this simple *Katz* analysis may suffice: PSS tech is used to monitor public movement or movement observable from public spaces, and is compatible with reasonableness analysis in *Katz* and *Cirilo*.

*Carpenter’s* Mosaic theory appears anti-PSS. CSLI provided 101 daily location points. PSS would provide up to 57,600. This location data would be pinpoint accurate, not just within a few square miles (*Carpenter*) or a few feet (*Jones*).

The constitutional outcome is unclear and legislative action is necessary to avoid a Fourth Amendment kerfuffle.

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29 Id.
31 Id. at n. 3.
32 Id. at 2232 (Kennedy, J., dissenting).
33 Id. at 2233. Kennedy is not only perturbed by the implication that fewer days’ worth of surveillance might not run afoul of the Fourth Amendment. See also *Id.* at 2266-67 (Gorsuch, J. dissenting) (officers in *Carpenter* only had access to two of the requested seven days’ worth of records, so the seven day time frame seems not only arbitrary, but factually false).
34 Id. at 2225.
35 Id. at 2238 (Thomas, J., dissenting). Thomas goes so far as to say Harlan coined the phrase “reasonable expectation of privacy” in the opinion.; *Carpenter*, 138 S. Ct. at 2263 (Gorsuch, J., dissenting).
36 Rector, *supra* note 6 (70% of polled Baltimore residents supported reimplementation after the 2016-2019 surveillance period).
Since 2017, City aldermen have proposed an ordinance requiring surveillance programs to submit a prospectus on use and types of evidence collected.\textsuperscript{37} Such a law could entice PSS administrators to employ additional safeguards.

Scholars have suggested a “naked-eye rule” limiting data collection by PSS-style systems to details observable in Ciraolo.\textsuperscript{38} Codifying this rule limits PSS’s use of better cameras or lower-altitude flights.

Legislation might require electronic location information of a certain age (\textit{e.g.}, ten minutes) be deleted unless a red-flag event triggers retention.\textsuperscript{39} Limiting red-flag events provides meaningful protection but limits the cost-effectiveness of continuous flight.

A more complicated, graduated system would permit collection and impose limits to accessibility.\textsuperscript{40} Perhaps incorporate Carpenter, by allowing warrantless search two consecutive days of location information, requiring reasonable suspicion up to six days, and a warrant thereafter.

New positive law is necessary to overcome PSS-related Fourth Amendment questions. Employing these solutions, St. Louisans must decide whether Persistent Surveillance strengthens or smothers their community.

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\textsuperscript{37} BB. 66, Session 2017-2018 (First Reading Jun. 16, 2017); BB. 219, Session 2018-2019 (First Reading Jan. 11, 2019); BB. 94, Session 2019-2020 (First Reading, Jul. 12, 2019).


\textsuperscript{39} Id.

\textsuperscript{40} Professor McNeil suggests a scheme in which (1) aerial surveillance of a person may continue for sixty minutes in any seven-day period at the officer’s discretion (2) aerial surveillance extending for sixty minutes to forty-eight hours in any seven-day period may only take place with a court order and reasonable suspicion, and (3) aerial surveillance of longer than forty-eight hours in any seven-day period is permissible only when accompanied by a warrant and probable cause. McNeil, \textit{supra} note 108, at 407.