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The Kyllo Conundrum: A New Standard to Address Technology That Represents a Step Backward for Fourth Amendment Protections

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THE *KYLLO* CONUNDRUM: A NEW STANDARD TO ADDRESS TECHNOLOGY THAT REPRESENTS A STEP BACKWARD FOR FOURTH AMENDMENT PROTECTIONS

INTRODUCTION

An oft-quoted maxim of judicial wisdom is Oliver Wendell Holmes's observation that "the life of the law has not been logic; it has been experience."[1] Applied to the field of thermal imaging surveillance technology, this maxim demonstrates the complicated and often conflicting standards by which application of technology has been judicially evaluated. The most recent development in this area of technological jurisprudence has been the Supreme Court's opinion in *Kyllo v. United States*,[2] where a sharply divided court concluded that use of a thermal imaging device constituted a search that invoked the protection of the Fourth Amendment.[3] The Court also concluded that a new "bright line" needed to be drawn so that courts could apply Fourth Amendment doctrines to new and evolving technologies.[4]

Part I of this comment reviews the skeleton of Fourth Amendment analysis, from its basis in trespass and property to the advent of the *Katz* two-prong test, and the application of Fourth Amendment analysis to other modern and new technologies. Part II discusses thermal imaging basics and prior decisions addressing the application of the Fourth Amendment to this type of scan. Part III analyzes the Court's decision in *Kyllo v. United States*. Part IV concludes that the Court actually returned to an intransigent view of Fourth Amendment application; one that is dangerously ill-equipped to handle future evolution of surveillance technology.

I. THE EVOLUTION OF THE FOURTH AMENDMENT WITH RESPECT TO EVOLVING SURVEILLANCE TECHNOLOGY

A. Early Origins and History

The early American colonial experience with unconstrained writs of assistance produced a fundamental distrust of unfettered investigatory powers.[5] British common law had established the primacy of a man's

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1. OLIVER WENDELL HOLMES, THE COMMON LAW (1881), *reprinted in* PRAGMATISM: A READER, at 137 (Louis Menand ed.,Vintage Books 1997).

2. 533 U.S. 27 (2001).

3. *Kyllo*, 533 U.S. at 40.

4. *Id.* at 36, 40.

5. *See, e.g.*, Navigation Act, 1662, 13 & 14 Car. II, c. 11, § 5 (Eng.) (This investigatory power is reflected in the British Navigation Acts, which authorized officials to "go into any house,

domicile, but the colonists found little comfort in this concept when this protection was tested against the magistrates' authorities.[6] In order to enforce colonial revenue laws, British authorities used writs of assistance to authorize the bearer to enter into any house or other place to conduct a search for taxable commodities.[7] In response to the predictable abuses that occurred, the drafters of the Bill of Rights adopted the Fourth Amendment, guaranteeing that "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated."[8] As interpreted by the courts over the years, this has come to stand for the need to ensure dispassionate judicial review of evidence prior to issuing a warrant to law enforcement personnel.[9]

As the body of law supporting the Fourth Amendment has grown, three essential doctrines have developed that are specifically applicable to the integration of new technology into the police investigatory arsenal. The first doctrine concerns the need and ability of law enforcement personnel to secure a warrant prior to surveillance activities. The second of these doctrines involves the shifting recognition of property rights as invoking a fundamentally different level of Constitutional protection. The final doctrine considers the relationship between Fourth Amendment protections and various private and administrative searches.

B. The Shift Away from Warrants to Reasonableness

One of the central debates that has influenced the development of Fourth Amendment jurisprudence is whether warrantless searches can pass constitutional muster.[10] This has clear application today as courts struggle to define the scope of police investigatory power in light of an

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shop, cellar, warehouse or room . . . and in case of resistance, to break open doors, chests, trunks and other package, there to seize, and from thence to bring, any kind of goods or merchandize whatsoever, prohibited and uncustomed.").

6. *See* Semayne's Case, 77 Eng. Rep. 194, 194 (K.B. 1604) (citing the famous proposition that "every man's house is his castle").

7. O.M. Dickerson, *Writs of Assistance as a Cause Of the American Revolution*, *in* THE ERA OF THE AMERICAN REVOLUTION 40, 40-41, 43-44 (Richard B. Morris ed., 1939).

8. U.S. CONST. amend. IV.

9. *See* Johnson v. United States, 333 U.S. 10, 13-14 (1948); Mark Young, *What Big Eyes You Have!: A New Regime for Covert Government Surveillance*, 70 FORDHAM L. REV. 1017, 1047-48 (2001).

10. *Compare* Trupiano v. United States, 334 U.S. 699, 705 (1948) (expressing the "cardinal rule that, in seizing goods and articles, law enforcement agents must secure and use search warrants wherever reasonably practicable"), *and* Chimel v. California, 395 U.S. 752, 761 (1969) ("The [Fourth] Amendment was in large part a reaction to the general warrants and warrantless searches that had so alienated the colonists and had helped speed the movement for independence. In the scheme of the Amendment, therefore, the requirement that 'no Warrants shall issue, but upon probable cause,' plays a crucial part."), *with* United States v. Rabinowitz, 339 U.S. 56, 66 (1950) (stating that the relevant test is "not whether it is reasonable to procure a search warrant, but whether the search was reasonable").

ever-evolving technological landscape that makes searches less intrusive, quicker, and easier to conduct.[11] The starting point for the debate involves revisions to the draft of the Fourth Amendment submitted by James Madison. Madison's introduced version provided: "The rights of the people to be secured . . . from all unreasonable searches and seizures, shall not be violated by warrants issued without probable cause . . . ."[12] At some point before final ratification, the House defeated a motion to substitute the phrase "and no warrant shall issue" for the phrase "by warrants issuing."[13] However, the text of the final amendment includes this supposedly defeated provision, invoking decades of debate about whether the two clauses—"the right of the people to be secure . . . against unreasonable searches" and "and no Warrants shall issue, but upon probable cause"—are to be read together (with searches presumptively unreasonable if they lack a warrant), or if they each stand alone (allowing for the recognition of a "reasonable" warrantless search).[14]

Early Supreme Court decisions seemed to support the former interpretation, indicating strong preference for police investigatory activities supported by warrants.[15] However, the Court gradually began to support the latter interpretation. Starting in the arena of "searches incident to arrest," courts began eroding the warrant requirement as they recognized a "well established right of law enforcement officers to arrest without a warrant for a felony committed in their presence."[16]

This exception to the need to obtain a warrant blossomed into protection for all "reasonable searches," as recognized in the seminal case of *United States v. Rabinowitz*.[17] Since that decision, the Court has vacillated between these two competing doctrinal approaches,[18] looking most recently to enhance the power of law enforcement by recognizing that searches themselves must only comport with a general "reasonableness"

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11. *See, e.g., Kyllo*, 533 U.S. at 34, 36.

12. 1 ANNALS OF CONG. 440-41, 450, 452 (Joseph Gales ed., 1789).

13. NELSON B. LASSON, THE HISTORY AND DEVELOPMENT OF THE FOURTH AMENDMENT TO THE UNITED STATES CONSTITUTION 101-03 (1937).

14. *See* Scott Sundby, *A Return to Fourth Amendment Basics: Undoing the Mischief of* Camara *and* Terry, 72 MINN. L. REV. 383, 384 (1988).

15. *See* Boyd v. United States, 116 U.S. 616, 627, 630 (1886) (approving of Lord Camden's argument that "it is now incumbent upon the defendants to show the law by which this seizure is warranted. If that cannot be done, it is a trespass").

16. *Trupiano*, 334 U.S. at 704 (overruled on other grounds); *see also* Agnello v. United States, 269 U.S. 20, 30 (1925) (observing that, in American jurisprudence, the legality of a search incident to a lawful arrest is not in doubt); Carroll v. United States, 267 U.S. 132, 158 (1925) (recognizing the legality of a search of an individual following a lawful arrest); Weeks v. United States, 232 U.S. 383, 392 (1914) (noting the uniform acceptance of the government's right to search the person of the accused upon a legal arrest of that person); Sundby, *supra* note 14, at 387-90.

17. 339 U.S 56, 65-66 (1950).

18. *See Chimel*, 395 U.S. at 761 ("In the scheme of the Amendment, therefore, the requirement that 'no Warrants shall issue, but upon probable cause,' plays a crucial part.").

criteria.[19] This shift away from a hard and fast warrant requirement has been a precursor to the rise of balancing tests, designed to measure "reasonableness" by weighing governmental regulatory interest against the individual's privacy interest.[20] Clear application of this phenomenon can be seen in the next area of Fourth Amendment evolution, the transition from property-based claims to a personal sense of privacy.

C. Property or Portable Reasonableness?

1. Actual Physical Invasions

As the courts strayed from the presumptive unconstitutionality of a warrantless search or seizure, it became necessary to determine when the Fourth Amendment applied. In order for Fourth Amendment protections to apply, there must be a "search" under the color of official action, with a subsequent attempt to use what is seized.[21] The early jurisprudential basis for privacy rights was derived from English common law, reflecting Lord Camden's idea that "the great end for which men entered society was to secure property . . . [and] every invasion of private property, be it ever so minute, is a trespass."[22] The Supreme Court echoed this property-based rationale in an early case involving the application of developing technology, *Olmstead v. United States*.[23] In this case, the Supreme Court concluded that wiretapping was not a constitutionally recognizable search, relying principally upon the lack of physical invasion of the defendant's property.[24] Specifically, a 5-4 majority concluded that the wiretapping was permissible because (1) the agents gained access to the telephone wires without any "entry of the houses or offices of the defendants," and (2) the agents obtained the content of the conversations that passed over the wires but did not acquire physical objects.[25] In a somewhat ominous note foreshadowing later developments in this area of law, Justice Brandeis in his dissent noted that the "progress of science in furnishing the government with means of espionage is not likely to

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19. *See* Matthew Pring, Survey, *The Death of A Doctrine: The 10th Circuit Court of Appeals and Random Suspicionless Urine Drug Testing Eroding the "Special Needs Doctrine,"* 79 DENV. U. L. REV. 457, 458 (2002); *see also* Illinois v. Rodriguez, 497 U.S. 177, 184-86 (1990); New Jersey v. T.L.O., 469 U.S. 325, 337, 340-43 (1985).

20. *See, e.g.*, *T.L.O.*, 469 U.S. at 337.

21. *See* Fredrick Alexander & John Amsden, *Scope of the Fourth Amendment*, 75 GEO. L.J. 713, 714 (1987); *see also* Burdeau v. McDowell, 256 U.S. 465, 475 (1921). *But see* State v. Helfrich, 600 P.2d 816, 818-19 (Mont. 1979) (holding that under the Montana Constitution, the right to privacy is protected from actions by both state and private actors, extending protection to all invasive actions).

22. Entick v. Carrington, 95 Eng. Rep. 807, 817-18 (K.B. 1765).

23. 277 U.S. 438, 464 (1928).

24. *See Olmstead*, 277 U.S. at 466.

25. *Id.* at 464-65.

stop with wire tapping."[26] The persistence of this "actual physical invasion" test is seen in the fact that that this property-based view of the Fourth Amendment persevered even after wiretapping was made unlawful by statute.[27]

2. The Introduction of "Reasonableness"

New technology and an evolving recognition of the limits of property law to address privacy interests eventually produced a fundamental shift in the basis for Fourth Amendment protection. In the case of *Katz v. United States*[28], the Supreme Court rejected Fourth Amendment protection of property, ruling instead that the Amendment "protects people, not places."[29] In *Katz*, FBI agents overheard the defendant's end of a telephone conversation by attaching an electronic listening and recording device to the exterior of the public telephone booth from which he was calling.[30] The Court refused to decide the issue on the basis of whether a person has a personal right of privacy in a phone booth based on property rights.[31] Instead, the Court found the use of this "detectaphone" constituted a search invoking Fourth Amendment protections, since what a person "seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."[32] In doing so, the Court shifted the focus of Fourth Amendment jurisprudence to the individual and away from her property.[33] As the Court noted in reaching its final holding, "One who . . . shuts the door behind him . . . is surely entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world."[34]

The two-part test proposed by Justice Harlan in his concurring opinion in *Katz* eventually came to be recognized as the new measuring stick for the legitimacy of government searches.[35] The first prong of the test involves evaluating whether the individual in question "exhibited an ac-

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26. *Id.* at 474 (Brandeis, J., dissenting).

27. *See* Frank Eichenlaub, *Carnivore: Taking a Bite Out of the Fourth Amendment?*, 80 N.C. L. REV. 315, 334 (2001); *see also* Silverman v. United States, 365 U.S. 505, 507-12 (1961) (ruling evidence gathered by law enforcement officers inadmissible because the evidence was gathered through means of a listening device that had intruded unlawfully upon the premises occupied by the defendants); Goldman v United States, 316 U.S. 129, 133-35 (1942) (holding that officers' use of a "detectaphone" to hear defendants' conversations emanating from next room did not constitute trespass or violation of Fourth Amendment).

28. 389 U.S. 347 (1967).

29. *Katz*, 389 U.S. at 351.

30. *Id.* at 348.

31. *Id.* at 350.

32. *Id.* at 351.

33. *Id.*

34. *Id.* at 352.

35. *See id.* at 361 (Harlan, J., concurring); Jonathan Todd Laba, *If You Can't Stand the Heat, Get Out of the Drug Business: Thermal Imagers, Emerging Technologies, and the Fourth Amendment*, 84 CAL. L. REV. 1437, 1454 (1996).

tual (subjective) expectation of privacy."[36] Many judicial commentators have criticized this first prong as being circular in nature.[37] Even the creator of the test, Justice Harlan, came to recognize its limitations, explaining in *United States v. White*,[38] "Our expectations, and the risks we assume, are in large part reflections of laws that translate into rules the customs and values of the past and present."[39] This eventually led Justice Harlan to reject this prong of the test in its entirety, stating that the Court "must . . . transcend the search for subjective expectations."[40] Correspondingly, as technology allows new levels of intrusiveness into the private domain, and citizens become aware of these new surveillance techniques, their subjective expectations of privacy must necessarily be lowered.[41]

The second prong of the *Katz* test involves assessing whether one has a legitimate expectation of privacy that "society is prepared to recognize as 'reasonable.'"[42] As the Supreme Court has noted, there are some expectations that society is simply not prepared to accept.[43] In practice, this standard has come to reflect a balancing test between the needs of law enforcement and the importance of the individual interest threatened; if societal standards dictate that there is a lesser expectation of privacy in a particular area, then the scope of the invasiveness may increase.[44] Criticism has been directed at this prong of the test because it fails to include

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36. *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

37. *See* Laba, *supra* note 35, at 1445.

38. 401 U.S. 745 (1971).

39. *White*, 401 U.S. at 786 (Harlan, J., dissenting). *But see* Smith v. Maryland, 442 U.S. 735, 740 n.5 (1979) (noting that, in certain circumstances, the two-prong *Katz* test would be an inadequate measure of Fourth Amendment protections. For example, the government could not destroy all grounds of subjective expectation by simply announcing that henceforth all homes would be subject to warrantless entry, and thus destroy the legitimate expectation of privacy.).

40. *White*, 401 U.S. at 786 (Harlan, J., dissenting).

41. *See* Melvin Gutterman, *A Formation of the Value and Means Models of the Fourth Amendment in the Age of Technologically Enhanced Surveillance*, 39 SYRACUSE L. REV. 647, 677 (1988).

42. *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

43. *See* Gutterman, *supra* note 41, at 665-66; *see also* California v. Greenwood, 486 U.S. 35, 39-41 (1988) (holding that no expectation of privacy that society would recognize as reasonable existed in garbage left outside a home); California v. Ciraolo, 476 U.S. 207, 214 (1986) (recognizing that no expectation of privacy remained in an area outside of a home that could be observed by all commercial air travel); Illinois v. Andreas, 463 U.S. 765, 773 (1983) (holding that there could be no reasonable expectation of privacy for material placed in a shipping container subsequently opened and inspected by customs agents); *Smith*, 442 U.S. at 743-44 (rejecting petitioner's claim of a reasonable expectation of privacy for numbers dialed on a telephone after police had monitored and gathered such numbers through use of a pen register); United States v. Miller, 425 U.S. 435, 437, 440-43, 445 (1976) (identifying no reasonable expectation of privacy in bank records).

44. *See* Pring, *supra* note 19, at 458. *Compare* United States v. Ross, 456 U.S. 798, 811 (1982) (noting that expectations of privacy in personal luggage and other closed containers must be substantially greater than in the area of an enclosed automobile), *with* Arkansas v. Sanders, 442 U.S. 753 (1979) (noting if the personal luggage is found in a car, the expectation of privacy must correspondingly be less).

some appraisal of underlying conduct.[45] For instance, if two kidnappers take their victim to a secluded location, they would expect privacy in this location. However, given the criminal nature of their activities, a court would probably not recognize their expectations as reasonable, irrespective of this second "objective" expectation of privacy test.

The *Katz* test has been applied to a number of "new" technologies in an effort to define the proper balance between investigative necessity and individual rights.[46] Regarding binoculars and telescopes, courts have held that use of these devices does not constitute a search.[47] The Supreme Court has twice addressed the use of beeper tracers in the cases of *United States v. Knotts*[48] and *United States v. Karo*,[49] developing a somewhat contradictory line of precedence for use of this technology. The *Knotts* agents used a beeper tracer to monitor a chloroform container while inside a cabin.[50] The Court found that the beeper tracer had initially been used on public streets, and applied the second prong of the *Katz* test to conclude that since there could be no legitimate expectation of privacy on these public streets, there was no search.[51] However, in the *Karo* case, the Court concluded that a beeper being monitored by agents while inside a house revealed "a critical fact about the interior of the premises that [they] . . . could not have otherwise obtained without a warrant."[52] As the Court expounded, "Private residences are places in which the individual normally expects privacy free of government intrusion . . . and that expectation is plainly one that society is prepared to recognize as justifiable."[53]

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45. *See* John M. Burkoff, *When Is a Search Not a "Search?" Fourth Amendment Doublethink*, 15 U. TOLEDO L. REV. 515, 527-29 (1984) (stating the subjective component of *Katz* distorts the protections of the Fourth Amendment); *see also White*, 401 U.S. at 786 (Harlan, J., dissenting) ("This question must . . . be answered by assessing the nature of a particular practice and the likely extent of its impact on the individual's sense of security balanced against the utility of the conduct as a technique of law enforcement.").

46. *See* Gutterman, *supra* note 41, at 717 (arguing against questions of search and seizure depending on technology).

47. *See* Texas v. Brown, 460 U.S. 730, 739-40 (1983) (holding that the use of a searchlight is the same as the use of field glasses, therefore not a search); United States v. Minton, 488 F.2d 37, 38 (4th Cir. 1973) (holding that use of binoculars is not a search); People v. Hicks, 364 N.E.2d 440, 444 (Ill. App. Ct. 1977) (holding that use of night vision binoculars is not a search).

48. 460 U.S. 276 (1983).

49. 468 U.S. 705 (1984).

50. *Knotts*, 460 U.S. at 277-79.

51. *Id.* at 281-82, 285.

52. *Karo*, 468 U.S. at 715.

53. *Id.* at 714.

3. Statutory and Judicial Interplay Involving Surveillance Technology

Title III of the Omnibus Crime Control and Safe Streets Act of 1968,[54] passed the year after the *Katz* decision, specifically addressed the subject of wiretapping and electronic surveillance.[55] Under this legislation, government officials were given the authority to apply to a federal judge for an order permitting interception of wire or oral communications, when such activity may provide evidence of certain enumerated crimes.[56] A judge may then grant the order *ex parte*, upon belief of probable cause that the named individual is committing the alleged enumerated offense, but for no longer than "is necessary to achieve the objective of the authorization," or in any account, not longer than 30 days.[57] One other important factor associated with this provision is that when one of several named officials finds that "an emergency situation exists that involves (i) immediate danger of death . . . , (ii) conspiratorial activities threatening the national security interest, or (iii) conspiratorial activities characteristic of organized crime," an interception without prior judicial authorization is permitted.[58]

Dalia v. United States[59] reflects how the Supreme Court has viewed the broad authorizations statutorily established by Congress. In *Dalia,* F.B.I. agents entered an office to install a listening device and then reentered to remove it, all pursuant to a court order obtained under the Title III authorizations.[60] Rejecting arguments about the trespassory nature of the agents' activities, the Court concluded that:

> one simply cannot assume that Congress, aware that most bugging requires covert entry, nonetheless wished to except surveillance requiring such entries from the broad authorization of Title III . . . . Those considering the surveillance legislation understood that, by authorizing electronic interception of oral communications in addition to wire communications, they were necessarily authorizing surreptitious entries.[61]

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54. 18 U.S.C. §§ 2510-20 (2000).

55. *See id.*

56. *Id.* § 2516(1).

57. *Id.* § 2518.

58. *Id.*; *see also* Geoffrey North, *Carnivore in Cyberspace: Extending the Electronic Communications Act's Framework to Carnivore Surveillance*, 28 RUTGERS COMPUTER & TECH. L.J. 155 (2002) (discussing the Act and digital surveillance).

59. 441 U.S. 238 (1979).

60. *Dalia*, 441 U.S. at 241, 245.

61. *Id.* at 252.

The *Dalia* decision became controversial for its additional holding that a court did not need to specifically authorize the covert entry of agents.[62] The relevance of this point to other forms of electronic surveillance can be found in Justice Brennan's dissent from the case, in which he noted that the "practice entails an invasion of privacy of constitutional significance distinct from that which attends nontrespassory surveillance."[63] Inherent in the dissent's position is a property-based distinction that subscribes to the idea that the Fourth Amendment offers different levels of protections depending upon the degree of actual physical intrusion associated with the process.

D. The Interplay Between Private and Public Actors

1. Third Party Actor Involvement

In the *Katz* decision, the Supreme Court concluded, "What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection."[64] This language is the starting point for judicial review of the actions of third parties as proof of the scope of personal privacy expectations. Primarily, the Fourth Amendment protects individuals from government action, and as such, it applies only when a government actor is involved.[65] However, third parties can act as agents of the government, thereby invoking the protections of the Fourth Amendment.[66]

Another rationale for not applying Fourth Amendment protections to private searches and seizures is that as a person exposes something to a private actor, both his subjective expectation of privacy and the objective status society is willing to accord that expectation decrease.[67] As one example of this, when a person conveys information to a third party, even during an apparently private conversation, that person cannot reasonably expect the information will remain protected within the context of the Fourth Amendment.[68] This doctrine has been extended to cover the actions of third party institutions, such as a bank[69] or telephone com-

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62. *Id.* at 257 ("Nothing in the language of the Constitution . . . suggests that . . . search warrants also must include a specification of the precise manner in which they are to be executed.").

63. *Id.* at 259-60 (Brennan, J., dissenting).

64. *Katz*, 389 U.S. at 351.

65. *See* Alexander & Amsden, *supra* note 21.

66. *See id.* at 715 & n.13 (discussing various court tests to determine if an actor is a government agent).

67. *See* Brian Serr, *Great Expectations of Privacy: A New Model For Fourth Amendment Protection*, 73 MINN. L. REV. 583, 627 (1989).

68. *See* Hoffa v. United States, 385 U.S. 293, 302-03 (1966) (ruling on a government informant who reported the conversation to government agents).

69. *Miller*, 425 U.S. at 442-43.

pany,[70] when these actors subsequently convey the information to law enforcement personnel.

2. Open Fields Surveillance

The most significant application of this doctrine to the field of *Kyllo*-type surveillance comes from the so-called "open fields" doctrine. Under this principle, espoused initially in the case of *Oliver v. United States*,[71] the Court started by recognizing "the overriding respect for the sanctity of the home that has been embedded in our traditions since the origins of the Republic."[72] The Court then concluded "open fields do not provide the setting for those intimate activities that the Amendment is intended to shelter from government interference or surveillance."[73] Consequently, in areas outside the immediate surroundings of a home, individuals have a reduced expectation of privacy and society is prepared to recognize only minimal protections as reasonable.[74] If government actors can view areas the general public can also view, the search is constitutionally permissible, because the area is akin to an "open field."[75] For example, in *Florida v. Riley*[76] the Court concluded that observation of a greenhouse by a police helicopter was a constitutionally permissible search because the test was "whether [the helicopter] was in the public airways at an altitude at which members of the public travel with sufficient regularity that respondent's expectation was not one that society is prepared to recognize as 'reasonable.'"[77] Here again, the fact that a private citizen could observe what law enforcement officials ultimately saw was used as proof by the Court that no legitimate expectation of privacy existed, even in an area closely associated with "the overriding respect for the sanctity of the home."

3. Private Naked Eyes

The final relevant application of private actor searches depends on the general public's availability and current use of the surveillance technology employed by government actors. The Court has concluded that when devices employed by law enforcement personnel merely enhance the surveillance capability that ordinary citizens could use to observe a

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70. *Smith*, 442 U.S. at 742, 745-46.
71. 466 U.S. 170 (1984).
72. *Oliver*, 466 U.S. at 178.
73. *Id.* at 179.
74. *See* Susan Moore, *Does Heat Emanate Beyond the Threshold?: Home Infrared Emissions, Remote Sensing, and the Fourth Amendment Threshold*, 70 CHI.-KENT L. REV. 803, 819 (1994).
75. *See* Young, *supra* note 9, at 1054.
76. 448 U.S. 445 (1989).
77. *Riley*, 448 U.S. at 446.

defendant's activities, the Fourth Amendment is not implicated.[78] However, with increasingly sophisticated technology, the likelihood that the general public would use these technologies decreases. When this occurs, courts have been more willing to circumscribe police activities by invoking Fourth Amendment protections.[79] The natural progression of technology has required judicial officers to consider the use of items as commonplace as binoculars and as complex as thermal imaging devices.

II. USE OF THERMAL IMAGING TECHNOLOGY AND JUDICIAL REVIEW

A. *What is Thermal Imaging Technology?*

A basic understanding of thermal imaging technology can help define precisely what sorts of intrusions occur when these devices are employed by law enforcement personnel. Any object with a temperature above absolute zero emits radiation in the infrared spectrum.[80] A thermal imaging device detects this infrared radiation and then converts the heat reading into a two-dimensional picture.[81] The picture depicts various shades of gray according to the levels of heat radiated by objects; hotter objects appear lighter in color due to the fact that they radiate more infrared energy.[82] The thermal imager neither alters nor enhances the radiation, but solely detects differences in heat between the target and the ambient background.[83] Most importantly, there are no beams penetrating a structure when the device is employed; thermal imagers merely passively scan the surrounding environment to measure respective heat signatures.[84]

Thermal imaging technology has been widely adopted by law enforcement personnel in the search for illegal drug cultivation.[85] Indoor

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78. *See* Moore, *supra* note 74, at 851; *see also* Dow Chemical Co. v. United States, 476 U.S. 227, 239 (1986) (holding use of an aerial camera did not invoke Fourth Amendment protections given); *Knotts*, 460 U.S. at 285 (holding that an electronic tracking device attached to a car did not constitute a search because the movements of the car could be observed by the naked eye).

79. *See Karo*, 468 U.S. at 720-21 (holding that a beeper tracer that reveals information not available without unaided surveillance does invoke Fourth Amendment protections).

80. Thomas D. Colbridge, *Thermal Imaging: Much Heat but Little Light*, FBI LAW ENFORCEMENT BULLETIN 18 (Dec. 1997), *at* http://www.fbi.gov/publications/leb/1997/leb97.htm.

81. *Id.*

82. *Id.*; *see also* M. Annette Lanning, *Thermal Surveillance: Do Infrared Eyes in the Sky Violate the Fourth Amendment?*, 52 WASH. & LEE L. REV. 1771, 1773 (1995) (describing how FLIR systems operate).

83. *See* Matthew L. Zabel, *A High-Tech Assault on the "Castle": Warrantless Thermal Surveillance of Private Residences and the Fourth Amendment*, 90 NW. U. L. REV. 267, 280 n.100 (1995) (stating that thermal imaging devices detect only heat emissions).

84. Mindy G. Wilson, *The Prewarrant Use of Thermal Imagery: Has This Technological Advance in the War Against Drugs Come at the Expense of Fourth Amendment Protections Against Unreasonable Searches?*, 83 KY. L.J. 891, 897 (1995).

85. *See* United States v. Field, 855 F. Supp. 1518, 1518-19 (W.D. Wis. 1994); United States v. Penney-Feeney, 773 F. Supp. 220, 225-28 (D. Haw. 1991).

growing of marijuana requires high intensity growth lamps for optimum yields.[86] These lamps produce hot exhaust gases that must be vented in order to maintain an optimum growing temperature of 68 to 72 degrees Fahrenheit.[87] Thermal imaging devices allow law enforcement personnel to detect hot exhaust gases emanating from structures by comparing the relative heat passively radiated from different environments.[88] An agent is able to tell the relative heat signature of an object by simply directing a thermal imaging device at it; no probes or sampling devices need to be attached to the target structure.[89] A thermal imaging device requires no special modification to be employed in this drug detection role; no transmission of penetrating rays or pulses is necessary to see the exhaust gases.[90]

B. *Pre-*Kyllo *Decisions Dealing with the Use of Thermal Imaging Devices*

The United States Court of Appeals for the Eighth Circuit was the first court in the federal system to rule on the pre-warrant use of thermal imaging devices. In the case of *Pinson v. United States*,[91] the court concluded that the use of these devices did not constitute a search because they failed the second prong of the *Katz* test.[92] The court decided that even if a defendant could show an expectation of privacy, that expectation would not be one that society would accept as reasonable for two reasons.[93] First, the court concluded that thermal imaging devices merely detected waste heat, and by analogy, this was similar to the waste left at a curb.[94] The significance of this reasoning was that the Supreme Court had concluded, in the case of *California v. Greenwood*,[95] that the police could search waste left at a curb because the individual had demonstrated

86. Wilson, *supra* note 84, at 893.

87. Lynne M. Pochurek, *From the Battlefield to the Homefront: Infrared Surveillance and the War on Drugs Place Privacy Under Siege*, 7 ST. THOMAS L. REV. 137, 150 n.99 (1994).

88. Tracy M. White, *The Heat is On: The Warrantless Use of Infrared Surveillance to Detect Indoor Marijuana Cultivation*, 27 ARIZ. ST. L.J. 295, 295 (1995).

89. *See* United States v. Ishmael, 48 F.3d 850, 857 (5th Cir. 1995) (holding the use of a thermal imaging device to be passive and non-intrusive); Wilson, *supra* note 84, at 896-97.

90. Wilson, *supra* note 84, at 896 n.54.

91. 24 F.3d 1056 (8th Cir. 1994).

92. *See* Sean D. Thueson, *Fourth Amendment Search—Fuzzy Shades of Gray: The New "Bright Line" Rule in Determining When the Use of Technology Constitutes a Search*, 2 WYO. L. REV. 169, 183-84 (2002).

93. *Pinson*, 24 F.3d at 1058-59.

94. *Id.*

95. 486 U.S. 35 (1988).

that he no longer maintained an expectation of privacy in the contents of that waste.[96]

The second reason the court concluded that there was no search was that the use of infrared sampling devices was similar to a search by a canine unit. As the court noted, "Just as odor escapes a compartment or building and is detected by the sense-enhancing instrument of a canine sniff, so also does heat escape a home and is detected by the sense-enhancing [thermal imager]."[97] Again, the significance of this comparison is that in the case of *United States v. Place*,[98] the Supreme Court had concluded that a canine search by a narcotics detection dog was clearly not a search within the meaning of the Fourth Amendment.[99]

Concerns about the application of this rationale to thermal imaging devices can be found from a closer scrutiny of a typical "canine-sniff" decision. The Ninth Circuit Court of Appeals' decision in the case of *United States v. Solis*[100] is illustrative of this line of thinking. The court concluded that a canine sniff did not constitute a search because "[n]o sophisticated mechanical or electronic devices were used [and the] . . . investigation was not indiscriminate, but solely directed to the particular contraband."[101] This stands in obvious contrast to passive heat detection where sophisticated mechanical devices are used. However, the majority of pre-*Kyllo* courts that considered the constitutional implications of thermal imaging devices agreed with the Eighth Circuit, concluding that their use did not constitute a search.[102]

In addition to the "waste heat" and "canine enhancement" doctrines, courts have also relied upon the "plain view" doctrine to conclude that use of these devices is not a search.[103] The "plain view" doctrine simply states that officers are not required to obtain a warrant prior to observing details that would be readily observable by any member of the public.[104] This is an extension of the "open fields" doctrine discussed above. Although applying "plain view" to seeing through walls appears somewhat

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96. *Greenwood*, 486 U.S. at 35 ("It is common knowledge that plastic garbage bags left along a public street are readily accessible to animals, children, scavengers, snoops, and other members of the public.").

97. *Pinson*, 24 F.3d at 1058.

98. 462 U.S. 696 (1983).

99. *Place*, 462 U.S. at 707 (Defendant's conviction was eventually overturned because the officers had detained the defendant's luggage for an unreasonable period of time and because the officers failed to communicate to the defendant where they were taking his luggage.).

100. 536 F.2d 880 (9th Cir. 1976).

101. *Solis*, 536 F.2d 880 at 882.

102. *E.g.*, *Ishmael*, 48 F.3d 850; United States v. Myers, 46 F.3d 668 (7th Cir. 1995); *Pinson*, 24 F.3d 1056; United States v. Ford, 34 F.3d 992 (11th Cir. 1994); State v. McKee, 510 N.W.2d 807 (Wis. Ct. App. 1993); State v. Cramer, 851 P.2d 147 (Ariz. Ct. App. 1992).

103. *Ishmael*, 48 F.3d at 853.

104. *See* California v. Ciraolo, 476 U.S. 207, 215 (1986); Dow Chemical Co. v. United States, 476 U.S. 227, 236-37 (1986).

attenuated based on common English definitions, when the subject matter is an object's invisible heat signature, at least one court has indicated that if used from a position where any member of the public could lawfully be located, an agent has not performed a search.[105] Support for this approach was also drawn from the Court's decisions in *Florida v. Riley*[106] and *Dow Chemical Co. v. United States*,[107] cases involving the first applications of technology generally available to the public as a means to restrict the sphere of privacy rights. [108]

The pre-*Kyllo* minority viewpoint that determined that use of a thermal imaging device did constitute a search relied upon different rationales to reach this conclusion. Some courts expressed a concern about revealing the "intimate details regarding activities occurring within the sanctity of the home,"[109] while others focused on the "indiscriminate" nature of the device.[110] The first court to conclude that use of a thermal imaging device did constitute a search, found that such searches were "at least as intrusive" as the electronic beeper that was the subject of the Supreme Court's holding in the *Karo* case.[111]

Other courts have rejected the claim that the passive nature of these devices precludes them from intruding upon the sanctity of the home, concluding instead that the principle reason for use of this technology is to enable an agent to view intimate details of the home.[112] The case of *State v. Young*,[113] decided by the Washington Supreme Court, is illustrative of minority viewpoints on waste and canine sniff analogies. In *Young*, the court decided that the emission of waste heat was not similar to the garbage at issue in the *Greenwood* case because unlike the disposal of garbage, a person does not foresee the use of sophisticated instruments to detect waste heat emissions.[114] In a foreshadowing of the rationale used in the *Kyllo* case, the court noted that thermal imaging "produces an image of the interior of the home . . . [and allows] the government to intrude into the defendant's home and gather information about what occurs there."[115] The court also rejected the canine sniff analogy by es-

105. *See Ishmael*, 48 F.3d at 854.
106. 448 U.S. 445 (1989).
107. 476 U.S. 227.
108. *See Riley*, 448 U.S. at 446; *Dow Chemical Co.*, 476 U.S. at 238-39 (stating the conclusion that the plant area at issue fell somewhere between 'open fields' and curtilage for privacy interest purposes, and that surveillance of these areas with highly sophisticated devices might be constitutionally prohibited, but the mapmaking camera at issue in the case would not reveal enough intimate details to violate the Fourth Amendment).
109. Commonwealth v. Gindlesperger, 743 A.2d 898, 902 (Pa. 1999).
110. People v. Deutsch, 44 Cal. App. 4th 1224, 1231 (1996).
111. *See* State v. Young, 867 P.2d 593, 602 (Wash. 1994).
112. *Field*, 855 F. Supp. at 1518-19.
113. 867 P.2d 593.
114. *Id.* at 603.
115. *Id.*

tablishing that canine sniffs are unique because they detect the existence or non-existence of illegal drugs.[116]

These polar opposite outcomes, based upon essentially similar tests, illustrate that the *Katz* framework was ill-equipped to provide judicial consensus about the nature of an individual's right to privacy in light of technological advances. Courts diverged on both prongs of the *Katz* test, namely on what society considered reasonable and whether society was prepared to recognize that heat loss observation should be constitutionally protected.[117] *Kyllo* provided the Court with an opportunity to address these differing positions.

III. *KYLLO V. UNITED STATES*[118]

A. *The Facts of* Kyllo

In 1991, Special Agent William Elliot of the Department of the Interior, Bureau of Land Management, came to suspect Danny Kyllo was growing marijuana in his home.[119] Agent Elliot first attempted to confirm his suspicions by subpoenaing and then examining utility records to compare average electricity use against dwellings of similar size.[120] Based in part upon the confirmed higher electricity demand, Agent Elliot requested Staff Sergeant Daniel Haas of the Oregon National Guard to examine the triplex where Mr. Kyllo lived with a thermal imaging device.[121] In the early morning hours of January 16, 1992, a thermal scan was conducted from the passenger seat of Agent Elliot's vehicle, which was parked across the street from Mr. Kyllo's residence.[122] The scan took only a few moments and showed that the roof over the garage and a side wall of the petitioner's house were relatively hot compared to the rest of the home and to other homes in the triplex area.[123] Agent Elliot used this information, the higher electricity usage, and tips from informants to convince a federal Magistrate to issue a search warrant for Mr. Kyllo's

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116. *Id.* (citing *Place*, 462 U.S.at 707).

117. *See Gindlesperger*, 753 A.2d at 903 (holding "that the proper focus of our inquiry should be on whether Appellee was able to demonstrate a legitimate expectation of privacy in the heat-generating activities occurring within his home").

118. 533 U.S. 27 (2001).

119. *Kyllo*, 533 U.S. at 29.

120. United States v. Kyllo, 809 F. Supp. 787, 790 (D. Or. 1992), *aff'd in part*, United States v. Kyllo, 26 F.3d 134 (9th Cir. 1994), *opinion superseded*, United States v. Kyllo, 37 F.3d 526 (9th Cir. 1994), *rev'd*, United States v. Kyllo, 140 F.3d 1249 (9th Cir. 1998), *opinion withdrawn*, United States v. Kyllo, 184 F.3d 1059 (9th Cir. 1999), *opinion superseded*, United States v. Kyllo, 190 F.3d 1041 (9th Cir. 1999), *rev'd*, *Kyllo*, 533 U.S. 27 (Agent Elliot examined the utility records because higher power usage is consistent with the need to run high power growth lamps used to stimulate marijuana plant growth.). *But see Kyllo*, 190 F.3d at 1047 (stating that utility records may reveal high power usage, but do not by themselves disclose the purposes behind the higher consumption).

121. *Kyllo*, 140 F.3d at 1251.

122. *Kyllo*, 533 U.S. at 30.

123. *Id.*

home.[124] When the search was conducted, agents discovered "an indoor growing operation involving more than 100 plants," ultimately leading Mr. Kyllo to conditionally plead guilty to one count of manufacturing marijuana.[125]

The procedural history of the case is confusing, starting with the decision of the United States Court of Appeals for the Ninth Circuit to remand the case to the United States District Court for the District of Oregon for an evidentiary hearing to determine the constitutional implications of thermal imaging.[126] The district court subsequently concluded that given its non-intrusive nature, use of the thermal imager did not constitute a search, a conclusion with which a three judge panel of the Ninth Circuit disagreed.[127] The government then moved for rehearing, and the Ninth Circuit eventually affirmed the decision of the district court, holding that use of the thermal imaging device did not constitute a search.[128] The Supreme Court agreed to hear the case in the winter of 2000.[129]

B. The Kyllo *Ratio Decidendi*

The first interesting point to note about the Supreme Court's opinion in *Kyllo* is that Justice Scalia wrote the majority opinion for the court, joined by Justices Souter, Thomas, Ginsberg, and Breyer.[130] This is noteworthy because of Justice Scalia's nearly universal application of the principle of strict interpretation of the Constitution in assessing the implications of judicial decision-making.[131]

The Court introduces its analysis with a passage establishing the constitutional primacy of the home as being "at the very core of the Fourth Amendment."[132] The Court then cites precedent for the principle that "with few exceptions, the question whether a warrantless search of a home is reasonable and hence constitutional must be answered no."[133] However, the Court then notes that decisions have "decoupled violation of a person's Fourth Amendment rights from a trespassory violation of

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124. *Id.*
125. *Id.*
126. *Kyllo*, 37 F.3d at 531.
127. *Kyllo*, 140 F.3d at 1255.
128. *Kyllo*, 190 F.3d at 1041.
129. Kyllo v. United States, 530 U.S. 1305 (2000).
130. *Kyllo*, 533 U.S. at 30.
131. *See* Michael P. Healy, *Communis Opinio and the Methods of Statutory Interpretation: Interpreting Law or Changing Law*, 43 WM. & MARY L. REV. 539 (2001); Daniel Farber, *The Scholarly Attorney as Lawyerly Judge: Stevens on Statutes*, 1992/1993 ANN. SURV. AM. L. xxxv, xxxvii; Brogan v. United States, 522 U.S. 398 (1998) (commenting on the standards of constitutional interpretation).
132. *Kyllo*, 533 U.S. at 31 (quoting Silverman v. United States, 365 U.S. 505, 511 (1961)).
133. *Id.* (citing Illinois v Rodriguez, 497 U.S. 177, 181 (1990); Payton v. New York, 445 U.S. 573, 586 (1980)).

his property,"[134] citing the *Katz* decision for the familiar principle that "a Fourth Amendment search occurs when the government violates a subjective expectation of privacy that society recognizes as reasonable."[135] The Court acknowledges that this principle has included the constitutional recognition of the legitimacy of home surveillance by authorities under certain circumstances.[136]

The majority then wastes no time in attacking this standard, citing, among other supporting documents, Justice Scalia's concurring opinion in *Minnesota v. Carter*,[137] for the proposition that the privacy-expectation doctrine is circular in nature.[138] Having thus concluded that the cornerstone test of Fourth Amendment application is flawed, the Court concedes that "it may be difficult to refine *Katz* when the search of areas such as telephone booths, automobiles, or even . . . uncovered portions of residences are at issue."[139] The majority then proceeds to draw the line at what they consider to be the "prototypical . . . area of protected privacy,"[140] the interior of homes. In rejecting the government's contention that pre-warrant use of a thermal imaging device is constitutional because it does not "detect private activities occurring in private areas,"[141] the Court notes that "any physical invasion of the structure of the home 'by even a fraction of an inch' [is] too much."[142] The Court then concludes by establishing a "firm line at the entrance to the house,"[143] ruling that "where . . . the Government uses a device that is not in general public use, to explore details of the home that would previously have been unknowable without a physical intrusion, the surveillance is a search and is presumptively unreasonable without a warrant."[144]

C. *The Dissent*

Justice Stevens authored the dissent, in which Chief Justice Rehnquist, Justice O'Conner, and Justice Kennedy joined.[145] Ironically, the dissent invokes the principle of strict constitutional interpretation, a Scalia refrain notably missing from the majority opinion, citing the Fourth Amendment for the principle of protecting the right of the people

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134. *Id.* at 32.
135. *Id.* at 33 (citing Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring)).
136. *Id.* (citing Florida v. Riley, 458 U.S. 445 (1989); California v. Ciraolo, 476 U.S. 207 (1986); Smith v. Maryland, 442 U.S. 735 (1979)).
137. 525 U.S. 83 (1998).
138. *See Kyllo*, 533 U.S. at 34 (citing *Carter*, 525 U.S. at 97 (Scalia, J., concurring)).
139. *Id.*
140. *Id.*
141. *Id.* at 37.
142. *Id.* (quoting *Silverman*, 365 U.S. at 512).
143. *Id.* at 40.
144. *Id.*
145. *Id.* at 41 (Stevens, J., dissenting).

"to be secure in their houses,"[146] and not to extend that privacy to "heat emanating from a building."[147]

The dissent attacks the majority opinion on two grounds. First, Justice Stevens invokes shades of the plain view doctrine by comparing the surveillance conducted in the instant case to the ability of officers "to gather information exposed to the general public."[148] The dissent accuses the majority of deciding the case based upon "the potential of yet-to-be-developed technology," raising the specter of the Court issuing an advisory opinion based on facts not yet before them.[149] The dissent further elucidates this critique of over-inclusiveness by noting that this new protection blocks inferences about the interior of the home drawn from observation with sense-enhancing equipment.[150] Justice Stevens provides an example, noting that "under that expansive view . . . an officer using an infrared camera to observe a man . . . entering the side door of a house . . . carrying a pizza might conclude that its interior is now occupied by someone who likes pizza,"[151] an observation that would amount to an unconstitutional search under the majority's new test.[152]

The second critique by the dissent is that the term "in general public use" fails at its stated goal of drawing a line "not only firm but also bright."[153] The dissent notes "how much public use is general public use is not even hinted at by the Court's opinion,"[154] precluding establishment of a clear standard.[155] Interestingly, the central concern associated with this new standard is that there is no set or quantative standard for future judicial application, a critique applicable just as easily to the *Katz* test.[156] Therefore, courts are in no better position than they were before, left with a test without precedent and no workable definition or standard of "general public use."

As the use of technology like this becomes more common, "the threat to privacy will grow," and the vital protections of the Fourth Amendment will fail at precisely the time the general public has the

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146. *Id.* at 43 (Stevens, J., dissenting) (citing U.S. CONST. amend. IV).

147. *Id.* (Stevens, J., dissenting).

148. *Id.* at 42 (Stevens, J., dissenting).

149. *Id.* (Stevens, J., dissenting); *see* North Carolina v. Rice, 92 S. Ct. 402, 404 (1971) ("To be cognizeable in federal court, a suit must be definite and concrete, touching the legal relations of the parties having adverse legal interests. It must be a real and substantial controversy admitting of specific relief . . . as distinguished from an opinion advising what the law would be based upon a hypothetical state of facts.").

150. *Kyllo*, 533 U.S. at 42 (Stevens, J., dissenting).

151. *Id.* at 49 (Stevens, J., dissenting).

152. *Id.* (Stevens, J., dissenting).

153. *Id.* at 47 (Stevens, J., dissenting).

154. *Id.* (Stevens, J., dissenting).

155. *Id.* (Stevens, J., dissenting).

156. *Id.* (Stevens, J., dissenting).

greatest need of them.[157] This author's position is that, because of this failure, the Supreme Court should reject the new *Kyllo* test, and return to an insistence upon the fundamental value underlying the Fourth Amendment, the need for protection against unreasonable searches of not just a person's home, but also her "person, . . . papers, and effects."[158]

IV. THE *KYLLO* CONNUNDRUM: THE COURT FAILS TO ADVANCE A STANDARD THAT ACCOUNTS FOR THE FLEXIBLE NATURE OF PRIVACY RIGHTS

The majority in *Kyllo* acknowledges that the *Katz* decision marked a transition from a purely property-based approach to Fourth Amendment analysis, to a flexible protection tied to an individual's privacy interests.[159] In its critique of this judicial reasoning, the Court points out that because what is objectively reasonable varies with development of more invasive technology, a *Katz*-based analysis ultimately leads to "subjective and unpredictable" decisions.[160] However, the new test developed by the Court falls victim to this same critique in two critical areas. First, the *Kyllo* test fails in its adoption of the "device not in general use" standard. Second, the Court reverts back to a property-based analysis of Fourth Amendment rights, one ill-equipped to handle the challenges of an increasingly mobile and transitory society.

A. What is General Public Use?

To begin with, numerous commentators have criticized the *Kyllo* decision for its failure to articulate guidelines for what is meant by the term "device not in general public use."[161] As the dissent even notes, the majority's criteria suffers from the same defect as its intellectual predecessor in *Katz*, as the protections inherent in this test will fail as more intrusive equipment becomes increasingly available.[162] For example, hunters and other outdoorsmen[163] currently employ thermal imaging devices for private use, and consumers may soon see them installed on new vehicles.[164] Fire departments [165] and border patrols[166] are also pushing the

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157. *Id.* (Stevens, J., dissenting).

158. U.S. CONST. amend. IV.

159. Kyllo v. United States, 533 U.S. 27, 32 (2001).

160. *Kyllo*, 533 U.S. at 34.

161. *See* Sarilyn E. Hardee, *Why the United States Supreme Court's Ruling in* Kyllo v. United States *is Not the Final Word on the Constitutionality of Thermal Imaging*, 24 CAMBELL L. REV. 53, 69 (2001); Thueson, *supra* note 90, at 192-95.

162. *Kyllo*, 533 U.S. at 47 (Steven, J., dissenting).

163. *See* Accurate Locations, *Target Location Viewer: Thermal Imaging Detector, at* http:www.accuratelocators.com/targetinfo.htm (last visited Mar. 3, 2003).

164. *See* Raytheon, *Transportation: See Better, Decide Faster, Drive Safer, at* http:www.raytheoninfrared.com/transportation/index.html (last visited Mar. 3, 2003); United States v. Cusumano, 67 F.3d 1497, 1504 (10th Cir. 1995) (discussing application of thermal imaging technology).

use of this technology into new and unexpected areas. However, the dissent and other commentators have not reflected on the implications this standard has for the broad spectrum of Fourth Amendment protections, especially in light of the cumulative effects of the inevitable cross-application between residential and general uses of new technology.

Although the *Kyllo* ruling was limited to the context of investigation of the interior of a house, the majority opinion does espouse as one of its principal objectives the need to "account for more sophisticated systems that are already in use or development."[167] One very apparent critique of this line of thinking is that it violates the Court's long established prohibition against deciding issues that are not yet properly before the Court.[168] Another, more subtle, critique of this reasoning addresses its obvious implications for other aspects of Fourth Amendment protections. Although James Tomkovicz, the lawyer for Mr. Kyllo, believes that "it's hard to know what they'll do with equivalent technology outside the home," it's easy to see how application of this rule to other areas of Fourth Amendment search-and-seizure law could occur.[169] The pervasiveness of jurisprudential references to the *Greenwood* case (involving domicile-based activity) in non-residential applications demonstrates the ease with which home-oriented tests translate into other areas of search-and-seizure law.[170]

If the "general public use" test sufficiently provides protection for the residential "core of the Fourth Amendment,"[171] then courts will more likely allow use of invasive technology in areas less tied to the traditional Fourth Amendment centers of personal privacy: "persons, houses, papers, and effects."[172] Imagine a world where the commercial use of Internet "cookies" ultimately served to justify random scans of all e-mail, or government tracking of a citizen's Web use. Certainly, this would seem to be inside the spectrum of protection envisioned in the "papers . . . and

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165. *Firefighters Test New Thermal Imaging Devices During 3 Fires*, *at* http:www.nassaufire-rescue.com/thermal.html (last visited Mar. 3, 2003).

166. FLIR Systems, *Border Patrol*, *at* http:www.flir.com/ground/application.htm (last visited Mar. 3, 2003).

167. *Id.* at 36.

168. *See, e.g.*, Thueson, *supra* note 92, at 201.

169. Jeffrey Benner, Kyllo*: Taking the 5th on the 4th* (July 3, 2001), *at* http://www.wired.com-/news/privacy/0,1848,44785,00.html.

170. *See* Wabuni-Inini v. Sessions, 900 F.2d 1234 (8th Cir. 1990) (holding that use of an F-stop for exposing photographs sufficiently defeats a claim of Fourth Amendment protection, just as the trash in *Greenwood* displayed a similar lack of subjective expectation of privacy); United States v. Hall, 47 F.3d 1091 (11th Cir. 1995) (discussing the portability of the *Greenwood* test to commercial property); Powell v. State, 776 A.2d 700 (Md. Ct. Spec. App. 2001) (citing the *Greenwood* test in deriving its holding that leaving a paper bag full of drugs in a gutter amounts to a loss of a subjective expectation of privacy).

171. *Kyllo*, 533 U.S. at 31.

172. U.S. CONST. amend. IV.

effects" term in the Fourth Amendment.[173] However, the Supreme Court's new standard would establish that general use of this technology would preclude any constitutionally protected privacy right. As these examples demonstrate, the cumulative effect of the introduction of home and personal effects-based applications of technology would produce a spiral of ever increasing general use. This, in turn, would produce an ever-shrinking zone of personal privacy protection, a situation that the majority could hardly have intended. This shrinking zone of privacy is also reflected in the next major shortcoming of the Supreme Court's test, the reversion of privacy protection to a property-based rationale.

B. Reversion to Property-Based Standards

In *Kyllo*, the majority refused to apply the traditional *Katz* test, instead resurrecting old Constitutional theories under a new name. The *Kyllo* test refocuses the Court's Fourth Amendment jurisprudence on the common law protections of the "prototypical and hence most commonly litigated are of protected privacy,"[174] the interior of the home. This criteria ensures "preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted,"[175] a not-so-subtle nod to the jurisprudential bias of Justice Scalia. However, the Supreme Court's new test leaves unanswered the question of how cases like *Olmstead* and *Katz* would be decided under this "details of the home that would previously have been unknowable without physical intrusion" standard.[176] Although Justice Scalia's critique of the *Katz*-standard as being circular in nature was on target, these early decisions at least made reference to a zone of privacy that extended beyond a person's property. The language of physical intrusion suggests that trespassory concepts are again the critical underpinning of Fourth Amendment protection. These concepts seem least equipped to handle potential controversies of investigatory action in areas where the highest technology thresholds exist.

For example, the Supreme Court's new test provides no viable standard for evaluating technology like the Federal Bureau of Investigation's Carnivore program.[177] Carnivore is designed to sweep through a large volume of e-mail without being detected, looking for key words and phrases that match a profile.[178] Since it performs this sweep by merely intercepting transmitted message data, it falls short of the "physical intrusion" of personal property. In addition, most, if not all, of the intrinsic

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173. *Id.*

174. *Kyllo*, 533 U.S. at 28.

175. *Id.*

176. *Id.* at 40.

177. *See* Eichenlaub, *supra* note 27 (discussing the Carnivore program).

178. *See* Jerry Seper, *FBI Follies Continue*, WASH. TIMES, June 9, 2002, *available at* 2002 WL 2912066; Catherine M. Barrett, *FBI Internet Surveillance: The Need for a Natural Rights Application of the Fourth Amendment to Insure Internet Privacy*, 8 RICH. J.L. & TECH. 16 (2002).

information in this electronic message traffic reveals information not about the intimate details of a person's home, but information personal and particular to an individual. This is exactly the same information rejected as a basis for specific constitutional protection by Justice Scalia,[179] and, as a result, the individual can expect no protection from any Carnivore-derived technology due to the ruling in *Kyllo.*

C. The Precision Offered to Police

One other substantial concern can be identified from the new "bright-line" standard offered by the majority in the *Kyllo* decision. As one of its critical goals, the majority seeks to develop a standard that will provide clear guidance to law enforcement personnel.[180] The dissent notes a shortcoming of this standard in its failure to account for new technologies clearly outside the "general public use" standard but still oriented toward receiving or analyzing details in which the subject is clearly no longer manifesting any expectation of privacy.[181] The extension of this analysis includes criticism of the "details of the home" standard as being overbroad in its restraint of the powers of law enforcement investigation, which the dissent notes in its pizza delivery example.[182]

While the dissent does point out some interesting potential applications that clearly appear jeopardized by the decision in *Kyllo,* the greatest impact missed by even the dissent is on already existing law enforcement technology successfully employed in numerous previous investigations. For example, the Court notes that in *Smith v. Maryland,*[183] application of the *Katz* test led the Court to conclude that use of a pen register by police at the phone company to determine numbers dialed from a private home was not a search.[184] Under the new *Kyllo* rationale, however, the pen register would most likely be found to be 1) "a device that is not in general public use" and 2) a device that would reveal "details of the home that would previously have been unknowable without a physical intrusion" (arguably, the phone numbers a person dials fall into this area).[185]

As the majority opinion acknowledges, the difficulty lies in providing a standard that enables an officer to know before the surveillance begins whether she is encroaching on personal privacy to an extent pro-

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179. *Kyllo*, 533 U.S. at 37.

180. *Id.* at 39 ("The people in their houses, as well as the police, deserve more precision.").

181. *Id.* at 47-48 (decrying the inability to account for mechanical substitutes for dogs, or more pragmatically, devices that could detect deadly bacteria or chemicals).

182. *Id.* at 48 ("Under that expansive view, . . . an officer using an infrared camera to observe a man silently entering the side door of a house at night carrying a pizza . . . would be guilty of conducting an unconstitutional 'search' of the home.").

183. 442 U.S. 735 (1979).

184. *Kyllo*, 533 U.S. at 33 (citing *Smith*, 442 U.S. 735).

185. *Id.* at 40.

tected by the Fourth Amendment.[186] However, by completely eliminating any reference to objective expectations of privacy and replacing them with the "details of the home" standard, the Court actually invites a regressive view of surveillance into its jurisprudence. What was a simpler analysis for law enforcement personnel to conduct (the degree to which the person is demonstrating an expectation of privacy distinct from public access) is now much more problematic for the officer (what details, no matter how accessible to the general public, are within the "details of the home?"). Instead of allowing an officer to use her experience and common sense in assessing what a reasonable person would consider a private area, the Court now asks that officer to decide what a court would consider "details of the home," a subject as yet undefined in any jurisprudence.[187] By failing to define these essential terms of the *Kyllo* test, the Court leaves both law enforcement officers and the courts without guidance as to how to evaluate the subjective determinations of officers on the street, a situation that will inevitably result in extensive Constitutional appeals.

CONCLUSION

In *Kyllo v. United States*, the Supreme Court clearly articulated some of the faults of the existing legal standards for assessing an individual's right to privacy as protected by the Fourth Amendment. However, despite the meritorious attempt to define a bright line standard that would address the application of new investigatory technology, the rationale expressed in *Kyllo* actually represents a step back for privacy protection. By failing to provide an objective standard—such as society's willingness to accept a manifestation of privacy as reasonable—*Kyllo* fails to provide a static target for dispassionate judicial review of law enforcement activities. In addition, the re-introduction of trespassory concepts as the basis for privacy rights represents a severe limitation on the application of *Kyllo* to preemptively address new law enforcement technology.

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186. *Id.* at 39 (discussing why the Court could not establish a standard based upon the principle of "intimate details").

187. *See* Thueson, *supra* note 92, at 197.

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