

Summer 1996

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### Recommended Citation

Scott J. Smith, *Thermal Surveillance and the Extraordinary Device Exception: Re-Defining the Scope of the Katz Analysis*, 30 Val. U. L. Rev. 1071 (1996).

Available at: <https://scholar.valpo.edu/vulr/vol30/iss3/7>

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# THERMAL SURVEILLANCE AND THE EXTRAORDINARY DEVICE EXCEPTION: RE-DEFINING THE SCOPE OF THE KATZ ANALYSIS

*There was of course no way of knowing whether you were being watched at any given moment . . . . It was even more conceivable that they watched everybody all the time . . . . You had to live—did live, from habit that became instinct—in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized.<sup>1</sup>*

## I. INTRODUCTION

In the dark hours of an early winter morning, law enforcement officials aboard a police helicopter move swiftly above the treeline en route to the residence of Mr. Theodore Robinson.<sup>2</sup> While the police have suspected Mr. Robinson of illegally cultivating marijuana in his home for some time, their mission tonight is to gather sufficient evidence to establish probable cause to obtain a warrant to search Mr. Robinson's home.<sup>3</sup> Beneath the aircraft, the police have mounted the latest in high-tech surveillance devices: the Forward Looking Infrared Device (FLIR).<sup>4</sup> The FLIR detects heat emanating from

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1. GEORGE ORWELL, 1984 4 (1949).

2. *United States v. Robinson*, 62 F.3d 1325, 1327 (11th Cir. 1995).

3. The officers' suspicions concerning Mr. Robinson surfaced when they learned that he had ordered 30 high-pressure, sodium lights, the type commonly used for indoor marijuana cultivation. *Id.* The officers then subpoenaed electrical utility records for Mr. Robinson's residence and determined that his residence displaced abnormally high electrical usage. *Id.* This excessive power usage is indicative of the high-wattage grow lamps needed for indoor cannabis cultivation. *Id.* at 1331 n.10.

4. *Id.* at 1327. Thermal imagery has emerged across the country as the government's most recent weapon in its war on drugs. See generally Lan Nguyen, *Piercing the Cover of Darkness; New Device Lets Arlington Police Capture Images at Night*, WASH. POST, Oct. 19, 1995, at V01. *Court Requires Warrant for Thermal Scan Reuter*, WASH. POST, Oct. 5, 1995, at A14. William Yelverton, *Smoking Gun?*, TAMPA TRIB., Jan. 29, 1995, at 1; James J. Kilpatrick, *A Lot of Hot Air*, BALT. SUN, Sept. 2, 1994, at 21A; Paul Valentine, *Putting the Heat on Crime at Night: State Police Helicopters Use Infrared Cameras to Detect Wrongdoers*, WASH. POST, Oct. 21, 1993, at M1; Rich Henson, *Police Going After Marijuana Harvest*, PHIL. INQUIR., Sept. 12, 1993, at B1; Tim Bryant, *DEA Targets Indoor Pot Growers*, ST. L. POST., May 9, 1993, at 1D.

The use of thermal imagery to detect indoor marijuana cultivation has also sparked much debate within the academic arena. See Lisa Tuenge Hale, Comment, *United States v. Ford: The Eleventh Circuit Permits Unrestricted Police Use of Thermal Surveillance on Private Property Without a Warrant*, 29 GA. L. REV. 819 (1995); Daniel J. Polatsek, Note, *Thermal Imaging and*

certain objects and transforms the relative heat patterns into a visual image on a screen which can then be saved on videotape.<sup>5</sup>

The officers take FLIR readings of Mr. Robinson's residence as well as surrounding objects.<sup>6</sup> The readings reveal that Mr. Robinson's residence is considerably warmer than the neighboring houses, evidence which is indicative of the high-wattage grow lamps necessary for indoor marijuana cultivation.<sup>7</sup> Relying on this information, the officers successfully obtain a search warrant and eventually arrest Mr. Robinson.<sup>8</sup> At trial, Mr. Robinson argues that the police violated his fourth amendment<sup>9</sup> rights by using the FLIR on his home without first securing a search warrant.<sup>10</sup> The Eleventh Circuit, however, concludes that Mr. Robinson did not have a reasonable expectation of privacy

*the Fourth Amendment: Pushing the Katz Test Towards Terminal Velocity*, 13 J. MARSHALL J. COMPUTER & INFO. L. 453 (1995); Tracy M. White, Note, *The Heat Is On: The Warrantless Use of Infrared Surveillance to Detect Indoor Marijuana Cultivation*, 27 ARIZ. ST. L.J. 295 (1995); Mindy G. Wilson, Note, *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 (1995); Melinda Foster, Note, *State v. Young: A Cool View Toward Infrared Thermal-Detection Devices*, 30 GONZ. L. REV. 135 (1994); Susan Moore, Note, *Does Heat Emanate Beyond the Threshold?: Home Infrared Emissions, Remote Sensing, and the Fourth Amendment Threshold*, 70 CHI.-KENT L. REV. 803 (1994); Lynne M. Pochurek, Note, *From the Battlefield to the Homefront: Infrared Surveillance and the War on Drugs Place Privacy Under Siege*, 7 ST. THOMAS L. REV. 137 (1994).

5. *Robinson*, 62 F.3d at 1328 n.2. For a detailed description of the FLIR's technological functions and capabilities, see *infra* notes 52-78 and accompanying text.

6. *United States v. Robinson*, 62 F.3d 1325, 1327 (11th Cir. 1995).

7. *Id.* at 1330 n.8. Indoor marijuana cultivation operations generally require between 400 and 1000 watt bulbs. See *United States v. Pinson*, 24 F.3d 1056, 1057 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994). For a discussion of the precise method used by police to detect these types of operations, see *infra* notes 82-90 and accompanying text.

8. *Robinson*, 62 F.3d at 1327-28.

9. The Fourth Amendment to the United States Constitution provides that:

The right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

U.S. CONST. amend. IV.

10. *United States v. Robinson*, 62 F.3d 1325, 1328 (11th Cir. 1995). A particular government activity must first constitute a "search" before its reasonableness can be put to scrutiny under the Fourth Amendment. See *infra* notes 16-18 and accompanying text. The Supreme Court's current standard used to determine if a particular police activity is a "search" under the Fourth Amendment was established in *Katz v. United States*, 389 U.S. 347 (1967). *Katz* stated that a "search" occurs only when the government intrudes on an individual's "reasonable expectation of privacy." *Id.* at 361 (Harlan, J., concurring). For a discussion of the *Katz* decision, see *infra* notes 122-32 and accompanying text.

in the heat emanating from his home and, therefore, is not entitled to fourth amendment protection.<sup>11</sup>

The court's holding in *United States v. Robinson*<sup>12</sup> is, however, only one approach to the country's most recent controversial fourth amendment issue: whether the use of a FLIR on an individual's residence to detect heat patterns constitutes a "search" under the Fourth Amendment. This seemingly straightforward inquiry has proved to be an enigma, resulting in a split among various state and federal courts. While several courts have held that the use of the FLIR is not a "search" under the Fourth Amendment,<sup>13</sup> several others have held that it is a "search."<sup>14</sup> The remaining courts faced with the FLIR issue have avoided deciding the "search" question altogether.<sup>15</sup>

The Fourth Amendment requires that all "searches" and "seizures" by the government be reasonable.<sup>16</sup> Thus, only those police contacts which rise to the

11. *Robinson*, 62 F.3d at 1330. The court reasoned that "[n]one of the interests which form the basis for the need for protection of a residence, namely the intimacy, personal autonomy and privacy associated with a home, are threatened by [FLIR] thermal imagery." *Id.* (quoting *United States v. Pinson*, 24 F.3d 1056, 1059 (8th Cir. 1994)). *But see United States v. Field*, 855 F. Supp. 1518, 1533 (W.D. Wis. 1994) (holding that the government's use of a FLIR on the defendant's home did constitute a "search" for purposes of the Fourth Amendment).

12. 62 F.3d 1325 (11th Cir. 1995).

13. Cases which have held that the use of a FLIR on a person's residence to detect certain heat patterns is not a "search" within the meaning of the Fourth Amendment include: *United States v. Robinson*, 62 F.3d 1325 (11th Cir. 1995); *United States v. Ishmael*, 48 F.3d 850 (5th Cir. 1995); *United States v. Myers*, 46 F.3d 668 (7th Cir. 1995); *United States v. Ford*, 34 F.3d 992 (11th Cir. 1994); *United States v. Pinson*, 24 F.3d 1056 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994); *United States v. Domitrovich*, 852 F. Supp. 1460 (E.D. Wash. 1994); *United States v. Porco*, 842 F. Supp. 1393 (D. Wyo. 1994); *United States v. Kyllo*, 809 F. Supp. 787 (D. Or. 1992); *United States v. Deaner*, 1992 WL 209966 (M.D. Pa. July 27, 1992), *aff'd on other grounds*, 1 F.3d 192 (3d Cir. 1993); *United States v. Penny-Feeney*, 773 F. Supp. 220 (D. Haw. 1991), *aff'd on other grounds sub nom. United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993); *State v. McKee*, 510 N.W.2d 807 (Wis. Ct. App. 1993); *State v. Cramer*, 851 P.2d 147 (Ariz. Ct. App. 1992).

14. Those cases which have held that the use of the FLIR on a person's home is a fourth amendment "search" include: *United States v. Cusumano*, 67 F.3d 1497 (10th Cir. 1995); *United States v. Field*, 855 F. Supp. 1518 (W.D. Wis. 1994); *State v. Young*, 867 P.2d 593 (Wash. 1994).

15. Those cases involving the FLIR which did not reach the "search" issue include: *United States v. Kyllo*, 1994 WL 533802 (9th Cir. Oct. 4, 1994); *United States v. Pugh*, 1994 U.S. APP. LEXIS 25480 (9th Cir. Sept. 13, 1994); *United States v. Olson*, 21 F.3d 847 (8th Cir. 1994); *United States v. Deaner*, 1 F.3d 192 (3d Cir. 1993); *United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993); *United States v. Kerr*, 876 F.2d 1440 (9th Cir. 1989); *United States v. Casanova*, 835 F. Supp. 702 (N.D.N.Y. 1993); *State v. Lewis*, 527 N.W.2d 658 (N.D. 1995); *State v. Johnson*, 879 P.2d 984 (Wash. Ct. App. 1994); *State v. Russell*, 857 P.2d 220 (Or. Ct. App. 1993).

16. U.S. CONST. amend. IV. For the specific text of the Fourth Amendment, see *supra* note 9.

level of “searches” or “seizures” are scrutinized under the Fourth Amendment.<sup>17</sup> All other police activity may be conducted absolutely free of the limitations imposed by the amendment.<sup>18</sup> Thus, whether or not the use of a FLIR on a person’s home amounts to a “search” is a very critical inquiry, as a negative answer forecloses fourth amendment debate altogether.<sup>19</sup> On the other hand, an affirmative answer would only require that the police conduct their activities according to the reasonableness standard of the Fourth Amendment.<sup>20</sup> The split in the courts<sup>21</sup> regarding this preliminary, yet crucially important inquiry, raises serious concerns about the current “search” standard’s ability to effectively analyze such a highly sophisticated instrument.<sup>22</sup>

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17. See Lewis R. Katz, *In Search of a Fourth Amendment for the Twenty-first Century*, 65 IND. L.J. 549, 555 (1990) [hereinafter Katz, *Twenty-first Century*]. See also Anthony G. Amsterdam, *Perspectives on the Fourth Amendment*, 58 MINN. L. REV. 349, 388 (1974) (stating that “[t]o label any police activity a ‘search’ . . . within the ambit of the [Fourth] [A]mendment is to impose [the reasonableness] restrictions upon it”); Wayne R. LaFare, *The Fourth Amendment: “Second to None in the Bill of Rights,”* 75 ILL. B.J. 424, 427 (1987) (stating that for the requirements of the Fourth Amendment to apply at all, “the police conduct in question must constitute either a ‘search’ or a ‘seizure’ as those terms are used in the Fourth Amendment”); Bruce G. Berner, *The Supreme Court and the Fall of the Fourth Amendment*, 25 VAL. U. L. REV. 383, 383 (1991).

Professor Berner refers to the Fourth Amendment as a “reach-grasp” dichotomy. *Id.* He states that the question of “what is a ‘search?’” defines the “reach” of the Fourth Amendment and could be restated as “what general type of governmental activity is this amendment interested in scrutinizing and regulating?” *Id.* The question of reasonableness then becomes the amendment’s “grasp” and could be restated as “from this universe of searches, which are permitted and which prohibited?” *Id.*

18. See Katz, *Twenty-first Century*, *supra* note 17, at 556 (stating that the “search” determination is a crucial one because a “negative answer forecloses further review”); Amsterdam, *supra* note 17, at 388 (noting that police activities which fall into neither the category of “searches” nor the category of “seizures” may be conducted as unreasonably as the police may so choose); Berner, *supra* note 17, at 385 (stating that to determine that a particular police activity is not a “search” is to completely close all debate on the fourth amendment issue).

19. See *State v. Young*, 867 P.2d 593, 600 (Wash. 1994). The court in *Young* noted that police officers conduct thermal investigations not only on a suspect’s home, but on the neighboring homes as well. *Id.* The court stated that to hold that such police activity is not a “search” would place absolutely no limitations “on the government’s ability to use the device on any private residence, on any particular night, even if no criminal activity is suspected.” *Id.*

20. See Amsterdam, *supra* note 17, at 388; Katz, *Twenty-first Century*, *supra* note 17, at 556; Berner, *supra* note 17, at 385.

21. For a list of those cases which are split over whether the warrantless use of a FLIR on the home is a “search,” see *supra* notes 13-15.

22. The Supreme Court’s current “search” standard, articulated in *Katz v. United States*, 389 U.S. 347 (1967), establishes that a “search” only occurs when the government intrudes on an individual’s “reasonable expectation of privacy.” *Id.* at 360 (Harlan, J., concurring). While the Katz standard has been widely criticized as being deficient in all applications, see *infra* notes 25, 254 and accompanying text, this note seeks to recognize Katz’s inherent inability to be logically or fairly applied to highly technological devices which are uncommon to society. See *infra* § VI.A (proposing an “extraordinary device” exception to the Katz standard).

The Supreme Court's seminal "search" case, *Katz v. United States*,<sup>23</sup> establishes the principle that a search occurs only when the government intrudes upon a person's "reasonable expectation of privacy."<sup>24</sup> While many fourth amendment scholars have criticized the Court's treatment of the "search" issue,<sup>25</sup> this Note argues that the Court can preserve the integrity of its "search" jurisprudence by recognizing *Katz* as a limited doctrine, incapable of dealing with such high-tech, extraordinary devices as the FLIR.<sup>26</sup> This Note suggests that the *Katz* inquiry can only be applied in those instances where it is fair and logical to require individuals to form expectations of privacy.<sup>27</sup> If a certain device or method of intrusion is not part of the social dynamic, such that it is not integrated into the common societal experience, then any mention of "expectations of privacy" is both illogical and destructive of those privacy rights so vital to any free society.<sup>28</sup>

23. 389 U.S. 347 (1967). See Berner, *supra* note 17, at 386 (referring to the *Katz* decision as the Supreme Court's "polestar search" case); Amsterdam, *supra* note 17, at 382 (stating that *Katz v. United States* "marks a watershed in fourth amendment jurisprudence").

24. *Katz*, 389 U.S. at 360. For a more in-depth discussion of *Katz's* "reasonable expectation of privacy" standard, see *infra* notes 122-32 and accompanying text.

25. See, e.g., Amsterdam, *supra* note 17, at 349 (stating that the Supreme Court's "search" jurisprudence is not its "most successful product"); Gerald G. Ashdown, *The Fourth Amendment and the "Legitimate Expectation of Privacy,"* 34 VAND. L. REV. 1289, 1310 (1981) (arguing that the Court's approach in handling the "search" question is "at best confusing"); Berner, *supra* note 17, at 384 (observing that fourth amendment critics are in an "apoplectic frenzy" over the Supreme Court's "search" decisions); Clark D. Cunningham, *A Linguistic Analysis of the Meanings of "Search" in the Fourth Amendment: A Search for Common Sense,* 73 IOWA L. REV. 541, 543 (1988) (stating that the majority of the scholarly community agrees that the Supreme Court's "search" cases "[do] not make sense"); Roger B. Dworkin, *Fact Style Adjudication and the Fourth Amendment: The Limits of Lawyering,* 48 IND. L.J. 329, 329 (1973) (stating that "the fourth amendment cases are a mess!"); Peter Goldberger, *Consent, Expectations of Privacy, and the Meanings of "Searches" in the Fourth Amendment,* 75 J. CRIM. L. & CRIMINOLOGY 319, 323-24 (1984) (noting that most scholarly discussion of the Supreme Court's "search" jurisprudence is "highly alarmist in tone").

26. This note does not criticize *Katz's* "reasonable expectation of privacy" standard but rather criticizes the manner in which the courts have applied this standard. See *infra* text accompanying notes 147-207. More specifically, this note argues that the *Katz* standard is inherently limited in its application to sophisticated devices like the FLIR. See *infra* § VI.A.

27. See *infra* notes 133-46 and accompanying text.

28. See Lloyd L. Weinreb, *Generalities of the Fourth Amendment,* 42 U. CHI. L. REV. 47, 85 (1974). Professor Weinreb states that "[t]he privacy secured by the [F]ourth [A]mendment fosters large social interests. Political and moral discussion, affirmation and dissent, need places to be born and nurtured, and shelter from unwanted publicity." *Id.* He goes on to argue that fourth amendment privacy and security notions help us to extend our personality by allowing us:

to leave our pajamas on the floor, the bed unmade and dishes in the sink, pictures of secret heroes on the wall, a stack of comic books or love letters on the shelf; it allows us to be sloppy or compulsively neat, to enjoy what we have without exposing our tastes to the world.

*Id.* at 53. See also Amsterdam, *supra* note 17, at 388 (noting that the knowledge which each citizen is free to express himself or herself freely "is the hallmark of an open society"). The Supreme

This Note argues that the post-*Katz* cases, rather than directly applying the *Katz* decision, have created anomalous doctrines.<sup>29</sup> These doctrines both deflect attention away from the true spirit of the *Katz* analysis and make it more difficult for courts to recognize the standard's limitations concerning extraordinary devices.<sup>30</sup> As a result, courts have pigeonholed FLIR surveillance into a standard which is neither logically nor fairly capable of analyzing such technology.<sup>31</sup> This Note offers an "extraordinary device exception" to the *Katz* standard which would recognize *Katz*'s inherent limitations and automatically subject devices not common to society, like the FLIR, to fourth amendment scrutiny.<sup>32</sup> This exception will benefit current fourth amendment jurisprudence in two ways: 1) it will strengthen the integrity of the *Katz* standard by recognizing the standard's limitations and by prohibiting its application to illogical and unfair situations,<sup>33</sup> and 2) it will more appropriately safeguard those privacy interests which face extinction as a result of the government's growing arsenal of high-tech surveillance methods.<sup>34</sup> The

Court asserted that privacy's antithesis, "police omniscience[,] is one of the most effective tools of tyranny." *Lopez v. United States*, 373 U.S. 427, 466 (1963) (Brennan, J., dissenting).

29. See *infra* notes 147-207 and accompanying text.

30. See *infra* notes 144-46 and accompanying text.

31. See generally Bradley J. Plaschke, *United States v. Deaner: Thermal Imagery, the Latest Assault on the Fourth Amendment Right to Privacy*, 12 J. MARSHALL J. COMPUTER INFO. L. 607, 612-24 (1994); Lisa J. Steele, *Waste Heat and Garbage: The Legalization of Warrantless Infrared Searches*, 29 CRIM. L. BULL. 19, 28-38 (1993) [hereinafter Steele, *Infrared Searches*]. For a list of those decisions that attempted to apply the *Katz* standard to thermal surveillance, see *supra* notes 13-15.

32. See *infra* notes 256-76 and accompanying text for a discussion of the "extraordinary device exception." This exception does not prohibit the use of certain sophisticated devices. *Id.* Rather, it merely requires that the police act reasonably when employing the aid of such devices. *Id.*

33. See *infra* § VI.A.

34. See *Katz*, *Twenty-first Century*, *supra* note 17, at 551 (stating that the list of permissible governmental surveillance techniques is more indicative of a police state than a free and open society); David E. Steinberg, *Making Sense of Sense-Enhanced Searches*, 74 MINN. L. REV. 563, 563 (1990) (noting that the police have developed highly sophisticated methods of surveillance with increasing frequency). See also Melvin Gutterman, *A Formulation of the Value and Means Models of the Fourth Amendment in the Age of Technologically Enhanced Surveillance*, 39 SYRACUSE L. REV. 647, 677-78 (1988).

Professor Gutterman notes that law enforcement agencies have acquired an increasingly large number of sophisticated surveillance devices, including "Questar telescopes, Star-tron 606, mapping cameras, and an unlimited variety of infrared scopes and goggles enabl[ing] the government to gather otherwise unavailable information for investigatory purposes." *Id.* at 678. Gutterman argues that, "[u]nrestrained, over time, technology can steadily erode our privacy protections, thus making our society terribly oppressive." *Id.* at 735.

In 1890, Justice Brandeis, with great vision, observed that "numerous mechanical devices threaten to make good the prediction that 'what is whispered in the closet shall be proclaimed from the house-tops.'" 4 HARV. L. REV. 193, 195 (1890). For a discussion of those court decisions dealing with the constitutionality of certain modern police surveillance techniques, see *infra* notes 147-207 and accompanying text.

proposed exception, however, does not prohibit the government from using highly technological devices; rather, it merely requires that this use be reasonable.<sup>35</sup>

Section II of this Note provides a technical description of the FLIR and its capabilities and outlines the process used by the government to detect the illicit cultivation of marijuana through the identification of heat patterns.<sup>36</sup> Section III analyzes the development of the Court's seminal "search" case in *United States v. Katz*<sup>37</sup> and discusses the nature of *Katz's* "reasonable expectation of privacy" standard, noting its inherent limitations.<sup>38</sup> Section IV explores the post-*Katz* search cases and argues that these cases, rather than applying the true *Katz* standard, have created anomalous, generic doctrines which deflect attention away from the true spirit of the *Katz* decision.<sup>39</sup> Section V of this Note discusses the conflicting FLIR decisions and argues that these types of "extraordinary devices" cannot logically nor fairly be examined under *Katz's* "reasonable expectation of privacy" standard.<sup>40</sup> Finally, Section VI proposes an "extraordinary device" exception to the *Katz* doctrine, whereby those devices which are not commonly integrated into society bypass the *Katz* "search" analysis and automatically undergo fourth amendment scrutiny.<sup>41</sup> The proposed exception does not seek to prohibit certain governmental activity but rather merely requires that the government's use of certain uncommon, sophisticated devices be reasonable.<sup>42</sup>

## II. THE FORWARD LOOKING INFRARED DEVICE (FLIR)

The FLIR has gained increasing popularity among police officers within the past several years.<sup>43</sup> Its heat-detecting capabilities allow officers to obtain

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35. See Berner, *supra* note 17, at 385. Professor Berner stresses the fact that to hold that a certain police activity is not a "search" is to close debate, but to hold that the activity is a "search" merely begins debate concerning the reasonableness of the police activity. *Id.*

36. See *infra* notes 43-94 and accompanying text.

37. 389 U.S. 347 (1967).

38. See *infra* notes 96-146 and accompanying text.

39. See *infra* notes 147-207 and accompanying text.

40. See *infra* notes 208-55 and accompanying text.

41. See *infra* notes 256-76 and accompanying text.

42. See *infra* note 264 and accompanying text.

43. See United States Dept. of Justice, Drug Enforcement Agency, *Domestic Cannabis Eradication and Suppression Project Final Report* at 29. The report states that:

[t]he successful use of off the shelf thermal video technology to confirm inordinate thermal emissions consistent with the operation of numerous high intensity grow lights was demonstrated in 1988-89. During 1990, this technology was utilized in numerous locations throughout the United States to support justification of a probable cause conclusion. The thermal surveillance data along with other investigative information were used in numerous search warrant affidavits.



evidence of indoor marijuana growth without physically entering the home.<sup>44</sup> FLIR readings which reveal that a particular home is emanating an abnormal amount of heat suggest the possible existence of high-wattage grow lamps in the home,<sup>45</sup> the type necessary for indoor marijuana cultivation.<sup>46</sup> The FLIR evidence can then be used to establish probable cause and to obtain a search warrant.<sup>47</sup> The FLIR device has been instrumental across the country in supplying the evidence necessary to arrest and charge individuals with various criminal marijuana offenses.<sup>48</sup> In the courtroom, however, the use of the FLIR has created enormous controversy.<sup>49</sup>

Before debating the constitutionality of a particular device or method of investigation, a technical analysis of the device or method is first required.<sup>50</sup> The more complex or sophisticated the device, the more important it becomes to initially determine the device's basic functions and capabilities. Because the FLIR is a highly sophisticated device which operates outside of the natural human senses, a thorough understanding of its functions, capabilities, and methods for detecting marijuana cultivation is necessary.<sup>51</sup>

*Id.* See also *supra* note 4.

44. See, e.g., *United States v. Pinson*, 24 F.3d 1056, 1057-58 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994) (stating that the grow lamps used for indoor marijuana cultivation generate temperatures of 150 degrees or more); *United States v. Field*, 855 F. Supp. 1518, 1521-23 (W.D. Wis. 1994); Steele, *Infrared Searches*, *supra* note 31, at 20; Plaschke, *supra* note 31, at 607-08, 607 nn.2, 4. Note, however, that a "search" does not require that there be a physical trespass. See *infra* note 125.

45. See, e.g., *Field*, 855 F. Supp. at 1523 (stating that police officers look for "hot spots" on a suspect's residence); Steele, *Infrared Searches*, *supra* note 31, at 24-25; Plaschke, *supra* note 31, at 607-08, 607 nn.2, 4. In addition to taking readings of the suspect's home, officers will often take readings of the neighboring homes for comparative purposes. See *State v. Young*, 867 P.2d 593, 595 (Wash. 1994).

46. See, e.g., *Pinson*, 24 F.3d at 1057.

47. See, e.g., *id.* The officers in *Pinson* submitted the FLIR evidence in addition to high electrical usage records in an affidavit for the issuance of a search warrant. *Id.* For a discussion of the Supreme Court's current probable cause standard for the issuance of a search warrant, see *Illinois v. Gates*, 462 U.S. 213, 238 (1983). The *Gates* court held that "[t]he task of the issuing [judge] is simply to make a practical, common-sense decision whether, given all the circumstances set forth in the affidavit before him, . . . there is a fair probability that contraband . . . will be found in a particular place." *Id.*

48. See *supra* notes 4, 43.

49. Both federal and state courts are in complete disagreement over whether or not the use of a FLIR on a person's residence constitutes a "search" under the Fourth Amendment. See *United States v. Field*, 855 F. Supp. 1518, 1525-30 (W.D. Wis. 1994). For a list of those courts which have split on the issue, see *supra* notes 13-15.

50. See Steele, *Infrared Searches*, *supra* note 31, at 24.

51. See Plaschke, *supra* note 31, at 618 (stating that FLIR technology is similar to an x-ray or magnetometer because it detects information which cannot be detected by the human senses or sense-enhancing devices); Steele, *Infrared Searches*, *supra* note 31, at 24 (explaining that the FLIR is a

### A. The Hardware

Developed by the United States Army to locate enemy vehicles during combat,<sup>52</sup> the FLIR is a device which detects infrared emissions (or heat) emanating from a certain object.<sup>53</sup> The FLIR has a lens which allows infrared light to pass through it onto a detector.<sup>54</sup> The FLIR then converts the thermal energy into a color on a predetermined color scale and displays this information on a screen.<sup>55</sup> Generally, the image on the screen appears in various shades of grey depending on the amount of heat which the targeted object is emitting.<sup>56</sup> The hotter the object, the more white it appears on the screen, while the cooler objects appear more grey.<sup>57</sup> Thus, the FLIR does not quantitatively reveal to its operator the temperature of a certain object but rather

highly technological instrument which operates outside of the human senses). Steele further states that before applying the *Katz* standard to thermal surveillance to determine whether the use of the FLIR is a "search," it is first necessary to consider the nature of the FLIR device. *Id.*

52. See *United States v. Olson*, 21 F.3d 847, 848 n.3 (8th Cir. 1994).

53. See, e.g., *United States v. Field*, 855 F. Supp. 1518, 1522 (W.D. Wis. 1994). Infrared emissions occupy a part of the infrared spectrum, including radio waves, microwaves, heat, visible light, ultraviolet light, X-rays, and gamma rays. See Steele, *Infrared Searches*, *supra* note 31, at 24. These different forms of energy vary by the wavelength of the electric and magnetic fields. *Id.* See also Plaschke, *supra* note 31, at 620 (stating that "[t]hermal emissions are invisible, odorless, silent and generally not detectable by human touch").

54. See Steele, *Infrared Searches*, *supra* note 31, at 24. The infrared light actually passes through the lens onto a series of mirrors which direct it onto the detector. *Id.* The detector then uses a highly sophisticated process to translate the light into an electrical signal which can be amplified, processed, and recorded on videotape or presented visually on a television-like screen. *Id.*

55. See, e.g., *Field*, 855 F. Supp. at 1522. The FLIR's outstanding characteristic is that it collects energy which cannot otherwise be detected by humans and transforms that information into a visual image which can be viewed by the thermographer. *Id.* The view on the screen displays the actual objects with less definition than a standard television. *Id.*

56. See, e.g., *id.* at 1522; *State v. Young*, 867 P.2d 593, 595 (Wash. 1994). See also Plaschke, *supra* note 31, at 607 n.2 (discussing information obtained in an interview with Col. Anglioh, President of Thermal Technologies, Inc. on Feb. 12, 1993, relating to the method in which the visual image on the screen reflects the amount of heat emanating from the targeted object). Technically, there are two factors which determine the exact shade of the displayed object: the amount of heat which the object radiates and the "emissivity" of the object. See Steele, *Infrared Searches*, *supra* note 31, at 24. The "emissivity" of a certain object is its transparency to infrared emissions. *Id.* In the same manner in which different amounts of light pass through a window or curtain, different materials allow different amounts of heat to radiate from them. *Id.*

57. *United States v. Field*, 855 F. Supp. 1518, 1522 (W.D. Wis. 1994) (stating that white is the visual representation of the hot portion of the scale, and black is the visual representation of the cold portion). The operator must first adjust the controls on the screen so that there is a neutral starting point which will allow objects radiating different amounts of heat to be visualized. *Id.*

provides information which is meaningful only in relative terms.<sup>58</sup>

FLIRs cost anywhere from \$15,000, like the ones commonly used by the police, to over \$225,000, like the ones used for more advanced military purposes.<sup>59</sup> They are available in either a small, handheld model<sup>60</sup> or a more sophisticated model which is mounted at the bottom of a helicopter.<sup>61</sup> Many courts have emphasized that the FLIR does not emit any rays or beams which penetrate a particular object but rather that it passively measures the heat which radiates off the surface of the targeted object.<sup>62</sup> While courts are generally in agreement as to how the FLIR operates, the extent of information which it can gather from the heat patterns of certain objects has generated far more dispute.<sup>63</sup>

### B. The FLIR's Capabilities

Generally, courts have conceded that a FLIR can detect differences in heat on the surfaces of objects.<sup>64</sup> Beyond this basic consensus, however, the courts

58. See, e.g., *Field*, 855 F. Supp. at 1522 (stating that "hot" and "cold" are relative terms because a FLIR only provides an image showing which objects are emanating more or less heat than the normative baseline set by the operator). While the FLIR does not tell its operator the exact temperature in numerical terms, it is able to differentiate between 0.2 degrees centigrade. See Steele, *Infrared Searches*, *supra* note 31, at 24.

59. Plaschke, *supra* note 31, at 607-08 n.4.

60. *Field*, 855 F. Supp. at 1522 (describing one particular FLIR as weighing approximately five pounds and capable of being powered by a portable battery or by a car's cigarette lighter).

61. See, e.g., *United States v. Pinson*, 24 F.3d 1056, 1057 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994) (police employing a FLIR mounted at the bottom of a helicopter to detect heat emanating from the suspect's roof).

62. See, e.g., *United States v. Penny-Feeney*, 773 F. Supp. 220, 223 (D. Haw. 1991), *aff'd on other grounds sub. nom. United States v. Feeney*, 984 F. 2d 1053 (9th Cir. 1993). The *Penny-Feeney* court defined the FLIR as "a passive, non-intrusive instrument which detects differences in temperature on the surface of objects being observed. It does not send any beams or rays into the area on which it is fixed or in any way penetrate structures within that area." *Id.* While some courts have emphasized the passiveness or intrusiveness of a particular device in holding that thermal surveillance is not a "search," this note argues that these characteristics are not dispositive to the "search" question. See *infra* notes 247-53 and accompanying text.

63. Compare *Penny-Feeney*, 773 F. Supp. at 223 (stating that a FLIR does nothing more than measure heat emanating from the surface of targeted residences), with *United States v. Kyllo*, 37 F.3d 526, 530-31 (9th Cir. 1994) (entertaining allegations that a FLIR can actually detect sexual activity inside a person's residence).

64. See, e.g., *Pinson*, 24 F.3d at 1058; *United States v. Olson*, 21 F.3d 847, 848 n.3 (8th Cir. 1994); *United States v. Field*, 855 F. Supp. 1518, 1522 (W.D. Wis. 1994); *United States v. Domitrovich*, 852 F. Supp. 1460, 1472 (E.D. Wash. 1994); *United States v. Deaner*, No. 92-0090-01, 1992 WL 209966, \*3 (M.D. Pa. July 27, 1992), *aff'd on other grounds*, 1 F.3d 192 (3rd Cir. 1993); *Penny-Feeney*, 773 F. Supp. at 223; *State v. Young*, 867 P.2d 593, 595 (Wash. 1994). For purposes other than detecting indoor marijuana cultivation, there seems to be no question that a FLIR can generically identify certain objects. See *United States v. Kilgus*, 571 F.2d 508, 509 (9th

are in complete disagreement as to the precise quality and detail of information which a FLIR can glean.<sup>65</sup> While some courts refer to the FLIR as a very limited and "passive" device,<sup>66</sup> other courts find the FLIR to be a dangerously intrusive device, capable of detecting intimate activity within the home.<sup>67</sup> However, these concerns exist only in the criminal context; in the non-criminal context, the FLIR is used for a number of uncontroverted purposes.<sup>68</sup> When the government uses thermal surveillance as an investigatory tool, however, a confusing array of complex fourth amendment issues arise.<sup>69</sup>

Because the FLIR allows its operator to sense certain infrared light which is invisible to the naked eye,<sup>70</sup> it is important to determine the extent of information which the device can actually disclose.<sup>71</sup> Several courts have engaged in debate over whether the FLIR can actually "see through the walls"

Cir. 1978) (stating that a FLIR could distinguish between a DC-3 and a Lear jet at night).

65. See *supra* note 63.

66. See, e.g., *United States v. Ford*, 34 F.3d 992 (11th Cir. 1994); *United States v. Pinson*, 24 F.3d 1056 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994); *United States v. Domtrovich*, 852 F. Supp. 1460 (E.D. Wash. 1994).

67. See, e.g., *United States v. Cusumano*, 67 F.3d 1497 (10th Cir. 1995); *United States v. Field*, 855 F. Supp. 1518 (W.D. Wis. 1994); *State v. Young*, 867 P.2d 593 (Wash. 1994).

68. The military uses thermal surveillance to locate and identify other aircraft in combat operations. See *Steele, Infrared Searches*, *supra* note 31, at 25. Additionally, researchers use thermal imagery for geological and oceanic studies as well as to conduct animal censuses. *Id.* Public officials are able to conduct rescue missions with the FLIR which is capable of locating a person in a forest or other dense area. *Id.* Further, utility companies are taking advantage of the FLIR's heat-seeking capabilities to detect overloaded wires and to monitor insulation efficiency. *Id.*

69. See *Field*, 855 F. Supp. at 1525-29 (analyzing the split in the federal as well as state courts over the constitutionality of thermal surveillance). Further, the complexities of FLIR issues have resulted in a "sizeable contingent" of the courts avoiding the question altogether. *Id.* at 1525. For a list of those courts that are split on the issue of whether this type of thermal surveillance is a fourth amendment "search," see *supra* notes 13, 14. See *supra* note 15 for a list of those courts that have avoided deciding the issue altogether.

70. See *Steele, Infrared Searches*, *supra* note 31, at 24. *Steele* states that "the FLIR device allow[s] the police officers to sense a part of the spectrum that their eyes could not normally perceive in the same way that a geiger counter would have allowed them to tell if radioactive material was located in the home." *Id.*

71. This inquiry creates a double-edged sword. *United States v. Field*, 855 F. Supp. 1518, 1531 (W.D. Wis. 1994). If the government argues that the FLIR does not glean any specific information from inside the house, then the information obtained has no evidentiary value in establishing probable cause. *Id.* If, however, the government concedes that the FLIR does disclose specific information taking place within the home, then the use of the FLIR begins to look more like a fourth amendment "search." See generally *Commonwealth v. Williams*, 431 A.2d 964 (Pa. 1981). In *Williams*, the court ruled that the government's use of a startron to peer into the defendant's window for nine straight nights amounted to a fourth amendment "search." *Id.* at 966. The court, however, did not hold that the use of a startron would always be a "search" but held that, because the nine-day surveillance gleaned very specific details about activity within the home, it was a "search." *Id.*

of a particular residence.<sup>72</sup> The more relevant inquiry, however, does not concern the FLIR's ability to physically see through walls *per se* but rather concerns the type of conclusions which the FLIR allows its operator to draw regarding the activities inside the home.<sup>73</sup> While some government officials are hesitant to disclose with any amount of particularity what a FLIR can actually detect,<sup>74</sup> courts are considering allegations that a FLIR can detect human activity in a residence, including sexual activity in the bedroom.<sup>75</sup>

While the courts will continue to debate the FLIR's precise capabilities when used for surveillance purposes, some courts have drawn more concrete conclusions. In one FLIR case, both parties stipulated to the fact that a FLIR could detect a human form through a window if the person was leaning against a curtain and that the device could detect a person leaning against a relatively thin barrier, such as a plywood door.<sup>76</sup> Another court indicated that "there is no doubt" that a FLIR, if properly used, could detect which rooms in the house were being occupied, whether hot water was being used in the bathroom, or whether a television or other heat-generating equipment near a window was in use.<sup>77</sup> More shocking, however, is the training literature which accompanied one particular FLIR. It required operators to determine the precise amount of

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72. See *State v. McKee*, 510 N.W.2d 807, 810 (Wis. Ct. App. 1993) (stating that the FLIR does not "peer" or "intrude" into the curtilage or the home). *But see* *United States v. Field*, 855 F. Supp. 1518, 1519 (W.D. Wis. 1994). The court in *Field* stated that "[a]s for not seeing through walls, the imager records the heat escaping from the walls that is emitted by an object on the other side of the wall. To the extent that the device can pick up such radiation and record it, it can 'see through' walls." *Id.*

73. See *Field*, 855 F. Supp. at 1530. The *Field* court stated that:

[t]hermal imagers don't see through walls in the sense that a telescope sees through a window. But the devices provide visual images of varying clarity that allow the operator to draw, attempt to draw, or claim to draw, conclusions about what is happening on the other side of the house wall. *Id.*

See also *Steele*, *Infrared Searches*, *supra* note 31, at 34 (stating that a FLIR is capable of disclosing certain activities that occur behind the solid walls of a dwelling).

74. See *Field*, 855 F. Supp. at 1522 (reporting that Captain Paul Russell of the Wisconsin National Guard refused to comment on whether a FLIR could actually track the movement of a heat-radiating object within a structure).

75. See *United States v. Kyllo*, No. 1994 WL 533802, \*4 (9th Cir. Oct. 4, 1994). In *Kyllo*, the court remanded the FLIR issue to the trial court to establish a more concrete factual basis concerning the degree and detail of information which a FLIR can actually disclose. *Id.* The *Kyllo* court explicitly stated that the trial court needed to determine whether the thermal imager can detect sexual activity in the bedroom, as an expert for the defendant suggested. *Id.* See also *Field*, 855 F. Supp. at 1531 (suggesting that a FLIR can draw accurate conclusions about an individual who is in his bedroom sipping coffee and watching television when the French doors are open, but the lightweight curtains are drawn to ensure privacy).

76. See *State v. Young*, 867 P.2d 593, 595 (Wash. 1994).

77. See *United States v. Field*, 855 F. Supp. 1518, 1531 (W.D. Wis. 1994).

coffee in a cup and to identify the tear ducts on a human face.<sup>78</sup> Aside from the courts' extensive debates, one fact seems self-evident: police use the FLIR on a person's home for the precise purpose of determining what is happening on the other side of the walls.

### C. Detecting Indoor Marijuana Cultivation

Since 1986, when the Supreme Court gave the police a free license to conduct aerial searches of a person's property,<sup>79</sup> including its curtilage,<sup>80</sup> marijuana growers have moved their operations indoors to avoid detection.<sup>81</sup> Consequently, these growers must employ the use of very high intensity discharge lights to cultivate their crops indoors.<sup>82</sup> These lights produce an exorbitant amount of heat which is often vented outside of the growing facility to obtain the optimum temperature for growing marijuana.<sup>83</sup> This excess or abnormal amount of heat is detected with the aid of thermal surveillance.<sup>84</sup>

Typically, the police will employ the FLIR to survey a suspect's home when they have suspicion of illegal marijuana cultivation but not enough evidence to establish probable cause.<sup>85</sup> A FLIR is most effective late at night

78. See *id.* See also *United States v. Cusumano*, 67 F.3d 1497, 1505 n.14 (10th Cir. 1995) (stating that it is quite plausible that given the proper circumstances, a FLIR could detect: "the use of a shower, bath, or hot tub; the running of one's dishwasher or clothes dryer; or the baking of bread, or a turkey, or cookies.").

79. See *California v. Ciraolo*, 476 U.S. 207, 213-15 (1986) (holding that police, flying in a fixed-wing airplane at 1,000 feet, were not "searching" for purposes of the Fourth Amendment when they obtained visual evidence of the suspect's marijuana crops in his backyard garden). For a more detailed discussion of the *Ciraolo* case, see *infra* notes 170-74 and accompanying text.

80. See *Florida v. Riley*, 488 U.S. 445 (1989) (holding that police, hovering in a helicopter, were not conducting a fourth amendment "search" when they peered into the suspect's partially uncovered greenhouse to obtain evidence of marijuana cultivation). For a detailed discussion of the meaning of "curtilage," see *Wattenburg v. United States*, 388 F.2d 853 (9th Cir. 1968). In general terms, the "curtilage" is basically the "yard," as distinguished from an open field. See *Berner*, *supra* note 17, at 391.

81. See *United States v. Penny-Feeney*, 773 F. Supp. 220, 224 (D. Haw. 1991), *aff'd on other grounds sub nom. United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993) (stating that "[s]uch an operation is favored by indoor marijuana growers because it is not dependent on weather conditions and cannot be detected by the naked eye").

82. See, e.g., *United States v. Pinson*, 24 F.3d 1056, 1057 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994).

83. See *id.* at 1057-58 (noting that these types of lights produce temperatures upwards of 150 degrees and that the optimum growing temperature for marijuana is between 68 and 72 degrees).

84. See *United States v. Field*, 855 F. Supp. 1518, 1521-23 (W.D. Wis. 1994); *Steele*, *Infrared Searches*, *supra* note 31, at 24-25; *Plaschke*, *supra* note 31, at 607-08, 607 nn.2, 4.

85. See, e.g., *United States v. Deaner*, 1 F.3d 192, 194-95 (3d Cir. 1993) (stating that the police employed a FLIR for use on the defendant's residence after learning that the defendant had purchased a large amount of indoor growing supplies and after recovering certain items from the defendant's trash which were indicative of marijuana cultivation); *United States v. Kerr*, 876 F.2d

or early in the morning when all of the solar energy has dissipated from the targeted object.<sup>86</sup> Generally, the operator must approach the residence within twenty to 200 meters and must be in a direct line of sight with the targeted object.<sup>87</sup> The police look for "hot spots," which are located by either comparing heat patterns from one part of the structure with other parts of the structure or by comparing the suspect's home with other homes in the neighborhood.<sup>88</sup> The difficulty, however, in differentiating between "hot spots" created by marijuana cultivation and "hot spots" resulting from other types of heat-generating activity<sup>89</sup> has led to a number of improperly issued search warrants.<sup>90</sup>

When a court rules that a certain police activity is not a "search" within the meaning of the Fourth Amendment, it has, in effect, placed that activity outside the protection of the Fourth Amendment.<sup>91</sup> Consequently, when a court holds that the use of a FLIR is not a "search," it allows the police to use the instrument indiscriminately without calling the reasonableness standard of the

1440, 1442 (9th Cir. 1989) (involving the government's use of a FLIR on the defendant's shed after complaints from neighbors and after the police allegedly smelled a marijuana-like odor emanating from the shed).

86. See *Field*, 855 F. Supp. at 1522. Operating a FLIR during these times makes it more likely that any detected heat is the result of some type of activity within the home rather than any of the day's remaining solar heat. *Id.*

87. *Id.* at 1522 n.2 (stating that the FLIR must be in a position which allows it to be free from any barriers which would interfere with the detection of heat emanating from the object to be viewed).

88. For instances when the police compared FLIR readings from the suspect's residence with readings from other residences in the same neighborhood, see, e.g., *United States v. Deaner*, 1 F.3d 192, 195 (3d Cir. 1993); *United States v. Casanova*, 835 F. Supp. 702, 706 (N.D.N.Y. 1993).

89. *United States v. Field*, 855 F. Supp. 1518, 1531-32 (W.D. Wis. 1994). The *Field* court argued that there seem to be no clearly established guidelines that the police may follow to differentiate between heat produced by indoor marijuana growing operations and heat produced by any other type of activity within the home. *Id.*

90. See Tim Bryant, *DEA Targets Indoor Pot Growers*, ST. L. POST., May 9, 1993, at 1D.

91. See, e.g., *California v. Greenwood*, 486 U.S. 35, 41-42 (1988) (holding that the police were not "searching" for purposes of the Fourth Amendment when they rummaged through the defendant's trash which he left on the side of the curb); *California v. Ciraolo*, 476 U.S. 207, 213-15 (1986) (holding that the government was not conducting a fourth amendment "search" when officers flew over the defendant's property in an airplane and obtained evidence that the defendant was illegally growing marijuana in his backyard); *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986) (deciding that aerial photography of a chemical company's industrial complex was not a "search" under the Fourth Amendment); *United States v. Place*, 462 U.S. 696, 707 (1983) (holding that the police's utilization of trained narcotics detection dogs on the defendant's luggage was not a "search"); *United States v. Knotts*, 460 U.S. 276, 285 (1983) (stating that the government's monitoring of a beeper which was placed in a container being transported by the defendant in his car was not a "search"); *Smith v. Maryland*, 442 U.S. 735, 745-46 (1979) (holding that the government's use of a pen register to obtain a list of all of the phone numbers called from the suspect's home did not amount to a fourth amendment "search").

Fourth Amendment into question.<sup>92</sup> The Supreme Court's current standard for this initial, yet very pivotal question of whether a certain governmental activity is a search, was articulated in *Katz v. United States*.<sup>93</sup> To fully understand the *Katz* standard and its limitations when applied to highly sophisticated devices like the FLIR, an analysis of the actual decision, its historical background, and its subsequent applications is required.<sup>94</sup>

### III. *KATZ V. UNITED STATES*:<sup>95</sup> THE REASONABLE EXPECTATION OF PRIVACY STANDARD

The 1967 *Katz* decision is a milestone in the history of the Supreme Court's fourth amendment jurisprudence.<sup>96</sup> Dubbed as the Court's landmark "search" decision,<sup>97</sup> *Katz* established the principle that a "search" occurs only when the government intrudes on an individual's "reasonable expectation of privacy."<sup>98</sup>

92. See, e.g., *United States v. Pinson*, 24 F.3d 1056 (8th Cir.), cert. denied, 115 S. Ct. 664 (1994) (cutting off fourth amendment discussion when the court determined that the police's use of a FLIR did not constitute a "search"). When a court holds that a certain governmental activity is not a "search" within the meaning of the Fourth Amendment, it closes fourth amendment debate altogether. See Berner, *supra* note 17, at 385. The police may act as unreasonably as they please because as long as they are not "searching," they remain "invisible" to the Fourth Amendment. *Id.* at 390.

93. 389 U.S. 347 (1967).

94. Typically, fourth amendment critics identify *Katz's* problematic nature by analyzing the actual decision as well as its history and applications. See generally Berner, *supra* note 17, at 385-97 (arguing that *Katz* "asks the wrong questions" by critically analyzing its history and subsequent applications); Lisa J. Steele, *The View from on High: Satellite Remote Sensing Technology and the Fourth Amendment*, 6 HIGH TECH. L.J. 317, 322-26 (1991) [hereinafter Steele, *Remote Sensing*] (discussing the historical overview of the *Katz* decision and its application in the "open view" cases to present the standard's inability to effectively scrutinize the use of satellite imagery); *Katz*, *Twenty-first Century*, *supra* note 17, at 555-75 (analyzing the *Katz* decision, its history, and its applications to put forth the argument that the courts are slowly eroding vital fourth amendment rights); Gutterman, *supra* note 34, at 651-77 (extensively outlining *Katz* and its progeny to demonstrate that the Supreme Court's current "search" standard fails to protect true privacy rights and permits their gradual decay as new surveillance technology is developed).

95. 389 U.S. 347 (1967).

96. See Brian J. Serr, *Great Expectations of Privacy: A New Model for Fourth Amendment Protection*, 73 MINN. L. REV. 583, 592 (1989). Professor Serr states that the *Katz* holding radically changed forever the focus of fourth amendment jurisprudence. *Id.* *Katz* transformed the nature of a "search" from a literal interpretation of the term, concerned with physically searching in a constitutionally-protected area, to a more broad interpretation, concerned with intrusions upon an individual's expectation of privacy. *Id.*

97. See *supra* note 23.

98. *Katz*, 389 U.S. at 361 (Harlan, J., concurring). Defining what actually makes up one's reasonable expectation of privacy, Justice Harlan created a test consisting of two prongs, both of which must be met for a given governmental activity to constitute a "search" for purposes of the Fourth Amendment. *Id.* First, the person must exhibit an actual, or subjective expectation of privacy, and second, society must objectively be prepared to recognize that expectation as reasonable. *Id.*



This Note argues that the *Katz* test is inherently limited to only those instances where the individual is actually given a chance to form such an expectation of privacy.<sup>99</sup> Further, this Note adopts the position that the post-*Katz* cases have actually mutated the "reasonable expectation of privacy" test in their attempts to apply the standard to different situations, making it more difficult to realize *Katz's* true limitations.<sup>100</sup> As a result, courts are applying *Katz* to the government's use of the FLIR when such an application is unfair, illogical, and beyond the scope of the *Katz* standard itself.<sup>101</sup> To understand this problem fully, it is necessary to examine the historical development of the *Katz* decision,<sup>102</sup> the actual decision with its inherent limitations,<sup>103</sup> and the decision's subsequent applications.<sup>104</sup>

### A. The Development of the *Katz* Standard

It is generally accepted that the Fourth Amendment stems from a series of events following the American Revolution, particularly the colonial protest against the writs of assistance and the British rejection of general warrants.<sup>105</sup> These practices were particularly oppressive and led to vigorous protests and litigation because they allowed the government to physically trespass on and rummage through a person's property and belongings.<sup>106</sup> This movement

99. See *infra* notes 133-46 and accompanying text. See also section VI.A.

100. See *infra* notes 147-207 and accompanying text. See also *Katz*, *Twenty-first Century*, *supra* note 17, at 563-75 (discussing the transformation of the *Katz* standard by subsequent "search" decisions). Professor *Katz* argues that the Supreme Court has seized upon a specific exception expressed in *Katz* and has used it to contort the "privacy-based standard into a trivialized risk assessment analysis." *Id.* at 563. He further states that anomalous doctrines, like the risk assessment doctrine, erode core fourth amendment values and operate to distort the true principles advanced in the actual *Katz* decision. *Id.* at 569.

101. See *infra* notes 208-55 and accompanying text.

102. See *infra* notes 105-21 and accompanying text.

103. See *infra* notes 122-46 and accompanying text.

104. See *infra* notes 147-207 and accompanying text.

105. See JACOB W. LANDYNSKI, *SEARCH AND SEIZURE AND THE SUPREME COURT* 19-20 (1966). Writs of assistance were judicial orders which authorized officers of the Crown to enter and search buildings for smuggled goods. *Id.* at 31-32. General warrants were basically employed to enforce seditious libel laws by granting royal officers the power to search out and seize writings which were critical of the Crown. *Id.* at 21.

106. See *id.* at 31 (stating that writs of assistance and general warrants were oppressive because they neither required prior identification nor description of the place to be searched or the items to be seized). For a detailed analysis of the history of litigation stemming from the writs of assistance and the general warrants, see Clark D. Cunningham, *A Linguistic Analysis of the Meaning of "Search" in the Fourth Amendment: A Search for Common Sense*, 73 IOWA L. REV. 541, 553-57 (1988).

proved to be the driving force behind the Framers' drafting of the Fourth Amendment.<sup>107</sup>

While blatant physical intrusions by the government initiated the "right to be free from unreasonable searches and seizures,"<sup>108</sup> the Supreme Court's first major fourth amendment case, *Boyd v. United States*,<sup>109</sup> did not involve a physical trespass at all.<sup>110</sup> The *Boyd* Court held that a federal statute which

107. See, e.g., *Boyd v. United States*, 116 U.S. 616, 626-27 (1886) (stating that an analysis of the practices of writs of assistance and general warrants sheds light on the nature of the proceedings intended by the Fourth Amendment). See also Cunningham, *supra* note 106, at 553-57. Professor Cunningham identifies two cases in particular which he feels had a direct impact on the drafting of the Fourth Amendment. *Id.* In 1761, Paxton's case involved the granting of a writ of assistance in which John Adams took down this famous passage made by James Otis in the courtroom:

Now one of the most essential branches of English liberty, is the freedom of one's house. A man's house is his castle; and while he is quiet, he is as well guarded as a prince in his castle. This writ, if it should be declared legal, would totally annihilate this privilege. Custom house officers may enter our houses when they please — we are commended to permit their entry — their menial servants may enter — break locks, bars and every thing in their way — and whether they break through malice or revenge, no man, no court can inquire — bare suspicion without oath is sufficient.

*Id.* at 553-54 (quoting from LEGAL PAPERS OF JOHN ADAMS 113, 142 (L. Wroth & H. Zobel eds. 1965)).

The second important case involved the issuance of a general warrant by Lord Halifax, the British Secretary of State, in 1762, under which four messengers in three days searched 49 persons for a libelous publishing. *Id.* at 556. John Wilkes, who was found to be the author of the publishing, obtained a verdict against Lord Halifax. *Id.* (citing *Entick v. Carrington*, 19 Howell's State Trials 1030, 95 Eng. Rep. 807 (1765)).

108. U.S. CONST. amend. IV. See *supra* note 9 for the text of the Fourth Amendment. Prior to *Katz*, a physical trespass upon a property interest was a prerequisite to attachment of fourth amendment rights. See *Katz*, *Twenty-first Century*, *supra* note 17, at 556. For examples of cases which apply the physical trespass standard, see *Lee v. United States*, 343 U.S. 747 (1952); *Olmstead v. United States*, 277 U.S. 438 (1928); *Katz v. United States*, 369 F.2d 130 (9th Cir. 1966), *rev'd*, 389 U.S. 347 (1967).

109. 116 U.S. 616 (1886).

110. *Id.* at 619-20. In *Boyd*, the issue concerned the constitutionality of a federal statute which provided that in certain non-criminal cases, the court may require the production of any business record or invoice which the government asserted would help prove a certain allegation. *Id.* The *Boyd* Court was called to answer the following inquiry:

Is a search and seizure, or, what is equivalent thereto, a compulsory production of a man's private papers, to be used in evidence against him in a proceeding to forfeit his property for alleged fraud against the revenue laws—is such a proceeding for such a purpose an "unreasonable search and seizure" within the meaning of the [F]ourth [A]mendment of the Constitution?

*Id.* at 622.

required the production of certain papers violated the Fourth Amendment.<sup>111</sup> The Court's liberal construction of the Fourth Amendment was short lived, however, as it later decided a series of cases which required the existence of an actual physical trespass before the Fourth Amendment could be triggered.<sup>112</sup>

In *Olmstead v. United States*,<sup>113</sup> the Court retreated from its holding in *Boyd* by deciding that wire-tapping a telephone and listening to one's private telephone conversations<sup>114</sup> did not constitute a "search" under the Fourth Amendment.<sup>115</sup> The Court reasoned that the Fourth Amendment is only concerned with blatant physical intrusions rather than the mere interception of telephone conversations.<sup>116</sup>

111. *Id.* at 630. The Court stated that "the breaking of . . . doors" and "rummaging of . . . drawers" are not essential to violate the Fourth Amendment, but rather it is "the invasion of [one's] indefeasible right of personal security, personal liberty, and private property" which calls the Fourth Amendment into question. *Id.* The *Boyd* Court went into a lengthy discussion of the great controversies surrounding the traditional writs of assistance and general search warrants. *Id.* at 624-30. The Court then went on to acknowledge that it was not the existence of a physical trespass which made these practices so despicable, but rather it was the invasion of a person's "indefeasible right of personal security, personal liberty, and private property." *Id.* at 630. The Court held that the Fourth Amendment sought to prohibit acts of arbitrary power and that compelling a person to produce incriminating papers without cause was simply an insidious disguise of an old grievance which had previously been so deeply abhorred. *Id.*

112. *See, e.g.,* *Olmstead v. United States*, 277 U.S. 438, 464 (1928) (holding that the interception of telegraph messages by the police did not constitute a fourth amendment search because oral communications were not the type of tangible things which the Fourth Amendment sought to protect); *Hester v. United States*, 265 U.S. 57, 58 (1924) (holding that the police were not searching when they entered the defendant's open field to obtain evidence because the Fourth Amendment protects only the home and the area immediately surrounding it).

113. 277 U.S. 438 (1928).

114. The defendants were charged with conspiring to violate a series of laws dealing with intoxicating liquors set out in the National Prohibition Act. *Id.* at 455. The information which led to these charges was obtained by the intercepting of messages from the residences of four of the defendants. *Id.* at 456-57. Four federal probation officers inserted the wire taps into the telephone wires without trespassing onto the property of any of the defendants. *Id.* at 457.

115. *Id.* at 464. The *Olmstead* Court decided that telephone conversations were not the tangible kinds of things with which the Fourth Amendment was concerned. *Id.* The Court argued that "[t]he amendment itself shows that the search is to be of material things—the person, the house, his papers, or his effects." *Id.*

116. *Id.* at 463-66. The Court in *Olmstead* analyzed the historical importance of the writs of assistance and the general warrants much more narrowly than did the Court in *Boyd*. *Id.* at 463. The Court reasoned that those historical practices concerned governmental misuse of authority only with respect to physical, tangible items. *Id.* The Fourth Amendment, the Court argued, was drafted to protect individuals' privacy interests only in regards to those physical items that the amendment expressly delineated: one's person, house, papers, and effects. *Id.* Applying this principle to the case at hand, the Court asserted that:

The United States takes no such care of telegraph or telephone messages as of mailed sealed letters. The amendment does not forbid what was done here. There was no searching. There was no seizure. The evidence was secured by the use of the sense of

This trespass-oriented standard became even more narrowly construed in *Hester v. United States*.<sup>117</sup> The *Hester* Court applied the strict, literal meaning of the language of the Fourth Amendment in holding that even a governmental trespass on one's open field did not constitute a "search" because the amendment protects only the person and the home.<sup>118</sup> This holding expressed the Court's willingness to embrace a "protected areas" theory in testing the Fourth Amendment's limits.<sup>119</sup> Thus, at this point in the Court's historical development of the Fourth Amendment, only a physical trespass in a narrowly-defined list of places would constitute a "search" and be subject to fourth amendment scrutiny.<sup>120</sup> This notion survived until 1967 when the Court decided its seminal fourth amendment "search" case, *Katz v. United States*.<sup>121</sup>

### B. The Katz Decision and its Limitations

In *Katz*, the defendant was making a phone call in a public telephone booth to allegedly engage in an illegal wagering transaction.<sup>122</sup> Suspecting foul play, FBI agents placed an electronic recording device on the outside of the booth to

hearing and that only. There was no entry of the houses or offices of the defendants.

*Id.*

117. 265 U.S. 57 (1924). In *Hester*, revenue officers entered the defendant's land without a search warrant and positioned themselves some 50 to 100 yards away from his home. *Id.* at 58. From this vantage point, the officers saw Hester come out of his home carrying what appeared to be a jug of whisky. *Id.* They eventually arrested the defendant, confirming that the jug contained illegal moonshine, and charged him with various liquor offenses. *Id.* at 57.

118. *Id.* at 58. The defendant challenged the officers' conduct, arguing that their warrantless entry upon his land constituted an unreasonable "search" under the Fourth Amendment. *Id.* Rejecting the defendant's argument that the police had illegally obtained the evidence without a search warrant, the Court held that the officers' conduct did not amount to a "search" because they had only entered upon the defendant's open field. *Id.* at 58-59. The Court stated that "the special protection accorded by the Fourth Amendment to the people in their 'persons, houses, papers and effects,' is not extended to the open fields. The distinction between the latter and the house is as old as common law." *Id.* at 59.

119. See Gutterman, *supra* note 34, at 660-62 (stating that *Hester* is the seminal decision which advanced the "constitutionally protected areas" type of analysis).

120. See *id.* at 661. Professor Gutterman states that the twin principles of *Hester* and *Olmstead* established the standard that a "search" occurred only when the government physically trespassed onto a constitutionally protected area. *Id.* See also Berner, *supra* note 17, at 385-86. Professor Berner summarizes the Court's "search" doctrine prior to 1967 as a two-part test. *Id.* First, the "place," typified by *Hester*, must be of the type which the Fourth Amendment is concerned with; and, second, the "type of government activity," typified by *Olmstead*, must be of the type which the amendment was intended to scrutinize. *Id.* In a nutshell, Professor Berner states that "until 1967, there was no fourth-amendment debate until the police trespassed into a relatively short list of 'protected places.'" *Id.* For a list of places that triggered fourth amendment scrutiny prior to 1967, see *id.* at 386 n.11.

121. 389 U.S. 347 (1967). See Berner, *supra* note 17, at 385-86 (stating that the *Katz* decision in 1967 brought an end to the Court's twin trespass doctrine established in *Olmstead* and *Hester*).

122. *Katz*, 389 U.S. at 348.

record the defendant's conversation and to obtain evidence to indict the defendant on federal gambling charges.<sup>123</sup> Although both parties tailored their respective arguments to fit the Court's standard as set forth in *Olmstead* and *Hester*,<sup>124</sup> the Court decided to forgo its traditional trespass requirement and adopt a new standard for defining a "search" under the Fourth Amendment.<sup>125</sup> The Court stated that what a person seeks to keep private is afforded fourth amendment protection, but those things that a person knowingly exposes to the public are not entitled to such protection.<sup>126</sup>

Thus, even though the agents did not physically trespass into a traditionally protected area, the Court still held that they were "searching" for purposes of the Fourth Amendment and had obtained information illegally without first

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123. *Id.* Because the FBI agents had placed the recording device on the outside of the booth, there was no physical invasion into the area occupied by the defendant. *Id.* at 348-49. The agents used this information to indict Mr. Katz on eight separate counts of violating a federal statute which prohibited the transmitting of wagering information by telephone. *Id.* at 348.

124. For a discussion of the Court's traditional "search" standard set forth in *Hester* and *Olmstead*, see *supra* notes 112-20 and accompanying text. The attorneys' arguments in *Katz* focused on whether the electronic recording device constituted an actual trespass into the booth and whether a phone booth was the kind of "protected place" which the Fourth Amendment was meant to scrutinize. *Katz*, 389 U.S. at 349-51.

125. *Katz v. United States*, 389 U.S. 347, 353 (1967). First, the Court rejected the notion that the Fourth Amendment applies only to an exclusive list of "protected places." *Id.* The Court reasoned that just because the defendant was in a public telephone booth and not in a traditional "protected place," he did not "shed" his fourth amendment rights. *Id.* at 352. The *Katz* Court argued that:

[o]ne who occupies [a public telephone booth], shuts the door behind him, and pays the toll that permits him to place a call is surely entitled to assume that the words he utters into the mouthpiece will not be broadcasted to the world. To read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication.

*Id.*

The Court went on to acknowledge that the Fourth Amendment "protects people—and not simply 'areas'—against unreasonable searches and seizures." *Id.* at 353. Thus, the Court's first major proposition in *Katz* was that fourth amendment analysis must focus on "people" rather than "places." *Id.* Having gone that far, the Court found that it had to extend its holding one step further to abolish its traditional trespass requirement. *Id.* (overruling the trespass requirement which the Court had established in *Olmstead*).

Thus, as a second major effect of the holding in *Katz*, the Court effectively overturned its prior ruling in *Olmstead* which held that the Fourth Amendment only protects against physical trespasses. *Id.* (stating that the underpinnings of the *Olmstead* decision have become so eroded by subsequent decisions that the traditional "trespass" requirement is no longer a constitutionally-sound doctrine). The Court stated that the petitioner's privacy in his phone conversations which he justifiably relied upon was violated regardless of the absence of a physical trespass into the telephone booth. *Id.*

126. *Katz*, 389 U.S. at 351-52.

securing a search warrant.<sup>127</sup> While the majority took a radical new approach to the fourth amendment "search" issue, it is the language found in Justice Harlan's concurring opinion which emerged as the foundation for the *Katz* formula as it exists today.<sup>128</sup>

In what was to become the core language in fourth amendment "search" jurisprudence, Justice Harlan interpreted the majority's holding to represent that a person is entitled to fourth amendment protection wherever that person has a reasonable expectation of privacy.<sup>129</sup> Justice Harlan broke his "reasonable expectation of privacy" test into two parts: 1) a person must exhibit an actual, or subjective, expectation of privacy;<sup>130</sup> and 2) society must objectively be prepared to recognize that expectation as reasonable.<sup>131</sup> Rejecting the traditional formalistic approach, Justice Harlan adopted a value-oriented

127. *Id.* at 353. The Court held that:

[t]he Government's activities in electronically listening to and recording the petitioner's words violated the privacy upon which he justifiably relied while using the telephone booth and thus constituted a 'search and seizure' within the meaning of the Fourth Amendment. The fact that the electronic device employed to achieve that end did not happen to penetrate the wall of the booth can have no constitutional significance.

*Id.*

128. *See, e.g.,* *Cardwell v. Lewis*, 417 U.S. 583, 591 (1974); *United States v. Dionisio*, 410 U.S. 1, 14 (1973); *Terry v. Ohio*, 392 U.S. 1, 9 (1968).

129. *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). Justice Harlan's refinement of the "search" test set forth by the majority in *Katz* quickly became the prevailing view. *See Serr, supra* note 96, at 593. Justice Harlan's "reasonable expectation of privacy" test has been consistently applied as the functional *Katz* search standard. *See, e.g.,* *California v. Greenwood*, 486 U.S. 35, 39 (1988); *California v. Ciraolo*, 476 U.S. 207, 211 (1986); *Oliver v. United States*, 466 U.S. 170, 177 (1984); *United States v. Knotts*, 460 U.S. 276, 280-81 (1983); *Smith v. Maryland*, 442 U.S. 735, 740 (1979).

130. *See Katz*, 389 U.S. at 361. By first establishing a subjective prong to one's expectation of privacy, Justice Harlan required that individuals actually take affirmative steps to "exhibit" their intentions to keep things to themselves. *Id.* For a critical analysis of the subjective prong of Justice Harlan's "reasonable expectation of privacy" test, see Gutterman, *supra* note 34, at 665-67.

131. *Katz*, 389 U.S. at 361. Justice Harlan adopted the objective prong to his test to ensure that all expectations of privacy be reasonable. *Id.* He stated that if a person exposes something to the "plain view" of outsiders, that person cannot claim fourth amendment protection by merely asserting a subjective expectation of privacy. *Id.* The objective analysis serves as a check to ensure that any alleged subjective expectation of privacy is reasonable. *Id.*

Applying these principles to the facts in *Katz*, the defendant was found to have reasonably expected that his telephone conversations were not being surreptitiously recorded by the police. *Id.* at 352-53. Mr. Katz exhibited a subjective expectation of privacy by occupying the booth, shutting the door behind him, and paying the toll permitting him to place a call. *Id.* at 352. Further, it was objectively reasonable for Mr. Katz to assume that his conversation was not being intercepted by the police. *Id.* As such, the warrantless use of the recording device was deemed a "search" under the Fourth Amendment, and the evidence obtained from it was held inadmissible. *Id.* at 352-53, 360-61. For further discussion of the objective prong to Justice Harlan's "reasonable expectation of privacy" test, see Gutterman, *supra* note 34, at 662-65.

approach which focuses on an individual's true privacy interests within the context of a social dynamic.<sup>132</sup>

While the *Katz* decision greatly broadened the scope of government activity which constitutes a "search" under the Fourth Amendment,<sup>133</sup> the standard is not without its limitations.<sup>134</sup> Because the *Katz* standard requires the individual to form an expectation of privacy in certain activities and to actively take steps to ensure this privacy, the standard is inherently limited to those instances where an individual is given the occasion, or chance, to form such an expectation.<sup>135</sup> In *Katz*,<sup>136</sup> for example, telephone conversations were an ordinary, commonplace activity in society in 1967.<sup>137</sup> Through his common societal experiences, Mr. Katz was aware that public telephone conversations could be overheard by the ordinary passerby, and he guarded against such an

132. See Gutterman, *supra* note 34, at 662-67 (summarizing the effect of the *Katz* decision). Professor Gutterman states that:

[t]his view of the fourth amendment was intended to escape the structure of a formalistic property analysis and to affirm the concept that the amendment protects certain privacy rights. The *Katz* Court explicitly eliminated the trespass requirements, implicitly rejected the constitutionally protected areas standard, and decided that Katz had a right to expect his conversation on this public telephone would remain private. . . . The right of the individual to be left alone to live his daily life secure against arbitrary invasions by governmental officials appeared once again to become the basic value protected by the fourth amendment.

*Id.* at 663.

133. See *id.* at 662-65; Katz, *Twenty-first Century*, *supra* note 17, at 557. Professor Katz argues that the *Katz* decision's expansion of fourth amendment coverage was sound for two reasons. *Id.* First, he argues that the decision is consistent with the actual language of the Fourth Amendment. *Id.* Second, he states that this expansion is supported by social and economic changes. *Id.*

134. This note argues that Katz's "expectation of privacy" test should only be applied in those instances where it is fair and logical to require an individual to form such an expectation. See Katz v. United States, 389 U.S. 347, 361 (1967) (requiring an individual to form an actual expectation of privacy before invoking the protection of the Fourth Amendment). This note argues that Katz's limitations prohibit its application to devices or methods of surveillance which are uncommon to a certain community. See *infra* notes 135-46 and accompanying text. See also *infra* section VI.A.

135. See Katz, 389 U.S. at 363 (stating that if an individual fails to form an expectation of privacy, she has waived her fourth amendment right to be free from unreasonable searches and seizures). This note argues that a person is only able to take the active step of forming an expectation in those instances where her societal experience has given her the occasion to form an expectation of privacy. This note proposes an "extraordinary device" exception which would allow the courts to forgo a *Katz* analysis in those instances where a person was never afforded the opportunity to actively form an expectation of privacy. See *infra* section VI.A.

136. 389 U.S. 347 (1967). For a discussion of the *Katz* decision, see *supra* notes 122-32 and accompanying text.

137. See *id.* at 361 (stating that it is the societal norm to enter a telephone booth, shut the door behind you, and reasonably assume that your conversation will be kept private).

interception by placing his call in a closed telephone booth.<sup>138</sup> Through his societal experiences, Mr. Katz was given a reason, or chance, to form an expectation of privacy in his phone calls, and he actively chose to safeguard this privacy interest.<sup>139</sup> Thus, it is both fair and logical to require that Mr. Katz form an expectation of privacy in his phone conversations and, further, that he objectively exhibit this expectation.<sup>140</sup>

Now, compare the *Katz* fact pattern<sup>141</sup> to the following hypothetical:

*Suppose that the government, in 1996, developed a new high-tech device which could measure precise sound wave patterns in one's voice, and with these measurements, the device could inform its user of the exact number and nature of illegal acts which the speaker has previously engaged in. Further, suppose that the government indiscriminately phoned people in the community, pretending to be a common solicitor, and used the device to obtain this very damaging evidence, secure arrest warrants, and finally to indict those people with sufficient criminal histories.*

The difference between the governmental activity in the hypothetical and that in *Katz*<sup>142</sup> is subtle, yet crucial. It is a fundamental principle in society that if one does not want others to hear the content of a conversation, appropriate steps can be taken to help assure a certain degree of privacy.<sup>143</sup> It is thus fair and logical to speak in terms of an "expectation of privacy" in this instance. The high-tech scrutiny of voice wave patterns, on the other hand, does not commonly exist in society, and while individuals have reason to consciously monitor the content of their speech, they were never given reason to monitor the sound wave patterns of their voice. It is unfair and illogical to even speak in terms of an "expectation of privacy" in regards to the sound wave patterns of one's voice. The dynamic relationship between society and the individual, that

138. *Id.* at 352, 361 (stating that Mr. Katz made his phone calls from a closed public telephone booth).

139. *See id.* Mr. Katz, like any member of his community, knew that he would have to make his phone call in an area which enabled him to exclude the uninvited ear of a passerby. Mr. Katz's dealings with society put him on notice that if he wanted to keep his telephone conversations private, he would have to actively take steps to seclude himself from the hearing distance of others. *Id.*

140. *See supra* notes 136-39 and accompanying text.

141. For a discussion of the facts in *Katz*, see *supra* notes 122-23 and accompanying text.

142. The FBI agents in *Katz* placed an electronic recording device on the outside of a public telephone booth to record the substance of the defendant's telephone conversions. *Katz v. United States*, 389 U.S. 347, 348 (1967); *See also supra* notes 122-23 and accompanying text.

143. *See Katz*, 389 U.S. at 352. Mr. Katz was able to take the appropriate steps to ensure privacy in his telephone conversations by entering a telephone booth and shutting the door behind him. *Id.*



by which the *Katz* formula is inherently bound, does not afford the individual an occasion to develop such an expectation.<sup>144</sup> Thus, *Katz*'s limitations preclude its application to situations where an individual was never given occasion to develop an expectation of privacy in the first place.<sup>145</sup> The true problem, however, is not the fact that the *Katz* standard is limited in its application; rather, the problem lies in the Court's subsequent mutations of the *Katz* formula in which the true spirit of *Katz* and its limitations are not realized.<sup>146</sup>

#### IV. MISAPPLICATIONS OF THE *KATZ* STANDARD

Since 1967, the Court has applied the *Katz* "reasonable expectation of privacy" standard to a wide variety of situations in determining whether certain types of governmental activities constitute a "search" under the Fourth Amendment.<sup>147</sup> In its attempts, however, the Court has strayed from the

144. See generally Gutterman, *supra* note 34, at 700-07 (discussing the government's use of electronic monitoring equipment (a beeper) to track persons in their automobiles). Professor Gutterman explains that when we travel in an automobile on the public roads, we anticipate that others may observe us as we move from place to place. *Id.* at 701. He states that the fact that observation may be accomplished by ordinary, visual surveillance does not allow the courts to extend this principle to the government's use of high-tech, electronic surveillance equipment. *Id.* This type of monitoring goes far beyond the "ordinary" powers of observation and ought not be allowed in a free society. *Id.* See also *United States v. Bobisink*, 415 F. Supp. 1334, 1339 (D. Mass. 1976) (stating that surveillance techniques which extend beyond the normal powers of observation should not be extended to law enforcement personnel in a free society).

145. See *supra* note 144. For a discussion of a proposed "extraordinary device exception" which would prohibit applying *Katz* to situations in which it would be unfair and illogical, see *infra* notes 256-76 and accompanying text.

146. See *infra* notes 152-203 and accompanying text for a discussion of the Court's application of the *Katz* doctrine. See also Gutterman, *supra* note 34, at 667 (arguing that the Supreme Court's application of *Katz* has led to results which undercut *Katz*'s promise); Jon E. Lemole, *From Katz to Greenwood: Abandonment Gets Recycled from the Trash Pile — Can Our Garbage Be Saved from the Court's Rummaging Hands?*, 41 CASE W. RES. L. REV. 581, 583 (1991) (stating that the Court has misapplied the *Katz* doctrine in its later decisions by contending that there is no reasonable expectation of privacy in something voluntarily conveyed to a third party); Serr, *supra* note 96, at 598 (asserting that the Supreme Court's application of the *Katz* standard has greatly limited the scope of the Fourth Amendment); Katz, *Twenty-first Century*, *supra* note 17, at 554 (arguing that in the decades since the Court decided *Katz*, it has applied the doctrine to reduce rather than enhance the protections of the Fourth Amendment). Professor Katz further adds that the "*Katz* standard has been twisted to allow the government access to many intimate details about our lives without having to establish the reasonableness of its behavior." *Id.*

147. See, e.g., *Florida v. Riley*, 488 U.S. 445 (1989) (deciding whether the aerial surveillance of the government over the defendant's greenhouse constituted a "search" under the Fourth Amendment); *United States v. Dunn*, 480 U.S. 294 (1987) (deciding whether police officers were "searching" when they entered the defendant's "open field" and used a flashlight to peer into his barn); *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986) (deciding whether the government intruded on the defendant's reasonable expectation of privacy when police officers flew over his industrial complex and used a very sophisticated mapping camera to take photographs); California

actual *Katz* standard and has created a number of sub-doctrines which mask the true spirit of *Katz*.<sup>148</sup> More importantly, however, is that these sub-doctrines render *Katz's* limitations, discussed in the previous section,<sup>149</sup> more difficult to realize.<sup>150</sup> An analysis of the Court's post-*Katz* cases is necessary to understand this phenomena which lies at the core of the courts' difficulties in deciding the FLIR issue.<sup>151</sup>

#### A. The Plain View Doctrine

In plain, unambiguous language, the Court in *Katz* stated that fourth amendment protection was to attach to the person and not to a particular list of places.<sup>152</sup> This fundamental tenet of the *Katz* decision was overlooked when the Court resurrected its traditional "open field" doctrine in *Oliver v. United*

*v. Ciraolo*, 476 U.S. 207 (1986) (deciding whether the police officers' conduct amounted to a "search" when they flew over the defendant's home and spotted marijuana growing in his backyard); *United States v. Karo*, 468 U.S. 705 (1984) (deciding whether the police officers invaded the defendant's reasonable expectation of privacy by attaching a beeper to contraband which the defendant eventually took into his home); *United States v. Knotts*, 460 U.S. 276 (1983) (deciding whether the electronic monitoring of the defendant in his automobile amounted to a "search" under the Fourth Amendment); *United States v. Place*, 462 U.S. 696 (1983) (deciding whether the government's use of narcotics dogs to sniff the defendant's luggage violated his reasonable expectation of privacy); *Smith v. Maryland*, 442 U.S. 735 (1979) (deciding whether the government's installation of a pen register device to record the telephone numbers dialed from the defendant's telephone constituted a "search" for purposes of the Fourth Amendment); *United States v. White*, 401 U.S. 745 (1971) (deciding whether the warrantless electronic eavesdropping by government agents by means of a transmitter which an informer consented to wear during meetings with the defendant violated the defendant's reasonable expectation of privacy).

148. See *Berner*, *supra* note 17, at 394-97 (arguing that the Court has created several sub-doctrines to the *Katz* formula which are not representative of true fourth amendment rights); *Gutterman*, *supra* note 34, at 667-707 (discussing the erosion of the *Katz* doctrine as a result of the Supreme Court's adoption of several "search" theories which seem to retreat from the true meaning of the *Katz* decision). For a discussion of the "plain view" doctrine, see *infra* notes 152-64 and accompanying text. See *infra* notes 165-94 and accompanying text for an analysis of the Court's creation of the "risk of exposure" theory. The "intimate activities" doctrine is discussed *infra* notes 195-203 and accompanying text.

149. For a discussion of the inherent limitations of *Katz's* "reasonable expectation of privacy" standard, see *supra* notes 133-46 and accompanying text.

150. By creating separate doctrines and theories within the *Katz* analysis, the Court has turned its focus away from the actual "reasonable expectation of privacy" standard. In so doing, *Katz's* inability to effectively analyze those governmental surveillance techniques not common to society has gone unacknowledged.

151. For a list of those courts split on the issue of whether the warrantless use of a FLIR on a person's home is a fourth amendment "search," see *supra* notes 13-15. For a discussion of the different holdings in the FLIR cases, see *infra* notes 219-53 and accompanying text.

152. *Katz v. United States*, 389 U.S. 347, 351 (1967) (stating that the Fourth Amendment "protects people, not places"). For a more in-depth discussion of the *Katz* decision, see *supra* notes 122-32 and accompanying text.

*States*.<sup>153</sup> The *Oliver* Court established the blanket rule that any police activity conducted in an open field, however unreasonable, is not a “search” for purposes of the Fourth Amendment.<sup>154</sup> The Court reasoned that because an open field is in “plain view,” it does not provide the setting for the type of intimate activities which the Fourth Amendment was intended to protect.<sup>155</sup> Such a broad decision is a generic application of the *Katz* standard, one in which the Court chose to rubber stamp the issue rather than examine the defendant’s true expectations of privacy.<sup>156</sup> The extent to which the Court was willing to extend the “plain view” doctrine was illustrated in *United States v. Dunn*.<sup>157</sup>

In *Dunn*, DEA agents entered the defendant’s “open field” without a search warrant to determine if he was producing illegal drugs in his barn.<sup>158</sup> To

153. 466 U.S. 170, 183 (1984) (holding that police officers were not “searching” when they entered the defendant’s “open fields” without a search warrant and discovered marijuana). See Serr, *supra* note 96, at 605-06 (stating that the Court in *Oliver* reverted back to the pre-*Katz* construction of the Fourth Amendment as only protecting against an actual physical trespass onto a specific list of constitutionally protected areas).

In *Oliver*, narcotics agents received a tip that Mr. Oliver was growing marijuana on his farm. *Oliver*, 466 U.S. at 173. Without a warrant, the agents entered Oliver’s land by driving past Oliver’s home to a locked gate marked with a “No Trespassing” sign. *Id.* at 173 n.1. The agents walked around the gate and searched Oliver’s land, eventually finding a field of marijuana about one mile from his home. *Id.* at 173.

154. *Oliver*, 466 U.S. at 179. The Court held, essentially, that any privately-owned property outside of the home and the yard is an “open field” for purposes of the Fourth Amendment and is not entitled to protection, including a heavily forested area. *Id.* at 180 n.11.

155. *Id.* at 176-77. The Court stated that “the government’s intrusion upon the open fields is not one of those ‘unreasonable searches’ proscribed by the text of the Fourth Amendment.” *Id.* at 177. The Court construed the text of the Fourth Amendment strictly and argued that the Fourth Amendment seeks to protect people in their “persons, houses, papers, and effects,” [but] is not extended to open fields.” *Id.* at 176.

156. See Serr, *supra* note 96, at 607 (stating that the *Oliver* Court justified its holding by belittling across the board a person’s privacy interest in open fields); Gutterman, *supra* note 34, at 689 (stating that it is commonplace for individuals to expect that their privately-owned woods and fields which they protect from public view are entitled to some measure of privacy). Professor Gutterman further notes that society does acknowledge this privacy interest, but it is the court, in its war against narcotics, which has deemed this privacy interest not essential. *Id.*

157. 480 U.S. 296, 296-97 (1987).

158. *Id.* at 294. The DEA agents first noticed that a particular individual was buying large amounts of chemicals and equipment used to make controlled substances. *Id.* at 296. The agents then placed electronic monitoring devices in some of the equipment, which led them to the defendant’s ranch. *Id.* See generally *United States v. Knotts*, 460 U.S. 276, 285 (1983) (holding that use of electronic monitoring equipment by police officers to track an individual in his automobile did not amount to a “search” under the Fourth Amendment). The agents then took aerial photographs of the defendant’s ranch and the surrounding area. *Dunn*, 480 U.S. at 297. See generally *California v. Ciraolo*, 476 U.S. 207, 213-14 (1986) (ruling that aerial surveillance of a person’s home and surrounding area did not constitute a fourth amendment “search”). It was at this point that the agents made their way onto the defendant’s property without a search warrant. *Dunn*, 480 U.S. at 297.

reach their vantage point, the agents traveled a half-mile off of a public road, crossed over the farm's perimeter fence, crossed over several barbed wired and wooden fences, made their way under the eaves of the defendant's barn, and used a flashlight to see through fishnetting into the barn.<sup>159</sup> The Court reasoned that because the DEA agents had only entered the defendant's "open field" and had observed only what was in "plain view," they were not "searching" within the meaning of the Fourth Amendment.<sup>160</sup>

In addition to Justice Brennan's vigorous dissent in *Dunn*,<sup>161</sup> the decision has been criticized for applying the once-rejected "open fields" doctrine<sup>162</sup> in conjunction with the "plain view" doctrine to reach a conclusion that gives little regard to property owners' true privacy interests.<sup>163</sup> As the Court

159. *Dunn*, 480 U.S. at 297-98. The agents observed what they suspected to be a drug laboratory within the defendant's barn and returned twice the following day to confirm the laboratory's presence. *Id.* at 298. With this information, the agents obtained a search warrant, arrested the defendant, and charged him with conspiracy to manufacture a controlled substance and related offenses. *Id.* at 298-99.

160. *Id.* at 304. The Court noted that the police officers never entered the defendant's barn but rather had remained on the defendant's "open field" the entire time. *Id.* The Court held that from this constitutional vantage point, the officers "merely stood, outside the curtilage of the house and in the open fields upon which the barn was constructed, and peered into the barn's open front." *Id.* The Court found that the activity within the barn was in "plain view" of the agents. *Id.* Reverting back to the notion of the Fourth Amendment only protecting against a physical trespass on a specific list of protected places, discussed at *supra* notes 113-20 and accompanying text, the Court held that "standing as they were in the open fields, the Constitution did not forbid them to observe the phenylacetone laboratory located in respondent's barn." *Dunn*, 480 U.S. at 304.

161. *United States v. Dunn*, 480 U.S. 294, 305 (1987) (Brennan, J., dissenting). Justice Brennan argued that the Court's holding gave no consideration to either the individual's sense of security or the individual's true privacy interests. *Id.* at 319. He stated that the majority's decision to allow this type of police activity negatively affected an individual's fourth amendment privacy interests in two ways: first, the individual's sense of security is put into jeopardy; and second, those who wish to safeguard their privacy interests are burdened too heavily. *Id.* Professor Amsterdam addressed these types of effects when he stated that "[t]he question is not whether you or I must draw the blinds before we commit a crime. It is whether you and I must discipline ourselves to draw the blinds every time we enter a room, under pain of surveillance." *See Amsterdam, supra* note 17, at 403.

162. The *Katz* decision appeared to explicitly reject the notion that the Fourth Amendment is concerned with a list of "protected places." *See Katz v. United States*, 389 U.S. 347, 351 (1967) (stating that the "Fourth Amendment protects people, not places."). *See also supra* note 125.

163. *See, e.g., Gutterman, supra* note 34, at 688-94. Professor Gutterman notes that the effect of the Court's holding in *Dunn* is to give law enforcement officers the "unrestricted power to engage anytime in surveillance of private property in open fields, for as long as they want, with as much personnel and equipment as desired." *Id.* at 694. He further argues that the *Dunn* holding "violently distorts" the English language, strikes at the "heart of the meaning of security and privacy," and does the Fourth Amendment a "great injustice." *Id.* at 693.

incorporated additional doctrines into its “search” analysis, it continued to retreat from the spirit of the *Katz* decision.<sup>164</sup>

### B. The Risk of Exposure Doctrine

In an attempt to conceptualize its “reasonable expectation of privacy” standard, the Court in *Katz* stated that “[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of fourth amendment protection.”<sup>165</sup> In subsequent search decisions, however, the Court has treated this language as an independent rule rather than as a means to understanding the true spirit of the *Katz* analysis and has used it in creating a “risk of exposure” doctrine which escapes a true application of the “reasonable expectation of privacy” standard.<sup>166</sup> The following cases illustrate the general thrust of the doctrine, which generally purports that a person is not entitled to fourth amendment protection in a certain activity or thing if that person merely *risks* exposing that activity or thing to the general public.<sup>167</sup>

164. See *infra* notes 165-203 and accompanying text (discussing the Court’s utilization of the “risk of exposure” doctrine and the “intimate activities” argument).

165. *United States v. Katz*, 389 U.S. 347, 351 (1967).

166. See Amsterdam, *supra* note 17, at 384. Professor Amsterdam argues that reducing the *Katz* doctrine to principles of risk-taking escapes the true meaning of *Katz* and leaves one’s privacy rights completely in the hands of the government. *Id.* Professor Amsterdam further states that “the government could diminish each person’s subjective expectation of privacy merely by announcing half-hourly on television that *1984* [by George Orwell] was being advanced by a decade and that we were all forthwith being placed under comprehensive electronic surveillance.” *Id.* See also Gutterman, *supra* note 34, at 667-75. Gutterman argues that the Court’s adoption of the “risk of exposure” doctrine radically altered the promise of the *Katz* decision and greatly reduced the Fourth Amendment’s scope of protection. *Id.* at 670.

167. See, e.g., *Florida v. Riley*, 488 U.S. 445, 449-52 (1989) (deciding that law enforcement officers did not “search” the defendant’s greenhouse which was missing a ceiling panel when they flew over the structure and observed a marijuana growing operation because this activity was subject to observation by the general flying public); *California v. Ciraolo*, 476 U.S. 207, 213-14 (1986) (holding that because the defendant risked exposing his marijuana garden to the general flying public, police officers were not “searching” when they flew over his property and observed the growing crops); *California v. Greenwood*, 486 U.S. 35, 40-42 (1988) (holding that the defendant did not have a reasonable expectation of privacy in curbside garbage left for pickup because he risked exposing the contents of the garbage to snoops, animals, and mischievous children); *United States v. Knotts*, 460 U.S. 276, 281-82 (1983) (ruling that the defendant traveling in an automobile had no expectation of privacy in his movements because he voluntarily conveyed his movements to anyone who wanted to look); *Smith v. Maryland*, 442 U.S. 735, 742-44 (1979) (holding that the defendant relinquished his expectation of privacy in the telephone numbers which he dialed by risking their exposure to the telephone company).

This note argues that the Court’s adoption of such a doctrine within its analysis of *Katz* deflects attention away from the actual *Katz* analysis. Critics, however, have attacked the “risk of exposure” doctrine directly as a completely misplaced application of fourth amendment jurisprudence. See, e.g., Amsterdam, *supra* note 17, at 406. Professor Amsterdam argues that “[t]he fact that our ordinary social intercourse, uncontrolled by government, imposes certain risks

In both *California v. Ciraolo*<sup>168</sup> and *Florida v. Riley*,<sup>169</sup> the police engaged in an aerial surveillance of property suspected of harboring illegal activity.<sup>170</sup> In each case, the police were acting upon an informant's tip that the homeowner was growing marijuana.<sup>171</sup> The Court held that in both cases the police were not "searching."<sup>172</sup> The Court reasoned that any activity conducted outdoors carries with it the risk that a member of the general flying public could possibly view the activity.<sup>173</sup> Thus, rather than engage in a true *Katz* analysis, the Court created a very broad doctrine that not only deflects attention away from the spirit of *Katz*, but also diminished fourth amendment privacy rights.<sup>174</sup>

upon us hardly means that government is constitutionally unconstrained in adding to those risks." *Id.*

168. 476 U.S. 207 (1986).

169. 488 U.S. 445 (1989).

170. *Ciraolo*, 476 U.S. at 209 (stating that the police flew over the defendant's property in a fixed-wing airplane at an altitude of 1,000 feet); *Riley*, 488 U.S. at 448-49 (reporting that the officers flew over the defendant's property in a helicopter at an altitude of 400 feet).

171. In *Ciraolo*, the officers identified marijuana plants eight feet to ten feet in height growing in the defendant's backyard garden. *Ciraolo*, 476 U.S. at 209. In *Riley*, the police flew over the defendant's greenhouse which was located 10 to 20 feet behind his mobile home. *Riley*, 488 U.S. at 448. Because two of the roof panels were missing, approximately 10 percent of the roof area, the officers were able to identify marijuana growing within the greenhouse. *Id.*

172. *California v. Ciraolo*, 476 U.S. 207, 213-14 (1986); *Riley*, 488 U.S. at 448-50.

173. See *Florida v. Riley*, 488 U.S. 445, 450-51 (1989) (reasoning that the defendant must have expected that his greenhouse was unprotected from public or official observation from a helicopter flying within the navigable airspace); *Ciraolo*, 476 U.S. at 213-14 (stating that it is irrelevant that the officers were trained to identify marijuana plants because any member of the general flying public could have looked down and observed the same thing). *But see id.* at 224 n.8 (Powell, J., dissenting). Justice Powell stated that "[a]s all of us know from personal experience, at least in passenger aircraft, there rarely—if ever—is an opportunity for a practical observation and photography of unlawful activity similar to that obtained by [the officers] in this case." *Id.*

174. The extremely broad and generic doctrine which the Court established in *Ciraolo* and *Riley* stands for the proposition that if an individual risks any public exposure, however slight or minimal, the police then have a free license to engage in an investigation of that area. See *Ciraolo*, 476 U.S. at 213; *Riley*, 488 U.S. at 448. This doctrine could dramatically diminish any sense of privacy which some individuals may have. See Amsterdam, *supra* note 17, at 404. Professor Amsterdam states that:

[f]or the tenement dweller, the difference between observation by neighbors and visitors who ordinarily use the common hallways and observation by policemen who come into the hallways to "check up" or "look around" is the difference between all the privacy that this condition allows and none.

*Id.* Further, subjecting privacy interests to this type of risk-taking analysis could present undue burdens on those individuals who desire complete privacy. See *id.* at 402 (stating that while "anyone can protect himself against surveillance by retiring to the cellar, cloaking all the windows with thick caulking, turning off the lights and remaining absolutely quiet," the Fourth Amendment was written to keep the homeowner from having to choose between "shutting up his windows or having a policeman look in."). Professor Amsterdam further notes that if the Fourth Amendment required this much withdrawal, the kind of open society in which we live would be completely diminished. *Id.*

In addition to the common airplane passenger, the Court in *California v. Greenwood*,<sup>175</sup> extended its risk-taking doctrine to include mischievous third parties who could rummage through one's garbage.<sup>176</sup> Suspecting the homeowner of dealing drugs, the police in *Greenwood* obtained several plastic garbage bags which the homeowner had left at the curb for the local trash collector.<sup>177</sup> In holding that the rummaging through of the defendant's trash without a warrant was not a "search," the Court reasoned that the homeowner had abandoned the garbage by placing it outside to be collected by a third party.<sup>178</sup> The Court further reasoned that the defendant, by placing the garbage bags outside, took the risk that animals, vagrants, or mischievous children may rummage through the trash, thus destroying any reasonable expectation of privacy.<sup>179</sup> Like the decisions in *Riley*<sup>180</sup> and *Ciraolo*,<sup>181</sup> the

175. 486 U.S. 35 (1988).

176. *Id.* at 40 (holding that the respondents had sufficiently risked exposing their curbside garbage to the public, thereby relinquishing any fourth amendment privacy right).

177. *Id.* at 37. The police actually asked the neighborhood trash collector to pick up the defendant's trash first and then hand it over to the police. *Id.* The police discovered items indicative of drug use and, relying on this evidence, obtained a search warrant to search the property owner's residence. *Id.* After recovering quantities of hashish and cocaine in the house, the police arrested the homeowner, who was subsequently indicted on criminal charges. *Id.* The dissenting opinion noted that the defendant had left the garbage for the collector in sealed, opaque containers. *Id.* at 45 (Brennan, J., dissenting).

178. *Greenwood*, 486 U.S. at 40-41. The Court stated that the defendant had placed his garbage at the curb for the express purpose of conveying it to a third party, the trash collector. *Id.* The Court reasoned that the trash collector could have sorted through the refuse himself or could have permitted others, including the police, to do so. *Id.* The Court further noted that the garbage was deposited "in an area particularly suited for public inspection and, in a manner of speaking, public consumption, for the express purpose of having strangers take it." *Id.* (citing *United States v. Reichert*, 647 F.2d 397, 399 (Cal. Ct. App. 1981)).

The dissenting opinions, however, took a different approach arguing that *Greenwood* had only exposed to the public the exterior of several opaque, sealed containers. *Id.* at 53. The dissent argued that had *Greenwood* strewn his trash all over the curb for the entire public to see, the Court's holding may have had some merit; however, given the facts as they were, *Greenwood* conveyed the closed bags not for the purpose of scrutiny but rather for the purpose of disposal. *Id.* at 54.

179. *California v. Greenwood*, 486 U.S. 35, 40 (1988).

It is common knowledge that plastic garbage bags left on or at the side of a public street are readily accessible to animals, children, scavengers, snoops, and other members of the public. Moreover, respondents placed their refuse at the curb for the express purpose of conveying it to a third party, the trash collector, who might himself have sorted through the respondent's trash or permitted others, such as the police, to do so. *Id.* *But see id.* at 54 (stating that the mere possibility that meddlers may stumble onto one's property and sort through containers does not negate one's reasonable expectation of privacy). The dissent further argued that the possibility of a burglary does not destroy an expectation of privacy in one's home nor does the possibility that an operator will listen in on a telephone conversation negate one's expectation of privacy in the words spoken. *Id.*

180. 488 U.S. 455 (1989). For a discussion of the Court's decision in *Riley*, see *supra* notes 169-74 and accompanying text.

*Greenwood* decision seized upon the risk-taking doctrine as a substitute to a true application of the *Katz* standard.<sup>182</sup>

While the Court's "risk of exposure" doctrine, or at least a derivation of it, shows up in a variety of different fourth amendment cases,<sup>183</sup> two additional cases merit discussion.<sup>184</sup> The Court in *United States v. Knotts*<sup>185</sup> held that the warrantless placement of a beeper<sup>186</sup> in a container taken by the suspect to track the suspect in his automobile was not a "search."<sup>187</sup> The Court reasoned that the defendants did not have a reasonable expectation of privacy because any

181. 476 U.S. 207 (1986). The *Ciraolo* decision is discussed *supra* notes 168-74 and accompanying text.

182. See *supra* notes 175-82 and accompanying text. By employing the generic risk-taking doctrine, the Court escaped asking the "reasonable expectation of privacy" question set forth in *Katz*. In fact, the risk-taking notion actually contradicts one of the main precepts of the *Katz* decision: "[w]hat a person] . . . seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected." *Katz v. United States*, 389 U.S. 347, 351 (1967). Thus, the mere fact that an individual risked public exposure does not end the *Katz* analysis. The *Katz* inquiry requires a case-by-case analysis of the particular facts involved and requires that the Court give credence to the express language in *Katz* rather than creating such sweeping, generic doctrines.

183. See generally *Berner*, *supra* note 17, at 394-95 (discussing the Court's use of "the analogy to private citizens," which operates on the same principles as the "risk of exposure" doctrine). Professor *Berner* explains that the Court often invokes images of the general public in determining whether certain police activity is a "search." *Id.* at 394. The analogy to private citizens seeks to legitimize certain police activity by arguing that a private citizen could have legally engaged in the same activity. *Id.* at 394-95. *Berner*, however, rejects this argument, stating that "[w]hen doing constitutional jurisprudence, references to the legality or illegality of actions of private citizens are usually beside the point." *Id.* at 395. The "analogy to private citizens" and the "risk of exposure" doctrine are simply different ways of phrasing the same notion.

184. *United States v. Knotts*, 460 U.S. 276 (1983), and *Smith v. Maryland*, 442 U.S. 735 (1979), are both important fourth amendment cases, not only because they further illustrate how the Court's "risk of exposure" doctrine deflects attention away from the *Katz* analysis, but also because they are frequently cited in cases determining the constitutionality of the warrantless use of the FLIR. See *infra* notes 240-44 and accompanying text.

185. 460 U.S. 276 (1983).

186. A beeper is a radio transmitter which sends a signal of a certain frequency which can be picked up by a radio receiver. *Id.* at 277.

187. *Id.* at 285. In *Knotts*, police officers suspected the defendants of producing illegal drugs, and they installed a beeper inside a five gallon container of chloroform, a substance used to make amphetamine, which they believed that the defendants would purchase. *Id.* at 278. When the defendants purchased the container, the police used the beeper to track them to one of the defendants' cabin. *Id.* Relying on the location of the chloroform and additional information obtained by the officers, they obtained a search warrant and found formulas for illicit drugs and \$10,000 worth of laboratory equipment. *Id.* at 279. The Supreme Court ruled that the monitoring of the beeper signals to track the defendants' car did not invade any reasonable expectation of privacy and did not amount to a "search" under the Fourth Amendment. *Id.* at 285.



traveler on the public thoroughfares could have seen and followed them.<sup>188</sup> Thus, the fact that a person risked some type of public exposure again served to destroy any reasonable expectation of privacy. In *Smith v. Maryland*,<sup>189</sup> the Court held that the warrantless use of a pen register<sup>190</sup> by police to record local phone numbers dialed from a private phone did not constitute a “search” under the Fourth Amendment.<sup>191</sup> The Court reasoned that the defendant “voluntarily” conveyed the phone numbers to the telephone company, thereby assuming the risk that the company would reveal to the police the numbers which he dialed.<sup>192</sup> While the Court’s creation of the risk-taking doctrine as

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188. *Id.* at 281-82. The Court stated that:

[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another. When [the defendant] traveled over the public streets he voluntarily conveyed to anyone who wanted to look the fact that he was travelling over particular roads in a particular direction, the fact of whatever stops he made, and the fact of his final destination when he exited from public roads onto private property.

*Id.*

189. 442 U.S. 735 (1979).

190. A pen register is a device which is able to record the particular numbers dialed on a telephone by monitoring electrical impulses. See *United States v. N.Y. Tel. Co.*, 434 U.S. 159, 161 n.1 (1977). To avoid a physical trespass into the home or office, the pen register can be installed at the telephone company.

In *Smith*, the police installed a pen register at the local telephone company to record the phone numbers called from the defendant’s home. *Smith*, 442 U.S. at 737. The police received information from a robbery victim that the perpetrator had been calling her on the phone and harassing her. *Id.* With enough information to suspect the defendant, but without enough evidence for probable cause to secure a search warrant, the police utilized the pen register and obtained evidence that the defendant was the one placing the phone calls. *Id.* The defendant was indicted for committing the robbery and sought to suppress “all fruits derived from the pen register” on the grounds that the police had failed to obtain a search warrant before using the device. *Id.*

191. *Smith*, 442 U.S. at 745-46. The Court in *Smith* held that the defendant did not form an actual expectation of privacy in the phone numbers that he dialed and even if he did, society was not prepared to recognize that expectation as reasonable. *Id.* Thus, the Court ruled that the installation and use of the pen register did not amount to a “search” under the Fourth Amendment and that a search warrant was not required. *Id.*

192. *Id.* at 745-46. First, the Court reasoned that the defendant did not have an actual expectation of privacy because telephone users typically know that they must convey numerical information to the phone company and that the phone company records this information for legitimate business purposes. *Id.* at 743. Second, the Court stated that society is not prepared objectively to recognize this expectation as reasonable because by “exposing” the telephone numbers to the operator, the defendant assumed the risk that the company would reveal this information to the police. *Id.* at 744.

The dissent, on the other hand, attacked the Court’s inference that exposing the numbers to the phone company for limited business purposes carried with it the risk that the company would convey the information to the police. *Id.* at 749. The dissent argued that *Katz* is not concerned with the risks an individual is presumed to accept but rather is concerned with those risks which he should be forced to assume in a free society. *Id.* at 750.

a means of applying the *Katz* standard has been widely criticized,<sup>193</sup> the Court continued to create anomalous doctrines rather than apply the true values and principles expressed in *Katz*.<sup>194</sup>

### C. The "Intimate Activities" Doctrine

In addition to the Court's resurrection of the "plain view" notion<sup>195</sup> and its creation of the "risk of exposure" doctrine<sup>196</sup> as a means of applying the *Katz* standard, the Court also began to focus on the intrusiveness of the police activity and the extent of intimate information which that activity revealed.<sup>197</sup> The case which best illustrates the "intimate activities" analysis is *United States v. Place*.<sup>198</sup> In *Place*, the Court was called on to decide whether the exposure of luggage to a trained narcotics detection dog was a "search" under the *Katz* standard.<sup>199</sup> In holding that the canine sniff did not amount to a "search" under the Fourth Amendment, the Court focused on the very limited nature of the information disclosed by the method.<sup>200</sup> The Court reasoned that such a discriminating procedure does not carry with it the same fourth amendment concerns implicated by more intrusive methods.<sup>201</sup> Although the Court's focus on the limited nature of certain police activity in cases like *Place* has been

193. See *Amsterdam, supra* note 17, at 406 (stating that "[t]he fact that our ordinary social intercourse, uncontrolled by government, imposes certain risks upon us hardly means that government is constitutionally unconstrained in adding to those risks.>").

194. See *infra* notes 195-203 and accompanying text (discussing the Court's "intimate activities" argument).

195. See *supra* notes 152-64 and accompanying text, for a discussion of the plain view doctrine.

196. See *supra* notes 165-92 and accompanying text, for a discussion of the Court's "risk of exposure" doctrine.

197. See *Berner, supra* note 17, at 396 (discussing the Court's adoption and utilization of the "intimate activities" argument in its "search" jurisprudence).

198. 462 U.S. 696 (1983).

199. *Id.* at 696. Upon arriving in New York's La Guardia Airport, the defendant was approached by law enforcement officers who said that they believed that he was carrying drugs. *Id.* After the defendant refused to consent to a search of his luggage, the officers subjected the luggage to a "sniff test" by a trained narcotics dog, obtained a search warrant from the results of the "sniff test," and ultimately discovered cocaine in the defendant's luggage. *Id.* At his trial, the defendant sought to have the evidence excluded, arguing that the warrantless use of the narcotics dog on his luggage violated his fourth amendment rights. *Id.* at 696-97.

200. *Id.* at 707. The Court in *Place* stated that "the sniff discloses only the presence or absence of narcotics, a contraband item. Thus, despite the fact that the sniff tells the authorities something about the contents of the luggage, the information obtained is limited." *Id.* The Court further stated that it was aware of no other method of investigation which is so limited both in the manner which it gleanes its information and the specific content of the information gleaned. *Id.*

201. *Id.* The Court reasoned that the limited nature of canine sniffs ensures that the property owner is not subjected to the embarrassment and inconvenience caused by other, less discriminate, investigatory methods. *Id.*

widely criticized,<sup>202</sup> the Court has consistently employed this principle in its fourth amendment jurisprudence.<sup>203</sup>

In its attempts to apply *Katz*'s "reasonable expectation of privacy" standard, the Court has developed several doctrines which do not remain faithful to the spirit of *Katz*.<sup>204</sup> As a result, *Katz*'s inherent limitations have become less obvious and more difficult to realize.<sup>205</sup> The Court's failure to recognize *Katz*'s logical limitations becomes increasingly dangerous as the police begin using more highly sophisticated devices, like the FLIR, which are uncommon in society.<sup>206</sup> The conflicting FLIR cases provide direct evidence that the *Katz* standard cannot logically nor fairly be applied to extraordinary devices which have not become integrated into society.<sup>207</sup>

## V. THE FLIR CASES

It is no surprise that the courts are split as to whether individuals have a reasonable expectation of privacy in the heat emanating from their homes.<sup>208</sup>

202. See, e.g., Gutterman, *supra* note 34, at 709-10. Professor Gutterman argues that "[a]lthough the technique may be discriminating and minimally offensive as compared to other detection devices, and may disclose only the presence or absence of limited information, it still remains as a method to disclose the contents of private property in private, enclosed space." *Id.* at 710. See also Berner, *supra* note 17, at 396 (arguing that the Fourth Amendment prohibits unreasonable "searches" and "seizures" not because of the nature or scope of the yielded results, but rather because they are improper intrusions).

203. See, e.g., *Florida v. Riley*, 488 U.S. 445, 452 (1989) (stating that when the police in a helicopter peered into the defendant's greenhouse, "no intimate details connected with the use of the home or curtilage were observed."); *Commonwealth v. Williams*, 431 A.2d 964, 966 (Pa. Super. Ct. 1981) (holding that while the government's use of a startron, a device which "sees" in the dark, may not always be a "search," its use will raise fourth amendment implications when used to peer into a house for nine straight days).

204. See *supra* notes 152-203 and accompanying text, for a discussion of the Court's "plain view" doctrine, "risk of exposure" doctrine, and "intimate activities" argument.

205. See *supra* note 146 and accompanying text.

206. See, e.g., *United States v. White*, 401 U.S. 745, 756 (1971) (stating that high-tech surveillance may be the "greatest leveler of human privacy ever known"); *Amsterdam*, *supra* note 17, at 386 (arguing that the government's proliferation of high-tech surveillance techniques represents the "frightening paraphernalia which the vaunted marvels of an electronic age may visit upon human society"); *Plaschke*, *supra* note 31, at 624 (reporting that the government in the past 200 years has developed high-tech investigatory equipment with startling efficiency which is capable of abuse in its application); *Steele*, *Infrared Searches*, *supra* note 31, at 39 n.94 (warning that the possibilities of further advances in high-tech surveillance techniques are Orwellian); *Steinberg*, *supra* note 34, at 569 (arguing that highly sophisticated investigatory techniques chill free expression and encourage arbitrary and inappropriate police conduct).

207. For a list of those cases which are split on the issue of whether the government's use of the FLIR amounts to a fourth amendment "search," see *supra* notes 13-15. For a more in depth discussion of these decisions, see *infra* notes 219-53 and accompanying text.

208. See *supra* notes 13-15.

This Note does not argue that the courts should answer this question one way or the other; rather, it argues that the question should not be asked in the first place.<sup>209</sup> While debate can arguably ensue concerning one's reasonable expectation of privacy in phone conversations,<sup>210</sup> phone numbers,<sup>211</sup> backyard gardens,<sup>212</sup> and even garbage,<sup>213</sup> it is both illogical and unfair to apply this standard to heat emanating from one's home. The FLIR is an uncommon device which is not integrated into society.<sup>214</sup> Thus, homeowners are never given any occasion nor reason to actively develop an expectation of privacy in the heat emanating off their homes.<sup>215</sup> Cases which have decided the FLIR issue have, however, failed to recognize *Katz's* inherent limitation.<sup>216</sup> These cases, like many other post-*Katz* cases, utilized the anomalous doctrines discussed in Section III<sup>217</sup> as a substitute for those principles expressed in *Katz*.<sup>218</sup> The remainder of this section will discuss the conflicting FLIR decisions and the courts' application of the *Katz* standard to a device which this standard is incapable of analyzing.

Rather than turning directly to the *Katz* decision for guidance in determining whether the use of the FLIR is a "search," most courts confronted with the issue have relied on analogies between thermal surveillance and other

209. See *infra* § VI.A., for a proposed exception to *Katz's* "reasonable expectation of privacy" standard.

210. See *Katz v. United States*, 389 U.S. 347 (1967). For further discussion of the *Katz* decision, see *supra* notes 122-32 and accompanying text.

211. See *Smith v. Maryland*, 442 U.S. 735 (1979). See *supra* notes 189-92 and accompanying text for an analysis of the *Smith* decision.

212. See *Florida v. Riley*, 488 U.S. 445 (1989). The *Riley* case is discussed at *supra* notes 169-74 and accompanying text.

213. See *California v. Greenwood*, 486 U.S. 35 (1988). For further discussion of the *Greenwood* decision, see *supra* notes 175-82 and accompanying text.

214. See *infra* notes 273-76. See also Steele, *Infrared Searches*, *supra* note 31, at 29. Steele notes that the common member of society does not rent a helicopter and spend the additional \$200 in rental fees to engage in the thermal surveillance of homes. *Id.*

215. See *infra* § VI.A. (discussing the factors which a court should consider when determining whether a particular community has given its members occasion to develop an expectation of privacy in a certain police activity or surveillance device).

216. See *infra* notes 219-53 and accompanying text. The FLIR cases have avoided a direct application of the *Katz* analysis by failing to recognize the standard's inherent limitations. *Id.*

217. See *supra* notes 96-146 and accompanying text.

218. See, e.g., *United States v. Ford*, 34 F.3d 992, 996 (11th Cir. 1994) (invoking the trespass doctrine to hold that the FLIR does not penetrate the walls of the home and thus is not a fourth amendment "search"); *United States v. Pinson*, 24 F.3d 1056, 1058-59 (8th Cir.), *cert. denied*, 115 S. Ct. 664 (1994) (holding that the government's use of the FLIR is not a "search" because the device is very non-intrusive and does not reveal any intimate activities taking place within the home); *United States v. Penny-Feeney*, 773 F. Supp. 220, 226 (D. Haw. 1991), *aff'd on other ground sub nom. United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993) (arguing that the use of the FLIR is not a "search" because the homeowner risked exposing the "waste heat" when he vented it into the public airspace).

investigatory methods analyzed in several of the post-*Katz* cases.<sup>219</sup> Generally, the courts have utilized those doctrines discussed in the previous section: the “plain view” doctrine,<sup>220</sup> the “risk of exposure” notion,<sup>221</sup> and the “intimate activities” argument.<sup>222</sup>

#### A. The “Plain View” Analogy

Several courts have reasoned that when the police fly over an individual’s home and use a FLIR to measure the heat emanating from the home, they are merely detecting that which is in “plain view.”<sup>223</sup> While this doctrine has traditionally been limited to situations where the officers discover something in plain view with their natural senses,<sup>224</sup> the courts are willing to take a leap of faith and extend this notion to heat, a medium not detectible visually by the natural senses.<sup>225</sup> The courts have utilized the “plain view” doctrine in different ways. One court compared the use of the FLIR to that of an aerial

219. See, e.g., *Ford*, 34 F.3d at 996 (comparing the use of the FLIR with the Court’s treatment of the “open fields” doctrine in *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986), and with the “risk of exposure” notion articulated in *California v. Greenwood*, 486 U.S. 35 (1988)); *Pinson*, 24 F.3d at 1063 (drawing the analogy between thermal surveillance and the notion of the limited nature of the information gleaned from canine sniffs in *United States v. Place*, 462 U.S. 696 (1983)); *United States v. Domitrovich*, 852 F. Supp. 1460, 1473 (E.D. Wash. 1994) (comparing the FLIR with the use of the pen register analyzed in *Smith v. Maryland*, 442 U.S. 735 (1979) and with the electronic beeper analyzed in *United States v. Karo*, 468 U.S. 705 (1984)).

220. See *supra* notes 152-63 and accompanying text.

221. See *supra* notes 165-92 and accompanying text.

222. See *supra* notes 195-203 and accompanying text.

223. See, e.g., *United States v. Ford*, 34 F.3d 992, 996-98 (11th Cir. 1994); *Domitrovich*, 852 F. Supp. at 1475 (applying the Court’s reasoning articulated in *United States v. Johns*, 469 U.S. 478, 486 (1985)); *United States v. Deaneer*, No. 92-0090-01, 1992 WL 209966, \*4 (M.D. Pa., July 27, 1992), *aff’d*, 1 F.3d 192 (3d Cir. 1993) (utilizing the court’s reasoning found in *United States v. Solis*, 563 F.2d 880, 882-83 (9th Cir. 1976)).

224. See *supra* note 167. See also *United States v. Ard*, 731 F.2d 718, 723 (11th Cir. 1984) (determining that the owner had no reasonable expectation of privacy when officers found the trailer, saw burlap bags through a two inch gap between the trailer’s doors, smelled marijuana, and were lawfully on the property); Thomas M. Finnegan et al., Project, *Fifteenth Annual Review of Criminal Procedure: United States Supreme Court and Courts of Appeals 1984-1985*, 74 GEO. L.J. 499, 520 (1985) (stating that police officers are not “searching” when they discover something through the use of one or more of their senses from a constitutionally-permissible vantage point). See generally *United States v. Whaley*, 779 F.2d 585 (11th Cir. 1986) (stating that a homeowner had no reasonable expectation of privacy as to the home’s basement when it can be viewed with the naked eye from a neighboring property).

225. See *supra* note 13. Along these same lines, courts also seem to regress back to the seemingly obsolete trespass doctrine. See *United States v. Penny-Feeney*, 773 F. Supp. 220 (D. Haw. 1991), *aff’d on other grounds sub nom. United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993). The *Penny-Feeney* court compared the use of the FLIR to aerial surveillance, stating that, like the aerial surveillance utilized in *Ciraolo* and *Riley*, the use of the FLIR was physically non-intrusive and caused absolutely no physical invasion into the home or curtilage. *Id.* at 227-28.

mapping camera.<sup>226</sup> The courts' reasoning, however, seems flawed from the very beginning because thermal heat emissions are invisible to the naked eye and can only be detected through the use of highly sophisticated technology.<sup>227</sup> Another court compared thermal imagery with the ability of officers to simply observe the outward appearance of certain containers and make inferences as to the containers' contents.<sup>228</sup> Again, the comparison is misplaced because the very foundation of the "plain view" doctrine is that the officers are able to observe something "plainly," with their natural senses.<sup>229</sup> In addition to the "plain view" analogy, courts have also incorporated the "risk of exposure" doctrine in determining that the use of the FLIR is not a "search" by characterizing the emissions as "abandoned heat."<sup>230</sup>

### *B. Risk of Exposure/"Abandoned Heat"*

Another argument adopted by those courts deciding that the use of the FLIR is not a search analogizes between garbage left at the curb<sup>231</sup> and dispelled heat.<sup>232</sup> In *United States v. Penny-Feeny*,<sup>233</sup> the most widely cited case

226. See *United States v. Ford*, 34 F.3d 992, 996-97 (11th Cir. 1994). The court in *Ford* compared the FLIR to an aerial mapping camera used to photograph a manufacturing facility. *Id.* at 996 (analyzing the Court's reasoning in *Dow Chemical Co. v. United States*, 476 U.S. 227, 238 (1986)). The *Ford* court stated that the thermal images, like the photographs taken by the mapping camera, did not penetrate any walls and were incapable of "revealing the intimacy of detail and activity protected by the Fourth Amendment." *Ford*, 34 F.3d at 996. The court also discussed the principles set forth in *Florida v. Riley*, 488 U.S. 445 (1989) (holding that what the officers observe from a legal vantage point will not amount to a fourth amendment "search").

227. See *supra* note 55. See also Plaschke, *supra* note 31, at 619-20 (arguing that the court's incorporation of the "plain view" doctrine in determining the constitutionality of thermal surveillance is completely misplaced).

228. See *United States v. Domitrovich*, 852 F. Supp. 1460, 1475 (E.D. Wash. 1994) (generally referring to *United States v. Johns*, 469 U.S. 478, 486 (1987)). The court stated that just because the officers can glean certain information concerning the inside of the structure, the officers' activity will not automatically be deemed a "search." *Domitrovich*, 852 F. Supp. at 1475.

229. See *supra* note 152-63. See also Plaschke, *supra* note 31, at 619-20. Plaschke argues that for purposes of the "plain view" doctrine an officer's senses may be enhanced by common devices like searchlights or binoculars, but the officer's senses may not be "multiplied into new senses" through the use of highly sophisticated devices like the FLIR. *Id.*

230. See, e.g., *United States v. Ford*, 34 F.3d 992, 997 (11th Cir. 1994); *United States v. Pinson*, 24 F.3d 1056, 1063 (8th Cir.), cert. denied, 115 S. Ct. 664 (1994); *United States v. Domitrovich*, 852 F. Supp. 1460, 1474 (E.D. Wash. 1994); *United States v. Penny-Feeny*, 773 F. Supp. 220, 226 (D. Haw. 1991), *aff'd on other grounds sub nom. United States v. Feeny*, 984 F.2d 1053 (9th Cir. 1993).

231. See *California v. Greenwood*, 486 U.S. 35 (1988); *supra* notes 175-82 and accompanying text.

232. See, e.g., *Ford*, 34 F.3d at 97; *Pinson*, 24 F.3d at 1059; *Penny-Feeny*, 773 F. Supp. at 226.

233. 773 F. Supp. 220 (D. Haw. 1991), *aff'd on other grounds sub nom. United States v. Feeny*, 984 F.2d 1053 (9th Cir. 1993).

supporting this argument,<sup>234</sup> the court reasoned that “waste heat” involves the same risks of public exposure as does curb-side garbage.<sup>235</sup> The Court stated that the fact that the heat could not be detected by the natural senses in no way affected the analysis.<sup>236</sup> The comparison of “waste heat” with curbside garbage has been criticized at length as a misplaced analogy, void of any rational connection.<sup>237</sup> The fact that the courts have struggled to characterize heat emanating from one’s home in the same fashion as garbage left at a curb for pickup exemplifies *Katz*’s inherent inability to be applied logically or fairly to extraordinary devices like the FLIR.<sup>238</sup> While it may be common

234. See *United States v. Field*, 855 F. Supp. 1518, 1525 (W.D. Wis. 1994) (stating that *Penny-Feeney* is the most quoted authority on this issue).

235. *Penny-Feeney*, 773 F. Supp. at 226 (stating that “both cases involve a homeowner’s disposing of waste matter in areas exposed to the public”). The court in *Penny-Feeney* further argued that by venting heat outside of the home, an individual exposes exhaust vapors and heat to public observation and consequently cannot claim an actual expectation of privacy in the heat emanating from an indoor marijuana growing operation. *Id.* See also *United States v. Pinson*, 24 F.3d 1056, 1063 (8th Cir.), cert. denied, 115 S. Ct. 664 (1994) (following the *Penny-Feeney* line of reasoning that an individual has no reasonable expectation of privacy in “abandoned heat”).

236. *Penny-Feeney*, 773 F. Supp. at 226. The court stated that time and again the Supreme Court has held that the use of extra-sensory equipment does not constitute a “search” for purposes of the Fourth Amendment. *Id.* The court made reference to the following cases which have upheld the warrantless use of extra-sensory equipment: *United States v. Knotts*, 460 U.S. 276 (1983) (placing a beeper in a container and tracking the defendant’s movements in his vehicle did not amount to a “search”); *United States v. Place*, 462 U.S. 696 (1983) (employing the aid of a drug-sniffing canine on defendant’s luggage was held not to be a “search”); *Smith v. Maryland*, 442 U.S. 735 (1979) (using a pen register to obtain the phone numbers dialed from the defendant’s home did not constitute a fourth amendment “search”).

The majority of the arguments in *Penny-Feeney* depend upon analogies to other government activities and devices which had previously been held to be searches. *Penny-Feeney*, 773 F. Supp. at 225-28. By comparing previous cases and utilizing generic doctrines, the FLIR cases in general, escape a true *Katz* analysis. See *supra* notes 218-19. Thus, this note argues that if the courts would turn directly to the principles enumerated in *Katz*, they would realize that *Katz* is a standard of limited application and that any attempts made to pigeonhole the FLIR analysis into the *Katz* standard are both illogical and unfair. See *infra* § VI.A.

237. See *Field*, 855 F. Supp. at 1532-33. The Court in *Field* stated that while it may be common knowledge that curbside garbage is accessible to the public at large, “[i]t is hardly common knowledge that government officials cruise the public streets after dark scanning houses with thermal imagers, seeking to interpret heat patterns.” *Id.* at 1532. See also *Steele, Infrared Searches, supra* note 31, at 28-30. *Steele* argues that the notion that one voluntarily places garbage on the curb for pickup cannot possibly be extended to heat emanating from one’s home. *Id.* First, while it requires no special equipment for an animal, child, scavenger, or snoop to rummage through one’s garbage, thermal surveillance requires very specialized, sophisticated equipment. *Id.* at 29. Second, individuals are aware of no other third party waiting to detect heat “who could potentially inspect it in the same manner as a garbage collector.” *Id.* at 30.

238. See *United States v. Field*, 855 F. Supp. 1518, 1532-33 (W.D. Wis. 1994) (arguing that the courts cannot logically transfer the reasoning and conclusion in *Greenwood* into its analysis of thermal imaging); *Steele, Infrared Searches, supra* note 31, at 28-31 (stating that the courts’ use of the garbage-digging analysis in *Greenwood* to conclude that the use of a FLIR is not a “search” is completely misplaced).

knowledge that curbside garbage is accessible to third parties, the use of thermal imagery to detect heat patterns is not a commonly-known societal activity.<sup>239</sup>

In addition to analogies to curbside garbage, courts have also likened thermal surveillance to the use of beepers and pen registers.<sup>240</sup> The court in *United States v. Domitrovich*<sup>241</sup> reasoned that the function of the FLIR is similar to that of a beeper and a pen register in detecting information which an individual exposes to the public.<sup>242</sup> Again, the *Domitrovich* court attempted to pigeonhole its analysis of the FLIR into one of the Court's generic "search" doctrines<sup>243</sup> rather than directly applying the principles established in *Katz*. Any attempt at a true *Katz* analysis would reveal that the FLIR device is not a part of the social dynamic with which *Katz* is concerned and, as such, cannot logically nor fairly be analyzed under the "reasonable expectation of privacy" standard.<sup>244</sup> In addition to the "plain view" and "risk of exposure" doctrines, the FLIR cases have also implicated the "intimate activities"<sup>245</sup> notion from the canine sniff decisions.<sup>246</sup>

### C. The "Intimate Activities" Analogy

Courts determining that the warrantless use of the FLIR is not a "search" have relied most heavily on analogies between thermal surveillance and canine

239. *Field*, 855 F. Supp. at 1532-33.

240. *See, e.g.*, *United States v. Domitrovich*, 852 F. Supp. 1460, 1473 (E.D. Wash. 1994) (citing *Smith v. Maryland*, 442 U.S. 735 (1979) and *United States v. Karo*, 468 U.S. 705 (1984)).

241. 852 F. Supp. 1460 (E.D. Wash. 1994).

242. *Id.* at 1473. The court in *Domitrovich* argued that by releasing heat out of the house, the homeowner relinquishes his expectation of privacy in the heat as well as private information that can be gleaned from that heat. *Id.* *See also Smith*, 442 U.S. at 744 (stating that "[w]hen [the defendant] used his phone, [he] voluntarily conveyed numerical information to the telephone company and 'exposed' that information to its equipment in the ordinary course of business.>").

243. *See supra* notes 152-203 and accompanying text.

244. *See United States v. Field*, 855 F. Supp. 1518, 1532-33 (W.D. Wis. 1994). The *Field* court stated that "[i]t is hardly common knowledge that government officials cruise the public streets after dark scanning houses with thermal imagers, seeking to interpret heat patterns." *Id.*

The core of the Court's holding in *Smith* was that telephone callers "realize that they must convey phone numbers to the telephone company," *Smith v. Maryland*, 442 U.S. 735, 742 (1979). This realization, arguably, relinquishes the callers' expectation of privacy. *Id.* The same, however, cannot possibly be said about the use of thermal surveillance. Individuals do not, nor have they ever had reason to, realize that high-tech devices are being used to measure fine differences in heat emanating from their homes.

245. *See supra* notes 195-203 and accompanying text.

246. *See United States v. Place*, 462 U.S. 696 (1983); *United States v. Solis*, 536 F.2d 880 (9th Cir. 1976). For a discussion of the *Place* decision, *see supra* notes 198-203 and accompanying text.



sniffs.<sup>247</sup> The courts mainly rely on *United States v. Solis*,<sup>248</sup> which held that the use of a narcotics dog on the outside of the defendant's trailer to detect marijuana within the structure was not a "search."<sup>249</sup> Courts have held that the use of the FLIR is similar to canine sniffs because both methods are inoffensive and neither entails embarrassment to, or the search of, the person.<sup>250</sup> The courts have further reasoned that neither method is capable of revealing any intimate details.<sup>251</sup> Like the courts' other attempts to draw such analogies, likening canine sniffs to FLIR searches has been widely criticized.<sup>252</sup> This analogy is misplaced because the use of the FLIR is actually more intrusive than a canine sniff. Additionally, while dogs may be common to society, the FLIR is a relatively novel device used mainly by government officials.<sup>253</sup>

247. See, e.g., *United States v. Pinson*, 24 F.3d 1056, 1063 (8th Cir.), cert. denied, 115 S. Ct. 664 (1994); *United States v. Deaner*, No. 92-009001, 1992 WL 209966, \*3-\*4 (M.D. Pa., July 27, 1992), aff'd, 1 F.3d 192 (3d Cir. 1993); *United States v. Penny-Feeney*, 773 F. Supp. 220, 226-27 (D. Haw. 1991), aff'd on other grounds sub nom. *United States v. Feeney*, 984 F.2d 1053 (9th Cir 1993).

248. 536 F.2d 880 (9th Cir. 1976).

249. *Id.* at 882. In *Solis*, police officers, acting on an informant's tip that the suspect had marijuana in his trailer, went to the trailer and found the rear doors covered with talcum powder, commonly used to conceal the odor of marijuana. *Id.* at 881. The police then brought narcotics dogs to sniff the outside of the trailer. *Id.* The dogs responded, and the police used that evidence to obtain a search warrant. *Id.* The court reasoned that the use of the dogs was not a "search" because the method was not offensive and did not embarrass the suspect, as would a "search" of his person. *Id.* at 882. Further, the court relied on the specificity of the information gleaned, stating that "[t]he target was a physical fact indicative of possible crime, not protected communications." *Id.*

250. See *Deaner*, No. 92-0090-01, 1992 WL 209966 at \*4; *Penny-Feeney*, 773 F. Supp. at 227. The court in *Deaner* actually argued that thermal surveillance is less intrusive than canine sniffs because:

the FLIR is incapable of providing definitive information as to what is happening behind closed doors other than the generation of heat. A marijuana-sniffing dog, on the other hand, gives a decisive indication as to the presence of an illegal substance behind closed doors.

*Deaner*, No. 92-0090-01, 1992 WL 209966 at \*4.

251. See *United States v. Deaner*, No. 92-0090-01, 1992 WL 209966 \*4 (M.D. Pa. July 27, 1992); *United States v. Penny-Feeney*, 773 F. Supp. 220, 227 (D. Haw. 1991).

252. See, e.g., *United States v. Field*, 855 F. Supp. 1518, 1533 (W.D. Wis. 1994); Steele, *Infrared Searches*, supra note 31, at 30-32.

253. See Steele, *Infrared Searches*, supra note 31, at 30-32. Steele argues that while specialized narcotics dogs react solely to drug odors, a FLIR reveals any source of heat. *Id.* at 31. Steele further states that "[t]here is no law regulating how much heat a residence may emit and the radiation of an unusual amount of heat cannot lead directly to an inference of illegal activity in the same direct manner as the smell of contraband implies its presence." *Id.* For further criticism of the courts' analogy between canine sniffs and thermal surveillance, see *Field*, 855 F. Supp. at 1533. The court in *Field* notes that while canine sniffs normally must work close to the targeted objects, the FLIR is capable of working at a distance of 200 meters. *Id.* As a result, a homeowner has some protection from the random use of a drug sniffing dog: unless

There are two possible approaches to overcoming *Katz's* inability to effectively analyze extraordinary devices like the FLIR. First, the Supreme Court could adopt a completely new "search" test which would be capable of analyzing all police activity and devices. For the past three decades, fourth amendment scholars have taken this position, proposing a wide variety of "search" standards to replace that set forth in *Katz*.<sup>254</sup> While a completely new "search" standard would be the most comprehensive solution, the likelihood that the Court will take such action is speculative at best.<sup>255</sup> Thus, this Note adopts the second approach, which is to carve out certain exceptions to the *Katz* standard where it would be unreasonable to require individuals to form expectations of privacy. The following proposed exception seeks to prevent application of *Katz* to those devices which are so uncommon to a society that its members are never given a fair opportunity to develop expectations of privacy.

#### VI. THE EXTRAORDINARY DEVICE EXCEPTION

As the government's arsenal of high-tech surveillance devices grows,<sup>256</sup> *Katz's* "reasonable expectation of privacy" test will be called on more frequently to determine the fate of privacy interests guaranteed by the Fourth Amendment.<sup>257</sup> The contradictory holdings in the FLIR cases illustrate the

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the homeowner invites the police onto his property (or they have some other legal right to be present), the dog must operate outside the limits of the curtilage, which typically would prevent an unconsented search.

*Id.*

254. See, e.g., Amsterdam, *supra* note 17, at 392-409 (discussing the possibility of creating a "sliding scale approach" to the Fourth Amendment's reasonableness standard in which the "search" question would become far less crucial); Berner, *supra* note 17, at 397-405 (proposing a "search" test which defines search by focussing on the government activity rather than on an individual's privacy interests); Michael Campbell, Comment, *Defining a Fourth Amendment Search: A Critique of the Supreme Court's Post-Katz Jurisprudence*, 61 WASH. L. REV. 191, 207-16 (1986) (arguing that the Court should adopt a "social norms" standard where government conduct which violates a social norm of privacy should be deemed a "search"); Gutterman, *supra* note 34, at 711-22 (proposing a "value-dominated model" to the Court's "search" jurisprudence); Katz, *Twenty-first Century*, *supra* note 17, at 575-88 (discussing the possibility of the Court adopting a "two-tiered system" of fourth amendment coverage embracing both searches and intrusions); Serr, *supra* note 96, at 627-42 (proposing a "private party search" doctrine which would define a "search" by the degree of public exposure); Steinberg, *supra* note 34, at 613-28 (arguing that the Court should adopt a three factor balancing test to its "search" jurisprudence).

255. See generally *Planned Parenthood of Southeastern Pa. v. Casey*, 112 S. Ct. 2791, 2798 (1992) (affirming the powerful doctrine of *stare decisis* which requires that courts should not lightly overturn precedent).

256. See *supra* note 206.

257. See Katz, *Twenty-first Century*, *supra* note 17, at 550. The courts' determinations concerning fourth amendment issues set the level of privacy and freedom for the whole community. *Id.* As the police are given more investigatory power in their quest to catch criminals, the effect of the privacy rights on the community at large grows in "geometric proportion." *Id.*

courts' difficulty in applying the *Katz* test to such a highly sophisticated device.<sup>258</sup> This Note does not argue that the *Katz* standard itself is the root of the courts' confusion; rather, courts have failed to recognize that *Katz* is an inherently limited doctrine which cannot logically nor fairly be applied to certain devices.<sup>259</sup> Before ascertaining whether an individual manifested a certain reasonable expectation of privacy, it is first necessary to determine from the nature of the device at issue whether that individual was realistically able to form such an expectation. The courts' failure to make such a determination has led to several questionable decisions,<sup>260</sup> including the FLIR cases,<sup>261</sup> a deterioration of the integrity of the *Katz* decision,<sup>262</sup> and the general decline of fourth amendment rights so vital to a free society.<sup>263</sup> The following proposed exception addresses each of these concerns by judicially recognizing the inherent limitations of the *Katz* doctrine and the important role that the social dynamic plays in fourth amendment jurisprudence.

#### A. The Exception

The "extraordinary device exception" requires that the court make a threshold inquiry to determine whether the *Katz* standard is capable of analyzing a given governmental device. The exception requires a court to determine if a certain governmental device is "extraordinary" before it can ask *Katz*'s "expectation of privacy" question. Those devices found to be "extraordinary" are excluded from a *Katz* application and are automatically put to scrutiny under the Fourth Amendment.<sup>264</sup> Those devices which are not "extraordinary" are put to scrutiny under *Katz*. The "extraordinary device exception" requires the court to engage in the following analysis:

- 1) *When a certain governmental device is attacked on the grounds that it violates the Fourth Amendment, the court must ask:*
- 2) *Under community standards, is the device common to society, such*

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258. For a list of those cases which are split on the issue of whether the warrantless use of the FLIR is a "search," see *supra* notes 13-15.

259. See *supra* notes 146, 152-203 and accompanying text. See also Amsterdam, *supra* note 17, at 375. Professor Amsterdam states that because fourth amendment law covers such a wide variety of situations, "it seems too dogmatic and improperly insensitive to the practical complexities of life to categorize or pigeon-hole situations for the purpose of enforcing a discipline of rules." *Id.*

260. See *supra* notes 146-47.

261. See *supra* note 13.

262. See *supra* note 146.

263. See *supra* notes 28, 146.

264. See Serr, *supra* note 96, at 587-88. Professor Serr argues that the consequences of assuming that a certain device is a "search" is hardly a draconian concept, for the Fourth Amendment merely requires that a certain governmental activity be reasonable. *Id.*

*that its use and existence has become integrated into the ordinary societal experience?*

*A) If the device is uncommon to society and its use and existence has not become integrated into the ordinary societal experience, the use of the device by law enforcement personnel must be reasonable under the Fourth Amendment, or*

*B) If the device is common and its use and existence has become integrated into the ordinary societal experience, the use of the device by law enforcement personnel shall be subject to scrutiny under the Fourth Amendment only if its use constitutes a "search" as defined by Katz v. United States.<sup>265</sup>*

Thus, when a certain activity is found by the court to be "extraordinary," it is automatically deemed a "search" and subjected to scrutiny under the Fourth Amendment. If, however, the device is found by the court not to be "extraordinary," it can be put to scrutiny under *Katz's* "reasonable expectation of privacy" test.<sup>266</sup> Before the specific ramifications of such an exception can be discussed, it is necessary to further explain two aspects of the exception: 1) the community-based standard; and 2) the factors which a court should consider in determining if a particular device is common to the societal experience.

### 1. The Community Standard

When determining if a particular device is common to the societal experience, the courts should employ a community standard. The nature of the "exceptional device" inquiry requires that courts actually examine the dynamic relationship between the individual and society to determine if a particular device is integrated into that relationship. This examination can most effectively be administered under a community standard. The narrowly-tailored focus of a community standard makes such an examination more practical and recognizes

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265. 389 U.S. 347 (1967). For a discussion of *Katz's* reasonable expectation of privacy standard, see *supra* notes 122-32 and accompanying text.

266. See *supra* notes 122-32 and accompanying text. When a particular device is found to be sufficiently integrated into the societal experience, then it is fair and logical to speak in terms of an individual's expectation of privacy in relation to the device.

that vast societal differences may exist from one community to the next. Further, community standards have been employed in other instances where the court is required to examine a certain aspect of society.<sup>267</sup>

## 2. "Extraordinary" Factors

Under the community-based standard described above, a court must determine whether a certain device is common and integrated into the societal experience. While the notion of a certain device being common to society has been recognized in other contexts, it has never been explicitly integrated into fourth amendment jurisprudence.<sup>268</sup> Although a court may consider several factors in determining if a given device is integrated into society, the underlying concern should always be whether it would be logical and fair to require an individual to form an expectation of privacy in relation to a particular device or investigatory method. Factors which a court may consider include:

a) *the level of technology and sophistication of the device;*

b) *the extent to which the device is commercially available;*<sup>269</sup>

c) *the extent to which the device may be used in nongovernmental contexts; and*

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267. See, e.g., *Miller v. California*, 413 U.S. 15, 30-34 (1973) (holding that the jury should consider contemporary community standards in determining whether or not certain materials are obscene); FED. R. EVID. 201(b) (requiring courts to look to the community to determine if a certain fact is generally known for purposes of judicial notice).

268. See, e.g., *Dow Chemical Co. v. United States*, 476 U.S. 227, 238 (1986) (stating that "[i]t may well be, as the Government concedes, that surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public . . . might be constitutionally proscribed absent a warrant."); Katz, *Twenty-first Century*, *supra* note 17, at 576. Professor Katz argues that the Katz formula consists of "measuring protected interests by the common understanding of citizens in a free society." *Id.* See also Steele, *Remote Sensing*, *supra* note 94, at 329. Steele states that "[n]o standard or threshold, however, has been set to interpret such phrases as 'widely available commercially,' 'not more sophisticated than [technology] generally available to the public,' or 'conventional, albeit precise, commercial camera commonly used.'" *Id.*

269. See Steele, *Remote Sensing*, *supra* note 94, at 330. To show general availability of satellite imagery, Steele argues that the "searcher should need to introduce evidence not only of gross sales, but also of the various uses of satellite imagery, such as media, agriculture, forestry, geology, civil engineering, land-use planning, cartography, coastal-zone management, and environmental monitoring." *Id.*

d) the duration in which the device has been in existence.<sup>270</sup>

While such a specific list of enumerated factors is helpful for the court, the essential element is that the courts recognize *Katz's* inherent limitations and begin asking these kinds of questions.

### B. Why Adopt the "Extraordinary Device Exception"?

The "extraordinary device exception" will improve the courts' fourth amendment jurisprudence in two distinct ways. First, it will put integrity back into the *Katz* standard because it will ensure that *Katz* is not applied to a situation which it cannot logically or fairly handle. In this sense, the proposal is really not an exception at all but rather a recognition of the limited scope of the *Katz* decision. The proposal forces courts to search beyond the generic doctrines which have surfaced<sup>271</sup> and to instead focus on the social dynamic which lies at the heart of the *Katz* decision. Those devices which do not play a role in the social dynamic are exempted from a *Katz* analysis rather than illogically forced through the standard. Recognizing *Katz's* inherent limits will regain its integrity and recapture its original spirit.

A second positive effect of the "extraordinary device exception" is that it will represent fourth amendment privacy interests more fairly and accurately than the current scheme. Fourth amendment rights concerning devices which are "extraordinary" in a certain community will no longer hinge on an unfair or illogical application of the *Katz* standard. If it is unfair or illogical to require that an individual form an expectation of privacy in relation to a certain device or investigatory method, the government activity will automatically be deemed a "search." Consequently, the individual will be afforded the protection of the Fourth Amendment. This process is consistent with the notion that privacy interests are a vital aspect of our society and should be assumed to exist unless clear and reasonable reasons state otherwise.<sup>272</sup> Given the particularized community standard, it is difficult to determine exactly which existing devices would be found to be "extraordinary;" however, the FLIR is one device which appears to fall into this category.

### C. The FLIR as an "Extraordinary Device"

Currently, it is safe to claim that FLIR technology in any community is not

270. These factors should not necessarily be viewed as an absolute list but rather should be used to help the court answer the overarching question concerning commonality and social integration.

271. See *supra* notes 152-203 and accompanying text.

272. See *supra* note 28.

a common instrument which has been integrated into the societal experience.<sup>273</sup> The device is used almost exclusively by the government for either military purposes or investigatory purposes.<sup>274</sup> Its commercial availability is very limited.<sup>275</sup> Its very high level of sophistication has only been in existence for a relatively short time.<sup>276</sup> Most important, however, is that it is simply illogical and unfair to require that persons form an expectation of privacy in the “waste heat” emanating from their homes. Society has never given its members occasion to form such an expectation, and it goes directly against the precepts of the Fourth Amendment and the *Katz* decision to make one’s privacy interest dependant upon the formation of such an exception. This Note does not suggest that the government should not be allowed to use extraordinary devices like the FLIR. However, it asserts that the government must merely operate within the Fourth Amendment’s reasonableness standard when it does.

## VII. CONCLUSION

As we are fast approaching a new millennium, advanced technologies are rapidly being developed to meet the needs of our changing society. This advancement includes the government’s utilization of high-tech surveillance devices to combat our Nation’s ever-increasing crime rate. While the Fourth Amendment was embedded in our Constitution to protect us from those government activities which become unreasonable, the courts have slowly eroded the effectiveness of this protection. One significant reason for this erosion is the courts’ failure to recognize *Katz*’s “reasonable expectation of privacy” test as a limited doctrine which, because of its limitations, is unable to logically or fairly analyze highly sophisticated devices. This failure has greatly undermined the integrity of the *Katz* analysis, as well as the privacy rights afforded by the Fourth Amendment. This Note’s “extraordinary device exception” seeks to regain *Katz*’s integrity and restore those privacy rights so vital to the survival of our society.

The proposed exception recognizes the fact that the *Katz* analysis is inherently limited to only those situations where a particular community has given its members the opportunity and reason to form a specific expectation of

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273. See *supra* notes 43-78 and accompanying text. See also *United States v. Cusumano*, 67 F.3d 1497, 1505 (10th Cir. 1995) (stating that it is doubtful “that society is aware that heat signatures can be read with any greater accuracy than tea leaves”).

274. See *supra* note 68.

275. See *id.* for a discussion of the FLIR’s limited role in society. See also *United States v. Field*, 855 F. Supp. 1518, 1532-33 (W.D. Wis. 1994) (stating that the FLIR is not the type of instrument commonly known to exist in a community).

276. See *United States v. Deaner*, No. 92-0090-01, 1992 WL 209966, \*2 (M.D. Pa., July 27, 1992), *aff’d*, 1 F.3d 192 (3d Cir. 1993) (stating that thermal imager technology has been in existence for approximately fifteen years).

privacy. If a device is found to be common to society under the exception, then it is fair to apply *Katz*. However, devices like the FLIR which are not integrated into the normal societal experience have no place within the *Katz* analysis and must be put to scrutiny under the Fourth Amendment. As long as the courts continue to use the “reasonable expectation of privacy” standard, an “extraordinary device exception” is necessary to strike the proper balance between the quest for law and order and the reverence for individual privacy interests.

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