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ELECTRONIC TRACKING DEVICES: FOURTH AMENDMENT PROBLEMS AND SOLUTIONS

BY THOMAS C. MARKS, JR.* AND ROBERT BATEY**

INTRODUCTION

The few words of the fourth amendment¹ may well have been interpreted more than any other provision in the Constitution. However, as Justice Frankfurter said in Chapmann v. United States, “The course of true law pertaining to searches and seizures, as enunciated here, has not — to put it mildly — run smooth.”² There have in fact been many ripples.

Wending its way among the ripples and assorted turbulences, a smooth channel of general principles has developed. Before one who has a “constitutionally protected reasonable expectation of privacy”³ can be subjected to search or seizure, the requirements of the fourth amendment must be satisfied. Since the fourth amendment proscribes unreasonable searches and seizures, the key question in every fourth amendment case is, what is reasonable? Generally, “reasonable” means that there exists probable cause to search and seize with the existence of probable cause having been decided beforehand by a judicial officer.⁴

Outside this smooth channel of the general rule, the ripples, eddies, and turbulences continue unabated. The different standards of reasonableness applicable to different types of

¹ 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 person or things to be seized.


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arrests\(^5\) and to different types of searches\(^6\) are examples of these eccentricities. The emergence of the electronic tracking device,\(^7\) or ETD,\(^8\) as a fourth amendment problem may prove to be a ripple or, indeed, white water. ETD's, referred to as “beepers” or, occasionally, “transponders,” are devices that aid in tracking\(^9\) or locating a vehicle or other movable object;\(^10\) in one


For seizures of persons that fall short of being arrests something less than probable cause may be reasonable; how much less will depend on the circumstances. See Pennsylvania v. Mimms, 434 U.S. 106 (1977); Adams v. Williams, 407 U.S. 143 (1972); Terry v. Ohio, 392 U.S. 1 (1968).

\(^6\) Some searches are reasonable with probable cause without a warrant. E.g., Chambers v. Maroney, 399 U.S. 42 (1970) (vehicle search); Warden v. Hayden, 387 U.S. 294 (1967) (hot pursuit); Carroll v. United States, 267 U.S. 132 (1925) (vehicle search). Such cases fall under the general rubric of “exigent circumstances.”


Other kinds of searches are reasonable with a warrant but no true probable cause. E.g., Marshall v. Barlow’s, Inc. 98 S. Ct. 1816 (1978) (regulatory inspection); Camara v. Municipal Court, 387 U.S. 523 (1967) (regulatory inspection).

\(^7\) A number of law review articles have dealt with this subject. See Dowling, “Bumper Beepers” and the Fourth Amendment, 13 CRIM. L. Bul. 266 (1977); Note, Electronic Tracking Devices and Privacy: See No Evil, Hear No Evil, But Beware of Trojan Horses, 9 LOYOLA L.J. (Chicago) 227 (1977); Note, Tracking Katz: Beepers, Privacy and the Fourth Amendment, 86 YALE L.J. 1461 (1977); Comment, Fourth Amendment Implications of Electronic Tracking Devices, 46 CINN. L. REV. 243 (1977); Comment, 29 VAND. L. REV. 514 (1976); Comment, 22 VILL. L. REV. 1067 (1977).

\(^8\) Some searches are also referred to as “beepers,” “electronic location devices,” “location buzzers,” “radio detection finders,” “trackers,” “homers,” “bird dogs,” or simply “signalling devices.” “Beeper,” however, is the most common term. A model designed specifically for attachment to a motor vehicle was referred to as a “bumper beeper” in United States v. Park, 531 F.2d 754 (5th Cir. 1976) and in United States v. Frazier, 538 F.2d 1822 (8th Cir. 1976).

\(^9\) “The receiving device receives the signal transmitted by the beeper through two antenna which measure the strength and direction of the transmission and is able thereby to ascertain the approximate location of the beeper.” United States v. Bergdoll, 412 F. Supp. 1323, 1326 n.1 (D. Del. 1976).

\(^10\) Beepers are most commonly attached to automobiles, but a number of cases have dealt with transponders, which are attached to airplanes. Transponders are simi-
court's words, they are "self-powered electronic signalling device[s]." Whether the installation and monitoring of these devices should be controlled by the general rule of fourth amendment law or by one or more of the exceptions to that rule is the topic of this article.

I. A Survey of Significant Reported ETD Cases

Most of the reported cases do not analyze adequately the constitutional problem presented by electronic tracking devices. The reported cases fall into three major categories: (1) those which find that the use of an ETD violates a constitution-

lar in principle to "beepers," except they emit a distinctive radar signal which appears on a radar screen as a "blip" distinctly different from ordinary radar "blips." See United States v. Miroyan, 577 F.2d 489 (9th Cir. 1978); United States v. Cheshire, 569 F.2d 887 (5th Cir. 1978); United States v. Curtis, 562 F.2d 1153 (9th Cir. 1977); United States v. Worthington, 544 F.2d 1275 (5th Cir. 1977); United States v. Pretzinger, 542 F.2d 517 (9th Cir. 1976); People v. Smith, 136 Cal. Rptr. 764 (Ct. App. 1977); United States v. One 1967 Cessna Aircraft, 454 F. Supp. 1352(C.D. Cal. 1978).

Since transponders are, for the purposes of fourth amendment analysis, indistinguishable from ordinary beepers, no distinction between them and ordinary beepers is made in text discussion.

1 United States v. Moore, 562 F.2d 106, 108 (1st Cir. 1977), vacating United States v. Bobisink, 415 F. Supp. 1334 (D. Mass. 1979). See also United States v. Holmes, 521 F.2d 859, 861 (1975), aff'd in part and modified in part en banc, 537 F.2d 227 (5th Cir. 1976) (per curiam): Electronic tracking devices "emit periodic signals which can be picked up on radio frequency. These signals establish the approximate location of the object to which the beacon is attached by providing a line of position, to the left or to the right, between the transmitter and the intercepting equipment."

12 This subject is one which many courts have attempted to evade, due to the confused state of the law in this area. The Fifth Circuit expressed its relief at being able to evade the puzzle this way: "We need not at this time solve the riddle of whether an electronic 'bug' [of the beeper type] constituted a search within the strictures of the Fourth Amendment, for this issue was not presented on appeal." United States v. Perez, 526 F.2d 859, 862-63 (5th Cir. 1976). There are many other examples. United States v. Frazier, 538 F.2d 1322 (8th Cir. 1976), cert. denied, 429 U.S. 1046 (1977), is typical. After noting that the legality of beeper use is a "difficult question," the court sidestepped it, noting that the beeper use under the peculiar facts of the case was justified by "probable cause and exigent circumstances." See also United States v. Washington, 586 F.2d 1147 (7th Cir. 1978) (the court reserved ruling on the fourth amendment status of ETD use after noting that the question was "not settled." Id. at 1154).

Other courts have evaded the issue by finding that a valid consent to implant the beeper was obtained. See, e.g., United States v. Kurch, 552 F.2d 1320 (6th Cir. 1977). Another method of avoiding the issue is to find that the evidence in question is not the "fruit" of the beeper use, so the legality of the beeper need not even be considered. See, e.g., United States v. Worthington, 544 F.2d 1275 (5th Cir. 1977); United States v. Bergdoll, 412 F. Supp. 1323 (D. Del. 1976); Fotianos v. State, 329 So.2d 397 (Fla. Dist. Ct. App. 1976).
ally protected reasonable expectation of privacy; (2) those which hold that maintaining surveillance over an individual by means of an ETD intrudes upon no reasonable expectation of privacy; and (3) those which assume that a constitutionally protected expectation of privacy is involved, but which consider that expectation satisfied by some event prior to the use of the ETD, such as consent by a third party.

A. ETD Use Implicates the Fourth Amendment

*United States v. Holmes* is the leading case to hold that ETD use should be categorized as a search implicating fourth amendment protections. With no actual physical entry, an ETD was magnetically attached to the underside of Holmes' van. Monitoring the ETD led to the discovery of a large amount of marijuana and the arrest of nine persons, including Holmes.

The trial court held that "the use of the beeper to monitor the movements of the van was a search subject to the Fourth Amendment, and that the search was illegal because of the failure to obtain a warrant for its installation." In what is arguably dictum, the trial judge also found "that an application for a warrant would have been rejected because no probable cause existed to justify its installation." A three-judge panel of the Fifth Circuit affirmed each of the rulings of the district court, citing *Katz v. United States* and its reasonable expectation of privacy interpretation. On

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14 521 F.2d at 863.
15 Id.
16 Id. at 864, citing Katz v. United States, 389 U.S. 347 (1967). The panel's opinion stated:

A person has a right to expect that when he drives his car into the street, the police will not attach an electronic surveillance device to his car in order to track him. Although he can anticipate visual surveillance, he can reasonably expect to be "alone" in his car when he enters it and drives away.

521 F.2d at 866. The panel pointed out that only one other case had addressed the ETD problem and that case had supported the rulings of the district court. Id. at 864 n.8, citing United States v. Martyniuk, 385 F. Supp. 42 (D. Ore. 1975). Martyniuk was later reversed in part by the Ninth Circuit Court of Appeals in United States v. Hufford, 539 F.2d 32 (9th Cir.), cert. denied, 429 U.S. 1002 (1976). Hufford is now the leading case contrary to Holmes on the question of the monitoring of an ETD as a fourth
rehearing, the Fifth Circuit, en banc, agreed with the panel opinion. The dissenters from the en banc decision, accepting that the installation of the ETD and its use could possibly be searches within the meaning of the fourth amendment, argued that the facts which led the agents to use the beeper were sufficient to meet the fourth amendment's requirement of reasonableness and that, given the "exigent circumstance" and "the minimal intrusion," no warrant should have been required.

The lines of reasoning of the district court, of the court of appeals, both in panel and en banc, and of the dissenting opinion all share the same flaw. Nowhere is a clear distinction made between the installation and the subsequent monitoring of the ETD.

The First Circuit, in United States v. Moore, did distinguish between installation and use, but not adequately. In United States v. Moore, government agents placed one ETD into a chemical container and one on a truck. The court emphasized that the two ETD's were used for two different purposes: (1) to follow vehicles (both ETD's) and (2) to know if the chemicals were still at the house (the ETD in the container only).

The use of the two ETD's to assist in following the vehicles was held to require probable cause. The court found ample probable cause for the government agents to believe that the defendants were engaged in the manufacture of a controlled substance. The court, however, required no warrant, appar-
ently because of the "automobile" exception to the warrant requirement. However, the placement of the ETD in the house was another matter. Simply stated, absent an exception to the warrant requirement, a warrant authorizing the monitoring of the ETD in the house was required.

The Moore court distinguished installation from monitoring in two instances. First, "affixing the beepers to the underbody of the vehicles was, standing alone, so minimal as to be of little consequence." Similarly, the ETD was placed in the chemical container "before title to the chemicals passed to defendants." However, such a non-intrusive installation could not legitimate the later monitoring of that ETD. The court did not explicitly distinguish installation from monitoring; however, it did place the emphasis where it belonged by requiring probable cause and a warrant for monitoring the ETD in the container of chemicals once it had found its way into the house.

B. No Implication of the Fourth Amendment in ETD Monitoring

_United States v. Hufford_ is the leading case to hold that ETD monitoring does not violate the fourth amendment. Federal courts have also concluded that use of an ETD triggers fourth amendment protection. United States v. Cofer, 444 F. Supp. 146 (W.D. Tex. 1978); People v. Smith, 136 Cal. Rptr. 764 (Ct. App. 1977). See also United States v. Rowland, 448 F. Supp. 22 (N.D. Tex. 1977). Two more courts have assumed fourth amendment applicability but found the ETD use constitutionally reasonable in the circumstances. United States v. Shovea, 580 F.2d 1382 (10th Cir. 1978); United States v. Frazier, 538 F.2d 1332 (8th Cir. 1976).


*Id.* at 112-13.

*Id.* at 113.

Two other courts have also concluded that use of an ETD triggers fourth amendment protection. United States v. Cofer, 444 F. Supp. 146 (W.D. Tex. 1978); People v. Smith, 136 Cal. Rptr. 764 (Ct. App. 1977). See also United States v. Rowland, 448 F. Supp. 22 (N.D. Tex. 1977). Two more courts have assumed fourth amendment applicability but found the ETD use constitutionally reasonable in the circumstances. United States v. Shovea, 580 F.2d 1382 (10th Cir. 1978); United States v. Frazier, 538 F.2d 1332 (8th Cir. 1976).

*Id.* at 111.

_Moore_ was distinguished by the Tenth Circuit in United States v. Clayborne, 584 F.2d 346 (10th Cir. 1978). That court saw a distinction between a beeper at rest in a suspect's home, "which the Fourth Amendment protects from invasion," and one in a laboratory rented by the suspect. *Id.* at 351. The perceived distinction is arguably more apparent than real.

*Other cases holding ETD monitoring does not violate the fourth amendment are* United States v. Dubrofsky, 581 F.2d 208 (9th Cir. 1978); United States v. Miroyan,
eral drug agents planted one beeper in a drum of caffeine and attached another, pursuant to a court order, to the suspects' truck battery. These beepers helped the agents locate a house where illegal drugs were seized.

The Ninth Circuit Court of Appeals, ruling on the admissibility of the evidence, stated: "We see no distinction between visual surveillance and the use of an electronic beeper to aid the agents in following the movements of an automobile along public roads provided no Fourth Amendment violation occurred when the beeper was attached."\(^3\) The ETD was analogized to other tracking devices that augment human senses, such as binoculars, tracking dogs, or search lights.\(^4\) The court also referred to the cases involving informers who are wired for sound.\(^5\)

The court reasoned that no infringement of any fourth amendment right occurred in the placement of the first ETD since the defendant had no constitutionally protected expectation that the chemical company would not consent to the installation of an ETD. In discussing the installation of the second ETD with a court order (presumably a search warrant issued on the basis of evidence produced by the first ETD), the court emphasized the fact that prior judicial approval was obtained. This discussion implied that a warrant supported by probable cause would be required any time entry was necessary in order to place an ETD, unless exigent circumstances excused the obtaining of a warrant.

The Hufford court correctly saw the key distinction between the installation of the ETD and its monitoring, unlike many of the other courts which have considered beeper cases. However, its analysis is far from satisfactory for two reasons. First, it found that since there is no constitutionally reasonable expectation that a person will not be subject to surveillance

\(^{577}\) F.2d 489 (9th Cir. 1978); Curtis v. United States, 562 F.2d 1153 (9th Cir. 1977), cert. denied, 99 S. Ct. 279 (1978); United States v. Pretzinger, 542 F.2d 517 (9th Cir. 1976) (per curiam); United States v. One 1967 Cessna Aircraft, 454 F. Supp. 1352 (C.D. Cal. 1978).
\(^{3}\) 539 F.2d at 34.
\(^{4}\) Id.
when on a public road or in public airspace, the mere enhancement of such surveillance by the monitoring of an ETD forms no reasonable basis for changing that expectation.\textsuperscript{38}

Second, the Ninth Circuit found a constitutionally protected reasonable expectation that the installation of an ETD would not be accomplished by improper government entry;\textsuperscript{37} presumably, the court would hold that an improper installation would require the exclusion of evidence obtained by later constitutional monitoring. This analysis focuses on the wrong thing: assuming that no constitutional expectation exists that one is not being followed by the monitoring of an ETD, why should it make a difference if the ETD was installed in an illegal manner?\textsuperscript{28}

C. Fourth Amendment Satisfied by Antecedent Justification for the ETD's Use

Many cases have avoided following Holmes, Moore, and Hufford, by using a variety of techniques which purport to make a decision on the fourth amendment issue unnecessary.\textsuperscript{39} However, most of these techniques do not avoid decision; they merely obscure it.

In a number of cases, a direct decision on the constitutionality of ETD use has been avoided by a finding that third party consent to the installation of the ETD eliminated the need for a warrant or prior court approval.\textsuperscript{40} In Houlihan v. State,\textsuperscript{41} the

\textsuperscript{38} Perhaps the Ninth Circuit would find that there was a reasonable expectation that a person will not be subjected to surveillance by the monitoring of an ETD when not on a public road or in public air space — i.e., when he is at home. The questionable soundness of this holding is discussed in text accompanying notes 58-75 infra.

\textsuperscript{37} 539 F.2d at 34.

\textsuperscript{39} See text accompanying notes 86-93 infra for a discussion of the issues raised by this question.

\textsuperscript{28} One technique which is valid involves application of the independent source exception to the fruit-of-the-poisonous-tree doctrine. In a Florida case, Fotianos v. State, 329 So.2d 297 (Fla. Dist. Ct. App. 1976), the investigating officers planted a beeper during a marijuana investigation. However, since they had also maintained an independent visual surveillance of the vehicle in question, the court held that the evidence obtained by tailing the vehicle was admissible under the independent source doctrine. The legality of the ETD use was not discussed.

\textsuperscript{40} See United States v. Cheshire, 569 F.2d 887 (5th Cir. 1978); United States v. Abel, 548 F.2d 591 (5th Cir. 1977).

\textsuperscript{41} 551 S.W.2d 719 (Tex. 1977).
Texas Supreme Court held consent to be valid when the Houston police department loaned a beeper-equipped van to a person suspected of dealing in drugs.\textsuperscript{42} Since the police could consent to a search of their own van, the beeper use was held to be proper.\textsuperscript{43}

In analyzing these consent cases, it is tempting to analogize to the wired-informer case, \textit{United States v. White}.\textsuperscript{44} There a plurality held that monitoring a bugging device knowingly worn by one participant in a conversation did not violate any reasonable expectation of privacy held by another participant; the unbugged conversationalist assumed the risk that the other was wired for sound. By analogy, in accepting an item from another person, one arguably assumes the risk that the previous holder has planted an ETD in the item. However, \textit{White} is distinguishable because it predicates the lack of any reasonableness on the face-to-face nature of the conversation. White had no reasonable expectation that the person to whom he was talking would not inform the police; therefore, he could not reasonably expect that person not to be wired for sound. The one spoken to is the conduit for the electronic surveillance. This is not the case with ETD monitoring; after the ETD's installation, the one consenting to its use normally departs. Without the ETD the consenter could never indicate where the defendant took the monitored item.\textsuperscript{45} Once the person consenting to the ETD's use loses contact with the item in which the device has been installed, the analogy to \textit{White} fails.\textsuperscript{46}

\begin{itemize}
\item \textsuperscript{42} \textit{Id.} at 722.
\item \textsuperscript{43} Two cases arising in California have reached a conclusion contrary to that of \textit{Abel, Cheshire}, and \textit{Houlihan}. See \textit{United States v. One 1967 Cessna Aircraft}, 454 F. Supp. 1352 (C.D. Cal. 1978) (consent by prior owner of aircraft insufficient with respect to purchaser); \textit{People v. Smith}, 136 Cal. Rptr. 764 (Ct. App. 1977) (consent by lessor of aircraft insufficient with respect to lessee).
\item \textsuperscript{44} 401 U.S. 745 (1971).
\item \textsuperscript{45} United States v. Kurck, 552 F.2d 1320 (8th Cir. 1977), illustrates the only situation in which analogy to \textit{White} might be appropriate. In \textit{Kurck}, government agents attached an ETD to an informant's car and monitored it while both the informant and the defendant were in it. Since defendant Kurck assumed the risk that the informant would indicate Kurck's whereabouts, it would be possible to argue that the defendant also assumed the risk that the informant would use electronic devices to keep himself and his companion under surveillance. \textit{But see note 46 infra}.
\item \textsuperscript{46} Considering Justice Harlan's eloquent dissent in \textit{White}, 401 U.S. 745, 768 (1971) many might agree that \textit{White} should not be followed even if it were not distinguishable.
\end{itemize}
Another group of cases has involved the installation of an ETD in contraband or its functional equivalent. In *United States v. Emery*, federal agents lawfully intercepted two items of international mail containing cocaine. After installing an ETD in each package, the agents allowed the packages to reach their addressee. In response to an objection to the use of the ETD's, the First Circuit held that there can be no reasonable expectation of privacy in contraband. Consequently, "the government did not violate appellant's constitutionally protected freedom from unreasonable searches and seizures."

This analysis is faulty because the emphasis is placed on the installation. While there may not be a constitutionally protected reasonable expectation of privacy in contraband, that is not the same as saying that one has no constitutionally protected reasonable expectation that his movements will not be tracked by an ETD. The courts' analysis stops with the installation, which is the vice of many of the ETD cases.

*Katz v. United States* provides the key to a proper analysis. While Katz may have had no reasonable expectation that he could not have been seen in the phone booth, he did have a reasonable expectation against being overheard. Even if there exists no reasonable expectation as to contraband, its possession should not destroy other reasonable expectations. Some
courts have relied on the sophistic argument that the police officers did not use the ETD to track the suspect, only to track the items the suspect had in his possession. If this reasoning is an exception to a rule that there is a constitutionally protected expectation that one will not be followed by the monitoring of an ETD, then the exception virtually eats up the rule, for an ETD is nearly always attached to an item other than the suspect.

II. ETD USE AND THE FOURTH AMENDMENT

A. Distinguishing Installation from Monitoring

The published opinions of courts that have considered ETD's have not given the issue of monitoring adequate analysis. Holmes and Moore do not focus adequately on monitoring as compared with installation. Hufford does differentiate between the installation of the ETD and its monitoring but goes on to hold that, for fourth amendment purposes, the installation is more significant than the monitoring. The consent and contraband cases similarly focus on installation without clearly distinguishing it from monitoring.

The only cases which highlight this critical distinction are United States v. French and United States v. Tussell. The approach in both cases is best summarized by the court in French: "It would appear that the more judicially cognizable event . . . is the monitoring of the [ETD] rather than its installation, for only then is information yielded which perhaps makes it a search." To analyze properly a fourth amendment objection to ETD use, a court should first differentiate the ETD's installation from its monitoring; then attention should turn to the constitutional significance of the monitoring.

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54 414 F. Supp 800 (W.D. Okla. 1976). The federal agents in French put ETD's in sacks of marijuana intercepted at the border and then tracked their movement from Louisiana to Colorado. Id. at 801-02.
55 441 F. Supp. 1092 (M.D. Pa. 1977). Tussell involves an ETD installed in a DC-6 with the consent of the airplane's lessee and then monitored as the plane flew from the Bahamas to Pennsylvania. Id. at 1098-100.
56 414 F. Supp. at 803.
57 Having made the crucial distinction, the courts in French and Tussell proceeded to measure incorrectly the fourth amendment implications of the monitoring in those
B. Monitoring is a Search Within the Meaning of the Fourth Amendment

An analysis of the constitutional ramifications of ETD monitoring must start with the question: Did what was done interfere with any reasonable expectations of the type safeguarded by the fourth amendment?N

In Katz v. United States, the United States Supreme Court held that monitoring a bugging device is a search or seizure for fourth amendment purposes. Katz has since come to stand for the proposition that governmental intrusion on a person's reasonable expectation of privacy makes the requirements of the fourth amendment applicable to the intrusion. Does a person involved have a reasonable expectation that he will not be followed, or an object in his possession located, by the monitoring of an ETD?

In Hufford, the Ninth Circuit held that monitoring an ETD intrudes upon no reasonable expectation of privacy because "the device only augments that which can be done by visual surveillance alone . . . . The [ETD] was merely a more reliable means of ascertaining where [the suspect] was going as he drove along the public road." The simplicity of this

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notes 58-73 infra.


Id. at 353.

See id. at 360-61 (Harlan, J., concurring). The actual language, "constitutionally protected reasonable expectation of privacy," is from Justice Harlan's concurring opinion, although it undoubtedly expresses what the majority opinion intended to say. But see Note, Tracking Katz, supra note 7, at 1482 (reading Katz to protect any reliance on "means . . . employed to preserve . . . privacy [which] are calculated to be effective against reasonably curious members of the public at large").

analysis is deceptive. Surely the Supreme Court could have followed that same simple reasoning in *Katz*: nonelectronic eavesdropping does not raise fourth amendment questions, since one's speech is knowingly exposed to all those within earshot; bugging is just a more reliable means of eavesdropping; therefore, bugging does not raise fourth amendment questions either. But the *Katz* Court did not follow such a line of reasoning. The shift from aural to electronic eavesdropping — the dramatic leap in efficiency achieved through new technology — made a difference to the Supreme Court. Should it also make a difference in the context of ETD's?

Two courts of appeals have answered this question affirmatively, the Fifth Circuit in *United States v. Holmes* and the First Circuit in *United States v. Moore*. *Holmes*, the earlier decision, took a less temperate view of ETD monitoring than *Moore*. *Holmes* found "[n]o rational basis . . . for distinguishing" ETD installation from the installation of a bugging device. *Moore*, on the other hand, concluded that while the "intrusion" of ETD monitoring is "lessened" by the fact that the monitored movement occurs in public, "still the intrusion cannot be written off as nonexistent."

The superiority of electronic surveillance over visual surveillance suggests the merit of the balanced approach taken in *Moore*. The leap in efficiency from visual to electronic surveillance is not as staggering as the leap from aural to electronic eavesdropping, but it is an impressive leap nonetheless. The improvement of surveillance provided by electronic technology renders this intrusion more than "abstract and theoretical" and justifies application of fourth amendment limitations to this form of surveillance.

accompanying notes 31-38 supra.


4 521 F.2d 869 (5th Cir. 1975), *aff'd in part and modified in part en banc*, 537 F.2d 237 (5th Cir. 1976). See text accompanying notes 13-19 supra.

5 562 F.2d 106 (1st Cir. 1977). See text accompanying notes 20-30 supra.

6 521 F.2d at 865.

7 562 F.2d at 112.

8 *United States v. Frazier*, 538 F.2d 1332, 1336 (8th Cir. 1976) (Ross, J., concurring).

The most difficult test for this principle should arise in the monitoring of a vehicular ETD, since the weakest case from the perspective of reasonable expectations is that concerning an automobile. But, while there is no doubt that there is a diminished expectation of privacy in an automobile, "[t]he word 'automobile' is not a talisman in whose presence the Fourth Amendment fades away and disappears." Even in Cardwell v. Lewis, the examination of a tire and the taking of paint scrapings were activities that required probable cause. Since no probable cause is required to observe an automobile, Cardwell appears to be almost exactly analogous to the ETD situation. There can be no reasonable expectations that law enforcement officials will not follow or locate a person by the use of sight — perhaps aided with field glasses or tracking dogs — as there was no reasonable expectation against observing the automobile in Cardwell v. Lewis. However, a reasonable expectation does not exist with respect to the physical limitations inherent in these means of surveillance: just as probable cause was necessary for the more intensive search (paint scrapings) in Cardwell, probable cause should be necessary to overcome the existing physical limitations in monitoring a person's movements. If there is a reasonable expectation against paint scrapings, how much more reasonable is the expectation against the monitoring of an ETD?

C. Making Monitoring Reasonable Under the Fourth Amendment

Before monitoring an ETD, what must law enforcement officials do in order to satisfy the requirements of the fourth amendment? One federal judge has suggested that the police must meet the high standards set by the Supreme Court and by Congress for electronic eavesdropping. These standards

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72 417 U.S. at 591-92.
would require a warrant in virtually every case of ETD monitoring and would place strict limits on the duration of the monitoring.  

Another federal judge has argued that ETD monitoring should require no more than a showing of "reasonable cause," a standard less demanding than probable cause, developed to deal with limited intrusions such as entering a car to determine its vehicle inspection number. Such a standard would permit virtually unlimited electronic surveillance on a very flimsy basis, with no provisions for prior judicial review.

A balanced application of the fourth amendment would allow ETD monitoring either if there is a valid warrant or if one of the exceptions to the warrant requirement applies. The most relevant exception in ETD cases is likely to be the "automobile" exception. When an ETD is installed in a vehicle or in an item to be carried in a vehicle, the police should not need to obtain a warrant to monitor the ETD if the mobility of the vehicle does not allow sufficient time to obtain a warrant and the police have sufficient probable cause to believe that the vehicle or the item in it is being used in ongoing criminal activity. Thus in United States v. Moore, the court upheld the warrantless monitoring of an ETD attached to the defendant's van because "the agents had probable cause to believe that a controlled substance was about to be made illegally."


For example, in United States v. Cofer, 444 F. Supp. 146 (W.D. Tex. 1978), federal agents placed an ETD in defendant's airplane on August 31, pursuant to a warrant. Later that day, the ETD signal was lost, and the agents did not pick the signal up again until October 7. The plane was located that day, and its pilot arrested for various drug offenses. Id. at 148. Despite the fact that the agents "acted expeditiously" once the signal reappeared, the court found the monitoring of the ETD constitutionally infirm since the warrant placed no termination date on that monitoring. Id. at 150.

United States v. Holmes, 537 F.2d 227, 228 (Ainsworth, J., dissenting).


The three-judge panel in Holmes rejected this argument: "[T]he opening of a door to inspect the [vehicle inspection number] . . . is limited in time, scope, and duration, unlike that involved when [an ETD] is used. In the instant case, the [ETD] was in operation for over 42 hours." 521 F.2d at 866 n.14.

See note 24 supra and accompanying text. Another possibly relevant exception to the warrant requirement is hot pursuit. See United States v. Bishop, 530 F.2d 1156 (5th Cir. 1976).

562 F.2d at 113. Contra United States v. Holmes, 521 F.2d 859 (1975), aff'd in part and modified in part en banc, 537 F.2d 237 (5th Cir. 1976). After holding the
Although the warrantless monitoring of vehicular ETD's may frequently be constitutional, the monitoring of nonvehicular ETD's will usually require a warrant. This conclusion raises a set of unresolved questions: What showing will be necessary to obtain a warrant? What restrictions should the warrant place on the monitoring of the ETD? And what notice requirements should the warrant enact?

The probable cause standard applied in Moore — probable cause to believe the monitored item is being used in ongoing criminal activity — seems to be the best standard for determining whether a warrant should issue. The traditional concepts of staleness should provide all the durational limits necessary in executing warrants to monitor ETD's. Finally, the post-execution notice procedures which have been approved for electronic eavesdropping should translate easily into the ETD context.

D. Defects In Installation

In most cases, the intrusion upon privacy posed by ETD installation will be so minimal that any constitutional defect in installing the device should be deemed to be cured by constitutionally acceptable monitoring. Attributing fourth amendment significance to installation independent of monitoring was responsible for much-criticized judicial absurdities like the distinction between Goldman and Silverman, and finally for the Court's abandonment of the protected area concept in Katz

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fourth amendment applicable to the monitoring of an ETD placed on Holmes' van, the Fifth Circuit rejected the notion that exigent circumstances could justify the warrantless action. "[F]ailure to obtain a warrant is fatal." Id. at 867.


The issue of the length of time a warrant authorizing beeper use is valid has not yet been settled. Compare United States v. Rowland, 448 F. Supp. 22 (N.D. Tex. 1977) with United States v. Cofer, 444 F. Supp. 146 (W.D. Tex. 1978). In both cases, the courts agreed that a ten-day limitation on the face of the warrant meant that an ETD had to be installed during that time, but they disagreed as to the necessity to renew the warrant after it had been installed.

See United States v. Cafero, 473 F.2d 489 (3rd Cir. 1973).

Compare Goldman v. United States, 316 U.S. 219 (1942) (placing electronic eavesdropping device against a party wall not a search or seizure) with Silverman v. United States, 365 U.S. 505 (1961) (inserting electronic eavesdropping device into a party wall is a search or seizure).
v. United States: "[T]he reach of [the Fourth] Amendment cannot turn upon the presence or absence of a physical intrusion into any given enclosure." 87

Questioning the constitutionality of an ETD installation focuses too much attention on areas, 88 and not enough attention on persons and their expectations of privacy. For example, a few ETD cases distinguish between external and internal placement of a vehicular beeper, finding that installation in the former case is not a search or seizure but that it is in the latter case. 89 No overwhelming significance should be attached to such a distinction.

No important consequences should flow from the fact that law enforcement officers armed with a valid warrant to monitor an ETD lacked a valid warrant to install the device, 90 or from the fact that police officers with probable cause to monitor an airplane's movements did not obtain valid third party consent to the ETD's installation, 91 or from the fact that the same officers could not warrantlessly install the ETD because a parked airplane does not fall within the vehicle exception to the warrant requirement. 92 In the face of constitutionally adequate ETD monitoring, defects in police procedure such as these seem inconsequential. 93

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87 389 U.S. at 353.
88 In United States v. Cofer, 444 F. Supp. 146 (W.D. Tex. 1978), the court thought the fact that the government agents had to enter a locked door to implant the ETD was determinative.
90 See, e.g., United States v. Rowland, 448 F. Supp. 22 (N.D. Tex. 1977) (lawful search warrant was issued, although it made no mention of need for forced entry to install ETD).
92 Id.
93 In Dalia v United States, 47 U.S.L.W. 4423 (1979), the Supreme Court applied similar reasoning in the context of electronic eavesdropping. Government agents had court authorization to eavesdrop on conversations in Dalia's office, but they had no warrant to enter the office in order to install the listening device. In holding that the eavesdropping warrant implicitly authorized entry to install the device, the Court noted:

It would extend the warrant clause to the extreme to require that, whenever it is reasonably likely that Fourth Amendment rights may be affected in more than one way, the court must set forth precisely the procedures to be
Of course, police behavior in installing an ETD which shocks the judicial conscience should not be curable by subsequent constitutional monitoring. The limitation on “shocking” police behavior must be retained and should be strengthened. But without a “shocking” violation, the only constitutionally significant event should be the use of the ETD to monitor a person’s movements.

CONCLUSION

Analysis of an ETD problem must begin with an understanding that evading the fourth amendment issue is rarely possible. Valid third party consent, or the installation of the ETD in contraband or its equivalent, should not destroy any constitutionally protected reasonable expectations of privacy with respect to the monitoring of the ETD.

A court should distinguish ETD installation from monitoring, and recognize that monitoring is “the more judicially cognizable event.” In analyzing monitoring, a court should require either a warrant issued on probable cause or the existence of probable cause and such exigent circumstances as will excuse the warrant requirement. A court should hold that the only event to be accorded constitutional status is monitoring. Even though one may have a reasonable expectation that an ETD has not been installed on his person, on his vehicle, or in a dwelling in which he is rightfully present, without unconstitutional monitoring there should be nothing to exclude. This analysis will best serve the goals for the fourth amendment outlined by Justice Brandeis:

The makers of our Constitution . . . conferred, as against the government, the right to be let alone — the most comprehensive of rights and the right most valued by civilized men. To

followed by the executing officers . . . [W]e would promote empty formalism were we to require magistrates to make explicit what unquestionably is implicit in bugging authorization: that a covert entry . . . may be necessary for installation of the surveillance equipment.

Id. at 4428. Of the four dissenters in Dalía, only two took issue with this portion of the opinion of the court. Id. at 4429 (Brennan, J., dissenting).


protect that right, every unjustifiable intrusion by the government upon the privacy of the individual whatever the means employed, must be deemed a violation of the Fourth Amendment.\textsuperscript{m}

\textsuperscript{m} Olmstead v. United States, 277 U.S. 438, 478 (1928) (Brandeis, J., dissenting).