PAGERS: HAS TECHNOLOGY ERODED PRIVACY?

Carol M. Bast*

In August 1997, the U.S. Attorney's office for the Southern District of New York announced the "first-ever prosecutions" for illegal interception of pager messages.[1] A New Jersey company, Breaking News Network, had allegedly intercepted alphanumeric messages sent to high-ranking New York City officials and had sold the information to the media.[2] The officials whose messages were intercepted included the New York City mayor's office, police department, fire department, bomb squad, and a district attorney's office.[3] The messages contained "sensitive" information such as "the location of high-level government officials, the location of crime witnesses and arrests and suspensions of police-department employees."[4] The company allegedly used tracking software and a "highly sophisticated" scanner to intercept messages and retrieve "capcodes," the electronic addresses of pagers.[5] The company allegedly used the capcodes to make clone pagers which would receive duplicates of the messages sent to the intended receiving pagers and sold some of the clone pagers.[6]

The United States Attorney commented, "[L]aw enforcement, the media and Corporate America should be aware ... if you are using a paging system, your communications may not be secure.... No governmental agency or business is immune from this illegal monitoring."[7] A privacy expert commented, "[W]e tell consumers that if they have any information that could be valuable to others, don't use wireless at all."[8]

In November 1997, two owners and a general manager of the company pleaded guilty to two counts of illegal interception and distribution of pager messages and the company pleaded guilty to illegally programming clone pagers.[9] Each individual faces a maximum six month prison term and a $5,000 fine for each count and the company faces a maximum $500,000 fine.[10]

Intercepting pager messages has been illegal since 1986. Digital transmission makes it difficult to intercept pager messages. Many pager users may have assumed

*Associate Professor, University of Central Florida; J.D., 1982, New York Law School; M.A., 1976, University of Wisconsin - Madison; B.A., 1974, Kalamazoo College.

[1] Stephanie N. Mehta, *Prosecutors Charge Company for Spying On Pager Messages / Firm Allegedly Sold Contents Of City Officials' Notes To* News *Organizations,* Wall St. J., Aug. 28, 1997, at A4.

[2] *Id.*

[3] Sharon Walsh, *3 Charged in N. Y. in Pager Scheme; News Service Allegedly Intercepted Messages,* WASH. POST, Aug. 28, 1997, at El.

[4] Mehta, *supra* note 1, at A4.

[5] Patricia Hurtado, *3 at Fort Lee Firm Charged with Intercepting Paging,* N. N.J. Rec., Aug. 28, 1997, at Al.

6 *Id.*

7. Walsh, *supra* note 3, at E1.

8. Id.

[9] *Breaking News Network Officials Admit Charges,* Wall St. *S.,* Nov. 21, 1997, at Bl 1A.

[10] *Id.*

that it is virtually impossible for their messages to be intercepted. The recent Breaking News Network incident puts pager users on notice that pager messages are susceptible to interception. Technology has eroded privacy; interception of pager messages may become commonplace even though federal statutes make interception illegal.

Electronic devices are not readily available for intercepting digital paging messages, but such devices could be available in the near future. The case against Breaking News Network shows that technology has outstripped the pager user's privacy. Confidential and sensitive information, if broadcast to a pager, is vulnerable to interception. The Breaking News Network incident is the first reported incident that does not involve the police or a paging company. A growing question is whether pager messages are effectively protected.

I. PAGER TECHNOLOGY

A recent article gives an interesting account of pager history:

> Industry lore has it that a radio engineer named Charles Neergard got the ball rolling in 1949. He was a hospital patient, and was tired of shouting down the corridor when he needed a doctor. Why not use radio technology to call them?
>
> Early pagers were something like one-way CB radios, bricksized things carried on the belt. As you went about your day, the voice of an operator chattered away on the unit, reading out messages. Not just yours, everybody's. You listened for your name.
> If you missed it, it was gone forever.
>
> Later on, pagers gained individual identities, so that they could pull in just the message intended for them, that is, you. Each one got a numerical ID, which it listened for, ignoring the messages that contained other pagers' IDs. It would beep when it heard its number being called, and you'd find a phone and call an operator at a central number to get your message.
>
> In the 1970s came tone and voice pagers -- the tone would announce to you that a message was coming, then you'd hear it on the unit. In the early '80s came numeric pagers with little screens that gave you the number, then late in the decade one that could do messages as well. It might be the number of the phone you were supposed to call, it might be a few words about when the meeting started or what flight you were supposed to take.
>
> Early pagers worked just in a single community. In time, they went national. The signals, relayed across the country by satellite, would seek you out in multiple cities at once, blanketing the airwaves with the ID number that your unit would pull in."

[11] John Burgess, *In Praise of the Lowly Pager; Last Week's Satellite Mishap Reminds Us How Much We Use It*, WASH. POST, May 25, 1998, at F21.

Long a common communication method of illegal drug dealers,[12] pagers have become popular with business people and teenagers.[13] The small radio receivers are popular with those who wish to stay in touch. In the mid-1980s, there were approximately 2.5 million pagers.[14] The number of pagers has now increased to almost twenty times that amount. Some 47.5 million people, or 18 percent of the adult United States population carried pagers at the end of 1997.[15] That number is expected to climb to 66.5 million by 2001.[16] Approximately twenty-two percent of United States households use pagers and, of those households, approximately fifty-seven percent obtained pagers for business communication,[17] nineteen percent own two pagers, and two percent own three to five.[18] This country's growing dependence on pagers became a newsworthy event when, on May 19, 1998, ninety percent of United States pagers were made inoperable as a communications satellite malfunctioned.[19] At least that percentage of the nation's pager traffic relies on digital transmission of pager messages via one or two satellites.[20]

Pagers are used heavily by business people, such as sales people, plumbers, electricians, real estate agents, tow truck operators, delivery services, and physicians, who travel daily as part of their job or who need to be contacted frequently.[21] Pagers increase one's productivity at a relatively low cost. Pagers can receive the latest information on traffic, the stock market, sports scores, airplane flight information, the weather, and news highlights and can receive email messages." With appropriate software, email messages can be composed on a computer and sent to numeric and alphanumeric pagers.[23] According to one source, some choose pagers over cellular telephones because pagers are smaller and lighter than cellular telephones and pager batteries last longer. Some pagers are usable throughout a greater geographical area.[24] Pager signals can reach into areas, such as top floors of skyscrapers or building

[12] *Protecting Privacy*, WASH. POST, June 1, 1998,atA16.

[13] Bleys Rose, *The Beep Goes on / Teens turning Pagers into Lifestyle Accessories*, SANTA ROSA PRESS DEMOCRAT, May 4,1998, at Dl.

[14] H.R. REP. NO. 647, 99th Cong., 2d Sess. 23 (1986).

[15] Tammy Parker, *The 2-way Street*, Mobile COMPUTING & COMMUNICATIONS, June 1998, at 109.

[16] James F. Peltz, *Advertising & Marketing / THE GREAT SATELLITE FAILURE / THE INDUSTRY /Wall St. Cuts Satellite, Pager Stocks Some Slack*, LOS ANGELES Times, May 21, 1998, atDl.

[17] Rose, *supra* note 13, at Dl.

[18] L.A. Lorek, *Page from the Future / Access Internet, Monitor Machines - All with Pagers*, FT.LAUDERDALE SUN-SENTINEL, Apr. 1, 1998, at ID.

[19] Elizabeth Douglass & Anne Colby, *Satellite Problem Cuts Service to 90% of Pagers*, LOS ANGELES TIMES, May 20, 1998, at Al.

[20] John J. Keller, *The Downside / Granted, the digital era opens up a new world. But parts of the old one will be missed.*, WALL ST. J., June 15, 1998, at R20.

[21] Rose, *supra* note 13, at Dl; Douglass, *supra* note 19, at Al.

[22] Rose, *supra* note 13, at Dl; Phillip Robinson, *That little box on your belt now can give you voice, word and two-way communications / The new age of beepers*, HOUS. CHRON., May 1, 1998, at 1; Katie Fairbank. *Paging companies are offering more features, services / Many providers are going beyond the basic beeper as use grows andfirms rush in to satisfy demand*, MlNNEAPOLlS-ST.PAUL STAR-TRJB. Apr. 27, 1997, at 5D.

[23] Stephen W. Plain, *E Corp: email 97*, PC MAG., May 5, 1998, at 128.

[24] Robinson, *supra* note 22, at 1.

basements, not accessible to cellular telephone transmissions.[-5]

The various types of pagers include numeric, tone-only pagers, alphanumeric, and voice pagers. The Personal Communications Industry Association estimates that seventy-nine percent of pagers are one-way numeric pagers, four percent are tone-only pagers, and seventeen percent are alphanumeric pagers.[26] Messages can be sent to numeric pagers by using a telephone pad. Although the pager screen is limited to a display of numbers, many users have developed numeric codes to send substantive messages.[27] The tone-only pager emits a beep that signals the pager user to dial a designated number. An alphanumeric pager allows the user to read a 100 to 300 character message on the pager screen.[28] A new type of voice pager was introduced in 1997. The old voice pagers played the voice message when received. The new voice pager can store voice messages like an answering machine and play them later.[29] One voice pager can store up to thirty twenty-second messages digitally.[30]

Most pagers are one-way pagers, capable of receiving but not sending messages; some newer pagers are two-way pagers, capable of sending and receiving messages. One percent of the United States pager users used two-way pagers at the end of 1997.[31] Experts estimate that the number of two-way pager users will increase to 15.5 million, or twenty six-percent of pager users, by 2001.[32] Two-way pagers have several advantages. Delivery of messages is guaranteed on the two-way pager, as it is on some newer one-way pagers. Those messages not delivered when sent because the pager is not on or is out of the reception range are resent when the pager is able to receive them.[33] Two-way pagers can receive email messages, send faxes, and download information from the Internet.[34] A pager user attending a conference or meeting can respond to a pager message without taking time out for a telephone call.[35] A present disadvantage is the higher cost for two-way pagers.[36] How are pager messages transmitted? Numeric and alphanumeric messages are transmitted by digital signals.[37]

[25] Bob Ortega, *Cheap Beeps / Paging Industry Faces Bind as Growth Slows. Profits Still Elude It/A Failed Try at Voice Service Prompts Biggest Player To Try Raising Prices / Threat From Cellular Phones*, WALL ST. J., July 16, 1998. at Al.

[26] Rose, *supra* note 13, at Dl.

27*Id.*

28. Id.

29. L.A. Lorek, *supra* note 18, at ID.

[30] Geoffrey Wheelwright. *Beethoven calling*, Fin. TIMES, Mar. 13, 1998, at 12.

[31] Parker, *supra* note 15, at 109.

32. Id. at 110.

[33] *Id.* A recent advertisement for a one-way pager claims that it is the "first nationwide paging service that guarantees you'll get all your messages. Even if your pager's been off, your batteries have died or you've been out of range, SkyWord Plus stores your messages and automatically delivers them to you when you return to full service." WALL ST. J., June 10, 1998, at B6.

[34] Parker, *supra* note 15, at 110-11; Fran Silverman. *A Brave New Beep / There's a Flurry of New Options for the Personal Pager. From Recording Messages to Getting the Latest Sports Scores*, HARTFORD COURANT, Feb. 5, 1998. at FI.

[35] A recent advertisement claims that the company's two-way pager is "(s]mart enough to let you communicate with most anyone with a pager. Internet email address or fax. Easy enough to create messages on the go with a full keyboard. Discreet enough to respond from almost anywhere, sending productivity to new heights." WALL ST. J., June 5, 1998, at W8.

[36] Parker, *supra* note 15. at 112.

[37] "Analog signals carry sound by converting it to radio waves. Digital signals carry sound by

A display pager works in the following fashion:

> 1. The person placing a page dials the pager's phone number. The signal gets a special code so it knows which pager it's intended for.
> 2. The page travels through the telephone network to a paging terminal, where it's beamed through the atmosphere.
> 3. The satellite picks up the signal and beams it back down to transmitters in the paging company's service area.
> 4. The transmitters blanket the service area with the page.
> 5. The appropriate pager recognizes the signal and displays the message on its screen.[38]

Interception of digital transmissions requires sophisticated equipment not readily available to the public.[39] Technology allows a computer, loaded with tracking software and connected to a scanner, to intercept pager messages to obtain the electronic address of pagers. The electronic addresses can be used to create clone pagers.[40] Legal use of the tracking software is restricted to law enforcement agencies, paging companies testing their paging systems, and those with court authorization.[41] Cloning equipment costs $300 to $ 1,000.[42]

Pager voice messages are transmitted by digital signals or by analog voice signals. In contrast to digital signals, analog signals are relatively easy to intercept using conventional scanners.[43] A scanner, which is a radio receiver, scans radio frequencies until it picks up a frequency on which sound is being transmitted.[44]

II. FEDERAL STATUTES

In passing the Omnibus Crime Control and Safe Streets Act of 1968 (" 1968 Act"), Congress attempted to prevent the interception of oral and wire conversations

converting it to 'computerlike l's and 0's."' *New technology will redefine TV,* Orlando SENTINEL, Dec. 28, 1995, at Bl.

[38] Peltz, *supra* note 16, at Dl.

[39] Theodore R. Harper & Andrew T. Knowles, *Congress May Criminalize Cell Phone Eavesdropping / Because mobile phone technology has improved, lawmakers now may be poised to make interception of PCS signals illegal,* NAT'L L.J., Apr. 13, 1998, at B1

[40] Walsh, *supra* note 3, at El.

[41] Mehta, *supra* note 1; Walsh, *supra* note 3, at El.

[42] Walsh, *supra* note 3, at E1.

[43] A 1987 case, People v. Medina, 234 Cal. Rptr. 256, 258-259 (Cal. Ct. App. 1987), *cert, denied,* 484 U.S. 929 (1987), involved a paging company using a single radio frequency to transmit messages to up to 3,0 pagers. A radio scanner tuned to that frequency would intercept all the messages transmitted on the paging system. For a discussion of the facts in *Medina,* see notes 118-120 *infra* and accompanying text. A radio scanner is not the only equipment capable of intercepting voice pager messages. An individual using a radio tuned to the frequency on which the voice message is broadcast could hear the message. *See* Dorsey v. State, 402 So. 2d 1178, 1182 (Fla. 1981). For a discussion of the facts in *Dorsey,* see notes 112- 117 *infra* and accompanying text.

[44] David L. Haase, *Scanners escape restrictive legislation / Congressman's bill is reworked to allow devices' continued use by their enthusiasts,* INDIANAPOLIS STAR, Nov. 17, 1997, at Bl.

without the consent of at least one party to the conversation. The 1968 Act protected the privacy of aural communications, that is face-to-face ("oral communications") and telephone conversations ("wire communications") audible by the human ear. The Act prohibited the interception of oral and wire communications without the consent of any of the parties to the conversation except upon court order. Evidence obtained from unauthorized interception was inadmissible in court. The Act also provided criminal penalties for its violation and authorized civil damages.[45]

By 1986, the 1968 Act lagged behind new communications technology. Digital communications, because inaudible by the human ear, were not protected under the 1968 Act.[46] The Electronic Communications Privacy Act of 1986 ("1986 Act") amended the 1968 Act to protect display and voice pagers;[47] tone-only pagers were explicitly excluded from protection under the 1986 Act.[48] The 1986 Act also protected stored electronic communications and cellular telephone calls. Another amendment in

[45] Omnibus Crime Control and Safe Streets Act of 1968. Pub. L. No. 90-351, § 802 1968 U.S.C.C.A.N. (82 Stat. 197) 237,254-57,259.

[46] Prior to the 1986 Act, some, but not all pagers, were protected under the 1968 Act:

> According to the United States Department of Justice, however, the three types of paging devices require different levels of statutory protection. The Department reasons that "tone only" pagers carry no reasonable expectation of privacy and therefore no court order is required for a governmental official to intercept or monitor such signals. The interception of "display pagers" is, according to the Department of Justice, also not within the ambit of Title III; the Department concedes, however, that because, [sic] use of such devices encompasses a reasonable expectation of privacy, governmental interception of messages over such a system requires use of a search warrant under the Fourth Amendment. Finally, the Department of Justice concludes that a "voice pager" is simply the continuation of an original wire communication, and therefore a Title III court order is required.

H. R. REP. No. 647, 99th Cong., 2d Sess. 24 (1986) (footnotes omitted).

[47] The legislative history to the 1986 Act recognizes three types of pagers:

> Pagers take on one of three basic forms: "tone only," "display" and "tone and voice pagers." The "tone only" device emits a "beep" or other signal to inform the user that a message is waiting, and where that message can be retrieved by the user's making a phone call to a predetermined number (usually an office or answering service). "Display" pagers are equipped with screens that can display visual messages, usually the telephone number of the person seeking to reach the person being paged. The party seeking to make contact with the user is instructed to provide a message, usually by pushing the buttons of a touch- tone telephone; this message is stored by the paging company's computer until it can be transmitted to the user's pager, where the message can be read directly by the user, obviating the need for the user to make a telephone call to retrieve the message. The most sophisticated type of pager is the "tone and voice" model. It can receive a spoken message that the paging company's computer has taken from the party seeking to contact the unit's user. After the beep tone is made, the device "repeats" the recorded message. This requires that a radio signal containing voice communications be sent from the paging company's base to the mobile unit.

S. Rep. No. 541, 99th Cong. 2d Sess. (1986), *reprinted in* 1986 U.S.C.C.A.N. 3564.

[48] The legislative history refers to this exception:

> There is an exception for tone-only paging systems [in the definition of 'electronic communications.'] Thus, the interception of tone-only paging system transmissions will not be prohibited by this law . On the other hand, the unauthorized interception of a displaying paging signal intended for digital display by the paging receiver (which involves the transmission of alphanumeric characters over the radio) canied by a common carrier is illegal.
>
> H R. REP. No. 647,99th Cong., 2d Sess. 37(1986).

1994 afforded protection to cordless telephone calls.

Now for a closer look at specific provisions of the Federal Act. Pagers are not specifically referenced under the 1968 act as amended by the 1986 Act and subsequent amendments (" Federal Act"),[49] except that tone-only pager messages are excluded from protection as electronic communications. Legislative history clearly indicates that the 1968 Act was amended to protect display pager messages, although it is unclear how they are to be classified.[50] Legislative history also indicates that the 1986 Act was intended to protect those voice pager messages not already protected under the 1968 Act. The Senate report concerning the 1986 Act indicates that voice pager messages carried by analog signals are wire communications, and computer generated voice pager messages are electronic communications. The Senate report states:

> An aural transfer means any transfer containing the human voice at any point between and including the points of origin and reception.
> Under this definition, voice messages transferred over a paging system are protected. It is intended that computer-generated or otherwise artificial voices are not included in this definition and thus will not be part of a "wire communication." They would, however, be part of an "electronic communication."[51]

Thus, voice pager messages transmitted by analog signal were already protected under the 1968 Act as wire communications; computer-generated voice pager messages became protected as electronic communications under the 1986 Act. The report did not address how voice pager messages transmitted by digital signals would be classified. It is unclear whether they are wire or electronic communications.

The first section of the Federal Act contains the following definitions for "wire communication," "oral communication," and "electronic communication:"

> "[W]ire communication" means any aural transfer made in whole or in part through the use of facilities for the transmission of communications by the aid of wire, cable, or other like connection between the point of origin and the point of reception (including the use of such connection in a switching station) furnished or operated by any person engaged in providing or operating such facilities for

[49] The 1986 Act also protected cellular telephone communications as wire communications. The 1986 Act was amended in 1994 by the Communications Assistance for Law Enforcement Act of 1994, which extended protection to cordless telephone communications. *See* Carol M. Bast, *Cordless Telephones: If You Can't Say Something Nice, You Might Want to Send a Letter*, 32 CRIM. L. BULL. 403 (1996).

[50] The Senate report provides:

> Radio communications transmitted over a system provided by a common carrier are not readily accessible to the general public with one exception. That exception is for tone-only paging systems. As a result of that exception, the interception of tone-only paging system transmissions will not be prohibited by this law. However, the unauthorized interception of a display paging system, which involves [sic] the transmission of alphanumeric characters over the radio, carried by a common carrier, is illegal.

S. REP. No. 541, 99th Cong., 2d Sess. (1986), *reprinted in* 1986 U.S.C.C.A.N. 3569.

51. Id. at3570.

> the transmission of interstate or foreign communications or communications affecting interstate or foreign commerce and such term includes any electronic storage of such communication ... ,[52]
>
> "[OJral communication" means any oral communication uttered by a person exhibiting an expectation that such communication is not subject to interception under circumstances justifying such expectation, but such term does not include any electronic communication ... ,[53]
>
> "Electronic communication" means any transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical system that affects interstate or foreign commerce, but does not include—
>
> (A) any wire or oral communication;
>
> (B) any communication made through a tone-only paging device; (C) any communication from a tracking device (as defined in section 3117 of this title); or
>
> (D) electronic funds transfer information stored by a financial institution in a communications system used for the electronic storage and transfer of funds _____ [54]

There are several notable differences among wire, oral, and electronic communications. Wire and oral communications involve communications audible by the human ear, while electronic communications are not audible. The expectation of privacy is different also. To qualify as an oral communication, the speaker must have a reasonable expectation of privacy; there is no similar requirement for wire or electronic communications. A communication is protected under the Federal Act by virtue of being classified as a wire or electronic communication. Another difference is that a wire communication includes its electronic storage. In contrast, an electronic communication does not include its electronic storage. An electronic communication, once transmitted and stored, is protected as a "stored electronic communication."

The Federal Act prohibits the intentional interception or disclosure of wire, oral, and electronic communications;[55] a law enforcement officer may obtain a court order authorizing an interception.[56] The Federal Act requires the government to present detailed information to obtain an interception order.[57] An application for an interception order must contain a wealth of information, including the information justifying the

[52] 18 U.S.C.S. § 2510(1) (Law. Co-op. Supp. 1998).

[53] 18 U.S.C.S. § 2510(2) (Law. Co-op. 1993).

[54.] 18 U.S.C.S § 2510(12) (Law. Coop. Supp. 1998).

55 18 U.S.C.S. § 2511(1) (Law. Co-op. 1993 & Supp. 1998).

56.18 U.S.C.S. § 2516 (Law. Co-op. 1993 & Supp. 1998).

[57] The procedure for obtaining the court order is specified in great detail in 18 U.S.C.S. § 2518 (Law. Co-op. 1993 & Supp. 1998).

issuance of an order and a statement concerning the investigation already conducted.[58] The Federal Act specifies the procedure for executing the interception order.[59] When intercepted, the communication must be recorded, if possible, and the recording must be sealed.[60] An oral or wire communication intercepted without following the required procedure for obtaining a court order may be suppressed.[61] There is no similar remedy

[58]18 U.S.C.S. § 2518 (1) (Law. Co-op. 1993 & Supp. 1998). In one case, the defendant challenged court authorization of clone beepers. In United States v. David, 940 F.2d 722, 727-28 (1st Cir. 1991), *cert, denied*, 502 U.S. 989 (1991), the defendant claimed that the government had not complied with the investigation requirement of 18 U.S.C. § 2518(l)(c). That statute requires that the application for court authorization of a clone beeper include "a full and complete statement as to whether or not other investigative procedures have been tried and failed or they reasonably appear to be unlikely to succeed if tried or to be too dangerous" by not investigating thoroughly enough. *Id.* at 727. The court disagreed, noting that the judge authorizing the application had found sufficient investigation. *Id.* at 729.

In a second case, United States v. Hennings, No. 95-CR-0010A, 1997 WL 714250, at *4 (W.D. N.Y. Oct. 20, 1997), the defendant similarly claimed that the government had "failed to exhaust alternative investigative techniques" before obtaining court authorization to intercept electronic communications on two digital pagers. The judge found that the government had complied with the statute; the government had attempted other investigation and had rejected further investigation as "either unlikely to succeed" or "too dangerous." *Id.* at *10. *Accord* United States v. Bautista, Nos. 91-5593,91-5594, 91-5601, 91-5613, 1992 WL 172667, at *4 (4th Cir. July 22, 1992).

[59] For example, 18 U.S.C.S. § 2518(5) (Law. Co-op. 1993) requires interceptions to "be conducted in such a way as to minimize the interception of communications not otherwise subject to interception under this chapter." Defendants in two cases claimed that evidence obtained by the government through clone pagers should be suppressed because the government did not comply with the minimization requirement. In *United States* v. *Tutino,* 883 F.2d 1125, 1140 (2d Cir. 1989), the government had used a clone numeric pager to intercept messages intended for Tutino. The court held that the minimization requirement could not be applied to clone pagers. The interceptions were less intrusive than telephone wiretaps and, from the numeric display, it was impossible to determine the contents of any "conversation." *Id.* The court in United States v. Bautista, 1992 WL 172667, at *4 reached the same conclusion for the same reasons and added that the defendant had "failed to indicate how the alleged intrusiveness of the beepers could have been minimized."

60.18 U.S.C.S. § 2518 (8)(a) (Law. Co-op. 1993 & Supp. 1998). In two cases, the defendants claimed that certain procedures regarding intercepted communications had not been followed. In the first case, United States v. Paredes-Moya, 722 F. Supp. 1402, 1407, 1408 (N.D. Tex. 1989), *aff'd in part & rev'd in part on other grounds,* 928 F.2d 665 (5th Cir. 1991), *cert, denied sub nom.,* Guena-Marez, 502 U.S. 917 (1991), the defendants claimed that the government had violated 18 U.S.C. § 2518 (8)(a) which requires that "(t]he contents of any wire, oral, or electronic communication intercepted by any means authorized by this chapter shall, if possible, be recorded on tape or wire or other comparable device . . . [and the recording] shall be done in such a way as will protect the recording from editing or other alterations." The DEA agents had attempted to use a device which would record information on the pager messages, including the numerical data transmitted. When the device malfunctioned, the agents recorded information concerning the messages in a log book. *Id.* at 1407. The court rejected defendants' claim that there had been no evidence presented that the government had not accurately logged in the messages and the government followed the statutory requirement that interceptions be recorded "if possible." *Id.* at 1408.

In the second case, United States v. Suarez, 906 F.2d 977, 983 (4th Cir. 1990), *cert, denied sub nom.,* Lucero-Romero v. United States, 498 U.S. 1070 (1991), the court held that "the sealing requirements in § 2518(8)(a) were never invoked because recording the contents of the communications intercepted in this case was not possible." That statute requires that the intercepted electronic communication be sealed "if possible;" any intercepted communication not sealed may be excluded from evidence. *Id.* at 981, 982. The court apparently agreed with the government's argument that the Federal Act governed procedures for intercepting communications because the interception occurred on November 8-9, 1998, but that the state court authorization for the use of a clone pager was valid because the court order was issued September 22, 1988. *Id.* at 983. The Act gave the states until 1986 to enact conforming legislation, which North Carolina had failed to do. *Id.* at 982-83.

[61] 18 U.S.C.S. § 2518 (10)(a) (Law. Co-op. 1993).

for an electronic communication intercepted without following proper procedure.[62]

The penalty for a garden variety wiretapping or eavesdropping is a fine, or not more than five years imprisonment, or both.[63] The fine range is from $1,000 to $10,000.[M] Any oral or wire communication intercepted in violation of the Federal Act is inadmissible; however, exclusion is not a remedy under the Federal Act for intentional interception of electronic communications.[65] The Federal Act also authorizes civil relief for interception of oral, wire or electronic communications, including equitable or injunctive relief, either actual damages or statutory damages of the greater of $ 100 per day or $ 10,000, punitive damages, attorneys fees, and costs.[66]

The Federal Act also prohibits the intentional interception of electronic communications in electronic storage; a law enforcement officer may access the stored electronic communication by obtaining a search warrant. The procedure for obtaining a search warrant is less onerous than that required for the court order needed to intercept an oral, wire, or electronic communication. The penalty for intentionally intercepting a stored electronic communication is a fine, or from six months to two years imprisonment, or both.[67] Exclusion is not a remedy under the Federal Act for intentionally intercepting stored electronic communications.[68] The Federal Act authorizes civil relief for intentional interception of stored electronic communications, including equitable or injunctive relief, a minimum of $1,000 in actual damages and any profits made by the interceptor, punitive damages, attorneys fees, and costs.[69]

The effective date of the 1986 Act was October 21, 1986, but the states were given two years to amend state wiretapping statutes to conform to the 1986 Act. After October 21, 1988, state courts in states whose statutes had not been amended were without power to authorize interceptions of oral, wire and electronic communications.[70]

[62] 18 U.S.C.S. § 2518 (10)(c)(Law. Co-op. 1993).

[63] 18 U.S.C.S. § 251 l(4)(a) (Law. Co-op. 1993).

[64] U.S. Sentencing Guidelines Manual § 2H3.1(a) (1998) designates “Interception of Communications or Eavesdropping" as a level 9 base offense. U.S. Sentencing Guidelines Manual § 5E1.2(c)(3) (1998) lists the minimum and maximum fine for each offense level.

[65] 18 U.S.C.S. § 2515 (Law. Coop. 1993) provides:

> Whenever any wire or oral communication has been intercepted, no part of the contents of such communication and no evidence derived therefrom may be received in evidence in any trial, hearing, or other proceeding in or before any court, grand jury, department, officer, agency, regulatory body, legislative committee, or other authority of the United States, a State, or a political subdivision thereof if the disclosure of that information would be in violation of this chapter.

Congress may have given electronic communications less protection because electronic communications were believed to be easier to intercept than oral and wire communications. A more likely reason for the lower level of protection was the lack of support from the United States Department of Justice. “According to Congressman Kastenmeier, only bills with Justice Department support had any chance of passage during the Reagan Administration, and the Department had made it quite clear that it believed electronic communication should be given a lower level of protection." Michael S. Leib, *E-Mail and the Wiretap Laws: Why Congress Should Add Electronic Communication to Title Ill 's Statutory Exclusionary Rule and Expressly Reject a "Good Faith " Exception,* 34 Harv. J. on Legis. 393, 410 (1997).

66. 18 U.S.C.S. § 2520 (Law. Co-op. 1993).

[67] 18 U.S.C.S. §§ 2701, 2703 (Law. Co-op. 1993 & Supp. 1998).

68. 18 U.S.C.S. § 2708 (Law. Co-op. 1993).

[69] 18 U.S.C.S. § 2707 (Law. Co-op. Supp. 1998).

[70] The Senate report explains:

> Subsection (b) [of Section 111] provides a special rule for the effective date in the case of

For example, in *Mauldin* v. *State,*[71] the Texas state court held that the Federal Act did not apply to police interception of display pager messages because the interception occurred seven months prior to the delayed effective date.[72] In *Brown v. Waddell,*[73] the court found that the North Carolina state court judge was without power to authorize the use of a clone pager. At the time of the 1991 interception, North Carolina had not amended its wiretap statutes to conform to the 1986 Act.[74]

The Federal Act, however, does not afford the only protection for pager messages. Pager messages can be protected against government interception under the Fourth Amendment.

III. PAGERS AND THE FOURTH AMENDMENT

In the 1967 landmark case, *Katz v. United States,*[75] the United States Supreme Court drew the boundaries for Fourth Amendment protection of communications. In that case, FBI agents had used a device to monitor Katz' calls from a telephone booth. The device, affixed to the outside of Katz' glass paneled telephone booth, allowed the agents to listen to and record what Katz said. Katz appealed his conviction for interstate betting, claiming that what he said in the booth should not have been admitted as evidence at trial.[76] The Court reasoned that

> [T]he Fourth Amendment protects people, not places. What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.... But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.[77]

The Court held that "[T]he Government's activities in electronically listening to and

> state authorizations of interceptions. This special effective date rule is necessary because the provisions of chapter 119 of title 18 supersede state laws with respect to electronic communications. Under chapter 119, the states must enact statutes which are at least as restrictive as the provisions of chapter 119 before they can authorize their state courts to issue interception orders. Because of the substantial changes made by this act it is appropriate to grant the states sufficient time to modify their laws. This special effective date rule gives the states two years to amend their laws to meet the new requirements of chapter 119.

S. REP. No. 541, 99th Cong., 2d Sess. (1986), *reprinted in* 1986 U.S.C.C.A.N.3589.

71 874 S.W.2d 692, 695 (Tex. Ct. App. 1993).

72. In March 1988, the police obtained a court order for a clone pager and used the pager to intercept pager messages. The court order was obtained without following the procedures mandated by the Federal Act. The court found that the police did not violate the Federal Act because the Federal Act became effective against the state on October 21, 1988, and the interception occurred in March 1988. *Id.*

73 50 F.3d 285, 290 (4th Cir. 1995).

74 *Id.* at 289 n.3. The court order authorizing two clone pagers was obtained following the procedures for obtaining a pen register. *Id.* at 287. The court found that a clone pager was not the equivalent of a pen register; because the North Carolina wiretap statutes had not been amended, the state judge had no power to authorize use of a clone pager. *Id.* at 290, 290 n.5. *See also* discussion *supra* note 60.

75 389 U.S. 347,353(1967).

76 *Id.* at 348, 352.

77 «. at 351.

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."[78] Justice Harlan's concurring opinion contains the two requirements for constitutional privacy protection. The "first [requirement was] that a person have exhibited an actual (subjective) expectation of privacy and, [the] second [requirement was] that the expectation be one that society is prepared to recognize as 'reasonable.'"[79] Harlan's test has been more widely used as precedent than the majority holding or reasoning.

Protection under the Fourth Amendment is not coextensive with the protection afforded under the Federal Act. For example, the first case subsequently discussed involved a display pager message constitutionally protected but not protected under an earlier version of the Federal Act. Today, the intercepted messages would be considered electronic communications; however, the interception occurred in 1985, prior to passage of the 1986 Act.

In a 1986 case, *People* v. *Pons,*[80] defendant Pons claimed that the assistant district attorney should have obtained an eavesdropping warrant rather than a search warrant to monitor the messages sent to his display pager. The messages were monitored in 1985 using a duplicate pager.[81] The pager operated in the following manner;

> "The messages are sent to the device by an individual using a touch- tone telephone who dials a telephone number assigned to the device.
> Once a signal is heard, the caller presses the digits he or she wants to transmit." It appears that the digits are then transmitted over radio waves to the portable pager, which emits a beep and displays the digits in visual light.[82]

The court determined that the eavesdropping statute was inapplicable because there was no conversation and no telephonic communication involved.[83] The court found, however, that Pons did have a reasonable expectation of privacy in pager messages under the Fourth Amendment and a search warrant was required to intercept messages.[84]
The interception was more intrusive than use of a pen register given that telephone numbers and coded messages can be displayed.[85]

Pons and other cases show that the Fourth Amendment may protect pager messages not protected under the Federal Act.[86] However, Fourth Amendment

78. *Id.* at 353.

79 *Id.* at 361.

80. 509 N.Y.S.2d 450,451-2 (County Ct. 1986).

81.*Id.* at452.

82.*Id.* at 451-2.

83. *Id.*

84. *Id.* at 453-4.

85.*Id.* at 453.

86. In United States v. Reyes, 922 F. Supp. 818, 837-8 (S.D. N.Y. 1996) the court held that pager messages which an agent accessed by turning on the pager should be suppressed as having been obtained in violation of the Fourth Amendment. The Federal Act would not have allowed the messages to be suppressed because suppression is not a remedy for illegally accessing stored electronic communications.

exceptions to the requirement of a search warrant also apply to pager messages.

Four federal cases concern police seizure of pagers incident to an arrest.[87] Courts considering those cases have all agreed that there is no Fourth Amendment violation where the pager was within arm's reach of the arrestee and the information on the pager was accessed within a short time of the arrest.[88] The purpose of the arrest exception to the search warrant requirement was to "secure any weapons and to prevent the concealment or destruction of evidence."[89] Three of the courts mentioned that an alternate ground for the government accessing the pager information could be exigent circumstances; however, none of the courts reached a holding on that ground.[90]

In two of the four federal cases, third parties who had sent messages to display pagers challenged police access to the messages. In *United States* v. *Meriwether*,[91] DEA agents used a search warrant to seize various items, including an operating digital display pager. The pager operated in the following manner:

> The pager had the capacity to receive and store a total of five numeric messages, each containing up to fifteen digits. An incoming sixth message would replace the first stored messages, which then would become irretrievable. Pressing a button on the pager would result in the stored numbers being displayed.[92]

Agents monitored that pager and recorded telephone numbers and numeric codes displayed, including a 911 emergency code. One of the telephone numbers displayed repeatedly with the emergency code was Chester Meriwether's. An agent called Meriwether's number, Meriwether negotiated a cocaine purchase, and the agents arrested Meriwether when he arrived to make the purchase.[93] Meriwether claimed that his telephone number and all other evidence should be suppressed either under the Fourth Amendment or under the federal wiretapping statutes.[94] The court first rejected

Id. at 837. Bohach v. City of Reno, 932 F. Supp. 1232, 1234-5 (D. Nev. 1996) was a case in which a 1983 Fourth Amendment claim was raised and rejected. *See* notes 139-146, *infra* and accompanying text.

87.United States v. Ortiz, 84 F.3d 977 (7th Cir. 1996); United States v. Reyes, 922 F. Supp. 818 (S.D.N.Y. 1996); United States v. Lynch, 908 F. Supp. 284 (D. St. Thomas 1995); United States v. Chan, 830 F. Supp. 531 (N.D. Cal. 1993).

[88] *See* cases cited *id.*

89. 89 U.S. v. Lynch, 908 F. Supp. 284, 287 (D. St. Thomas 1995).

[90] *See* U.S. v. Reyes, 922 F. Supp. 818, 833 n.12 (S.D.N.Y. 1996). Another federal district court stated: We are unable to make an informed ruling whether exigent circumstances existed in this case, because the relevant facts which may have constituted such circumstances were not developed at the suppression hearing. For instance, we do not know the pager's storage capacity, nor do we know what impact turning off the pager might have had, i.e., whether it would have been to erase the telephone numbers in the pager's, memory or just have prevented new telephone numbers from being received.

U.S. v. Lynch, 908 F. Supp. 284, 289-90 (D. St. Thomas 1995). A California federal district court stated, "[A]s the valid search of the pager incident to Chan's arrest destroyed Chan's privacy interest in the pager's contents, the Court need not address the government's arguments concerning exigent circumstances." U.S. v. Chan, 830 F. Supp. 531, 536 (N. D. Cal.1993).

91. 917 F.2d 955, 957 (6th Cir. 1990).

[92] *Id.*

[93] *Id.*

[94.] *Id.* at 958,959.

Meriwether's Fourth Amendment claim, holding that the warrant allowed the agent to seize the telephone number.[95] The court further stated that, even without the warrant, Meriwether's Fourth Amendment rights were not violated because Meriwether had no reasonable expectation of privacy in messages sent to another person's pager:

> [W]hen person sends a message to a pager, he runs the risk that either the owner or someone in possession of the pager will disclose the contents of his message. Since the actual confidentiality of a message to a pager is quite uncertain, we decline to protect appellant's misplaced trust that the message actually would reach the intended recipient.[96]

Meriwether's claim that the agent violated the federal statutes is discussed subsequently.[97]

In *Slate v. Wojtyna*,[98] the police had seized a pager in an arrest. The police monitored the seized pager and received Wojtyna's telephone number in one of the messages. A detective called the number, Wojtyna arranged to purchase cocaine, and Wojtyna was arrested when he arrived to make the purchase.[99] Wojtyna challenged the detective's seizure of Wojtyna's number under the Washington Constitution, the Fourth Amendment to the United States Constitution, and the Washington wiretapping statutes. The court rejected his claim under the state constitution.[100] Wojtyna's claim that the agent violated the state statutes is discussed subsequently.[101]

IV. PAGER MESSAGES: ORAL, WIRE, ELECTRONIC COMMUNICATION, OR STORED ELECTRONIC COMMUNICATIONS?

Voice pager messages may be classified as oral or wire communications. Display pager messages may be classified as wire, electronic or stored electronic communications. Although most courts have classified display pager messages as electronic communications,[102] one court classified pager messages as wire communications, and several classified messages, once received, as stored electronic communications. As subsequently explained, the classification is determinative of the privacy protection afforded under the Federal Act.

95. *Id.* at 958.

96 *Id.* at 959.

97 *See infra* notes 147-150 and accompanying text.

98 855 P.2d 315 (Wash. Ct. App. 1993).

99 *Id* at 316.

100. The court examined six factors which might afford an individual broader protection than that provided by the Fourth Amendment but found no broader protection. "[W]e find that the facts of this case do not support a finding that resort to independent state grounds is necessary ..." *Id.* at 317.

101 *See infra* notes 151-154 and accompanying text.

102. Brown v. Waddell, 50 F.3d 285, 294 (4th Cir. 1995); U.S. v. David, 940 F.2d 722, 727 (1st Cir. 1991); U.S.v. Meriwether. 917 F.2d 955, 959 (6th Cir. 1990); Bohach v. City of Reno, 932 F. Supp. 1232, 1235 (D. Nev. 1996); U.S. v. Reyes, 922 F. Supp. 818. 836 (S.D.N.Y. 1996); U.S. v. Suarez, 906 F.2d 977, 983 (4th Cir. 1990); U.S. v. Paredes-Moya, 722 F. Supp. 1402, 1406, 1408 (N.D. Tex. 1989); U.S. v. Hennings, No. 95-CR-0010A, 1997 WL 714250, at *4, 10 (W.D. N.Y. Oct. 20, 1997); Mauldin v State 874 S.W.2d 692,695 (Tex. Ct. App. 1993).

A. ORAL COMMUNICATIONS

Although pagers became popular in the 1970s and 1980s, there were few pager cases until the 1990s. Two of the earliest cases concerned voice pagers. The intercepted messages in those cases might have been classified as oral communications except that there was no reasonable expectation of privacy because the messages had been easily intercepted using a scanner. This attempted classification is at variance with the legislative history to the 1986 Act, which would have classified the messages as wire communications.[103]

In the 1981 case, *Dorsey v. State,*[104] the police used a scanner to monitor voice messages sent to John Bailey's pager. Information from the pager messages was used to obtain a wiretap order and the investigation resulted in sixteen arrests.[105] The court described the operation of the voice pager as follows:

> [A]nother person dials the telephone number of the company and distributes the beepers. The calling party hears a tone and thereafter has ten seconds in which to announce his message. This message is then converted into radio waves and transmitted to the party with the beeper and to any member of the public who has a radio tuned to this frequency. The receiving party can only listen to the message, since the beeper is a receiver and not a transmitter.[106]

The defendants claimed that the pager messages were protected against interception as wire communications under Florida's wiretap statutes. The court noted that the definitions for oral and wire communications in the state statutes were similar to those in the federal wiretap statutes. The court held that there could be no expectation of privacy in beeper messages sent over the airwaves and that Florida's wiretap law does not protect these messages.[107] The case indicates that defendants had claimed that the pager messages were protected as wire communications.[108] The court determined the term "wire communications" "to apply only to so much of the communication as is actually transmitted by wire and not broadcast in a manner available to the public."[109] The case does not indicate whether defendants claimed, in the alternative, that the pager messages were protected as oral communications. The court's holding that there was no expectation of privacy for the messages would necessarily preclude them being classified as oral communications.

In another early voice pager case, *People* v. *Medina,*[110] a police officer had

[103] *See supra* note 51 and accompanying text.

[104] 402 So. 2d 1178, 1182-83 (Fla. 1981).

[105] W. at 1180.

106.Id. at 1182.

[107] *Id.* at 1180, 1183.

[108] *Id.* at 1183.

[109] *Id.*

110.234 Cal. Rptr. 256, 258-59 (Cal. Ct. App. 1987), *cert, denied,* 484 U.S. 929 (1987).

obtained a radio scanner and duplicate pagers from a pager company. The officer used this equipment in April and May 1984 to monitor pagers rented by Gloria Medina. The officer used information obtained to secure a search warrant, which resulted in arrests on narcotics charges. The pagers operated as follows:

> Each individual pager is given a designated phone number. When that number is dialed from a telephone, the caller hears a tone and then has 10 seconds to record a message. When the caller hangs up the phone, the message is then relayed to a switching unit. The message is broadcast over the communication airways in the order received preceded by a signal for the particular pager. With the signal, the pager is activated and the speaker automatically opens up so the message can be heard by the individual in possession of the pager. If the red button on the pager is not depressed immediately following receipt of the message, that individual receives pages meant for other pagers."[1]

The court rejected appellant John Medina's claim that the pager messages were protected under the Federal Act. It determined that the pager messages were not wire communications under the federal wiretap statutes; the messages could not be oral communications either, because there was no expectation of privacy where the messages could be intercepted by a radio or other pager."[2]

B. WIRE COMMUNICATIONS

One state court, the Florida Supreme Court, classified display pager messages as wire communications. In the Florida state case, *State* v. *Jackson,*"[3] a police detective obtained court authorization for a clone display pager to monitor the numbers received on Roberta Jackson's pager. The authorization was obtained under the Florida statutes governing court orders for pen registers and trap-and-trace devices rather than the statutes governing court authorization for the interception of oral, wire, and electronic communications."[4] The numbers received on the clone pager included a telephone number and codes identifying the caller and the caller's desired drug purchase."[5] The Florida Supreme Court noted that the Florida statute governing court authorization for wiretaps does not specifically indicate that the statute applies to display pagers, that the

111.Id.

[112.] *Id.* at 260. 261-62. Appellant also argued that the pager messages were protected under the Fourth Amendment. *Id.* at 259-60. The court rejected this argument finding that there was neither a subjective nor an objective expectation of privacy. *Id.* at 260.

[113.] 650 So. 2d 24,25 (Fla. 1995).

[114] *Id.* A pen register is a device that records or decodes electronic or other impulses that identify the numbers dialed or transmitted on the telephone line to which the device is attached. ... A trap-and-trace device captures the incoming electronic or other impulses that identify the originating number of an instrument or a device from which a wire or electronic communication is transmitted. *Id.* at 25 n.l.

115. *Id.* at 26.

Florida statutes were amended in 1988 to conform with federal wiretap statutes, and that the Florida statutes are modeled after the federal statutes.[116] Even so, the court emphasized that state legislative history referenced display pagers as wire communications:

> With the inclusion of electronic communications in Chapter 934, the following forms of communications, which are currently excluded from the chapter's protections against unauthorized interception, would continue to be excluded:... communications through "tone- only" beepers, in contrast with voice pagers, which would be oral communications, and digital readout pagers, which would be wire communications.[117]

The court held that "any communication via a pager other than a tone-only pager requires a wiretap order," concluding that "pager transmissions constitute wire (digital readout pagers), oral (voice pagers), or electronic (all other types [sic] pagers except tone-only paging devices) communications."[118]

C. Electronic Communications and Stored Electronic Communications

Most courts have classified display pager messages as electronic communications. Electronic communications are protected against interception. Several courts have classified transmitted electronic communications as stored electronic communications. The distinction is important because there is a higher level of protection accorded electronic communications than stored electronic communications.

One federal court, *United States v. Reyes,*[119] classified a message retrieved from a pager as a stored electronic communication. In *Reyes,* Alcohol, Tobacco, and Firearms agents seized three pagers, the first incident to an arrest,[120] the second in a search of a car performed with consent,[121] and the third in the lost and found of the Miami Hilton Hotel pursuant to a search warrant. The agents claimed that the third pager was on when they found it, but Reyes claimed that when he left it, it had been turned off.[122] The court noted that whether the pager was off or on when the agents found it was crucial:

116. Id. at 27.

117. Id.

118. Id. at 28. In 1993, a Texas court noted in passing that information viewed on a clone display pager was "a visual acquisition of a wire communication." Mauldin v. State, 874 S.W.2d 692, 695 (Tex. Ct. App. 1993). The court determined that the version of the Federal Act effective in Texas at the time of the interception "only prohibited the 'aural acquisition,' as opposed to the 'aural or other acquisition' of wire or oral communications." *Id.* For the *Mauldin* facts, see notes 71-72. *supra* and accompanying text.

119. 922 F. Supp. 818, 836-7 (S.D.N.Y. 1996).

[120] *See supra* note 94 and accompanying text.

[121] The seizure of the second pager was constitutional because the car driver consented to the search of the car. *Reyes,* 922 F. Supp. at 832.

[122] *Id.* at 834.

> The issue then becomes whether Dugan's act of turning on pager #3 (assuming, as Reyes argues, that Dugan did so) was a lawful act. The search warrant for the storage department at the Miami Hilton did not authorize the agents to access the memory of Reyes' pager. . . .
> Because no exception to the warrant requirement was applicable under these circumstances . . . , if Dugan turned the pager on, that act was unlawful.[123]

The judge found that the agent's testimony was not credible, the agent had turned on the pager, and accessing of information from the pager was unconstitutional.[124] Reyes also challenged the seizure of information from the three pagers under the Federal Act. The threshold question for the court was "whether the conduct of the ATF agents amounted to intercepting electronic communications or to accessing stored electronic communications."[125] The court found that "[retrieving numbers from the memory of a pager ... is more accurately described as accessing electronic communications that are in electronic storage than intercepting electronic communications."[126] Noting that the definition of electronic communication does not include electronic communication storage, the court determined that intercept applies only when the information is accessed during transmission; in contrast, the definition of wire communication does include "any electronic storage of such communication."[127] The Federal Act requires court authorization in compliance with the Federal Act for interception of oral, wire, and electronic communications; a search warrant is all that is required to access stored electronic communications.[128] The court noted that the Federal Act does not provide suppression as a remedy for accessing stored electronic information in violation of the Federal Act, but that the information from the third pager would be suppressed as having been obtained in violation of the Fourth Amendment.[129] The court also noted that the available remedy under the Federal Act is a civil action.[130]

Bohach v. *City of Reno*[131] was an interesting case involving a police department paging system. The system operated as follows:

> Use of the Alphapage system by means of the computer system proceeds roughly as follows. The user logs on to any Reno Police department computer terminal and selects Alphapage from the menu of available functions, and then selects, from a list of all persons to whom pagers have been issued, the name of the person to whom the

[123] *Id.* at 835.

[124] *Id.* at 835 - 36.

[125] *Id.* at 836.

[126] *Id.* at 836 -37.

[127] *Id.* at 836.

[128] *Id.* at 837.

[129] *Id.* The court found that the search warrant for the items in the hotel lost and found was not valid because it was not supported by probable cause. In addition, because there was no applicable exception to obtaining a search warrant, the agent's action of turning on the pager was unconstitutional. *Id* at 835, 838.

[130] *Id.*

[131] 932 F. Supp. 1232, 1234 (D. Nev. 1996)

> message is to be sent. The user then types the message and hits the "send" key. The message is sent to the computer system's "Inforad Message Directory," where it is stored in a server file, and the user receives a message on the computer screen indicating that the page is being processed. The computer then dials the commercial paging company, sends the message to the company by modem, and disconnects. The user receives a "page sent" message on the computer screen, and the paging company takes over, sending the message to the recipient pager by radio broadcast.[132]

Two police officers sent messages over the system. When the messages were retrieved from computer storage and the department began an investigation concerning the messages, the officers filed a lawsuit claiming that the department's actions violated the federal wiretapping statutes and their constitutional right to privacy.[133] At the time the paging system was installed, the chief of police, by standing order, warned the police officers "[e]very Alphapage message is logged on the network."[134]

The court rejected a Section 1983 Fourth Amendment claim because the officers had no reasonable expectation of privacy:[135]

> So while officers Bohach and Catalano attempt [sic] liken their communications to private telephone calls, we think that some aspects of the system (its primary though not exclusive purpose, the restrictions placed on the contents of messages, the limited number of persons with whom one can communicate using it, and the fact that police departments routinely and properly record their communications with the public) suggest that one should expect, when using it, less privacy than one might expect when, say, making a private telephone call, even from a police station.[136]

In considering the officers' claims under the Federal Act, the court first found that the messages were "electronic communications" when transmitted but they were in "electronic storage" when they were retrieved from the department's paging system.[137] The court explained that Section 2701 of the Federal Act, which governs electronic storage, allows the service provider to access messages in electronic storage. Therefore, the city, as service provider, had legal access to the messages.[138]

The Fourth Amendment claims in *Meriwether* and *IVojtyna* were discussed previously. Both courts decided that the retrieval of a defendant's telephone number, which a defendant had sent to someone else's pager, was not protected under the Fourth Amendment.

[132] *id.*
[133] *Id.* at 1233.
[134] *Id.* at 1234.
[135] *Id*
[136] *Id* at 1235.
[137] *Id.* at 1235,
[138] A/, at 1237.

The *Meriwether* court also rejected Meriwether's claim that the seizure of his telephone number violated the federal wiretapping statutes. The court gave three reasons that the statutes did not apply. First of all, the agent did not intercept Meriwether's message, because the message transmission had already ended when the pager signaled that a message had been received. Secondly, as a party to the communication, the agent could not intercept Meriwether's telephone number.[139] "[T]he agent lawfully had possession of the paging device. By pressing the digital display button, he became a party to the communication."[140] Thirdly, the agent did not use any device to intercept the numbers; the agent only pressed the display button.[141] The court noted in passing that suppression is not an available remedy under the federal wiretapping statutes for intercepted electronic communications.[142]

The *Wojtyna* court cited to and quoted from *Meriwether* with approval in rejecting Wojtyna's Fourth Amendment claim.[143] The court also rejected the state statutory claim. The state statute prohibits interception of a "private communication" without all-party consent.[144] The court first found that there was no private communication, noting that "[discovery of the number did not affect other persons, involve multiple invasions of privacy, or record the exchange of information such as the dialing from one telephone number to another."[145] The message transmission was not intended to be private and its confidentiality was uncertain. The court also doubted that a pager was an interception device under the state statute.[146] The question remains whether or not pager messages are adequately protected under the Fourth Amendment and the Federal Act.

V. ARE PAGER MESSAGES ADEQUATELY PROTECTED?

Prior to *Katz*, privacy was lost by a physical invasion into a space otherwise considered private. The loss could be seen, heard, felt, tasted, or touched. Technology upset the balance, facilitating imperceptible interception of one's private conversations. No longer could one rely on one's five senses to detect the interception. Conversations intended to be private had no legal privacy protection. The *Katz* court recognized that the trespass theory was inadequate to describe the space deserving of legal protection, and refashioned the legal definition of privacy to protect a new realm considered by society to be private. Congress passed the 1968 Act in response to *Katz*, and in so doing attempted to protect oral and telephone conversations against interception.

Legislation usually lags technology. One reason is because it is difficult to anticipate all effects technology will have on privacy. Legislation reacts to effects of new technology rather than anticipating its effect. The 1968 Act was woefully inadequate because it provided no protection for the newer electronic communication

139. *Meriwether*, 917 F.2d at 960.

140. *Id.*

141. *Id*

142. *Id.*

143. *Wojtyna*, 855 P.2d at 318.

144. *Id.*

145. *Id.* at 319.

146. *Id.*

technology, including display pagers. The 1986 Act provided more protection for pager messages, but the Federal Act is still inadequate in some ways. The Federal Act must be amended to ensure adequate privacy. If privacy is not ensured now, when certain types of technology are in their infancy, privacy may be lost. Privacy may be lost because certain communication becomes accepted as not being private; privacy may be lost when technology, which easily and cheaply facilitates interception, is widely available.

New technology creates a privacy gap. Privacy is cherished by all sorts of pager users: average law-abiding citizens, high-ranking officials, celebrities, those with unpopular views, and those engaged in criminal activity. Interception of pager messages is imperceptible and leaves no evidence of interception; the interception may continue, undetected, for a lengthy period of time and invades the privacy of the person sending the message as well as the recipient. If communication is not adequately protected, the individual must assume, at the individual's peril, that a neighbor does not have the latest scanning device or the individual must choose another, more cumbersome, method of communicating sensitive information. The reasons one might want to intercept pager messages include curiosity, competitive advantage, and crime control.

The realm of privacy recognized by the Federal Act subsumes oral conversations,[147] landline, cordless, and cellular telephone conversations, electronic transfers of data, and pager messages. One might claim that the Federal Act provides excess protection, at least to those communications transmitted by analog signal; a scanner enthusiast may easily monitor analog signals.

Federal law makes it a crime to manufacture, possess, or sell "any electronic, mechanical, or other device, knowing or having reason to know that the design of such device renders it primarily useful for the purpose of the surreptitious interception of wire, oral, or electronic communications."[148] The sale and use of scanners is legal because their primary use is to intercept conversations on frequencies freely accessible to the public. Scanners are readily available at retail at the local electronics store. The Federal Communications Commission adopted a regulation, effective April 26, 1994, which bans the manufacture or importation of scanners capable of picking up cellular telephone conversations.[149] The regulation does not ban the use of scanners manufactured before that date and applies only to scanners capable of intercepting cellular telephone conversations.

The patchwork effect of the FCC regulation is to allow use of pre-1994 scanners capable of intercepting cellular telephone conversations, as well as those capable of intercepting cordless telephone conversations and voice pager messages. The FCC regulation also does nothing to prohibit the use of a new generation of scanners capable of intercepting digital signals. Ownership of scanners with this capability is legal even though interception of cordless and cellular conversations and pager messages is illegal under the Federal Act.

If the Federal Act did not exist, what theory would one use in drafting statutes

[147] The Federal Act at least protects conversations spoken in a low voice in a closed room.

[148] 18 U.S.C.S. § 2512 (Law. Co-op. 1993 & Supp. 1998).

[149] 47 C.F.R. §§ 15.37(f), 15.121(a) (1998).

to provide legislative privacy for certain types of communications? One might use a balancing test, balancing the importance of providing privacy for communications against the importance of disclosure. Is there a compelling government interest in disclosure? Is there a legitimate purpose in disclosure to an individual? Another approach is to employ a risk analysis. Are there available alternatives? What precautions were taken? But, when an individual uses a method of communication that has become a necessity in his personal or business dealings, perhaps the risk analysis should not apply. Another approach akin to the risk analysis is limiting protection to those communications not readily intercepted using technology widely available to the general public.

Although the Federal Act provides excess protection, it is preferable to a balancing test because under the Federal Act it is clear that certain types of communications are legally protected against interception. In contrast, a risk analysis lacks certainty in its application to certain types of communications. The third approach, basing privacy on currently available technology, would create a realm of privacy that is continuously shrinking with the advances in technology.

The Federal Act should be amended to fully protect pagers while pager messages are not readily accessible to the general public. The protection provided pagers is unclear for two reasons. The first reason is that it is unclear in which category pager messages belong. Are they oral, wire or electronic communications? The second reason is that there are a number of different types of pagers. The difference in protection afforded oral, wire, and electronic communications is inconsistent and irrational.

Pagers, with the exception of tone-only pagers, are not specifically included as oral, wire, or electronic communications. A voice pager message may potentially be classified as an oral communication, but may not fall within that category because there may be no reasonable expectation of privacy. To be an oral communication, one transmitting a voice pager message must have a reasonable expectation of privacy. If transmitted by analog sound waves, voice-paging messages are interceptible by scanners. Cordless and cellular telephone conversations if transmitted by analog signals are also interceptible by scanners, yet they are protected under the Federal Act.

One court has classified display pager messages as wire communications. Most courts addressing the issue have classified display pager messages as electronic communications. In the Senate report concerning the Federal Act, the Judiciary Committee attempted to clarify the often-elusive distinction between wire and electronic communications. According to the committee, a '"wire communication' includes existing telephone service, and digitized communications to the extent that they contain the human voice at the point of origin, reception, or some point in between."[150] The committee stated that an electronic communication "is not carried by sound waves and cannot fairly be characterized as containing the human voice. Communications consisting solely of data, for example, and all communications transmitted only by radio are electronic communications."[151]

Classification as a wire communication or as an oral communication provides

[150] S. REP. No. 541, 99th Cong., 2d Sess. (1986), *reprinted in* 1986U.SCC AN 3566

[151] *Id.* at 3568.

more protection than classification as an electronic communication. Of course, as explained above, a voice pager message can be classified as an oral communication only if there is a reasonable expectation of privacy. If classified as a wire communication or an oral communication, an illegally intercepted pager message can by suppressed. In contrast to oral and wire communications, the Federal Act does not allow suppression of an illegally intercepted electronic communication.

It is unclear from the legislative history why there is no provision to exclude illegally intercepted electronic communications and stored electronic communications from evidence while illegally intercepted oral and wire communications are inadmissible under the Federal Act.[152] Is a reasonable expectation of privacy for Fourth Amendment purposes indicated by the fact that pager messages are protected against interception under the Federal Act? Interception of electronic communications is just as intrusive as interception of oral and wire communications. Interception of an electronic communication is different than a traditional search. The person whose communication is intercepted may not realize that the interception has occurred. Illegal interception can continue for a lengthy time period and affects all persons who have sent the pager owner messages. With suppression unavailable, the remedies left under the Federal Act are a civil lawsuit or an injunction. Electronic communications not suppressible under the Federal Act might be suppressed under the Fourth Amendment; a person whose electronic communication has been intercepted by government officials might bring a § 1983 suit against the government as the officers did in *Bohach.*

Remedies available must be appropriate to the value of the interest protected. If a certain type of communication is deemed private, exclusion of intercepted evidence should be available as well as civil damages and injunctive relief. It is even more crucial to provide adequate legal protection where technology is advancing so rapidly.

Because there is no clear classification for voice and display pager messages, one court may classify a pager message differently than another court, thus providing a different level of protection. The decision of the Florida Supreme Court in *Jackson* is one example.[153] In *Jackson,* the court held that a display pager message is a wire communication. Thus in Florida, an illegally intercepted display pager message can be suppressed under the Florida version of the Federal Act; that statutory remedy is unavailable in federal court and other state courts. This problem could be eliminated either by amending the Federal Act to protect pagers as a separate category or by amending the Federal Act to add suppression as a remedy for illegal interception of electronic communications.

A final gap in the privacy afforded communications is the interception capability provided by scanners. Scanners capable of intercepting voice and display pager messages should be prohibited.

VI. CONCLUSION

Pager technology allows millions of people to communicate and, for many, has

[152] *See supra* note 65.

[153] *See supra* notes 113-118 and accompanying text.

become a necessity in personal or business dealings. The information transmitted ranges from the mundane to the highly sensitive and confidential. Display pager messages have generally been considered secure because digital signals are much more difficult to intercept than analog signals. Advances in technology also inevitably bring the ability to intercept display pager messages.

Although legislative history indicates that voice and display pager messages are protected under the Federal Act, it is unclear whether they are oral, wire, or electronic communications. The classification is crucial because the privacy protection among oral, wire, and electronic communications differs. A voice pager message, which would otherwise be classified as an oral communication, may not fall within the Federal Act's protection if there is no reasonable expectation of privacy. Under the Federal Act, an illegally intercepted oral or wire communication may be suppressed; suppression is not available under the Federal Act for illegally intercepted electronic or stored electronic communications.

The Federal Act makes it illegal to intercept pager messages classified as oral, wire, electronic, or stored electronic communications. Even though interception is illegal, scanners are widely available capable of intercepting analog signals and the next generation of scanners may be capable of intercepting digital signals.

Protection for pager messages under the Federal Act is inadequate. This article suggested the ways in which the Federal Act should be amended to protect pager messages.