the combination that was destroyed because of unusual circumstances; the rule of *Aro I* further fails to distinguish the situation where proper use of the combination involves a destruction of the combination. In regard to the latter situation, the *Cotton-Tie* case, assuming it is still good law, should provide a sound argument for holding of infringing reconstruction; in regard to the former case, more difficulty is presented. However, one possible argument might be that once the element which distinguished the combination over the prior art has been spent, assuming that element is not perishable and was not destroyed because of unusual circumstances, the inventive entity ceases to exist and any replacement of that element re-creates the patented combination as a whole and accordingly is an impermissible reconstruction.

THE PEN REGISTER*

William A. Claerhout†

INTRODUCTION

The telephone is so much a part of modern life[1] that few people give it much thought until its use becomes impaired. Fortunately, mechanical difficulty is not common and, when it does occur, repair is available with a minimum of inconvenience to the customer. However, regardless of periodic advances toward perfection of telecommunications, invariably there are those who insist upon using the telephone for purposes which are unacceptable to society. To be sure, abuse of the telephone system is not widespread though it is often used by the kidnapper, the gambler, the "mad bomber," the blackmailer, and other criminals needing fast, efficient communication.[2] However, the most common problem is not the serious crime but the annoying call.[3] As a result, nearly all states have adopted legislation prohibiting annoying, harassing, or threatening calls.[4] The primary obstacle to the enforcement of these laws is difficulty in identifying the source of the calls and gathering admissible evidence for prosecution without infringing upon the right to privacy.

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* The views expressed herein are solely those of the author and do not necessarily reflect the views of his employer. The author also reserves the right to later concur in, modify, or dissent from any opinions stated herein.—Ed.

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1 Statistics show that in 1968 the United States led the world in telephone use, possessing over 109 million telephones (45.9% of world total; 54 telephones per 100 persons) and that the average person had 701 telephone conversations in that year. A.T. & T. LONG LINES, *The World's Telephones* 1, 2, 10 (1969).

2 In an internal survey taken over the first six months of 1970, Northwestern Bell Telephone reported 5,688 complaints in Iowa, 88% of which were classified as obscene or harassing, 5% were classified as threatening, and 7% classified as interference calls. Of all these calls, 50% were disposed of immediately after the initial complaint simply because these calls ceased, 15% of which were closed after the phone company had those receiving the calls keep logs. No statistics were gathered on the use of the telephone in perpetration of major crimes.

3 In *State v. Holliday*, 169 N.W.2d 768, 778 (Iowa 1969), the Supreme Court of Iowa acknowledged a statement in the state's brief that Bell System annoyance call complaints exceeded three-quarters of a million annually.

4 For a compilation of state statutes, *see Unwanted Telephone Calls—A Legal Remedy*, 1967 UTAH L. REV. 379. 404 IOWA CODE ANN. §§ 714.37-40 (Supp. 1970) which was enacted in 1967 states:

> It shall be unlawful for any person, with intent to terrify, intimidate, threaten, harass, annoy or offend, to telephone another and use any obscene, lewd or profane language or suggest any lewd or lascivious act, or threaten to inflict injury or physical harm to the person or property of any person. It shall also be unlawful to attempt to extort money or other thing of value from any person, or to otherwise disturb by repeated anonymous telephone calls the peace, quiet or right of privacy of any person at the place where the telephone call or calls were received.

Many different mechanical devices might be available to assist in the battle against annoying telephone calls; however, in most cases the evidence obtained by mechanical devices has been held inadmissible.[5] The "spike-mike" is an example of such a device.[6] Very few devices have escaped a constitutional ban. The "pen register" is a device that has successfully avoided many of the constitutional problems faced by many of the devices.

Although the pen register is a simple device in comparison with many space-age electronic developments, the few courts which have studied its mechanical operation and legal status have encountered difficult constitutional and statutory construction problems. Because no more than eleven decisions have made specific and substantive pronouncements on the device,[7] it is difficult to isolate a thread of "pen register law" from the large and continually growing body of law surrounding electronic eavesdropping. The future utility of the pen register, as an effective tool in discovering and providing evidence against those who misuse the telephone, depends largely upon the judges and lawyers required to understand its mechanics, its use, as well as various legal arguments which may attend it.

I. Mechanics

A pen register is a mechanical metering device used in connection with the dial telephone. Besides its use in the communications industry, metering devices are commonly used by industry in research, production, and maintenance where constant monitoring of temperature, pressure, movement, light, or contact is desirable. The ordinary pen register is merely a member of that particular family of devices.

When the dial telephone was developed, it was necessary to mechanically replace certain functions formerly accomplished by the operator. Details, once noted by human hand, such as the number called, had to be automatically registered to insure proper operation of the system and to facilitate billing. Unlike some surreptitious devices commonly associated with eavesdropping, the pen register is rooted in wholly legitimate beginnings and continues to promote telephone system protection.

A pen register is attached to the line of the telephone to be observed, inside a central office of the telephone company where contact is made between that telephone and the receiving telephone. When the telephone is dialed,

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[5] *See generally* 31A C.J.S. *Evidence* § 187 (1964).

[6] On Lee v. United States, 343 U.S. 747 (1952).

[7] United States v. Dote, 371 F.2d 176 (7th Cir. 1966); Huff v. Michigan Bell Tel. Co., 278 F. Supp. 76 (E.D. Mich. 1967); United States v. Caplan, 255 F. Supp. 805 (E.D. Mich. 1966); United States v. Guglielmo, 245 F. Supp. 534 (N.D. Ill. 1965) *aff'd*, 371 F.2d 176 (7th Cir. 1966); State v. Holliday, 169 N.W.2d 768 (Iowa 1969); People v. Schneider, 45 Misc. 2d 680, 257 N.Y.S.2d 876 (1965); State v. Hulsey, 15 Ohio App. 2d 153, 239 N.E.2d 567 (1968); Schmukler v. Ohio Bell Tel. Co., 66 Ohio L. Abs. 213, 116 N.E.2d 819 (1953); Carswell v. Southwestern Bell Tel. Co., 449 S.W.2d 805 (Tex. Civ. App. 1969); Jarvis v. Southwestern Bell Tel. Co., 432 S.W.2d 189 (Tex. Civ. App. 1968); Harmon v. Commonwealth, 209 Va. 574, 166 S.E.2d 232 (1969).

the pen register is automatically activated by the dial pulses passing through the line. As each number is dialed, marks or dashes are recorded on paper tape by the pen register. For example, if the number 215 were dialed, it would appear as follows: "-- - -----." The ordinary pen register does not indicate whether the receiving telephone rings or is answered. Neither does it record conversation or aural impulses, nor does it disclose calls being received from other telephones. A few courts have found that certain types of pen registers note the ringing of the receiving telephone or the receiving of calls by the phone being observed.[8] The equipment considered by those courts may have possessed capabilities not found in the ordinary pen register.[9] This may explain the first blush inconsistency of judicial fact-finding in pen register cases. Accordingly, each case involving the "pen register" is dependent upon the type of pen register involved. Only the usual, limited capability type as was previously discussed will be considered in this Article.[10] The Iowa supreme court in *State v. Holliday*[11] discusses this latter type.

II. Procedure and Evidence

Traditionally, the pen register has been used to insure proper customer billing and to maintain good service. Unlike eavesdropping devices, the constitutionality of which has been litigated based on their use by private persons or the government agents,[12] the pen register is used primarily by the telephone company.[13] For example, if customer A receives repeated harassing, obscene, or threatening calls, he may wish to initiate criminal prosecution. If A has some reason to believe X is the responsible party, either by voice identification or other circumstances, he may pursue further inquiry on that basis alone with the assistance of local law enforcement authorities. If successful prosecution requires additional investigation, either before or after the annoyed party has sought police assistance, he may request aid from the telephone company.

Upon receiving the initial complaint, the telephone company furnishes the complainant with printed instructions. The recommendations presently found in the instructions direct the complaining party to hang up on the oc-

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8 Huff v. Michigan Bell Tel. Co., 278 F. Supp. 76 (E.D. Mich. 1967); Schmuckler v. Ohio Bell Tel. Co., 66 Ohio L. Abs. 213, 116 N.E.2d 819 (1953).

9 *Id.*

10 Cases showing the capabilities of the pen register as the term is used in this Article include: *United States v. Dote*, 371 F.2d 176 (7th Cir. 1966); *United States v. Guglielmo*, 245 F. Supp. 534 (N.D. Ill. 1965) *aff'd*, 371 F.2d 176 (7th Cir. 1966); *Carswell v. Southwestern Bell Tel. Co.*, 449 S.W.2d 805 (Tex. Civ. App. 1969); *Harmon v. Commonwealth*, 209 Va. 574, 166 S.E.2d 232 (1969); *State v. Holliday*, 169 N.W.2d 768 (Iowa 1969).

11 169 N.W.2d 768 (Iowa 1969).

12 19 Drake L. Rev. 476 (1969).

13 Two basic reasons for this are (a) the permissive cost of such a machine may exceed two thousand dollars, and (b) the electronic skills required to connect, operate, and maintain the device. In contrast, simple, inexpensive eavesdropping "bugs" would be more available to those persons desiring to use them. *See* Berger v. New York, 388 U.S. 41 (1967).

casional harassing caller and, if the calls persist, contact phone company officials. When all other measures have failed or when the telephone company deems it advisable, phone company officials attach the pen register to the suspect's telephone line, though this is generally not done without the written permission of the complainant. Upon A's request to assist in line identification, specially trained telephone company personnel advise A to maintain a logbook of all subsequent annoying calls. When the calls noted in the log are compared with the numbers dialed as shown by the pen register tape, the result becomes circumstantial evidence disclosing whether the calls were dialed from the suspected phone. It should be noted that the pen register does not indicate the party making the call but only the phone from which the call was made. In fact, in a prosecution for violation of an annoyance call statute, where the only evidence of the violation was the recordings of the pen register, the appellate court reversed a conviction in the trial court because the evidence did not show guilt beyond a reasonable doubt.[14]

Assuming results indicate that A received ten annoying calls during a certain period of time and that the pen register showed A's number had been dialed ten times during the same period of time from X's phone, it is then necessary to produce such evidence in admissible fashion. Assuming A has requested law enforcement authorities to prosecute X and that A has authorized disclosure of line identification evidence by the telephone company, a court order will secure the cooperation of the company in providing the evidence requested. Once these fundamental details have been accomplished, the legal arguments arise.

III. Constitutional Implications

A. *Search and Seizure*

On its face, the fourth amendment protects houses, persons, papers, and effects from unreasonable search and seizure.[15] Many issues have developed with the changing times concerning which searches are reasonable, what is a search, and what things are subject to constitutional protection from unreasonable search and seizure.[16] In the initial confrontation in the United States Supreme Court between the fourth amendment and evidence obtained from telecommunications, the court concluded that "wiretapping" was not a trespass into a constitutionally protected area under the fourth amendment, and there was no seizure of anything tangible as was previously required in search and seizure cases.[17] Earlier search and seizure decisions required that something

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14 State v. Hulsey, 15 Ohio App. 2d 153, 239 N.E.2d 567 (1968).

15 The fourth amendment to the United States Constitution states: "The right of the people to be secure in their person, houses, papers, and effects against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

16 *See generally* Annot., 84 A.L.R.2d 959 (1961).

17 Olmstead v. United States, 277 U.S. 438 (1928).

tangible be seized by a trespassory invasion.[18] While Mr. Justice Black has consistently refused to extend the fourth amendment,[19] the majority of the Court has destroyed this strict construction. The fourth amendment protects people, not just areas, and the presence or absence of trespassory, physical intrusion into an enclosed area will not offer a basis for constitutional distinction.[20] *Katz v. United States*[21] makes it clear that the fourth amendment secures protection from governmental intrusion but does not offer similar protection from private citizens. Moreover, *Katz* weighs against arguments avoiding fourth amendment application to the pen register because there is a lack of physical intrusion or trespass.

One contention which can be made, is that the telephone company is not subject to the restrictions placed on the government by the fourth amendment.[22] In spite of an occasional note of pessimism as to the life expectancy of this distinction, between evidence seized by private individuals as opposed to evidence seized by governmental sources, courts and legal writers have placed continuing confidence in it.[23] The United States Supreme Court has shown no inclination to stray from the principle since *Katz*. The unfortunate underlying difficulty with this position in pen register cases is that the assumption can be left standing that the pen register does have the capability to (and does, in fact) seize something.

The argument that the pen register seizes electric impulses and that such intangibles are within the scope of fourth amendment protection appears arguable. However, this argument has received little support in case law. It has been held that messages,[24] calls,[25] spoken words,[26] and conversation[27] are protected intangibles, but the courts have not advanced the scope of protection beyond these substantive communications. Although this argument was submitted in *United States v. Dote*,[28] the Court of Appeals for the Seventh Circuit concluded that the apparent limitation was merely evidence that the United States Supreme Court had not yet been called upon to decide such a case.

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18 *Id.*

19 Katz v. United States, 389 U.S. 347 (1967).

20 *Nardone v. United States*, 302 U.S. 379 (1937) held that wiretap evidence was inadmissible on non-constitutional grounds in federal courts because Section 605 of the Federal Communications Act of 1934 was violated. This subsequently was expanded to evidence indirectly obtained in *Nardone v. United States*, 308 U.S. 338 (1939). In *Schwartz v. Texas*, 344 U.S. 199 (1952) the Court made state law officers subject to federal prosecution for divulging wiretap evidence and thus made wiretapping unattractive though admissible under state law. *Lee v. Florida*, 392 U.S. 378 (1968) extended the *Nardone* exclusionary rule to the states. In *Berger v. New York*, 388 U.S. 41 (1967) the Court set forth standards which electronic surveillance legislation must meet to pass the test of constitutionality.

21 Katz v. United States, 389 U.S. 347 (1967).

22 Burdeau v. McDowell, 256 U.S. 465 (1921).

23 19 DRAKE L. REV. 476 and authorities cited therein.

24 Nardone v. United States, 302 U.S. 379 (1937).

25 Schwartz v. Texas, 344 U.S. 199 (1952).

26 Osborn v. United States, 385 U.S. 323 (1966).

27 Berger v. New York, 388 U.S. 41 (1967).

28 371 F.2d 176 (7th Cir. 1966). The decision in *Dote* appears to be limited to the particular use made of the pen register in that case.

Aside from the fact that almost any issue could be avoided on this ground, the position is also unsatisfactory when viewed in light of the continuing process of defining which intangibles may be subjected to unreasonable search and seizure. Based on construction of a broad statute,[29] some courts have held that the pen register does "intercept" a communication.[30] However, a theory that some persons might communicate merely by dialing assumes a pre-arranged signal, assumes that a pen register will record the ringing of the phone, and assumes that someone is always present at the receiving end to hear the "communication." Unfortunately, in the *Dote* decision the court did not consider that code calling may constitute unprotected fraudulent use of the telephone service.

B. *Self-Incrimination*

An occasional argument against admissibility of pen register evidence is grounded on the fifth amendment prohibition against self-incrimination. The Iowa supreme court fielded this proposition in *State v. Holliday*.[31] While the court's opinion did not explain the exact nature of the defendant's fifth amendment plea, the resulting dismantling of the argument by the court showed a clear factual basis for its action. Finding "no compulsion, no interrogation, no evidence of any response by anyone, no harassment of the person calling, no abuse, no eavesdropping, no interruption of any call, no recording of any conversation or voice, no identification of who was calling," the court had no basis for finding testimonial compulsion.

In *Holliday* the Iowa supreme court dispelled all doubt that the crucial factor of compulsion was not present in the use of the pen register, and the language from several opinions adopted with approval therein generally forces the conclusion that the evidence obtained by a pen register is neither speech nor communication. Undoubtedly, continued decisions upholding the constitutionality of the use of the pen register will ultimately depend upon the recognition and maintenance of this limitation.

C. *The Federal Communications Act § 605*[32]

Section 605 of the Federal Communications Act of 1934[33] has been the most serious impediment to the admissibility of pen register evidence in criminal prosecutions. Originally the statute prohibited interception of any communication, divulging, or publishing its existence or contents, except where

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[29] *Communications Act*, 18 U.S.C. § 605 (1934). This act, as will be seen, has been amended by the *Omnibus Crime Control Bill Act*, 18 U.S.C. § 2515 (1968) [hereinafter referred to as § 2515].

[30] United States v. Dote, 371 F.2d 176 (7th Cir. 1966); United States v. Guglielmo, 245 F. Supp. 534 (N.D. Ill. 1965) *aff'd*, 371 F.2d 176 (7th Cir. 1966); United States v. Caplan, 255 F. Supp. 805 (E.D. Mich. 1966).

[31] 169 N.W.2d 768 (Iowa 1969).

[32] *Id.*

[33] 48 Stat. 1103 47 U.S.C.A. § 605 (1934).

representative except upon lawful order.[50] The strict observance of this policy has long protected the privacy of telephone service.

One of the first reported civil damage claims against the telephone company for using the pen register resulted when a customer was caught in a scheme using residence service with the intent to wrongfully avoid the more costly business rate.[51] Because the company had used the pen register in ferreting out the deception, the plaintiff sought $150,000 damages for an alleged violation of privacy by the telephone company. Commending the telephone company for using the pen register to insure equal treatment for all customers, the court found no violation of § 605 or any other basis for the plaintiff's claim. That a telephone company has the right and duty to protect its service by using the pen register is the general rule where admissibility in criminal prosecution is not in question.[52]

The decisions considering the pen register in criminal prosecutions inevitably contain a question concerning liability of the telephone company in the event the accused, against whom the device provided incriminating evidence, is acquitted. Two recent Texas decisions have provided the first law on the problem. *Carswell v. Southwestern Bell Telephone Co.*[53] provides both an in-depth study of the problems involved in annoyance call litigation and a review of several of the legal issues discussed herein. To a great extent, the opinion suggests that as long as the telephone company follows its strict standards in refusing to disclose pen register evidence to persons not a party to the telephone call, except, of course, to lawful authority, it will not be subjected to civil liability. *Jarvis v. Southwestern Bell Telephone Co.*[54] provided a succinct commentary on the relationship between the pen register and the acquitted annoyance caller when the court stated:

> Plaintiff's contention that the monitoring constituted a wrongful invasion of his privacy, is contrary to his own testimony. The pen register showed that during the five-hour period when it was connected, someone dialed the complainant's telephone number from appellant's phone 47 times. But appellant categorically denied that either he or anyone acting with his authority or consent did the dialing. If anyone's privacy was invaded by that monitoring, it was not, according to the plaintiff's own testimony, his privacy, but that of some unknown party who did the dialing.[55]

The conclusions of non-liability in both *Carswell* and *Jarvis* are notable for more than just being premier decisions on a particular point of law and for the avoidance of substantial potential judgments against a telephone com-

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[50] This would, of course, conform to the requirements of either the old or new § 605.

[51] Schmukler v. Ohio Bell Tel. Co., 66 Ohio L. Abs. 213, 116 N.E.2d 819 (1953).

[52] Even under the strict interpretation of *United States v. Dote*, 371 F.2d 176 (7th Cir. 1966), a "business use" of the pen register was acknowledged as legitimate.

[53] 449 S.W.2d 805 (Tex. Civ. App. 1969).

[54] 432 S.W.2d 189 (Tex. Civ. App. 1968).

[55] *Id.* at 192.

pany.[56] These two cases represent a victory for the privacy of the vast majority of telephone customers.

Conclusion

The pen register is only one of many devices which have been developed in an age of increasing sophisticated devices and increasing fear for the quality of privacy. The pen register appears to rise above the serious debates surrounding eavesdropping and wiretapping with its unusual combination of mechanical accuracy and impersonal functioning. At last, changes made by Congress in the Omnibus Crime Control and Safe Streets Act of 1968 appear to have laid to rest any doubts which had previously existed concerning the legality of the pen register. The Act clearly allows for the operation of the device as a normal piece of equipment by the telephone company, including but not limited to annoyance call problems.[57] The few court decisions adverse to pen register use remain readily distinguishable on facts showing use not in the regular course of business. Thus, in a time when both privacy and good telephone service are so important, the pen register appears to have a bright future.

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[56] The right of privacy carries a high price tag. In *Carswell v. Southwestern Bell Tel. Co.*, 449 S.W.2d 805 (Tex. Civ. App. 1969), the plaintiff sought "at least $2,000,000" in damages; the plaintiffs in *Jarvis v. Southwestern Bell Tel. Co.*, 432 S.W.2d 189 (Tex. Civ. App. 1968) and *Schmuckler v. Ohio Bell Tel. Co.*, 66 Ohio L. Abs. 213, 116 N.E.2d 819 (1953) prayed for $150,000 in damages.

[57] *See, e.g.*, P.L. 90-351, Tit. III, § 802, 82 Stat. 212 (1968), 18 U.S.C.A. §§ 2510 (4), (5), 2511 (2) (a), (d).

SURVEY OF IOWA LAW

IOWA CRIMINAL LAW

John J. Yeager†

During the period covered by this survey,[1] the Iowa supreme court handed down significant opinions in fifty-five criminal appeals.[2] Several of the decisions in this period have some effect on the substantive criminal law of the state, but the greater number dealt with procedural matters. Two non-criminal cases during this period,[3] involving commitment, may also be of some interest in that they point out the difference between the criminal process and civil commitment.

I. Substantive Law

A. *General Observations*

One of the more interesting cases dealing with substantive law is *State v. Nickelson*,[4] a prosecution for embezzling mortgaged property. The indictment was phrased in the language of the 1962 Code,[5] although at the time of the alleged offense, the 1962 Code section had been repealed and replaced by another section similar in purpose but differing in terminology, part of the act adopting the Uniform Commercial Code.[6] The court held that this section was in conflict with Article III, Section 29 of the Iowa Constitution, which requires that the subject of every act be expressed in the title of the act. An examination of the title to this act gave the court no indication that somewhere

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[1] The period covered by this survey is that between March 1969 and March 1970, and includes cases which can be found in volumes 165 through 173 of the Northwestern Reporter, Second Series.

[2] Two of these cases, *State v. Spier*, 173 N.W.2d 854 (Iowa 1970) and *State v. Holliday*, 169 N.W.2d 768 (Iowa 1969) have been noted in this or previous issues of the Drake Law Review. Three other cases, *State v. Wisniewski*, 171 N.W.2d 882 (Iowa 1969), *State v. Evans*, 169 N.W.2d 200 (Iowa 1969), and *State v. Galloway*, 167 N.W.2d 89 (Iowa 1969) were prosecutions which were caught in the "backwash" from *Stump v. Bennett*, 398 F.2d 111 (8th Cir.), *cert. denied*, 393 U.S. 1001 (1968). These cases were tried prior to *Stump*, but were pending on appeal when *Stump* was decided. Although the Iowa supreme court did not consider *Stump* to be retroactive in effect, the court was unwilling to hold that *Stump* had no effect on pending appeals, and as the alibi instruction which was fatal in *Stump* had also been given in these three cases, they were reversed and remanded for further proceedings consistent with that opinion.

[3] State *ex rel.* Fulton v. Sheetz, 166 N.W.2d 874 (Iowa 1969); State v. Allan, 166 N.W.2d 752 (Iowa 1969).

[4] 169 N.W.2d 832 (Iowa 1969).

[5] Iowa Code § 710.12 (1962).

[6] Ch. 413, § 10153 [1965] Iowa Acts 799.