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COMPUTER BULLETIN BOARD OPERATOR LIABILITY FOR USER MISUSE

INTRODUCTION

A personal computer enthusiast dials in to a local computer bulletin board.¹ After reading a few notices, he discovers something interesting. It is a copyrighted computer program, one he recently saw selling in his local computer store for fifty dollars. Deciding that this is a bargain that he cannot pass up, he downloads² the program to his own computer.³ Silently, he thanks the poster of the program. Elsewhere, other bulletin boards are being used to circulate stolen credit card numbers⁴ and defamatory and obscene messages.⁵

1. A computer bulletin board is a computer program that simulates the functions of the bulletin boards found in supermarkets, universities and other public gathering places. The program allows individuals to post new messages, read existing messages, add comments to messages and delete messages. See Soma, Smith & Sprague, *Legal Analysis of Electronic Bulletin Board Activities*, 7 W. New Eng. L. Rev. 571, 572 & n.2 (1985); Pollack, *Free-Speech Issues Surround Computer Bulletin Board Use*, N.Y. Times, Nov. 12, 1984, at A1, col. 1; Crocker, *Bulletin Board Basics: A How-To Primer for Nationwide Networks*, Microcomputing, Oct. 1984, at 30.

Bulletin board programs can be run on almost any computer, from small personal computers to large mainframe computers. The more powerful the computer, the more messages it can hold.

To operate a computer bulletin board, an individual needs a computer, bulletin board software and a way for others to communicate with the computer. This function is usually provided by a modem, a device that allows computers to communicate over telephone lines. See Manning, *Bulletin Boards: Everybody's Online Services*, Online, Nov. 1984, at 8, 9.

To use a computer bulletin board, an individual needs a computer with communications software and a modem. The individual can then telephone a computer running a bulletin board program. See Soma, Smith & Sprague, *supra*, at 572 n.2; Lasden, *Of Bytes and Bulletin Boards*, N.Y. Times, Aug. 4, 1985, § 6 (Magazine), at 34.

2. Computer programs can be posted on bulletin boards as large messages. The process of transferring the program from one's personal computer to the bulletin board is known as uploading. The reverse process—transferring a program from a bulletin board to a personal computer—is known as downloading.

3. Software piracy, the unauthorized copying of copyrighted computer programs, is a big problem in the computer software industry. By one estimate, one unauthorized copy is made for every computer program sold. This may lead to losses of \$800 million in 1985 alone. Schiffres, *The Struggle to Thwart Software Pirates*, U.S. News & World Rep., Mar. 25, 1985, at 72. Computer bulletin boards are one way to distribute unauthorized copies of software. See Lasden, *supra* note 1, at 42.

4. Distribution of stolen credit card numbers is another common type of misuse of computer bulletin boards. Some numbers are distributed to harm a specific individual. *Writer Feels Wrath of Computer Buffs Angered by Article*, N.Y. Times, Dec. 9, 1984, § 1, at 88, col. 4 (Newsweek reporter's Visa credit card account number posted on bulletin boards after he wrote a story critical of "hackers"). Other account numbers are distributed to enable individuals to place telephone calls without paying for them. These calls are frequently to computer bulletin boards. See Schiffres, *The Shadowy World of Computer "Hackers"*, U.S. News & World Rep., June 3, 1985, at 58 ("If you're into calling bulletin boards, a big problem is phone-bill shock at the end of the month.'").

5. See Pollack, *supra* note 1, at D4, col. 6.

Though abuse is possible,⁶ computer bulletin boards offer their users important benefits. An individual can use a bulletin board to express his opinion on a matter of public interest.⁷ He may find a review of a product he is considering buying.⁸ He may find a useful piece of software.⁹ An individual might also use the bulletin board to ask a technical question about a specific computer program.¹⁰

Computer bulletin boards also offer a unique way for a group of people to discuss an idea or an event. One person starts the discussion by posting a message. Others read the message and add their comments. One need not respond immediately—a person can carefully prepare a reply and post it later. The people involved need not be in the same place at the same time and do not have to know each other. The participants in the discussion do not even have to know each other. Those not actually

6. This Note will examine civil and criminal misuse. Civil misuse occurs when a wrongdoer uses the bulletin board to the detriment of another by, for example, defaming the other individual, or by posting without permission a program copyrighted by the other individual. Criminal misuse occurs when someone uses a bulletin board to distribute information in furtherance of a criminal activity. The posting of stolen credit card numbers for use by other bulletin board users is an example of this type of misuse.

An individual will suffer different types of harm from different types of misuse. A defamatory message results in tarnishing of the plaintiff's reputation. This type of harm hinges on several factors that make it difficult to place a monetary value on the injury. See *Mattox v. News Syndicate Co.*, 176 F.2d 897, 901 (2d Cir.) ("plaintiff's loss of reputation in the minds of those who know him or know about him"), *cert. denied*, 338 U.S. 858 (1949); *Goodrow v. New York Times Co.*, 241 A.D. 190, 192, 271 N.Y.S. 855, 857 (1934) ("the extent of the circulation, the social and business standing of the plaintiff, and the tendency which [the] publication has to injure [the] plaintiff in the public estimation of his character"), *aff'd*, 266 N.Y. 531, 195 N.E. 186 (1935); *Foerster v. Ridder*, 57 N.Y.S.2d 668, 671-73 (Sup. Ct. 1945) (plaintiff's mental anguish, circulation of statement), *modified*, 275 A.D. 665, 87 N.Y.S.2d 419 (1949).

Damages from copyright infringement may be somewhat easier to measure. A plaintiff will probably be unable to determine exactly how many unauthorized copies of a program have been made. A court could, however, assume that a certain percentage of a bulletin board's users have made copies and then shift the burden to the operator to prove that fewer copies had been made. An operator could do this by keeping track of the number of times a message had been seen.

By comparison, damage from the disclosure of confidential information should be relatively simple to determine. Unauthorized charges made with a credit card can be measured quite readily. An operator must, however, have an opportunity to show that a specific loss was due to something unconnected with his bulletin board. A court should, for example, diminish any potential award if an operator can show that a particular credit card charge was made by someone who had obtained the credit card number from another source.

7. One bulletin board operator used his bulletin board to alert local citizens to an upcoming hearing on a local ordinance. Lasden, *supra* note 1, at 37. Bulletin boards have also been used to discuss proposed legislation concerning operator liability for misuse. See bbs/issues #2, Byte Information Exchange, Apr. 16, 1985 (available in the files of the *Fordham Law Review*).

8. See Schiffres, *supra* note 4, at 58.

9. Computer bulletin boards are frequently used for the legitimate distribution of software. See *For Every Taste, A Bulletin Board*, U.S. News & World Rep., June 3, 1985, at 59 [hereinafter cited as *Every Taste*]; Markoff & Shapiro, *Public-Domain Gems*, Byte, Mar. 1985, at 207, 208; Pollack, *supra* note 1, at D4, col. 3.

10. See Schiffres, *supra* note 4, at 58.

adding to the discussion can benefit simply by reading the posted comments. In an age when most forms of mass communication, and thus public debate, are controlled by a small number of people,¹¹ bulletin boards have the potential to play an important role in the exploration and exchange of ideas.

As personal computers become increasingly popular and more computer bulletin boards come into existence,¹² abuse looms as an increasingly serious problem. Problems of identification¹³ and enforcement¹⁴ make it desirable to find a way to prevent misuse and ensure adequate compensation for victims of misuse in addition to the imposition of liability on the originator of the wrongful message. Though liability for harm caused by bulletin board misuse should lie primarily with the originator of the message rather than the computer bulletin board operator (the "operator") who innocently distributes the message, imposition of some liability on the operator should be considered both as a source of compensation for victims and as a means of deterring misuse.¹⁵ The operator who encourages or approves of the misuse of his bulletin board should be found liable for the misuse as a joint participant. This Note discusses the imposition of liability on the operator who does not encourage or approve of the misuse.

11. See *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 247-50 (1974) ("[c]hains of newspapers, national newspapers [and] national wire and news services . . . are the dominant features of a press that has become noncompetitive and enormously powerful and influential"); Barron, *Access to the Press—A New First Amendment Right*, 80 Harv. L. Rev. 1641, 1642-43 (1967) ("comparatively few [people] . . . determine not only the content of information but its very availability").

12. By current estimates, between 1000 and 5000 computer bulletin boards exist in the United States. Many of these are run by individuals on home computers. See Soma, Smith & Sprague, *supra* note 1, at 572 (between 3500 and 4500); Lasden, *supra* note 1, at 36 (at least 2500); Schiffres, *supra* note 4, at 58 (more than 1000). It is difficult to determine the exact number of bulletin boards in operation because many are private and one must know the operator to use them. Soma, Smith & Sprague, *supra* note 1, at 572 n.3.

13. Users of some bulletin boards can post messages anonymously, making it impossible to identify the wrongdoer. See Pollack, *supra* note 1, at D4, col. 3.

14. Bulletin boards dedicated to wrongful activities often have the tightest security measures to prevent access by the authorities. See Sandza, *The Night of the Hackers*, Newsweek, Nov. 12, 1984, at 17-18. They frequently have several access levels with more incriminating material available to only a select few. See Schiffres, *supra* note 4, at 58-59.

15. Compensation of victims and deterrence of harm-causing conduct are two principles underlying tort liability. See W. Keeton, D. Dobbs, R. Keeton & D. Owen, *Prosser and Keeton on the Law of Torts* § 4, at 20, 25 (5th ed. 1984) [hereinafter cited as *Prosser & Keeton*]. Bulletin board operator liability directly serves the first goal by providing a victim of misuse with a second source of compensation. The victim who cannot identify the wrongdoer because the damaging message was posted anonymously will find this liability especially important because the operator can be found once one knows the phone number of the bulletin board. If the operator is a commercial service, the victim is more likely to recover if he can sue both the wrongdoer and the operator.

Operator liability can also serve the second goal of tort liability, deterrence. The possibility of liability will encourage operators to take steps that will make it riskier for people to misuse computer bulletin boards. See Pollack, *supra* note 1, at D4, col. 6 (operators distributing passwords so that posters can be identified in hopes of avoiding liability for misuse).

Rules governing computer bulletin board operators' liability for user misuse in civil cases should be as objective as possible to ensure certainty for operators who may be faced with numerous questionable messages. At the same time, the law should not impose a burden that will discourage operators from running their bulletin boards. Criminal statutes should punish operators who knowingly permit the posting of wrongful messages, knowingly retain wrongful messages or intentionally ignore the existence of wrongful messages on their bulletin boards. Part I of this Note will examine the duties imposed on disseminators whose function resembles that of computer bulletin board operators. Part II will propose specific steps that operators should be required to take in order to avoid liability.¹⁶

I. DUTIES OF OTHER DISSEMINATORS

Computer bulletin boards resemble mass media when the media perform certain specific functions. Bulletin board operators distribute information for others without endorsing the material and without the wrongful intent that a user will have when posting an illegitimate message. Other media are frequently in a similar position. Newspapers perform a similar role when they publish advertisements and letters to the editor. Radio stations fit this model when they broadcast advertisements. Telephone and telegraph companies always perform this function. An examination of the duties imposed on disseminators in this situation will provide guidance in the determination of the appropriate duties to be imposed on computer bulletin board operators.

The duties of media that disseminate certain defamatory matter were defined by the Supreme Court in its decision in *New York Times Co. v. Sullivan*.¹⁷ That case held that a newspaper publisher may not constitutionally be held liable for an advertisement defaming a public official unless the newspaper knew the statement was false or acted with reckless

16. The standard for civil misuse could be enacted as a statute or developed by courts as common law. One federal statute would be preferable to many state statutes because it would provide operators with one standard, thus avoiding choice of law problems that might arise because bulletin board use is not restricted by state boundaries. A user can use a bulletin board from anywhere in the country. Some bulletin boards, primarily commercial ones, provide local telephone access numbers throughout the country so that users need not incur long distance telephone charges.

Computer technology has advanced rapidly in the past few years and will probably continue to do so. As the technology advances, the structure of the computer bulletin board industry may change with equal speed. A standard for liability developed by courts could react to these changes better than a statutory standard. Cf. *Prosser & Keeton*, *supra* note 15, § 3, at 20 ("a statute well adapted to circumstances existing at the time of its enactment may be less apt when circumstances have materially changed").

It is beyond the scope of this Note to weigh the benefits and drawbacks of statutory and judicial standards and suggest one or the other. In the absence of an applicable statute, however, courts should be free to apply the standard proposed by this Note.

17. 376 U.S. 254 (1964).

disregard of whether the statement was false.¹⁸ Subsequent cases have defined reckless behavior as publication of an item with serious doubts as to its accuracy.¹⁹ The same standards apply when a newspaper publishes a defamatory letter to the editor.²⁰ First amendment concerns have led to the adoption of this standard as a matter of constitutional law.²¹

In copyright and false advertising actions against the media, disseminators may be held liable when someone misuses the service, something in the material transmitted should have alerted the disseminator to the wrongful nature of the material and the disseminator then acted unreasonably. Such a standard was applied by the Southern District of New York in *Screen Gems-Columbia Music, Inc. v. Mark-Fi Records, Inc.*,²² in which a radio station broadcast advertisements for a record that contained songs that had been included without the copyright holder's permission. The plaintiff copyright holder argued that the low advertised price of the record should have put the radio station on notice of the record's infringing nature.²³ The court held that the trier of fact could find the defendant radio station liable for copyright infringement if it found that the radio station had broadcast the advertisements with actual or constructive knowledge of the record's infringing character.²⁴ Newspapers similarly will not be held liable for the material in advertisements unless the plaintiff can show scienter and unreasonable actions on the part of the publisher.²⁵

The disseminators discussed above had substantial contact with the wrongful material before transmitting it. Those who have less contact with the material or less time to investigate it, such as telephone and telegraph operators, are subject to even lesser burdens. For these media, courts have expressed a desire to maintain speed and confidentiality.²⁶

18. See *id.* at 279-80.

19. See *Rosenbloom v. Metromedia, Inc.*, 403 U.S. 29, 56 (1971) (plurality opinion) (radio broadcast); *St. Amant v. Thompson*, 390 U.S. 727, 731 (1968) (televised speech).

20. See *Moriarty v. Lippe*, 162 Conn. 371, 380, 294 A.2d 326, 331 (1972); *Safarets, Inc. v. Gannett Co.*, 80 Misc. 2d 109, 113-14, 361 N.Y.S.2d 276, 281 (Sup. Ct. 1974), *aff'd*, 49 A.D.2d 666, 373 N.Y.S.2d 858 (1975).

21. See *Time, Inc. v. Hill*, 385 U.S. 374, 389 (1967) (rejecting a negligence standard); *New York Times Co. v. Sullivan*, 376 U.S. 254, 279-80 (1964) (applying a recklessness standard and rejecting a strict liability standard).

22. 256 F. Supp. 399 (S.D.N.Y. 1966).

23. *Id.* at 405.

24. See *id.* The court seemed to apply the doctrine of contributory infringement under which one individual may be held liable for the copyright infringement of another. The Supreme Court approved of the contributory infringement theory in *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

25. See *Suarez v. Underwood*, 103 Misc. 2d 445, 448, 426 N.Y.S.2d 208, 211 (Sup. Ct. 1980) (refusing to impose liability on defendant newspaper absent a showing of scienter and "maliciousness, intent to harm, or recklessness without regard to the consequences"), *aff'd*, 84 A.D.2d 787, 449 N.Y.S.2d 438 (1981); see also *Yuhas v. Mudge*, 129 N.J. Super. 207, 209-10, 322 A.2d 824, 825 (1974) (refusing to impose liability on defendant magazine absent scienter and refusing to require investigation of the legitimacy of all advertisements published).

26. See, e.g., *O'Brien v. Western Union Tel. Co.*, 113 F.2d 539, 541 (1st Cir. 1940) (a

These disseminators will be held liable for sending a defamatory message only when they know or have reason to know that the message is not privileged.²⁷

The determination of what constitutes actionable behavior in any given situation has depended on a balance of policy concerns and an examination of the functioning of the particular medium. Computer bulletin boards do not raise all the policy concerns or share all the functional characteristics of any one medium. Rather, they share a few of the characteristics of each and have differences from each. Like newspapers and television broadcasts, they offer the potential to distribute information to large audiences.²⁸ They also share the ability to be an effective forum for public debate of controversial issues.²⁹ These similarities suggest that bulletin boards should receive the constitutional protections afforded these other media.

Unlike newspaper publishers and television broadcasters, who can carefully choose what they disseminate,³⁰ however, computer bulletin board operators typically allow their users to post whatever they wish³¹ and cannot easily limit the subjects of posted messages.³² This comparison suggests that bulletin boards should be held to a standard less stringent than that which these disseminators must meet.

Like telephones, computer bulletin boards allow swift transmission of messages. Yet messages posted on a bulletin board remain perceivable for much longer periods of time than messages transmitted over phone

telegraph company must have a privilege sufficient to enable it to transmit messages without delay); *Von Meysenburg v. Western Union Tel. Co.*, 54 F. Supp. 100, 101 (S.D. Fla. 1944) (as speed is of the essence, telegraph company must have a privilege "broad enough to enable the company to render its public service efficiently"); *Anderson v. New York Tel. Co.*, 42 A.D.2d 151, 165, 345 N.Y.S.2d 740, 754 (1973) (Witmer, J., dissenting) ("it would be unwise and socially expensive to impose the burden upon the telephone company to investigate complaints about the truth of communications"), *rev'd*, 35 N.Y.2d 746, 320 N.E.2d 647, 361 N.Y.S.2d 913 (1974) (reversed on dissenting opinion below).

27. *Western Union Tel. Co. v. Lesesne*, 182 F.2d 135, 137 (4th Cir. 1950) (telegraph company); *O'Brien v. Western Union Tel. Co.*, 113 F.2d 539, 542 (1st Cir. 1940) (same); *Anderson v. New York Tel. Co.*, 42 A.D.2d 151, 163-64, 345 N.Y.S.2d 740, 752-53 (1973) (Witmer, J., dissenting) (telephone company), *rev'd*, 35 N.Y.2d 746, 320 N.E.2d 647, 361 N.Y.S.2d 913 (1974) (reversed on dissenting opinion below); see *Restatement (Second) of Torts* § 612(2) (1977).

28. An individual posting a message on CompuServe, for example, has a potential audience of over 200,000 people. See Lasden, *supra* note 1, at 34. Even non-commercial bulletin boards can provide access to significant audiences. See Watt, *Police Seize BBS Equipment*, *InfoWorld*, June 18, 1984, at 11 (one bulletin board with 5000 users).

29. See *supra* notes 7, 11 and accompanying text.

30. See *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 258 (1974) (newspaper); *Muir v. Alabama Educ. Television Comm'n*, 688 F.2d 1033, 1041 (5th Cir. 1982) (television), *cert. denied*, 460 U.S. 1023 (1983).

31. See Pollack, *supra* note 1, at D4, col. 6 (only one of four commercial services monitors messages).

32. An operator wishing to prevent the posting of obscene messages, for example, would have to screen all messages. See *id.*, col. 6.

lines³³ and the desire to have instantaneous transmission is not as strong for bulletin boards as for telephones and telegraphs. Thus, the permissive standard applied to telephone and telegraph companies is not warranted for computer bulletin boards.

Other disseminators are required to take reasonable precautions to prevent misuse of their facilities. In no instance is a disseminator required to take unduly burdensome steps that might seriously impair the function of the medium. Computer bulletin boards share many of the characteristics and provide many of the benefits of these other media and should thus be held to the same type of standard as these other media, one of reasonable precautions.

II. DUTIES OF COMPUTER BULLETIN BOARD OPERATORS

When determining the duties to include in a reasonable precautions standard for bulletin board operators, one must try to satisfy competing demands. On the one hand, the standard should protect individuals' property and reputation interests and ensure compensation for victims of misuse. At the same time, the standard should not excessively burden the bulletin board operator who did not originate the wrongful message or approve of the misuse. The standard set forth in this Note seeks to balance these competing concerns.

A. Civil Liability

Civil liability should be imposed on bulletin board operators both to discourage misuse and to reduce the damage resulting from it. Any steps required should be effective without excessively burdening computer bulletin board operators.³⁴

1. Deterrent Measures

a. Poster Identification

One step that might discourage potential misusers would be to establish a mechanism for identifying the person who posts a message (the

33. See *id.*, col. 5 (one message containing a telephone credit card number may have been posted for two months).

34. The precautions examined by this Note impose two kinds of burdens. The first kind is programming a bulletin board to perform a particular function. An example of this is programming a bulletin board to automatically delete messages containing undesirable terms. See *infra* Part II.A.1.c. This burden will probably lead to only slightly higher prices for purchased bulletin board software because one programmer can spread the cost of the extra time and effort among the many purchasers of the program. An operator who writes his own software will incur this entire cost. The cost of this kind of burden should not be prohibitive if the function is technically feasible.

The second kind of burden is the continuing effort required to give effect to a measure. Screening of messages imposes such a burden because it requires bulletin board operators to examine every message posted. This burden is independent of whether the operator bought his bulletin board software or created it himself and imposes a much greater total cost on operators than measures requiring only programming changes.

"poster"). This might consist of actually placing the poster's name in each message or simply maintaining a list indicating who posted each message. This precaution probably requires the establishment of accounts for each person wishing to post messages on the bulletin board. Each poster would then have to identify himself and provide a password in order to use the bulletin board.³⁵

An operator should not be allowed to rely on the name provided by a potential user when the operator does not know the individual in question. The operator should be required to verify independently the potential user's name. This can be done by asking the potential user's name, address and phone number and verifying the information with directory assistance. By retaining this information, the operator can help identify wrongdoers if misuse occurs.

Identifying posters should deter potential wrongdoers because they could easily be found and held accountable for their wrongful messages.³⁶ This measure appears to have several drawbacks. If people cannot use the facility without a password, they will be prevented from examining the contents of a bulletin board before subscribing. But, a special account not requiring a password could be set up for such people from which they could read but not post messages.³⁷

A second problem is the possibility that a legitimate user's account and password may be discovered and wrongful material posted under the innocent user's name. While this possibility exists, it requires considerable effort to bypass the precautions taken by the operator and the operator should not be held liable for such misuse.³⁸

Poster identification also imposes on the operator the continuing burden³⁹ of verifying the identity of all new users. This burden will be substantial for the operator of a bulletin board with several thousand users.

35. Some amateur operators have already taken this step in hopes of avoiding liability for misuse of their bulletin boards. Pollack, *supra* note 1, at D4, col. 6. Bulletin boards that impose fees on their users must be able to identify their users in order to bill them. Any such mechanism can be used to identify posters.

36. See *id.* The first amendment gives people the right to express their opinions, but it does not give them the right to do so anonymously. Anonymity will be protected only when disclosure of one's identity would act as a prohibition on speech. *Aryan v. Mackey*, 462 F. Supp. 90, 92 (N.D. Tex. 1978) (Iranian students permitted to wear masks during protests of Shah's regime in order to avoid reprisals); *cf.* *NAACP v. Alabama*, 357 U.S. 449, 462 (1958) (forced disclosure of an organization's membership lists would restrain its members' freedom of association). The poster would thus not normally have a constitutional right to post anonymously.

37. See Hoffman, *Across the Boards*, PC Magazine, June 11, 1985, at 311, 313.

38. The user would have to try random passwords or do something else to illegally procure a valid password. Unauthorized access to computer facilities is a significant problem. See, e.g., Ranney, *Teenagers Suspected of Illegally Accessing Data*, InfoWorld, Oct. 28, 1985, at 8; Sandza, *The Revenge of the Hackers*, Newsweek, Dec. 10, 1984, at 81; *Thrills and Lax Security Cited in Computer Break-In*, N.Y. Times, Aug. 14, 1983, § 1, at 30, col. 3. This problem has led to much new legislation on both state and federal levels. See Mace, *Computer Bills in Works*, InfoWorld, Oct. 14, 1985, at 10.

39. See *supra* note 34.

The cost is justified, however, by the probable deterrent effect of poster identification.⁴⁰ The measure should thus be one of those required of bulletin board operators seeking to avoid liability for misuse.

b. *Pre-Screening of Messages*

Another measure computer bulletin board operators could take to deter misuse would be to pre-screen any messages submitted to the bulletin board. This would require the operator to look at all messages before allowing other users to see them. The operator would then post only those messages for which he was willing to accept liability. This measure would probably do the most to avoid injury to innocent individuals by both deterring poster misuse and requiring operators to prevent it.

While this measure offers the most potential deterrent value, the benefit comes at great cost. An operator may have to devote a great deal of time to screening messages.⁴¹ Commercial bulletin boards would probably raise the price they charge their customers in order to pay for this added burden. Operators who receive no remuneration for their service might decide that the added cost is too great and stop offering their facilities.⁴²

In addition to cost, a first amendment problem exists. Operators might censor legitimate messages on controversial subjects in order to avoid any possibility of being taken to court.⁴³ Such action would run counter to our strong national commitment to free debate on controversial topics.⁴⁴

40. See Pollack, *supra* note 1, at D4, col. 6.

41. The burden of screening messages can be oppressive, especially when many individuals use a particular bulletin board. See *Every Taste*, *supra* note 9, at 59 (one operator spends an average of three hours per day screening messages).

42. See Pollack, *supra* note 1, at D4, col. 5. One might argue that if computer bulletin boards do not generate enough revenue to pay the cost of preventing misuse and to pay for the damage they cause, they should be allowed to go out of business. Computer bulletin boards, however, provide society with important benefits that make it reasonable not to force them to internalize all the costs they entail. Computer bulletin boards can be used to discuss important social issues, to distribute legitimately software that can improve computers' value to society and to provide a forum in which questions regarding computers can be asked and answered. See *supra* notes 7-11 and accompanying text. Similar benefits provided by other media such as newspapers, television and telephones have led to standards of liability that do not require these media to compensate all injuries resulting from misuse of their facilities. See *supra* Part I.

43. *Cf. Smith v. California*, 361 U.S. 147, 153 (1959) ("if the bookseller is criminally liable without knowledge of the contents, . . . he will tend to restrict the books he sells to those he has inspected; and thus the State will have imposed a restriction upon the distribution of constitutionally protected as well as obscene literature").

44. See *New York Times Co. v. United States*, 403 U.S. 713, 717 (1971) (Black, J., concurring) ("Both the history and language of the First Amendment support the view that the press must be left free to publish news, whatever the source, without censorship, injunctions, or prior restraints."); *Time, Inc. v. Hill*, 385 U.S. 374, 388-89 (1967) ("[w]e create a grave risk of serious impairment of the indispensable service of a free press in a free society if we saddle the press with the impossible burden of verifying to a certainty the facts . . . in news articles"); *New York Times Co. v. Sullivan*, 376 U.S. 254, 269-70

Some practical problems exist for the operator trying to determine the legitimacy of a posting containing a piece of computer software. One problem is a "language barrier." For technical reasons, a user must usually translate software into a postable form before putting it on a bulletin board.⁴⁵ The operator must thus have a translating program to transform the software back to its original form before he can check to see if it is copyrighted. Users intent on misusing the bulletin board could simply post programs in a form untranslatable by the operator.⁴⁶ The second problem arises once the operator detects a copyrighted piece of software. How does the operator know whether the copyright owner consented to the posting?⁴⁷ An operator could simply delete any software that caused either one of these problems, but this could lead to the deletion of many legitimately posted pieces of software.

An operator who screened messages might occasionally find a message that was obviously posted in violation of a copyright. However, misusers can easily remove copyright notices from programs before posting them, resulting in a negligible number of messages that operators would find obviously violating a copyright. The possibility of finding one of these rare infringing programs does not justify the cost of screening.

The imposition of a duty to pre-screen would also subject the operator to unwarranted uncertainty. When an operator is sued for another's misuse, questions will inevitably arise as to whether the operator tried hard

(1964) ("profound national commitment to the principle that debate on public issues should be uninhibited, robust, and wide-open"); *Roth v. United States*, 354 U.S. 476, 484 (1957) ("The protection given speech and press was fashioned to assure unfettered interchange of ideas for the bringing about of political and social changes desired by the people."); *Near v. Minnesota*, 283 U.S. 697, 718 (1931) (noting that an absence of prior restraints "is significant of the deep-seated conviction that such restraints would violate constitutional right"). In the context of defamation, the computer bulletin board operator may be unable to recognize the defamatory nature of a posted statement, particularly where the context of the statement or facts that may or may not be known to the operator are the key to the message's defamatory character. Operators wary of potential liability would probably delete borderline messages, some of which are bound to be protected statements.

45. Computer programs in executable form contain characters with special meaning to computer hardware and communications software. When programs are transmitted over phone lines or between computers, something must be done to ensure that the information transmitted does not confuse the hardware or software involved. This is frequently done by running a program that translates troublesome characters to special sequences of non-troublesome characters. The individual receiving the program would then need to run a program to translate these special sequences back to the characters they represented. See Shapiro, *Shopping the Electronic Software Shelves*, *Macworld*, June 1985, at 138, 140; Barr & Rogers, *Looking for the Perfect Program*, *Byte*, Dec. 1984, at 199, 206.

46. A program using a method of encoding and decoding data that the bulletin board operator did not possess would accomplish this task.

47. Subject to certain limitations, the owner of a copyright has the exclusive right to reproduce the copyrighted work or authorize the reproduction of the copyrighted work. See 17 U.S.C. § 106(1) (1982). The person who posted the software without permission would be an infringer of the copyright, see *id.* § 501(a), and would be subject to various penalties. See *id.* §§ 502-506.

enough to determine the wrongful character of a message or was reasonable in believing that the message was not wrongful.⁴⁸ The judgment of what constitutes sufficient effort or reasonable belief will necessarily vary from case to case, leaving the operator unclear as to the exact nature of his duty.

Because of problems of effectiveness, constitutionality, cost and legal uncertainty, the law should not impose the duty of pre-screening messages on computer bulletin board operators.

c. *Programming the Bulletin Board to Automatically Delete Postings Containing Undesirable Terms*

A third possible precaution aimed at discouraging potential misusers would require a bulletin board operator to program the bulletin board to reject messages containing certain terms. These terms would include, for example, common defamatory and obscene words and information in the form of a credit card number. The bulletin board itself would automatically discard any message containing one of these terms.

This precaution would require effort only at the time the bulletin board program was created and would not impose any burden on the operator once the bulletin board went into operation. Although this precaution should not lead to a substantial price increase for the ultimate users, it could easily be circumvented. A determined misuser could learn the terms that would cause the bulletin board to reject a message and work around them. The wrongdoer could accomplish this evasion by something as simple as spelling the key terms incorrectly.

Automatic deletion shares several of the drawbacks of pre-screening, including the potential deletion of legitimate messages on controversial topics,⁴⁹ the language barrier problem⁵⁰ and the difficulty of determining permission for the posting of copyrighted software.⁵¹ These problems will probably be exacerbated when a computer performs the screening function. Computer programs cannot understand all the nuances of language⁵² and will probably have to base deletion decisions on the existence

48. Cf. *Screen Gems-Columbia Music, Inc. v. Mark-Fi Records, Inc.*, 256 F. Supp. 399, 405 (S.D.N.Y. 1966) (trier of fact could determine that defendant radio station had failed to investigate adequately an advertisement for a copyright infringing record); *Suarez v. Underwood*, 103 Misc. 2d 445, 448, 426 N.Y.S.2d 208, 210-11 (Sup. Ct. 1980) (reckless publication of false advertisements by a newspaper may lead to liability), *aff'd*, 84 A.D.2d 787, 449 N.Y.S.2d 438 (1981); *Weaver v. Pryor Jeffersonian*, 569 P.2d 967, 974 (Okla. 1977) (whether the conduct of a publisher of a defamatory letter to the editor was an extreme departure from standard investigatory practices was a question of fact for the jury); Bloom, *Proof of Fault in Media Defamation Litigation*, 38 Vand. L. Rev. 247, 267-89 (1985) (In defamation cases, several factors, including long lead time, an anonymous source and a questionable source, can be used to show that the publisher's effort to determine the accuracy of an item was insufficient.).

49. See *supra* notes 43-44 and accompanying text.

50. See *supra* notes 45-46 and accompanying text.

51. See *supra* note 47 and accompanying text.

52. See Wright, *Programs That Understand Language*, Creative Computing, Oct.

of particular words or patterns. This rigid, mechanical decisionmaking process would probably lead to the deletion of many more legitimate messages than would pre-screening. Anything in the form of a credit card number, for example, would be deleted, even if it were only the phone number of another bulletin board or a model number of a product. This measure could thus seriously undermine the usefulness of computer bulletin boards and should not be required of bulletin board operators.

Also, if an operator were to write his own bulletin board program, how would he know what terms he would have to catch to avoid liability? A statute or judicial decision would be necessary to establish a minimum level of screening ability. If the level established were feasible on the personal computers used by many amateur operators, it probably would not provide enough protection to be worth establishing.⁵³ Furthermore, if this minimum level were adjusted as the technology advanced, those previously meeting the standard might suddenly find themselves subject to liability.

d. *Limit the Size of Postings*

A fourth measure operators could take to deter misuse would be to limit the size of messages. Messages might be limited to two or three thousand characters. This measure would have its greatest impact on the posting of copyrighted software. These items are usually large, often exceeding one hundred thousand characters. To bypass this precaution, one would have to post the copyrighted software in pieces, as separate messages. Other forms of misuse, such as obscenity, defamation and credit card fraud, would probably not be deterred by size limits. Furthermore, while preventing the unauthorized posting of copyrighted software, this measure would prevent the authorized posting of other potentially useful programs. Courts should not require operators to limit the size of postings.⁵⁴

1985, at 92. A computer program must go through several complex steps before it can "understand" a sentence. It must ascertain the meaning of each word, even when the word is part of an idiom. It must then determine the structure and meaning of the sentence, and having done so, it must remember the meaning and process other sentences. Determining the meaning of any one sentence may require the application of knowledge gained from a prior sentence or a pool of general knowledge. This type of artificial intelligence is only in its developmental stages and is by no means common in the computer industry. See Rich, *Artificial Intelligence and the Humanities*, 19 *Computers & the Humanities* 117, 118-19 (1985).

53. Many personal computers that run bulletin boards do not have the computing power to do the extensive pattern and context recognition necessary to detect most wrongful messages. This is especially so in the area of potentially defamatory messages. See *supra* note 52.

54. Other measures that ration bulletin board functions solely to prevent misuse are similarly undesirable because they unnecessarily restrict the legitimate use of bulletin boards. Such methods include limiting the amount of time a user could connect to a bulletin board and limiting the life of a message posted on the bulletin board.

2. Mitigation Measures

The measures discussed above seek to prevent misuse. Several precautions may be taken to reduce the damage caused by wrongful messages that do get posted.

a. *Deletion of a Wrongful Message on Notice of Its Existence*

Operators should be required to delete wrongful messages after notice of their existence.⁵⁵ Although this may sound simple enough, it requires further development. Someone who feels he has been defamed could request that the operator remove the offending message. The same holds true for the victims of other types of misuse. However, if the operator reasonably believes that the message is not wrongful, he should not have to remove the notice without a court order.⁵⁶ Harassment of bulletin board operators might result if users could freely require operators to remove notices.

b. *Deletion of Messages After a Specific Period of Time*

Another way of reducing the harm caused by wrongfully posted messages would be to delete messages automatically after a particular period of time.⁵⁷ This measure could be formulated as imputing knowledge to the operator of messages of a certain age or older. Ideally, automatic deletion would occur before a large audience had seen the wrongful message. As the number of people using the bulletin board increased and the frequency with which they used the bulletin board increased, this time period would become progressively shorter. The ideal

55. This would be roughly the equivalent of a newspaper publishing a retraction after finding out that something it had printed was defamatory. A newspaper that printed such a retraction would not, however, avoid liability. See *Prosser & Keeton, supra* note 15, § 116A, at 845-46. Bulletin board operators who do not pre-screen messages should not face liability in this situation, however, because they did not know of the nature of the statement at the time it was made. See Restatement (Second) of Torts § 581 (1977).

Courts have been willing to impose liability on other entities for failing to remove wrongful material on their property after being informed of the material's existence and its wrongful nature. See *Hellar v. Bianco*, 111 Cal. App. 2d 424, 426, 244 P.2d 757, 759 (1952) (libelous message on tavern restroom wall); *Fogg v. Boston & L.R.R.*, 148 Mass. 513, 517, 20 N.E. 109, 110 (1889) (libelous newspaper story posted at railroad ticket agent's office).

56. An operator should be able to base his determination of legitimacy on a facial examination of the message in question. If the message is obviously wrongful, the operator should delete it. Operators should not be required to investigate further because they lack the investigatory resources possessed by newspapers and because of the potential cost of such investigation.

57. Computer bulletin board operators make old messages much more accessible than, for example, newspaper publishers and television broadcasters. Old messages are just as visible as new messages on computer bulletin boards; they coexist with newer messages. Old issues of newspapers are not on corner newstands next to current issues; one must go to a library to see the old issues. It requires even more effort to locate old television programs.

time period would thus depend on the usage patterns of the particular bulletin board.

Even if the lifespan of messages was not so short as to require almost immediate screening, operators might end up doing a lot of screening. If the operator wanted to maintain the utility of his bulletin board, he would have to screen the "expiring" messages and keep the useful ones. This would probably require as much effort and raise the same problems as pre-screening.⁵⁸

If operators chose not to screen expiring messages, other undesirable consequences would probably follow. Because all messages would be removed after, for example, a week, users of bulletin boards would probably connect more frequently to make sure they saw all the useful information before it was deleted. They would also see all the wrongful information. Depending on how long it takes for wrongful messages to be deleted, this measure might increase the number of people seeing wrongful messages, the opposite of the desired result.

Those unable or unwilling to connect more frequently would lose many of the benefits offered by computer bulletin boards. All users might lose some of the benefit of the technology because those who would now take the time to post large public domain software might decide not to do so, knowing that the message would be deleted a short time later. Thus, any advantage gained by the deletion of messages at the end of a certain time is probably outweighed by the undesirable consequences.

3. Summary of Measures

Liability for misuse of computer bulletin boards by outside parties should be imposed on bulletin board operators only if they act unreasonably by failing to take required precautions. One required precaution is designed to deter misuse and aid in the identification of wrongdoers: maintenance of a mechanism for identifying the posters of messages.⁵⁹ A second required precaution is designed to reduce the harm caused by wrongful messages that are posted. Operators should delete wrongful messages after proper notice of their existence.⁶⁰

Imposing any greater burden on operators seeking to avoid civil liability is undesirable and would involve an unwarranted degree of censorship over the material posted by others, reducing computer bulletin boards' suitability as a forum for public debate.⁶¹ Screening is also likely to result in the removal of legitimately posted software by operators unable or unwilling to determine whether the copyright holder has given permission for the distribution. Further burdens that impose significant costs

58. See *supra* notes 41-48 and accompanying text.

59. See *supra* Part II.A.1.a.

60. See *supra* Part II.A.2.a.

61. See *supra* notes 43-44 and accompanying text.

on operators are undesirable because they could result in a decision by many amateur operators to stop running their bulletin boards.⁶²

The measures suggested by this Note should reduce abuse of computer bulletin boards. Wrongdoers who can now post stolen credit card numbers anonymously will no longer be able to do so. The loss of anonymity should force misusers to think twice before posting credit card numbers and result in the posting of fewer credit card numbers on computer bulletin boards. The same deterrent effect should also reduce other types of abuse by those who engage in wrongful conduct only when they can do so anonymously.

The measures described in this Note will also serve two other important purposes. First, those injured by misuse of computer bulletin boards will be able to seek compensation not only from misusers, but also from operators who failed to take the required precautions. Second, computer bulletin board operators will be provided with a reasonably objective standard to use when deciding whether to operate a bulletin board and, having decided to operate the service, in deciding how to operate it.

4. Application at Trial

In order to establish a *prima facie* case against the operator, a plaintiff seeking to hold an operator liable for the wrongful posting of another should have to prove the operator's failure to take the required steps. The plaintiff would have to prove that a wrongful message was posted anonymously or that the operator failed to remove such a message after notice of its existence. If the plaintiff could prove that the operator failed to identify the poster or that the operator failed to remove the message after a proper request, the plaintiff should be allowed to recover from the bulletin board operator. No liability would be imposed on an operator whose bulletin board had been misused unless a plaintiff could prove that one of these events occurred. Once it is determined that the operator is liable for the misuse, the operator and the misuser should be treated as joint tortfeasors.⁶³

B. Criminal Liability

While civil liability seeks to compensate those who suffer injuries, criminal liability has other goals, including the protection of society from certain types of behavior.⁶⁴ Criminal statutes imposing liability on bulletin board operators should do so only when the operators' actions show that they are intentionally furthering a criminal activity or when they promote criminal activity by intentionally ignoring its existence. An op-

62. See *supra* note 42.

63. Joint tortfeasors cause a single and indivisible harm and any individual tortfeasor can be required to remedy the entire harm. See *Edmonds v. Compagnie Generale Transatlantique*, 443 U.S. 256, 260 (1979); Restatement (Second) of Torts § 875 (1977); see also *id.* § 886A (restating rules on contribution among tortfeasors).

64. Model Penal Code § 1.02(1)(a) (1962).

erator should face criminal punishment when he knowingly permits an item furthering a criminal activity to remain posted on his bulletin board or his actions indicate intentional ignorance of such a message. Pending federal legislation would impose criminal liability on bulletin board operators who knowingly permit the use of their facilities to distribute obscene material and child pornography.⁶⁵

CONCLUSION

Computer bulletin boards provide a potentially important new vehicle for communication. With this new medium come new ways to violate the rights of others. As a way to protect these rights and at the same time not cripple the industry, this Note has suggested imposition of liability on computer bulletin board operators for misuse by outside parties and steps that computer bulletin board operators should be required to take to avoid liability for misuse.⁶⁶ The suggested steps are appropriate for the existing industry, one composed of many amateur bulletin boards and relatively few commercial ones. Should this structure change significantly—for example becoming dominated by a few large, commercial operators—it might become appropriate to alter the burden on operators. The standard proposed by this Note takes into account the current state of the technology. It should not be viewed as a rigid and final answer, but rather as a stage in the development of the medium and the law.

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65. See *Computer Pornography: Hearings on S. 1305 Before the Subcomm. on Juvenile Justice of the Senate Comm. on the Judiciary*, 99th Cong., 1st Sess. 2 (1985) (statement of Lawrence Lippe, Chief, General Litigation Section, Criminal Division).

66. Computer bulletin boards present just one instance in which society must determine how much a technology's function should be impaired in order to protect the rights of innocent people. This issue is even more important for the related "news" and "automated mailing list" facilities found on large computer networks. News is a system that allows a user to post a message on a bulletin board-like facility on his mainframe computer. This facility then distributes the message to its counterparts on the other computers in the network. An automated mailing list is a computer program that receives messages from users on the network, combines them into one big message and then distributes the resulting message to computers on the network. In the case of both news and automated mailing lists, a recipient computer may in turn distribute the mailing to other computers.

Using these highly automated devices, a wrongdoer can distribute an illegitimate message to thousands of computers without any human intervention. Determination of the duties that should be imposed on those who run these facilities and recipient computers is beyond the scope of this Note.