Network Constitutions

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by Michael I. Meyerson

Law always lags behind technology. In part, this is inevitable for a profession based on precedent, where the common law still reigns after nearly 500 years. Of course, the lawyers and judges who argue and decide the issues of technology and law are also somewhat to blame; legal education does not included basic engineering and electronics courses. The result of this legal myopia has been a frequent misunderstanding of the promise of new technology.

In 1915, for example, the Supreme Court ruled that movies were not protected by the First Amendment, but were merely, "spectacles, not to be regarded ... as part of the press of the country or as organs of public opinion."[1] Similarly, one court in 1968 held that cable television was not sufficiently "affected with a public interest" to permit local regulation.[2] The court reasoned, "The public has about as much real need for the services of a CATV system as it does for hand-carved ivory back-scratchers."[3]

As the age of high-speed computer networks dawns, the nation's legal system again seems unprepared. The rapid growth of computer

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[1]Mutual Films Corp. v. Industrial Commission of Ohio, 236 U.S. 239, 245 (1915). This decision was not overturned until the middle of the century. Burstyn v. Wilson, 343 U.S. 493 (1952).

[2]Greater Fremont, Inc. v. City of Fremont, 302 F.Supp. 652, (N.D.Ohio 1968), aff'd sub nom, Wonderland Ventures, Inc. v. City of Sandusky, 423 F.2d 548 (6th Cir. 1970).

[3]Greater Fremont, Inc., 302 F.Supp. at 665.

technology has left the law far behind. Computers and communications have been improving at the extraordinary rate of 25% a year for two decades.[4] Meanwhile, computing costs have been cut in half every three years since 1950.[5] What began not long ago as just another ivory back scratcher has suddenly become commonplace. Ready or not, a legal framework must, and will, be created to respond to the introduction of computer networks into the fabric of everyday life.

Applying a grand vision of law to the great promise of computer technology is, by nature, a risky venture. The marriage of lawyers to computer scientists and engineers may result in offspring similar to that resulting from the pairing of horses and donkeys. If we are not careful, we might create a mule of a legal structure, too stubborn to move forward, and incapable of producing heirs to adapt to our uncertain future.

As we prepare for this perilous journey into the legal unknown, some issues are already apparent. First, will networks be characterized as governmental or private? Only if they are governmental, would they be restricted by the commands of the Constitution. Next, if networks are private, what requirements will be imposed by the government, either through statute or regulation? Finally, if necessary, can networks evolve their own "constitutions," to promote the general welfare of their users?

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[4]Dertouzous, Scientific America

[5]Tesler, Scientific America

I. State Action

The theory of "state action" is based on the fact that the Constitution was only designed to restrict governmental behavior. Private parties are governed by laws passed by Congress or by state legislatures, but the Bill of Rights only applies to government. Thus, a mob may prevent me from giving a speech, but they have not violated my First Amendment rights. A police officer who wrongfully pulls me off a podium, however, is an agent of the city and would be guilty of violating my constitutional rights.

If a computer network were held to be a "state actor," its discretion over how its deals with its users would be severely limited. The most important constitutional provisions would likely be the First Amendment's guarantees of freedom of expression, which generally prohibits content-based censorship, the Fourteenth Amendment's guarantee of equal protection, and the Fifth and Fourteenth Amendment's protections against loss of liberty and property without due process of law.

The determination of whether computer networks are governed by constitutional restrictions cannot be fully answered in the abstract, since there are so many types of networks. As Ithiel de Sola Pool noted, "Networks, like Russian dolls, can be nested within each other."[6] The simple network that merely links a few computers together should undoubtedly be viewed differently from the super-networks that link all the smaller networks together.

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[6] I. Pool, Technologies of Freedom 199 (1983).

The largest current super-network is the Internet, which serves an estimated three million users, and 500,000 computers.[7]

The High Performance Computing Act of 1991 will further complicate the analysis.[8] In the Act, Congress establishes a new super-network, the National Research and Education Network (NERN), to provide a "test bed" for the next generation of high-speed computer networks. NERN will be built on an existing network, NSFNET, which is run by the National Science Foundation. NSFNET is also the major backbone of the Internet. While only five percent of Internet's costs are paid for out of the federal treasury, a much larger federal outlay seems dedicated to NERN. Over the first five years of its existence, federal funding is to grow to one billion dollars per year.

The actual operating structure of NERN is not mandated by the law which established it. Control over NERN is centered in the Office of Science and Technology Policy, which will coordinate the involvement of many other federal agencies.[9]

It is also not apparent how NERN will relate to the private sector. The law specifies that NERN not be a competitor of private

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[7]"Information Superhighway Bill Sketches Outlines of Ubiquitous Computer Network," Daily Report For Executives, (BNA), November 26, 1991.

[8]For an excellent summary of the Act, see "Information Superhighway Bill Sketches Outlines of Ubiquitous Computer Network," supra note 7.

[9]Other agencies include the Department of Defense, the National Science Foundation, the National Aeronautics and Space Administration, the Environmental Protection Agency, the Departments of Education and Energy, and the National Institute of Science and Technology.

enterprises but instead should be "designed, developed, and operated in a manner which fosters and maintains competition and private sector investment in high-speed data networking within the telecommunications industry." On the other hand, it is not clear whether there will be any private competitors for NERN.

By definition, everything NERN does is "state action" since it is governmental created and controlled. The status of both the users of NERN and the super-networks, if any, that duplicate NERN's services, is far from clear. A changing technical environment makes predictions of legal conclusions speculative for the simplest legal issue. Unfortunately, the state action doctrine is a labyrinth of competing policies and analyses. Its complexities has led one scholar to conclude, "[V]iewed doctrinally, the state action cases are a 'conceptual disaster area.'"[10]

One line of cases has limited the scope of private action which will be considered to be state action. In 1974, the Supreme Court ruled that a private electric utility's termination of service to a customer was not state action even though the Public Utilities Commission had approved the general tariff containing the termination procedures.[11] The Court noted that the PUC had never discussed the specific provision and "[T]here was no ... imprimatur

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[10]L. Tribe, American Constitutional Law, at 1690 (2nd Ed., 1988)(quoting Black, "The Supreme Court, 1966 Term--Foreword: 'State Action,' Equal Protection, and California's Proposition 14," 81 Harv. L. Rev. 69, 95 (1967)).

[11]Jackson v. Metropolitan Edison Co., 419 U.S. 345 (1974).

placed on the practice."[12] The Court explained in detail its conclusion that the actions of heavily regulated businesses could still be considered private:

> The mere fact a business is subject to state regulation does not by itself convert its action into that of the State for purposes of the Fourteenth Amendment. Nor does the fact that the regulation is extensive and detailed, as in the case of most public utilities, do so. It may well be that acts of a heavily regulated monopoly will more readily be found to be "state" acts than will the acts of an entity lacking these characteristics. But the inquiry must be whether there is a sufficiently close nexus between the State and the challenged action of the regulated entity so that the action of the latter may be fairly treated as that of the State itself.
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> The nature of governmental regulation of private utilities is such that a utility may frequently be required by the state regulatory scheme to obtain approval for practices a business regulated in less detail would be free to institute without any approval from a regulatory body. Approval of such a request by a state utility commission of such a request from a regulated utility, where the commission has not put its own weight on the side of the proposed practice by ordering it, does not transmute a practice initiated by the utility and approved by the Commission into "state action."[13]

In a similar vein, the Supreme Court held that a private club could discriminate against blacks, even though it received one of a limited number of liquor licenses from the Pennsylvania Liquor Control Board, and was subject to detailed regulation.[14] Because the discriminatory policy was not mandated by the Board, the Court held

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[12] Id. at

[13] Id. at

[14] Moose Lodge No. 107 v. Irvis, 407 U.S. 163 (1972).

that the State's regulation, "cannot be said to in any way foster or encourage racial discrimination. Not can it be said to make the State in any realistic sense a partner or even a joint venturer in the club's enterprise."[15]

Even receiving heavy state funding may not be enough to turn an enterprise public. A private school which taught special need students and received more than 90% of its funding from the state was permitted to fire an employee for speaking out against school policies, even though such a firing might have been unconstitutional had the employer been a public school.[16] The Court reasoned that the school's fiscal relationship with the State should be analogized to that of independent contractors performing services for pay, and thus not result in a finding of state action.

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[15] Id. at . The Court faced a somewhat similar inquiry in trying to determine whether broadcast licensees were state actors. There was no majority opinion but Chief Justice Burger wrote for a three-Justice plurality that a finding of state action would destroy broadcast journalism:

> [I]t would be anomalous for us to hold, in the name of promoting the constitutional guarantees of free expression, that the day-to-day editorial decisions of broadcast licensees are subject to the kind of restraints urged by respondents.... Journalistic discretion would in many ways be lost to the rigid limitations that the First Amendment imposes on Government. Application of such standards to broadcast licensees would be antithetical to the very ideal of vigorous, challenging debate on issues of public interest."

CBS v DNC, 412 U.S. 94, 120 (1973)(Burger, C.J., plurality). In the case of a common carrier, such as the post office, cable television as a provider of public and leased access, or computer networks, such constitutional standards would actually encourage free debate by enabling more to speak.

[16] Rendell-Baker v. Kohn, 457 U.S. 830 (1982).

Finally, this line of cases holds that government must somehow exert its coercive power or provide overt or covert encouragement for a challenged private act before it becomes "state action." However, "[m]ere approval of or acquiescence in the initiatives of a private party is not sufficient to justify holding the State responsible for those initiatives.[17]

Under these cases, private networks using NERN would maintain their private character unless their actions were either compelled by the federal government or induced by governmental encouragement. The amount of governmental regulation, the degree of benefit received by the private networks, and, perhaps, even the existence of private monopoly power would not turn otherwise private decisions into state action.

A second line of cases, though, focuses on a different question, and inquires whether the government, "has elected to place its power, property and prestige" behind a challenged private act.[18] These cases do not look for state-mandated action so much as an intertwining between the private and public entities.

For example, a "private" restaurant, located in a municipal building, was held to have violated the Constitution by denying service to Blacks.[19] The Court's finding that the restaurant's actions were "state action" was based on a number of factors,

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[17]Blum v. Yaretsky, 457 US. 991 (1982).

[18]Edmonson v. Leesville Concrete Co., --- U.S. --- (1991)(holding use of preemptory challenge by private civil litigant to exclude jurors based on race was state action).

[19]Burton v. Wilmington Parking Authority, 365 U.S. 715 (1961).

including the facts that the land and building were publicly owned, the building was "dedicated to 'public uses' in performance of the Authority's 'essential governmental functions," and the restaurant was a "physically and financially integral and indeed indispensable part," of the government's plan to operate as a self-sustaining unit.[20] What was probably most unacceptable to the Court was that under the lease agreement, the city benefited from the discrimination, that, "profits earned by discrimination not only contribute to, but are indispensable elements in, the financial success of a governmental agency."[21] The Court concluded that the local government had neglected its constitutional duties by failing to contractually limit the restaurant's discriminatory practices:

> [By] its inaction, the [government] has not only make itself a party to the refusal of service, but has elected to place its power, property and prestige behind the admitted discrimination. The State has so far insinuated itself into a position of interdependence with [the restaurant] that it must be recognized as a joint participant in the challenged activity.[22]

Like the restaurant in a public building, networks using NERN will be physically (or metaphysically) intertwined. Depending on the business relationship, the Federal government might well benefit financially from the actions of the "private" network. If

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[20] Id. at

[21] Id. at

[22] Id. at

such a network misuses it power, by, for example, banishing critics based on the content of their speech, it could be argued that the Government is putting its power, computing and otherwise, behind the misconduct. If so, the private network's actions might be characterized as state action.

A similar concern led the Court to strike down restrictive covenants which barred the sale of homes to "nonwhites."[23] Even though the covenants were contained in contracts between private parties, the Court held that judicial enforcement of those contracts would be unconstitutional. Here, the State had, "made available to [private] individuals the full coercive power of government" to deny buyers, on basis of race, their right to purchase property.[24] Thus, the Court concluded, "It is clear that but for the active intervention of the state courts, supported by the full panoply of state power, petitioners would have been free to occupy the properties in question without restraint."[25]

It is noteworthy that the actual covenant did not emanate from the state, nor was their evidence that the government encouraged the discrimination. It was enough that the government was making the discrimination possible. Likewise, Justice Anthony Kennedy, writing for the Supreme Court, stated that preemptory challenges of jurors by private civil litigants was state action because of the "overt, significant assistance," of state officials in the

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[23] Shelley v. Kraemer, 334 U.S. 1 (1948).

[24] Id. at

[25] Id. at

discrimination:

> [Without] the direct and indispensable participation of the judge, who beyond all question is a state actor, the peremptory challenge system would serve no purpose. By enforcing a discriminatory preemptory challenge, the court, 'has not only made itself a party to the [biased act], but has elected to place its power, property and prestige behind the [alleged] discrimination."[26]

It could likewise be argued that the federal government's infrastructure is essential for all private networks. The super-network provides "overt, significant assistance" which will undoubtedly enable many of the newer networks to become economically viable. Thus, the government may find itself a party to challenged acts of networks, even without active encouragement.

Private networks might also be analogized to company towns. The Supreme Court held that even though the streets of the town were privately owned, the First Amendment permitted Jehovah's Witnesses to leaflet on those streets, because: "Whether a corporation or a municipality owns or possesses the town the public in either case has an identical interest in the functioning of the community is such a manner that the channels of communication remain free."[27] In language that could easily be applied to computer network users, the Court stated that residents of company towns:

> are free citizens of their State and country. Just as all other citizens they must make decisions which affect the welfare of community and nation. To act as good citizens they must be informed. In order to enable them to be properly informed their

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[26]Edmonson v. Leesville Concrete Co., --- U.S. --- (1991).

[27]Marsh v. Alabama, 326 U.S. 501 (1946).

> information must be uncensored. There is no more reason for depriving these people of the liberties guaranteed by the First and Fourteenth Amendments than there is for curtailing these freedoms with respect to any other citizen.[28]

The reach of the company town concept was restricted when the Court held that there was no First Amendment right to petition in private shopping centers, and stressed that the company town, "had all the attributes of a state-created municipality...."[29] Nevertheless, as networks develop, courts may find that they are far more essential for meaningful communication than shopping centers. Networks might carry all forms of electronic communication and deprivation of access to that network might indeed impair the people's ability to be properly informed.

If networks are fungible, so that if one network is unsatisfactory, many others are available, no single network would be essential. But if there evolves a bottleneck, whereby one or only a few entities control access, this issue will be far more significant.

In sum, the state action question will not be resolved until we know the structure of the network system that is ultimately created and the path of analysis ultimately chosen by the Supreme Court. Until then, it is to be hoped that the courts will strive to find the narrow path that limits governmental interference and prevents private monopolistic abuses.

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[28] Id. at

[29] Lloyd Corp. v. Tanner, 407 U.S. 551 (1972) . See also Hudgens v. NLRB, 424 U.S. 507 (1976).

II. Network Liability

The first judicial decision on the proper characterization of computer networks came on October 29, 1991 in Cubby, Inc. v. CompuServe, Inc,[30] CompuServe is a network that provides its subscribers with access to numerous information sources including more than 150 "forums,"such as electronic bulletin boards, online conferences and databases. One forum, the Journalism Forum, is operated by Cameron Communications, Incorporated (CCI). CCI had a contract with Compuserve under which CCI, "agrees to manage, review, create, delete, edit and otherwise control the content of the [Journalism Forum], in accordance with editorial and technical standards and conventions of style as established by CompuServe." CCI, in turn, has contracts with many electronic publishers, including Don Fitzpatrick Associates (DFA), which publishes Rumorville. DFA's contract requires it to "maintain...files in a timely fashion," and states that, "DFA accepts total responsibility for the contents of [Rumorville]."

On more than one occasion in April, 1991, Rumorville published unflattering statements about a competing service, Skuttlebut. The owners of Skuttlebut sued for libel, business disparagement and unfair competition. What raised this from the usual legal dispute, was that they not only filed these charges against the head of DFA,

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[30]Cubby, Inc. v. CompuServe, Inc,1991 U.S.Dist. LEXIS 15545 (S.D.N.Y. 1991).

which produced the material, but also against CompuServe, which carried it.

The key issue, according to the court, was to decide which print model should be applied to computer networks. At common law, anyone who repeated or republished defamatory information, was as guilty as the original speaker.[31] Thus, if Anne said that Bob was a thief, and Carol's newspaper merely reprinted the charge, Bob could sue Carol for repeating the allegation.

Booksellers and newsstand operators, though, are not generally characterized as "repeaters" unless they know of the defamatory content.[32] Thus, if David sells Carol's newspaper at his stand, David is immune from liability as long as he is unaware of the defamation. The reason for this exemption is clear. To make booksellers and newsstand operators libel for everything they sell is to require them to be aware of everything they sell. As the Supreme Court has stated, "It would be altogether unreasonable to demand so near an approach to omniscience....If the contents of bookshops and periodical stands were restricted to material of which their proprietors had made an inspection, they might be depleted indeed."[33]

The court in Cubby ruled that CompuServe should be viewed as an electronic newsstand rather than a high-tech newspaper. The

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[31]Restatement (Second) of Torts, sec. 578 (1977).

[32]E.g. Lerman v. Chuckleberry Publishing, Inc., 521 F.Supp. 228 (S.D.N.Y. 1981).

[33]Smith v. California, 361 U.S. 147, 153 (1959).

court reasoned that CompuServe, "has no more editorial control over such a publication (as Rumorville) than does a public library, book store or newsstand, and it would be no more feasible for CompuServe to examine every publication it carries for potentially defamatory statements than it would be for any other distributor to do so." Accordingly, even though CompuServe could refuse to carry a particular forum or publication within a forum, "in reality, once it does decide to carry a publication, it will have little or no editorial control over that publication's contents." The legal result of the newsstand analogy is that CompuServe is only liable if it "knew or had reason to know" of the statements. Because no such knowledge could be proven or implied, CompuServe escaped liability on all counts.

Of course, if the network is not responsible for the publication, the focus will shift to the publisher of the allegedly harmful material.[34] Such a ruling serves the interest of free communication. If networks are not held legally responsible for the other speakers' material that they carry, they will not have the same incentive to seek to control and censor the communications offered on the network. The court's decision, thus, helps to reduce the problem of bottlenecks facing electronic publishers, while maintaining individual responsibility for one's own remarks. A very different situation confronted another network, Prodigy, a joint venture of Sears, Roebuck & Co. and I.B.M. Prodigy also

[34]As of this date, there has been no resolution on the merits of Skuttlebut's charges against Rumorville.

offers its more than one million subscribers access to numerous services, including over 100 electronic billboards. In mid-1991, one of the billboards began displaying vicious anti-Semitic messages, including statements that, while stories about the Holocaust are "a hoax," the concept that Jews should be exterminated, "is a good idea." The Anti-Defamation League of the B'nai Brith (ADL) complained to Prodigy and asked them to censor the offending items. At first, Prodigy refused, citing its policy of permitting free exchange on its bulletin boards.

To many, this argument was insufficient. Prodigy, after all, had a history of censoring statements with which it disapproved. Prodigy had advertised itself as a "family-oriented" service, and vowed to screen messages both electronically and with a five-person crew and remove "offensive" statements.[35] An earlier controversy arose when Prodigy removed first, statements of an explicitly sexual nature, but later also comments criticizing Prodigy for its actions. Apparently, the censors at Prodigy felt that corporate criticism was "offensive."

With this background, Prodigy's acquiescence towards hate speech could easily appear as approval. As the Chair and director of ADL commented, if Prodigy, which retained the ability to delete that which it felt was offensive, permitted the anti-Semitic tirades to continue, "[W]e concluded that Prodigy did not regard

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[35]Feder, "Toward Defining Free Speech in the Computer Age," The New York Times, Nov. 3, 1991 at E.5.

them as offensive. We did."[36] Finally, Prodigy relented, and announced that "offensiveness" included statements, "grossly repugnant to community standards," including, presumably those of bigots.

The Prodigy incident reveals the weakness in the Cubby decision's protection for networks. As long as a network preserves for itself the power to censor, it risks being treated an electronic editor with responsibility for all statements on the network. Since CompuServe only avoided liability because it was ignorant of the message, it presumably would have been responsible for repeats of the message once a complaint had been made. Its refusal to censor a statement would then be viewed as its adoption of the statement as its own. Even worse, once the network was informed of a problematic statement somewhere in its system, it might well be said that the network had "reason to know" of the possibility of future similar statements and thus should monitor the offending speaker. This problem is not limited to libel. Allegations of invasion of privacy, copyright violations and even obscenity await the network that retains the power to censor.

One way out of this dilemma is to follow the example set for regulation of cable television's provision of public and leased access channels. These channels are made available to programmers who are unaffiliated with the cable operator, at no charge or a negotiated fee, respectively. To fulfill the purposes of these

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[36]Salberg & Foxman, Letter to the Editor, New York Times, Nov. 10, 1991, at A.

channels, to "assure that the widest possible diversity of information sources are made available to the public,"[37] Congress declared that, "it is integral...to the concept of the use of [access] channels that such use be free from any editorial control of supervision by the cable operator."[38] To remove the need for cable operators to censor, the Congress mandated that cable operators will not be held liable for the content of access programming.[39]

Computer networks may well opt for a similar trade-off. To avoid repeated litigation and calls for network review of all information carried, on billboard statements, E-mail, video programs and more, networks may be willing to forego their ability to censor. Such a deal might be voluntary; to avoid legal uncertainty the choice probably should be embodied in legislation. Thus, these networks will be more like public parks, or at least common carriers, than like private publications. Such a situation would replace one editor with thousands, and multiply the electronic voices heard. It would help "assure that the widest possible diversity of information sources are made available to the public."

A useful, if surprising, analogy can be made between this vision of computer networks and the role of printers in colonial

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[37]47 U.S.C. 532 (b).

[38]H.R. Rep. No. 934, 98th Cong., 2d Sess. 47 (1984)("The House Report").

[39]47 U.S.C. 558.

America. In those days, because printing was still an art that was both expensive and not widely mastered, printers preformed a vitally different function than they do today. Like many modern computer networks, printers viewed their job largely as that of preparing for mass distribution the writings of others. Printers, therefore, would publish the many diverse points of view, and often received criticism for their willingness to publish undesirable material. In the 1730's, Benjamin Franklin was an influential Pennsylvania printer. In On June 10, 1731, after enduring complaints about the writing he had printed, Franklin wrote his own defense, entitled "An Apology for Printers." In this essay, he argued that printers should be not be treated as proponents of all which they publish:

> Printers are educated in the Belief, that when Men differ in Opinion, both sides ought equally to have the advantage of being heard by the Publick; and that when Truth and Error have fair Play , the former is always an overmatch for the latter: Hence they chearfully serve all contending writers that pay them well, without regard on which side they are of the Question in Dispute....
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> Being thus continually emloy'd in serving both Parties, Printers naturally acquire a vast Unconcernedness as to the right or wrong Opinions contain'd in what they print; regarding it only as their daily labor: They print things full of Spleen and Animosity, with the utmost Calmness and Indifference, and without the least Ill-will to the Persons reflected on: who nevertheless unjustly think the Printer as much their Enemy as the Author....[40]

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[40]"An Apology for Printers," The Pennsylvania Gazette (June 10, 1731), reprinted in L. Levy, Freedom of the Press from Zenger to Jefferson, at 4-5 (1966). Franklin, never one to hold himself to too high a standard, freely admitted that he had often refused

Franklin continued that printers should not be regarded as approving that which they printed, and then warned of the consequences of condemning printers for the work of the writers:

> It is ... unreasonable what some assert, "That Printers ought not to print any Thing but what they approve;" since if all of that Business should make such a Resolution, and abide by it, an End would thereby be put to Free Writing, and the World would afterwards have nothing to read but what happen'd to be the Opinion of Printers....[41]

It would even more unreasonable for networks, carrying millions of messages, to only carry that with which they approve. If that were allowed to happen, "an End would thereby be put to Free Electronic Communication and the World would afterwards have nothing to read but what happen'd to be the Opinion of the Networks."

III. What is a Constitution?

To a nation, a constitution serves many different functions. On its most practical level, a constitution describes the ways in which those in political control may exercise their power. Next, a constitution can provide the framework for the rights of the individuals living within the country. Ultimately, though, a

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to print material that would, "countenance Vice, or promote Immorality...[or] as might do real Injury to any Person...."Id.

[41]Id.

constitution defines the very character of a nation, telling what sort of country it wants to be, and is likely to become.

In many ways, a constitution for computer networks will operate in the same way. It will delineate the decision-making functions, outline the rights of users of the network, and both reflect and create a vision of what type of society we want within, and without, the universe of the network.

By exploring the evolution of the United States Constitution, some useful lessons can be drawn that might benefit the latter-day founding parents of computer network constitutions.

A. Conventional Constitutions

Colonial America was a breeding ground for freedom, where freedom did not yet exist. Under the rule of a distant and non-responsive monarch, the colonies struggled until they became strong enough to fight back. The Stamp Act, imposed in March, 1765, levied a tax on communication, requiring virtually all writing for mass distribution to be on stamped paper imported from England. Colonists objected, but Parliament passed the Declaratory Act in 1766, which reiterated the supremacy of Parliament's laws over the colonies.

The next decade saw a steady growth in colonial anger. The Boston Tea Party of 1773, for example, was an unsubtle response to the imposition of a new tax on tea. In early 1776, Thomas Paine's pamphlet, Common Sense, forcefully argued that the citizens of a country must be supreme to its rulers, and that, "Government, even

in its best state, is but a necessary evil." Finally, on July 4, 1776, the Continental Congress signed the Declaration of Independence.

Thomas Jefferson's document described the reasons for the new nation and its philosophical soul:

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, that whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government....

Within a year of declaring independence, and while the Revolutionary War was still in its infancy, the Second Continental Congress prepared the Articles of Confederation. In February, 1781, the Articles of Confederation were ratified by the thirteen colonies (now states). The document reflected the consensus that each state should have primary control over its well-being, largely unhindered by a weak central government: "[E]ach state retains its sovereignty, freedom, and independence, and every Power, Jurisdiction and Right, which is not by this confederation expressly delegated to the United States...."

The government of the United States was severely limited by the structure created. There was no executive branch, no president, and no judiciary except for maritime cases. The central government lacked the power to levy taxes or to regulate interstate commerce.

The unhappy result of this experiment was economic chaos and political turmoil. States enacted protectionist tariffs at the expense of their neighbors. The federal treasury had no money to repay its debts, and many of the states began printing their own paper money. As one historian described the years following enactment of the Articles of Confederation: "The whole story is one of gradually increasing ineptitude; of a central government which could less and less function as it was supposed to function; of a general system which was creaking in every joint and beginning to hobble at every step."[42]

The Constitutional Convention which met in Philadelphia in 1787 was originally given a very limited assignment, to review the situation under the Articles of Confederation and "devise such further provisions as shall appear to them necessary to render the constitution of the federal government adequate to the exigencies of the Union." What emerged from the four months of secret deliberations, of course, were not merely "further provisions" but an entirely new governmental structure.

The federal government was finally empowered to regulate interstate commerce, raise money, provide for the common defense and promote the general welfare. Promoters of the new plan recognized the inherent problems of any system of governance:

> If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government to which is

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[42]A. McLaughlin, A Constitutional History of the United States, (1935).

> to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on government; but experience has taught mankind the necessity of auxiliary precautions.[43]

The most important auxiliary precaution was the concept of separation of powers and checks and balances, whereby governmental power would be divided and shared. In the federal government, Congress, the President and the courts were each given spheres of influence. The framers of the Constitution were well aware of the danger of those seeking to increase their areas of control:

> It will not be denied that power is of an encroaching nature and that it ought to be effectually restrained from passing the limits assigned to it....Will it be sufficient to mark, with precision, the boundaries of these departments in the constitution of the government, and to trust to these parchment barriers against the encroaching spirit of power?[44]

The answer to this problem is that "Ambition must be made to counteract ambition." Each branch of federal government has the desire and general ability to protect its own institutional interests.

The other major limitations of power are the restrictions embodied in the Bill of Rights and the Fourteenth Amendment. These amendments to the constitution provide that no governmental authority, whether it be the federal government, states, counties,

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[43] The Federalist No. 51 (Madison).

[44] The Federalist No. 48 (Madison)

cities or towns, can deprive individuals of basic human rights, including freedom of expression and association, freedom from invidious and arbitrary discrimination, guarantees that no adverse governmental action can be inflicted without "due process of law," and some guarantee that the realm of individual privacy is to be protected against governmental intrusion.

The genius of the Constitution is its dependence on apparent contradiction for its operation. Power is to be centralized, yet divided. The people choose their leaders, but the Supreme Court has lifetime tenure. The most basic belief underlying our system is that democracy will protect us from tyranny, but even democratically desired actions must sometimes give way to protection of individual rights. Finally, the ultimate protection of having a written, permanent constitution is tempered by a flexibility that has adapted to changing times.

B. The Constitutional Prehistory of Computer Networks

Computer networks have experienced an evolution analogous to that of the United States. The earliest computers, room-sized behemoths, were kept under tight control by the government or large corporation that created them. In the 1960's, computers were predominantly used for large calculations and for data processing. Long-distance and local telephone communications were controlled by the American Telephone & Telegraph monopoly. The first computer network, APRANET, was begun by the Department of Defense's Advanced

Research Projects Agency in 1968. Computers were generally viewed as Orwellian instruments of control.

Ironically, 1984 has come and gone, and it is Big Brother who has lost control. Without a Bunker Hill or Valley Forge, a revolution has occurred. AT&T has been divided by a consent decree which ended seemingly interminable antitrust litigation. Numerous long-distance carriers, such as MCI and Sprint, are now carrying telephone communications. Desk-top computers have given individuals their own computing power, while lap-top, notebooks and hand-held computers promise unlimited mobility.

Networks have evolved as well. Local Area Networks, LAN's, connect multiple computers in different locations. USENET, begun in 1979, was the first cooperative conferencing network.[45] Data-bases, such as the lawyer's lifelines, LEXIS and WESTLAW, have become commonplace. For many, electronic-mail (E-Mail) has become the primary medium for exchanging written words. Networks of networks have formed. Telenet and TYMNET, for example, connect users to numerous services.

Without a Thomas Jefferson at the keyboard, there has been no ringing statement of independence. But those in the computer field have seen the new self-evident truths. In the course of human events, the ability to communicate electronically is destined to become an unalienable right. The next Thomas Paine will be far more likely to distribute ideas through a modem than on a street corner. The new technology also means that, whenever any form of

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[45]J. Quarterman, The Matrix 154 (1990).

control becomes destructive of free communications, there exists the ability to institute new systems.

The new freedom, however, has permitted fragmentation rather than unity. Many computers and networks cannot communicate with one another. Moreover, many in society are "out of the loop" altogether. Telephone companies, cable television operators and large businesses are creating their own networks, duplicating effort yet failing to create universal high-speed networks. Just as there were calls for a constitutional convention in 1787, there must be calls for network constitutions for the 21st Century.

C. Network Constitutions

Whatever structure is created must respect the verities recognized by James Madison in the 18th Century. Those in charge of the network must be able to police the users, so as to prevent crime, viruses, and invasions of privacy, and to ensure that the system is operating as intended. But those who yield the power must be controlled as well. There will be no angels managing the networks of the future, so the managers must have their discretion monitored and limited. In the same way that "ambition counteracts ambition," there must be numerous centers of power, each able to protect its own interest against outside control. Strict rules must guard against the encroaching nature of power. Finally, the rights of the individual user must be ensured.

There are many ways a constitution can be created. It may be established by the courts pursuant to our existing constitution,

governmental regulators may issue rules governing network behavior or the networks themselves may create their own internal constitutions. This paper will not attempt to draft a one-size-fits-all network constitution. Rather, it seeks to serve as a modern Annapolis Convention, the 1786 call for the Constitutional Convention.[46] What follows are policies that should be considered in the creation of any network constitution.

1) Not all networks are created equal. Using Pool's analogy to Russian dolls, the smaller, inside ones should face the least regulation; the outer containers the most. Presumably, if the super-networks are required to be open to all, the multiplicity of small networks will permit competition to protect the public interest.

2) Access to super-networks must be as easy and inexpensive as possible. There should be Open Network Architecture, and no private entity should possess bottleneck control.

3) Responsibility for speech should be as diffused as possible. Freedom of speech will best flourish when the most people have control over their messages. Let each of us be responsible for our own messages and exempt carriers from responsibility for policing the network. Networks open to public use should announce

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[46]D. Farber & S. Sherry, A History of the American Constitution 26 (1990)

a policy barring censorship.

4) Government must not require networks to censor. An old FCC rule required cable operators to ensure that public access programmers not exhibit obscene materials. This regime was declared unconstitutional since, "the cable operator [served as] both judge and jury, and subjected the cable user's First Amendment rights to decision by an unqualified private citizen."[47] This scheme should not be repeated.

5) Freedom of association must be balanced with freedom from discrimination. Like-minded individuals and businesses should be permitted to form their own networks. But no group of businesses should be permitted to keep out competitors. The antitrust laws will apply to networks, and the principles opposing collusion to restrict trade should be recognized.

Obviously, a business should be permitted to create its own in-house network, that can be considered purely private. On the other hand,

> The more an owner opens up his property for use by the public in general, the more do his rights become circumscribed by the statutory and constitutional rights of those who use it. Thus the owners of privately held bridges, ferries, turnpikes and railroads may not operate them as freely as a framer does his farm. Since these facilities are built and operated primarily to benefit the public and since their operation is essentially a public function, it is subject to

[47]Midwest Video Corp, v. FCC, 571 F.2d 1025, 1057 (8th Cir. 1978); aff'd on other grounds, 440 U.S. 689 (1979).

state regulation....."[48]

6) Due Process must be protected. The concept of "Due Process" is complex and varied. For computer networks it means, at minimum, that procedures for resolving disputes must be explicit and known to all users; that anyone accused of violating network rules be permitted to refute the charges before an impartial arbiter; and that all equally situated users be equally treated.

7) Privacy must be guaranteed. The right to send a message privately must be preserved. Encryption should be permitted. Each disseminator of information should have the right and ability to control who receives the messages.

8) Democratic decision-making should be considered. It must be remembered that networks will permit quick, efficient group interactions. It may be time to apply the principals of Jeffersonian democracy to the high-speed computer network. Let the users decide, by majority vote, major policy decisions that will affect the network. There can be full discussion by all interested users and informed decision-making would follow. The United States Constitution has survived more than two centuries because of its faith in democracy. Computer networks can easily be designed to permit individual participation to continue into the foreseeable future.

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[48]Marsh v. Alabama, 326 U.S. 501 (1946).