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# Blackhole in Cyberspace: The Legal Void in the Internet, 15 J. Marshall J. Computer & Info. L. 413 (1997)

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# BLACKHOLE IN CYBERSPACE: THE LEGAL VOID IN THE INTERNET

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## I. INTRODUCTION

Most people surf the Internet with little concern about who governs cyberspace or how those governing derive their authority to make decisions regarding domain names, Internet Protocols, and other Internet administrative matters. However, Internet governance promises to be an area of increasing interest for lawyers because of the convergence of two trends. On the one hand, with the Internet growing as a commercial medium, decisions about its structure, administration and function will more frequently affect and raise legal issues concerning commercial property rights. On the other hand, the Internet's growing commercial success is prompting the federal government to withdraw from further participation in and support of Internet governance, the existing Internet governing bodies may soon find themselves without a colorable legal basis for their claimed authority over the Internet. This looming legal void could swallow the Internet into a black hole of litigation unless the legal community devises some creative solutions to place Internet governance on stable footing.[1]

## II. THE INTERNET: A BRIEF DESCRIPTION

The first linking of computers in a network began in 1969 as a project sponsored by the Advanced Research Projects Agency ("ARPA") of the Department of Defense ("DOD").[2] DOD wanted a system that al-



1. *See* NICHOLAS BARAN, INSIDE THE INFORMATION SUPERHIGHWAY REVOLUTION 41 (1995) (stating that, "with government funding for the Internet beginning to dry up, it seems inevitable that intense commercial activity will drive control of the Internet into the private sector"). Robert Shaw, *Internet Domain Names: Whose Domain is This?* (visited Feb. 1, 1997) <http://www.itu.int/intreg/dns.html>.

2. ARPA is today known as the Defense Advanced Research Projects Agency ("DARPA"). *See Defense Advanced Research Projects Agency* (visited Feb. 1997) <http://www.arpa.mil>.

lowed linked computers to communicate via alternate routes to enable the network to continue functioning even if some computers in the link were out of service.[3] The network ("ARPANet") soon developed beyond the scope originally envisioned to include many university networks.[4] Consequently, in 1987 the National Science Foundation ("NSF") entered the field by establishing a new network ("NSFNet") as a "backbone" into which other networks could link.[5] By the early 1990s, the NSF had opened the NSFNet to commercial users and the general public, resulting in the Internet that exists today.[6]

The constant underlying this evolution in computer networking is the TCP/IP protocol, which was perfected in 1982 for ARPA by Internet pioneers Vint Cerf, Bob Kahn, and others. TCP/IP has three key features that make "internetting" possible:

(1) computers using different operating systems can communicate with each other;

(2) each transmission is broken up into digital packets of a few thousand bytes; and

(3) each digital packet is routed dynamically, *i.e.*, each packet is separately directed to its destination along the route the network determines is most convenient for that packet at the time it arrives for forwarding.[7]

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3. The "creation myth" of the Internet teaches that DOD wanted a network that could survive a nuclear attack severing some of the linked computers. *See, e.g,* G. BURGESS ALLISON, THE LAWYER'S GUIDE TO THE INTERNET 31 (1995); JOHN R. LEVINE & CAROL BAROUDI, THE INTERNET FOR DUMMIES 12 (2d ed. 1994); *see also Mag. of Fantasy, Science and Fiction* (visited Feb. 1, 1997) <http://www.utep.edu/~comm/cmc/nethist.html>. However, recent scholarship casts doubt on this Cold War scenario and suggests more benignly that DOD simply wanted a network sufficiently flexible to permit information sharing without constant shutdowns. *See* KATIE HAFNER & MATTHEW LYON, WHERE WIZARDS STAY UP LATE: THE ORIGINS OF THE INTERNET 9-10 (1996).

4. HAFNER & LYON, *supra* note 3, at 249; LEVINE & BAROUDI, *supra* note 3, at 12.

5. BARAN, *supra* note 1, at 39-40. The NSF's basic charter directs it to foster the development of computer technologies. 42 U.S.C. §§ 1861(a)(4), 1861(b). In addition, the High-Performance Computing Act ("HPCA"), 15 U.S.C. § 5501 *et seq.*, authorizes the NSF—along with other federal agencies—to promote the development of network computing in cooperation with private network providers and the private computer and telecommunications industries.

6. HAFNER & LYON, *supra* note 3, at 253-54, 257-58; LEVINE & BAROUDI, *supra* note 3, at 13-14.

7. In this aspect, TCP/IP differs critically from telephony, which uses a dedicated circuit between two telephones for the duration of each telephone communication. BARAN, *supra* note 1, at 38-39. With dynamic routing, the digital packet does not require a dedicated circuit connected to the destination terminal, but instead travels the circuit most suitable at any particular instant. *Id.* Thus, the digital packets comprising a single transmission in theory could all travel different routes before being reassembled at their destination as text or image. *Id. See also* Henry Perritt, *Dispute Resolution in Electronic Network Communities*, 38 VILL. L. REV. 349, 352 n.7 (1993). "Dynamic routing means that

The TCP/IP protocol assigns each computer in the network a unique Internet Protocol ("IP") address which is analogous to a telephone number consisting of four groups (called octets) of integers separated by dots, each octet being an integer between zero and 255.[8] However, from early on, network users preferred names instead of numbers.[9] Thus, each numeric IP corresponds to a mnemonic domain name.[10] Each pairing of an IP numeric and a domain name is unique, *i.e.*, only one computer site in the network can have a particular domain name.[11] The approximately four billion IP addresses mathematically possible with this system ($255^4$ = 4.23 billion) are sometimes called the "name space" or "address space."[12]

When a user types in a domain name, a "domain name server" translates it into the corresponding IP numeric and then sends the numeric to the "root server" that holds the identifying information for domain names in the root server's top-level domain ("TLD").[13] For example, <www.jmls.edu> is in the *.edu* TLD. Typing in the <www.jmls.edu> domain name sends its corresponding IP numeric[14] to the *.edu* root server. The root server returns a message identifying the "authoritative name server," which is the server hosting the particular site within the TLD. In the example, The John Marshall Law School is the server hosting <www.jmls>. The user's computer is then put into contact with the site

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the path that a particular message takes—and sometimes different parts of the same message—is not predetermined. Rather, at the time the computer establishes the path for a particular message it simultaneously determines what path would be most efficient." *Id.*

8. MARGARET LEVINE YOUNG & JOHN R. LEVINE, INTERNET FAQs 33 (1995); Paul Mockapetris, *Domain Names - Concepts and Facilities* (visited Feb. 1, 1997) <http://ds.internic.net/rfc/rfc882.txt>.

9. HAFNER AND LYON, *supra* note 3, at 252-53; William A. Foster, *Registering the Domain Name System: An Exercise in Global Decision Making* (visited Feb. 5, 1997) <http://ksgwww.harvard.edu/iip/foster.html>.

10. The IP numeric address and domain name for the John Marshall Law School home page are, respectively, 192.207.162.250 and <www.jmls.edu>. Entering either the numeric IP address or the mnemonic domain name at the <http://> prompt will bring the user to the home page.

11. Jon Postel, *New Registries and the Delegation of International Top Level Domains,* ¶ A.1.1 (visited Feb. 1, 1997) <ftp://ftp.isi.edu/in-notes/iana/administration /new-registries> (Oct. 1996 Internet Assigned Numbers Authority).

12. Caitlin Remby, *Networking Acronyms at a Glance,* PC WEEK, Feb. 19, 1996, at N17; Royal Van Horn, PHI DELTA KAPPAN, Mar. 1995, at 572.

13. LEVINE & YOUNG, *supra* note 8, at 33; Ed Bott, *What's in a Name?,* PC COMPUTING, Oct. 1996, at 341. Reading a domain name from right to left, the first component is the TLD that describes the purpose of the entity (*e.g., .com* for a commercial owner, *.edu* for an educational organization, *etc.*) owning the second-level domain immediately to the left of the "dot" setting off the TLD. *DNS Background Materials: Suggested Reading* (visited Feb. 1, 1997) <http://rs.internic.net/help/domain/dns.html>.

14. *See supra* note 10.

identified by the domain name.[15]

### A. The Internet Groups

Several engineering groups formed to administer the network's evolution under the auspices of DARPA and, later, the NSF. In recent years these "founder groups" have been joined by several new groups, as the Internet community tries to keep pace with the Internet's rapid evolution.

#### 1. *Founder Groups*

The founder groups continue to function today and are the main decision-making bodies with regard to the TCP/IP protocol, the domain-name system, and all other aspects of the Internet's governance.

##### *a. Internet Assigned Numbers Authority ("IANA")*

IANA is a division of the Information Sciences Institute at the University of Southern California. Jon Postel, another Internet pioneer, has headed IANA since its inception. It is the clearinghouse for assigning and coordinating the use of so-called Internet parameters, such as Internet addresses and domain names.[16] IANA claims the authority "to supervise and control the creation and management aspects of the iTLDs [International Top-Level Domains]."[17] DARPA has been the primary source of IANA's funding, today accounting for about 90% of IANA's budget.[18]

##### *b. Internet Domain Names Review Board ("IDNB")*

IANA has conferred on the IDNB coordinate jurisdiction to review disputes concerning domain-name registries.[19] An appeal from either IANA or the IDNB goes to the Internet Society ("ISOC").[20]

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15. Bott, *supra* note 13, at 341.

16. *See Internet Assigned Numbers Authority* (visited Feb. 1, 1997) <http://www.isi.edu/iana/overview.html>. *See also* Vint Cerf, *IAB Recommended Policy on Distributing Internet Identifies Assignment and IAB Recommended Policy Change to Internet Connected Status*, ¶ 1.2 (visited Feb. 1, 1997) <http://ds.internic.net/ rfc/rfc1174.txt>.

17. Postel, *supra* note 11, ¶ 5.1. *See supra* note 13 for a description of TLDs.

18. E-mail from Jon Postel to author (transmitted Nov. 9, 1996) (on file with the author and with the *John Marshall Journal of Computer and Information Law*). *See* also *Gigabit Network Communications Research* (visited Feb. 1, 1997) <http://www.ito.darpa.mil/Summaries95/8420—USC_ISI_GigNetCom.html>.

19. Postel, *supra* note 11, ¶ 5.1. Alternatively, IANA may hear the appeal itself. *See also* Jon Postel, *Domain Name System Structure & Delegation* (visited Feb. 1, 1997) <http://ds.internic.net/rfc/rfc1591.txt>.

20. Postel, *supra* note 11, ¶ 5.3. *See* discussion *infra* Part II.A.2.a. (describing ISOC),

*c. Internet Architecture Board ("IAB")*

The IAB develops guidelines for research into problems with and improvements in the Internet's architecture.[21] The IAB members are the Internet Engineering Task Force ("IETF") Chair plus twelve other trustees selected by the IETF nominating committee and approved by ISOC.[22]

*d. Internet Engineering Task Force ("IETF")*

The IETF is comprised of working groups of engineers and other technicians focusing on specific issues identified by the IAB.[23] The IETF has an Internet Engineering Steering Group ("IESG"), made up of IETF area directors and the IETF Chair, who handles the IETF's internal management.[24] The IAB appoints the IESG and Chair from a list submitted by the IETF's nominating committee.[25] The IETF also receives support from DARPA.[26] The IETF Secretariat is the IETF's administrative body,[27] receiving support from various Internet organizations.[28] The NSF funds the Secretariat through grants.[29]

*e. Internet Research Task Force ("IRTF")*

The IAB "sponsors and organizes" the IRTF[30] which, in contrast with the IETF, focuses on more long-term, abstract networking problems.[31] The IRTF also has a steering group, the Internet Research

21. Brian Carpenter, *What Does the IAB Do, Anyway?* (visited Feb. 1, 1997) <http://www.iab.org/iab/connexions.html>.

22. *Charter of the Internet Architecture Board,* ¶ 1.1 (visited Feb. 1, 1997) <http://ds.internic.net/rfc/rfc1601.txt>.

23. *The Organizations Involved in the IETF Standards Process,* ¶¶ 3.1, 3.2, 3.6 (visited Feb., 1997) <http://ds.internic.net/rfc/rfc2028.txt>.

24. *Id.* ¶ 3.5. Like IANA, the IETF Chair operates out of the Information Sciences Institute at the University of Southern California. *Gigabits Networthy Research Project* (visited Feb. 1, 1997) <http://www.isi.edu/div7/infra/nia-home.html>.

25. *Supra* note 23, ¶ 3.6; IAB Charter, *supra* note 22, ¶ 2.

26. *ARPA Support for the IETF (ASI) Project* (visited Feb. 1, 1997) <http://www.isi.edu/div7/giga/asi.html>; *1995 Project Summaries, ARPA Support for the IETF (ASI)* (visited Feb. 1, 1997) <http://www.ito.darpa.mil/Summaries95/8420—USC_ISI_IETF.html>.

27. *Supra* note 23, ¶ 3.3.

28. In particular, "[t]he Corporation for National Research Initiatives (CNRI) runs the IETF Secretariat with funding from the US government." *Internet Engineering Task Force* (visited Feb. 1, 1997) <http://www.ietf.cnri.reston.va.us/home.html>.

29. *IETF Secretariat* (visited Feb. 1, 1997) <http://www.ietf.org/secretariat.html>; Don Mitchell et al., *In Whose Domain: Name Service in Adolescence* (visited Feb. 1, 1997) <http://ksgwww.harvard.edu/iip/bradner.html>.

30. *See supra* note 22, ¶ 2.2.

31. *See supra* note 23, ¶ 3.8; *see also IRTF Research Group Guidelines & Procedures,* ¶ 1 (visited Feb. 1, 1997) <http://ds.internic.net/rfc/rfc2014.txt>.

Steering Group ("IRSG"), to oversee the IRTF's work and organization.[32]

2. *New Groups*

In addition to these founder groups, several new organizations have become important in Internet governance in recent years:

*a. The Internet Society ("ISOC")*

ISOC is a non-profit corporation formed in Washington, D.C. in 1992.[33] ISOC's stated goal is to foster global cooperation and coordination on Internet issues. Its members are companies, government agencies, foundations and individuals involved in Internet development and innovation. Since ISOC's formation, other Internet organizations have accepted it as the over-arching Internet authority.[34]

*b. Corporation for National Research Initiatives ("CNRI")*

CNRI, another non-profit corporation, endeavors to "help focus U.S. strengths in information processing technology."[35] DARPA and the NSF have provided CNRI with substantial funding. CNRI is also a charter member of ISOC.

*c. Network Solutions, Inc. ("NSI")*

NSI is a private corporation that registers domain names in the *.com* TLD under a 1993 cooperative agreement with the NSF.[36] In registering domain names, NSI operates within the parameters established by IANA for the *.com* TLD. NSI and ATT, which perform Internet directory functions under another NSF cooperative agreement, together form the entity known as InterNIC.[37]

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32. *See supra* note 23; *see also supra* note 31.

33. *See Frequently Asked Questions: What is the Internet Society?* (last updated Aug. 14, 1995) <http://info.isoc.org:80/whatis/what-is-isoc.html>.

34. *See, e.g., supra* note 28 (describing the IESG as operating "under the auspices of the Internet Society"). Sometimes an organization that existed for years before ISOC's formation is even incongruously described as "chartered" by ISOC. *Internet Assigned Numbers Authority* (visited Feb. 3, 1997) <http://www.isi.edu/iana/overview.html> (providing an overview of the IANA); *IETF Home Page* (visited Feb. 3, 1997) <http://www.ietf.org/home.html> (describing IANA as chartered by ISOC and the Federal Networking Council). *But see* Christian Huitema, *IAB Charter*, ¶ 2.4 (visited Feb. 3, 1997) <http://ds.internic.net/rfc/rfc1601.txt> (stating that the IAB shall designate an Internet Assigned Numbers Authority "to administer the assignment of Internet Protocol numbers").

35. *The Corporation for National Research Initiative* (visited Feb. 1, 1997) <http://www.cnri.reston.va.us/>.

36. *NSF Cooperative Agreement Table of Contents* (visited Feb. 3, 1997) <http://rs.internic.net/nsf/agreement/>.

37. *See About the InterNIC* (last modified Apr. 1, 1996) <http://rs.internic.net/internic/>.

*d. Federal Networking Council ("FNC")*

The FNC is a council comprised of seventeen federal agencies interested in or affected by computer networking.[38] Although the FNC has existed in some form since the mid-1980's,[39] it now operates under the auspices of the Committee on Information and Communications ("CIC") of President Clinton's National Science & Technology Council ("NSTC").[40] Many of the other Internet organizations are supported by the FNC with funding or FNC participation.[41]

*e. International Ad Hoc Committee ("IAHC")*

The IAHC was formed in November, 1996 by the ISOC, the IANA, the IAB, the FNC, the World Intellectual Property Organization ("WIPO"), the International Telecommunications Union ("ITU") and the International Trademark Association ("INTA") to deal with the domain name system on an international level.

## B. The Organization

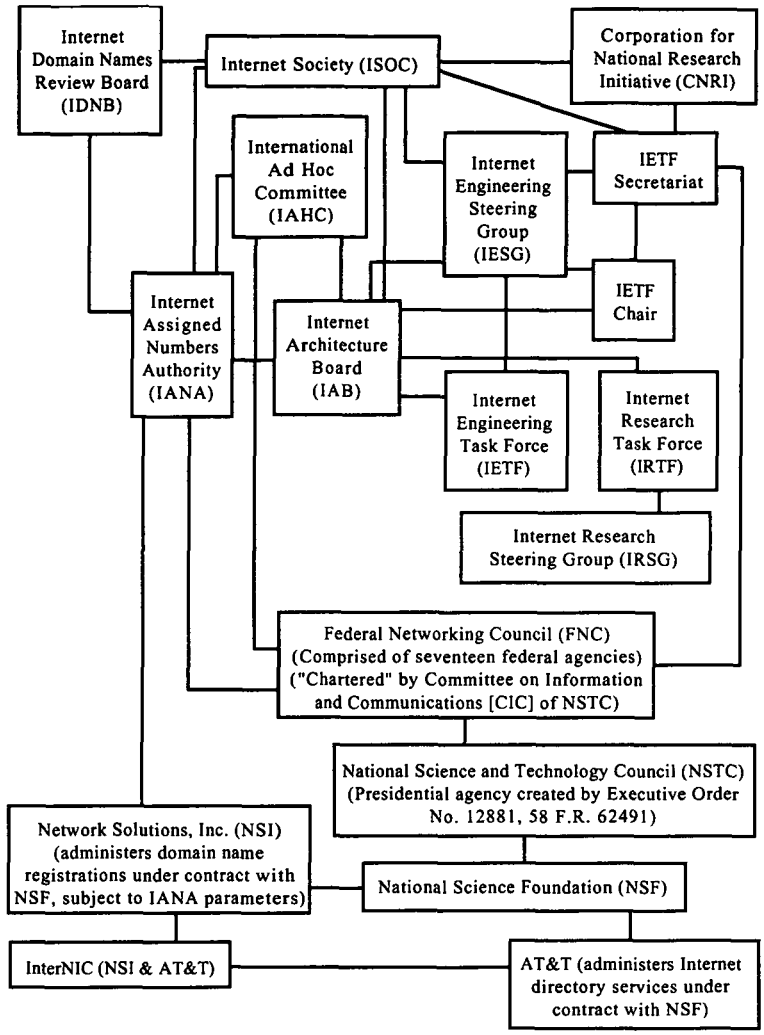
A diagram of all these organizations and groups and their real or purported relationships would thus look something like the following:

38. *The Federal Networking Council* (last updated Jan. 14, 1997) <http://www.fnc.gov>.

39. Mike St. Johns, *FNC's Role in the DNS Issue* (visited Feb. 3, 1997) <http://ksgwww.harvard.edu/iip/fnc.html>.

40. Executive Order No. 12881, 58 F.R. 62491, Nov. 23, 1993, establishing the NSTC. *See* statement of John C. Toole, Director of the CIC's National Coordination Office for High Performance Computing and Communications, before the Subcommittee on Basic Research of the House Committee on Science, Oct. 31, 1995, *available in* 1995 WL 11597736 (regarding the FNC's relationship with the CIC).

41. Mitchell et al., *supra* note 29; St. Johns, *supra* note 39.




## III. THE LEGAL VOID

This convoluted structure is surprising, given the collective engineering genius involved in all these organizations. However, there may be a method to this madness. Someone described as a key participant in the Internet community once confided that the community likes this Rube Goldberg nightmare because "we want to keep things murky."[42]

A penchant for organizational murkiness probably reflects the desire of many Internet technocrats to keep *their* Internet out of the hands of

42. *See Network Solutions Says Name Policy is "Not Subject to Review,"* INFO. L. ALERT, May 17, 1996, *available in* 1996 WL 8913600.

newly arrived cyber-businessmen and their lawyers.[43] Yet, something more may be at play than simple nostalgia for the days when the Internet was the exclusive province of those who could master the quirks of Unix, the Internet's lingua franca.[44] A murky organizational picture also can hide flaws in an organization's legal structure.

In apparent recognition of these flaws, IANA has been calling for a "legal umbrella" under which it can operate.[45] This new concern about establishing a legal cover for the Internet's organization derives from the federal government's plan to withdraw from active participation in the Internet's administration.[46]

When DARPA and later the NSF controlled the Internet, these sponsoring agencies provided the necessary authority for the *ad hoc* groups to allocate among themselves jurisdiction over the various operational aspects of the *federal government's* computer network. Although some in the Internet community seem to believe, mistakenly, that the FNC's participation in Internet governance continues to provide the desired "legal umbrella,"[47] the FNC—an administrative convenience, not a statutory agency—has no power to authorize the activities of the Internet groups.[48] Moreover, the FCC, the one federal agency with apparent statutory authority to provide such an umbrella, *see e.g.*, 47 U.S.C. §§ 151,

43. *See, e.g.*, Roberts, *The Future of Internet Infrastructures* (visited Jan. 21, 1997) <http://ksgwww.harvard.edu/iip/roberts.html>; The NSF/DNCRI and Harvard Information Infrastructure Project, *Internet Names, Numbers and Beyond: Issues in the Coordination, Privatization, and Internationalization of the Internet* (hereinafter "1995 Harvard Project"), Nov. 20, 1995 (visited Jan. 21, 1997) <http://ksgwww.harvard.edu/iip/nsfmin1.html> (including the remarks of Paul Mockapetris); David W. Maher, *Trademarks on the Internet: Who's in Charge?*, (visited Feb. 5, 1997) <http://aldea.com/cix/maher.html> (describing the Internet as "an academic, government, and military network which merely tolerates commercial and private user interests").

44. 1995 Harvard Project, *supra* note 43 (including the remarks of Paul Mockapetris). "The Internet is no longer restricted to a small group of us who wrote some code. It's not ours anymore and we have to get over that." *Id.*

45. *See, e.g.*, Postel, *supra* note 11, ¶¶ 1.5.3, 2.1, 5.3. Foster, *supra* note 9, at 2 (regarding ISOC providing a legal umbrella for the IETF, the IESG, the IAB and IANA).

46. *See* Mitchell et al., *supra* note 29, at 2; St. Johns, *supra* note 39; *Draft Minutes of the Federal Networking Council Advisory Committee (FNCAC) Meeting*, Apr. 8 & 9, 1996, (visited Jan. 24, 1997) <http://www.fnc.gov/ FNCAC_4_96_minutes.html>.

47. *See Internet Assigned Numbers Authority* (last modified Oct. 11, 1996) <http://www.isi.edu/iana/overview.html> (describing the FNC as one of the two agencies (the other being ISOC) "chartering" IANA); *see also Internet Engineering Task Force* (visited Feb. 1, 1997) <http://www.ietf.org/home.html> (stating also that the FNC and ISOC are the two agencies "chartering" IANA).

48. *See, e.g.*, Bureau of Alcohol, Tobacco & Firearms v. Fed. Labor Relations Bd., 464 U.S. 89, 97 (1983) (stating that courts will not allow "unauthorized assumption by an agency of major policy decisions properly made by Congress").

152, has repeatedly refused to enter the field.[49] The separate statement of then FCC Chairman Ferris in one of the Computer II proceedings illustrates the FCC's laissez-faire attitude toward computer networking:

> Today we have removed the barricades from the door to the information age. The supply of communications products and services will be limited only by the ingenuity of businessmen and scientists. Government will no longer be a barrier that prevents or delays the introduction of innovations in technology.
>
> As long as the development of new telecommunications products was subject to the whim of the regulatory process, however, the evolution of this industry was subject to uncertainty. Now communications business entrepreneurs can be sure that the marketplace and not the government will decide their fate.[50]

In summary, the FCC's abstention from network regulation, the NSF/DARPA's withdrawal from Internet governance, and the government's invitation to private industry to assume responsibility for the Internet's future,[51] mean that the existing Internet groups will no longer have any foundation of federal authority for their activities.[52]

What is occurring is without precedent. Earlier in this century, the radio industry developed without active participation by the national government, but the government then stepped in to regulate when required by the public interest.[53] More recently, in the post-war period, the federal government gave private industry significant government-developed nuclear technology, but without relinquishing regulatory oversight.[54] In the case of the Internet, the federal government is in effect turning over to the private sector a communications network developed almost exclusively with government funding, without retaining any regulatory control.

For the time being, the Internet organization remains in place even while its foundation of federal authority erodes. The Internet groups with their talented engineers and technicians have built a large reservoir of goodwill with the brilliance of their achievement. Thus, for the most part, the private sector has been inclined to acquiesce in their continued administration of the Internet. However, this *pax cybernetica* is unlikely to last. The increasing commercialization of the Internet means that technical and administrative decisions will have ever greater im-

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49. *See, e.g.,* California v. F.C.C., 905 F.2d 1217 (9th Cir. 1990); Computer & Communications Indus. Ass'n v. F.C.C., 693 F.2d 198 (D.C. Cir. 1982), *aff'g* 77 F.C.C.2d 384 (1980), 84 F.C.C.2d 50 (1980) and 88 F.C.C.2d 512 (1981) (collectively known as Computer II).

50. 77 F.C.C.2d at 384 .

51. *Id. See also* Mitchell et al., *supra* note 29; St. Johns, *supra* note 39.

52. *See* Mitchell et al., *supra* note 29; Maher, *supra* note 43.

53. *See infra* text accompanying notes 120-26.

54. *See* Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 206-07 (1983).

pact on legal rights.[55] Eventually, the Internet organizations will face challenges to their authority.[56]

### A. The Legal Status of the Internet Groups

The kinds of challenges that the Internet groups might confront will depend on what the courts determine to be their legal status in any particular case. In some instances, the grounds might exist for treating an Internet group as a state actor, *i.e.,* a government surrogate. For example, the federal government has never explicitly renounced its claim that it "owns" the name space for Internet addresses,[57] and some in the Internet community have characterized the Internet groups as "agents" or "custodians" of the federal government with respect to the name space.[58] If a court were to hold that the name space belonged to the United States government, IANA and NSI might be deemed state actors insofar as they were "managing" federal property.[59] In allowing the various groups to administer the Internet, the federal government is acquiescing in their regulation of a channel of interstate and foreign commerce—a traditional constitutionally based governmental function—which might be another ground for invoking the state-action doctrine.[60] IANA's almost exclusive reliance on DARPA funding may carry it across the state actor threshold.[61] NSI may be a state actor with respect to its domain-disputes policy promulgated with the NSF's approval.[62]

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55. Shaw, *supra* note 1, at 13.

56. Shaw, *supra* note 1, at 14; Maher, *supra* note 43.

57. *See* St. Johns, *supra* note 39 ("Although the InterNIC performs the registrar function, it does this as an agent of the U.S. government and does not own the space nor does it own the registration data"); 1995 Harvard Project, *supra* note 43 (including the remark of Mark Corbitt, "The U.S. government has ownership as a public trust"). *See also supra* text accompanying note 12 regarding the "name space."

58. St. Johns, *supra* note 39 (characterizing "agents"); 1995 Harvard Project, *supra* note 43 (including the remarks of Vint Cerf depicting "custodians"). *See also Final Report of the International Ad Hoc Committee: Recommendations for Administration and Management of gTLD's*, Executive Summary, (visited Feb. 19, 1997) <http://www.iahc.org/draft-iahc-recommend-00.html> (hereinafter "IAHC Final Report" declaring that "[t]he Internet top level domain space is a public resource and is subject to the public trust"). *See also infra* text accompanying notes 78 and 79 (describing the IAHC).

59. *See* Burton v. Wilmington Parking Auth., 365 U.S. 715 (1961).

60. *See, e.g.,* Edmonson v. Leesville Concrete Co., Inc., 500 U.S. 614 (1991); Flagg Brothers, Inc. v. Brooks, 436 U.S. 149 (1978).

61. *See, e.g., Edmonson*, 500 U.S. at 621; *but see* Rendell-Baker v. Kohn, 457 U.S. 830 (1982) (holding that the private actor's virtually total dependence on government funding is not, by itself, sufficient to invoke state-action doctrine).

62. *See* Roadrunner Computer Sys., Inc. v. Network Solutions, Inc., No. 96-413-A (E.D. Va. 1996), NSI Answer ¶ 13 and NSI Counterclaim ¶ 4 <http://www.patents.com/nsians.sht> (acknowledging that NSF approves NSI's policy regarding domain-name disputes). However, "[m]ere approval. . .of the initiatives of a private party is not sufficient . . ." to transmute private conduct into state action. Blum v. Yaretsky, 457 U.S. 991, 1004-

On the other hand, where the courts treat the Internet groups as private actors, they will be subject to the same legal risks as other private entities. These groups no longer will enjoy the privilege of being shielded by the federal government from legal responsibility for their actions. Moreover, irrespective of the status of the various Internet groups under United States law, the Internet's global character could expose the groups to legal liability beyond the borders of the United States.[63]

### B. THE CONTENTIOUS DOMAIN NAME SYSTEM

The domain name system ("DNS"), which has already produced many disputes, is the most likely area in which these issues will arise.[64] Most disputes to date have concerned competing claims of trademark rights in domain names. The inherent limitations in the DNS's requirement of domain-name uniqueness conflict with real-world trademark law's tolerance of multiple users of commercial names.[65] The growing

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05 (1982). Moreover, the NSI/NSF Cooperative Agreement (*see supra* note 36) is silent regarding the resolution of domain-name disputes, obviating the argument that NSI is a state actor because the NSF "encouraged" NSI's disputes policy. *See* 457 U.S. at 1004 (holding that a state action can arise when government "has provided . . . significant encouragement, either overt or covert," for the private conduct). *See also Flagg Bros.*, 436 U.S. at 164-65. On the other hand, the Cooperative Agreement's failure to include a due-process procedure to resolve domain-name disputes might warrant a finding of state action, because a government agency, like the NSF, may not evade the Constitution by contractually delegating duties to a private entity if the agency can by the contract require the private entity to conform its behavior to constitutional standards. *Burton*, 365 U.S. at 725.

Alternatively, NSI's policy may constitute state action by virtue of the fact that the Cooperative Agreement gives it a monopoly on registrations in the .com TLD. West v. Atkins, 487 U.S. 42 (1988) (holding that the private defendant's conduct was a state action where, pursuant to government contract, the defendant was sole the source of services giving rise to plaintiff's claim). NSI could also be a state actor if it were found to be performing a traditional governmental function. *Edmonson*, 500 U.S. at 621; Evans v. Newton, 382 U.S. 296 (1966). In this regard, the statute providing the authority for the Cooperative Agreement is enlightening as to the governmental character of NSI's services:

> An executive agency shall use a cooperative agreement reflecting a relationship between the United States Government and a. . .recipient when-
> (1) the principal purpose of the relationship is to transfer a thing of value to the. . .recipient to carry out a public purpose of support or stimulation authorized by a law of the United States. . .; and
> (2) substantial involvement is expected between the executive agency and the . . . recipient when carrying out the activity contemplated in the agreement.

31 U.S.C. § 6305 (1983).

63. Alexander Gigante, *Ice Patch on the Information Superhighway: Foreign Liability for Domestically Created Content*, 14 CARDOZO ARTS & ENT. L.J. 523 (1996) (regarding possible international liability arising from Internet transmissions).

64. See *Index of lc/internic/recent* (visited Jan. 21, 1997) <http://www.ll.georgetown.edu/lc/internic/recent> for a comprehensive survey of domain-name disputes.

65. *See, e.g.*, Mark Voorhees, *Network Solutions to Rework Policy Governing Internet Domain Names* (last modified Apr. 19, 1996) <http://infolawalert.com/stories/041996b.html>; Alexander Gigante, *"Domain-ia": The Growing Tension Between the Do-*

commercialization of the Internet will generate similar litigation.

### 1. *Domain Name Conflicts*

The Internet community's response to these issues has been disappointing. NSI has a Domain Name Disputes Policy[66]—the current version being the fourth promulgated in a little over a year—that allows NSI to arbitrarily suspend a domain name in certain situations, notwithstanding that the domain name holder may have invested time and money in developing goodwill in the name.[67] Moreover, NSI's policy fails to address the potential international problems arising from registrations in the *.com* TLD. In particular, because *.com* is a so-called international Top-Level Domain ("iTLD"),[68] anyone in the world can register a name in that domain, holding out the prospect of international trademark disputes where different parties have separate, valid registrations in the same name in their respective countries.[69] Perhaps representing the proverbial tip of the iceberg, a German court has already ruled that a name appearing on an American Internet site infringed a registered trademark in Germany.[70] The respective North American and European

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*main Name System and Trademark Law* (visited Jan. 21, 1997) <http://ksgwww.harvard.edu/iip/gigante.html> (advocating changes in the DNS and illustrating the existing problems).

66. *Network Solutions Domain Name Dispute Policy* (visited Feb. 4, 1997) <ftp://rs.internic.net/policy/internic/internic-domain-6.txt>.

67. *See Trademark/Internet/Domain Names/New NSI Policy,* INTELL. PROP. STRATEGIST, Nov. 1996, at 11 (reporting on Juno Online Services, L.P. v. Juno Lighting Inc., Case No. 96-1505A (E.D. Va. 1996), where the non-competing defendant trademark owner tried to obtain suspension of the plaintiff's domain name under the NSI policy after the domain-name registrant had invested $15 million in developing an online service with 500,000 subscribers). Regarding the flaws in NSI's policy generally, see, for example, Maher, *supra* note 43; Gigante, *supra* note 63; Carl Oppedahl, *Analysis and Suggestions Regarding NSI Domain Name Trade Mark Dispute Policy* (last modified Sept. 8, 1996) <http://www.patents.com/nsi/iip.sht>.

68. Postel, *supra* note 11, ¶ 1.5.

69. Generally, "a trademark is recognized as having a separate existence in each sovereign territory in which it is registered or legally recognized as a mark." 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 29.1, at p. 29-4 (4th ed. 1996). Thus, the legitimate owner of a mark in one country cannot use it in another country where the same mark belongs to a different owner.

70. *See* Foster, *supra* note 9. The German commercial court issued an *ex parte* restraining order, finding that the Internet use and other factors evinced an intent to infringe the German mark. Telephone Interview with Thomas Hofmann, Esq., the United States Attorney for the American defendant. No further information is available, because the parties' settlement prohibits disclosure of any details about the case. E-mail message from William Foster to the author (transmitted Nov. 22, 1996) (on file with author and *Journal of Computer & Information Law*). *See also* Playboy Enter., Inc. v. Chuckleberry Publ'g, Inc., 939 F. Supp. 1032 (S.D.N.Y. 1996) (holding that magazine images available on Italian Internet site violated 15-year-old trademark injunction against distribution of magazine in the United States).

owners of the SCRABBLE mark have recently clashed over the former's use of SCRABBLE on its Web site which, naturally, is accessible in the latter's exclusive trademark territory.[71]

2. *Internet Groups' Response to the Conflict*

Until recently, the Internet engineering groups have dismissed these issues as problems created by lawyers,[72] insisting that they never intended domain names to be trademarks,[73] and ignoring the growing body of legal opinion that domain names are a species of trademark.[74] In

71. *See* Mattel, Inc. v. Hasbro, Inc., No. 96-7635 IH (RCX) (C.D. Cal.), first amended complaint, filed Dec. 11, 1996 (charging, among other claims, that the Web site constitutes trademark infringement and unfair competition under the Lanham Act and international trademark agreements). The defendant, Hasbro, Inc., owns the United States and Canadian rights to the SCRABBLE name and markets the game through its Milton Bradley division. *Id. See also Scrabble®, The Official Milton Bradley Website* (visited Jan. 22, 1997) <http://www.scrabble.com/aol/home.html>. In late 1996, Hasbro established the scrabble site at ,http://www. scrabble.com>. Anyone accessing the site <httpwww.scrabble.com> gets the following message:

> THE MATERIALS IN THE MILTON BRADLEY SCRABBLE.COM SITE ARE PRESENTED SOLELY FOR USERS IN THE UNITED STATES AND CANADA AND ONLY FOR THE PURPOSE OF PROMOTING SALES OF SCRABBLE ® BRAND CROSSWORD GAME PRODUCTS IN THE UNITED STATES AND CANADA. BY CLICKING ON THE "OK" BUTTON, YOU AGREE TO THESE RESTRICTIONS AND REPRESENT THAT YOU ARE CURRENTLY LOCATED IN THE UNITED STATES OR CANADA.

*Id.* However, nothing prevents—or can prevent—a user outside the United States and Canada from clicking "OK" to access the "Official SCRABBLE ® Homepage." *Id.*

Hasbro and the European owner, the plaintiff Mattel, are attempting to settle their dispute. Hasbro has been unwilling to discuss the matter for fear of jeopardizing the settlement negotiations.

72. *See, e.g.*, Roberts, *supra* note 43, at 7 (arguing that the application of trademark law is an undesirable burden); Mockapetris, *supra* note 43 (arguing that the involvement of lawyers means less flexibility and less Internet growth); Maher, *supra* note 43, at 13 (stating that there is a concern for avoiding litigation by finding an entity that is immune from litigation).

73. Postel, *supra* note 11, at ¶¶ 1.7, A.1.1., A.1.4.1.

74. *See, e.g.*, Hasbro, Inc. v. Internet Entertainment Group, Ltd., 1996 WL 84853 (W.D. Wash. 1996) (entering a preliminary injunction in favor of Hasbro, Inc., and enjoining Internet Entertainment Group, Ltd. from using the name "CANDYLAND" or any similar name in connection with any Internet site); Comp Examiner Agency, Inc. v. Juris, Inc., No. 96-01213-WMB (C.D. Cal. Apr. 26, 1996) (preliminary injunction enjoining plaintiff from using "juris" domain name on ground that it infringed defendant's registered "JURIS" trademark); Sun Microsystems, Inc. v. Sunriver Corp., No. C-95 02340-CAL (N.D. Cal. Sept. 28, 1995) (entering a preliminary injunction enjoining defendant from using "SUNRIVER" mark as, among other things, a domain name on the ground that it infringed plaintiff's many "SUN-" trademarks). One of the earliest court decisions to address the issue declared that "[a] domain name mirroring a corporate name may be a valuable corporate asset, as it facilitates communication with a customer base." MTV Networks v. Curry, 867 F. Supp. 202, 204 (S.D.N.Y. 1994). *See also, e.g.*, Richard Raysman & Peter Brown, *Domain Names: Protecting Trademarks on the Internet,* N.Y. L.J., June 11, 1996, at 3 (not-

the fall of 1996, IANA floated a plan to "solve" the problem of domain-name conflicts in the *.com* iTLD by flooding the Internet with a host of new, competing iTLDs and franchising private registries for the new iTLDs.[75] IANA's proposal ignored the trademark community's prediction that multiple iTLDs would only create multiple venues for trademark disputes.[76] IANA also drew criticism from segments of the Internet community concerned that its plan to create new iTLDs was a "quick fix" hastily conceived without careful consideration of all its ramifications.[77]

The reaction to IANA's plan prompted IANA and ISOC in November 1996[78] to join with several other bodies—including the World Intellectual Property Organization ("WIPO") and the International Telecommunications Union ("ITU")—to form an International Ad Hoc Committee ("IAHC") to study the problem and devise a comprehensive solution.[79] In February 1997, the IAHC issued a final report endorsing the concept of multiple iTLDs, but within a more textured, nuanced framework.[80] Among the highlights of the IAHC proposal:

(1) the creation of seven new iTLDs[81]

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ing that unlike the traditional trademark environment, where identical trademarks can coexist in different markets, in the current domain name system a trademark can only be used in a single domain name); Dan L. Burk, *A First Look at the Emerging Law of Cybermarks*, 1 RICH. J.L. & TECH. 1 (1995), <http://www.urich.edu/~jolt/v1i1/burk.html> (visited Jan. 24, 1997) (explaining the development of litigation and trademark disputes on the Internet); Jonathan Agmon & Stacey Halpern, *The Relationship Between Domain Names and Trademarks* (visited Jan. 24, 1997) <http://www.ll.georgetown.edu/ lc/internic/introd1.html> (discussing NSI's dispute policy); Maher, *supra* note 43.

75. Postel, *supra* note 11.

76. 1995 Harvard Project, *supra* note 43 (noting the remarks of Robert Frank and Robert Moskowitz). As recently as March 1994, IANA declared that "[i]t is extremely unlikely that other TLDs [in addition to *.edu, .com, .net, .org, .gov, .mil,* and *.int*] will be created." *Domain Name System Structure & Delegation*, (visited Jan. 22, 1997) <http://ds.internic.net/rfc/rfc1591.txt>.

77. Mitchell, *supra* note 29.

78. *See New International Committee Named to Resolve Domain Name System* (visited Nov. 12, 1996) <http://www.iahc.org/iahcmembers.html>. *See also* IAHC Final Report, *supra* note 58, ¶ 1.

79. *International Internet Ad Hoc Committee* (visited Jan. 24, 1997) <http://www.iahc.org>. The International Trademark Association, the IAB and the FNC are also members of the IAHC. *Id.* As is the wont of these self-appointed Internet groups, the IAHC declares—without any citation of authority—that iTLDs are within its "purview." *Id.* at Executive Summary.

80. IAHC Final Report, *supra* note 58. The IAHC's proposal substitutes the term "generic Top-Level Domain" for international Top-Level Domain. To spare the reader from learning yet another Internet acronym, this article will continue to use iTLD to refer to such domain.

81. IAHC Final Report, *supra* note 58, ¶ 3.1.

(2) the establishment of multiple domain-name registrars worldwide, with each registrar empowered to register names in all the iTLDs[82]

(3) the optional posting of new domain-name applications for 60 days on the Internet to allow affected parties an opportunity to comment or protest[83]

(4) the creation of an iTLD and national TLDs in which trademark owners could register trademark-specific domain names[84]

(5) the requirement that domain-name registrants consent, as a condition of registration, to mandatory WIPO mediation and arbitration of name disputes at the discretion of the party challenging the domain name[85]

(6) the creation of a directory for the trademark-specific domains that would allow users to access sites using the trademark as an identifier[86]

The IAHC proposal goes a long way toward addressing the problems of the current DNS, but still does not solve the core issue of legal authority. As its name indicates, the IAHC is an *ad hoc* organization. Several of its constituent members are themselves *ad hoc* entities.[87] Thus, as with all the other Internet groups, the private sector's acquiescence is critical to the IAHC's assumption of the role of overall Internet governing body. However, such acquiescence is unlikely where the IAHC system threatens fundamental rights.[88]

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82. IAHC Final Report, *supra* note 58, ¶ 4.2.

83. IAHC Final Report, *supra* note 58, Executive Summary, ¶¶ 7.1.3, 7.2.2. *See* Gigante, *supra* note 65, first proposing such a notice period for new domain names modeled on the PTO's practice for trademark applications.

84. IAHC Final Report, note 58, ¶ 8.2 *et seq.*

85. IAHC Final Report, *supra* note 58, ¶ 7.1.1.

86. IAHC Final Report, *supra* note 58, ¶ 8.2.3. See Gigante, *supra* note 65 (proposing such a directory system as a means of allowing multiple uses of trademarks as domain names).

87. For example, the ISOC, IAB and FNC.

88. *See Network Solutions' Preliminary Response to the IAHC's Draft Specifications for the Administration and Management of gTLDs* (visited Feb. 23, 1997) <http://info.netsol.com/announcements/011497.html>, in which NSI, commenting on an earlier draft of the IAHC proposal, stated the following:

> no one has the legal basis, delegated by statute or otherwise, to oversee and direct the affairs of the Internet. Without legal mandate, the Committee must seek and obtain consensus for its actions. The membership of the [International Ad Hoc] Committee, with its broad constituency, may be an organization which can bring the various constituencies to consensus. That consensus, however, must be consistent with the needs of the Internet's customers. As a key stakeholder and participant, we realize that our consensus is also needed. We will assist and participate in helping to form that consensus. Make no mistake, *the Committee may make decisions which will forever effect* [sic] *the way the Internet operates.*

The IAHC's proposal regarding domain-name disputes is one area that could erode the current consensus by acquiescence. The plan requires a domain-name registrant to submit to mediation and arbitration under WIPO's rules at the discretion of the party challenging the domain name. Although the IAHC plan is in part an attempt to relieve the pressure created by the exponential growth of the *.com* iTLD,[89] conditioning registration in the new iTLD's on consent to mandatory WIPO mediation/arbitration will probably mean that many registrants will continue to opt for a *.com* registration, rather than submit to mandatory mediation or arbitration.[90] This likely reaction by registrants will defeat the IAHC's stated purpose of increasing competition and access for the global Internet community.[91] The IAHC proposal would therefore appear to raise both due-process and antitrust issues that a disgruntled registrant could use to challenge the IAHC's authority to promulgate such rules.[92]

Thus, for example, if a court were to hold that a particular Internet group's activities constituted state action (*see supra* text accompanying notes 57-62), the group would have to conform its practices to constitutional standards.[93] A domain-name registrant might be entitled to a

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(Emphasis added.) *See also What Does Network Solutions Want, and What Will it Get?*, Info. L. Alert, Feb. 14, 1997, at 1, (observing that the IAHC "derives its authority from nowhere and no one," and reporting that NSI is asserting certain, undefined proprietary rights in the *.com* database).

89. IAHC Final Report, *supra* note 58, ¶ 3.2.1.

90. The IAHC's proposal of course does not state the basis for its authority to condition access to the Internet on the registrant's surrender of its right to seek judicial protection in the event of a domain-name dispute.

91. IAHC Final Report, *supra* note 58, ¶ 3.2.1. The IAHC does envision bringing the existing iTLDs — *.com, .net* and *.int* — under the same rules on expiration of the current cooperative agreement between NSI and the NSF (*see supra* note 36). *See Seven New Top Level Domain Names Are Added for Internet Addresses and Up to 28 New Registrars Planned*, Feb. 4, 1997 (visited Feb. 19, 1997) <http://www.iahc.org/press-final.html>.

92. The IAHC proposal notably avoids the issue of who—if anybody—has proprietary rights in the existing name space. *See* text accompanying *supra* notes 57-59. The proposal merely accepts as a given, and without explanation, that "[t]he Internet top level domain space is a public resource and is subject to the public trust." IAHC Final Report, *supra* note 58, Executive Summary. *Compare supra* text accompanying notes 57 and 58; 1995 Harvard Project, *supra* note 43 (noting the remarks of Anthony Rutkowski regarding the conflicting claims of the United States government and Internet service providers in the name space).

93. Lebron v. Nat'l R.R. Passenger Corp., 513 U.S. 374 (1995) ("It surely cannot be that government, state or federal, is able to evade the most solemn obligations imposed by the Constitution by simply resorting to the corporate form."); Edmonson v. Leesville Concrete Co., Inc., 500 U.S. 613, 620 (1991) ("[g]overnmental authority may dominate a[ ] [private] activity to such an extent that its participants may be deemed to act with the authority of the government and, as a result, be subject to constitutional restraints.").

due-process hearing in the event of any dispute over the domain name.[94] The IAHC requirement of consent to mandatory mediation and arbitration under WIPO's auspices, if state action, thus might violate due-process standards.

The Internet groups would not necessarily fare better if held to be private actors. Antitrust might be one problematic area. Although the Internet groups continue to see themselves as "public trustees," the IAHC's plan to franchise several dozen private registrars for the new iTLDs will place these groups squarely in commerce.[95] With their self-proclaimed authority to enfranchise new, territorially ensconced iTLD registrars, on the one hand, and, on the other, their ability to impede the development of alternative domain-name systems,[96] the Internet groups could face charges that they are engaging in anti-competitive conduct.

The focal point for such charges would likely be the Council of Registrars ("CORE"), a body comprised of all IAHC-authorized iTLD registrars, to be established under the IAHC's proposal.[97] According to the IAHC, all CORE members will be signatories to a memorandum of understanding that will provide [*sic*] "the necessary contractual, legal, oversight and public policy framework under which CORE and the Individual Registrars must operate."[98] CORE's Executive Committee—elected by the member registrars and "coordinate activities among the registrars . . . ."[99]

Given the incestuous relationship that will exist between the registrars and the other Internet groups, as well as the mandatory signature of all registrars to the CORE memorandum of understanding, CORE would probably be deemed a horizontal agreement for antitrust purposes, *i.e.*, an agreement between competitors or potential competitors.[100] The IAHC's plan to designate a limited number of registrars in defined territories—coupled with requirements (like mandatory media-

94. *See, e.g.*, Tulsa Professional Collection Services, Inc. v. Pope, 485 U.S. 478, (1988); Lugar v. Edmondson Oil Co., Inc., 457 U.S. 922, 932-33 (1982). Under the present system, if NSI were held to be a state actor, it might have to afford a registrant such a hearing to answer a trademark owner's complaint before taking any action to suspend the registrant's domain name.

95. *See* IAHC Final Report, *supra* note 58, ¶ 4.1.4 (requiring a $20,000 fee for each approved registrar). *C.f.* Shaw, *supra* note 1; Postel, *supra* note 11, ¶ A.3.

96. *See, e.g., Alternic.nic Network Information Center* (visited Jan. 22, 1997) <http://www.alternic.net> (describing of how an alternate registry system must operate within the interstices of the dominant TCP/IP protocol).

97. *See* IAHC Final Report, *supra* note 58, ¶¶ 5.1.1-6.1.2.

98. IAHC Final Report, *supra* note 58, ¶ 5.1.1.

99. IAHC Final Report, *supra* note 58, ¶ 5.1.2.

100. *See*, United States v. Topco Assoc., Inc., 405 U.S. 596 (1972); United States v. Sealy, Inc., 388 U.S. 350 (1967). *See also* 1 JULIAN O. VON KALINOWSKI, ET AL., ANTITRUST LAWS AND TRADE REGULATION §§ 11.01[1], 14.02 (2d ed. 1996) ("VON KALINOWSKI").

tion/arbitration) that encourage registrants to act cooperatively—might then constitute a *per se* illegal horizontal allocation of markets.[101] Further, as now envisioned, CORE and particularly CORE's Executive Committee will function as something analogous to an industry association. Yet the IAHC proposal lacks any controls to guard against a danger inherent in such associations: the exchange of price and other competitive information in violation of the antitrust laws.[102]

Moreover, although the IAHC plan laudably reflects, for the first time, sensitivity to the international implications of decisions affecting Internet governance, the imprimatur of this latest ad hoc Internet group does not guarantee international acceptance of the proposed iTLD regime. The European Union ("EU"), in particular, has become increasingly distressed over American domination of Internet content[103] and administration.[104] On November 20, 1996, the European Commission issued a "Green Paper" on telecommunications which, among other things, expressed disquiet that "some of the most significant global domains are administered by a private company [*viz:* NSI] in the U.S."[105] The same disquiet may greet the IAHC's efforts, given its American flavor[106] and the EU's desire for a greater European voice in the administration of the Internet.[107]

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101. *See, e.g., Topco* 405 U.S. 596; Timkin Roller Bearing Co. v. United States, 341 U.S. 593 (1951) (allocation of world markets between United States and foreign companies a violation of American antitrust law). Under United States law, a horizontal allocation of markets is illegal even though there is no proof of price-fixing or other anticompetitive conduct. *E.g., Topco*; Palmer v. Georgia, 498 U.S. 46, (1990); 1 VON KALINOWSKI § 14.02, at 14-5. Such a market allocation would also violate European Union antitrust law. 8 VON KALINOWSKI § 60.04.

102. *See* 1 VON KALINOWSKI §§ 11.02[2][ii], 13.04.

103. *See, e.g.*, John Browning, *Television By Any Other Name*, SCI. AMER., Oct., 1996, at 40 (reporting that the European Union intends to require Internet transmissions to comply with the minimum European content restrictions applicable to television programming); Bernard Cassen, *Le Tout-Anglais N'est Pas Une Fatalité*, LE MONDE DIPLOMATIQUE, May 1996, at 18 (decrying the English language's predominance on the Internet as "cultural imperialism").

104. *See, e.g.*, Maher, *supra* note 43; *see also* 1995 Harvard Project, *supra* note 43 (including the remarks of Daniel Karrenberg and David Conrad).

105. Commission of the European Communities, Towards A European Numbering Environment: Green Paper on a Numbering Policy for Telecommunications Services in Europe 23 (1996), *available in* Commission of the European Communities, *Green Paper on a Numbering Policy for Telecommunications* (visited Jan. 24, 1997) <http://europa.eu.int/en/record/green/gp9611/index.htm>.

106. Even the IAHC's "international" representatives from WIPO (Albert Tramposch) and the ITU (Robert Shaw) are U.S. citizens.

107. The EU's "Green Paper" (*see supra* text accompanying note 104) suggests more governmental regulation of the iTLDs:

> In the Green Paper, the Commission also addresses the issue of assignment of Internet names and addresses. These functions have been transferred to private companies, the largest of which are located in the United States, that are paid for

For similar reasons, the IAHC's imprimatur will not necessarily insulate a registrant in one of the new iTLDs from liability abroad, for example, trademark infringement.[108] Nothing in the IAHC's proposed new iTLD system shields a domain-name against being sued for trademark infringement. The defendant domain-name registrant might, in turn, try to implead the registrar that issued it the name. IAHC, IANA and CORE—the groups that would be controlling the name space *de facto*—might also find themselves drawn into the litigation by either the domain-name registrant or the impleaded registrar.

In addition to conflicting international regulation, the IAHC plan also fails to address the prospect of conflicting regulation within the United States. State public utility commissions could have authority in some instances to fill the gap left by the federal government, thereby subjecting the Internet to a patchwork of state regulation.[109] States may try to regulate Internet activities by legislative action too, as has already occurred in several jurisdictions.[110] Under these circumstances, the In-

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this service; companies are beginning to fight over particular names, and mechanisms for settling such disputes are inadequate. For all these reasons, the Commission calls on interested parties to submit observations concerning possible regulatory intervention by the European Union.

Eur. Rep., Nov. 23, 1996, 1996 WL 11075102.

108. *See supra* text accompanying notes 70 and 71 (regarding international trademark liability arising from use of names on Web sites). *See also Playboy* (holding that magazine images available on Italian Internet site violated 15-year-old trademark injunction against distribution of magazine in the United States). Regarding international trademark liability arising from domain names registered in an iTLD, see, for example, Maher, *supra* note 43; André Brunel, TRADEMARK PROTECTION FOR INTERNET DOMAIN NAMES, IN THE INTERNET AND BUSINESS: A LAWYER'S GUIDE TO THE EMERGING LEGAL ISSUES n.29 (Computer Law Association ed., 1996), *available in* André Brunel, TRADEMARK PROTECTION FOR INTERNET DOMAIN NAMES, n.29 (visited Jan. 24, 1996) <http://cla.org/RuhBook/chp3.htm>; *Legislation: Two Days of Hearings on NII Bill Consider Provider Liability and Fair Use*, 51 Pat., Trademark & Copyright. J. (BNA) 484 (Feb. 15, 1996) (reporting the congressional testimony of an International Trademark Association representative on the Internet's potential for generating global trademark abuse).

109. *See* Maher, *supra* note 43; *see also* 1995 Harvard Project, *supra* note 43 (regarding the remarks of Anthony Rutkowski).

110. See GA. ST. ANN. § 16-9-93.1 (1996), which makes it a misdemeanor to "knowingly . . . transmit any data through a computer network . . . if such data uses any individual name, trade name, registered trademark, logo, legal or official seal, or copyrighted symbol to falsely identify the person, organization, or representative transmitting such data." Arguably, knowingly using a domain name that is the same as a registered mark would violate this statute, even though the domain-name registrant might have the right to use the name under civil trademark law. *See also Minnesota Attorney General's Warning to All Internet Users and Providers*, (visited Jan. 24, 1996) <http://www.state.mn.us/ebranch/ag/memo.txt> (declaring that the Minnesota's civil and criminal laws apply to Internet transmissions received in the state from anywhere on the Internet).

ternet community's expressed desire to be rid of federal involvement[111] recalls the Chinese proverb that admonishes us to wish with care, lest our wish might be granted.

## IV. PROPOSALS FOR THE INTERNET'S FUTURE GOVERNANCE

The IAHC's proposal is a positive development insofar as it reflects a matured recognition that Internet governance must be rationalized if it is to function in the new environment created by the federal government's withdrawal. However, as the above discussion shows, the self-appointed IAHC can no more avoid the fundamental problem of lack of authority than can its constituent members. In fact, in attempting to address Internet governance at the international level, the IAHC will only exacerbate the authority problem, as other legal systems undoubtedly will be called upon to evaluate the powers of the IAHC and other Internet groups according to their own jurisprudence. Thus, without a comprehen-sive framework based on accepted legal norms, the Internet will likely face piecemeal and inconsistent regulation by legislative and judicial action in the several United States states and in States around the world.[112] Without the protection of their erstwhile federal sponsors, the Internet groups may find that a court hearing a challenge to their authority will fashion an Internet structure quite different from that to which they are accustomed. Some legislative action could avoid this prospect and place the Internet's administration on a healthy legal footing for the next stage of its development:

(1) clarify the legal character of the name space;[113]

(2) clarify the jurisdiction and authority of those Internet groups deemed necessary for Internet administration;

(3) to the extent determined appropriate, provide the sanctioned Internet groups with carefully prescribed immunity from antitrust liability, as well as from vicarious and contributory liability under copyright,

111. *See* 1995 Harvard Project, *supra* note 43 (containing the remarks of Paul Mockapetris, Paul Vixie, David Conrad and Jeffrey Ritter).

112. "Inevitably, lawyers from different traditions will approach the issues of transborder data flows ("TBDF") in ways dictated by their training. Concepts will differ, institutions will differ, categories of legal reference will be different . . . ." M.D. Kirby, *Legal Aspects of Information Technology*, *in* AN EXPLORATION OF LEGAL ISSUES IN INFORMATION AND COMMUNICATION TECHNOLOGIES 12 (Report of the Committee for Information, Computer and Communications Policy, Organization for Economic Co-operation and Development 1983). *See also id.* at 40. *Cf.* Perritt, *supra* note 7, at 352-53.

113. Calling the name space a "public trust," IAHC Final Report, *supra* note 58, at Executive Summary, begs the question. What laws define the fiduciary duties of the trust's self-appointed trustees? What social groups comprise the "public" for whom these trustees presume to act?

trademark and patent laws;[114]

(4) confer on a single federal agency—be it the NSF, the FNC or a new entity—the statutory authority to act as liaison with the sanctioned Internet groups, make recommendations to the executive and legislative branches on Internet administration and represent the United States with respect to international efforts to coordinate the administration of Internet activities; and

(5) preempt state and local regulation of Internet administration, and state and local jurisdiction over claims concerning trademarks, trade names and domain names arising from interstate or foreign Internet transmissions.[115]

More ambitiously, on the global scale, the Internet needs international agreement on the structure of Internet governance.[116] As an example of just one troublesome question that might require an international solution, the United States government's claim to a proprietary interest in the domain name space remains unresolved.[117] If the United States government still claims such proprietary rights, it will find itself in conflict with the EU and other foreign governments.[118] Clear statutory authority under United States law will be essential for any Internet group or federal liaison agency to be able to deal effectively with foreign governments on this and analogous issues.

Some in the Internet community will resist any real-world effort at legislation or international agreements. They hope instead that the Internet will somehow develop its own globally accepted common law.[119] Experience suggests otherwise.

Although the Internet is a unique medium, in some ways its current problems are not much different from those plaguing the early days of radio. In the decade after World War I, radio broadcasting—like the Internet today—grew exponentially.[120] Except for the military and ship-

114. *See Network Solutions Willing to Consider Scrapping Its Policy in Return for Immunity from Litigation*, INFO. L. ALERT, Nov. 22, 1996, at 1 (reporting that NSI would remove itself from all domain-name disputes if it could obtain statutory immunity from contributory infringement claims by trademark owners aggrieved over NSI's registration of a domain name); Gigante, *supra* note 65 (proposing such immunity for NSI and other registries).

115. See *supra* note 110, at 548-62 (describing troublesome regulation by the states).

116. Gigante, *supra* note 63, at 548-62 (proposing a treaty to avoid international conflicts over Internet content).

117. *See supra* text accompanying notes 57-59.

118. *See supra* text accompanying notes 103-07. *See also* 1995 Harvard Project, *supra* note 43 (containing the remarks of David Conrad).

119. *See, e.g.*, David Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, (visited Jan. 24, 1997) <http://www.cli.org/X0025_LBFIN.html>.

120. *See* Edward F. Sarno, Jr., *The National Radio Conferences, reprinted in* LAWRENCE W. LICHTY & MALACHI C. TOPPING, AMERICAN BROADCASTING: A SOURCE BOOK ON THE HIS-

ping uses of radio, the federal government initially maintained a hands-off policy, limiting itself to issuing station licenses through the Department of Commerce.[121] By the mid-1920's, the radiowaves were in a state of anarchy, with amateur users and national and local commercial stations broadcasting on and interfering with each other's frequencies.[122] After several court decisions held that the Department of Commerce could not use its ministerial licensing authority to regulate the interference problem,[123] the Department tried to obtain voluntary compliance through a series of government-sponsored radio conferences between 1922 and 1925.[124] However, the conflicting interests of the different broadcasting groups forestalled any consensus. "The result was confusion and chaos."[125]

Finally, in 1927, Congress passed the Radio Control Act, which established the Federal Radio Commission, the F.C.C.'s precursor, to bring order to radio broadcasting.[126] Despite resistance to any government role from segments of the broadcasting community, the imposition of regulatory order hardly stifled growth in the cyberspace of its day—what was then called the "ether." The following decade of the 1930's is generally recognized as radio's golden age.

The Internet does not face the problem of a limited frequency spectrum that confronted early radio broadcasting. In theory, the TCP/IP protocol can be adjusted to allow for as many domain names as necessary to accommodate all users wanting Internet sites. However, because domain names are unique, when several users compete for the same name, the situation is analogous to different radio broadcasters trying to broadcast on the same frequency. As the experience with radio suggests, it is unlikely that a commercial enterprise will voluntarily surrender its claim to a desirable resource, be it a radio frequency or a domain name, especially when, in the case of a domain name, the name or an associated

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TORY OF RADIO AND TELEVISION 534, at 536 (1975); Marvin R. Bensman, Regulation of Broadcasting By the Department of Commerce 1921-1927, *reprinted in* LAWRENCE W. LICHTY & MALACHI C. TOPPING, AMERICAN BROADCASTING: A SOURCE BOOK ON THE HISTORY OF RADIO AND TELEVISION 548, 553. *See also* N.B.C., Inc. v. United States, 319 U.S. 190, 210-12 (1943).

121. *See* LICHTY & TOPPING, *supra* note 120, at 527-28; BENSMAN, *supra* note 120, at 547.

122. *See* BENSMAN, *supra* note 120, at 547-48, 553-54; *N.B.C.*, 319 U.S. at 211.

123. *See* BENSMAN, *supra* note 120, at 548-49, 553-54; *N.B.C.*, 319 U.S. at 212.

124. *See* SARNO, *supra* note 120, at 537, 539-41. See generally *N.B.C.*, 319 U.S. at 210-13, for a comprehensive discussion of radio's early travails and the Commerce Department's futile efforts to bring order to the broadcasting world.

125. *N.B.C.*, 319 U.S. at 212.

126. *See* LICHTY & TOPPING, *supra* note 120, at 529-30; BENSMAN, *supra* note 121, at 555; W. JEFFERSON DAVIS, *The Radio Act of 1927*, *reprinted in* LICHTY & TOPPING, *supra* note 120, at 556; *N.B.C.*, 319 U.S. at 213.

trademark represents the enterprise's valuable good will developed through years of promotional efforts. Only a statutory scheme can sort out such conflicting claims and impart some order.

## V. CONCLUSION

The current organization of the Internet is unprecedented, consisting of self-appointed ad hoc groups that, though neither possessing statutory authority nor subject to regulation, make vital decisions affecting what is already a significant channel of interstate and international communication. Because these groups evolved in an environment of federally sponsored research, which did not require the Internet groups to consider the legal ramifications of their decisions, today's Internet operates in a legal void. This void threatens the Internet's further development because it may be filled with confusing and inconsistent regulation by territorially based governments in the United States and around the globe.

Admiration for the accomplishments of the Internet groups therefore should not impede discussion of whether the existing Internet organization is suitable for administering the next level of the Internet's development.[127] That development will be primarily commercial and the experience with radio broadcasting teaches that in a pure laissez-faire environment, competing commercial interests will battle over unique or limited resources—like domain names—in ways that may harm the medium's growth. The Internet thus urgently requires an organization based on a normative structure that addresses these issues on the national and international levels.

127. Albeit with probably a different structure in mind, IANA itself acknowledges the need for more orderliness: "As the net becomes larger and more commercial, the IANA needs a formal body to accept responsibility for the legal issues which arise surrounding DNS policy and its implementation." Postel, *supra* note 11, ¶ 1.5.3. *See also* Anthony M. Rutkowski, *Internet Names and Numbers: Toward a Viable Regime* (last modified June 3, 1996) <http://www.wia.org/pub/internet-issues.html>.