FOREWORD: THE LEGAL AND POLICY FRAMEWORK FOR GLOBAL ELECTRONIC COMMERCE

By Kalama Lui-Kwan [†] *and Kurt Opsahl* [‡]

In July 1997, the Clinton Administration released its third major Internet initiative, a policy statement entitled *The Framework for Global Electronic Commerce*.[1] The Framework[2] outlines the Clinton Administration's

---

† Symposium Editor, *Berkeley Technology Law Journal*; B.A., International Relations and China Studies, Boston University, 1995; J.D. candidate 2000, Boalt Hall School of Law, University of California, Berkeley; M.P.P. candidate 2000, John F. Kennedy School of Government, Harvard University.

‡ Research Fellow; J.D. 1997, Boalt Hall School of Law, University of California, Berkeley.

The Conference was jointly organized by the Berkeley Center for Law & Technology and the *Berkeley Technology Law Journal*, and took place at the University of California at Berkeley on March 5-6, 1999. The authors wish to give special thanks to Professor Pamela Samuelson for her leading role in coordinating the event and for her support in developing this Symposium issue. The authors also wish to thank those who helped to organize the Conference, especially Larry Trask and John Sasson of the Berkeley Center for Law & Technology, Greg Papciak of the *Berkeley Technology Law Journal*, Pat Murphy of the Institute for Management, Innovation, and Organization, and Mark Lemley of the University of Texas at Austin. The authors are also grateful for the support of John Cioffi, for his excellent summary of the papers presented at the conference; Rachna Dhamija and David Chott for their work on a summary of the background issues; the Conference speakers, who contributed their insight and time to assure the high quality of the content of the Conference and this Symposium issue; the Conference volunteers, for helping to make the two-day event run without any logistical problems; and the editors of the *Berkeley Technology Law Journal* for the substantial support and time they have committed toward the success of this Symposium issue.

1. *See* WILLIAM J. CLINTON & ALBERT GORE, JR., A FRAMEWORK FOR GLOBAL ELECTRONIC COMMERCE (1997), *available at* <http://www.ecommerce.gov/framewrk.htm> [hereinafter FRAMEWORK]. The first two initiatives were Ronald H. Brown, Secretary of Commerce, NATIONAL INFORMATION INFRASTRUCTURE: AN AGENDA FOR ACTION (Dec. 1993), *available at* <http://metalab.unc.edu/nii/NII-Table-of-Contents.html>, and Bruce Lehman, Patent and Trademark Office, REPORT OF WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS OF INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY RIGHTS AND THE NATIONAL INFORMATION INFRASTRUCTURE (Sept. 1995), *available at* <http://www.uspto.gov/web/offices/com/doc/ipnii/> [hereinafter *White Paper*].

2. The Framework is often referred to as the Magaziner Report, after Ira Magaziner, former Senior Adviser to the President for Policy Development, who was princi-

strategy for facilitating the growth of electronic commerce and fostering business and consumer confidence in the use of electronic networks for commerce.[3] The Framework presents five "principles" that are intended to "guide the development of the new digital economy."[4] The principles are: (1) the private sector should lead, (2) governments should avoid undue restrictions on electronic commerce, (3) where government involvement is needed, its aim should be to support and enforce a predictable, minimalist, consistent, and simple legal environment for commerce; (4) governments should recognize the unique qualities of the Internet; and (5) electronic commerce over the Internet should be facilitated on a global basis.[5]

In addition, the Framework identifies nine areas where it makes recommendations to accomplish these principles: Tariffs and Taxation; Electronic Payment Systems; Uniform Commercial Code for Electronic Commerce; Intellectual Property Protection; Privacy; Security; Telecommunications Infrastructure and Information Technology; Content; and Technical Standards.[6] Contemporaneously with the Framework, President Clinton issued thirteen directives to implement the report's recommendations.[7] The directives are generally consistent with the philosophy that the private sector should take the lead role in developing self-regulation of electronic commerce markets.[8]

---

pally responsible for its creation. Magaziner has since resigned, and been replaced by Elliot Maxwell. *See* Jeri Clausing, *Magaziner, Head of U.S. Internet Policy, Plans to Resign*, N.Y. TIMES ON THE WEB (Nov. 6, 1998) <http://www.nytimes.com/library/tech/98/11/cyber/articles/07magaziner.html>; Jeri Clausing, *Commerce Dept.'s New Point Man on the Net*, N.Y. TIMES ON THE WEB (Dec. 11, 1998) <http://www.nytimes.com/library/tech/98/12/cyber/articles/11maxwell.html>.

3. The Framework was recently updated with the U.S. GOVERNMENT WORKING GROUP ON ELECTRONIC COMMERCE, FIRST ANNUAL REPORT (Nov. 1998), *available at* <http://www.doc.gov/ecommerce/review.htm> [hereinafter FIRST ANNUAL REPORT].

4. *Id.* at 10.

5. *See* FRAMEWORK, *supra* note 1, at 2-3.

6. *See id.* at 4-21.

7. *See* WILLIAM J. CLINTON, MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES, (July 1, 1997), *available at* <http://www.ecommerce.gov/presiden.htm> [hereinafter *Presidential Directive on Electronic Commerce*].

8. The U.S. Trade Representative is directed to ensure Internet commerce remains tariff-free, the Secretary of Commerce is directed to secure international intellectual property protections, and the Secretary of the Treasury is directed to discourage any new taxes from discriminating against Internet commerce. Other directives aim to protect privacy, ensure security, and promote electronic payment systems, including the creation of an online shopping system for the federal community. *See id. See also* Sandra Sobieraj,

While the Framework supports limited regulation in forms such as a uniform commercial code in cyberspace and the establishment of certain intellectual property norms, the main emphasis is to keep the government's role limited and enjoy the benefits of the Internet as "a global free-trade zone." It specifically implores the U.S. government and industry to work together to "adopt a non-regulatory, market-oriented approach to electronic commerce ... that facilitates the emergence of a transparent and predictable legal environment."[9] One critique has been that the report expects the electronic commerce industry to take major initiatives, yet provides little incentive to undertake those initiatives.[10] Consumer groups have also voiced skepticism about the private sector's ability to "self-regulate" collectively, especially on issues surrounding privacy and consumer protection.[11]

The Berkeley Center for Law & Technology and the *Berkeley Technology Law Journal* convened a Conference two years after the Report was issued to assess the progress made on the Clinton Administration's proposals, and to examine the relationship between the explosive growth of electronic commerce and existing law and policy.[12] The Framework provided a focal point for the Conference because it is a reflection of the U.S. national policy on electronic commerce. The program included legal

---

Clinton Issues 'Hands Off' Policy on Internet Commerce, N.Y. TIMES ON THE WEB (July 2, 1997) <http://www.nytimes.com/library/cyber/week/070297commerce.html>.

9. FRAMEWORK, *supra* note 1, at 2.

10. For a survey of responses to the Framework, see Sobieraj, *supra* note 8, and Jeri Clausing, *Critics Question U.S. Policy on Electronic Commerce*, NY TIMES ON THE WEB (June 15, 1998) <http://www.nytimes.com/library/tech/98/11/biztech/articles/30net.html>. The primary incentive to self-regulate is the 'threat' of government regulation. *See, e.g.*, FRAMEWORK, *supra* note 1, at 14 ("[I]f effective privacy protection cannot be provided [by self-regulation], we will reevaluate this policy.").

11. *See* Jeri Clausing, *Internet Commerce Study Stresses Self-Regulation*, N.Y. TIMES ON THE WEB (Nov. 30, 1998) <http://www.nytimes.com/library/tech/98/11/biztech/articles/30net.html>.

12. The full title of the Conference was *The Legal and Policy Framework for Global Electronic Commerce: A Progress Report*. For an overview of the Conference, *see* Berkeley Center for Law & Technology, *Electronic Commerce Conference* (visited Apr. 10, 1999) <http://www.sims.berkeley.edu/bclt/ecom/>. The authors would like to recognize the generous support of the following Conference sponsors: The School of Information Management and Systems, UC Berkeley; The Haas School of Business, UC Berkeley; BRIE (Berkeley Roundtable on the International Economy), UC Berkeley; Institute for Management, Innovation, and Organization, UC Berkeley; The IBM Institute for Advanced Commerce; The Fisher Center for Management & Information Technology; Cisco Systems, Inc.; The American Bar Association, Science & Technology Section.

scholars, technologists, government policy officials, and lawyers specializing in electronic commerce issues. To enable the insights from this Conference to be shared with a wider audience, the *Berkeley Technology Law Journal* agreed to publish this Symposium issue, which features selected papers that assess the past and future impact of existing laws, as well as papers that explore policy issues related to the Framework. This Symposium issue explores a broad range of topics discussed at the live Conference. Its design is to offer proposals for policy makers, concise discussions of certain sets of laws for industry officials, and forewarnings of policies and laws to come for legal practitioners.

I. GLOBAL STANDARDS FOR INTELLECTUAL PROPERTY RULES

In the digital economy, intellectual property rights will take a primary role, often forming the locus of value in a transaction. Understanding the growing importance of intellectual property rights, the Framework envisions a set of intellectual property rules that will enhance commerce in the global marketplace, yet remain "predictable, minimalist, consistent and simple."[13] Despite this laudable set of goals, and claims of substantial progress in the *First Annual Report*, it is not clear that the Clinton Administration has followed through with its own proposals.[14] Three conference scholars addressed the issues surrounding intellectual property in the information economy, looking at copyright and patents in the new millennium.

Professor Pamela Samuelson, a Conference organizer and co-director of the Berkeley Center for Law & Technology, examines the recently enacted Digital Millennium Copyright Act ("DMCA")[15] and illustrates its inconsistency with the Framework's principles.[16] Samuelson's article, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, focuses on the anti-circumvention and anti-device provision of the DMCA. These provisions are designed to prevent engineers from developing or deploying technologies that circumvent technical protection mechanisms. The anti-circumvention provision pre-

13. FRAMEWORK, *supra* note 1, at 3.

14. *See* FIRST ANNUAL REPORT, *supra* note 3, at 10-13.

15. Pub. L. No. 105-304, 112 Stat. 2860 (1998).

16. *See* Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519 (1999).

vents the act of circumvention while the anti-device provision outlaws the circumvention technologies themselves. Samuelson makes three main points regarding the provisions: there are legitimate reasons to circumvent technical protection mechanisms, the anti-device provisions are highly ambiguous and over-broad, and periodic reviews of the DMCA are needed to ensure that the Act's potential for mischief is not realized.

The DMCA's ban on circumvention lacks a general purpose "or other legitimate reasons" exception, instead choosing to codify seven carefully delineated exceptions, each responsive to a particular criticism. Samuelson explains how this inconsistency with the Framework's endorsement of simple and minimalist regulations is derived from both the poor judgment of the Clinton Administration and the extensive lobbying efforts of major copyright industries. The legislation became more complicated as the drafters included exceptions instead of reassessing the focus. Samuelson marshals a host of examples of legitimate circumvention, and suggests that the courts will narrow the reach of the DMCA's provisions if the Congress does not.

Building on the exceptions to the anti-circumvention provisions, Samuelson notes that the anti-device provision provides a broad ban without clarifying the legality of developing technologies that enable these exceptions. For example, under the Act, it is unclear if one is authorized to make devices that protect personal privacy, despite the DMCA's personal privacy exception. Indeed, Samuelson predicts that the breadth of the ban will engender a flood of litigation, as people question whether a particular technology fits in the provision's wide embrace. Until the courts or the Congress clarify the anti-device provisions, technologists may be deterred from developing legitimate technologies, thus slowing the pace of innovation. Finally, Samuelson finds the DMCA's call for a Library of Congress study too narrow. Rather, she argues for "a broader study to be undertaken of the impact of these regulations with an eye to recommending changes to remedy unintended harmful consequences they may be having."[17]

Silicon Valley patent attorney Mark Haynes criticizes the Framework's recommendation that steps be taken to ensure strong intellectual property protection.[18] In *Black Holes of Innovation in the Software Arts*, Haynes argues that innovation cannot escape the gravity imposed by copyright law in certain areas. According to Haynes, copyright law creates

17. *Id.* at 564.

18. *See* Mark A. Haynes, *Commentary: Black Holes of Innovation in the Software Arts*, 14 BERKELEY TECH. L.J. 567 (1999).

isolated pockets of innovation by preventing anyone but the copyright holder from innovating. Without access to the copyrighted works, "Software engineers are constantly reinventing the wheel."[19] This wastes valuable resources, and slows the pace of innovation, because the inventor must continue to go over old ground, rather than innovating.

Haynes looks at the Windows operating system, where Microsoft's copyright has helped to block the development of competing operating systems. Without competition, Haynes notes, the pace of OS innovation has been slower than that of hardware innovation.[20] Since 1995, Windows has undergone one major revision, integrating Microsoft Internet Explorer into the system for Windows 98, while the x86 microprocessors have undergone numerous substantial revisions.[21] The difference lies in the system protection: Windows is protected by copyright, while Intel's x86 processors are protected by patents. Haynes calls for more explicit protection for reverse engineering of copyrighted software, like the approach taken in the Semiconductor Chip Protection Act of 1984,[22] so the copyright system can follow the path of the patent system. This, Haynes opines, will allow the pace of software innovation to keep up with hardware innovation.[23]

Professor Robert Merges' article, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts*[24] expands the examination of the patent system. Focusing on business method patents—which protect pure concepts, rather than technology[25]—Merges argues that we should pay attention to the process by which patents are granted because the negative net effects are a potentially significant drag on the economy. Even though he says that it is practically impossible to determine the economic effect of business concept patents,[26] there are a number of policies that could be implemented to deal with the problem of issuing bad business concept patents. Merges, recognizing that drastic change is

---

19. *Id.* at 569.

20. *See id.* at 503.

21. *See id.*

22. 17 U.S.C. §§ 901-914 (1984).

23. *See* Haynes, *supra* note 18, at 575.

24. Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts*, 14 BERKELEY TECH. L.J. 577 (1999).

25. Until the recent *State Street* decision, patents on business concepts and other abstractions were simply not permitted. Merges explores the importance of business concept patents and, more specifically, whether they contribute any value in excess of their cost to society. *See, e.g.*, Gottschalk v. Benson, 409 U.S. 63 (1972); State St. Bank & Trust Co., Inc. v. Signature Fin. Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998).

26. *See* Merges, *supra* note 24, at 581.

unrealistic, outlines a number of modest proposals for reforming the patent office. Under one proposal, the patent office would be allowed to subcontract patent search and examination procedures to outside firms.[27] Merges also proposes that the patent office reduce the turnover rate of its examiners by increasing the quality of its examinations. Specifically, he suggests that senior examiners should be paid more, and that the patent office should increase expenditures for training their most junior people.[28] A third set of proposals involves reforming the patent examiner bonus system, which is "believed to skew incentives in favor of granting patents."[29] Merges offers two possible ways of reforming the bonus structure, each centering on creating disincentives to issue patents that are later determined to be invalid in court or reexaminations.[30]

Merges concludes that trying to create a system within which examiners would never issue an invalid patent is unrealistic. The more reasonable goal of determining an acceptable "error rate," he argues, may be attainable by implementing these modest proposals.[31] These proposals, Merges suggests, focus on the relationship between the patent office and the private sector in such a way as to allocate efficiently costs to determine patent validity.[32]

II. GOVERNMENT REGULATION OF ELECTRONIC COMMERCE

Professor Michael Froomkin examines the issues surrounding Internet domain names, focusing on the creation and harmonization of governmental regulations of the domain name process. While lauding the initial declaration of principles in the Framework, Froomkin points out that the proposed action program "reveals a different view."[33] In *Of Governments and Governance*, Froomkin accuses the Clinton Administration of being "consumed by short-term policies and fail[ing] to grasp the consequences of the means proposed to achieve its short-term ends for long-term global governance."[34] Throughout the Framework, one can find calls for interna-

27. *See id.* at 604.
28. *See id.* at 608.
29. *Id.* at 609.
30. *See id.* at 609.
31. *See id.* at 615.
32. *See id.*
33. A. Michael Froomkin, *Of Governments and Governance*, 14 BERKELEY TECH. L.J. 617, at 620 (1999).
34. *Id.* at 620.

tional legal harmonization on electronic commerce issues. Froomkin looks to these edicts, and finds inconsistencies in the roles to be played by governments, industry, and international bodies in harmonizing the divergent rules. Harmonization is a challenging process, and subject to capture and other sub-optimal results. After a short discussion of the problems with the Article 2B process, Froomkin illustrates his point through an example with which he is deeply familiar: the World Intellectual Property Organization's domain name/trademark process.[35] WIPO is currently devising a process to address the issues created by the use of Internet domain names as marketing tools, as part of an international harmonization of domain name standards.[36] Noting the "dearth of consumer representatives, public interest groups, and citizen groups participating in the WIPO process," Froomkin argues that an elected government is a far better forum for providing notice to the public of the rules we expect them to obey.[37]

Professor Maureen O'Rourke also sees challenges in implementing consistent global rules based on the Framework's principles. She looks at the conflict between the Framework's call for decentralized, market-led regulation of commercial transactions and the need for certainty in electronic commerce.[38] While she finds the high level objectives of the Framework sensible, the "devil, as always, has been in the details."[39] Even if there is international agreement on a broad framework, O'Rourke foresees the possibility of discord if the details are implemented at the local level. O'Rourke illustrates her point with the example of proposed Article 2B of the Uniform Commercial Code. Article 2B proposes to enunciate a model law of computer information transactions, and thereby validate the concept of shrinkwrap software licenses.[40] Despite some agreement that a

35. Froomkin sits on a Panel of Experts charged with assisting WIPO on its contribution to the Internet Domain Name Process, and has written extensively on the proposal.

36. For more information on the WIPO Internet Domain Name Process, see World Intellectual Property Organization, *Internet Domain Name Process* (visited Apr. 7, 1999) <http://wipo2.wipo.int/>.

37. *See* Froomkin, *supra* note 33, at 628.

38. *See* Maureen A. O'Rourke, *Progressing Towards a Uniform Commercial Code for Electronic Commerce or Racing Towards Nonuniformity?*, 14 BERKELEY TECH. L.J. 635 (1999).

39. *Id.* at 637.

40. See U.C.C. Article 2B (Feb. 1, 1999 Draft). Since that draft, the National Conference of Commissioners on Uniform State Laws ("NCCUSL") and the American Law Institute ("ALI") have decided to table U.C.C. Article 2B, and promulgate the legal rules for computer information transactions for adoption by states as the Uniform Computer Information Transactions Act. *See* ALI-NCCUSL joint press release, *NCCUSL to Promulgate Freestanding Uniform Computer Information Transactions Act—ALI and*

model law could be useful, Article 2B has been mired in controversy, and lacks a broad consensus on its controversial issues.[41] Article 2B presents the essence of the conflict: a choice between uniform commercial standards that do not reflect commercial norms and the possibility of diverging legal standards that might slow the development of electronic commerce. O'Rourke calls for domestic and global conversations to resolve the "conflicting goals of flexibility and uniformity in the context of an overarching desire to encourage global electronic commerce."[42]

Another issue critical to the growth of electronic commerce involves the development of international norms for electronic payment systems. This is the focus of Professor Kerry Lynn Macintosh's article *The New Money.*[43] While consumers today seem to prefer using credit cards over other electronic payment systems, Macintosh believes that it is "much too early to conclude Internet commerce can—or should—rely primarily on credit cards."[44] Instead, the Internet needs "global electronic currencies" that are privately issued, managed, and denominated.[45] The global marketplace, she argues, should not depend on the inflationary monetary policies and politics of sovereign nations.[46] Instead, the private sector should, as the Framework urges, take the lead by developing stable electronic currencies. To facilitate the growth of these global electronic currencies, Macintosh suggests that policy makers heed the call of the Framework to refrain from adopting "inflexible and highly prescriptive regulations and rules."[47] Generally, Macintosh believes that the proposals regarding electronic payment systems offer good policies, but are valuable only if the government takes steps that are consistent with the recommendations.

Professor Jane Winn continues the discussion of electronic payment systems in her article, *Clash of the Titans: Regulating the Competition*

NCCUSL Announce that Legal Rules for Computer Information Will Not Be Part of UCC (Apr. 7, 1999) <http://www.2BGuide.com/docs/040799pr.html>.

41. See, e.g., articles published in a dual symposium of the *California Law Review* and the *Berkeley Technology Law Journal* in January 1999 and December 1998 respectively.

42. O'Rourke, *supra* note 38, at 657.

43. Kerry Lynn Macintosh, *The New Money,* 14 BERKELEY TECH. L.J. 659 (1999).

44. *Id.* at 664.

45. *See id.*

46. *See id.* at 665.

47. *Id.* at 660 (citing FRAMEWORK, *supra* note 1, § 2).

Between Established and Emerging Electronic Payment Systems.[48] The new communications and information technologies, she says, have created conflicts over market dominance between new and established players.[49] While the new, electronic-based "Olympians" have had few successes,[50] the established, paper-based "Titans" still dominate the industry.[51] Winn envisions a future in which the two sides collaborate to create a world in which new technology is used to access the existing infrastructure.[52] The ultimate winner of the battle, if any, may be determined by whether the new entrants in the market become subject to the same regulations as the rest of the industry.[53]

David Forst, a Silicon Valley tax attorney, outlines the difficulty of developing a tax regime for the digital environment in his article, *Old and New Issues in the Taxation of Electronic Commerce.*[54] The primary problem, he says, is that the Internet is still "a new medium whose full ramifications are not close to being understood."[55] The global nature of the Internet poses significant challenges to traditional notions of, among many other issues, jurisdiction, dispute resolution, and sovereignty. One question Forst examines within the context of electronic commerce is how the international community will fairly allocate online tax revenue as electronic commerce grows. The two options from which the world's nations have to choose are source-based taxation and residence-based taxation.[56] The trend, it seems, is toward a source-based form of taxation, which grants the country in which the enterprise earns the income the right to tax the profits of the enterprise.[57] The primary question now is how the international community will preserve the fiscal sovereignty of nations while equitably sharing the tax base from electronic commerce transactions.[58] This is particularly important, Forst notes, because, if a consistent interna-

48. Jane Kaufman Winn, *Clash of the Titans: Regulating the Competition Between Established and Emerging Electronic Payment Systems*, 14 BERKELEY TECH. L.J. 675 (1999).

49. *See id.* at 677.

50. *See id.* at 691-695.

51. *See id.* at 682.

52. *See id.* at 700.

53. *See id.* at 706.

54. David Forst, *Old and New Issues in the Taxation of Electronic Commerce*, 14 BERKELEY TECH. L.J. 711 (1999).

55. *Id.* at 711.

56. *See id.* at 712.

57. *See id.*

58. *See id.* at 716.

tional tax regime is to govern electronic commerce, it must be designed in such a way as to ensure that countries will not "believe that they are being denied their fair share of tax revenue."[59] Forst concludes that, while change in online tax regimes is inevitable, it will and should be incremental. In the meantime, policy makers should consider ways of relaxing barriers to countries taxing at the source by either expanding the use of consumption taxes or "liberaliz[ing] the permanent establishment principle in bilateral income tax treaties."[60]

III. DEVELOPING ELECTRONIC COMMERCE INFRASTRUCTURE AND STANDARDS

In his article, *The Speed Gap: Broadband Infrastructure and Electronic Commerce*, Professor Howard Shelanski identifies a number of constraints underlying the Federal Communication Commission's advanced-services proceedings.[61] He also suggests that policy makers should be wary of allowing these constraints to harm consumers or slow the development of affordable broadband services. Shelanski begins with an overview of the progress made in upgrading the telecommunications infrastructure to accommodate the demands of the national information economy. While fiber-optic cables have been deployed along freeways and main roads, they still have yet to reach individual consumers along neighborhood streets.[62]

Most of the alternatives for extending broadband capacity to consumers are expensive and represent only one of many factors in determining consumer demand for online transactions. However, as costs fall and connection speeds increase, consumers will eventually be able to access more interactive forms of information, and will likely "engage not just in more transactions, but in more *kinds* of transactions as well."[63] For businesses, cheaper Internet access will make it easier to enter and survive in the electronic marketplace by expanding the market for online businesses, increasing the number of transactions made electronically, and expanding the types of transactions consumers can make online. For government, this means that FCC regulators will have to decide fairly soon between, on the

59. *Id* at 715.

60. *Id.* at 716.

61. *See* Howard Shelanski, *The Speed Gap: Broadband Infrastructure and Electronic Commerce*, 14 BERKELEY TECH. L.J. 721 (1999).

62. *See id.* at 723.

63. *Id.* at 732.

one hand, the competitive benefits of opening the market to new entrants, and, on the other hand, the economies of scale and scope offered by incumbents that want to provide advanced services at prices lower than their competitors.[64] In other words, a choice will have to be made between the long-term benefits of competition and the short-term benefits of quality control and economies of scale.

Professor Mark Lemley finds that the Framework's proposals for technical standards have a lot of potential, and would be helpful if they were consistent with the government's actual approach. In his article, *Standardizing Government Standard-Setting Policy for Electronic Commerce*, Lemley explores the contradictions and gaps between the Framework and the standard-setting policies offered by the federal government.[65] Lemley argues first that electronic commerce definitely requires uniform standards, whether they are set by government mandate, industry organizations, or simply by a market "tip" in favor of one particular product.[66] The government's participation in setting these standards, however, runs against the policy document's strong position against government intervention. For example, while the Framework calls for the "development of a voluntary, market-driven key management infrastructure"[67] for encryption, the government has refused to allow companies to export or buy anything that fails to "meet its idea of a proper standard."[68]

Lemley then explores the tension between the Framework's proposals and the government's policies. That is, while the Framework supports the strengthening of intellectual property rights in the digital environment, such rights are by definition "inimical to open standard setting."[69] Even standard setting organizations such as the Internet Engineering Task Force ("IETF"),[70] Lemley points out, have difficulty maintaining open standards in the presence of strong intellectual property rights in the standards themselves.[71] Lemley argues that the way to resolve many of these tensions should start with government making a genuine effort to "get out of the way of private standard setting organizations that promote open stan-

64. *See id.* at 737.

65. *See* Mark Lemley, *Standardizing Government Standard-Setting Policy for Electronic Commerce*, 14 BERKELEY TECH. L.J. 745 (1999).

66. *See id.* at 747.

67. *Id.* at 748 (quoting FRAMEWORK, *supra* note 1, § 6).

68. *Id.* at 749.

69. *Id.* at 752.

70. For more information on the IETF, see Internet Engineering Task Force, *IETF Overview* (visited Apr. 8, 1999) <http://www.ietf.org/overview.html>.

71. *See* Lemley, *supra* note 65, at 750-51.

dards."[72] If the government chose to adopt a more progressive role, it could endorse interoperability and private sector initiatives by refusing to use or buy products that rely on closed proprietary standards.[73] The government, he concludes, has become involved when it has a stake in the outcome, even if the Framework says that the private sector should lead. Lemley argues that more than mere rhetoric is needed to deal with the questions posed by open and closed standards.

If the government continues to regulate cyberspace standards, despite the Framework's rhetoric, how far can it go before infringing on liberties, and how should the private sector respond? In *The Limits in Open Code: Regulatory Standards and the Future of the Net*, Professor Lawrence Lessig argues for open code within applications as a method of preserving liberties in cyberspace.[74] Lessig notes that "code" is a kind of cyberspace law, and argues that we should examine the freedoms and constraints built into the code, as we would real space law.[75] This examination reveals that controlling the code behind Internet standards allows the government to regulate by technical means what might be difficult, if not impossible, to regulate through traditional legal rules. By stepping back a level, and regulating the code that regulates behavior, governments may be able to engender regulatory regimes that the cyber-libertarians thought impossible just a few years ago.[76]

In order to preserve liberties in the face of possible regulation, Lessig looks to the open source movement. Closed code, where the source code is hidden, is subject to regulation to the extent that governments can control the originator. In contrast, open code, where the source code is made public, is far more challenging to regulate. Even if the law can mandate certain regimes to be reflected in the application, this does not insure that these regimes will be adopted. Lessig illustrates his point with the example of Netscape's open-source browser, controlled by an organization known as Mozilla.[77] While Mozilla might be required to insert weak encryption into the public source code, this does not mean that an end user would not replace the weak encryption with strong encryption before compiling the application. This, Lessig asserts, shows that "the regulability of the appli-

72. *Id.* at 756.

73. *See id.* at 756.

74. *See* Lawrence Lessig, *The Limits in Open Code: Regulatory Standards and the Future of the Net*, 14 BERKELEY TECH. L.J. 759 (1999).

75. *See id.* at 763.

76. *See id.* at 761.

77. *See id.* at 766.

cation space turns in part on whether the application space is open."[78] Lessig concludes with a note about the open source code movement. For many, Lessig notes, the virtue of making the source code public is in the efficiency and power that it enables. However, as he demonstrates in his article, there are greater issues at stake. Open code is not only valuable for utilitarian viability, but for the broader social values it supports and maintains.

Joel Reidenberg explains in his article, *Restoring Americans' Privacy in Electronic Commerce*, how a combination of technology and law can safeguard the privacy of electronic commerce consumers.[79] He argues that policymakers have adopted the theory that industry will eventually create adequate privacy protections for consumers on their own.[80] However, Reidenberg finds that companies have profited from the secret accumulation and sale of consumer information.[81] Acxiom Corporation, for example, "sells information such as ethnic and religious affiliations, the type of car a person drives, and whether a person buys specialty clothing like particular types of underwear."[82] Even the industry's self-regulation initiatives are less than reliable.

For its part, the Framework "ignores [the] incongruity" between American privacy policy and the global trend toward the establishment of comprehensive legal rights.[83] The enactment of comprehensive statutes, as in the case of Europe, has been slow. The European Directive took five years to assemble, and implementation within each nation was scheduled to take another three years.[84] Nevertheless, the Framework could have offered a few proposals to provide a new approach for privacy protection in the new environment of electronic commerce. Reidenberg offers three examples of what the Framework could have done. First, the United States should adopt the principles of the Organization for Economic Cooperation and Development, which offers a set of standards already recognized by American companies, and enact them into law.[85] Second, the government should act in a fashion that encourages technological devel-

78. *See* Lessig, *supra* note 74, at 767.

79. *See* Joel R. Reidenberg, *Restoring Americans' Privacy in Electronic Commerce*, 14 BERKELEY TECH. L.J. 771 (1999).

80. *See id.* at 774-775.

81. *See id.* at 776.

82. *Id.* at 4; *see also* Acxiom Direct Media, *Mailing Lists and More!* (visited Apr. 8, 1999) <http://www.directmedia.com/>.

83. *Id.* at 780.

84. *See id.* at 783.

85. *See id.* at 788.

opment, but only in such a way as to encourage "privacy protections rather than privacy intrusions."[86] Third, the government should establish a U.S. Information Privacy Commission to serve "the tripartite role of consensus builder, privacy arbitrator and international advocate."[87] Existing agencies and departments—such as the Department of Commerce, the State Department, and the White House Office of Management and Budget—are limited in the scope of their powers, and would not have as much authority to serve the three functions.[88]

IV. CONCLUSION

One theme that emerged from the live Conference and echoes throughout this Symposium issue is the need for consistency and vision in federal laws governing electronic commerce. That is, policy makers should draft legislation that is both consistent with federally-established principles and, more importantly, visionary enough to balance the interests of consumers and the private sector over the long term. To its credit, the Framework recognizes the unique nature of the Internet, and focuses on the development of information as a commodity. Nevertheless, the policy document lacks the political strength necessary to align rhetoric with actual policies. While the Framework claims that the private sector should lead,[89] federal initiatives in encryption, for example, seem to suggest that the private sector should lead only when the government wants it to lead. The Framework also lacks the insight necessary to craft a legal and policy infrastructure that enhances both the long-term profitability of the private sector and provides adequate incentives and protections for innovators and consumers. The Digital Millennium Copyright Act, for example, may have allayed the concerns of copyright industry companies, which have argued that "fair use should not be an acceptable reason to 'break' a technical protection system used by copyright owners to protect their works."[90] However, the legislation failed to alleviate the fears of Silicon Valley firms,[91] librarians, and nonprofit groups[92] that the anti-circumvention provisions would severely limit lawful use of and access to information. The actual policy also fails to conform to the Framework's principle of sup-

86. *Id.* at 789.
87. *Id.* at 790.
88. *See id.*
89. *See, e.g.*, FRAMEWORK, *supra* note 1, at 2.
90. Samuelson, *supra* note 16, at 539.
91. See id. at 522.
92. See id. at 540.

porting and enforcing a "minimalist, consistent, and simple legal environment."[93] Instead, it incorporates a short-sighted vision that maximizes near-term profits for a small set of intellectual property holders at the expense of long term economic growth. The future of the information economy requires the right balance of intellectual property rights with innovation, competition, and the free flow of information.[94]

Neither this Symposium issue nor the actual Conference purport to reconcile all of the inconsistencies, or offer all of the necessary solutions, but together they form a two-pronged attempt to reveal legal and policy issues that require careful and balanced consideration. To be sure, the criticism offered at this Conference does in fact come with constructive and realistic suggestions for change. Still, the next step depends heavily on the integrity and vision of policy makers as they construct the rules that will guide the development of electronic commerce as we collectively lay the foundation for our global information society.

93. FRAMEWORK, *supra* note 1, at 3.

94. *See* William Landes & Richard Posner, *An Economic Analysis of Copyright Law*, 28 J. OF LEGAL STUD. 325, 326 (1989); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 997-98 & n.32 (1997).