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From Patchwork to Network: Strategies for International Intellectual Property in Flux

Paul E. Geller

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From Patchwork to Network: Strategies for International Intellectual Property in Flux*

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Laws of intellectual property define what is bought and sold on media and technology markets, notably works, trademarks, and inventions. Laws and treaties have traditionally been made and enforced by nation-states operating in a patchwork of territories. Now, the media and technology marketplace is being globalized in digital networks. The law is only beginning to respond to this change.¹

To analyze this process in the field of intellectual property, this Article will consider the following questions: First, how is the patchwork of national laws lagging behind new networks in this field? Second, how does the international regime of intellectual property leave these laws in conflicts relative to the emerging global marketplace? Third, what strategies are available to private parties for dealing with legal uncertainties that are emerging in the short term? Lastly, how can these strategies be coordinated in the long term?

I. THE SHIFT FROM PATCHWORK TO NETWORK

How do the patchwork and network models apply in the field of intellectual property? A patchwork consists of differentiated units, each separated from the other by clear-cut borders in space. A network consists of individuals at terminals, each linked and interactively communicating with others across space, while networks themselves tend to interconnect with each other globally.² Until recently, national laws of intellectual property, along with corresponding markets, fit within the patchwork model. Now, media technologies are shifting the marketplace to the network model.

Laws of intellectual property have formed a patchwork country by country. Treaties in the field set out minimum rights, but in flexible terms so that each right may be implemented with more or less discretion.³ Otherwise, these treaties, starting with the Berne and Paris Conventions, provide for national treatment,

1. See, e.g., Paul Edward Geller, *New Dynamics in International Copyright*, 16 COLUM.-VLA J.L. & ARTS 461 (1992) (correlating changes in international copyright with changes in the media).

2. See generally W. RUSSELL NEUMAN, *THE FUTURE OF THE MASS AUDIENCE* 48-74 *passim* (1991) (emphasizing the proliferating interconnectivity of digital networks). See, e.g., NATIONAL RESEARCH COUNCIL, *THE UNPREDICTABLE CERTAINTY* 11-22 (1996) (analyzing the relation of the Internet to other networks).

3. See Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, arts. 6*bis*-16, 828 U.N.T.S. 221 (as last revised at Paris, July 24, 1971) [hereinafter Berne Convention]; Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, arts. 4-11 *passim*, 21 U.S.T. 1583 (as last revised at Stockholm, July 14, 1967) [hereinafter Paris Convention].

requiring each member-state to protect foreign treaty claimants like domestic claimants. Thus, while differing from country to country, much the same legal rules have governed most competitors in media and technology markets within each set of borders.⁴ Industries have tended to group within such borders: for example, publishers have gravitated to centers such as Paris, London, and New York. Hard copies and products have been marketed outward from such centers within national territories.

Now, however, markets are being globally networked. Computers are releasing creation and production from the constraints of geographical space. For example, they allow writers to ready text for publishing, composers to synthesize music, and designers to shape products, all at their desktops. Telecommunication media, like the fax and the Internet, enable teams of creators from the four corners of the earth to collaborate instantaneously across cyberspace.⁵ The World Wide Web opens up new interactive channels between creators and producers, on the one hand, and mass and specialized markets, on the other. More generally, the communication of media productions, marketing symbols, and technologies is being decentralized and enriched between points of input and end-use.⁶

4. See Berne Convention, *supra* note 3, art. 5; Paris Convention, *supra* note 3, arts. 2-3. Cf. Hanns Ulrich, *Technology Protection According to TRIPS: Principles and Problems*, in FROM GATT TO TRIPS 357, 366-69 (Friedrich-Karl Beier & Gerhard Schricker eds., 1996) (noting that national treatment leaves countries free to fashion laws of intellectual property pursuant to national policies). On rare points, countries do derogate from national treatment, lapsing into material reciprocity, but they then only further complicate the patchwork. See Paul Edward Geller, *Intellectual Property in the Global Marketplace: Impact of TRIPS Dispute Settlements?*, 29 INT'L LAW. 99, 100-01 (1995) [hereinafter Geller, *TRIPS Dispute Settlements?*].

5. See, e.g., Peggy M. Irish & Randall H. Trigg, *Supporting Collaboration in Hypermedia: Issues and Experiences*, in THE SOCIETY OF TEXT: HYPERTEXT, HYPERMEDIA, AND THE SOCIAL CONSTRUCTION OF INFORMATION 90 (E. Bartett ed., 1989) (analyzing existing technologies); Carl Tollander, *Collaborative Engines for Multiparticipant Cyberspaces*, in CYBERSPACE: FIRST STEPS 303 (Michael Benedikt ed., 1992) (anticipating future systems).

6. See Dan L. Burk, *Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks*, 68 TUL. L. REV. 1, 7-24 *passim*, 38-46 (1993); PAUL GOLDSTEIN, *COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX* 197-201, 234-36 (1994) [hereinafter GOLDSTEIN, *COPYRIGHT'S HIGHWAY*]; Brian Kahin, *The Internet Business and Policy Landscape*, 1997 ANN. REV. INST. FOR INFORMATION STUDIES 47, 50-56.

II. HOW THE SHIFT LEAVES LAWS IN VOLATILE CONFLICTS

Patchwork law lags behind the networked marketplace. It suffices to focus on one basic problem to dramatize this lag: What law or laws of intellectual property should a court choose to govern cross-border infringement? In the patchwork, enforcement country by country usually stopped illicit manufacturing or pirate presses, as well as commerce in infringing products or hard copies. Upon suit in any one country, the court there simply applied its own law to such products or copies within its jurisdiction. But what if, today, a court applied the law of any one country to network transactions crossing borders into other countries?⁷ That law could provide too much or too little protection, and that country could become either a choke point or a pirate haven.

For example, what law should govern transmitting raw data from a European database via the Internet to the United States or China? The European Union has now directed its member-states to institute *sui generis* property rights in raw data compiled into databases.⁸ Suppose that a court considers unauthorized transmissions of raw data from Europe as completely localized inside Europe, effectively at the point of transmission. Then a European law granting property rights in the data might be chosen, at the source, to apply the transmissions worldwide and, accordingly, to those received in the United States and China. That choice of law might well hinder, indeed choke off, data flow at points within the global network that policies in these countries, among others, would still leave open.⁹ Suppose, in turn, that a court localizes the infringing acts in the United States or China, where data is received but not strongly protected. Then, to European eyes, pirates may find havens in these

7. Compare Burk, *supra* note 6, at 48-67 (analyzing issues raised by cross-border patent infringement), and Curtis A. Bradley, *Territorial Intellectual Property Rights in an Age of Globalism*, 37 VA. J. INT'L L. 505 (1997) (critiquing extraterritorial application of laws, notably with regard to trademark infringement), with Paul Edward Geller, *International Copyright: An Introduction* § 3[1][b][iii] [hereinafter Geller, *International Copyright*], in 1 INTERNATIONAL COPYRIGHT LAW AND PRACTICE INT-46 to INT-50 (Paul Edward Geller & Melville B. Nimmer eds., 1997) [hereinafter INT'L COPYRIGHT LAW & PRACTICE] (proposing criteria for localizing cross-border copyright-infringing acts).

8. Council Directive 96/9/EC of 11 March 1996 on the legal protection of databases, arts. 7-11, 1996 O.J. (L.077) (European Community).

9. See generally J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51 (1997) (critiquing E.C. directive along with other initiatives and presenting policy arguments against granting property rights in raw data).

countries, from which they might more or less freely retransmit data.¹⁰

Such conflicts of laws are potentially quite volatile. The alternative resolutions just broached in the hypothetical data case parallel differing approaches to choosing laws to govern the broadcasting of works via satellite across multiple borders.¹¹ If suits for illicit satellite broadcasts were brought in different jurisdictions, the results could vary, for example, if one court applied the law of the transmitting country and another the laws of receiving countries.¹² Furthermore, not only do laws of intellectual property vary from country to country, but so do laws governing the ownership and transfer of such property, compounding the chances that different laws might be dispositive of similar cases of transfers of worldwide rights.¹³ Finally, different courts follow different methods of resolving conflicts of laws: for example, European courts tend to apply categorical rules often codified in statutes and treaties, while North American courts may more easily take account of public policies in choosing

10. Compare *National Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841, 848-53 (2d Cir. 1997) (not protecting raw data at issue, but opining that raw data may be protected against misappropriation as hot news), with *Guangxi Broad. & T.V. Newspaper v. Guangxi Coal Worker's Newspaper*, 1996 CHINA L. REP. 843 (Liuzhou Intermediate People's Court), noted in Guo Shoukang, *China* § 2[1][b], in 1 INT'L COPYRIGHT LAW & PRACTICE, *supra* note 7, at CHI-16 (holding it legitimate to reprint television-program data for the same and next day, but not necessarily for other uses).

11. See generally Geller, *International Copyright*, *supra* note 7, § 3[1][b][iii] at INT-50 to INT-53 (providing framework of analysis and citing authorities). Compare ROBERTO MASTROIANNI, DIRITTO INTERNAZIONALE E DIRITTO D'AUTORE 413-25 (1997) (attempting to reconcile the alternative approaches to resolving conflicts of laws in cases of both satellite-relayed broadcasts and on-line dissemination), with JEAN-SYLVESTRE BERGÉ, LA PROTECTION INTERNATIONALE ET COMMUNAUTAIRE DU DROIT D'AUTEUR: ESSAI D'UNE ANALYSE CONFLICTUELLE 221-26, 300-01, 394-98 (1996) (considering that the alternative approaches remain distinct and perhaps differently applicable to satellite-relay and on-line cases).

12. Compare Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission, recitals 9-15 and art. 1.2, 1993 O.J. (L.248/15) (localizing such broadcasts in transmitting E.C. countries, subject to safeguard rules for borderline cases), with *Directsatellitensendung* case, Judgment of Nov. 30, 1989, Oberlandesgericht (Vienna), 1990 GRUR Int. 537, 539, *aff'd*, Judgment of June 16, 1992, Oberster Gerichtshof (Austria), 1992 GRUR Int. 933, translated in 24 INT'L REV. INDUS. PROP. & COPYRIGHT L. 665 (1993) (localizing such broadcasts in receiving country).

13. Compare EUGEN ULMER, INTELLECTUAL PROPERTY RIGHTS AND THE CONFLICT OF LAWS (English trans. 1978) (explaining European conflicts approach to the choice of differing rules for contractual transfers of intellectual property), with Geller, *International Copyright*, *supra* note 7, § 6[2] at INT-210 to INT-234 (reconciling European and United States conflicts approaches relative to copyright contracts).

laws.¹⁴ Special conflicts analyses have been proposed to reduce such uncertainties in network cases, but they do not necessarily compel choosing the same laws in similar cases.¹⁵

To respond to this problem, among others, the goal of a supranational code has been contemplated in the field of intellectual property for over a century.¹⁶ Such a code would impose sufficiently uniform law worldwide that courts would not have to choose between conflicting laws on critical issues that typically arise in this field of law. The Berne and Paris Conventions have gradually approached this goal by dictating minimum rights that may be implemented with more or less variation in each member-state.¹⁷ Most recently, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) represents new progress, treating most branches of intellectual property in one text applicable to most countries.¹⁸ However, the TRIPs Agreement is not yet a systematic code, but it rather incorporates and supplements Berne and Paris provisions

14. See generally Thomas G. Guedj, *The Theory of the Lois de Police, A Functional Trend in Continental Private International Law—A Comparative Analysis with Modern American Theories*, 39 AM. J. COMP. L. 661 (1991) (criticizing the collapsing of European distinctions between rules and exceptions into undifferentiated policy analysis in U.S. conflicts law); Paul Edward Geller, *Conflicts of Laws in Cyberspace: Rethinking International Copyright*, 44 J. COPYRIGHT SOC'Y USA 103, 104-06 (1996) [hereinafter Geller, *Conflicts in Cyberspace*], in translation in the foreign-language versions of 31 UNESCO COPYRIGHT BULLETIN (no. 1) 3 (1997) and in expanded forms in THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 27 (P. Bernt Hugenholtz ed., 1996) [hereinafter THE FUTURE OF COPYRIGHT] and 20 COLUM.-VLA J.L. & ARTS 571 (1996) (distinguishing European and U.S. conflicts analyses relative to network transactions).

15. Compare François Dessemontet, *Internet, le droit d'auteur et le droit international privé*, 92 REV. SUISSE DE JURISPRUDENCE 285, 292 (1996) (proposing, for copyright, a formal scheme favoring choice of most protective law, as in general tort cases), with Paul Edward Geller, *International Intellectual Property, Conflicts of Laws, and Internet Remedies*, in LIBER AMICORUM HERMAN COHEN JEHOAM (Jan J.C. Kabel et al. eds., forthcoming 1998) [hereinafter Geller, *Conflicts and Internet Remedies*] (proposing a functional approach applying laws of the countries where remedies take effect).

16. See, e.g., WILLIAM BRIGGS, THE LAW OF INTERNATIONAL COPYRIGHT 162 (1906) (proposing, at the turn of the century, a "universal law of copyright [in] a single code, binding throughout the world").

17. See *supra* text accompanying notes 3-4. See generally WILHELM NORDEMANN ET AL., INTERNATIONAL COPYRIGHT AND NEIGHBORING RIGHTS LAW: COMMENTARY WITH SPECIAL EMPHASIS ON THE EUROPEAN COMMUNITY 15-19 (R. Livingston trans., 1990) (indicating parameters of Berne rights); G.H.C. BODENHAUSEN, GUIDE TO THE APPLICATION OF THE PARIS CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY 11-16 (1968) (indicating parameters of Paris rights).

18. Agreement on Trade-Related Aspects of Intellectual Property Rights, April 15, 1994, GATT Doc. MTN/FA II-A1C, 33 I.L.M. 81 (1994) [hereinafter TRIPs Agreement].

piecemeal.¹⁹ The TRIPs Agreement thus still leaves patchwork law lagging behind an increasingly networked marketplace.

III. TRANSITIONAL STRATEGIES FOR PRIVATE PARTIES

Hence the urgent question: What strategic options are available during this shift from patchwork to network? Distinguish the following levels of strategies: first, self-help; second, systems; and third, enforcement. In the transition from patchwork law, analysis at each of these levels takes place against the receding horizon of reliable network law. The following strategies are being outlined precisely to cope with this admittedly frustrating, interim perspective.

A. Self-Help Strategies

The first level is that of self-help strategies. Most simply, landlords build fences around their lands to prevent trespass, or herders brand cattle or sheep to keep rustling in check and, perhaps more importantly, to keep their livestock from being mixed up into their neighbors' herds on the way to market. Creators, innovators, and producers can use self-help measures, such as digital fences or brands, to manage what they originate, as well as to keep out or to help catch infringers.²⁰

Media productions, marketing symbols, technologies, and data, once digitized, can be copied perfectly and transmitted repeatedly worldwide. In copyright circles there is a slogan regarding self-help measures against the resulting threat of digital piracy: the answer to the machine is in the machine.²¹ That is, increasingly, new systems are being developed to fence in and to brand packets of digitized information and, more broadly, to manage its exploitation. Since the state of the art is rapidly changing, it would be futile to inquire into all possible strategies

19. See generally J.H. Reichman, *The TRIPs Component of the GATT's Uruguay Round: Competitive Prospects for Intellectual Property Owners in an Integrated World Market*, 4 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 171, 179-80 (1993) (critiquing TRIPs language as riddled with "untried, stopgap provisions, a few serious lacunae, and lots of loopholes").

20. See generally Ejan Mackaay, *The Economics of Emergent Property Rights on the Internet*, in *THE FUTURE OF COPYRIGHT*, *supra* note 14, at 13, 16-25 (analyzing relations between private fences and publicly protected property rights).

21. Charles Clark, *The Answer to the Machine is in the Machine*, in *THE FUTURE OF COPYRIGHT*, *supra* note 14, at 139.

at this level.²² Consider, instead, one oversimplified, hypothetical example.

Suppose that an epic feature film is produced at the cost of fifty-million dollars. Commonly, more money is charged for access to such films upon initial release and less as the market is saturated. It is then crucial to release the film subject to self-help measures that keep it from being uncontrollably retransmitted throughout the marketplace. The film can be encrypted, and an initial signal sent to end-users' terminals to trigger feedback to verify that these terminals would only decode the film for viewing upon compliance with programmed conditions.²³ At the threshold, end-users could only access the film in decoded form on the condition that their credit-card accounts be debited for viewing the film. At the lowest price, the terminal would destroy all trace of the film after displaying it once; at higher prices, the terminal would allow specified, subsequent uses. An interface would articulate such options among which the end-user could choose.²⁴

The mere fact that claimants resort to such fences does not imply any right to stop others from jumping over them. Such rights turn on whether or not the law deems what lies on the other side of any given fence to be protected, for example, as property. It is true that different courts have invoked diverse laws as the bases for remedies against commercial attempts to circumvent self-help measures.²⁵ Nonetheless, even with new treaty provisions on point, it remains uncertain how far the law should allow such actions, in particular against providers of devices that might facilitate circumvention of self-help measures but that are not exclusively designed for that purpose.²⁶

22. See, e.g., INTERACTIVE MULTIMEDIA ASS'N, ELECTRONIC COMMERCE FOR CONTENT, 2 F. TECHNOLOGY-BASED INTELL. PROP. MANAGEMENT (Brian Kahin & Kate Arms eds., Aug. 1996) (reviewing state of the art).

23. See Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 137, 139-44 (1997).

24. See *id.* at 144-53.

25. Compare *Vidéotron, Ltée. c. Industrie Microlec Produits Électroniques, Inc.* [1988] R.J.Q. 546 (Canada) (prohibiting commerce in unauthorized decoders of encrypted television signals on basis of unfair competition), with *BBC Enterprises, Ltd. v. Hi-Tech Xtravision, Ltd.* [1992] R.P.C. 167 (Ch. Div.), *rev'd, id.* at 183-93 (Court of Appeals), *reversal aff'd, id.* at 194-203 (House of Lords) (U.K.) (prohibiting such commerce on basis of copyright statute).

26. See World Intellectual Property Organization: Copyright Treaty [hereinafter WIPO Treaty], arts. 11-12; Agreed Statements Concerning the WIPO Copyright Treaty, art. 12; WIPO Performances and Phonograms Treaty, arts. 18-19, Agreed Statements Concerning the WIPO Performances and Phonograms Treaty, art. 19, all as adopted by the Diplomatic Conference in Geneva on Dec. 20, 1996, 36 I.L.M. 65. See generally Julie E. Cohen, *Some Reflections on*

B. System Strategies

The second level is that of system strategies. Self-help measures are nothing more than elements in larger system strategies. Return to the hypothetical example of the fifty-million dollar film.²⁷ To encrypt, deliver, and get paid for this film in the networked marketplace, its producer needs computer-driven systems. Such copyright-management systems must fit into some still-larger system, now effectively the Internet, that links rights-holders, credit-card accounts, and end-users. Indeed, diverse hardware and software systems, themselves programmed to run according to complex sets of rules, converge to form the networked marketplace.²⁸ Because such systems tend to become entangled with legal rules, they offer strategic options. Consider system strategies in a multidimensional analysis. The following distinctions can be drawn:

1. *Program and legal rules.* Computer-program rules can be distinguished from legal rules, including those which contractually bind parties. In the example of the film exploited thanks to computerized systems, program rules control its actual encryption and delivery on demand and, thus, end-users' access to it. Legal rules come into play to determine whether or not end-users contractually accept such rules as are programmed into these systems.
2. *Service and transactional rules.* Rules will vary in the extent to which they apply either throughout a given service or transaction by transaction. In the case of films delivered and enjoyed on demand and on-line, some rules may generally apply to all films delivered by a specific service, such as those governing participation or modes of payment. Others may change from particular transaction to transaction, such as the actual prices for access or re-access to the film. Of course, all such rules would be tailored according to the kind of works or data to which the public gains access.
3. *Surface and background rules.* As a matter of fact, end-users differ in their knowledge of program and legal rules in any

Copyright Management Systems and Laws Designed to Protect Them, 12 BERKELEY TECH. L.J. 161, 163-71, 179-83 (1997) (critically discussing legislative and treaty initiatives); Paul Goldstein, *Copyright and Its Substitutes: The Kastenmeier Lecture*, 1997 WIS. L. REV. 865 (stressing enforcement as well as policy problems).

27. See *supra* text accompanying notes 23-25.

28. See Joel Reidenberg, *Governing Networks and Rule-Making in Cyberspace*, in BORDERS IN CYBERSPACE: INFORMATION POLICY AND THE GLOBAL INFORMATION INFRASTRUCTURE 84, 88-90 (Brian Kahin & Charles Nesson eds., 1997) [hereinafter BORDERS IN CYBERSPACE]; Kahin, *supra* note 6, at 48-53.

given system. To analyze their varying awareness, we shall treat as surface rules those which are relatively obvious to end-users and as background rules those which remain obscure to them. In the case of the hypothetical film, most end-users would understand the surface program rule that entering an option on a menu, or clicking on an icon on screen, allows them to see the film, as they would the surface legal rule that they then owe money on their credit cards for such access. By contrast, program rules controlling encryption remain background rules for most users, as do the full set of legal rules governing the credit-card system.

These distinctions can cut across each other to varying effects. Program rules drive copyright-management systems, such as those controlling access to the hypothetical film.²⁹ Depending on applicable legal rules, a contract may arise when an end-user subscribes to an on-line service generally or pays for access to a media production like the film in a specific transaction. End-users can be put on notice of surface rules by user-interfaces that will appeal to the mass market to the extent that they are simple and easy to operate, but it might be necessary to resort to interfaces that articulate more complex contractual rules, especially in moving to more specialized, so-called niche markets.³⁰ For example, a developer of specialized software, in marketing to clients via the Internet, would do well to settle such terms as specifications, upkeep after initial delivery, and payment schedules. To the extent that market segments, such as mass and niche markets, are themselves networked, rules in one segment might impact on others. This possibility now troubles legislative initiatives concerning electronic commerce.³¹

That said, it would oversimplify matters to suggest that simple assent suffices to validate such contractual arrangements. It is already quite common, especially in technologically complex settings, for end-users to agree to standard-form contracts. Whether parties should be legally bound by contractual terms at the surface of such transactions will depend on overriding laws

29. See *supra* text accompanying notes 23-25.

30. Compare Fred M. Greguras, Trudy A. Golobic & Rebecca Duncan, *Software Marketing, Licensing and Distribution in Cyberspace*, 1 CYBERSPACE LAW., June 1996, at 4 (describing current state of software transactions on the Internet), with Stefik, *supra* note 23, at 145-52 (distinguishing rules for situations ranging from one-time use to complex re-uses of works).

31. See generally Raymond T. Nimmer, *Licensing on the Global Information Infrastructure: Disharmony in Cyberspace*, 16 NW. J. INT'L L. & BUS. 224, 235-247 *passim* (1995) (noting conflicts of laws, as well as varying standards for consumer and commercial contracts, in the electronic licensing of intellectual property).

and policies.³² Of course, standardization might facilitate network transactions, but it can arise for a host of other, possibly contingent reasons as well, among them the anticompetitive practices of parties in dominant market positions.³³ In any event, legal principles and public policies at work in various jurisdictions and fields of law, ranging from intellectual property to freedom of expression and antitrust, may also prove relevant to validating, or invalidating, contract terms.³⁴ Courts may apply such principles or policies with erratic effects from case to case, or statutory instruments may codify their effects by enumerating categorically unenforceable contract terms.³⁵

There is the hope, or fear, that intellectual property will be eclipsed by technological and contractual systems of control. Accordingly, some cyber-prophets have announced the death of intellectual property,³⁶ but news of this death might be premature. To start, older media are never fully swallowed up by newer media: just as live public performances are still attended, hard copies will continue to be read.³⁷ At a minimum, intellectual property will continue to play default roles that it has already developed with regard to older media, even as these feed newer

32. Cf. W. DAVID SLAWSON, *BINDING PROMISES: THE LATE 20TH-CENTURY REFORMATION OF CONTRACT LAW* 65-67, 90-103 *passim* (1996) (arguing that, where end-users cannot adequately understand standard-form contracts, law-makers must review the possible legal effects of standard forms in the light of public policies).

33. Compare W. Brian Arthur, *Positive Feedbacks in the Economy*, *SCI. AM.*, Feb. 1990, at 92, 99 (hypothesizing that some standards take hold because of historically contingent clusters of factors, rather than because of market-driven choices alone), with S. J. Liebowitz & Stephen E. Margolis, *Should Technology Choice Be a Concern of Antitrust Policy?*, 9 *HARV. J. L. & TECH.* 283, 288-312 (1996) (critiquing this hypothesis, but admitting that intellectual property can be a factor).

34. See generally J.H. Reichman, *Electronic Information Tools—The Outer Edge of World Intellectual Property Law*, 24 *INT'L REV. INDUS. PROP. & COPYRIGHT L.* 446, 461-67 (1993) (explaining, in a seminal analysis, how policies favoring the free flow of information impact on the legal validity of self-help measures, coupled with purported contracts, to control access to digitized materials).

35. Compare *Sega Enter., Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1521-28 (9th Cir. 1992) (allowing decompilation as fair use), with Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, art. 9(1) 1991 O.J. (L.122) 42 (invalidating contractual terms that purport to prohibit decompilation).

36. See John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights*, *WIRED*, Mar. 1994, at 84, also published as *Selling Wine without Bottles: The Economy of Mind on the Global Net*, in *THE FUTURE OF COPYRIGHT*, *supra* note 14, at 169.

37. See generally Richard Lick, *LA JUSTE COMMUNICATION* 28-29 (1988) (observing the cumulation of media, not replacement of older by newer media, through history).

media. Further, intellectual property would only become superfluous within the networked marketplace if all productions and data on-line were fully fenced in, both technologically and contractually.³⁸ Not only are such fences not necessarily without technical glitches or gaps, but nothing obligates right-holders to use them to control access to materials that they input into networks.

For example, a poet, looking for sympathetic readers, might post her texts on her web-site and, at the same, indicate that certain poems may be gratuitously retransmitted as long as they are attributed to her and not changed.³⁹ Suppose that a popular singer adapts one of these poems into the lyrics of a song exploited at great profit: the poet may assert her copyright or author's rights to obtain royalties or respect for her authorship.⁴⁰ Similarly, trademark and patent or hybrid rights provide lines of defense against network exploitation both of marketing symbols and of technological processes and data.⁴¹

C. Enforcement Strategies

After self-help and system strategies, the next level is that of enforcement. The law ultimately controls behavior by virtue of threats of enforcement. Most notably, pirates face civil and criminal remedies, and businesses negotiate contracts with an eye toward their relative force in arbitration or court. Civil litigation

38. *But cf.* Pamela Samuelson, *Copyright, Digital Data, and Fair Use in Digital Network Environments*, in *THE ELECTRONIC SUPERHIGHWAY* 117, 125 (Daniel Poulin et al. eds., 1995) (opining that copyright might still be necessary, "as a kind of deus ex machina" to justify, at least ideologically, "the use of technological and contractual measures").

39. *Cf.* NEAL BOWERS, *WORDS FOR THE TAKING: THE HUNT FOR A PLAGIARIST* (1997) (telling the tale of plagiarism of poetry, albeit in print, and dramatizing how such takings violate the poet's moral interests, by presenting one's intimate thoughts and feelings in corrupted texts and passing them off as another's).

40. *Compare* Paul Edward Geller, *The Universal Electronic Archive: Issues in International Copyright*, 25 *INT'L REV. INDUS. PROP. & COPYRIGHT L.* 54, 63-66 (1994) (stressing the importance of the right to attribution of authorship of, and possibly of hypertext reference back to, prior works in digital networks), *with* Adolf Dietz, *General Report: Authenticity of Authorship and Work*, in *ALAI STUDY DAYS, AMSTERDAM, 4-8 JUNE 1996: COPYRIGHT IN CYBERSPACE* 165, 176 (Marcel Dellebeke ed., 1997) [hereinafter *ALAI: COPYRIGHT IN CYBERSPACE*] (contemplating producers' as well as authors' rights to assure the authenticity of digitized works, subject to some "balancing of interests").

41. *See generally* Torsten Bettinger, *Trademark Law in Cyberspace—The Battle for Domain Names*, 28 *INT'L REV. INDUS. PROP. & COPYRIGHT L.* 508, 519-42 (1997) (analyzing significance of trademarks, trade names, and related interests for securing Internet domain names); Burk, *supra* note 6, at 28-36 (highlighting the relevance of software and process patents in network contexts); Reichman, *supra* note 34, at 468-75 (arguing for new rights in such contexts).

between private parties has the advantage of highlighting specific strategic options regarding enforcement in the transition from patchwork to network.⁴² These include selecting a court, putting pressure on points where systems converge, and attacking and defending at these points.

Think again of the hypothetical fifty-million dollar film.⁴³ Suppose that a pirate cracks the encryption system and is retransmitting the film for profit across borders. The rights-holder then faces an initial strategic question: In what court or courts to bring suit against the pirate? Indeed, confronted by conflicts of laws, European and North American courts may well choose laws differently.⁴⁴ They may also choose whether to exercise jurisdiction and extend the territorial scope of their orders according to quite different considerations. In Europe, the Brussels and Lugano Conventions may come into play, while courts in the United States look both to common-law doctrines such as *forum non conveniens* and to special concerns regarding federal jurisdiction.⁴⁵

The next pair of questions are interrelated: What laws to choose? And what preliminary orders to request from the court?⁴⁶ The film pirate has to rely on converging delivery and credit-card systems, as does the film provider, to market the film electronically and to get paid. One strategic option is to attack at this point of convergence, for example, by asking the court to so choose laws that it will order the delivery-service provider to reprogram its system to block access to the pirated work or the credit-card system to block payments to the pirate pending trial.⁴⁷ Distinct issues arise regarding remedies here: On the one hand, may content providers obtain court orders compelling service providers to reprogram systems to avoid infringement?⁴⁸ On the

42. *But cf.* TRIPs Agreement, *supra* note 18, arts. 41-61 *passim* (providing for enforcement measures, in particular at national borders in geographical space, but not expressly in cyberspace). *Cf.* Geller, *TRIPs Dispute Settlements?*, *supra* note 4, at 101-02, 106-12 (questioning whether TRIPs decision-makers may fill such gaps).

43. *See supra* text accompanying notes 23-25.

44. *See supra* text accompanying notes 13-14.

45. *See* Geller, *International Copyright*, *supra* note 7, § 6[1][a] and authorities cited therein, at INT-201 to INT-210.

46. *See* Geller, *Conflicts in Cyberspace*, *supra* note 14, at 112-16; Geller, *Conflicts and Internet Remedies*, *supra* note 15.

47. *Cf.* *Reebok Int'l, Ltd. v. Marnatech Enter., Inc.*, 970 F.2d 552 (9th Cir. 1992) (freezing alleged infringer's bank account in United States, on basis of showing of cross-border trademark infringement from Mexico to United States).

48. *Compare* *Playboy Enter., Inc. v. Chuckleberry Publ'g Inc.*, 939 F. Supp. 1032 (S.D.N.Y. 1996) (issuing complex set of orders to stop web-site in Italy from infringing trademark in the United States), *with* *Religious Tech. Ctr. v. Netcom*

other hand, may content providers make service providers liable to pay damages for infringement?⁴⁹ Defenses are developing on this point: services that ignore content are proving rather resistant to damage suits.⁵⁰

This legal environment is like a dense and tangled jungle. Content providers can here spring surprise litigation attacks from forums that they have shopped, while service providers risk being caught unawares on the defensive or in cross-fire between right-holders and pirates.⁵¹ Depending on their varying interests, parties subject to such attacks may ask themselves whether they are better off conforming their conduct to the laws effective within the most protective jurisdictions in the global network or within its most profitable market segments or, in the alternative, whether they can get away with taking advantage of the lack of protective laws in data havens.⁵² Stray facts can also bear on survival: for example, damages in one small country might be tolerable, but not on a continental scale, or it might be easy to reprogram a system to comply with an order in one case, but difficult in another.

In any event, as the costs and dangers of fighting increase in this worldwide jungle of patchwork law, its denizens might start to dream of an orderly garden of reliable network law.⁵³ Such law might include procedures to handle claims of cross-border infringement, to block access or payment in easily confirmed

On-Line, Inc., 907 F. Supp. 1361, 1382-83 (N.D. Cal. 1995) (refusing to grant preliminary injunction against bulletin-board and network services pending the resolution of factual issues).

49. Compare *Telstra Corp. Ltd. v. APRA Ltd.* (Australian High Court), (1997) 146 A.L.R. 649 (holding mobile-telephone service liable for infringing copyright in music that it relayed to parties put on hold), with *Religious Tech. Ctr. v. Netcom On-Line, Inc.*, 907 F. Supp. 1361, 1381 (N.D. Cal. 1995) (reasoning that bulletin-board service with relationship to party inputting materials might be liable for infringing copyright in them, but holding that network service merely relaying materials, absent proof of scienter, is not liable).

50. See, e.g., *Scientology v. XS4ALL*, Order of March 12, 1996, President District Court, The Hague (Netherlands), reported in 1996 MEDIAFORUM B59 (declining, at initial stage, to hold Internet providers liable for access to copyright materials placed on their servers' websites without their knowledge), translated in Dirk J.G. Visser, *Netherlands*, in ALAI: COPYRIGHT IN CYBERSPACE, *supra* note 40, at 139.

51. See *supra* text accompanying notes 43-50.

52. See *supra* text accompanying notes 8-12.

53. Compare I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace,"* 55 UNIV. PITT. L. REV. 993, 1019-21 (1994) (contemplating spontaneous development of common cyber-law on model of medieval law merchant), with Paul Frissen, *The Virtual State: Postmodernisation, Informatisation and Public Administration*, in THE GOVERNANCE OF CYBERSPACE 111 (Brian D. Loader ed. 1997) (contemplating autonomous self-regulation of diverse communities through networked administrations).

cases of piracy, and to refer difficult cases to arbitration and, ultimately, to the courts.⁵⁴ These utopian thoughts bring us to the task of coordinating the self-seeking strategies of private parties in the light of global public policies.

IV. THE LARGER INTERNATIONAL PERSPECTIVE

Patchwork law continues to serve as the default structure within which network law will evolve in the foreseeable future. In the interstices of this patchwork structure, national laws come into play with increasing risks of conflicts in the globally networked marketplace.⁵⁵ In the systems converging to form this marketplace, computer-program rules are proliferating, but it remains to be seen how these may best feed into legal rules.⁵⁶ The following criteria are provisionally ventured to help coordinate the strategies previously proposed to cope with this transition from patchwork to network:

1. *Avoid falling back into the default position of patchwork law.* Nation-states typically legislate to solve locally defined problems. They thus tend to overload existing legal structures with endemically differentiated national laws. The first criterion is then merely cautionary, directing analysis away from old sources of such patchwork law and toward more suitable sources of network law.
2. *Organize private-public initiatives to elaborate transnational network law.* Diverse parties, ranging from private individuals and enterprises to public entities, including nation-states, build and participate in network systems. Along with end-users, ultimately the public at large, these parties all have interests in the orderly and reliable operation of their internationally converging systems. The second criterion favors initiatives that bring such parties together to elaborate transnational law for global networks.
3. *Formulate such law compatibly with diverse cultures.* In the patchwork, diverging legal conceptions can cohabit on the

54. See generally Henry H. Perritt, Jr., *Dispute Resolution in Electronic Network Communities*, 38 VILL. L. REV. 349 (1993) (elaborating a framework for handling legal claims in cyberspace); THOMAS DREIER, *COPYRIGHT LAW AND DIGITAL EXPLOITATION OF WORKS: THE CURRENT COPYRIGHT LANDSCAPE IN THE AGE OF THE INTERNET AND MULTIMEDIA* 43-44 (C. Thomas trans., 1997) (discussing cross-border jurisdiction and remedies).

55. See *supra* text accompanying notes 7-15.

56. See *supra* text accompanying notes 28-35.

opposite sides of borders. In digital networks, such divergences risk being compounded as contractual and other legal rules proliferate from system to system. The third criterion requires that, rather than being cast in a Babel of cyber-jargons, basic principles of network law make sense across cultural lines.

The domain-name crisis illustrates these criteria. The same trademark may be used by different parties in different places or on different goods. Each domain name is used on the World Wide Web across territorial lines as a unique address. The first criterion, just listed above, was only partially satisfied in the initial cases involving domain names. In these cases, trademark owners invoked patchwork national laws to challenge domain names that were similar to their marks.⁵⁷ In line with the second criterion, initiatives are now seeking to increase the variety of higher-level domain names available internationally. At the same time, private and public parties, including the World Intellectual Property Organization (WIPO), are establishing procedures for resolving disputes concerning such names.⁵⁸ Now, domain names often serve as trade names, which the Paris Convention protects along with trademarks, but without prioritizing all these symbols.⁵⁹ To satisfy the third criterion, a rule governing relations between such symbols needs to be formulated compatibly with laws worldwide.

Treaty provisions may well remain the best instruments for harmonizing the relations between such symbols from country to

57. See, e.g., *Playboy Enter.*, 939 F. Supp. 1032 (ordering web-site in Italy to stop trademark infringement in the United States); *Panavision Int'l, L.P. v. Toeppen*, 945 F. Supp. 1296 (C.D. Cal. 1996) (prohibiting domain name preemptively filed and used in conflict with trademark). *But cf.* *Cavani c. Solignari*, Order of Oct. 23, 1996, Tribunal of Modena (Italy), 1996 ANNUARI ITALIANI DI DIRITTO D'AUTORE 279 (declining to impose liability for unfair competition resulting from the use, on a web-site for lawyers and jurists, of a domain name similar to the trade name of a legal journal, but enjoining any such confusing use).

58. See generally *Bettinger*, *supra* note 41, at 513-519 (discussing proposed WIPO scheme for settling disputes regarding domain names). See also U.S. Dep't of Commerce, *A Proposal to Improve Technical Management of Internet Names and Addresses* (Discussion Draft Jan. 30, 1998) <<http://www.ntia.doc.gov/ntiahome/domainname/dnsdrft.htm>> [hereinafter *Magaziner Report*] (proposing dispute resolution under the auspices of multiple domain-name registries coordinated by one not-for-profit corporation).

59. Paris Convention, *supra* note 3, art. 8. See generally *BODENHAUSEN*, *supra* note 17, at 133-34 (explaining that rules protecting trade names, notably relative to trademarks, may vary).

country.⁶⁰ Indeed, in the field of intellectual property generally, international treaties, such as the Berne and Paris Conventions, have proved effective in forestalling many, though far from all, of the conflicts to which patchwork law is susceptible. Admittedly, the new, transnational initiatives contemplated here will not be without their own disadvantages and difficulties.⁶¹ Hence the question: How to build on the strengths of the time-tested Berne-Paris regime in pursuing initiatives to elaborate network law? To begin inquiry, it will prove useful to apply the three criteria for such initiatives in another branch of intellectual property, namely copyright.

A. *Beyond the Default Position*

The first criterion of avoiding patchwork law will encounter resistances in the area of copyright. Law-making is here pushed and pulled by a perplexing variety of interest groups and passions. For example, authors haggle with producers, but both groups join in opposing users as diverse as broadcasters and libraries and, most recently, end-users on the global network. Further, copyright provincialisms, arising out of cultural tensions, prompt groups to favor local laws, to demonize unfamiliar foreign laws, and to attempt transplanting their notions worldwide.⁶²

Such groups clashed at the Diplomatic Conference which WIPO held at the end of 1996. The Conference then compromised on controversial points in drafting the WIPO treaties. So-called agreed statements, along with these treaties themselves, now leave the rights of reproduction and communication to the public open-ended and contemplate new exceptions in digital media.⁶³

60. Cf. Frederick W. Mostert, *Well-Known and Famous Marks: Is Harmony Possible in the Global Village?*, 86 TRADEMARK REP. 103 (1996) (considering treaty provisions on well-known marks as the basis for a harmonizing approach).

61. See, e.g., *infra* text accompanying notes 61-66 (noting doctrinal tensions between systems that make harmonization difficult) and notes 73-78 (noting the risk of hyper-regulation of networks by multiple, uncoordinated law-makers).

62. See, e.g., GOLDSTEIN, *COPYRIGHT'S HIGHWAY*, *supra* note 6, at 165-72, 190-96; BERNARD EDELMAN, *LA PROPRIÉTÉ LITTÉRAIRE ET ARTISTIQUE* 27-30, 65-69, 94-95 (1989) (touching on such tensions from United States and French points of view, respectively). See generally Paul Edward Geller, *Legal Transplants in International Copyright: Some Problems of Method*, 13 U.C.L.A. PAC. BASIN L.J. 199, 218-30 (1994) (proposing criteria for acceptable transplants).

63. See WIPO Copyright Treaty, *supra* note 26, Preamble, arts. 8, 10; Agreed Statements Concerning the WIPO Copyright Treaty, *id.*, arts. 1(4), 8, 10; WIPO Performances and Phonograms Treaty, Preamble, *id.*, arts. 7, 10, 11, 14, 16; Agreed Statements Concerning the WIPO Performances and Phonograms Treaty, *id.*, arts. 7, 11, and 16.

Unfortunately, the distinctions between such rights specifically, as well as between rights and exceptions generally, diverge systematically at the deepest levels from one copyright law to another.⁶⁴ For example, France and Germany formulate all rights broadly in terms of reproduction and communication, while drawing exceptions in narrowly construed statutory terms.⁶⁵ By contrast, the United States enumerates these rights with others in a closed list and exempts fair use in elastic, judicially crafted terms.⁶⁶

The new WIPO Copyright Treaty and Performances and Phonograms Treaty have not reconciled these very different approaches to rights and exceptions. Both treaties employ sufficiently vague language on point to allow member-states some room to vary rights and exceptions according to local predilections.⁶⁷ Most critically, the right which these treaties specifically articulate for network systems, the right to control communication to the public, is not coupled with any definition of the private sphere that would limit its scope. Furthermore, under the so-called umbrella reading of this right, each country may implement it with rights that are either broadly conceptualized according to the Continental European approach or narrowly enumerated according to the Anglo-American approach, and varying overlaps with the reproduction right are possible.⁶⁸ Under the new WIPO Treaties, nation-states may thus continue to make patchwork law in this branch of intellectual property. What initiatives might prepare the way for network law?

B. *Transnational Initiatives*

The second criterion of organizing private-public initiatives addresses needs specific to global networks. The present analysis has already broached some of the problems that such initiatives could help to solve in these new media environments. For

64. See generally ALAIN STROWEL, DROIT D'AUTEUR ET COPYRIGHT: DIVERGENCES ET CONVERGENCES 144-49, 290-91 (1993) (noting differences between Continental European and Anglo-American legal systems in legislative and judicial techniques for determining the scope of copyright).

65. See André Lucas, *France* §§ 8[1][b]-8[2], in 1 INT'L COPYRIGHT LAW & PRACTICE, *supra* note 7, at FRA-110 to FRA-123; Adolf Dietz, *Germany* §§ 8[1][b]-8[2], in 2 *id.* at GER-93 to GER-109.

66. See David Nimmer, *United States* §§ 8[1][b]-8[2][a], in *id.* at USA-129 to USA-144.

67. See Mario Fabiani, *The Geneva Diplomatic Conference on Copyright and the Rights of Performers and Phonogram Producers*, [1997] ENT. L. REV. 98, 102.

68. See Mihály Ficsor, *The Spring 1997 Horace S. Manges Lecture—Copyright for the Digital Era: The WIPO "Internet" Treaties*, 21 COLUM.-VLA J.L. & ARTS 197 (1997).

example, one type of initiative could standardize copyright-management systems, both technologically and contractually, to assure their seamless use across borders.⁶⁹ As another example, consider initiatives to establish dispute-settlement procedures that, coupled with new judicial procedures, would expedite handling claims of cross-border infringement.⁷⁰

Such private-public initiatives would not fit neatly within the traditional distinctions of international law. Private parties have usually exercised decentralized powers of choice in the marketplace, while public authorities in centralized nation-states have ratified and limited these powers as rights under patchwork law. The private international laws of such states have then normally accorded most rights of nationals to foreign parties,⁷¹ while public international law in treaties such as the Berne and Paris Conventions has specified state obligations to assure such private rights in the field of intellectual property.⁷² However, mutant rule-making creatures are now evolving in the globally networked marketplace that no longer fit comfortably on one side or the other of such traditional distinctions between private rights and public laws and treaties.⁷³ In particular, ostensibly private enterprises can sometimes impose rules in their network systems, as if they were public authorities, for example, by excluding rebellious or misbehaving parties from such systems.⁷⁴

69. See *supra* text accompanying notes 21-29.

70. See *supra* text accompanying notes 54, 57-59. Another initiative would network databases in patent and trademark offices worldwide to facilitate transnational searches and examinations. See Charles Berman, *Moving the patent process into the 21st century*, MANAGING INTELL. PROP., Mar. 1997, at 24.

71. See, e.g., *Huston v. Turner Entertainment*, Judgment of May 28, 1991, Cass. civ. 1re (France), 149 REV. INT'L DR. D'AUTEUR 197 (1991), translated in 23 INT'L REV. INDUS. PROP. & COPYRIGHT L. 702 (1992) (recognizing foreign author's moral rights pursuant to domestic private international law without reference to any treaty), *on remand*, Judgment of Dec. 19, 1994, Cour d'appel, chs. réunies (Versailles), 164 REV. INT'L DR. D'AUTEUR 389 (1995).

72. See generally FERENC MAJOROS, LE DROIT INTERNATIONAL PRIVÉ 8-10 (3d ed. 1990) (indicating that rules governing conflicts of laws are often dictated by treaty).

73. It suffices to glance at reference works in the field to see the difficulty of characterizing these new creatures in traditional terms. See, e.g., IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 69 (4th ed. 1990) (hesitating to characterize *sui generis* entities in general terms of international law absent treaty terms on point, but proposing that their status only be conditionally determined "for particular purposes"). Cf. PAUL REUTER, INTRODUCTION TO THE LAW OF TREATIES 33 (2d English ed. 1995) (noting the possibility of "an agreement between a State and an individual," but doubting the application of "the legal régime of inter-State treaties except on a very limited number of points").

74. See, e.g., David Johnson & David Post, *The Rise of Law on the Global Network*, in BORDERS IN CYBERSPACE, *supra* note 28, at 3; Henry H. Perritt, Jr.,

Furthermore, private-public initiatives have been developing the Internet, and the enterprises and agencies investing in these initiatives have serious interests in assuring the orderly operation of this global system.⁷⁵

The patchwork of jurisdictional competencies of nation-states does not fully catch these new rule-making creatures within its grasp. For example, it remains unclear how national courts may oversee international domain-name registries or review arbitral decisions settling disputes with regard to such names.⁷⁶ More generally, diverse pressure groups can be expected to prompt national legislatures to elaborate public laws to regulate network commerce that affects local consumers or business interests. Such schemes will overlay the patchwork of laws recognizing private rights, such as those sounding in intellectual property, that already tend to enter into conflicts in applying to cross-border transactions.⁷⁷ Thus global networks risk hyper-regulation as national laws, as well as international treaties, impact in unexpected ways with such new program and contractual rules as network enterprises and agencies propose to participants in their systems. Some commentators place their hopes in transnational governance regimes that would at least engage traditional law-makers and these new rule-making creatures in harmonizing dialectics with each other.⁷⁸ Such hopes, it will now be suggested, can be bolstered by looking to common threads in diverse legal cultures.

Jurisdiction in Cyberspace: The Role of Intermediaries, *id.* at 164 (both indicating the resources of network systems to enforce program and legal rules that they impose on end-users).

75. See NATIONAL RESEARCH COUNCIL, *supra* note 2, at 22-24, 197-230 *passim*. Cf. J.H. Reichman & David Lange, *Bargaining Around the TRIPs Agreement: The Case for Ongoing Public-Private Initiatives*, 1 DUKE J. COMP. & INT'L L. (forthcoming 1998) (analyzing private-public initiatives, especially regarding intellectual property).

76. See *supra* text accompanying notes 57-59; see, e.g., *Magaziner Report*, *supra* note 58 (raising the issues of overseeing domain-name registries judicially for antitrust abuses and of implementing agreements by domain-name registrants to submit disputes to resolution procedures and, eventually, to the jurisdiction of national courts).

77. See *supra* text accompanying notes 7-12. Note that the laws implementing public policies, such as antitrust laws, are not necessarily subject to the same conflicts analyses as private rights of intellectual property. Cf. Hanns Ullrich, *TRIPs: Adequate Protection, Inadequate Trade, Adequate Competition Policy*, 4 PAC. RIM L. & POL'Y J. 153, 196 (1995) ("antitrust is by no means bound to take intellectual property-based territorial divisions as sacrosanct").

78. See Walter S. Baer, *Will the Global Infrastructure Need Transnational (or Any) Governance*, in NATIONAL INFORMATION INFRASTRUCTURE INITIATIVES: VISION AND POLICY DESIGN 532, 539-548 (Brian Kahin & Ernest J. Wilson, III eds. 1997); Reidenberg, *supra* note 28, at 91-100.

C. Multicultural Compatibility

The third criterion of compatibility also corresponds to network conditions. In the mass market, user-interfaces are more likely to become standards to the extent that they are user-friendly.⁷⁹ These same interfaces will convey to end-users the contractual terms with which network enterprises propose to bind them. The fact that the shortest, simplest interfaces will tend to become the most widespread raises problems of validating them as short-form standard contracts.⁸⁰ In the global marketplace, it is submitted, thought should be given to solving such problems compatibly with legal cultures worldwide.

It has been contended that the invisible hand of the marketplace will favor network rules that more and more end-users accept in participating in systems that incorporate these rules.⁸¹ At a minimum, this argument has the merit of pointing out that some network rules may obtain contractual force by virtue of acceptance throughout a marketplace that transcends territorial borders. Nonetheless, it is unclear to what extent end-users will knowingly assent to ostensibly contractual choices on user-friendly interfaces, for example, when entering options in short menus or clicking on simple icons that do not fully spell out underlying terms and conditions.⁸² It also remains questionable under what conditions end-users may, in all legal cultures, contractually waive basic rights of privacy and freedom of expression and, accordingly, of creatively reworking copyright materials.⁸³

Some of these difficulties can be forestalled by comparative legal analysis. Research can seek out principles common to most or all legal cultures in the light of which standard user-interface

79. See *supra* text accompanying notes 28-30.

80. See, e.g., SLAWSON, *supra* note 32, at 21-31 *passim* (highlighting that acceptance of contract terms without fully understanding them is often unavoidable in a technologically complex society and that complex terms are often cryptically incorporated by reference in short-form standard contracts).

81. See Johnson & Post, *supra* note 74, at 21-37 *passim*.

82. Cf. Nimmer, *supra* note 31, at 239-240 (asking how "humanistic" contractual doctrines of knowing acceptance might apply to automated electronic commerce).

83. See generally STIG STRÖMHOLM, RIGHT OF PRIVACY AND RIGHTS OF THE PERSONALITY, A COMPARATIVE SURVEY (1967) (surveying rights of privacy in different legal cultures); IVAN CHERPILLOD, L'OBJET DU DROIT D'AUTEUR 152-71 *passim* (1985) (surveying exceptions in different laws allowing for creatively reworking copyright materials); Cohen, *supra* note 26, at 175-187 (questioning enforceability of overbroad contractual waivers).

terms might be made interoperable worldwide.⁸⁴ The drafters of the Berne and Paris Conventions, in elaborating minimum rights of intellectual property compatible with different legal cultures, have begun to work out a kind of *lingua franca* for the field.⁸⁵ Furthermore, judges ideally characterize the facts of cross-border cases in terms "referable indifferently to foreign as well as to domestic substantive law" before making any choice between conflicting laws.⁸⁶ Such terms might also provide the keys to formulating contract-rule modules that user-interfaces can incorporate compatibly with diverse laws.

V. CONCLUSION

Digital media have unleashed deep-running changes in the international regime of intellectual property. The patchwork of nation-states can no longer respond, with its purely territorial laws, to network imperatives of interconnectivity. Just as paper and print once undermined the feudal order, these media changes are dislocating modern allocations of law-making power.⁸⁷ Inevitably, hard cases will arise at myriad interfaces, for example, between freely creative individuals and technologically fenced-in data, masses of end-users and elite system-operators, and content and service providers. Short-term strategies, useful to private parties in such cases, have here served as starting points for elaborating longer-term, law-making methodologies.

84. See generally Rudolf B. Schlesinger, *The Common Core of Legal Systems: An Emerging Subject of Comparative Study*, in XXTH CENTURY COMPARATIVE AND CONFLICTS LAW: LEGAL ESSAYS IN HONOR OF HESSEL E. YNTEMA 65, 76-77 (Kurt H. Nadelmann et al. eds., 1961) (explaining methodology of deriving principles common to diverse legal cultures). See, e.g., Paul Edward Geller, *Toward an Overriding Norm in Copyright: Sign Wealth*, 159 REV. INT'L DR. D'AUTEUR 3 (1994) (elaborating a norm common to both Anglo-American and Continental European copyright cultures, on the basis of which hard cases may be coherently resolved).

85. See Geller, *International Copyright*, *supra* note 7, § 1[2] at INT-11, § 2[3][b] at INT-39; see also ADOLF DIETZ, *COPYRIGHT LAW IN THE EUROPEAN COMMUNITY* 9 (English trans. 1978) (speaking of the "more or less gentle and gradual pressure towards harmonization" exercised by Berne).

86. ERNST RABEL, 1 *THE CONFLICT OF LAWS: A COMPARATIVE STUDY* 55 (2d ed. 1958).

87. See generally HAROLD A. INNIS, *EMPIRE AND COMMUNICATIONS* 5 (1950, new ed. by David Godfrey, 1986) (noting that "civilization reflects the influence of more than one medium, and . . . the bias of one medium towards decentralization is offset by the bias of another medium toward centralization"). See also Harold A. Innis, *Minerva's Owl*, in *THE BIAS OF COMMUNICATION* 3, 20-32 *passim* (1951, new ed. 1995) (indicating roles of paper and printing in transition from feudal to modern orders).