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A NEW DEAL FOR END USERS? LESSONS FROM A FRENCH
INNOVATION IN THE REGULATION OF
INTEROPERABILITY

JANE WINN* & NICOLAS JONDET**

ABSTRACT

In 2007, France created the Regulatory Authority for Technical Measures (l'Autorité de Régulation des Mesures Techniques or ARMT), an independent regulatory agency charged with promoting the interoperability of digital media distributed with embedded "technical protection measures" (TPM), also known as "digital rights management" technologies (DRM). ARMT was established in part to rectify what French lawmakers perceived as an imbalance in the rights of copyright owners and end users created when the European Copyright Directive (EUCD) was transposed into French law as the "Loi sur le Droit d'Auteur et les Droits Voisins dans la Société de l'Information" (DADVSI). ARMT is both a traditional independent regulatory agency and a novel attempt to develop a new governance structure at the national level to address global information economy challenges. The fear that other national governments might follow suit seems to have helped to cool enthusiasm for TPM among some businesses. This Article notes parallels between the limitations imposed on ARMT and those imposed on the first modern independent regulatory agencies that emerged in the United States in the late nineteenth and early twentieth centuries. Using history as a guide, it is not surprising that the ARMT's exercise of authority has been limited during its early years; it remains possible that ARMT may become a model for legislation in other countries. It took decades before the first American independent regulatory agencies exercised

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real authority, and their legitimacy was not established beyond question until Roosevelt's "New Deal." Even though information society institutions may evolve quickly, national governments are sure to require more time to develop effective, legitimate ways to ensure that global information and communication technology (ICT) standards conform to their national social policies.

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INTRODUCTION

In 2007, France created the Regulatory Authority for Technical Measures (l'Autorité de Régulation des Mesures Techniques or ARMT), an independent regulatory agency charged with promoting interoperability of media technologies used by French consumers.¹ ARMT is both a traditional independent regulatory agency and a novel attempt to develop a governance structure to address information economy challenges.² The growth of digital media and the expansion of global electronic communications networks have revolutionized the ways in which information is created, distributed, and accessed.³ Although these changes have made possible many new forms of creativity and processes for exchanging ideas, they have also dramatically facilitated the unauthorized reproduction and distribution of copyrighted works. The ensuing mass copyright infringement threatened traditional business models in the music, film, broadcasting, and video game industries. In an attempt to stifle such piracy, the media industry has implemented various strategies with a predilection for technological solutions and for the toughening of copyright laws. Indeed, content producers have embedded technologies in media software and hardware to control the way in which consumers can access, use, and copy digital media. These technologies are commonly known as "Digital Rights Management" systems (DRMs) but are referred to in legal instruments as "Technological Protection Measures" (TPMs).⁴ Unfortunately, for the media industry, TPMs are inherently fallible as ingenious hackers

1. Press Release, Ministère de la Culture et de la Communication, Installation de l'Autorité de Régulation des Mesures Techniques (Apr. 6, 2007), <http://www.armt.fr/IMG/pdf/installationARMT.pdf> [hereinafter Press Release]; Nicolas Jondet, DRM Watchdog Established in France (Décret n° 2007-510 du 4 Avril 2007), FRENCH-LAW.NET, Apr. 11, 2007, <http://french-law.net/drm-watchdog-established-in-france-decret-2007-510-4-avril-2007.html>.

2. Press Release, *supra* note 1.

3. Urs Gasser, *Legal Frameworks and Technological Protection of Digital Content: Moving Forward Towards a Best Practice Model*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 39, 40 (2006).

4. See, e.g., WIPO Copyright Treaty, art. 11, Dec. 20, 1996, S. TREATY DOC. NO. 105-17, 2186 U.N.T.S. 152 [hereinafter WIPO Copyright Treaty]. For an explanation of the differences between DRMs and TPMs, see OFFICE OF THE PRIVACY COMM'R OF CANADA, FACT SHEET: DIGITAL RIGHTS MANAGEMENT AND TECHNICAL PROTECTION MEASURES (2006), http://www.priv.gc.ca/fs-fi/02_05_d_32_e.cfm.

always find ways to circumvent them.⁵ In an effort to offset this vulnerability, copyright industries have successfully lobbied international institutions and national governments to introduce legal prohibitions on tampering with TPMs. The principles of the legal protection of TPMs, and of the prohibition of their circumvention, were first set in the World Intellectual Property Organization (WIPO) Internet Treaties,⁶ adopted in 1996. Anticircumvention provisions have subsequently been implemented in national laws, such as the U.S. Digital Millennium Copyright Act (DMCA) of 1998,⁷ and regional instruments, such as the 2001 European Copyright Directive (EUCD).⁸ The resulting legal landscape has enabled the widespread deployment of TPMs in digital content distribution. Soon enough, however, the unintended consequences of TPMs for consumers became apparent. Chief amongst them were the facts that TPMs challenged consumers' ability to benefit from copyright limitations, such as fair use,⁹ and that they undermined the portability of digital media due to a lack of interoperability between competing technologies. The international copyright framework, as designed in the mid-1990s, did not address issues that materialized only a decade later. And this is precisely when France belatedly decided to abide by its international obligations and grant legal protection to TPMs.

In an original attempt to address consumer concerns raised by the widespread use of TPMs, the French Parliament passed the "Loi Relative au Droit d'Auteur et aux Droits Voisins dans la Société l'Information" (DADVSI),¹⁰ which created the ARMT and transposed

5. Stefan Bechtold, *Digital Rights Management in the United States and Europe*, 52 AM. J. COMP. L. 323, 331 (2004).

6. This includes the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, both adopted in Geneva. See WIPO Copyright Treaty, *supra* note 4; WIPO Performances and Phonograms Treaty, Dec. 20, 1996, S. TREATY DOC. NO. 105-17, 2186 U.N.T.S. 203.

7. Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.).

8. Council Directive 2001/29, Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, 2001 O.J. (L167) 10 (EC) [hereinafter Directive 2001/29]. Like the DMCA, this Directive implements the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. See *id.* at 11.

9. See generally Nicola Lucchi, *Countering the Unfair Play of DRM Technologies*, 16 TEX. INTELL. PROP. L.J. 91 (2007).

10. Law No. 2006-961 of Aug. 1, 2006, Journal Officiel de la République Française [J.O.]

the EUCD.¹¹ The DADVSI therefore departs from other European and international instruments as it tries to counterbalance the rights granted to copyright owners, through the protection of TPMs, with guarantees for consumers of cultural goods, notably in terms of interoperability of these TPMs. This Article will consider the political pressures and compromises that led to the establishment of ARMT and the scope of its mandate in order to assess its viability as a legislative model. The initial grant of authority to ARMT was narrow. Since its formation, it has carried out its mission cautiously, giving rise to criticism that it may never deliver on its original promise.¹² Notwithstanding its modest short-term impact, ARMT may one day be seen as an important experiment in the regulation of technological innovation. If ARMT ultimately becomes a model for regulatory innovations, then it would resemble the first modern independent regulatory agency, the U.S. Interstate Commerce Commission (ICC), which at first appeared to be a failure but later became a very influential model.¹³

And although independent regulatory authorities play different roles under French and U.S. administrative law, this Article will consider the status of ARMT under French administrative law in light of some significant historical developments in U.S. administrative law. The French legislature's original mandate for ARMT was challenging: to protect the French public's interest in preserving limitations on copyrights and the interoperability of TPMs. To fulfill its interoperability mandate, ARMT may require the provider of a particular technology to disclose proprietary information to a competitor to permit said competitor to achieve interoperability between the two technologies. Mandating disclosures by dominant producers represents an *ex post* focus on the problem, whereas promoting the use of technical standards represents an *ex ante* approach to the problem. This Article will therefore also consider

[Official Gazette of France], Aug. 3, 2006, p.11529. See generally Nicolas Jondet, *La France v. Apple: Who's the DADVSI in DRMs?*, 3 SCRIPTED 473 (2006), <http://www.law.ed.ac.uk/ahrc/script-ed/vol3-4/jondet.asp>.

11. Jondet, *supra* note 10, at 475.

12. See, e.g., European Digital Rights, *France: ARMT Was Useless*, EDRI-GRAM, Jan. 14, 2009, <http://www.edri.org/edri-gram/number7.1/armt-useless>.

13. Robert Rabin, *Federal Regulation in Historical Perspective*, 38 STAN. L. REV. 1189, 1213-15, 1233-36 (1986).

the costs and benefits of using technical standards to preserve copyright limitations and promote TPM interoperability even though ARMT is not currently authorized to regulate the use of technical standards to achieve its goals. Despite ARMT's lack of authority, within the larger context of EU legislation in the area of standards, ARMT might serve as a legislative model for an agency with such authority in the future.¹⁴

In competitive markets, the use of technical standards is generally voluntary and market participants with little or no government oversight determine the degree of standardization.¹⁵ In such contexts, government intervention may be limited to ensuring the security of contract and property rights, preventing fraud or anticompetitive behavior, or promoting the accurate disclosure of information. In the context of social regulation, however, the interaction between law and standards may be significantly different because government may require market participants to internalize certain costs they would otherwise prefer to externalize.¹⁶ The government may mandate compliance with technical standards, provide reference standards to signal regulator expectations, or develop the standards directly.¹⁷ With the rapid growth of the information economy,¹⁸ conflicts between social regulations and the norms implicit in technical standards for information and communications technologies (ICTs) products and services set by market

14. See generally Evangelos Vardakas, Enter. Directorate-Gen., European Comm'n, *The Role of Government in Standards Settings: A European View* (Dec. 11, 2002), in VADEMECUM ON EUROPEAN STANDARDISATION, Nov. 15, 2003, http://ec.europa.eu/enterprise/standards_policy/vademecum/doc/standards_setting_governance_ev.pdf.

15. OFFICE OF TECH. ASSESSMENT, 96TH CONG., GLOBAL STANDARDS: BUILDING BLOCKS FOR THE FUTURE (1992); CARL CARGILL, OPEN SYSTEMS STANDARDIZATION: A BUSINESS APPROACH 26, 29-32 (1997).

16. CARGILL, *supra* note 15, at 27-28. The OECD defines economic regulation as intervention "in market decisions such as pricing, competition, market entry, or exit" designed to increase efficiency, and social regulation as intervention to "protect public interests such as health, safety, the environment, and social cohesion." ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD), THE OECD REPORT ON REGULATORY REFORM: SYNTHESIS 6 (1997).

17. Peter J. May, *Social Regulation*, in THE TOOLS OF GOVERNMENT: A GUIDE TO THE NEW GOVERNANCE 156, 161, 165-66 (Lester Salamon ed., 2002).

18. Uday M. Apte & Hiranya K. Nath, *Size, Structure and Growth of the U.S. Information Economy*, in MANAGING IN THE INFORMATION ECONOMY 17-19 (Annals of Info. Syst., Vol. 1, 2007).

forces seem destined to increase.¹⁹ This increase will also place pressure on legislators to grapple with the challenges of meshing ICT standards with social regulation.

ARMT's original mandate targets issues related to the distribution of copyrighted works over ICT networks. The hallmark of a network is that its value increases with the number of users connected to it, whether it is a real network (such as a railroad) or a virtual network (created by many individuals using the same ICT such as compact disk storage media).²⁰ With regard to activities that take place within information networks, strong positive and negative externalities produce network effects that in turn create strong pressure for convergence around a single network, product, or standard.²¹ As a practical matter, ICT network-product interoperability can be achieved in a variety of ways, including through the use of proprietary technologies, such as the Microsoft Windows operating system, by means of reverse engineering, or the use of standards. The use of standards often translates into significant benefits for consumers, although there may be significant costs as well.²² Common benefits include the simplification of complex processes, increased economies of scale, reduction of information asymmetries, and increased competition among vendors.²³ Costs may include reduction in product variety, increased risk of lock-in to a particular problem-solving approach, and switching costs for producers whose systems are incompatible with the standard.²⁴

There are also costs and benefits associated with attempts to incorporate technical standards into regulation to change behavior. Regulation by means of standards involves complex issues, including whether the standard should target its objective directly or indirectly by use of a proxy for the public interest involved; the degree of specificity with which the standard is expressed; the choice

19. KNUT BLIND, *THE ECONOMICS OF STANDARDS* 89 (2004).

20. CARL SHAPIRO & HAL R. VARIAN, *INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY* 174 (1999).

21. *Id.* at 173-225.

22. SAMUEL KRISLOV, *HOW NATIONS CHOOSE PRODUCT STANDARDS AND STANDARDS CHANGE NATIONS* 4-7 (1997).

23. Michelle Egan, *Setting Standards: Strategic Advantages in International Trade*, 13 *BUS. STRATEGY REV.*, Mar. 2002, at 51, 52.

24. *Id.*

between performance standards, which describe goals generally, and design standards, which are technology specific; whether compliance with the standard should be mandatory or voluntary; and whether the standard should express an aspirational goal beyond what current technology can achieve or refer to existing technology.²⁵

I. REGULATORY AUTHORITY FOR TECHNICAL MEASURES

A. *The Interoperability Requirement*

In 2006, France enacted DADVSI, which includes a requirement that TPMs must not prevent effective interoperability between digital file formats and the various software and devices on which they can be played.²⁶ French lawmakers were worried that a successful proprietary TPM technology could become a de facto standard, locking in cultural goods consumers to the exclusive benefit of the technology provider.²⁷ French lawmakers were particularly concerned about what was already happening in the field of digital music distribution. Apple had been dominating the market both in sales of digital music files, through its iTunes music store, and in sales of portable media players, through its iPod player.²⁸ Part of this success stemmed from Apple's strategy to use its exclusive TPM technology, FairPlay, to tie the music sold on iTunes to the iPod player.²⁹ As a consequence, iPod owners who wished to buy digital music could only get compatible files from iTunes. Conversely, owners of digital players produced by another manufacturer could

25. STEPHEN BREYER, REGULATION AND ITS REFORM 103-14 (1982).

26. CODE DE LA PROPRIÉTÉ INTELLECTUELLE [C. PROP. INTELL.], art. L331-5 (Fr.). An earlier version of this narrative was previously published in Jane Winn & Nicolas Jondet, *A "New Approach" to Standards and Consumer Protection*, 31 J. CONSUMER POL'Y 459 (2008).

27. M. CHRISTIAN VANNESTE, RAPPORT FAIT RELATIF AU DROIT D'AUTEUR ET AUX DRUITS VOISINS DANS LA SOCIÉTÉ DE L'INFORMATION, RAPPORT NO. 2349, at 20-22 (2005), available at <http://www.assemblee-nationale.fr/12/pdf/rapports/r2349.pdf> [hereinafter RAPPORT NO. 2349].

28. Competitors have estimated that Apple controls 83 percent of the online music market and 90 percent of the hard-drive based music player market. Thomas Claburn, *Antitrust Lawsuit Charges Apple with Monopolizing Online Music*, INFORMATION WEEK, Jan. 3, 2008, http://www.informationweek.com/news/personal_tech/show/Article;html?articleID=205207895.

29. Steve Jobs, *Thoughts on Music* (Feb. 6, 2007), <http://www.apple.com/hotnews/thoughtsonmusic/>.

not play songs bought from Apple. Apple's proprietary technology was thus becoming the de facto standard for digital music distribution. French lawmakers believed that such a technology-based monopoly in the cultural goods market would be detrimental to consumers and the dissemination of, and equal access to, culture.³⁰

To tackle this issue, the French Parliament had to be creative. International instruments mandating the legal recognition and protection of TPMs did not address the negative consequences TPMs might have on consumer choice in the cultural goods market. The WIPO Internet Treaties and the EUCD were drafted at a time when TPM technology was still in its infancy and had yet to be deployed on a large scale. Problems associated with TPMs first emerged only a few years after the adoption of the international instruments which legalized them. France had missed the December 2002 deadline for transposing the EUCD into national law, so by the time the French lawmakers finally took up the matter in earnest in 2005, the potential negative impact of TPMs on consumer choice had become fully visible.³¹

The French Parliament was under an international obligation to legalize TPMs, but was also fully aware of the problems TPMs created for consumers and thus tried to mitigate some of the shortcomings of TPMs. The French Senate Committee argued that although the EUCD did not itself contain provisions relating to consumer issues, the recitals of the directive provided some legal basis for an interoperability requirement.³² The Senate Committee pointed to Recital 48, which states that the legal protection granted to TPMs should not be limitless and notably that it "should respect proportionality and should not prohibit those devices or activities which have a commercially significant purpose or use other than to circumvent the technical protection."³³ The Senate Committee also pointed to Recital 54,³⁴ which acknowledges that even though

30. RAPPORT NO. 2349, *supra* note 27, at 20-22.

31. The deadline for implementing the EUCD was December 22, 2002. See Directive 2001/29, *supra* note 8, at 19.

32. MICHEL THIOLLIÈRE, RAPPORT FAIT AU DROIT D'AUTEUR ET AUX DROITS VOISINS DANS LA SOCIÉTÉ DE L'INFORMATION, RAPPORT NO. 308, at 145 (2006), available at <http://www.senat.fr/rap/105-308/105-3081.pdf> [hereinafter RAPPORT NO. 308].

33. *Id.* at 145.

34. *Id.* at 146.

“[i]mportant progress has been made in the international standardization of [TPMs] ..., differences between [TPMs] could lead to an incompatibility of systems within the Community.”³⁵ Finally, Recital 54 encouraged the “[c]ompatibility and interoperability of the different systems,” as well as “the development of global systems.”³⁶ French lawmakers took the initiative to translate these mere aspirations into a legal requirement. They decided that some form of technology-forcing legislation was needed to compel recalcitrant copyright owners and TPM vendors to support interoperability.³⁷ The business community strongly opposed compulsory licensing, so lawmakers adopted the less coercive requirement that TPMs should interoperate instead. The parliamentary debate then focused on determining which institution should be in charge of enforcing this requirement.³⁸

B. The Inadequacy of Existing Institutions

One option was to let the civil courts implement interoperability, as they have jurisdiction over intellectual property matters in general and copyright issues in particular. However, lawmakers deemed civil courts unsuitable to carry this task because they would lack the expertise, speed, and secrecy required to deal with highly sensitive and fast-evolving technologies. They also feared that civil courts across the country could issue conflicting decisions, which would only be resolved many years later by the Court of Cassation, France’s highest court in civil and criminal matters. Such a long time frame would be ill-suited for technological innovation.³⁹

Another avenue explored by Parliament would have been to entrust the French Competition Authority with the mission to enforce the interoperability requirement. Indeed, choosing the Council on Competition would have solved many of the issues associated with civil courts. The Council is a single, centralized institution with authority over all of France and is accustomed to handling and

35. Directive 2001/29, *supra* note 8, Recital 54, at 15.

36. *Id.*

37. On technology-forcing legislation, see BREYER, *supra* note 25, at 106-07.

38. RAPPORT NO. 308, *supra* note 32, at 150-54.

39. *Id.* at 155.

guaranteeing the secrecy of sensitive information in competition law matters.⁴⁰ But unfortunately for French lawmakers, the Council had already implicitly condoned the lack of TPM interoperability.

In a 2004 decision, the Council ruled that Apple's refusal to license its TPM technology to its competitor, VirginMega, was not an abuse of dominant position.⁴¹ The decision of the Council on Competition is in itself very interesting.⁴² VirginMega, an online platform offering music downloads,⁴³ sued Apple for abuse of dominant position. VirginMega was selling music protected by the Windows DRM technology, which is incompatible with Apple's very popular iPod. In order to reach owners of iPods, VirginMega had asked Apple to license its FairPlay technology.⁴⁴ When Apple refused, VirginMega launched a lawsuit before the Council on Competition arguing that such refusal to license its technology prevented would-be competitors from operating other download platforms.⁴⁵ For VirginMega, the FairPlay technology had become so prevalent that it was essential to the success of any online music platform.⁴⁶ As a result, VirginMega and other services asserted that they would have no chance to prosper by selling music incompatible with the iPod.

The question was thus whether access to Apple's FairPlay technology was indispensable to online music platforms. The Council concluded that it was not. First, the Council observed that, according to studies conducted in 2004, French consumers predominantly enjoyed their digital music on computers rather than on portable devices.⁴⁷ Importantly, computer users have access to the complete

40. Autorité de la Concurrence, Reform of the French Competition Regulatory System: The Conseil de la Concurrence Becomes the Autorité de la Concurrence, http://www.autoritedelaconcurrence.fr/user/standard.php?id_rub=317 (last visited Oct. 28, 2009).

41. Conseil de la Concurrence, Decision No. 04-D-54 of Nov. 9, 2004 ¶¶ 104-05 [hereinafter Decision No. 04-D-54].

42. See generally Natali Helberger, *Virgin Media Versus iTunes*, INDICARE, Oct. 28, 2005, http://www.indicare.org/tiki-read_article.php?articleId=150.

43. VirginMega, Achat Musique en Ligne, <http://www.virginmega.fr/accueil.htm> (last visited Oct. 18, 2009).

44. Decision No. 04-D-54, *supra* note 41, ¶¶ 6-7.

45. *Id.* ¶¶ 7-9.

46. *Id.* ¶ 65.

47. *Id.* ¶¶ 76-80.

range of TPM-compliant media players, meaning that they are able to read files protected by both the Windows DRM and FairPlay technologies, albeit by using two different media players (Windows Media Player and iTunes, respectively). Because computers can play any type of TPM-protected music, no particular TPM is indispensable, as online platforms can choose amongst different technologies to protect the content they distribute. Second, the competition authority observed that consumers could easily and legally bypass technological protections. The Council noted that there was a simple way of transferring songs bought on VirginMega to an iPod: CD burning.⁴⁸ The Council gave a step-by-step explanation of the process, instructing consumers to burn on a blank CD the songs they had downloaded on VirginMega, then copy the songs back from the CD onto their computer using an unprotected media file format such as the MP3.⁴⁹ The resulting MP3 files would then be playable on any media device, including the iPod.⁵⁰ The Council argued that this solution was legal since all music platforms allowed songs to be copied on a CD at least once.⁵¹ It also noted that the process involved little extra cost (that of the blank CD) and was both well-known and frequently used by digital consumers.⁵² VirginMega consumers thus had the ability to make the songs they downloaded compatible with the iPod. Lastly, the Council observed that the market for portable media players was very competitive, with all the competitors of the iPod, including VirginMega, using Microsoft technology.⁵³ The competition authority concluded that the FairPlay technology was not indispensable for VirginMega to set up a successful online platform; consequently, Apple's refusal to license its technology was not anticompetitive.⁵⁴

When trying to decide which institution would be best suited to enforce DADVSI's new interoperability requirement, the French Parliament observed that the Council decision was legally sound and that, since then, no new element had emerged that would make

48. *Id.* ¶¶ 81-85.

49. *Id.*

50. *Id.* ¶ 84.

51. *Id.* ¶ 82.

52. *Id.*

53. *Id.* ¶¶ 86-89.

54. *Id.* ¶¶ 104-05.

the Council reverse its decision.⁵⁵ As a result, it was clear that if the Council were mandated to enforce a new interoperability requirement, it would likely once again refuse to find a legal justification to intervene in the market, thus making the whole exercise pointless.

C. The ARMT: Its Inherent Limitations and Impact

French lawmakers ultimately chose to create ARMT, a dedicated independent administrative authority, to enforce the interoperability requirement. ARMT was authorized to force a TPM owner to disclose information essential to achieve interoperability, notably by imposing huge fines.⁵⁶

So far the mechanism has not been tested. No one has yet challenged a supplier of TPMs before the ARMT. This is partly due to ongoing changes in the structure of the Authority and partly to the inherent limitations of the procedure before the ARMT. As of 2009, the ARMT was still not fully operational. Indeed, in 2008, the French government introduced the Creation and Internet Bill in Parliament to completely overhaul the ARMT by changing its name, composition, and missions.⁵⁷ Under the proposed legislation the ARMT will be revamped into the High Authority for the Dissemination of Works and the Protection of Rights on the Internet (Haute autorité pour la diffusion des œuvres et la protection des droits sur Internet or HADOPI).⁵⁸ The HADOPI would be the cornerstone of the so-called graduated response policy (also referred to as “three strikes and you’re out”) under which repeat copyright offenders could be disconnected from the Internet. Until the adoption of the Creation and Internet Bill, which is expected to occur in late 2009,⁵⁹

55. RAPPORT NO. 308, *supra* note 32, at 152.

56. Jondet, *supra* note 10, at 483-84.

57. Ministère de la Culture et de la Comm'n, *Projet de loi Favorisant la Diffusion et la Protection de la Création sur Internet 4-6* (June 18, 2008), <http://www.culture.gouv.fr/culture/actualites/dossiers/internet-creation08/6%20-%20Projet%20de%20loi.pdf>.

58. ASSEMBLÉE NATIONALE, PROPRIÉTÉ INTELLECTUELLE: CRÉATION SUR INTERNET (2008), available at <http://www.assemblee-nationale.fr/13/dossiers/internet.asp>.

59. In October 2008, the Senate adopted a first draft of the Creation and Internet Bill. See *Projet de loi Favorisant la Diffusion et la Protection de la Création sur Internet* (2008), <http://www.senat.fr/leg/tas08-008.pdf>. The lower house of Parliament started discussion of the bill's text in March 2009.

it seems unlikely that an interoperability case can be brought before the authority.⁶⁰

Even after the authority is fully functional, the strict rules limiting the entities allowed to refer a case might ensure that no interoperability case would ever be brought. Indeed, under the current system, consumers and consumer groups are not allowed to bring an interoperability claim before the authority. This option is only open to some technology companies, namely software publishers, manufacturers of technical systems, and services providers.⁶¹ The decision to exclude consumers from a process designed to protect them seems, at first, inconsistent. However, French lawmakers argued that allowing the general public to have access to highly confidential information about TPMs could compromise their integrity.⁶² Technology companies were deemed to be more capable of both safeguarding and using the essential information to achieve interoperability. Nevertheless, excluding consumers from the process could render the whole mechanism pointless if technology companies enter a tacit pact of nonaggression. Once the authority is up and running, it will be interesting to see which technology company, if any, will bring the first interoperability case.

In spite of these shortcomings, the French framework created by DADVSI may have already had an impact on the global marketplace for TPMs, at least in the field of digital music.⁶³ DADVSI may have played an important part in Apple's decision in early 2007 to push record labels to offer digital music without TPMs. Apple was already facing strong opposition from consumers and legal challenges in the United States and Europe over its TPM technology, and the prospect of dealing with French regulators could have been the deciding factor in the company's change of direction.⁶⁴

DADVSI also clearly illustrates the intention of the French government and Parliament to address the consumer issues raised by

60. For a more complete analysis of HADOPI, see Nicolas Jondet, *The French Copyright Authority (HADOPI), the Graduated Response and the Disconnection of Illegal File-Sharers* (unpublished manuscript, on file with author).

61. C. PROP. INTELL., art. L331-7, ¶ 1.

62. Jondet, *supra* note 10, at 483.

63. Jondet, *supra* note 1, § 4.2.

64. Nicola F. Sharpe & Olufunmilayo B. Arewa, *Is Apple Playing Fair? Navigating the iPod FairPlay DRM Controversy*, 5 NW. J. TECH. & INTELL. PROP. 332, 342-45 (2007).

TPMs. This concern for the interests of consumers of cultural goods was also evident during the elaboration of the Creation and Internet Bill. The Bill is the legal translation of a far-reaching agreement, known as the Elysée Agreement, signed in November 2007 by the French government, the copyright industry, and Internet services providers.⁶⁵ Under this agreement, the French government undertakes to pass antipiracy legislation instituting a graduated response mechanism. In exchange, the music industry notably undertakes to suppress all noninteroperable TPMs from their catalogues of online French music within a year after the implementation of the graduated response mechanism.⁶⁶ From the point of view of the government, the policy objectives are clear: punishing copyright infringers whilst helping legitimate consumers by making the legal offer of cultural goods more user-friendly. By early 2009, France was the only country in Europe to take concrete steps toward enacting a three strikes law to punish end users engaged in peer-to-peer file sharing. The European Parliament and several other European countries considered such legislation in 2008 but rejected it as an unwarranted interference in individual rights.⁶⁷ If the Creation and Internet Bill is adopted, and the HADOPI agency undertakes its new three strikes authority with the enthusiasm that content producers in France and in other countries would like, its role in enforcing traditional intellectual property rights may quickly overshadow its responsibilities for protecting the consumer interest in interoperability of media devices.

Although ARMT's mandate still preserves beneficial copyright limitations for French consumers of cultural goods, there has been even less progress on this front than on the interoperability front. This apparent loss of enthusiasm is less surprising than it might first appear, however, when put in the larger context of French copyright law and policy generally. Even though French consumers

65. MINISTÈRE DE LA CULTURE, "ACCORDS DE L'ELYSEE": UN ACCORD HISTORIQUE QUI PROFITE AUX CONSOMMATEURS AUTANT QU'AUX ARTISTES, DESTINÉ À FAIRE DU PIRATAGE UN RISQUE INUTILE 1-3 (2007), available at http://www.culture.gouv.fr/culture/actualites/dossiers/internet-creation08/Accords_Fiche%20explicative.pdf.

66. *Id.* at 2.

67. Sean Michaels, *France Votes for "Three Strikes" Filesharing Law*, THE GUARDIAN, Nov. 4, 2008, <http://www.guardian.co.uk/music/2008/nov/04/french-filesharing-legislation>. For a more complete analysis of HADOPI, see Jondet, *supra* note 60.

currently pay a levy on blank recording media to finance a fund to compensate copyright owners for private copying,⁶⁸ the Court of Cassation recently adopted a very restrictive interpretation of what the private copy exception means under French copyright law.⁶⁹ The French consumer advocacy organization UFC-Que Choisir, together with a consumer known as Stéphane P., brought the suit to clarify the scope of the French consumer's right to make private copies.⁷⁰ Stéphane P. had purchased a film in DVD format and wanted to make a copy in VHS form because his parents did not have a DVD player, but he was prevented from doing so due to the anticopy protection on the DVD.⁷¹ The Court of Cassation ruled against the consumer by ruling that private copying was an exception, not a right. Not only were copyright holders entitled to use TPMs to prevent private copying, but consumers were not even entitled to spontaneously challenge such use. The private copying exception, said the Court of Cassation, could only be used as a defense in a copyright infringement case and not as an affirmative cause of action.⁷² It is important to note that the case was decided by application of copyright law as it was decided prior to the adoption of DADVSI. One of the aims of DADVSI was to offer some guarantees that the use of TPMs would not deprive consumers of the benefit of copyright exceptions such as the private copying exception. After DADVSI, consumers and consumer groups can refer a case before the ARMT arguing that TPMs unduly prevent them from benefiting from copyright exceptions. However, if consumers

68. Dugie Standeford, *French Industry Attacks Private Copy Fees as Levy Debate Grows*, INTELL. PROP. WATCH, Nov. 16, 2007, <http://www.ip-watch.org/weblog/2007/11/16/french-industry-attacks-private-copy-fees-as-levy-debate-grows/>.

69. Cour de cassation [Cass.1e civ.] [highest court of ordinary jurisdiction], June 19, 2008, Bull. civ. I 2008, M. Perquin, available at <http://www.foruminternet.org/specialistes/veille-juridique/jurisprudence/cour-de-cassation-1re-chambre-civile-19-juin-2008-2699.html>; see also Francisco Javier Cabrera Blazquez, *Digital Rights Management Systems (DRMs): Recent Developments in Europe*, 17 MEDIA L. & POLY 2, 8-9 (2007).

70. Natali Helberger, *It's Not a Right, Silly!*, INDICARE, July 10, 2004, http://www.indicare.org/tiki-read_article.php?articleId=48.

71. *Id.*

72. A complete discussion of this case, known as the *Mulholland Drive* case after the name of the film that the consumer purchased in DVD format, is beyond the scope of this Article. For a general discussion of the private copy exception under EU law, see Natali Helberger & P. Bernt Hugenholtz, *No Place Like Home for Making a Copy: Private Copying in European Copyright Law and Consumer Law*, 22 BERKELEY TECH. L.J. 1061 (2007).

now have an affirmative cause for action before the ARMT, this does not mean that the ARMT will rule in their favor. The ARMT could still decide that TPMs should prevail over private copying in order to safeguard the economic interests of copyright holders.

II. INDEPENDENT REGULATORY AGENCIES IN AMERICA AND FRANCE

The independent regulatory agency is one of the hallmarks of modern economic regulation.⁷³ The growth in the scale and complexity of economic activity associated with the Industrial Revolution gave rise to social conflicts beyond the power of traditional executive branch institutions to resolve.⁷⁴ Just as independent regulatory agencies emerged in the late nineteenth century in response to radical changes in economic institutions, new forms of regulation are now emerging in response to radical changes in economic institutions triggered by the information revolution that began in the late twentieth century. Social conflicts arising between private business models and the public interest in access to digital content and interoperability of different devices may be a challenge beyond the ability of traditional regulatory agencies to resolve. ARMT is a modest but novel attempt to resolve those conflicts within a new form of regulatory institution. In order to put its modest scale and impact into perspective, it may be useful to remember the difficult process that first established the competency and legitimacy of traditional independent regulatory agencies.

A. Independent Regulatory Agencies in America

The first independent regulatory agency, the ICC, was established in 1887 to regulate prices and eliminate what was then seen as unfair discrimination among railroad customers.⁷⁵ Although the

73. See, e.g., JAMES M. LANDIS, *THE ADMINISTRATIVE PROCESS* 111-12 (1938).

74. See generally KARL POLANYI, *THE GREAT TRANSFORMATION* (1944) (asserting that the expanded role of the state in regulating the economy triggered by the Industrial Revolution took place under the guise of “self-regulating” markets).

75. Rabin, *supra* note 13, at 1194. The ICC was established February 4, 1887, by the Interstate Commerce Act of 1887, ch. 104, § 11, 24 Stat. 379, 383 (codified as amended in scattered sections of 49 U.S.C.), and abolished in 1996 by the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803 (codified as amended in scattered sections of 49 U.S.C.).

ICC later served as the model for other independent regulatory agencies in America, including the Federal Trade Commission and the Federal Communications Commission,⁷⁶ controversy surrounded its creation. As a result, its initial mandate was limited in scope.⁷⁷ The ICC was created to deal with the chaos caused by unregulated competition among railroads, which at that time were the economic backbone of the country. Although there was widespread consensus in the 1880s that the federal government had to do something to solve the railroad problem, there were deep political divisions among advocates of different strategies.⁷⁸ The compromise that created the ICC required the Commission to defer to the courts in enforcement matters and did not grant it authority to set prices, only to investigate unfair practices by railroads and to issue cease and desist orders.⁷⁹ Early Supreme Court opinions interpreting the scope of ICC power limited it further.⁸⁰ Soon after the turn of the century, however, the Supreme Court began grudgingly to acknowledge the legitimacy of the ICC and exercised more restraint in reviewing its decisions.⁸¹

It was not until the second phase of the New Deal in 1935, and President Roosevelt's threat to pack the Supreme Court following his 1936 reelection, that the authority of the ICC and other independent regulatory agencies was established beyond question in the United States.⁸² The legitimacy of independent regulatory agencies in the United States hit a high water mark in the decades following World War II, only to come under broad assault in the 1960s and 1970s due to widespread public skepticism about the integrity of agency processes.⁸³ Then the Reagan Revolution in the

76. Rabin, *supra* note 13, at 1224, 1262.

77. KEITH WERHAN, PRINCIPLES OF ADMINISTRATIVE LAW 14 (2008).

78. Rabin, *supra* note 13, at 1206-07.

79. *Id.* at 1212-13.

80. *ICC v. Ala. Midland Ry. Co.*, 168 U.S. 144, 173 (1897) (stating that carriers are better suited to adjust rates to fit dissimilar circumstances); *ICC v. Cincinnati, New Orleans & Tex. Pac. Ry. Co.*, 167 U.S. 479, 500-06 (1897) (holding that Congress did not give the ICC the power "to legislate" rates, but rather the power "to execute and enforce"); *Cincinnati, New Orleans & Tex. Pac. Ry. Co. v. ICC*, 162 U.S. 184, 196-97 (1896) (holding that the ICC lacks the power to prescribe rates).

81. Rabin, *supra* note 13, at 1233-34.

82. *Id.* at 1260.

83. WERHAN, *supra* note 77, at 23-26.

1980s led to the embrace of deregulation which continued through the 2000s.⁸⁴ This resurgence of American skepticism toward central government regulation of the economy caused administrative law in the United States to revert to something resembling its nineteenth-century roots: deference to private rights and market incentives as the primary response to economic challenges, followed by a preference for local regulation over central regulation.⁸⁵

ARMT has some of the classic features of an independent regulatory agency: it is made up of six members who are all independent from the French government and exercise their authority as an independent collegial body. It is authorized to render opinions to resolve specific complaints regarding TPMs. It is also in charge of monitoring technical and legal developments affecting TPMs and may suggest appropriate changes in the law. It cannot, however, mandate the adoption of technical specifications to TPM providers. This is very similar to the ICC's original grant of authority. The ICC was not permitted to issue prospective guidance in the form of maximum prices until 1906, or minimum prices until 1920, but only to investigate and provide a very modest response to specific instances of unfair competition.⁸⁶ The Supreme Court initially interpreted the scope of judicial review of ICC determinations so broadly that the ICC did little more than conduct investigations until its authority was strengthened by Congress in the early twentieth century.⁸⁷ Given that ARMT is barely a year old, the history of the ICC suggests it is too soon to predict how effective ARMT may ultimately be in protecting consumers in global ICT markets. Although ARMT has not yet issued any opinions, Apple switched its policy regarding TPMs following the enactment of DADVSI, possibly in response to the French legislation.⁸⁸

In some respects, the current controversy surrounding consumer use of ICT technologies and digital content mirrors the railroad problem of nineteenth-century America in that a large but relatively

84. *Id.* at 26-30.

85. *Id.*; see also Keith Werhan, *The Neoclassical Revival in Administrative Law*, 44 ADMIN. L. REV. 567 (1992).

86. Rabin, *supra* note 13, at 1209, 1240.

87. *Id.* at 1212-15, 1235-36.

88. Apple.com, Changes Coming to the iTunes Store (Jan. 6, 2009), <http://www.apple.com/pr/library/2009/01/06itunes.html>.

weak social group is seeking legislation to block attempts by a more powerful group to exploit its unequal bargaining power. Both controversies were created by the unregulated growth of economic institutions that manifest some characteristics of public goods: in the case of railroads, a national transportation system; in the case of digital content, a global ICT market architecture. However, the nineteenth-century railroad problem in the United States represented a desperate struggle by farmers for their economic survival in the face of predatory practices by suppliers and lenders.⁸⁹ Before the ICC was created in 1887, the pervasive sense of crisis among American farmers led to widespread political agitation and mass movements including the Grange Movement and the Farmers Alliance.⁹⁰

The controversy surrounding the scope of copyright, including the scope limitations such as private copying or fair use, is part of the battle of traditional copyright industries to survive in the face of rapid technological innovation. DADVSI and ARMT reflect efforts by France to define the proper scope of private intellectual property rights and the public interest in ready access to cultural goods and to retain national economic sovereignty in the face of growing global integration of ICT markets. The French approach to this issue differs markedly from the American approach, in part because of the radically different historical experiences of government regulation in the United States and France.⁹¹

B. Independent Regulatory Agencies in France

During the French Revolution, France established a strict prohibition on judicial review of legislative action, which substantially

89. Rabin, *supra* note 13, at 1199-1202.

90. *Id.* at 1201-02. While the question of what information remains in the public domain and what can be owned is a pivotal one for the regulation of the information economy, in 2009 the global financial crisis might seem to correspond more closely with the crisis in the agrarian economy of the late nineteenth century.

91. The common law and French approaches to public law have differed significantly for centuries. “Down to the conclusion of the Hundred Years War [1453] the Governments of France and England were of the same kind, viz. ‘a political government whose power is limited by the remnants of feudal decentralisation—a national law which is not unified—and a judicial administration.’” FREDERICK JOHN PORT, *ADMINISTRATIVE LAW* 296 (1929).

remains in place today.⁹² After Napoleon took power in 1799, he strengthened the executive branch of government and established the *Conseil d'Etat*, modeled loosely on the *Ancien Régime Conseil du Roi*, which also remains in place today.⁹³ In 1806, a special unit was established within the *Conseil d'Etat* to hear public complaints regarding executive action and preserve the strict separation of powers; this unit was later expanded to a complete system of administrative tribunals.⁹⁴ However, the French tradition of strong central government regulation of markets was established before Napoleon by Louis XIV (1654-1715) and his finance minister, Jean-Baptiste Colbert, who served from 1665-1683.⁹⁵

The French system for judicial review of administrative law is thus radically different from the common law system generally, which presumes that review of executive action will take place within the conventional court system,⁹⁶ and the U.S. variant of the common law system, which provides for a particularly invasive form of judicial review.⁹⁷ The difference between the two systems was so great that Albert Venn Dicey, the great British constitutional scholar, could plausibly assert in the early twentieth century that Britain had no administrative law (taking the French system as the exemplar of administrative law) and that the French system fostered tyranny whereas the British model of treating the state as a private party within the conventional court system fostered civil

92. Because *parlements* of the *Ancien Régime* (hereditary feudal institutions of local government that combined judicial and legislative functions) had successfully blocked successive royal reform attempts for decades before the Revolution, they were particular targets for the wrath of the revolutionaries. See H.B. JACOBINI, AN INTRODUCTION TO COMPARATIVE ADMINISTRATIVE LAW 100 (1991), for an overview of the strict French approach to separation of powers. For a more critical perspective, see Mitchel de S.-O.-l'E. Lasser, *Judicial (Self-)Portraits: Judicial Discourse in the French Legal System*, 104 YALE L.J. 1325 (1995).

93. JACOBINI, *supra* note 92, at 101.

94. *Id.* at 101-02.

95. See generally FREDERIC INGELAERE, DROIT PUBLIC ECONOMIQUE (2007). This tradition of strong central government control of the economy is referred to as Colbertisme or Dirigisme in France.

96. See generally CAROL HARLOW & RICHARD RAWLINGS, LAW AND ADMINISTRATION (2d ed. 1997).

97. See generally ROBERT A. KAGAN, ADVERSARIAL LEGALISM: THE AMERICAN WAY OF LIFE 12-16 (2001).

liberties.⁹⁸ Dicey's criticisms notwithstanding, the French model of administrative law has been more influential than either the U.K. or U.S. variants of the common law approach to administrative law, and many of its elements have been widely copied in Europe and Latin America.⁹⁹ Because the French system of administrative law was so highly developed, France resisted the creation of independent regulatory agencies much longer than did the U.K.¹⁰⁰ Although the legitimacy of independent regulatory agencies has always been and remains problematic even under U.S. law,¹⁰¹ the legitimacy of independent regulatory authorities under French law appears to be even more uncertain, given the background of two centuries of strong central government with strict separation of judicial and executive functions.¹⁰²

The distinction between public law and private law is also generally more sharply drawn in French law than in the common law because market regulation is based on the notion of "ordre publique économique." Although this notion originally signified something like market law and order, it has expanded over time to include twentieth-century concepts such as government planning and regulation of distribution systems.¹⁰³ Given the French tradition of strong government supervision of market behavior, it is not surprising that France would be the first developed market economy to attempt to regulate TPM. Within the French framework of administrative law, assigning an independent regulatory agency to accomplish this task is a distinctly cosmopolitan and modern approach to information economy regulation.¹⁰⁴

98. HARLOW & RAWLINGS, *supra* note 96, at 40-41 ("In many continental countries, and notably in France, there exists a scheme of administrative law—known to Frenchmen as *droit administratif*—which rests on ideas foreign to the fundamental assumption of our English common law, and especially to what we have termed the rule of law.") (emphasis added) (citing A. DICEY, *INTRODUCTION TO THE STUDY OF THE LAW OF THE CONSTITUTION* (E. Wade ed., 2d ed. 1959)).

99. JACOBINI, *supra* note 92, at 113.

100. See HARLOW & RAWLINGS, *supra* note 96, at 40-41 (discussing the history of French administrative law and comparing it to the development of English administrative law).

101. WERHAN, *supra* note 77, at 30-31.

102. MICHEL GENTOT, *LES AUTORITÉS ADMINISTRATIVES INDEPENDANTES* 12-13 (1994).

103. With regard to modern French regulation of producer-distributor relations as part of commercial law, see James Q. Whitman, *Consumerism Versus Producerism: A Study in Comparative Law*, 117 *YALE L.J.* 340, 364-65, 375 (2007).

104. The French government helpfully lists all the independent regulatory authorities now

Given the modern French tradition of economic dirigisme, it is not surprising that the French are the first to try to regulate the interoperability of TPM. However, it is surprising that the French granted that authority to an independent regulatory authority in lieu of the French executive branch of government. It was not until 1978 that the Data Protection Commission (Commission nationale de l'informatique and des libertés or CNIL), the first truly independent modern regulatory authority, was established in France, although regulatory commissions with oversight of securities markets and banks had been established a decade earlier.¹⁰⁵ As a practical matter, the growth in recent decades in the number of independent regulatory agencies in France reflects a desire for legal realism in lieu of the legal formalism often characteristic of French bureaucracy, for regulators with specialized expertise in lieu of generalist functionaries, and innovative, new governance institutions in response to rapid social change.¹⁰⁶ The need to regulate some of the new forms of economic activity emerging in recent decades justifies the creation of independent regulatory authorities in France. Independent regulatory authorities protect citizens and regulated entities from arbitrary exercises of power by bureaucrats, increase respect for new social values such as government transparency and freedom of information, and provide independent oversight of certain traditional government functions.¹⁰⁷

recognized under French law on the Legifrance website it maintains. Legifrance.com, Les Autorités Administratives Indépendantes, http://www.legifrance.gouv.fr/html/sites/sites_autorites.htm (last visited Oct. 18, 2009). Compared with the nearly countless number of commissions, quangos (quasi-autonomous nongovernmental organization), and other forms of independent regulatory authorities now recognized in the U.K., this is a very short list indeed. In 2006, the BBC reported estimates ranging from 910 to 6000 but other estimates range from 135 to 1162. Trudi Davies, *South East: Quango Fog*, BBC NEWS, Oct. 10, 2006, http://news.bbc.co.uk/2/hi/programmes/politics_show/6040906.stm; PJC Journal, *Quangos: The Unseen Government of the UK*, http://thejournal.parker-joseph.co.uk/blog/_archives/2008/5/18/3697226.html (May 18, 2008, 10:37 BST) (estimating 135 quangos in Britain in 1999); The TaxPayers' Alliance, *Quangos: The Unseen Government of the UK*, May 17, 2008, <http://tpa.typepad.com/bettergovernment/2008/05/quangos-theuns.html> (estimating 1162 quangos in the U.K.).

105. MICHEL GENTOT, *supra* note 102, at 9. This is not to suggest that the general principle of administrative autonomy was unknown in France before 1978; arguably the principle was clearly established by Napoleonic civil service reforms 200 years ago, mitigating the need in France for free-standing independent agencies. *Id.* at 33.

106. *Id.* at 19.

107. *Id.* at 16.

When the text of DADVSI was debated, there was discussion of giving authority over TPM interoperability to a technical committee (commission de normalisation of AFNOR, the French national standards body),¹⁰⁸ or a college of mediators (College des médiateurs) along the lines of the Cinema Mediator (médiateur du cinéma).¹⁰⁹ Nevertheless, the final legislation specifies that ARMT should be an independent regulatory authority. Since the law was enacted, however, progress in establishing ARMT has proceeded slowly. ARMT has only a few staff members and, according to its 2008 Annual Report, its activities have consisted mostly of gathering information from relevant stakeholders.¹¹⁰ Whether this is merely the conventional pace for establishing a new governmental entity in France, or is due to the fact that no businesses have decided to challenge any of the most widely used TPM systems (CSS, AAC3, FairPlay, or Windows DRM), or the decision of some copyright owners to abandon the use of TPM remains unclear. As long as ARMT survives, however, there is a chance that things might change. Should the government and the Parliament remain unsatisfied with the way TPMs are deployed in the marketplace, they would just need to tweak the existing statutory and regulatory framework of the DADVSI law to put pressure on TPM providers to achieve interoperability. Indeed, a change in the law to allow consumers and consumer groups to bring an interoperability case before the ARMT would probably spur TPM providers to reach agreements over interoperability rather than face litigation from consumer groups.

III. TECHNICAL STANDARDS AND REGULATION

Technical standards have played an important role in rationalizing the industrial economy. The importance of this role is often reflected in the integration of standards into modern economic and

108. AFNOR was formerly known as Association Française de Normalisation. Afnor Groupe, <http://www.afnor.org/> (last visited Oct. 18, 2009).

109. Le Médiateur du cinéma is an independent regulatory authority established in 1982 to oversee competition among cinemas in France. Le Médiateur du cinéma, *Création et Statuts*, <http://www.lemediateurducinema.fr/Mediateur/creation-et-status.htm> (last visited Oct. 18, 2009).

110. AUTORITÉ DE RÉGULATION DES MESURES TECHNIQUES, ANN. REP. 3 (2008).

social regulation.¹¹¹ Because technological innovation may proceed at a faster pace than law reform, one challenge facing regulators who wish to harness the administrative impact of standardization is how to make use of specific standards without creating new problems of obsolescence and inefficiency that are more serious than the ones regulation was intended to correct. The U.S. experience of technology-forcing regulations issued in connection with environmental laws enacted in the 1970s has colored perceptions of regulation and technical standards for industry in America ever since.¹¹² As a result, businesses in the United States staunchly oppose most attempts to incorporate technical standards for industry in regulations, preferring to leave the development and adoption of standards in the hands of hundreds of different private standard setting organizations. By contrast, since the 1980s, the European experience of harmonizing regulation and technical standards for industry has generally been positive. This reaction is a result of the New Approach to standardization, discussed further below. European coordination with international standards organizations such as ISO and outreach efforts targeting developing countries have increased the popularity of EU technical standards for industry around the world.¹¹³

With regard to ICT standards, however, the U.S. private sector approach has enjoyed a decisive tactical advantage in global mar-

111. CARGILL, *supra* note 15, at 14-37.

112. See, e.g., Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1334-40 (1985) (outlining a critique of the Best Available Technology strategy utilized in environmental regulation).

113. National Standards Strategy for the United States, http://www.astm.org/NEWS/NSS_ANSI.htm (last visited Oct. 18, 2009).

The European Union is aggressively and successfully promoting its technology and practices to other nations around the world through its own standards processes and through its national representation in the international standards activities of the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU). Emerging economies with the potential for explosive growth are looking to ISO and IEC for standards. In some sectors these standards do not reflect U.S. needs or practices. The exclusion of technology supporting U.S. needs from international standards can be a significant detriment to U.S. competitiveness. The U.S. will lose market share as competitors work hard to shape standards to support their own technologies and methods.

Id.

kets, overshadowing most European efforts to set global ICT standards.¹¹⁴ The U.S. approach to ICT standard setting is unique in its emphasis on innovation and the rapid commercialization of innovation, as well as its lack of attention to social regulations, such as data protection laws, which tend to increase production costs. In the global regulatory competition to shift the architecture of the global information infrastructure in a direction that benefits a particular national economy, the U.S. laissez-faire approach to the growth of the information economy is being exported around the world, embedded in smart products that were not designed to accommodate social values such as universal access or data protection. The ARMT is an independent regulatory agency created to promote one of those social values, interoperability, in a technology that was developed to protect private property rights rather than advance any collective public interest. The conventional means of achieving interoperability in ICT markets is through standards; the governance structure of those standards may range from proprietary technology controlled by a single vendor to open public standards created through transparent international processes. The focus of ARMT is now limited to ex post dispute resolution among a small number of competing service providers and products and does not yet influence or mandate any technical standards. The history of the ICC suggests, however, that with time, the scope of ARMT's authority, or the authority of an independent regulatory agency like it established in another country or at the EU level, may one day expand to include some form of oversight of ICT standards to ensure that their implementation serves specific public interests other than interoperability, such as universal access or data protection.

Defining the relationship between technical standards and regulation in ICT markets is certainly more difficult than in markets for industrial products, although defining the relationship between technical standards and regulation in industrial markets is not by any means easy. Notwithstanding the difficulty of formalizing the relationship between relatively static legal rules and highly dynamic markets for ICT standards and products, the need to insert the public interest ex ante, when standards are first developed,

114. GREG FITZPATRICK, SKICAL CONSORTIUM, THE FAILURE OF EUROPEAN ICT STANDARDS POLICY: AND A POSSIBLE FUTURE? 10-11 (2003), www.itkommissionen.se/doc/650.html.

rather than ex post, when those standards are implemented in products sold to end users, may be greater with technical standards for industrial products. This is because technical standards define the market for ICT products to a much greater degree than do technical standards for industrial products. Once a market has formed around certain standards, the practical difficulty of shifting an entire market may be even greater than the problems of modifying one line of products to bring them into conformity with standards.

Although ARMT's authority is now limited to addressing interoperability issues ex post, in the future its authority might be expanded to address interoperability issues ex ante. The ongoing conflict between the European Commission and Microsoft suggests that ex post remedies to achieve interoperability may be ineffective.¹¹⁵ The most obvious strategy for switching from an ex post strategy to an ex ante one would be to grant ARMT some authority in the development and recognition of technical standards. One legislative model for integrating technical standards with regulation while preserving enough flexibility to accommodate innovation and diversity is the New Approach to European standardization developed in the 1980s to support the development of the internal market.¹¹⁶ Although the New Approach addresses issues related to industrial product standards, not ICT standards, it might be possible to adapt selected elements of the New Approach legislative framework to ICT standards issues. In 2008, the European Commission launched a public policy dialogue on the need for new European responses to the encroachment of American ICT standards into European markets, as the American ICT standard

115. David Gow, *European Commission Fines Microsoft Record £680m*, THE GUARDIAN, Feb. 27, 2008, <http://www.guardian.co.uk/business/2008/feb/27/microsoft.europe>. The EU Competition Commission opened an investigation into whether Microsoft had abused a dominant position in the market for personal computer operating systems in 2001 and issued a decision against Microsoft which was upheld by the European Court of Justice in 2004; since then the Commission has fined Microsoft a total of €1.7 billion for failure to comply with mandated disclosure features of its operating system to competing software application developers. *Id.*

116. MICHELLE P. EGAN, CONSTRUCTING A EUROPEAN MARKET: STANDARDS, REGULATION, AND GOVERNANCE 121-25, 177-78 (2001); HARM SCHEPEL, THE CONSTITUTION OF PRIVATE GOVERNANCE: PRODUCT STANDARDS IN THE REGULATION OF INTEGRATING MARKETS 63-67 (2005).

development system has often overshadowed established European approaches to ICT standard developing.¹¹⁷ Within the context of that policy dialogue, novel approaches to harmonizing ICT standards and European economic regulation may emerge, which could then inform the exercise of ex ante authority by ARMT.

CONCLUSION

Will ARMT eventually usher in a New Deal for end users of ICT technologies by advancing the cause of social regulation into new economic arenas? It certainly seems unlikely now, but two years after the enactment of the Interstate Commerce Act of 1887, it also looked like the ICC was doomed to irrelevance. Like the ICC, ARMT was the product of political compromises and governmental ambivalence that have deprived its current operations of much vigor or coherence. The scope of ARMT's mandate to insure the interoperability of TPMs has proven to be so narrow as to be almost nonexistent, and it seems unable to protect copyright limitations from being eroded by TPMs. It took two decades, however, for the ICC to assume its full modern role as regulator of the American transportation industry, and only after three decades under the New Deal was its legitimacy finally established. Even if ARMT's status evolves at Internet time instead of Guilded Age time, it may still take a few years before it is clear whether ARMT has succeeded in achieving its original mandate.

If the policy objective behind the creation of ARMT was the protection of consumer interests in copyright limitations and interoperability, then it may be necessary not merely to provide an ex post dispute resolution procedure, but also to deal with technical standards. Managing the interface between technical standards and economic regulation is never easy, and the convergence of national economies in global ICT markets has made the interface even more difficult to manage. The American experience with the use of technical standards to support enforcement of the Clean Air Act

117. DG ENTER., EUROPEAN ICT STANDARDISATION POLICY AT A CROSSROADS: A NEW DIRECTION FOR GLOBAL SUCCESS (2008), available at <http://ec.europa.eu/enterprise/ict/policy/standards/cf2008/080206-dispaper.pdf>; see also Jane K. Winn, *Globalization and Standards: The Logic of Two-Level Games*, 5 I/S: J.L. & POL'Y FOR INFO. SOC'Y 185 (2009).

continues to cast a pall over American thinking about the use of technical standards to support regulation in other areas. By contrast, the European experience with the New Approach to standardization provides European regulators with an example of successful integration of product standards with product regulations that helped fuel the growth of the internal market. Although ARMT may ultimately provide French consumers with little protection from consortia standards and proprietary technologies that interfere with their enjoyment of media technologies, it may nevertheless provide an interesting example of new hybrid forms of consumer protection regulations that leverage technical standards as well as legal norms to advance consumer interests. That is, unless the ARMT, reborn as the HADOPI, enjoys more success in its missions to deter piracy than as an authority to safeguard the interests of consumers of digital cultural goods.