The Computer & Communications Industry Association (CCIA) is a mission-focused association that subscribes to the vision of "open markets, open systems, and open networks." CCIA represents large, medium, and small companies that participate in the information and communications technology industries, including computer hardware and software, electronic commerce, telecommunications, and Internet products and services. CCIA members represent more than \$200 billion in annual revenues. CCIA has long been active in European policies that affect information and communications technology (ICT).

CCIA welcomes this opportunity to respond to the DG Information Society and Media's July 28, 2006 questionnaire that opened the Directorate General's public consultation on online content. The following responses are provided to certain questions in the questionnaire. CCIA remains at the disposal of the Commission in its continuing efforts.

Executive Summary

These comments highlight several factors that are essential to the rapid development of online content and services. They explain that:

- Broadband deployment and speed affect the demand for online content and services and increasing broadband penetration is essential to promoting these markets.
- Interoperability is similarly essential to promoting online content and services. The ability to move data and hardware between services and environments is crucial. Intellectual property rights law and competition law should police against anticompetitive efforts to prevent interoperability. However, government efforts to mandate technology should be avoided, as governments generally do not excel at "picking winners."
- Excessive regulation, including intellectual property and "anticircumvention" regulation, will impair the development of innovative online services.

1. Do you offer creative content or services also online? If so, what kind of content or services? Are these content and services substantially different from creative content and services you offer offline (length, format, etc.)?

CCIA members offer a variety of information and communications technology (ICT) services and content. Some CCIA members are content providers; others are service providers; some are both. Many of these services and this content are provided solely online. The products and services that originate from the highly innovative ICT industry are, in CCIA's view, highly creative. The innovation and creativity that characterizes ICT development has made a noticeable contribution to GDP growth in recent years.¹

¹ Among certain OECD states, estimates indicate that ICT investment alone accounted for between 0.3 and 0.8 percentage points of growth in GDP per capita around the turn of the millennium. *See* Organisation for Economic

It merits noting that the term "creative content," however, is somewhat subjective and lacks a legally discernable foundation. "Creative content" should not be conflated with the notion of an "expression" in the sense that the latter term is used in Article 2 of the World Intellectual Property Organization (WIPO) Copyright Treaty² or Article 9(2) of the Agreement on Trade Related Aspects of Intellectual Property Rights.³ These terms are not necessarily symmetrical, and it is entirely possible that creative content may not qualify as original "expressions," or that original "expressions" as understood with respect to these international instruments may not appear particularly creative.

3. Do you think the present environment (legal, technical, business, etc.) is conducive to developing trust in and take-up of new creative content services online? If not, what are your concerns: Insufficient reliability / security of the network? Insufficient speed of the networks? Fears for your privacy? Fears of a violation of protected content? Unreliable payment systems? Complicated price systems? Lack of interoperability between devices? Insufficient harmonisation in the Single Market? Etc.

Several factors directly affect the demand for online services, chief among which are broadband penetration and speed. Despite considerable efforts to increase broadband access, a substantial majority of the population in developed countries lack broadband subscriptions. As data compiled by the Organisation for Economic Cooperation and Development in December 2005 demonstrated, the highest rates of broadband penetration in the EU market included the Netherlands and Denmark, where it had reached only 25 percent. The United States ranked 12th with 16.8 percent, and other OECD members, including several EU member states, were estimated to have even lower rates.⁴ Increasing these rates is essential to promoting markets for online content and services. As discussed further below, interoperability is also of great importance to online services. *See infra*.

5. How important for you is the possibility to access and use all online content on several, different devices? What are the advantages and / or risks of such interoperability between content and devices in the online environment? What is your opinion on the current legal framework in that respect?

It is imperative that intellectual property and competition law ensure that competitors may engage in "reverse engineering" of computer hardware and software products. Reverse

Cooperation and Development, *ICT and Economic Growth: Evidence from OECD Countries, Industries, and Firms* (OECD 2003).

² World Intellectual Property Organization Copyright Treaty, Dec. 20, 1996, S. TREATY DOC. NO. 105-17, 36 I.L.M. 65, art. 2.

³ Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 31, 33 I.L.M. 81, art. 9(2).

⁴ Organisation for Economic Cooperation & Development, OECD Broadband Statistics, December 2005, *available at* http://www.oecd.org/sti/ict/broadband>.

engineering promotes competition by permitting hardware and software to work together, or *interoperate*. Two technology products can interoperate only if they conform to the same set of rules, or *interface specifications*. If a company could exercise proprietary control over the interface specifications implemented by its products, that company could determine which products made by other firms – if any – could interoperate with its software.

Such a broad monopoly poses serious risks to consumer welfare.⁵ For example, prohibiting competitors from accessing *de facto* standard interface specifications could lock users into a particular online service, or network software environment, leverage less competitive products, and inhibit users from transferring data between different computing environments.

The European Software Directive's⁶ reverse engineering and decompilation provisions proved highly beneficial to ICT industries by obviating the need to rely upon copyright principles such as U.S.-style fair use or the idea/expression dichotomy, thus creating more certainty in the short run. In the long run, however, technologies change, and new innovative services may not be covered by existing law.⁷ Fair use's flexibility permits common law courts to adapt the rule to technological progress, saving the costs and long-run uncertainty inherent in legislating reactively.⁸ The flexible fair use approach found in U.S. copyright law therefore merits consideration as efforts to promote online content are considered, as the doctrine is highly adaptable to future developments.

17. Are there any legal or regulatory barriers which hamper the development of creative online content and services, for example fiscal measures, the intellectual property regime, or other controls?

While the information and communications technology industry depends upon the intellectual property regime to protect many of its innovations, unbalanced application of that regime will undermine the progress that it seeks to achieve, including the promotion of creative online content and services. As the U.S. Supreme Court reaffirmed in its recent *Grokster* opinion, promoting copyright must be balanced against promoting innovation.⁹ Robust intellectual property protection encourages creativity and the expression of ideas. At the same time, the right to innovate without persistent litigation greases the wheels of the technology

⁵ See, e.g., Peter S. Menell, An Analysis of the Scope of Copyright Protection for Application Programs, 41 Stan. L. Rev. 1045, 1082, 1097 n.281 (1989).

⁶ See Council Directive, 91/250/EEC, Legal Protection of Computer Programs (May 14, 1991) (hereinafter "Software Directive").

⁷ See Jonathan Band & Masanobu Katoh, *Interfaces on Trial – Intellectual Property and Interoperability in the Global Software Industry*, at 257 (Westview Press 1995) (noting criticism by some commentators that the Directive's precision is illusory since ambiguities invite litigation).

⁸ Article 6 of the Software Directive, for example, protects decompilation to achieve interoperability with software, but said nothing of hardware.

This ambiguity created uncertainty as to whether the Directive protected software-to-hardware interoperability. *See* Band & Katoh, at 248-50, 257. This illustrates the benefits of a flexible doctrine such as fair use, which is not circumscribed by a narrow statutory protection.

⁹ See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 545 U.S. ____, 125 S. Ct. 2764 (2005).

industry and guarantees its global competitiveness. The balance between the copyright owner and the public must consider the interests of all industries, innovators, and users of copyrighted material.

As discussed below in response to questions 25-29, legal protections for digital rights management technology (DRM) have been demonstrated to hamper the development of online content and services. As discussed further below, CCIA believes that these regulations substantially impair innovation and investment in new products, services, and business models. Ultimately, these problems demonstrate that the experiment in so-called "anticircumvention" regulation has been a failure. *See infra* pages 7-10.

The extraordinary term extension achieved by the U.S. Copyright Term Extension Act,¹⁰ which was largely inspired by the 1993 EU Term Directive,¹¹ is another example of regulation that hampers the innovation and development of new services. The term extension greatly multiplied the potential liability for any new online service, with little corresponding benefit to most creators. When the U.S. term extension was challenged before the Supreme Court of the United States,¹² a brief filed by a group of recognized and Nobel Prize-winning economists explained how the term extension would lead to the creation of few new works, while increasing the social cost of monopoly and inhibiting innovation.¹³ In return for depriving the public of works for twenty additional years, the economists estimated, the CTEA increased the author's present-value incentive by a mere 0.33%. When comparing the economic deadweight loss of term-extended works that had been nearing expiration to that of newly created works, the economists subsequently characterized the U.S. term extension as "too long" and "a big mistake."¹⁵ CCIA agrees entirely with this assessment.

The fact that overprotection can in fact hamper the development of creativity, including innovative online services, is evidenced by the lack of success which met the EU Database Directive,¹⁶ which created '*sui generis*' protection for certain compilations of facts. This experiment in creation of new IP rights proved unsuccessful, however. "Interpreting the precise scope of the '*sui generis*' right has proved difficult [and] '*sui generis*' provisions have ... created considerable legal uncertainty," the Internal Markets and Services Directorate General found in its December 12, 2005 Working Paper. The Working Paper also noted that "the complexity of the '*sui generis*' regime may have caused confusion among certain users, in particular the

¹³ Amicus curiae Brief of George Akerlof, Kenneth Arrow, Ronald Coase, et al. (No. 01-618).

¹⁴ *Ibid.* at 6, 11.

¹⁵ UNC Symposium on Intellectual Property, Creativity, and the Innovation Process, Nov. 2, 2005 (video excerpt available at http://www.ibiblio.org/yugen/video/too_long.mpg).

¹⁰ Copyright Term Extension Act of 1998, Pub. L. No. 105-298, 112 Stat. 2827.

¹¹ Council Directive 93/98/EEC, Harmonizing the Terms of Protection of Copyright and Certain Related Rights (Oct. 29, 1993) (hereinafter "Term Directive").

¹² Eldred v. Ashcroft, 537 U.S. 186 (2003). The legal challenge to the CTEA questioned only Congress's authority to enact it, not its wisdom in doing so. The Court's opinion suggested that, given the authority, it may very well have questioned the prudence of the extension. *Ibid.* at 222 ("petitioners forcefully urge that Congress pursued very bad policy in prescribing the CTEA's long terms. The wisdom of Congress' action, however, is not within our province to second guess.").

¹⁶ Council Directive 96/9/EC, The Legal Protection of Databases (March 11, 1996) ("Database Directive").

academic and scientific community." Moreover, after the Directive, the European portion of the global database market has plunged relative to the U.S. share, such that the ratio of European to U.S. database production fell from 1:2 to 1:3.¹⁷

Questions regarding the effectiveness of term extension, database protection, and, as discussed below, anticircumvention, suggest that policymakers should more aggressively evaluate costs and benefits before creating new rights through intellectual property regulation.

20. The Internet is currently based on the principle of "network neutrality", with all data moving around the system treated equally. One of the ideas being floated is that network operators should be allowed to offer preferential, high-quality services to some service providers instead of providing a neutral service. What is your position on this issue?

Because considerable debate exists regarding the scope and meaning of "network neutrality," the term is used herein to mean that network operators should not block, degrade, or impair end user access to lawful applications, content, or services over the Internet. CCIA believes that end users' access to applications, content, and services must be preserved. Should regulation prove necessary to achieve this end, policymakers should impose the least amount of infrastructure regulation to ensure vibrant competition at the network's edges.

Where local telecommunications law provides enhanced traffic control to network providers, Internet application and content providers may be forced to pay twice for high-speed delivery of their content: once to obtain Internet access and again to reach end-users.¹⁸ They may also be discriminated against by preferential or exclusive treatment contracts between carriers and their competitors. Given insufficient competition in some Internet service provider markets, this concern merits attention. Customers cannot easily changes providers, and in a sparsely populated market, competing service providers may be engaged in similar discriminatory dealings. Under U.S. telecommunications law, few "free market" checks currently exist against these practices.

Over-regulating network infrastructure will slow incentives to innovate and expand, however.¹⁹ Moreover, broadband providers should have sufficient flexibility to devise efficiency-enhancing business models, lest hastily-conceived regulatory actions stifle broadband

¹⁷ DG Internal Market and Services Working Paper, "First evaluation of Directive 96/9/EC on the legal protection of databases," Dec. 12, 2005 (*available at* http://europa.eu.int/comm/internal_market/ copyright/docs/ databases/evaluation_report_en.pdf>) at 15, 22.

¹⁸ It merits noting that some aspects of the current network neutrality debate are specific to U.S. telecommunications law. The *Brand X* decision by the U.S. Supreme Court accelerated the debate over network neutrality by removing traditional "open access" requirements from cable modem service. *National Cable & Telecom. Ass'n v. Brand X Internet Servs.*, 125 S. Ct. 2688 (2005). The U.S. Federal Communications Commission subsequently relieved DSL service from the same requirements to provide for a level playing field. As a result, U.S. law now provides Internet service providers with greater control over the information that flows through their "pipes." Because aspects of U.S. telecommunications law are not entirely symmetrical with telecommunications law of all EU Member States, the practical relevance of this issue will vary between Member States.

¹⁹ OECD statistics indicate a link between heavier regulatory burdens and diminished investment in ICT. *See ICT and Economic Growth, supra* note 1, at 31-32.

deployment. Entry and exit triggers in non-competitive markets may be one possible solution. For example, once a pre-established litmus test for competition is met, anti-discrimination rules would no longer be needed because the competition itself will police against actions taken to the detriment of consumers. Following this principle, well-tailored anti-discrimination rules need not constitute so-called "constraining regulation." Rather, they would encourage free market competition where customers, not discrimination or collusion, determine winners and losers.

21. To what extent does your business model suffer from piracy (physical and/or online)? What kinds of action to curb piracy are taken in your sector/field of activity and in the country or countries you operate in? Do you consider unauthorised uploading and downloading to be equally damaging? Should a distinction be made as regards the fight against pirates between "small" and "big" ones?

CCIA's members include content providers, who suffer from piracy, and as a result CCIA advocates for strong enforcement of existing copyright law. CCIA perceives that in recent years some policymakers have viewed the expansion of the scope and scale of copyrights as a suitable substitute for enforcing pre-existing rights. This expansionist approach aids neither rights-holders nor those who would lawfully use protected content. It disadvantages the former, whose underlying rights remain unenforced, and it disadvantages the users, transmitters, and distributors whose business depends upon clear delineations of the contours of copyright law. A balanced approach – abjuring expansionism and encouraging enforcement – would provide greater protection and certainty for all involved.

When scarce resources are available for enforcing rights, CCIA believes enforcement resources are most efficiently devoted to deterring large scale, commercial piracy. Not only does litigation against end-users (such as that being prosecuted by the U.S. recording industry against members of the public) cast intellectual property rights in a less attractive light and risk the creation of bad precedent due to asymmetric litigation resources, it also draws resources from prosecuting other, more costly piracy operations.

22. To what extent do education and awareness-raising campaigns concerning respect for copyright contribute to limiting piracy in the country or countries you operate in? Do you have specific proposals in this respect?

Education and awareness-raising campaigns are possible tools for improving public understanding about the importance of copyright. CCIA has participated in efforts to devise educational curriculum concerning copyright. Yet too often, "educational" campaigns devolve into little more than propaganda, and fail to educate the public about the importance of limitations on the system, such as exceptions for pro-competitive activities such as reverse engineering to ensure interoperability, or pro-social activities such as necessary copying by libraries and archives.

Such propaganda underestimates the wisdom of the public and likely contributes to the contempt that intellectual property rights now inspire among a disturbingly large and growing

portion of the public. Indeed, traditional academic analyses now openly question the efficacy of the system.²⁰ The crisis of credibility that intellectual property rights now face only increases the need for *objective* educational activities. At the same time, however, educational activities will not prevail so long as excesses of the current intellectual property rights regime are not curtailed.

25. Do you use Digital Rights Management systems (DRMs) or intend to do so? If you do not use any, why not? Do you consider DRMs an appropriate means to manage and secure the distribution of copyrighted material in the online environment?

27. In the sector and in the country or countries you operate in, are DRMs widely used? Are these systems sufficiently transparent to creators and consumers? Are the systems used user-friendly?

28. Do you use copy protection measures? To what extent is such copy protection accepted by others in the sector and in the country or countries you operate in?

Digital rights management technology is employed in various areas of the ICT industry, to control access or to provide copy protection for copyrighted works. Under certain circumstances, DRM technology may be an appropriate tool to secure copyrighted works from piracy. Because DRM itself is infrequently the problem, it is only in rare cases such as antitrust/competition enforcement and security threats that governments should consider regulating technology, and even then with care. Ultimately, the market should decide when and where DRM is deployed.

The principal policy challenge posed by DRM is not the DRM itself but the creation of "anticircumvention" rules – legal protection for the DRM itself, rather than the underlying work.²¹ If policymakers elect to institute anticircumvention rules, they must carefully protect competition, the rights of consumers, and critical infrastructure security.

29. Are there any other issues concerning DRMs you would like to raise, such as governance, trust models and compliance, interoperability?

Because DRM often requires controlling how one product interfaces with another, DRM may be used anticompetitively to prevent competitors' products from interoperating with one's own. Normally, competitors will reverse-engineer the product so as to understand its interface and achieve interoperability. In some cases, this can require circumventing DRM. If DRM is protected by law, however, businesses can legally lock out their competitors, to the ultimate detriment of the consumer.

Some form of anticircumvention rule (*i.e.*, protection for "technological protection measures" or TPMs) is required by Article 11 of the World Intellectual Property Organization

²⁰ See e.g., M. Boldrin & D. Levine, The Case Against Intellectual Monopoly, 45 Int'l Econ. Rev. 327 (2004).

²¹ Anticircumvention rules are sometimes referred to as "paracopyright."

(WIPO) Copyright Treaty and Article 6 of the European Copyright Directive.²² In the United States, the anticircumvention rule was codified by the Digital Millennium Copyright Act.²³

When the DMCA was pending before the U.S. Congress, developers of interoperable computer products, including CCIA, explained that the act of reverse engineering – the uncovering of the interface specifications – could require the circumvention of a technological protection measure, an act which is presently prohibited by Section 1201 of that law. Recognizing that Section 1201 could prevent a developer of interoperable products from exercising fair use privileges, Congress created an exception to Section 1201 explicitly directed toward the development of interoperable products: Section 1201(f).²⁴ Indeed, the language of Section 1201(f) was modeled on the language of the European Software Directive, which pioneered the concept of protecting interoperability and reverse engineering in order to promote competition.²⁵ The enactment of Section 1201(f) demonstrates that reverse engineering is an economically important fair use and that the U.S. Congress recognizes that importance, just as the Software Directive did.²⁶

Unfortunately, in several instances companies have employed insignificant DRM-like technologies for the purpose of locking an interface and then wielded the DMCA's anticircumvention rule against competitors to lock them out, thus turning the law into an anticompetitive tool. Section 1201(f) of the DMCA, although designed to prevent this, has proven too narrow. While Section 1201(f) has prevented some misconduct, the DMCA nevertheless remains "ripe for anticompetitive abuse,"²⁷ particularly in cases that have nothing to do with copyright piracy, including *Lexmark Int'l, Inc. v. Static Control Components, Inc.*,²⁸ *Chamberlain Group v. Skylink Technologies*,²⁹ and *Storage Technologies v. Custom Hardware Engineering.*³⁰

Creative online services have not escaped the misuse of DRM and statutory anticircumvention rules. Recently, in *Davidson & Associates v. Jung*,³¹ the computer game

²² Council Directive, 2001/29/EC, Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society (May 22, 2001) (hereinafter "Copyright Directive"). This document uses the lay term "DRM" interchangeably with the legal term "TPMs."

²³ Pub. L. No. 104-304, 112 Stat. 2860 (1998) (codified in various sections of U.S. Code, Title 17).

²⁴ The U.S. Senate Judiciary Committee explained the policy underlying Section 1201(f), stating that the exception was "intended to allow legitimate software developers to continue engaging in certain activities for the purpose of achieving interoperability to the extent permitted by law prior to the enactment of this chapter." *See* S. Rep. No. 105-190, at 32 (1998).

 $^{^{25}}$ For example, the Software Directive and the DMCA share the same definition of interoperability ("interoperability can be defined as the ability to exchange information and mutually to use the information which has been exchanged"). *Compare* Software Directive, *supra* note 6 *with* 17 U.S.C. § 1201(f)(4).

²⁶ See generally Band & Katoh, supra note 7, at 242-58.

²⁷ Dan Burk, Anticircumvention Misuse, 50 UCLA L. Rev. 1095, 1096 (2003).

²⁸ 253 F. Supp. 2d 943 (E.D. Ky. 2003), reversed, 387 F.3d 522 (6th Cir. 2004).

²⁹ The Chamberlain Group Inc. v. Skylink Techs., Inc., 292 F. Supp. 2d 1040 (N.D. Ill. 2003), reversed, 381 F.3d 1178 (Fed. Cir. 2004), cert. denied, 125 S. Ct. 1669 (2005), available online at http://www.fedcir.gov/opinions/04-1118.doc.

³⁰ Storage Tech. v. Custom Hardware Eng'g, 421 F.3d 1307 (Fed. Cir. 2005), available online at http://fedcir.gov/opinions/04-1462.pdf

³¹ Davidson & Associates v. Jung, 422 F.3d 630 (8th Cir. 2005).

developer Blizzard successfully employed the anticircumvention provisions of the DMCA to sue a group of developers who produced an open-source program that emulated Blizzard's official servers for online, multi-player gaming. This permitted users to engage in online multi-player games if they were unable or unwilling to connect to Blizzard's official servers, which were then plagued with delays, cheating, hacking, and profanity. Unwilling to tolerate this practice, Blizzard used the DMCA to eliminate the competition.

DRM protected by anticircumvention rules also may threaten critical infrastructure security. The debacle involving Sony's DRM "rootkit" exemplifies some copyright holders' failure to take cybersecurity seriously. As was widely documented in international media, Sony surreptitiously caused the installation of a security-compromising application on the computers of millions of consumers and institutional users – including governments and militaries – who purchased certain copy-protected discs. This revelation shocked the Internet and computing community, and led to class action litigation and product recalls.

Even more alarming was the revelation that the cloaking device Sony used to disguise its DRM from consumers was exploited by hackers to launch malicious computer attacks. This particular use of DRM has abused consumer trust, seriously compromised computer security, and threatened critical infrastructure. Yet if security researchers, professionals, and security applications developers attempted to remedy the security threat posed by the offending software, they risked violating the anticircumvention rules – a potentially criminal act. While CCIA and others petitioned the U.S. Copyright Office to establish an administrative exemption in the law to protect against this threat, the ideal remedy is to ensure that anticircumvention rules do not impede security in the first place. To this end, policymakers should review existing anticircumvention rules to assess whether they are serving their intended purposes, and revise them as necessary.

Mandating a particularly technology, however – whether to avoid such security risks or to enforce interoperability – is not a viable options. Governments generally fail relative to free markets at selecting superior technologies, and excessive regulation will impede innovation. It bears noting that the contentious debate over the French implementation of the Copyright Directive, the *loi sur le droit d'auteur et les droits voisins dans la société de l'information* (DADVSI) – which largely revolved around the interoperability of DRM – may have produced a regulatory regime not unlike the DMCA. The ruling by the French Conseil Constitutionnel that DADVSI's language permitting circumvention to ensure interoperability was too vague may have set up DADVSI to create the same problem as does U.S. law: DRM does not secure rights but rather lock out competitors, leading to monopolization of aftermarkets. Policymakers should study the effects of DADVSI to assess whether it produces similar abuses.

32. What could be the role of national governments / regional entities to foster new business models in the online environment (broadband deployment, inclusion, etc.)?

In the United States, CCIA has advocated revising of the aging "Universal Service Fund," which is designed to subsidize telephone access for rural and underserved areas, so as to increase access to broadband in those areas. One of the most effective steps national governments can take is to incentivize the deployment of new broadband infrastructure. However, any institutionalized subsidy regime must be carefully conceived. Subsidies should be performance/efficiency based and technologically and competitively neutral. Subsidies that either implicitly or explicitly support outdated technology can create perverse incentives that discourage innovation in the broadband infrastructure market. As the market of broadbandsubscribing consumers grows, online content and services will similarly expand.

Beyond incentivizing broadband, minimal regulatory intrusion – including intellectual property regulation – is essential for a flourishing market in online content. Rather than develop new regulatory infrastructure, CCIA believes that national governments should enforce existing copyright and competition law and allow the marketplace to operate freely.