Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201

[] Check here if multimedia evidence is being provided in connection with this comment

ITEM A. COMMENTER INFORMATION

OmniQ is a joint venture for the commercial development of a method for nonreproductive substitution of the material object in which a work is fixed. The method is disclosed in a patent application for Digitally Transferring Content Across Media Without Reproduction, Patent Application # WO 2016/168832; US 2016028135 (annexed hereto as Exhibit 1, hereafter the "OmniQ Invention"). Although necessarily a for-profit endeavor to attract the needed investment, OmniQ currently plans to incorporate as a public benefit corporation with the aim of restoring the public benefit provided from secondary markets for lawfully made copies of copyrighted works that, although still supported by the first sale doctrine and Sections 109 and 202 of the Copyright Act, is rapidly being lost on account of modern technological advances that allow copyright holders to effectively avoid business models that allow secondary markets to flourish. By use of the OmniQ Invention, OmniQ seeks to restore the public benefit that Sections 109 and 202 used to guarantee. To be clear, although the OmniQ Invention discloses the specific method OmniQ intends to use to space-shift motion pictures and other audiovisual works (as well as literary and pictorial works) from one material object to another without copying, the exemption sought need not be limited to the precise method disclosed in the OmniQ Invention. Rather, it should be permitted for any space-shifting process that does not reproduce the work into another copy. Also, although OmniQ also hopes to make the technology available to libraries, particularly public and academic libraries, as a means of regaining the freedom to "lend" copies without requiring the consent of the copyright holder, and a library use case might include non-reproductive space-shifting of literary works fixed with ink on paper, the proposed exemption is limited to Class 3, given that circumvention is unnecessary for space-shifting copies of literary works printed on paper, as they do not come with TPM.

The OmniQ Invention seeks to, among other things, maintain the viability of, and the public benefit afforded by, secondary markets for the exchange of lawfully made copies of copyrighted works. As technological advances often render copies in certain formats obsolete when the technology needed to access them is going into disuse (for example, a DVD is useless without a DVD player), and as digital dissemination and storage technologies increasingly result in the fixation of lawful copies on material objects that are too cumbersome to redistribute and may share space with thousands or even millions of fixations of other works (as in "downloading"), a new method is needed to preserve important avenues through which those unable to afford new copies in the primary market may continue to obtain access to lower cost second-hand copies notwithstanding the current trend toward digital dissemination that is causing a reduction in the availability of discrete fixations on individually transferable single-

Privacy Act Advisory Statement: Required by the Privacy Act of 1974 (P.L. 93-579)

The authority for requesting this information is 17 U.S.C. §§ 1201(a)(1) and 705. Furnishing the requested information is voluntary. The principal use of the requested information is publication on the Copyright Office Web site and use by Copyright Office staff for purposes of the rulemaking proceeding conducted under 17 U.S.C. § 1201(a)(1). NOTE: No other advisory statement will be given in connection with this submission. Please keep this statement and refer to it if we communicate with you regarding this submission.

work copies.1

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ITEM B. PROPOSED CLASS ADDRESSED

Proposed Class 3: Audiovisual Works—Space-shifting

We note that Proposed Class 3, as described in the Notice of Proposed Rulemaking, would consider two very different petitions. The OmniQ petition seeks an exemption for <u>non-reproductive</u> space-shifting where the reproduction right is not implicated at all because no reproduction takes place. In contrast, the De Petris petition seeks an exemption in order to enable "personal" reproductions either as back-up copies or for use on other devices.

This distinction between the OmniQ and De Petris petitions is important for several reasons:

1. The first objective of the De Petris petition – a back-up copy "in the event that something happens to the original, fragile disc" cannot be achieved by

because there is no reproduction. Although a fair use analysis might well result in a finding of non-infringement, and would provide an alternate basis for the exemption, fair use analysis is unnecessary where there is no reproduction.

4. By depending on fair use for the reproduction, the De Petris solution risks harm to the copyright holder's interests insofar as there is a greater chance that the lawfully made copy on DVD would be redistributed while the back-up or convenience copy remains in possession of the person who no longer owns the DVD used to make them. Although the exemption could be granted subject to terms along the lines of Section 117(a), designed to prevent the authorized copy from being in possession of anyone other than the owner of the first copy, it may prove difficult to monitor compliance, particularly with respect to audiovisual works.²

For these reasons, although OmniQ is not opposing the De Petris petition, and although there may be some overlap in the result of allowing the enjoyment of a movie on DVD using a device that does not play DVDs, OmniQ wishes to make clear that its petition is radically different, in that no back-up copies or convenience copies are made at all. With the OmniQ solution, the copyright owner continues to sell the DVD at whatever price the market will bear, and the Copyright Act's intent that the copy pass from one person to another unfettered is preserved.

ITEM C. OVERVIEW

The Basic Petition

Because non-reproductive space-shifting implicates none of the exclusive rights of the copyright holder, there is no need to rely solely upon fair use analysis with respect to the reproduction right, as ReDigi is attempting, or cobble together some "virtual" DVD player that, as Zediva and VidAngel learned, required a public performance. Plus, even if the "space-

² Motion pictures and other audiovisual works retain their value decades after they are first published, and the copyright holder can anticipate the opportunity to exploit the reproduction and distribution rights for the entire term of the copyright. And although a DVD must be played by use of a device, the DVD is removed after the performance, making way for the next title, whereas computer programs typically are not performed from the DVD, which was one reason why Congress wanted to authorize the reproduction necessary to privately perform ("run") the work. Computer programs, in contrast to motion pictures, are literary works of comparatively short life spans, such that newer versions will soon supplant the older ones. Plus, copies of motion pictures and other audiovisual works can be enjoyed without the need for patches and updates to retain their functionality in the face of newer operating systems or security vulnerabilities. Chances are that once a new version is installed, the old version will have little or no market value. Publishers of computer programs may also employ methods, such as "product keys" to make certain that no copy of a copy can be performed on more than one device. In fact, some major publishers of computer programs, such as Microsoft, allow for unlimited free reproductions by means of a download, and monetize the product keys as a proxy for the copy. That is not the case with motion pictures or other audiovisual works.

shifting" or "format shifting" misnomers are applied to the activity proposed by De Petris, and the reproductions constitute fair use of the reproduction right, there remains the concern that infringing copies may proliferate once a fair use copy is in the wild. In the case of *true* space-shifting, where the fixation of the work is simply moved from one material object to another without reproducing more copies, circumvention does not touch on any of the copyright holder's exclusive rights. As practiced in the OmniQ Invention, not only is lawfulness not dependent on Section 107, but also the potential harm associated with the multiplication of copies is eliminated.

Although OmniQ is not asking for an exemption limited to those who practice the OmniQ Invention, we note that, once shifted using the OmniQ Invention, the copy that has been shifted is protected from unlawful reproduction to a far greater extent than the typical TPM, such as the Copy Scramble System (CSS). That is because CSS must function with mass-produced copies intended for playback in a dizzying array of devices from different manufacturers, leaving it highly vulnerable to casual circumvention. Once the right "key" is found, it opens any copy of the work. In contrast, the OmniQ Invention is more able to vigorously guards against unauthorized reproduction because multiple stronger encryption keys are required to space-shift one copy. As described in Exhibit 1, and in less technical terms in the Declaration of Johann George (annexed hereto as Exhibit 3), instead of 40-bit encryption intended for any factory-made DVD to work with any factory-made DVD player, the encryption on the space-shifted copy is unique to that particular copy. As estimated by Johann George, Exh. 3, the time it would take to break the encryption in order to reproduce a DVD or Blu-ray fixation that has been space-shifted using the OmniQ Invention method would exceed the term of the copyright by a mind-boggling multiple of years.

OmniQ's solution resolves the concerns that were raised with respect to *so-called* space-shifting proposed in the previous triennial (and which may well be renewed in opposition to the De Petris Petition) by addresses the fundamental weakness identified: That this *so-called* space-shifting requires the reproduction of a "fair use copy" of the work. That is, in seeking the exemption, proponents argued that Section 107 provided a right to *reproduce* the work. *True* space-shifting, such as practiced using the OmniQ Invention, is inherently *non-reproductive*. In the absence of any reproduction, there is no need to apply fair use analysis to justify it. Accordingly, the exemption needn't be limited to non-commercial uses in order to enhance its weight on the fair use scales, but may cover commercial space-shifting for purely entertainment

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³ The concern may be misplaced. Given the relative ease with which the motion picture on an optical disc can be "ripped" and copied onto a hard drive or another optical disc using cheap off-the-shelf software that is readily available to anyone, it is doubtful that anyone wishing to make an infringing copy would bother to add a step of "fair use reproduction" before making an infringing copy. The De Petris Petition seeks a lawful means of circumvention to make fair use, whereas the infringer is not going to worry whether circumvention also violates Section 1201.

⁴ See, e.g., Gregory Kesden, Course: 15-412 Operating Systems: Design and Implementation, Lecture 33 (Wednesday, December 6, 2000) (course at Carnegie Mellon University), available at http://www.cs.cmu.edu/~dst/DeCSS/Kesden/index.html (noting that 40-bit encryption is particularly weak, and describing five methods of attack). Circumvention that may have been a novel concept in 2000 is now available to the masses as a simple installation requiring no particular skill.

purposes, just like DVD movies may be commercially sold or rented without the consent of the copyright holder and for purely entertainment purposes. Non-reproductive space-shifting should be permitted in any instance in which a work is digitally embodied in a material object that cannot, as a practical matter, be re-sold, lent, rented or gifted, solely because it either shares the same recording medium with thousands of other works (such as a large-capacity hard drive), or because the medium (such as a DVD) relies on older technology of increasing obsolescence with respect to playback (private performance).

Non-reproductive space-shifting serves the constitutional purpose of copyright. "The sole interest of the United States and the primary object in conferring the monopoly lie in the general benefits derived by the public from the labors of authors." Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932). In pursuit of that interest, Congress endorsed the Supreme Court's conclusion that copyright holders could not extend the scope of their copyrights by means of an end-user license agreement that gave them greater control over copies they no longer owned. Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908). The codification of the first sale doctrine (which actually never has required a "first sale") carried with it a strong expression of public policy encouraging secondary markets for re-dissemination of copies, recognizing that copyright owner control over secondary markets would tend to reduce, rather than promote, the progress of science and art: "it would be most unwise to permit the copyright proprietor to exercise any control whatever over the article which is the subject of copyright after said proprietor has made the first sale." H.R. Rep. No. 2222, 60th Cong., 2d Session (1909).

When an end-user license agreement printed on the inside cover of a book in the manner of *Bobbs-Merrill* (and which can legally and practically be ignored) is replaced with TPM to achieve similar ends (but which might not be so easily circumvented and ostensibly carries with it the threat of civil or criminal prosecution), it is important that both the legal means and the practical means of ignoring it are within reach of the public, in order to prevent the copyright holder from exercising "any control whatever" over the transfer of ownership of lawfully made copies. That's what OmniQ's invention aims to do, and with the aid of a sensible exemption from the anti-circumvention prohibition, it can do so more efficiently, reaching a broader segment of the population.

Digits On Plastic = Ink On Paper

We did not abandon basic copyright principles when we developed audio and videotape. Digital media should be no different. It is common to hear a distinction being made between "digital copies" and "physical copies," forgetting that a movie on a DVD is 100% physical and digital. The first sale doctrine has always focused on the copy/copyright distinction rather than the technology used for making the copy. Section 202 of the Copyright Act (which was part of the original enactment or the statutory first sale doctrine in 1909) drove home the distinction between the ordinary ownership of "things" (such as paper, shampoo bottles, watches, discs or hard drives) that might contain works of authorship and the intangible exclusive rights conferred with respect to those works. The Copyright Act is replete with definitions that are technology neutral, and in fact, future-proofed to apply to technologies "now know or later developed."

As we shift from ink on paper to bits on something else, we are left with more of a practical problem than a legal one – How do I exercise my right to lend, give away or sell the copy of Work No. 3,476 on my hard drive without also having to part with my hard drive, which

also happens to be a copy of Works Nos. 1-3,475 and 3,477-5,000? There is a legal right to lend Work No 3,476 so long as the entire hard drive is lent.

Of course, on a daily basis, millions of people let friends and family use their smartphones and laptops – technically a redistribution of copies and phonorecords protected by Section 109(a) of the Copyright Act – but those redistributions rarely involve long term lending or transfer of ownership, and to the degree that the hard drive or smart phone contains computer programs or musical works, such lending would not be prohibited by Section 109(b)(1)(A) unless "for the purposes of direct or indirect commercial advantage." But this sets up another quandary, which has yet to reach the courts: Supposed one wants to rent a laptop so that a friend can watch a movie that was lawfully made on the hard drive, but rental of musical works and computer programs residing on the same hard drive would constitute infringement? One legal solution might be for the courts to allow the general rule favoring alienation to trump the specific rule prohibiting it, but a more elegant solution would allow the OmniQ Invention to facilitate non-reproductive space-shifting of the movie from one hard drive to another, and then back, after viewing.⁵

For many years, the public has been enjoying digital copies made in a factory and shipped to their homes through various distribution channels – DVD sales (in retail stores or by mail order), DVD rentals (in retail stores of by mail), and acquisition of second-hand ("used") copies through thrift shops, online sales, or gifts. All of this activity was carried out without needing the consent of the copyright owner. The freedom to alienate a copy meant that a video retailer could rent that copy out as many times as it wished, to as many people as it wished, at whatever price it wished, and for however long it wished, all without the consent of the copyright owner. Unsurprisingly, motion picture studios that wanted to capture a greater share of the added value provided by Section 109 of the Copyright Act (to the owner of the copy, that is), simply charged more for the initial sale. It was not uncommon for VHS copies to cost upward of \$75, to be purchased primarily by video rental stores. Eventually, the studios began experimenting with "sell through pricing" intended to allow retail sales to compete with rentals, but the wholesale price to the retailer was the same whether intended for resale or rental. Today, DVD copies are uniformly offered at a "sell-through" price, yet if a VHS copy is made, it is often sold at the higher price, knowing that the primary purchasers are video rental stores. In other words, the copyright holder gets to control the price of each copy it distributes or authorizes; any additional value of that copy as a result of the value of secondary market for it can be captured by the copyright holder when establishing the initial price – just as it is with the purchase price of a new automobile.

Digital delivery puts the consumer into possession of a lawfully made copy by using the home replicator (a download) rather than the factory replicator (a DVD). Both are lawfully made copies of the same work of authorship, and both enjoy the *de jure* freedom to redistribute that copy, but until now, only the owner of the DVD copy could distribute it, as a practical matter, because the owner of the computer copy would have to part with the entire computer. Still, the

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⁵ This scenario is not within the scope of Class 3. It is offered to illustrate the need for a lawful means to continue enjoying the intent of the right of alienation, even when a hard drive can't be loaned out in discrete slices containing just one work.

law with respect to the rights of the copyright holder and the copy owner remain the same, governed by Sections 109 and 202. (Unfortunately, the owner of the DVD sees the value decrease as playback options are reduced.)

The motion picture industry has long advocated that a copy made by digital delivery should be treated the same as a copy delivered by mail – at least when assessing taxes. As early as 2001, when Congress was grappling with the legal consequences of digital delivery, the Motion Picture Association of America addressed the question of whether the delivery of a movie through e-commerce networks (now known as electronic sell-through, or EST) should be considered trade in goods or trade in services, MPAA's Vice President for Trade & Federal Affairs gave the following example:

If a consumer were to place a telephone order for a DVD of the film "Finding Forrester" and have a copy of that DVD delivered to his house on a UPS truck, that is a "goods" transaction. Likewise, if the same consumer ordering a copy of the same DVD on his/her computer and had the same content delivered digitally and downloaded from his computer to a write-able DVD – that is still a "goods" transaction. The only difference is that a digital network instead of a delivery van provided the transportation from the retailer to the consumer.

Testimony of Bonnie J.K. Richardson before the House Commerce Committee Subcommittee on Commerce, Trade and Consumer Protection, May 22, 2001, prepared statement at 12. Notably, Ms. Richardson referred to the digital delivery as being "of the same DVD" rather than "the same work that was on the DVD." As early as 2001, the movie industry already saw "the DVD" almost like the literary world sees "a book". There is no "book" in the Copyright Act. The value of the literary work of authorship is in the ability to read it, not in the quality of the paper or whether it is on a Kindle. Likewise, "a DVD" tells the consumer that "the movie" is in digital form, but for all practical purposes, the consumer will get just as much enjoyment from watching the movie from a DVD inserted into a DVD player hooked up to a TV or computer screen as from watching it from an ISO image on a computer hard drive hooked up to the same TV.

In Copyright Act terms, the UPS delivery involves reproduction onto a medium that has not yet been distributed, whereas digital delivery over the Internet involves reproduction onto a medium that has already been distributed to the person receiving the download. The question to be addressed now is whether and how to facilitate the second and third distribution of that digitally delivered copy without the impractical extremes – having to distribute the entire hard drive or other storage medium, on the one hand, or opening up a free-for-all replication (or multiplication) of copies without the copyright holder's consent, on the other.

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⁶ See, e.g., United States v. Cohen, 946 F.2d 430, 434 (6th Cir. 1991) ("[C]opyright law does not forbid an individual from renting or selling a copy of a copyrighted work which was lawfully obtained or lawfully manufactured by that individual." (emphasis added)); United States v. Sachs, 801 F.2d 839, 842 (6th Cir. 1986). Copyright law does not forbid it, but the copyright holder's choice of technology may forbid it, as a practical reality.

Given the way courts have been treating reproductions by digital delivery as though they infringe not only the reproduction right, but also, the distribution right, and doing to at the instigation of copyright owners who perceive their distribution rights to have been infringed when only a reproduction technically, took place.⁷

Legally speaking, so-called "digital copies" are substantively evolutionary, not revolutionary. Recording "bits" on a hard drive, USB, or any other tangible medium is the legal equivalent of recording ink on paper, grooves in vinyl, chemical reactions on film, and magnetic impulses on "analog" cassette or 8-track tape. During most of the 160 or more years that the first sale doctrine has existed (over a century since its first codification in 1909), the tangible medium was easier to re-distribute than to replicate. That is, the easiest way to let someone read my copy of a popular book was to lend my particular copy of the book. It became the public policy that copyright owners should exercise no control at all over the copies they put into circulation. The Congressional committee recommending codification of the judicially created first sale doctrine stated, "it would be most unwise to permit the copyright proprietor to exercise any control whatever over the article which is the subject of copyright after said proprietor has made the first sale." H.R. Rep. No. 2222 (1909) (emphasis added). And, instead of codifying it that way as mere passive exhaustion of the distribution right, Congress went further, authorizing the owners (or, initially, mere possessors) to redistribute their copies without the consent of the copyright holder.

Case law since then has shown all manner of gimmicks to avoid Section 109, and though downloads and streaming are not gimmicks, *per se*, by emphasizing streaming and digital delivery of downloads over physical delivery of copies, copyright owners gain *de facto* control, not due to the laws of copyright, but by harnessing the laws of physics – we can't simply cut a sliver out of a hard drive to redistribute the portion in which the work is fixed. With more fixations being delivered as digital download copies, and fewer as individual copies, replication has now caught up with and surpassed distribution as the most efficient way of passing on the content of my copy to someone else. If we do not allow a comparable manifestation of the

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⁷ The distribution right is limited to the distribution of "copies and phonorecords," which are both defined as "material objects." While some courts facing the issue squarely have insisted on the distribution of a material object for the right to apply, others, including the Ninth Circuit (see, e.g., A & M Records, Inc. v. Napster, Inc., 239 F. 3d 1004 (9th Cir. 2001), where all parties and the court treated digital delivery over the Internet as both a reproduction and a distribution) and the Supreme Court (see, e.g., Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 545 US 913, 920 (2005) ("Given these benefits in security, cost, and efficiency, peer-to-peer networks are employed to store and distribute electronic files by universities, government agencies, corporations, and libraries, among others," emphasis added), have seemed to simply assume that an electronic delivery encompasses both a reproduction and a distribution, for infringement purposes. The question need not be settled here, but it warrants noting that if electronic delivery does infringe the Section 106(3) distribution right even though the reproduction was made on a material object that the downloader already owned, then a fortiori, the Section 106(3) distribution right is exhausted by Section 109, to which it is subject, and the owner of the copy lawfully made by downloading is free to "re-distribute it" by digital delivery, as well – at least using the non-reproductive method taught in the OmniQ Invention.

principles underlying the first sale doctrine to evolve alongside the technological evolution, we risk losing the important benefits of the doctrine. The approach that courts seem to be pointing to (*see* footnote 7, above) is one way. OmniQ's Invention is another – and the two are compatible.

To be clear, OmniQ's petition for an exemption for non-reproductive space-shifting has nothing to do directly with the first sale doctrine. Rather, given the shrinking opportunities to enjoy the benefits of the first sale doctrine, and growing inability to actually act on the redistribution right Congress vested in copy owners, millions of intended beneficiaries are left behind, faced with a more costly choice of having to buy all of their copies "new, and unused" due to a lack of secondary markets.

To understand the harm to the public, we must therefore look at the benefits of protecting our longstanding unlicensed redistribution regime, which benefits are rapidly being lost to a permissions-based system characterized by first sales only. The benefits of unlicensed redistribution made possible by the first sale doctrine and Sections 109 and 202 of the Copyright Act have come to be part of the fabric of our culture. Quite simply, had Abraham Lincoln been unable to borrow the books he studied to practice law, we most likely would never have had a "President Lincoln" to sign the Emancipation Proclamation. Those books could be borrowed one at a time, leaving the rest on the lender's shelf, but our modern massive digital storage capabilities, coupled with digital delivery, effectively mean that the entire bookshelf full of books would have to be loaned in order for the next Lincoln to borrow but one.⁸

Congress had good reason to stand against allowing copyright holders to exercise "any control whatever" over authorized copies placed in the stream of commerce:

- a. Intermediaries are ready, willing and able to get the works out into the hands of people that the first seller may consider too marginal. Whether a distributor, such as a "one stop" who services smaller accounts that would overwhelm a major publisher, a retailer that concentrates on smaller markets that might fall below the threshold for major chains, a small, independent retailer willing to do business in less affluent neighborhoods, the used product merchant, the seller of carefully curated collections of copies of rare works that the copyright owner does not wish to promote, or the 99-cent new release video rentals from kiosks with low overhead, it would be impossible for a publisher to directly reach the consumers in all of these markets.
- b. Distribution reaches beyond "first consumers" in the commercial marketing sense. Copyright law encourages unlicensed redistribution, advancing the progress of art and science by reaching those unwilling or unable to pay the market price to own a new copy. Rental models, library lending, second-hand stores, and private sales through yard sales or online markets such as eBay and Craigslist, all enable the widespread dissemination intended by the Constitution's copyright clause *and* by Sections 109 and 202 of the Copyright Act. Plus, copies regularly wend their way from one person to another at no

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⁸ Reference to Lincoln's borrowed books is by analogy, of course. They are in the public domain and can be freely copied. Plus, there is no TPM that must be circumvented in order to gain access to literary works printed on paper, which is why this petition need not encompass them.

cost through gifts, lending and inheritance. First sale doctrine case law includes redistribution even as far as copies intended for the trash heap or retrieved from the recycling bin. *See, e.g., Harrison v. Maynard, Merrill & Co.*, 61 F. 689 (2nd Cir. 1894); *Independent News Co. v. Williams*, 293 F. 2d 510 (3rd Cir. 1961). It gives the copyright owner the right to charge what it wants for the copy it owns or authorizes to be made, but prohibits the copyright owner's subsequent control over whether someone else may come to own it or possess it.

- c. Market viability of the original publication increases. The value of the original sale is greater because of its redistribution value. Consider how new car sellers trumpet the high resale value of their new cars. In the consumer's mind, the "resale" value need not be cash the value in giving it to a relative, trading it in on a newer model, or donating it to charity in exchange for a good feeling or a tax deduction, all enhance the market value of the original. Absence of the first sale doctrine would be comparable to an automobile market where new cars could only be disposed of as scrap, or after successfully negotiating a transfer license from the manufacturer. Notably, there is no comparable statutory right of the owner of a lawfully made automobile to redistribute it without the consent of the manufacturer, though the general rule of alienability of chattel may suffice. (Perhaps another reason is that Congress' authority to regulate commerce includes no limitation to the purpose of "advancing the progress of freedom to travel by useful means.")
- d. Redistribution cannot be limited. Whether it was Bobbs-Merrill trying to keep the price of THE CASTAWAY above one dollar, or Mark Twain trying to artificially bolster the perceived value of his books, or the major college textbook publishers trying to charge the most the market will bear in different regions of the globe, the right of the owner of a non-infringing copy to redistribute it over the copyright owner's objection has provided an important safety valve against artificial scarcity that would limit access only to those with deepest pockets. Mark Twain learned that the first sale doctrine (along with the copy/copyright distinction) protected from liability such distributors as chose to breach price fixing agreements intended to add luster to the perceived value of his books; the Supreme Court held that Macy's was free to resell THE CASTAWAY for pennies on the dollar notwithstanding an end-user license agreement to the contrary; the Supreme Court held that copyright owners could not escape the Copyright Act's limitation on their

⁹ Automobile makers competitively advertise the value of the first sale doctrine: "The Subaru Legacy retains its value better than any other vehicle in its class for 2017." Subaru advertisement, at https://www.subaru.com/why-subaru/reviews-awards/legacy.html; "Not only does the 2015 Toyota Tacoma have the highest resale value in its class, it's also Kelley Blue Book's #1 Best Resale Value Winner. Out of ALL 2015 cars, trucks, and SUVs, KBB deemed the Toyota Tacoma to have the highest resale value." Toyota advertisement, at https://www.performancetoyotastore.com/blog/2015/august/12/toyota-cars-with-the-best-resale-value.htm.

¹⁰ Clemens v. Estes, 22 F. 899 (C.C.D. Mass. 1885).

¹¹ Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908).

copyrights by making the copies abroad; 12 and ordinary merchants remained free to buy from the "exclusive" retailer and put the product on their own shelves. ¹³ Restricting the reach of the first sale doctrine, whether by clever distribution agreements, attempts to escape it by manufacturing abroad, by wrapping the fixed work behind various technological measures to impair the usefulness of the redistributed copy, ¹⁴ or even the passive collateral effect of CSS on a DVD – a system intended to prevent unauthorized reproduction but with the added "benefit" to the copyright owner that redistribution could be tempered by licensing the equipment needed to work with the encrypted discs, might all be attractive to the copyright holder as a more lucrative approach, but they widen the economic divide in terms of participation in the constitutionally intended progress of science and the useful arts. Without a vibrant first sale doctrine, we would have a legal landscape in which the poor need the copyright owner's permission to play a movie from a fixation that had been first distributed on a DVD, even though the poor do not have a DVD player or, if they do, lack the ability of acquiring the used DVD from dwindling local sources. Abraham Lincoln's lender would have needed a license from the copyright holder before letting him borrow books, an executor of an estate would need to search out the copyright owners for permission before transferring copies by inheritance, ¹⁵ the birthday gift shopper would need to be sure the copy came with a re-distribution

¹² Kirtsaeng v. John Wiley & Sons, Inc., 568 US ___, 133 S. Ct. 1351 (2013).

¹³ Back in 1993, Orion Pictures provided McDonald's with an exclusive video title, and reportedly "attempted to prevent McDonald's from selling tapes to retailers after reports surfaced that Trans World Music, Musicland and other retailers had purchased them at fast-food chain [sic] for resale in their stores." VIDEO WEEK (April 5, 1993), p. 4. There is no indication that Orion's efforts met with any degree of success; nor could they, since any given McDonald's customer buying a sandwich with a premium could happen to be a video store employee doing the boss a favor. Indeed, any customer is free to resell their tapes, whether to video stores or to each other.

About ten years ago, the "EZ-D" DVD was introduced, enticing copyright owners to, for an added cost or reproduction, distribute DVDs that were *less* attractive to consumers, because they would self destruct, *See* Sarah N. Lynch, *This DVD Will Self-Destruct*, TIME.COM, Tuesday, July 01, 2008, at http://content.time.com/time/business/article/0,8599,1817828,00.html. It was (fortunately) a market failure, for it was an attempt to circumvent Section 109 by rendering the DVD unusable – no longer a "copy" – 48 hours after the "first sale" customer opened it. It used technology to obliterate the Section 109 right Congress had intended to be superior to the distribution right. But it also demonstrated Section 109' economic value to the owner of the copy and the value to the subsequent owner to which it might be distributed – value that the self-destructing DVD basically tried to recapture.

¹⁵ Which raises another use case for the OmniQ Invention: When Uncle Tony dies, leaving behind a couple of terabytes worth of lawfully made copies of copyrighted works, and the only choices of the executor who wants to divide them up among the heirs is to either say "sorry, only one of you can have it," or else reproduce them without permission, non-reproductive space-shifting could move the fixations, individually, from Uncle Tony's hard drive to a medium for each of the heirs, according to their selections. But Uncle Tony may need to stick around a few more years before OmniQ can perfect that particular space-shift.

authorization, and a donation of DVDs to the after-school program for underprivileged students would be limited to those DVDs for which permission to donate had been obtained.

The digital marketplace should be no different in that regard, as the most attractive target consumer is the heavy spender with the financial means to purchase new copies, whether on DVD or by licensed download, at whatever "optimal" price the market will bear. But once a movie has been watched, it just takes up space on the bookshelf or the hard drive. The owner of the hard drive is not likely to part with it so that someone else can enjoy the motion picture fixed on it, nor will the offer to sell or lend a DVD be attractive to the consumer who lacks the technology (licensed by the Copy Control Association) to play it. It is perfectly lawful to do so, but it comes with a tremendous practical barrier – the hard drive redistribution is the equivalent of Abraham Lincoln having to cart away the book owner's entire bookshelf full of books just to read one book; the DVD redistribution is the equivalent of Lincoln borrowing the book bound shut, without permission to cut the binding, because his knife was from an unlicensed knifemaker.

As technology has evolved to the point that it can be used to expand the copyright holder's control beyond the limits of the copyright while diminishing access to important secondary markets by the less affluent, just to prevent price competition against the premium prices charged for the first copy, it is imperative that the Librarian of Congress use her authority to provide relief to those being sidelined from the progress of science and useful arts.

There is a failure in the market because, currently, all of the approaches to preserving the benefits of Section 109 and the first sale doctrine have required a "reproduction" or "public performance" step that depends on permission from the copyright holder, or has required permission from the copyright holder to circumvent the TPM system the copyright holder deployed. In either case, the access to copyrighted works via secondary markets that the first sale doctrine and Sections 109 and 202 of the Copyright Act intended to protect is quickly eroding. The public's access to movies is rapidly moving away from the unlicensed retail market (sales, resales and rentals), together with a long tail of informal yard sales, swaps and gifts, and moving just as rapidly toward an environment where licensors serve as gatekeepers to knowledge and entertainment, where only the more privileges licensees or the unlicensed infringers can enjoy the bounty Article I, Section 8 of the Constitution intended.

The problem is exacerbated by a TPM system that pretends to control access to motion pictures and other audiovisual works on optical discs as an adjunct to preventing unauthorized reproduction of the work from them. Books, for example, continue to be widely available without TPM, and no "licensed equipment" is needed to access them. Music on CDs comes with no TPM; to the contrary, it comes with immunity from lawsuit for noncommercial reproduction, 17 U.S.C. § 1008. But there is currently no legal "patch" for a broken first sale doctrine where TPM-protected movies on optical discs are concerned. With books and music CDs, anyone is free to engage in the kind of activity that CSS on DVD prevents. Non-reproductive space-shifting is lawful with all media, as is fair use reproduction, but where CSS serves as a legal barrier to such non-infringing use while providing no barrier at all to infringing use, it effectively enlarges the reach of Section 106 rights as it diminishes the non-exclusive rights Congress

reserved to the public. Given that Congress specifically stated its intent that nothing in Section 1201 be interpreted to alter the balance of exclusive versus non-exclusive rights, it is imperative that this exemption process authorizes circumvention aimed at restoring the balance.

As Section 1201(c)(1) provides that "Nothing in this section [1201] shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title," we must not allow any TPM to interfere with non-reproductive space shifting as described in the OmniQ Invention, which involves no infringing reproduction or public performance.

Finally, there is no indication that the market controlled by the major owners of the copyrights in motion pictures is moving in the direction of offering a digital-delivery counterpart to the analog first sale doctrine benefits. To the contrary, the freedom that a retailer had to choose any movie title to stock, including the freedom to purchase copies from an "exclusive retailer" the copyright holder might have chosen, is rapidly giving way to a model in which the bulk of the revenue is coming from a handful of large companies (offering public performances (such as through VOD (video on demand), SVOD (subscription video on demand)) or EST (electronic sell-through, which is to say, copies reproduced by means of an authorized download)), and with which licensing deals are reached, often with exclusivity clauses, and always for a very limited period of time. As explained more fully below, the rapid shift within the movie industry to delivering movies by *licensed* public performance and *licensed* downloads at the expense of unlicensed redistributions of lawfully made copies is resulting in fewer motion pictures being available to the masses. Shareholders of the major movie studios may be content to reap higher profits from a vastly reduced viewing public, but that runs counter to the Constitution's Article I, Section 8 authority to secure exclusive rights to authors. The Librarian of Congress should lend her aid to restoring the public benefit, to the fullest extent that Section 1201 allows.

The Long Shot

OmniQ believes that there is arguably no circumvention activity that need to be exempted, because, notwithstanding judicial and Register of Copyrights pronouncements (from years ago) that CSS is a technological measure that effectively controls access to a work, as defined in Section 1201 (a)(3)(B), the reality is that, for all practical purposes, once millions of people have already installed one or more of the many competing "DVD ripping" programs, the "ordinary operation" of the DVD no longer "requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work," id. Instead, all that is required is the DVD owner's desire to "rip the DVD to my hard drive," and accomplish the task with an innocuous couple of clicks. (In fact, the off-the-shelf software does not care whether the user is the owner, or just the renter or borrower). It is time to accept the fact that we have been in denial about since 1999: CSS is useless as an access control if the purpose is to "protect" any exclusive right of the copyright holder. While it may be true that most people technically gain access in the method authorized by the copyright holder (which is to say, they simply bought a DVD player that was licensed by the DVD Copy Control Association), it is just as true that anyone wishing to reproduce the work from the DVD onto a personal computer may do so with greater ease than answering a "what movie do you want to watch tonight" text

message. The most difficult step is deciding which from among the many competing computer programs is the better deal, ¹⁶ and that step need not be repeated to continue ripping away.

Having said that, we are not attempting to persuade the Librarian of Congress to abandon the "alternate reality" that CSS and AACS continue to meet the statutory definition of a TPM. That may be too much of a long shot – at least until the next triennial. Given that the current Notice of Proposed Rulemaking notes the previous treatment of circumvention with respect to DVDs, we must assume that the Register continues to at least presume that, for purposes of this triennial rulemaking, CSS and AACS "effectively controls access to a work." We do, however, believe that it is reasonable for the Librarian of Congress to take into consideration two important facts when considering the Petitions with respect to Class 3:

First, the fact that CSS and AACS don't actually perform the access control function that was intended, and they provide no protection at all (at least not beyond "fig leaf" level) against unauthorized access to the works fixed on the DVD or Blu-ray discs for the purpose of unlicensed reproduction, it is very difficult to fathom any injury to the copyright owner that could come from even the most liberal of exemptions.

Second, many of the "ripping" tools simply reproduce the work to the hard drive along with the entire disc image (ISO file) without actually circumventing anything. They do not gain access to the work, *per se*, and playback may still require the use of an ordinary CSS-compliant DVD player app (or AACS-compliant app). ¹⁷ There is, of course, no "exclusive right to do or to authorize access to a work" in Section 106. The sole legitimate interest to be protected is the reproduction right. When it is clear that the emperor has no clothes – that CSS and AACS do nothing to protect the reproduction right – it is time to at least take the reality into consideration when fashioning exemptions, rather than perpetuate the charade of an invisible fig leaf.

ITEM D. TECHNOLOGICAL PROTECTION MEASURE(S) AND METHOD(S) OF CIRCUMVENTION

The OmniQ Petition seeks an exemption to circumvent the TPMs employed on DVD and Blu-ray discs – essentially the same as those identified by the Register during the last triennial rulemaking process:

The vast majority of DVDs use the Content Scramble System ("CSS") to encrypt audiovisual works on DVDs using a fixed set of decryption keys, and the Copyright Office and courts have found that CSS is an "access control" within the meaning of section 1201(a)(1). The CSS key was decoded in 1999, and decryption

.

¹⁶ Not only can DVD "ripping" software can be readily purchased or downloaded, but Amazon.com alone offers approximately 30 different choices "in stock" to anyone searching for "dvd ripper" under the "software" category.

¹⁷ See, e.g., Danny Chadwick, "The Best DVD Copy Software of 2017," Top 10 Reviews, latest update March 3, 2017, at http://www.toptenreviews.com/software/multimedia/best-dvd-copy-software/, in which 8 of the "Top 10" works were said to be able to "Copy ISO to Hard Drive," explained in a pop-up: "An ISO file is a type of disc image that serves as the blueprint of a DVD and behaves the same way as a disc when opened with DVD player software. The best DVD copy software allows you to copy these types of files for backup or archiving purposes." *Id.*

software is now available on the internet, including the programs MactheRipper, DVDDecrypter, and Handbrake.

Blu-ray discs are protected primarily by the Advanced Access Content System ("AACS"), which allows vendors to revoke compromised keys and distribute new keys. In 2012, the Register recognized AACS as a TPM subject to the DMCA. Proponents, including EFF/OTW, attest that Blu-ray circumvention tools are also easily available, including DVDFab and MakeMKV. Another TPM, called BD+, protects some Blu-ray discs.

Section 1201 Rulemaking: Sixth Triennial Proceeding, Recommendation of the Register of Copyrights, October 2015, at 29 (citations omitted).

Although this Petition seeks an exemption to circumvent such TPMs, the OmniQ Invention's method of non-reproductive space-shifting is largely agnostic to the class of works and to the TPM being used.¹⁸

The OmniQ invention is also largely agnostic to the TPM, at least with respect to the TPM used with DVDs and Blu-ray discs. But the TPM nevertheless presents a barrier to fulfilling the Constitutional objectives.

For example, the OmniQ system can "ingest" a DVD to substitute a hard drive for the plastic medium, keeping intact the entire work together with all TPM surrounding it. But when "the work" of interest is just the motion picture, having to maintain the surrounding TPM is very inefficient, and a useless exercise once the anti-copying function has been replaced with something far more effective; it is akin to forcing consumers to keep the shrink wrap and electronic article surveillance tags together with the DVD long after they have become worthless for their intended purposes of preventing tampering and theft. And, since the DVD of any motion picture often includes other copyrighted works (such as movie previews or "trailers", interviews, or "making of" features), if the person receiving the space-shifted copy only desires the feature film, it is more efficient to only space-shift the primary work on the DVD, and ignore the undesired works. Similarly, a francophone film buff may be happy space-shifting just the original French language film, without the English subtitles (assuming that the subtitles are a separate work in a separate file as opposed to integrated into the movie).

As described in the OmniQ Invention application, OmniQ's method for non-reproductive space-shifting can substitute the hard drive for the plastic, where the entire "disc image" is preserved. But because OmniQ's encryption system is so much more robust than the Copy Scramble System ("CSS") or any other disc-based TPM in preventing reproductions, the TPM no

¹⁸ The OmniQ Invention is not limited to audiovisual works; it can be applied equally to space-

same words fixed in digital form on digital media. But, since there is no TPM surrounding works printed with ink on paper, this Petition does not encompass them.

shifting of sound recordings, literary works, and visual works – anything work fixed in a manner that can be moved from one material object to another without reproduction, and in which the fixation in the new material object is digital. If the original fixation is in non-digital form, such as ink on paper rather than digits on a disc, the OmniQ Invention can be practiced adding what might be referred to as "format-shifting," in which the fixation of, say, a literary work fixed using words printed with ink on paper is space-shifted and format-shifted into a fixation of the

longer serves any useful function once OmniQ's space-shifting has been completed. Specifically, past technologies have either involved DVD direct reproductions through so-called "rippers" that result in the multiplication of unauthorized reproductions, or more creative efforts to "contain" the reproductions by making the unauthorized reproduction first, and then attempting to delete all other copies (*e.g.*, *Capitol Records*, *LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013)). Before ReDigi's "copy and delete" approach, Congress considered (but did not adopt) the legitimacy of a "forward-and-delete" method of space-shifting advocated by former Congressman Rick Boucher. Introduced during the 105th Congress, he proposed to legalize the reproduction of a copyrighted work from one medium to another so long as the source copy was subsequently destroyed. The "Digital Era Copyright Enhancement Act," provided that Section 109(a) (*i.e.*, the entitlement of owners of lawfully made copies to transfer ownership or possession of them without the consent of the copyright owner)

applies where the owner of a particular copy or phonorecord in a digital format lawfully made under this title, or any person authorized by such owner, performs, displays or distributes the work by means of transmission to a single recipient, if that person erases or destroys his or her copy or phonorecord at substantially the same time. The reproduction of the work, to the extent necessary for such performance, display, distribution, is not an infringement.

H.R. 3048, 105th Cong., Section 4. The intent was to permit the owner of a lawfully made copy to do the *equivalent* of transferring possession even though the tangible medium itself would not change hands. The drawback was that, for a period of more than a transitory duration, there would be two copies that could simultaneously be perceived or further reproduced. And, the system did not lend itself to containment – "trust me, I deleted the source copy right away" was too tenuous a basis for granting the right, particularly given that typical computer operating systems allow for the recovery of deleted items.

The OmniQ Invention approach resolves all of those concerns. Throughout the entire process, there is never a multiplication of the work into copies. There is never a point in which the work is fixed in two material objects at once. And, the system is so robust that there is no backup: If the material object substitution fails, the copy is lost forever. If the person to whose hard drive the fixation is shifted breaks the hard drive, the copy is gone. The result is just like when a Netflix customer receives a broken DVD in the mail, and Netflix must replace it with an entirely different lawfully made copy – it cannot simply say, "don't worry, we will burn you a new copy."

The OmniQ space-shifting process need not "bypass or disable" the TPM, but the TPM is nevertheless a hindrance. It is far easier to bypass or disable the CSS on a DVD movie, or AACS on a Blu-ray disc than to bypass or disable the OmniQ encryption. (*See* Exhibit 3, Declaration of Johann George, at 2.) With OmniQ, no "back doors" are permitted. Indeed, the OmniQ encryption is so strong that not even the business using it can keep a "back door" to decrypt it in case of loss. In that sense, OmniQ agrees with members of the House Government Oversight and Reform Committee's Information Technology Subcommittee who, at a hearing on April 29, 2015, criticized the inherent weakness of encryption with back-door access:

"It is clear to me that creating a pathway for decryption only for good guys is technologically stupid," said Rep. Ted Lieu (D-Calif.), who has a bachelor's in computer science from Stanford University. "You just can't do that."

Andrea Peterson, "Congressman with computer science degree: Encryption back-doors are 'technologically stupid'," The Switch, The Washington Post, April 30, 2015, available at http://www.washingtonpost.com/blogs/the-switch/wp/2015/04/30/congressman-with-computer-science-degree-encryption-back-doors-are-technologically-stupid/.

Rep. Jason Chaffetz (R-Utah), chairman of the Government Oversight and Reform Committee, also expressed concern about back doors.

"It's impossible to build a back-door for just the good guys — if somebody at the Genius Bar could figure it out, so could the nefarious folks in a van down by the river," he said.

Id. OmniQ's method of non-reproductive space-shifting ensures that the person who owns or controls neither the original material object in which the work had been fixed cannot use a back door to regain the fixation – the ability to perceive or reproduce the work from the material object – once the space-shifting occurs. It is a flaw by design, and something that beneficiaries of the secondary market will simply have to live with. *See*, *e.g.*, the preliminary FAQ (frequently asked questions) OmniQ developed at the time the OmniQ Invention was being invented, designed to explain to potential customers that, unlike an Electronic Sell-Through model (such as downloads from the iTunes store), there would be no way to simply "recover" the movie if your iPhone falls in the toilet. There is no backup copy "in the cloud" that can restore the copy lost. ¹⁹

OmniQ's encryption is sufficiently strong as to ensure that the work will have long entered the public domain by the time a brute force attack succeeds. And for that reason, the independent deployment of such a system is to be preferred over TPM applied by the copyright holder. Any copyright holder that used TPM to prevent reproduction long after the copyright expired might face charges of monopolization or copyright misuse. By <u>independently</u> protecting the work from being reproduced from that copy, the OmniQ method continues to incentivize the copyright holder to reproduce the work into additional copies, or license others to do so. (We realize that, when the copyright term expires, OmniQ's encryption would continue to prevent reproduction, but at least it is not an act of monopolization or misuse, given that OmniQ is not the copyright owner.)

But the ability to lawfully bypass the virtually useless TPM will make space-shifting much more efficient and less costly than having to respect it, thereby making lawful copies more widely accessible to people of all walks of life through low-cost space-shifting.

Looking under the hood: In its most recent triennial rulemaking, the Copyright Office noted that OmniQ did not provide a prototype that would, in effect, allow it to kick the tires and look under the hood, so to speak:

Commenter OmniQ submitted a patent application that purports to set forth a system of "non-reproductive" space shifting, such that the original instance of a work is destroyed or made unusable when a copy of the work is moved to a new medium. OmniQ asserts that use of such a system would not implicate any of the exclusive rights under section 106 because "[t]here is no 'reproduction or duplication." Although described in written comments, this system was not demonstrated at the hearings, and it is not clear from the record that a product

¹⁹ The FAQ is attached to Exhibit 2, Declaration of John T. Mitchell.

embodying the patent specification has been made available for potential users or even prototyped.

Section 1201 Rulemaking: Sixth Triennial Proceeding, Recommendation of the Register of Copyrights, October 2015, at 113 (citations omitted, emphasis added). At another point in the Recommendations, the Register similarly noted:

Proponent OmniQ contends that the "non-reproductive" space-shifting model it describes in its comments is a noninfringing use because the process described does not constitute reproduction under the Copyright Act. The Register cannot credit OmniQ's arguments in light of its failure to establish that the technology it advocates has actually been developed. The question therefore appears to be a hypothetical one.

Id. at 123 (citation omitted, emphasis added). OmniQ respectfully disagrees with the notion that a working prototype is necessary or even desirable. This is why:

First, to create a prototype that actually takes a CSS-protected DVD or AACS-protected Blu-ray disc and space-shifts by circumventing the TPM sounds almost like entrapment. Surely that was not the Register's intent, but the problem is that, even if a prototype could satisfy the Register that the non-reproductive space-shifting process actually operated as described, it would be necessary to do an act that is currently prohibited by Section 1201 – or at least that is the contention of the copyright holders who use CSS and AACS, and was the position of the Register in 2015.

Second, the whole point of a patent application is to describe the invention with sufficient clarity that anyone skilled in the art could build it.²⁰ The degree of clarity required under our patent laws is sufficient as a matter of law. The current OmniQ Invention application (Exhibit 1 hereto) is under consideration by the U.S. Patent Office, which does not require a working prototype before making its determination of patentability. The point of the 1201 process is not to determine whether, if the USPTO grants the patent, the invention will join the ranks of so many other inventions for which a prototype was never made, and the invention was never practiced. Rather, it is enough that the patent examiner believes it could work as described, and it is not unusual for a patent to be granted for something that might appear to work "on paper" but that, in reality, simply don't work.²¹ In any event, even if the Patent Office denies the OmniQ Invention patent application (for example, because someone else already invented it, thereby failing the novelty requirement, or because it is too obvious, thereby failing the non-obvious

²⁰ 35 U.S.C. § 112 provides, "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention."

²¹ G

²¹ See, e.g., Wonderful energy patents that didn't quite work, The Source (published by the British Gas Company) at https://www.britishgas.co.uk/the-source/our-world-of-energy/surprising-world-of-energy/energy-patents.

requirement), there is nothing to prevent anyone from practicing the method described in the Exhibit 1 patent application for the OmniQ Invention.

Third, even if a prototype were presented for testing, and assuming, arguendo, that the Copyright Office has or can hire the expertise to know whether the split-second computing operations are being carried out precisely in the manner described in the OmniQ Invention patent application, together with the added protection of the OmniQ encryption on each chunk that is read into volatile memory, the Section 1201 task is not for the Librarian of Congress to test each method someone might use to carry out the exemption. The Petition asks for an exemption to carry out non-reproductive space-shifting along the lines of described in Exhibit 1 (the OmniQ Invention patent application), but does not ask that the particular OmniQ Invention method be the only one used. (See Declaration of Johann George, Exhibit 3, for a "plain English" description.) Like "building a better mousetrap," if another inventor figures out how to move the authorized fixation of an audiovisual work from a DVD or Blu-ray disc to some other material object, without reproduction, the inventor would also benefit from the proposed exemption. Surely, if the exemption is granted, neither the Register of Copyrights nor the Librarian of Congress have authority to prevent the competitor's entry into the market until it, too, presents a working prototype to be tested. To put it more directly, the OmniQ Petition is not for an exemption "to practice the OmniQ Invention," but an exemption to use any method now known or later developed of moving the fixation from the disc to something else, without reproduction. To be sure, OmniQ would be satisfied if the granted exemption required the level of encryption planned by OmniQ, but it is certainly not necessary for the Register to wait 6.4 quadrillion years²² to see whether OmniQ can implement the such strong encryption, given that the copyright in a work made for hire only lasts 95 years. Nor do we suggest waiting even 95 years! The Librarian of Congress is free to craft an exemption for non-reproductive space-shifting, including a requirement that at no time may the work be "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration" on more than one material object "from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 101 (definitions of "fixed and "copies").

Fourth, requiring a functioning prototype would appear to be arbitrary and capricious, Quite simply, if the Librarian of Congress refuses to grant an exemption that would allow circumvention of CSS and AACS in order to practice the *non-infringing* method such as that described in the OmniQ Invention patent application on account of the possibility that no one will actually be able to build it, and no one will actually build it because the Librarian of Congress refuses to grant an exemption for it which would permit the invention to be practiced without risk of being sued for violating Section 1201, we are in a hopeless loop. Indeed, a very significant reason why OmniQ has yet to build a prototype is precisely because potential investors are concerned about whether, without such exemption, Section 1201 would frustrate their efforts to see a return on investment. *See* Declaration of Mark Vrieling, Exhibit 4. Plus, if investment is going to be made to practice the OmniQ Invention by building the device, it is important to know whether the device may be designed to efficiently move just the audiovisual

²² See Declaration of Johann George, Exhibit 3, at 2.

work by circumventing the TPM, or must be designed to move the entire contents of the disc, including the useless TPM. ²³

Fifth, there is absolutely no danger if the OmniQ Invention does not work. Assuming that the Librarian of Congress authorizes circumvention of CSS and AACS for the narrow purpose of non-reproductive space-shifting along the lines described in the OmniQ Invention, and further assuming, *arguendo*, that no one is able to perfect the non-reproductive part of the implementation, or that a court were to rule that the OmniQ Invention process itself, as practiced, in reality infringes the reproduction copyright, then the exemption would simply not apply to such conduct. We are confident that the Librarian of Congress can fashion an exemption that does not apply to non-reproductive space-shifting if the non-reproductive feature does not become a reality.

Finally, the exemptions that the Register has recommended in the past have never required the demonstration of a working model. We concede that the OmniQ invention is novel (as it must be, to qualify for patent protection), but novelty is no reason for putting the brakes on "the progress of science and the useful arts."

Accordingly, OmniQ respectfully requests that the Petition be evaluated on the basis of the written Petition itself, referring, at most, to the OmniQ Invention patent application for all necessary understanding of how the exemption might be applied.

ITEM E. ASSERTED ADVERSE EFFECTS ON NONINFRINGING USES

The Proposed Class Includes More Works Protected By Copyright Than Not

Given the current length of copyright protection in U.S. law, odds are that any audiovisual work in the class, selected at random, is still protected by copyright, and that fact will hold true over the next three years. Although the precise number of motion pictures with expired copyrights is not available, it is certainly a very small number in comparison to the number still under copyright. For example, IMDb has listed 284 movie titles in the public domain in 2011 (and quite surprisingly, only 76 movie titles in the public domain in 2012).²⁴ In contrast, there are or will be 540 new movies released in December 2017 alone.²⁵ It is safe to say that even if the IMDb numbers are too low, the vast majority of motion pictures published on TPM-protected DVDs and Blu-rays discs are still copyright protected.

²³ By analogy, it is as if Redbox were seeking investors to back the designing and building DVD rental kiosks without knowing whether it was legally permitted to discard the clamshell cases along with the EAS (Electronic Article Surveillance) tags, or would be required to build a kiosk that rented DVDs inside the EAS-tagged clamshell case supplied by the studio.

²⁴ See http://www.imdb.com/list/ls003915205; http://www.imdb.com/list/ls055593451. (It is curious that the "New 2012" list is smaller than the "Old 2011" list.) Both lists are dwarfed by the number of new copyrighted movies released every year.

²⁵ See, The Numbers - Movies Released and Planned for Release in 2017, https://www.thenumbers.com/movies/year/2017.

The Uses At Issue Are Non-Infringing Under Title 17

Non-infringing uses are (a) private performances and (b) non-reproductive space-shifting.

(a) Private performances

The private (or, more precisely, non-public) performance of a work is not within the scope of exclusive rights; private performances are *always* non-infringing – even the thief who steals an infringing DVD copy of a motion picture has a right to watch the movie; doing so infringes no one's copyright. There has never been – and never can be – a case where an infringer found guilty of making infringing reproductions and distributing the resulting copies for profit is also found guilty of watching the movie from one of those copies. It is a legal impossibility. The point is not to argue for an exemption for the benefit of a thief who wants to watch a stolen copy of an infringing DVD, but to drive home how much more rightful it is for the owner of a lawfully made copy of a movie on DVD to watch it.

Because private performances are fully protected by the First Amendment to the Constitution, and can never be infringing of any copyright, as a matter of law, it is important that relief be granted against any TPM that serves as gatekeeper for "access" in a manner that effectively usurps the First Amendment-protected non-infringing right to privately perform a work.

The owner of a DVD has just as much a right to watch the movie fixed in the DVD as does the owner of a book have a right to read it. And, just as the owner of the book who has not yet learned to read has the right to have someone else privately perform it for her enjoyment, the owner of a DVD who has no machine or device on which to watch it has a right to use a different machine or device, including one not authorized by the copyright owner. Section 1201 did not create an "exclusive right of access to a work," nor is it intended to give the owners of Section 106 rights leverage over which machines or devices may be used to privately perform a work, which is a non-exclusive right beyond the reach of the copyright holder's realm of exclusivity.

Although one may say, "let's watch a DVD," it is the movie (the copyrighted audiovisual

(b) Non-Reproductive Space-Shifting²⁷

The use at issue is non-infringing for three reasons. First, the proposed exemption relies on the Copyright Act's own expression of what constitutes a "reproduction" of a work into "copies," as well as case law interpreting it. Second, the use is expressly non-reproductive; the exemption need not anticipate all possible implementations or require prototypes to see whether, in fact, they function as the exemption requires. Accordingly, none of the exclusive rights in Section 106 are infringed by non-reproductive space-shifting. Third, assuming, *arguendo*, that the reproduction right is implicated, the use is still non-infringing because it satisfies the "fair use" requirements of Section 107.

1. Non-Reproductive Space-Shifting As Described In The OmniQ Invention Does Not Reproduce The Work Into Copies

The first sale doctrine and its corollary, exhaustion of the distribution right, has for centuries ensured a robust secondary market for the redistribution of lawfully made copies of copyrighted works through resales, gifts, and lending. Such activity has ensured wider dissemination of copyrighted works while stimulating the creation of more works due to increased demand. That elegant arrangement has served us well, enabling Abraham Lincoln to borrow law books when he did not have the means to purchase them at the publisher's first sale price, requiring only the consent of the owner of the books, and not the consent of the copyright owner. The doctr

and phonorecords," which are defined as "material objects" in which the work has been fixed. Both the distribution right and the limitation on that right apply only to material objects that are being distributed. In the case of downloads, the reproduction of a work from one material object (e.g., the copyright owner's Internet-connected server) to another (e.g., a person's laptop computer) supplants the reproduction + distribution process used, until very recently, to deliver copies. Instead of reproducing works onto cheap material objects that are shipped in commerce, making their way to the first new owner and then to any number of subsequent persons by sale, gift, rental or lending, the digitally disseminated work is reproduced directly onto the first owner's comparatively very expensive material object containing myriad other works and with which the owner of the material object will be reluctant to part. As downloads increasingly replace the reproduction and distribution of prerecorded media, such as DVD movies, the public benefits of the first sale doctrine are being lost, as a smaller percentage of copies can be circulated on discrete media.

Meanwhile, what had been a competitive free-for-all in which sales, rentals, resales and trade-ins competed with each other and with gifts and lending, is quickly giving way to a more dominant market of strict licensing, where

might pass fair use muster, or otherwise avoid infringement, but those approaches are <u>not</u> contemplated by this Petition.

True space-shifting – that is, the substitution of one material object in which the work is fixed for another, and which results in no reproduction anywhere in the process – is well represented in U.S. and Canadian jurisprudence. Because the Canadian experience has reached Canada's highest court, we will begin north of the border to provide a fuller legal framework, just as we did in comments during the last triennial. Because Canadian copyright law is so similar to that of the U.S., and because lower courts in the U.S. have taken the same path, the Supreme Court of Canada has provided useful guidance.

Canadian Space-Shifting Jurisprudence: The leading case, *Théberge v. Galerie d'Art du Petit Champlain inc.*, [2002] 2 S.C.R. 336, 2002 SCC 34 (CanLII), explains the essence of the reproduction right by emphasizing "re". That is, there must be a *multiplication* of copies. Any process that, once complete, has generated no more copies than when the process began, is not a reproduction. As explained by the Court:

The appellants purchased on the open market a quantity of posters of the respondent's artistic works. They subjected these posters to a technique which involved spreading a special resin or laminating liquid across the face of a poster. The resin is designed to bond with the surface inks. After the applied coating is dried (or cured), the coated poster is submerged in a bath of solvent which loosens the paper substrate but leaves intact the fixed ink/resin layer, thus allowing the latter to be peeled off the former. The rear of the ink/resin layer is then coated with a suitable adhesive resin and transferred to a canvas substrate, which is then smoothed and finished.

Id. at ¶ 35.

My colleague, Gonthier J., takes the position that if the image were transferred from one piece of paper to a different piece of paper with no other "change", there is a new "fixation" and that would be "reproduction". But in what way has the legitimate economic interest of the copyright holder been infringed? The process began with a single poster and ended with a single poster. The image "fixed" in ink is the subject-matter of the *intellectual* property and it was not reproduced. It was transferred from one display to another. It is difficult to envisage any intellectual content let alone intellectual property embodied in the piece of blank paper peeled away, or in the piece of blank paper substituted for it. When Raphaël's *Madonna di Foligno* was lifted for preservation purposes from its original canvas in 1799 under the direction of the chemist Berthollet and fixed to a new canvas, the resulting work was considered to be no less an original Raphaël. Similarly, when the frescoes of Pompeii were restored by replacement of the underlying plaster, the result was not classified as a "reproduction", even though the old plaster was a constituent physical element of the original frescoes. If a comparable copyright situation arose, I do not think the artist would (or should) have a veto over a purchaser's attempt to preserve the asset. These examples may be more spectacular than the humble swap of substrates of a paper poster, but the principle is the same and applies equally to authorized copies as

well as to the original artistic work. In neither case is there reproduction within the meaning of the Act.

Id. at \P 38 (emphasis in original).

The Quebec Court of Appeal adopted a more restricted view than does my colleague, suggesting that the violation of economic rights lay not simply in "fixation" but in moving the ink film from a paper substrate to a substrate of a more costly material, namely canvas ([2000] Q.J. No. 412 (QL), at paras. 18-23). (This was thought to place the respondent's work for resale in a different market niche, as discussed below.) This too, in my view, goes too far. If the "new" substrate material were made of a smooth sheet of vellum (calf) or papyrus, the result would have the identical appearance to the original paper. How has the copyright holder's interest in the "intellectual" property been harmed by such a change in the material composition of the backing? Does the mischief only emerge in appearances, i.e., if the new piece of paper has a textured finish, or is pebbled to look like canvas? No one would deny the world of difference between the original artistic work and a mechanically produced copy, but we are talking here about moving the same physical layer of inks around different blank substrates.

To allow artists to regulate what can or cannot be done with posters in this way would have the public searching for elusive distinctions. There would be no even reasonably "bright line" between infringing and non-infringing conduct, a deficiency that would be particularly mischievous when dealing with prejudgment seizure at the instance of a plaintiff without judicial supervision.

I do not foreclose the possibility that a change of substrate could, as part of a more extensive set of changes, amount to reproduction in a new form (perhaps, for example, if the respondent's work were incorporated by the ink transfer method into some other artist's original work) but the present case does not rise to that level.

Id. at ¶¶ 39-41. The Court went on to focus on <u>re</u>production: "As one would expect from the very word "<u>copy</u>right", "reproduction" is usually defined as the act of producing <u>additional</u> or <u>new</u> copies of the work <u>in any material form</u>. Multiplication of the copies would be a necessary consequence of this physical concept of "reproduction". *Id.* at ¶ 42 (emphasis in original).

Significantly, the *Théberge* Court actually cited U.S. case law in support of its conclusion, and to that we now turn.

United States Space-Shifting Jurisprudence:

The leading case in the United States is *C. M. Paula Co. v. Logan*, 355 F.Supp. 189 (N.D. Tex. 1973). The court focused on whether the process at issue – using a chemical method for lifting a copyrighted image off on one backing and placing it on another – was an infringement of the reproduction right. It held that it was not:

The Court notes at the outset that without copying there can be no infringement of copyright. Further, plaintiff has the burden of establishing that there has been a copying—a "reproduction or duplication" of a thing.

The process utilized by defendant that is now in question results in the use of the original image on a ceramic plaque; such process is not a "reproduction or duplication."

The Court believes that plaintiff's characterization of the print thus used as a decal is appropriate. Each ceramic plaque sold by defendant with a Paula print affixed thereto requires the purchase and use of an individual piece of artwork marketed by the plaintiff. For example, should defendant desire to make one hundred ceramic plaques using the identical Paula print, defendant would be required to purchase one hundred separate Paula prints. The Court finds that the process here in question does not constitute copying

Id. at 191 (citation and footnotes omitted). OmniQ's non-reproductive space-shifting is identical in all significant respects. If, for example, a video service using OmniQ's patent-pending invention wished to substitute a customer's hard drive for the plastic disc of a DVD movie for one hundred customers, then one hundred DVDs of the movie would have to be purchased. At the end of the process, the work is no longer fixed in the 100 DVDs, but instead fixed in 100 customer hard drives. There is no "'reproduction or duplication' of a thing."

As Section 202 of the Copyright Act instructs, we must be mindful of the distinction between the intangible work and the tangible copy of a work. The reproduction right attaches to the work, not the copy. Whether the material object in which the work is fixed is substituted for another material object is inconsequential for purposes of the reproduction right. "The court chooses to focus on the art work itself, not on the material on which the work was mounted or the ultimate use to which the tiles 'lend themselves.' The mode of affixation of the art work onto the mat or tile is insignificant." *Lee v. Deck the Walls, Inc.*, 925 F. Supp. 576, 580 (N.D. Ill. 1996), *aff'd sub nom. Lee v. A.R.T. Co.*, 125 F.3d 580 (7th Cir.1997). The court added, in a footnote, "Certainly Congress did not intend that courts look to the type of adhesive, whether it be Elmer's glue, Superglue or tape, to be the fact upon which a copyright infringement issue should be determined." *Id.*, n. 3. When the Seventh Circuit affirmed, Judge Easterbrook observed, "An alteration that includes (or consumes) a complete copy of the original lacks economic significance." 125 F.3d at 581. "The art was bonded to a slab of ceramic, but it was not changed in the process." *Id.* at 582. "

As noted above, this is what distinguishes OmniQ's non-reproductive space-shifting from efforts like that of ReDigi. There, reproductions were, in fact made, even if the *next* step involved deletion of duplicates. As the *ReDigi* court explained: "It is beside the point that the original phonorecord no longer exists. It matters only that a new phonorecord has been created." *Capitol Records, LLC v. ReDigi Inc.*, 934 F.Supp.2d 640, 560 (S.D.N.Y. 2013). In distinguishing *C.M. Paula* (and, by implication, the OmniQ method), the court explained:

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³⁰ The OmniQ Invention, likewise, removes the fixation from the DVD to the hard drive, no more and no less. The unaltered work of authorship remains intact, but on a different medium.

"ReDigi's service is distinguishable from the process in that case. There, the copyrighted print, or material object, was lifted from the greeting card and transferred in toto to the ceramic tile; no new material object was created. By contrast, ReDigi's service by necessity creates a new material object when a digital music file is either uploaded to or downloaded from the Cloud Locker."

Id. at 650-51.

In short, there is strong authority in both the United States and Canada that where the owner of a lawfully made copy transfers the fixation of a work from one material object to another, without altering the work or causing more copies to be created, there is no infringement of the exclusive right to reproduce the work into copies and phonorecords. The copyright holder's right remains inviolate, while the public's interests expressed in the "copyright clause" of the Constitution are advanced. Moreover, the ability to substitute one material object for another helps ensure that the Copyright Act's (§ 109) plan for unlimited recirculation of lawfully made copies that have already been placed in circulation by the copyright holder will not be stunted merely because modern digital technology makes it cumbersome to transfer the entire library of works (such as a hard drive) sharing a single material object, or to make use of a DVD when DVD players are no longer readily available.

Legal Precedent For "Analog Copies" Must Be Applied To "Digital Copies"

OmniQ was not a petitioner during the Sixth Section 1201 Triennial Proceeding, but commented on a proposal similar to the De Petris petition here, suggesting that even if the Copyright Office were reluctant to recommend an unfettered exemption for the purpose of making back-up or convenience copies, it should consider allowing non-reproductive space-shifting to that end. The Register noted the legal authority cited in support of *true* space-shifting (*i.e.*, moving the work from one material object to another without increasing the number of copies), but suggested that such precedent did not involve a digital format, pointing to the *ReDigi* case as the "most analogous" case involving the digital format, 2015 Recommendation at 123. But there is no reason to reject pre-digital cases, and instead look solely at a digital case in whish the reproduction step was admitted (even if danced around). We respectfully suggest that the Register reconsider this stance, as that there is no room to doubt the precedential value of the cases that are more factually on point. The <u>only</u> fact in common with *ReDigi* is the word "digital." The Copyright Act establishes no basis for disparate treatment, and judicial precedent confirms this.

As noted above, at 5, there is no legal basis upon which to distinguish "digital copies" from any other copies for purposes of copyrights in audiovisual works, or to treat "digital" as a signal for *sui generis* treatment. In the same way that a "literary work" may appear on a printed paper, microfiche, a USB thumb drive, or a server in the so-called "cloud", the Section 101 definitions of "copies," "fixed," "motion pictures" and "audiovisual works" make no distinction between 16mm film, videocassette tape, a DVD, a laptop hard drive, a smart phone, or a remote server. Accordingly, there is no basis for reluctance in applying established legal precedent developed at a time when space-shifting involved works that were fixed in material objects using so-called "analog" methods to space-shifting that involves works that were fixed using "digital" technology, or speculating as to whether, some day, a federal court might conclude that there is a reason for treating "digital" as *sui generis*.

The U.S. Supreme Court agrees. In his concurring opinion in the 1984 "Betamax" decision, Justice Brennan reminds us that analog versus digital is a distinction without a difference. He summarized the judicial policy of taking the Copyright Act as we find it, without speculating as to whether Congress might desire a different result in the case of newer technology:

Like so many other problems created by the interaction of copyright law with a new technology, "[t]here can be no really satisfactory solution to the problem presented here, until Congress acts." *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 167 (1975) (dissenting opinion). But in the absence of a congressional solution, courts cannot avoid difficult problems by refusing to apply the law. We must "take the Copyright Act . . . as we find it," *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390, 401-402 (1968), and "do as little damage as possible to traditional copyright principles . . . until the Congress legislates." *Id.* at 404 (dissenting opinion).

Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 500 (1984), Brennan, J., concurring (full citations added). The Supreme Court of Canada has reached the same conclusion, and established the principle of "technological neutrality" as a fundamental copyright principle. See Cary J. Craig, Technological Neutrality: (pre)Serving the Purposes of Copyright Law, in The Copyright Pentalogy, Michael Geist, ed., at 271, discussing Entertainment Software Association v Society of Composers, Authors and Music Publishers of Canada, 2012 SCC 34, [2012] 2 SCR 231, in particular. Craig writes:

Michael Geist is right to suggest that "the biggest long term impact [of the ESA decision] may be felt when courts begin to assess the effect of the new digital lock rules. Those rules are distinctly non-neutral and could face a rough ride if challenged before the courts." Geist explains, "those rules 'impose an additional layer of protections' and create 'a gratuitous cost' for consumers who lose their user rights in the shift to Internet-based technologies"—precisely the kinds of effects that the Court found to be contrary to its substantive version of the technological neutrality principle.

Id. at 296 (citations omitted). We will face the same issue in the United States, eventually, but in the meantime, we can be guided by the Supreme Court's policy, and the Librarian of Congress may freely follow it to the limits of her Section 1201 power. Traig suggests technological neutrality as a "regulatory starting point," and we recommend it here:

Technological neutrality is an inherently appealing concept for policy makers in the digital age. At its core, the concept implies that regulations can and should be developed in such a way that they are independent of any particular technology, neither favouring nor discriminating against specific technologies as they emerge and evolve. From a principled perspective, neutrality and non-discrimination in the law are almost always laudable goals; from a practical perspective,

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if any, <u>regardless of the nature of the material objects</u>, such as films or tapes, in which the works are embodied.

17 U.S.C. § 101 (emphasis added). The definition of "audiovisual works" is <u>technology neutral</u>, both with respect to the material object constituting the copy and with respect to the machine, device, or electronic equipment used to show the work.

"Copies" are material objects, other than phonorecords, in which a work is *fixed* by <u>any method now known or later developed</u>, *and* from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. *The term "copies" includes the material object, other than a phonorecord, in which the work is first fixed.*

17 U.S.C. § 101 (emphasis added). As the Second Circuit has explained, the definition of "copies" requires an "embodiment requirement" and a "duration requirement," a point we shall return to below (see discussion of the definition of "fixed"). At this juncture, we draw attention to "any method now known or later developed." There is no way to read "except digital" into that definition.

Also, the last sentence in the definition of "copies" would be unnecessary – superfluous – if "reproduce" in Section 106(1) did not have the ordinary English language meaning of multiplying the number of copies. Clearly, in plain English, the first material object in which a work is fixed would not be a "copy," for it is the original; there was nothing to have copied. Congress therefore had to "tweak" the definition just enough to make sure that the original fixation would be treated in the same manner as any reproduced copy of it, otherwise, the author would have no Section 106(3) distribution right over the original.

A "device", "machine", or "process" is one now known or later developed.

Section 101 (emphasis added). Once again, the Copyright Act is <u>technology neutral</u> unless expressly stated otherwise. To put "digital" devices, machines or processes in perspective, it is important to bear in mind that, with the exception of sound recordings, <u>there is nothing special about "digital" insofar as the Copyright Act is concerned</u>. Digits are to disc as ink is to paper.

A work is "fixed" in a tangible medium of expression when its *embodiment* in a copy or phonorecord, by or under the authority of the author, is sufficiently *permanent or stable* to permit it to be *perceived, reproduced, or otherwise communicated for a period of more than transitory duration.* A work consisting of sounds, images, or both, that are being transmitted, is "fixed" for purposes of this title if a fixation of the work is being made simultaneously with its transmission.

Section 101 (emphasis added).

Finally, even where the Copyright Act provided special treatment for "digital" reproductions with respect to phonorecords, it did so only to succeed in hammering a square peg

into a round hole. Because the compulsory license in 17 U.S.C. § 115 was only triggered when the phonorecord was made and distributed, and "downloads" only implicated the reproduction right with no distribution of the material object, Congress essentially deemed the reproduction to encompass distribution as well, not in the Section 106(3) meaning, but just for purposes of applying the Section 115 compulsory license to downloads – "digital phonorecord deliveries." This demonstrates that Congress continues to view the distribution right as merely a means of perfecting and protecting the reproduction right. Melville B. Nimmer and David Nimmer, 2 NIMMER ON COPYRIGHT, § 8.12[A] ("granting the distribution right is a necessary supplement to the reproduction right in order to fully protect the copyright owner"). See, also, C.M. Paula Company v. Logan, 355 F. Supp. 189, 191-92 (N.D. Texas 1973) (quoting an earlier version of the Nimmer treatise). The distribution right is simply a means of perfecting the right to profit from the reproduction of the work into copies, particularly in the event that one who did not infringe the reproduction right is distributing the infringing copies; but the copies themselves are merely tokens of the fact that the reproduction right was exercised. By analogy, if the author of a haiku poem calls someone on the phone and says "write this down," and proceeds to recite the poem, the author has no claim of ownership over whatever article the licensee may have written it on – be it a napkin, a wall, or a hand, or by digital means, such as typing it on a laptop.

3. Even If Arguably Reproductive, The Use Is Non-Infringing Fair Use That Helps Restore The Lost Benefits Of The First Sale Doctrine

The "first sale doctrine" has been part of the fabric of our nation's copyright laws from their inception. When the Supreme Court decided *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908), there had already been a line of lower court cases establishing the same principle – that once an author relinquishes ownership of a copy of the work, at whatever price it chose, the public interest in unfettered redistribution of that copy takes over. Even Mark Twain learned that lesson. For purposes of this initial comment, we suggest that all of the fair use arguments mustered in support of the De Petris Petition apply here, with two important distinctions: First, the use is intended to restore the benefits of the diminishing world of secondary distributions made possible by Section 109(a) – and would have the effect of doing so. Second, there is no cognizable harm to copyright owners, because (a) Section 109(a) already means that any copy they make can be distributed, and (b) just as with a copy on DVD, the OmniQ Invention means only one person can own the copy at a time, and only one person can privately perform the copy at a time.

Users Are Adversely Affected In Their Ability To Make Such Noninfringing Uses (And Are Likely To Be Adversely Affected In Their Ability To Make Such Noninfringing Uses During The Next Three Years)

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For most of our nation's history with copyright protection, copyrighted works were typically published in discrete copies – material objects in which a single work, or a closely related small collection of works – were embodied. The Copyright Act's sharp distinction between the intangible copyrighted work and the tangible copy of the work (17 U.S.C. § 202) could be given full effect in commerce, together with the Copyright Act's express limitation on the distribution right (17 U.S.C. § 109(a)) which entitles owners of lawfully made copies to

redistribute them without the consent of the copyright holder. (Sections 109 and 202 of the Copyright Act of 1976 were originally codified together in § 41 of the Copyright Act of 1909, and in § 27 of the Copyright Act of 1947. Prior to 1909, these principles were adhered to as part of our common law.)

So-called "digital copies" have been around since the days of the music CD and DAT (digital audio tape). Music CDs have been manufactured commercially in the United States since the September 21, 1984, release of Bruce Springsteen's *Born in the U.S.A.*, dubbed by CBS as "The First CBS Records Compact Disc Made In The U.S.A." *See*http://www.keithhirsch.com/the-very-rare-red-bruce-springsteen-born-in-the-u-s-a-cd. That same day, *The Edison CD Sampler* was issued from the same plant. *See*http://www.keithhirsch.com/the-edison-cd-sampler. Interestingly, even back then *The Edison CD Sampler* betrayed the publisher's attempted to restrict uses that are statutorily placed beyond the copyright owner's control. Rather than TPM, the digital copy (or "digital phonorecord," to be precise) carried a legal warning resembling the one struck down by the Supreme Court in *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908): "FOR EDUCATIONAL USE ONLY – NOT FOR SALE." Obviously, it is perfectly lawful for anyone to use it for non-educational use of the CD, and to sell it. But as modern TPM systems allow copyright owners to use technological locks rather than austere and baseless warnings to suppress lawful uses, thumbing one's nose at legal puffery is not an option."

What is different today, with respect to audiovisual works in Class 3, is that in spite of new ways of watching a movie, the public's access to movies is shrinking dramatically. While there may be enough movies available to find *something* worth watching, the breadth of choice in movies was many times higher 20 years ago than it is today.

From the copyright owner's perspective, that may be perceived as a good thing. Your local video store of 20 years ago may have carried 20,000 titles, but the studios were not making any incremental money on rentals following the sale to the store. When a potential viewer wanted to decide on a movie to watch, the studio naturally preferred that the viewer purchase a new copy, watch it at the theater, or at least stimulate rental store demand so that the video retailer would have to direct more of its revenue toward purchasing new releases. Like consumers satisfied to keep driving a 10-year old car to the chagrin of auto makers, retailers that turned customers into classic film buffs happy to watch a black and white Hitchcock flick were doing Hollywood studios no favors. In the end, however, movie selection at retail was responsive to public demand, regardless of which choices (or lack of choices) were more profitable for the studio. A retailer who saw an increased interest in French comedies could beef up the catalog buying used copies of French comedies from a broker rather than steer customers to a smaller selection of new releases.

Today, relatively few video rental stores remain. Even Netflix, which had been a fierce competitor of local video retailers with its mail order DVD rentals, and used to famously drive increased interest in older movies, has been cutting way back on its selections, not bothering to replace classics on DVD, or license the rights to stream them as public performances. Zach Schonfeld, *Netflix, Streaming Video And The Slow Death Of The Classic Film,* Newsweek (online), Sept. 15, 2017, at 6:10 AM, at http://www.newsweek.com/2017/09/22/netflix-streaming-movies-classics-664512.html. Schonfeld goes on to note that 1960 was the year Alfred Hitchcock's *Psycho* was released, along with Billy Wilder's *The Apartment*, and Stanley Kubrick's *Spartacus*:

But in the vast world of Netflix streaming, 1960 doesn't exist. There's one movie from 1961 available to watch (the original *Parent Trap*) and one selection from 1959 (*Compulsion*), but not a single film from 1960. It's like it never happened. There aren't any movies from 1963 either. Or 1968, 1955 or 1948. There are no Hitchcock films on Netflix. No classics from Sergio Leone or François Truffaut. When Debbie Reynolds died last Christmas week, grieving fans had to turn to Amazon Video for *Singin' in the Rain* and *Susan Slept Here*. You could fill a large film studies textbook with what's not available on Netflix.

Id. Of course, Amazon Video has its own limited selection, and having to subscribe to multiple services just to try to cobble together a decent choice is costly to the public, whose local video store did not charge a monthly admission fee whether they rented anything or not. Schonfeld describes the selection as "abominable," noting that, at the time he checked on the ever-rotating (due to licensing) steaming platform, there were just 43 movies made before 1970. Only 25 movies from the pre-1950 era were available to the more than 100,000,000 global subscribers.

Stephen Prince, a cinema studies professor at Virginia Tech, observed, "Now we see the danger inherent in this change—an emphasis on mainstream, contemporary movies has replaced what had been a broad archive of world cinema... Convenience biases viewers toward mainstream fare and makes films of the past or from other cultures less visible." *Id.* "My students are heavily biased toward what's new and what can be streamed on portable devices," Prince says. "What isn't available to stream essentially doesn't exist." *Id.* To paraphrase the Swedish film scholar, Jan Olsson, the cost of acquiring streaming rights often exceeded the customer acquisition/retention value.

Librarian (and writer) Rachel Paige King decried the shift to a system based on contractual permissions rather than the operation law:

So, as the technology to disseminate all kinds of art and information becomes more sophisticated, so too does the means and the motive to restrict access. If entertainment industry executives are smart (and they are) they'll make sure that streaming video turns out to be a whole lot more expensive for consumers than home DVD rental.

Id. And she is right. That is exactly what is happening. "The end result," says Schonfeld, "is a paltry, pathetic catalog of older films shackled by copyright law. It's a strange conundrum: The internet promises a century's worth of multimedia output at your fingertips but ruthlessly privileges whatever got released yesterday. Some films have been left behind in obsolete format hell." *Id.*

As major streaming services become filmmakers, in an effort to both compete using "exclusives" and avoid the need to pay licensing fees, some films do not even get a theatrical release open to everyone, before being confined to an exclusive streaming service. "Frankly, this is why I'm keeping all my DVDs," says film critic, Leonard Maltin. "And it's a pain in the neck, because they take up space. But I don't trust the cloud. And I don't trust the marketplace to maintain titles that are in some cases obscure or not terribly commercial."

"There are some movies you basically have to break the law to see." *Id.* (quoting classic cinema blogger, Nora Fiore). And *that* is what OmniQ seeks to correct. Millions upon millions of movies have already been made, sold, and lawfully distributed, and are currently gathering dust

in warehouses, bas

suddenly fall within the *de facto* control of the copyright holder by operation of the laws of physics shielded by anti-circumvention law insufficiently softened by this exemption process.

(iii) Impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research

There are two primary ways in which the prohibition on the circumvention of TPM applied to copyrighted works affect criticism, comment, news reporting, teaching, scholarship and research: access to the work and access to a specific copy of the work.

First, all of these activities require some manner of *access to the work*. The private performance of a work is never infringing, of course. Even the private performance by means of an infringing reproduction is constitutionally protected. Accordingly, the only constitutionally permissible prohibition on the circumvention of TPM that controls private performance access must be one that is narrowly tailored to go no farther than necessary to protect a legitimate copyright interest. By analogy, if a copyright holder sells a lawfully made copy of a book the access to which is protected by a padlock, a law that prohibits the owner of the lawfully made copy from breaking the padlock without the copyright holder's permission is illegitimate. The fact that a thief cannot read the copy of a locked un-sold book may be acceptable, whereas the copyright owner's use of the lock to impose a metered access to the lawfully made and distributed copies, or to charge a fee to unlock copies being redistributed pursuant to § 109, would not.

The difficulty with the uses described in this sub-section (iii), which mirror statutory examples of fair use, is that the fair use factors are fact-specific, making it difficult to apply a single rule to all access concerns. It may be that if TPM prevents a movie critic from evaluating my copy of a movie, even if doing so is a non-infringing private performance, the movie critic remains free to access the work by other means, such as buying, borrowing or renting a different copy, or watching a public performance. Even so, restrictions imposed by the copyright holder burden the movie critic's freedom if they go beyond essential copyright protection. If the copyright holder's answer to the fact that its TPM blocks non-infringing access to the work is to say that there are other means of accessing the work, such as paying to download it, paying for a movie theater ticket, or buying a different copy, the solution results in an enlargement of the copyright monopoly beyond the statutory limits. In short, any solution that enlarges the scope of the copyright monopoly should be rejected. If the movie critic wishes to privately perform a work from a lawfully made copy, and cannot, the solution is not that the copyright owner can license or otherwise make available some other access. Rather, the solution is to recognize that Section 1201(c) and the First Amendment require that the movie critic be free to privately perform the work without having to turn to the copyright holder for permission.

This brings us to the second way in which TPM may frustrate these uses. It is crucial that the right to privately perform the work be agnostic to the copy from which the private performance is facilitated, just as the Copyright Act and the First Amendment do not distinguish between a professional film critic who publishes in the New York Times from the 8-year-old film critic who publishes by turning in her homework for Mrs. Doubtfire's second-grade English class. The former may be able to send an assistant, with a budget, to scare up an alternate means of access, whereas the latter may be limited to the copy available from a neighbor or the bargain

bin of a thrift shop. Telling the second-grader that she can open an iTunes account to purchase a reproduction rather than circumvent the TPM on the copy she holds in her hands abridges her rights under the Copyright Act and the First Amendment. *See, also*, Declaration of Betty González Mitchell, Exhibit 5.

In sum, the point is that both the Constitution and the Copyright Act require that the "impact" be judged not as an economist might judge market alternatives, or as a copyright holder might mix and match the exercise of exclusive rights to maximize profit, but rather on whether the non-infringing means of access reserved to members of the public are abridged. Because I have a right, under the Constitution and under the Copyright Act, to watch a movie from a second-hand copy I received from a previous owner of that lawfully made copy, that right is abridged if the copyright holder uses TPM to limit that freedom and force me to find an alternate means of access even if that alternate means is readily available and at a nominal additional cost. A student who subscribes to cable television and has two streaming subscriptions should not have to subscribe to a third subscription service, just because the student does not have a DVD player on which to watch a more inexpensive DVD copy.

(iv) Effect of circumvention of technological measures on the market for or value of copyrighted works

When limited to non-reproductive substitution of the material object in which the work is fixed, the impact on the market for and value of the work likely increases. But in any event, because there is no reliance on "fair use," this fair use factor is immaterial. It is no more relevant than a discussion of whether a second-hand bookstore increases or decreases the value of a copyrighted work, since used book sales are a matter of right without regard to fair use.

To properly analyze the impact, we must segregate each exclusive right identified in § 106. First of all, the circumvention would have no impact on the exclusive right to perform or display the work publicly, nor would it have any impact on the exclusive right to create derivative works. (§§ 106(2), 106(4), 106(5) and 106(6).) Although it is conceivable that, in individual instances, there might be an impact (for example, if a licensed public performance of a motion picture is facilitated or hindered by the particular medium in which the work is embodied), it is inconceivable that there would be an overall impact.

With respect to the reproduction right in § 106(1), the non-reproductive substitution would have no effect at all with respect to any individual authorized copy. After all, it is non-reproductive. But by enabling the non-reproductive substitution of the tangible medium in which the work is fixed, the value of the initial copy is likely to increase (whether that value is expressed in a higher market price or simply a higher demand for more copies). For example, the purchase of a DVD-version of a motion picture has more value if there is a greater secondary market for that copy, and the option of non-reproductive substitution of the DVD plastic for a solid state laptop hard drive increases that secondary market. The EZ-D example, discussed above, at n.14, demonstrates that film producers know that there is greater value in redistributable copies.

(v) Other factors that may be appropriate for the Librarian to consider in evaluating the proposed exemption

The proper operation of the U.S. Copyright Act's anti-circumvention prohibition requires that technological protection measures not serve as thumbs on the scale of the Copyright Act's balance between exclusive rights granted under constitutional authority and the non-exclusive

balance, and the courts have required that there be a nexus between a cognizable copyright and the TPM. See, e.g., Chamberlain Group v. Skylink Tech., Inc., 381 F. 3d 1178 (Fed. Cir. 2004). Where "the critical nexus between access and protection" is missing, id. at 1204, there can be no liability. Where the Copyright Act authorizes a use, anyone circumventing a TPM to make that authorized use is "immune from § 1201(a)(1) circumvention liability. In the absence of allegations of either copyright infringement or § 1201(a)(1) circumvention, [users of the OmniQ invention] cannot be liable for § 1201(a)(2) trafficking." Id. The Chamberlain court and others have read "or permitted by law" into the fabric of U.S. copyright jurisprudence. And it could be no other way, since every use that is not prohibited by the Copyright Act is fully protected by the First Amendment to the U.S. Constitution.

Because non-reproductive space-shifting does not involve any reproduction at all, such activity is beyond the reach of the copyright monopoly, and is fully protected by the First Amendment. Accordingly, circumvention of TPM that interferes with *non-reproductive* space-shifting must be allowed, regardless whether the copyright owner might prefer to suppress non-infringing competition.

The Statutory Prohibition On Circumventing Access Controls Is The Cause Of The Adverse Effects

1. Ge $e \ a \ P \ c \ e$

The inability to circumvent the technological protection measures at issue has, for purposes of non-reproductive space-shifting, an adverse effect on noninfringing use as a matter of law. Where the space-shifting can be accomplished without infringing the reproduction right (or any other exclusive right of the copyright owner), the interposition of TPMs, even if for an otherwise legitimate intention of preventing infringing reproductions, necessarily results in an expansion of the copyright owner's monopoly into activity that Congress has expressly excluded from the scope of the copyright. For the same reasons that the Supreme Court established that a court's authority to award costs and attorneys' fees to the prevailing party in a copyright infringement lawsuit could not be applied in a manner that tipped the scales in favor of copyright owners, *Fogerty v. Fantasy, Inc.*, 510 U.S. 517 (1994), so, too, must the Librarian of Congress exercise her discretion with respect to exemptions, in order to preserve that same balance between exclusive and non-exclusive rights.³³

gained thereby." *Graham v. John Deere Co. of Kansas City*, 383 US 1, 6-7 (1966). Adding "to the sum of useful knowledge" is an inherent requisite of all copyright monopolies, and "may not be ignored." *Id.* at 7. The Librarian of Congress must, therefore, apply her exemption authority with the same adherence to the constitutional imperative.

Accordingly, when the Copyright Act itself authorizes uses of a work without the consent of the copyright owner, it is not enough that there be alternate non-infringing means of access authorized by the copyright owner. For example, where the copyright holder uses TPM to diminish lawful enjoyment of secondary markets, it is not enough that the potential beneficiary of the second-hand market remain free to purchase the product at full price. Similarly, just as the Copyright Act gives the copyright holder the exclusive right to print a literary work in a paperback book, but does not give the copyright owner the power to determine that it can only be read by the light of a G.E. light bulb, or to prohibit magnification or projection onto a wall in order to read it better, the authority to reproduce a movie onto a plastic disc does not come accompanied with the exclusive right to determine the means of privately performing the work that is on the disc.

And, when the market is such that there are fewer DVD players on which to play movie fixed in a DVD, it is no solution for the copyright owner to point to *other* copies of the work available for sale, to invite the DVD owner to go to iTunes to obtain a copy by EST (electronic sell-through, or "download"), or to simply watch a public performance of the work if and when it comes available. And if the owner of a copy of the work fixed on a DVD wishes to lend it to a friend or give it to a charity, it is no solution that one can give the cash value, instead, so that the friend or charity can go out and get their own. The whole point of the Copyright Act is to maximize the creation *and dissemination* of the works for the benefit of all. When TPM works for the sole benefit of the copyright owner by artificially restricting non-infringing uses established by law, directly limiting the reach of knowledge and the useful arts in a profit-maximizing way unrelated to protection or exploitation of exclusive rights, there must be a way of lawfully circumventing it.

2. Tec ca S T Tec Da a e T Sec 109 R A e S e ed³⁴

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³⁴ We refer to Section 109 "rights" because we understand them to be exactly that. We are aware of the popularity of relegating the limitations and exceptions in Section s 107 through 122 as mere defenses to a claim of copyright infringement, rather than as affirmative rights, but the fact remains that, in Section 109(a), Congress "authorized" owners to redistribute copies in defiance of the copyright owners' wishes (and Section 106 makes the distribution right "subject to" Section 109); and Section 109(d) refers to the "privileges" described in Section 109(a). Plus, Section 1201(c)(1) recognizes fair use as among "rights, remedies, or defenses ... including fair use;" 1201(c)(3) clearly establishes a right *not* to have to design products to respond to any particular TPM; and 1201(c)(4) recognizes rights, such as free speech rights with respect to use of consumer electronics or computing products, the courts have held that Section 107 is intended in great part to protect First Amendment rights. Courts have had no reluctance to refer to "section 109 rights." *See, e.g., DSC Communications Corp. v. Pulse Communications*, 170 F. 3d 1354, 1361 (Fed. Cir. 1999) ("Such a restriction is plainly **at odds with the section 109 right to transfer owned copies** of software to third parties" (emphasis added)). *See, also, Sebastian*

Although the "first sale doctrine," and its amplified codification in the Copyright Act of 1909 (currently 17 U.S.C. §§ 109 and 202), are a longstanding part of the Copyright Act, and *all* of the exclusive rights in Section 106 are "subject to" Section 109, the expression of it in the copyright context has roots that run much deeper into the fabric of our society. To put it bluntly, every single day, millions of Americans depend on the freedom of alienation of previously sold property, including Copies of motion pictures and other audiovisual works. Some families depend upon thrift stores for much of their shopping for clothing, household goods, and, yes, even DVDs containing motion pictures and other audiovisual works. Our national policy means that people are free to buy or rent used DVDs and used cars with equal ease, even though the original manufacturers of DVDs and cars might prefer to be able to regulate the resale and rental markets.

The first sale rule is statutory, but finds its origins in the common law aversion to limiting the alienation of personal property. *See Burke & Van Heusen, Inc. v. Arrow Drug, Inc.*, 233 F.Supp. 881, 883 (E.D.Pa.1964); Colby, *The First Sale Doctrine* — *The Defense That Never Was?*, 32 J. Copyright Soc'y U.S.A. 77, 89 (1984). *See also* H.R.Rep. No. 987, 98th Cong., 2d Sess. 2, reprinted in 1984 U.S. Code Cong. & Admin. News 2898, 2899 ("the first sale doctrine has its roots in the English common law rule against restraints on alienation of property"); 2 M. Nimmer, \$8.12 (1987).

Intern., Inc. v. Consumer Contacts (PTY) Ltd., 847 F. 2d 1093, 1097 (3rd Cir. 1988) ("the first sale right of section 109(a)"); Softman Prods. Co., LLC v. Adobe Systems, Inc., 171 F. Supp. 2d 1075, 1090 n.19 ("Scholars have suggested that Congress contemplated that parties might attempt to contract out of a first sale right."); Lantern Press, Inc. v. American Publishers Co., 419 F. Supp. 1267, 1373 (E.D.N.Y. 1976) ("the rights of those who purchase paperbacks in the regular course of trade and elect to rebind them" and sell them); Vernor v. Autodesk, Inc., 555 F. Supp. 2d 1164, n.10 (W.D. Wash. 2008) ("an 'owner' with a right to resell his copy under § 109"); Vernor v. Autodesk, Inc., No. C07-1189RAJ, (W.D. Wash. Sept. 30, 2009 (uses a section heading "A. Rights Belonging to an "Owner" of a Copy of Copyrighted Material: The First Sale Doctrine of § 109 and the Reproduction Exception of § 117," and goes on to say that Section 109 is "commonly known as the 'first sale' right"); Brilliance Audio v. Haights Cross Communications, 474 F.3d 365, 373 (6th Cir. 2007) (noting "the traditional bargain between the rights of copyright owners and the personal property rights of an individual who owns a particular copy"). "The first sale doctrine ensures that the copyright monopoly does not intrude on the personal property **rights** of the individual owner, given that the law generally disfavors restraints of trade and restraints on alienation." Id. at 374. (Subsequent history, is any, is omitted from these examples, as it is of no relevance to the reason cited.) In any case, all semantics aside, it is unassailable that the owner of a copy has an ownership "right" in it, and that the Copyright Act, in granting certain limited exclusive rights, leaves everything else as a non-exclusive right to be enjoyed by all. Moreover, all activity involving copyrighted works that falls outside of the reach of the exclusive right is fully protected by the First Amendment, which provides all the "right" necessary for legal recognition as such. The courts will not lend their aid to a private party wishing to do what would be unconstitutional for the government to do directly, Shelley v. Kraemer, 334 US 1 (1948), and neither should the Register of Copyrights.

There is, however, an economic reason for the rule as well. As the district court said in *Burke & Van Heusen*, "the ultimate question under the `first sale' doctrine is whether or not there has been such a disposition of the copyrighted article that it may fairly be said that the copyright proprietor has received his reward for its use." 233 F.Supp. at 884. *See Platt & Munk Co. v. Republic Graphics, Inc.*, 315 F.2d 847, 854 (2d Cir.1963). *See also Cosmair, Inc. v. Dynamite Enters., Corp.*, No. 85-0651, slip op. (S.D.Fla. Apr. 9, 1985) (1985 WL 2209).

Sebastian Intern., Inc. v. Consumer Contacts (PTY) Ltd., 847 F. 2d 1093, 1096-97 (3rd Cir. 1988). The Supreme Court has long recognized the importance of this right to alienate one's own property, both within and without the context of copies of copyrighted works:

But because a manufacturer is not bound to make or sell, it does not follow that in case of sales actually made he may impose upon purchasers every sort of restriction. Thus a general restraint upon alienation is ordinarily invalid. "The right of alienation is one of the essential incidents of a right of general property in movables, and restraints upon alienation have been generally regarded as obnoxious to public policy, which is best subserved by great freedom of traffic in such things as pass from hand to hand. General restraint in the alienation of articles, things, chattels, except when a very special kind of property is involved, such as a slave or an heirloom, have been generally held void. 'If a man,' says , section 360, 'be possessed of a horse or any Lord Coke, in other chattel, real or personal, and give his whole interest or property therein, upon condition that the donee or vendee shall not alien the same, the same is void, because his whole interest and property is out of him, so as he hath no possibility of reverter; and it is against trade and traffic and bargaining and contracting between man and man." Park v. Hartman, supra. See also , §§ 27, 28.

Nor can the manufacturer by rule and notice, in the absence of contract or statutory right, even though the restriction be known to purchasers, fix prices for future sales. It has been held by this court that no such privilege exists under the copyright statutes, although the owner of the copyright has the sole right to vend copies of the copyrighted production. *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339. There the court said (p. 351): "The owner of the copyright in this case did sell copies of the book in quantities and at a price satisfactory to it. It has exercised the right to vend. What the complainant contends for embraces not only the right to sell the copies, but to qualify the title of a future purchaser by the reservation of the right to have the remedies of the statute against an infringer because of the printed notice of its purpose so to do unless the purchaser sells at a price fixed in the notice. To add to the right of exclusive sale the authority to control all future retail sales, by a notice that such sales must be made at a fixed sum, would give a right not included in the terms of the statute, and, in our view, extend its operation, by construction, beyond its meaning, when interpreted with a view to ascertaining the legislative intent in its enactment." It will hardly be contended,

with respect to such a matter, that the manufacturer of an article of commerce, not protected by any statutory grant, is in any better case.

Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 US 373, 404-05 (1911) (emphasis added). But although this "right of alienation is one of the essential incidents of a right of general property in movables, and restraints upon alienation have been generally regarded as obnoxious to public policy," *id.*, and that policy is best advanced "by great freedom of traffic in such things as pass from hand to hand," *id.*, the very same modern technology that has enabled more efficient reproduction and wider dissemination of "first" sales is making it much harder to exercise that freedom to traffic in lawfully made copies that the Copyright Act has, for well over a century, intended pass from hand to hand without restraint. (This is particularly true in the case of licensed downloads – reproductions, authorized by the copyright holder, in which the owner of the computer or mobile phone onto which the work is reproduced becomes the "owner of a lawfully made copy" with the legal right to redistribute it, but no practical way of doing so.) And, unlike a printed copy of a literary work that can be read for generations to come, lasting as long as the book or magazine is protected from destruction, an audiovisual work on DVD suffers from two threats to alienability.

First, sales of playback devices are in a downward trend,³⁵ and less likely to be included with a personal use computer.³⁶ In fact, Lifewire reports,

Probably the biggest factor that will lead to the demise of the optical drive in PCs is Microsoft dropping support for DVD playback. In one of their developer blogs, they state that the base versions of the Windows 8 operating system will not include the software necessary for playing back DVD videos. This decision carried over to the latest Windows 10. This is a major development as it was a standard feature in previous versions of the operating system. Now, users will either have to purchase the Media Center pack for the OS or will need a separate playback software on top of the OS.³⁷

The Lifewire article goes on to note the explain the impact on consumers:

The end result is that it can be a major headache for the consumers who wish to have the new optical formats in their computers. In fact, users of the Apple software have it even worse as the company refuses to support the technology within the Mac OS X software. This makes the Blu-ray format all but irrelevant for the platform.³⁸

³⁵ DVD players/recorder unit shipments in the United States have been in year-to-year decline every year since 2014. See https://www.statista.com/statistics/220729/forecast-in-dvd-player-shipments-in-the-us/.

³⁶ See, e.g., Mark Kyrnin, Death of the Computer Optical Drive Why Most Moderns PCs Do Not Feature CD, DVD or Blu-ray Drives, Lifewire, August 12, 2017, at https://www.lifewire.com/death-of-the-computer-optical-drive-832403.

³⁷ *Id*.

³⁸ *Id*.

Kyrnin's conclusion speaks directly to one substantial reason – completely independent of the secondary markets being lost – why consumers must be able to migrate their DVD and Blu-ray copies to their hard drives:

Now optical storage is not going to completely disappear from computers any time soon. It is just very clear that their primary usage is changing and is not a requirement for computers like they once were. Instead of being used for storing data, loading software or watching movies, the drives will likely be there to convert the physical media into the digital files for playback on computers and mobile devices. It is almost certain that the drives will be completely removed from most mobile computers in the near future. There is little use for the drives when it is so much easier to view them off a digital file than the disc. Desktops will still pack them for a while as the technology is so inexpensive to include and there are not the space issue of mobile computers. Of course, the market for external peripheral optical drives will survive for a while for anyone that still wants to have the capability that will be dropped from their future computers.

Accordingly, the millions upon millions of lawfully made copies of motion pictures on DVD and Blu-ray discs, made and distributed as intended by the Copyright Act, will soon be "a major headache" to watch. Having to find a third party optical disc drive compatible with one's latest laptop, find the correct connectors, and then have to purchase and install playback software

doctrine" intended to foster. Existing long before we had a Copyright Act, the right to alienate the copies one owns has been an integral part of the fabric of copyright law. When Congress legislatively endorsed the Supreme Court's holding in *Bobbs-Merrill*, it went a big step further by than declaring that the copyright holder's exclusive rights do not extend so far as to allow control over copies it no longer owns. Agreeing "it would be most unwise to permit the copyright proprietor to exercise any control whatever over the article which is the subject of copyright after said proprietor has made the first sale." H.R. Rep. No. 2222, 60th Cong., 2d Session (1909), Congress made clear that copy ownership is separate for copyright ownership, and transfers with respect to one do not control the other, and that all of the rights and incidents of ownership of ordinary chattel apply with respect to non-infringing copies that have been lawfully acquired. Plus, while Section 106 makes all copyrights "subject to sections 107-122," Section 109(a) is uniquely set out as a specific authority of the owner of the copy, which is superior to that of the copyright's distribution right.

Closing comment:

The OmniQ Invention method of non-reproductive space-shifting need not be the only way to engage in non-reproductive space-shifting. We are not suggesting that the exemption should be patent-specific. Nor are we suggesting that "fair use" alone is an insufficient justification for an exemption when the fair use standard is met. Rather, OmniQ's Patent method demonstrates that space-shifting can be carried out without reproduction and in a manner that is more protective of the reproduction right than any TPM in use today, and without the collateral damage when well-intended TPM infringes upon non-exclusive rights. Consequently, non-reproductive space-shifting fully protects the integrity of the reproduction right and, when OmniQ's method is followed, makes it unnecessary for the user to rely on fair use analysis or for the copyright owner to rely on its own TPM.

DOCUMENTARY EVIDENCE

Commenters are encouraged to submit documentary evidence to support their arguments or illustrate pertinent points concerning the proposed exemption. Any such documentary evidence should be attached to this form and uploaded as one document through regulations.gov.

In addition to the evidence cited, the following documentary evidence is included with this submission:

- Exh. 1. Digitally Transferring Content Across Media Without Reproduction, Patent Application # WO 2016/168832; US 2016028135.
- Exh. 2. Declaration of John Mitchell (and attached OmniQ FAQ).
- Exh. 3. Declaration of Johann George.
- Exh. 4. Declaration of Mark Vrieling.
- Exh. 5. Declaration of Betty González Mitchell.

OmniQ Peticion, Calss 3, Exhibit 1

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computer system including instructions for performing any of the methods described herein.

WO 2016/168832 PCT/US2016/028135 one or more data segments) from the second volatile memory including at least a portion of the corresponding data. wherein the received data was read from the second non-volatile storage medium to the second volatile memory; after the corresponding data is erased from the second non-volatile storage medium, storing the received data in the first non-volatile storage medium; and after storing the received data in the first non-volatile storage medium. erasing the received data from the first volatile memory. The received data is erased from the second volatile memory after the received data is received in the first volatile memory or

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WO 2016/168832 PCT/US2016/028135 circuits have not been described in detail so as not to unnecessarily obscure aspects of the [0024] Figure 1 is a block diagram illustrating an implementation of a content transfer system 100. in accordance with some embodiments. The content transfer system 100 includes a communications network 160 and a plurality of client-servers, including a first client-server 110 and a second client-server 130. In some embodiments, client-server 110 includes content transfer module 112. [0025]

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	o encryption/decryption module 212 that is used for encrypting and/or
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; <u>*</u>	generated by key generator 216 as described herein:
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ī.	 transfer status module 214 that is used for monitoring the status of content transfer, and that may monitor the status of one or more chunks of content
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	being transferred;
~ <u>R</u>	key generator 216 that is used for generating encryption/decryption keys for
15 F. —	one or more portions of content.
D	[0029] Each of the above identified elements may be stored in one or more of the previously mentioned memory devices that together form memory 206, and corresponds to a
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	set of instructions, executable by the one or more processors of client-server 110, for
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	performing a function described above. The above identified modules or programs (i.e., sets
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	of instructions) need not be implemented as separate software programs, procedures or
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	reproduction 300. in accordance	with some embodiments. In some embodiments. method	
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	300 is performed by a content tra	nsfer system, such as by content transfer system 100 or a	
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	component thereof such as client-	-server 110 (Figure 1). In some embodiments, method 300	
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	is performed within client-server	110 across internal communication buses (e.g.,	
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WO 2016/168832 PCT/US2016/028135 content file in the selected data can no longer be played, viewed, perceived, reproduced or otherwise communicated from NVM A, either directly or with the aid of a machine. In some embodiments, the content transfer system erases (308) the selected data from NVM A by means of physical destruction of the storage medium (e.g., NVM A), or physical destruction of at least the portion of the storage medium in which the selected data. or a portion of the selected data, was stored. For example, in embodiments in which NVM A is a CD or DVD.

	[0040] Optionally, in some embodiments, the content transfer system converts (310) a format of the selected data. In some embodiments, the format conversion is performed on the
_	Tormat of the selected data. In some embodiments, the format conversion is bentonned on the
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	selected data that has been read into volatile memory. In some embodiments, format
	conversion includes encryption or decryption of content using keys. In some embodiments.
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	format conversion includes conversion of content into a format required for playback on an
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	output device, such as a stereo system, television, or monitor. In some embodiments, format
Ξ	Output device, such as a stereo system, terevision, or monitor, in some emocumicitis, format
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	conversion is performed independently of the erase operation. In other words, format
	conversion of data that has been read into volatile memory from a first non-volatile memory
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	need not be done in any particular order with respect to erasing the corresponding data from

[0041] In some embodiments, the selected data is transferred across a network (e.g., from a first client-server such as client-server 110 to a second client-server such as client-

example embodiment in which operation 304 is repeated for a next data segment after
operation 308 is performed on a prior data segment, those of ordinary skill in the art will
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recognize that a respective segment or set of segments may but need not be fully processed and transferred before processing is begun for a subsequent segment or set of segments.
Thus, processing may be performed in a pipelined manner, and a plurality of segments may
be in various stages of the transfer process at any given time.
[0045] In some embodiments, when the content transfer system completes respective
150 101 In some emoderments, whom the content transfer system combietes respective

and its corresponding kev(s). As shown in Figure 4A. in some embodiments, the content
stored in NVM A includes encrypted data and one or more corresponding keys.
[0049] In some embodiments, as described above with reference to Figure 3, the
content is stored as a content file, optionally including a plurality of data segments (e.g.,
chunks 123-1, 123-2 through 123-n), and in some embodiments the content is transferred all
at once or one or more segments at a time. Thus, in some embodiments in which a content
at once or one or more segments at a time. Thus, in some embodiments in which a content file is optionally transferred in segments, the content transfer system selects (404) a next data
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file is optionally transferred in segments, the content transfer system selects (404) a next data
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file is optionally transferred in segments, the content transfer system selects (404) a next data segment, or a next subset of a plurality of data segments, of the content data to be transferred.
file is optionally transferred in segments, the content transfer system selects (404) a next data segment, or a next subset of a plurality of data segments, of the content data to be transferred.
file is optionally transferred in segments, the content transfer system selects (404) a next data segment, or a next subset of a plurality of data segments, of the content data to be transferred.
file is optionally transferred in segments, the content transfer system selects (404) a next data segment, or a next subset of a plurality of data segments, of the content data to be transferred.
file is optionally transferred in segments, the content transfer system selects (404) a next data segment, or a next subset of a plurality of data segments, of the content data to be transferred.

 $corresponding \ key.$

[0050] Next, the content transfer system reads (406) the selected data (or data segment) and its corresponding kev from NVM A into a first volatile memory A (e.g..

WO 2016/168832 PCT/US2016/028135 are received and stored (412) in volatile memory B. In some embodiments, such as those in which one or more forms of format conversion were performed on the selected data. the data

F	corresponding data, corresponding to the selected data and its corresponding key, have been
F	transmitted to the second volatile memory B (410), and erases the corresponding data from
F	the second volatile memory B (420) after the corresponding data are stored in the second
* –	NVM B. Thus, the selected data and its corresponding key are erased from the first volatile
· <u>.</u>	memory A after the corresponding data is transmitted to the second volatile memory, or after the corresponding data is stored in the second non-volatile storage medium. Erasing the selected data and its corresponding key from volatile memory A and volatile memory B need
F	not be done in any particular order with respect to each other and may be done concurrently.
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[0057] Optionally, in some embodiments in which content is transferred in segments, the content transfer system repeats operation 404 and subsequent operations of method 400a for a next data segment or set of segments. More generally, in some embodiments operations

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In som	e embodiments, n	nethod 400b is perf	formed by a plura	ality of client-server	s (e.g., client
server	110 and client-ser	ver 130, Figure 1)	communicating	via a network (e.g.,	
commi	inications networ	k 160) to return cor	itent from non-v	olatile memory in a	second clien
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		11.2 11.2			
					
server	(<u>e.g., NVM 140 o</u>	f client-server 130,	Figure 1) to non	n-volatile memory in	n a first clien
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seryer	(e.g., NVM 120 o	f client-server 110.	Figure 1).		
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		<u> </u>			
<u>[0060]</u>	The meth	od begins in some	embodiments w	vith content being st	ored (422) in
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	[0064] Next, in some embodiments, after the corresponding key is received and	
	stored in volatile memory A (e.g., returned to volatile memory A) (430), the content transfer	
<u> </u>	system erases (432) the at least the key corresponding to the selected data from NVM B.	=
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	Optionally, the selected data is also erased (432) after the corresponding key is received and	_
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	stored in volatile memory A. However, in embodiments in which the selected data is retained	_
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(e.g., the content corresponding to the selected data) is not stored in the second non-volatile storage medium concurrently with the portion (e.g., the corresponding key) being stored in the first non-volatile storage medium.		serected data exist between	eli i vivi A aliu i vivi	B. More generally, the cor	responding data
storage medium concurrently with the portion (e.g., the corresponding key) being stored in the first non-volatile storage medium.				*	
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storage medium concurrently with the portion (e.g., the corresponding key) being stored in the first non-volatile storage medium.		(a a the content comes	معطناه مطامع فالمعادم	l data) is mot stomed in the so	aand nan svalatila
the first_non-volatile storage medium. [0068] Next, the content transfer system erases the corresponding key from the	-	Te.g., the content corresp	onding to the selected	i data) is not stored in the se	cond non-voiante
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the first_non-volatile storage medium. [0068] Next, the content transfer system erases the corresponding key from the		. 1	.1 1.1 .1	/ .1 1° 1	\1 • • • • • • • • • • • • • • • • • • •
[0068] Next, the content transfer system erases the corresponding key from the		storage medium concurre	ently with the portion	(e.g., the corresponding key) being stored in
[0068] Next, the content transfer system erases the corresponding key from the	-			<u>*</u>	
[0068] Next, the content transfer system erases the corresponding key from the					
[0068] Next, the content transfer system erases the corresponding key from the					
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[0068] Next, the content transfer system erases the corresponding key from the	-				
[0068] Next, the content transfer system erases the corresponding key from the			1	*	
[0068] Next, the content transfer system erases the corresponding key from the			****	<u> </u>	
[0068] Next, the content transfer system erases the corresponding key from the		the Cust was realettle stor			
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accord weletile memory D (426) and energy the companion ding less from the first weletile		[0068] Next, the	content transfer system	m erases the corresponding	key from the
		second volatile mamare	B (136) and arosas the	a corresponding law from th	a first valetila
second volatile memory B (436) and erases the corresponding key from the first volatile		second voiante memory,	and eigses the	c corres honantă ve a nom m	C.IIIST VOIAUIC

memory A (438). Alternatively, the content transfer system erases the corresponding key

corresponding to the entire data set or content file have been transferred from NVM A to

	NVM B. As Figure 4B show	ws an example embodime	ent in which operation 42	24 is repeated
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	for a next data segment after	r operation 428 is perforn	ned on a prior data segm	ent and as
	Tor a next data segment arter	- Coberation 420 is benton	icu on a biioi data segii	
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· · · · · ·	discussed above with referen	nce to Figures 3 and 4A.	those of ordinary skill in	the art will
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51	recognize that a respective s	egment or set of segment	s mav but need not be fu	ıllv processed
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and transferred before processing is begun for a subsequent segment or set of segments.

[0072] In some embodiments, when the content transfer system completes respective operations of method 400a and/or method 400b, such as any of the operations described above, a status table or log (e.g., stored in or by the content transfer system) is updated to

J <u>0</u> 075]	With reference to Figure 5A, in some embodiments, the content transfer
	100 F' 1 1 (700) 6 1 1 1 101
system (e.g	content transfer system 100, Figure 1) reads (502) first data (e.g., data 121, or a
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	#- * · · · · · · · · · · · · · · · · · ·
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respective ch	unk 123-i thereof. Figure 1) stored in a first non-volatile storage medium (e.g.,
	* · · · · · · · · · · · · · · · · · · ·
NIV. 100 C	
NVM 120 of	client-server 110. Figure 1) from the first non-volatile storage medium to
volatile mem	ory (e.g., volatile memory 125 and/or volatile memory 145, Figure 1). In some
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embodiments	s, the non-volatile storage medium is a flash memory device. CD (compact disc).
emodaments	The non-volune scoluge median is a mash memory device. Ob teombact disc.
DVD ("digits	al versatile disc" or "digital video disc"). Blu-Rav Disc TM (a trademark of Blu-
D ID Cuight	, resource dide of distant rideo dide i. Did 1(a) Pide (a tradellidir of Did-

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can be done in conjunction with operation 404 or 406 of method	400a, Qi	i oberanon 502 oi

506 of method 500. Furthermore, in some embodiments, if the first data is initially

encrypted, and is decrypted by operation 512 using a previously obtained key, a new key can

be generated for the first data or any segment of the first data, using any of the

aforementioned kev generators, and that new kev is used to encrypt the first data, or a

segment of the first data, during operation 512,

Next. in some embodiments, after storing the corresponding data (e.g., data

	predefined quantity of data, such as 10 megabytes. 100 megabytes, or other appropriate
*	
	quantity.
	As those skilled in the art will recognize, in some embodiments, the methods
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<u> </u>	described herein to transfer content from a first non-volatile storage medium to a second non-
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	volatile storage medium may be repeated to transfer the content from the second non-volatile
	volatile storage medium may be repeated to transfer the content from the second non-volatile storage medium to a third non-volatile storage medium. In some embodiments, after content
	volatile storage medium may be repeated to transfer the content from the second non-volatile storage medium to a third non-volatile storage medium. In some embodiments, after content
	storage medium to a third non-volatile storage medium. In some embodiments, after content
	storage medium to a third non-volatile storage medium. In some embodiments, after content
	storage medium to a third non-volatile storage medium. In some embodiments, after content
	storage medium to a third non-volatile storage medium. In some embodiments, after content
	storage medium to a third non-volatile storage medium. In some embodiments, after content
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated
	is transferred from a first client-server to a second client-server, the method may be repeated

		is claimed is:		Î.				
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-	1.	A method of t	ransterring (<u>lata.</u> combris	sing:			
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	,. <u> </u>	reading first d	ata stored in	a first non-v	olatile storag	ge medium fro	m the first i	non-
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	Volati	ile storag <u>e med</u> i	um to volatii	e memory:		٤		
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		erasing the fir	st data from	the first non-	-volatile stora	age medium;	-	
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		erasing the fir					um. storing	
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	COLLEGE	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre		he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	
	corre	after erasing t	he first data	from the firs	t non-volatile	e storage medi	um. storing	

located at a first physical medium, and the second non-volatile storage medium is located at a segond physical medium. 7. A computer system, comprising: one or more processors: one or more processors: instructions for: reading first data stored in a first non-volatile storage medium, from the first non-volatile storage medium, from the first non-volatile storage medium.
7. A computer system, comprising: one or more processors: one or more programs stored in the memory, the one or more programs including instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
7. A computer system, comprising: one or more processors: one or more programs stored in the memory, the one or more programs including instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
one or more programs stored in the memory, the one or more programs including instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
one or more programs stored in the memory, the one or more programs including instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium from the storage medium from the first non-volatile storage medium.
one or more programs stored in the memory, the one or more programs including instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
instructions for: reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
reading first data stored in a first non-volatile storage medium from the first non-volatile storage medium to volatile memory;
non-volatile storage medium to volatile memory;
non-volatile storage medium to volatile memory;
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*	11. The system of any of claims 7-10. wherein the first data stored in the first non-volatile
*	storage medium corresponds to a segment of a data set stored in the first non-volatile storage
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	medium, the data set includes a plurality of segments, and the system includes instructions for
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· · ·	repeating the reading, erasing, storing, and erasing operations with respect to each of the
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	plurality of segments of the data set.
	plurality of segments of the data set. 12. The system of any of claims 7-11, wherein the first non-volatile storage medium is
	12. The system of any of claims 7-11. wherein the first non-volatile storage medium is
	12. The system of any of claims 7-11, wherein the first non-volatile storage medium is
	12. The system of any of claims 7-11, wherein the first non-volatile storage medium is

	after storing the corresponding data in the second non-volatile storage medium, erase
	the first data from the volatile memory;
*	wherein the first data stored in the first non-volatile storage medium and the
	
<u> </u>	corresponding data stored in the second non-volatile storage medium are not concurrently
	corresponding data stored in the second non-volatile storage medium are not concurrently
	corresponding data stored in the second non-volatile storage medium are not concurrently
	corresponding data stored in the second non-volatile storage medium are not concurrently
	stored.
	stored.
	stored. 16. The non-transitory computer readable storage medium of claim 15, wherein the
	stored.
	stored. 16. The non-transitory computer readable storage medium of claim 15, wherein the
	stored. 16. The non-transitory computer readable storage medium of claim 15, wherein the corresponding data includes the first data.
	stored. 16. The non-transitory computer readable storage medium of claim 15, wherein the corresponding data includes the first data.
	stored. 16. The non-transitory computer readable storage medium of claim 15, wherein the corresponding data includes the first data.

	21. A method of transferring data, comprisin	<u> </u>
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	reading first data stored in a first non-vol	atile storage medium from the first non-
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<u> </u>	volatile storage medium to a first volatile memor	V
	#	
	1000 	
	transmitting corresponding data from the	first volatile memory to a second volatile
* -		
	#. 	
	#	
	memory, wherein the corresponding data is conf	igured to be stored in a second non-volatile
*		
	- 102 - 103 - 104 - 105 - 105	
	10-2	
	storage medium;	

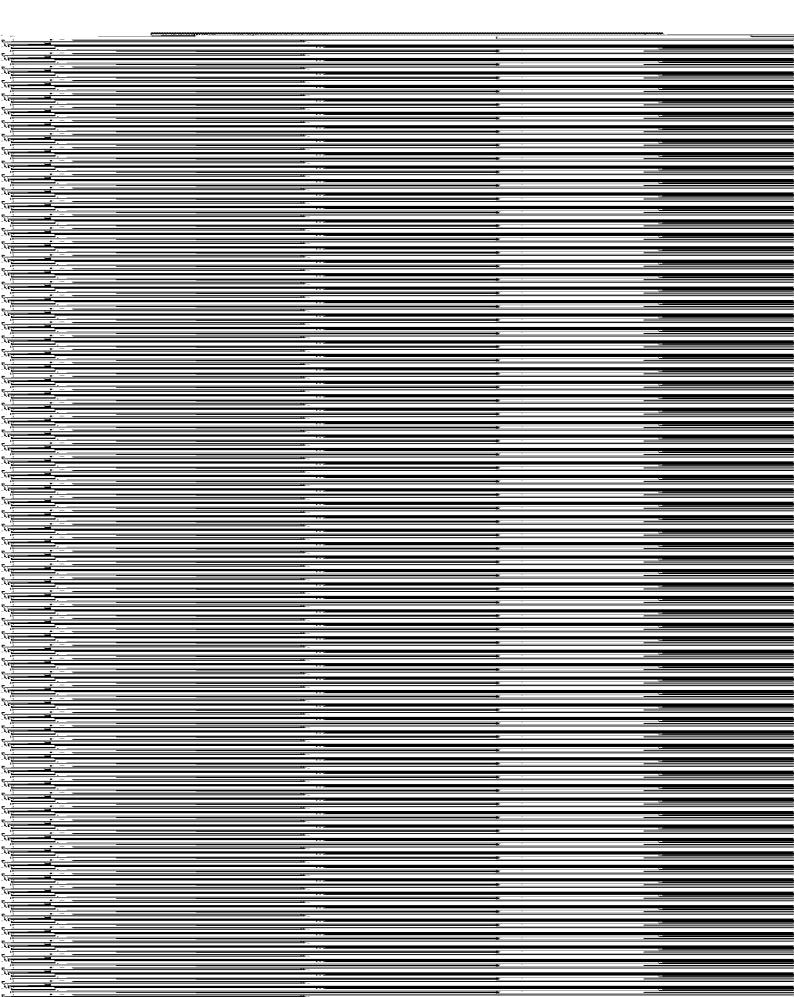
after the corresponding data is read from the first non-volatile storage medium to the

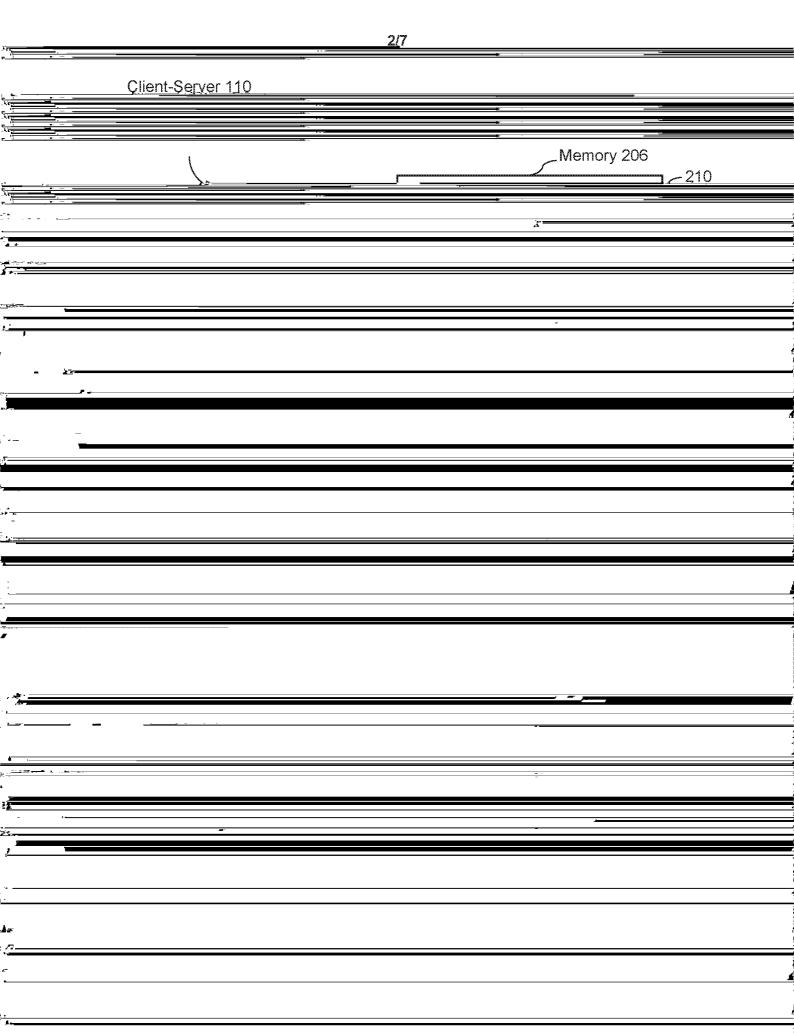
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modium and accord valetile manners are legated at	aliant daving distinct from the heat
medium and second volatile memory are located at a	ctient device distinct from the nost
medicin and second volume memory in crossica at a	* -
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device.	
24, The method of any of claims 21-23, wherein	the first data includes one or more
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	reading first data stored in a first non-volatile storage medi	um from the first
	non-volatile storage medium to a first volatile memory;	
	transmitting corresponding data from the first volatile mem	ory to a second
	volatile memory, wherein the corresponding data is configured to be store	d in a second non-
	### ### ##############################	
	volatile storage medium;	
	after the corresponding data is read from the first non-volate	ile storage medium
<u> </u>		
	to the first volatile memory, or after the corresponding data is transmitted	to the second
	volatile memory, erasing at least a portion of the first data from the first no	on-volatile storage

	wherein the corresponding data is erased from the second volatile memory after the
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Action 1	
	corresponding data is stored in the second non-volatile storage medium, and wherein the
	portion of the first data stored in the first non-volatile storage medium and the corresponding
	data stored in the second non-volatile storage medium are not concurrently stored.
N. S.	33. The computer system of claim 32, including means for performing the method of any
_ '?	a.
	of claims 22-29.
	of claims 22-29. 34. A non-transitory computer readable storage medium storing one or more programs configured for execution by a computer, the one or more programs including instructions that
	34. A non-transitory computer readable storage medium storing one or more programs
	34. A non-transitory computer readable storage medium storing one or more programs
	34. A non-transitory computer readable storage medium storing one or more programs configured for execution by a computer, the one or more programs including instructions that
	34. A non-transitory computer readable storage medium storing one or more programs configured for execution by a computer, the one or more programs including instructions that
	34. A non-transitory computer readable storage medium storing one or more programs configured for execution by a computer, the one or more programs including instructions that when executed by one or more processors of the computer system cause the computer system to:
	34. A non-transitory computer readable storage medium storing one or more programs configured for execution by a computer, the one or more programs including instructions that when executed by one or more processors of the computer system cause the computer system to: read first data stored in a first non-volatile storage medium from the first non-volatile

memory, wherein the corresponding data is configured to be stored in a second non-volatile



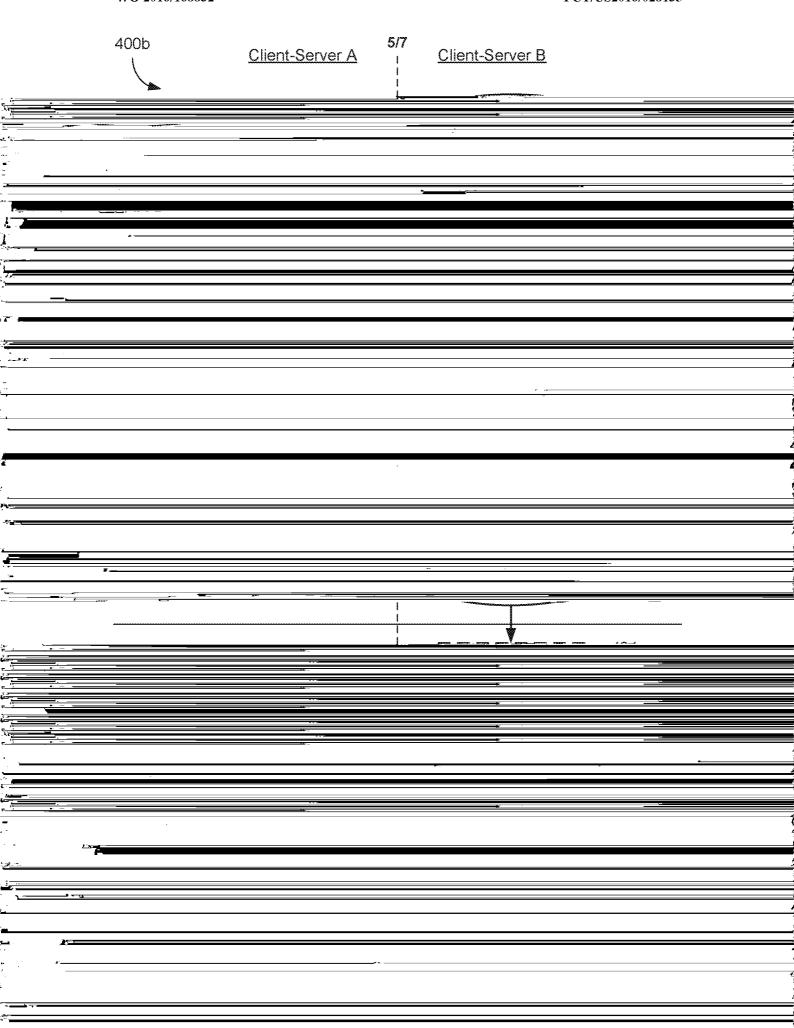


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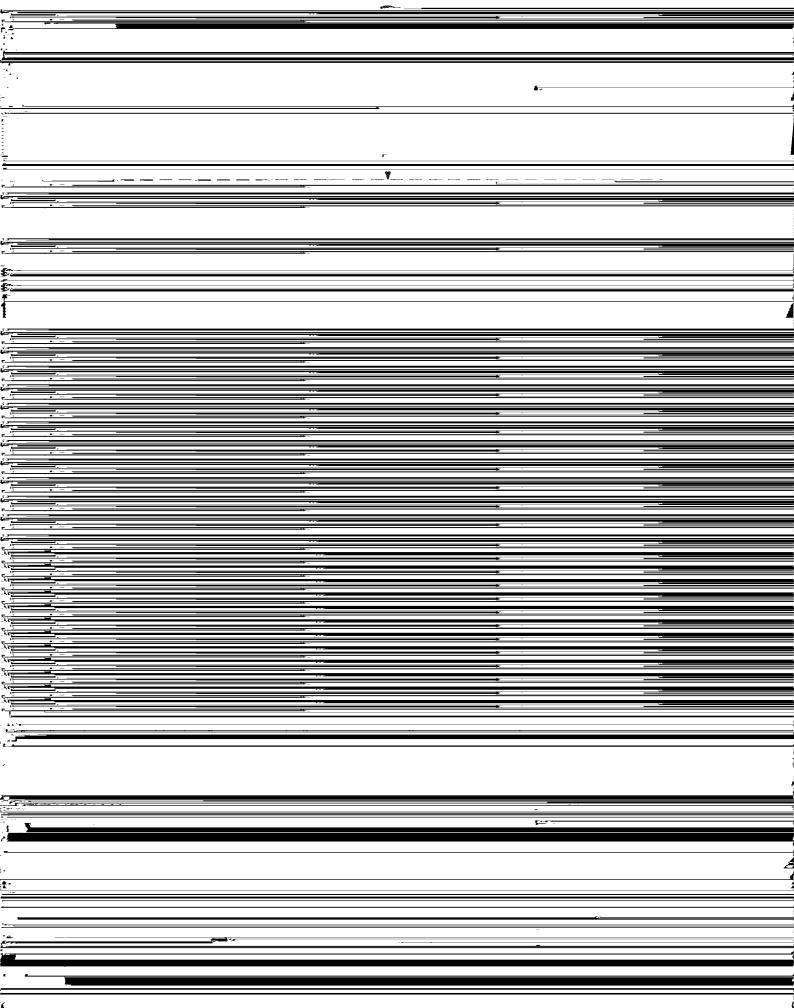
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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2016/028135

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/<u>US2</u>016/028135

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OmniQ Class 3 Petition, Exhibit 2

D a T a C Ac M a W R c , Patent Application # WO 2016/168832; US 2016028135 (the "OmniQ Invention")

Q: Is it legal?
Q: How is this different from ReDigi, that was allowing resale of digital music files?
Q: I'm a nerd. I know that the "bits" making up a movie have to somehow make it from your hard drive to mine. Don't you have to make a copy onto my hard drive before deleting it from yours?
Q: When you space-shift, don't you have to verify that the copy is complete before deleting anything from the original?

Q: When I rent a movie, can I watch it more than once before I return it?
Q: May I send it to someone else to watch?
Q: What if I don't return the rental movie?
Q: What if my hard drive crashes and I lose everything on it?
Q: But if my hard drive crashed, can't you just send another copy of the movie?
Q: But when you send me the movie, don't you keep a copy on your server as a back-up?

Q: Once I return the movie, does it take up space on my hard drive?
Q: When I buy a movie, is there any limit on how many times I can watch it?
Q: What happens if I quit my account, or OmniQ goes out of business?
Q: When I own a DVD, I can sell it, lend it, or give it away. What about a space-shifted movie?
Q: Does OmniQ take a cut from my sales?
Q: Can I make a copy of the movie, just like I can rip a DVD?



DECLARATION OF JOHANN GEORGE Regarding OmniQ Proposed Exemption Under 17 U.S.C. § 1201

My name is Johann George. I am one of the founding partners of OmniQ.

I entered the University of Waterloo at the age of 13, majoring in mathematics and had much exposure to computers during that time. As a teenager in 1979, I co-founded the company that developed Coherent, which was the first Unix-compatible operating system that ran on the x86 architecture. I worked briefly with Steve Jobs at Apple Computer and also at NeXT Inc., was co-founder and CEO of both Pattern Recognition Systems and Sourcelight Technologies, CTO of Commodore International, served as an executive of Tecmar, PathScale (purchased by QLogic) and Schooner Information Technology (purchased by SanDisk), and most recently was the Senior Principal Strategist for SanDisk.

In the course of co-inventing a method of *Digitally Transferring Content Across Media Without Reproduction*, Patent Application # WO 2016/168832; US 2016028135, I was struck by the ineffectiveness of CSS (Copy Scrambling System) and similar TPM's (Technical Protection Measures) for audiovisual works on optical discs. Because such TPMs are designed to work with an infinite number of copies using myriad different players from many different manufacturers, they are vulnerable to being defeated using relatively unsophisticated methods. In my professional judgment, the current technologies intended to protect audiovisual works on optical discs are completely ineffective against unauthorized reproduction – a conclusion born out by the many competing "ripping" programs currently on the market. CSS and similar TPMs may generate revenue from technology licensing but offer negligible protection from copyright infringement of the works to which they are applied. That is because anyone who succeeds in circumventing the TPM will, in effect, have the equivalent of a "master key" to all copies of the works "protected" by the same TPM.

In designing the method for *Digitally Transferring Content Across Media Without Reproduction*, it was crucial that we devise a much stronger method of preventing reproduction, because the whole point is to perform a space-shift in which no reproduction takes place. And, while the studios who publish works on DVD and other optical discs might be comfortable balancing the risk of reproduction against cost and convenience, we wanted to build a solution that was much more secure. The studios might accommodate room for fair use copying or tolerate some amount of infringing reproduction, but we needed to prevent any reproduction at all. Our method for *Digitally Transferring Content Across Media Without Reproduction* required a much more robust copy protection, in order to ensure that our space-shifting solution would never result in any unauthorized reproduction of the work.

The space-shifting process we devised makes it impossible for the fixation to constitute a "copy" (as defined in the Copyright Act) in two places at once. It achieves that, first, by space-shifting small "chunks" of the work, wrapping each with its own robust encryption, such that even if someone managed to break it, they would only have access to a small snippet of a work. Second, the space-shifting process reads these chunks into volatile memory that is insufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration. During this brief moment, and before the small chunk is fixed in the new medium, the original fixation on the disc is removed. Thus, it is physically impossible to perceive, reproduce or otherwise communicate the work from two places at once. In fact, the solution is engineered such that, if anything goes wrong during the place-shifting process, the result is the same as if a mail-order Netflix DVD rental was broken while the Post Office transported it from the warehouse to the customer. The customer might be able to request a "free" replacement from the retailer, but the retailer has to actually go out and buy (or have already bought) the replacement from the copyright owner. Likewise, our solution carries the risk that if a space-shift fails, one must purchase (or have already purchased) a replacement DVD with which to try the space-shifting process anew. If a mistake is made during space-shifting of any "chunk" of the work, it is too late – there will no copy of that chunk that one can go back to and try again.

DigiCert claims that when using 2048 bit keys, it would take 6.4 quadrillion years to break with a single modern desktop computer using an algorithm that utilizes public and private keys (https://www.digicert.com/TimeTravel/math.htm). In the case of a movie that was space-shifted using the method described in the OmniQ Patent using 2048 bit keys, once the keys are removed, there isn't even a public key to start an attack with and the methods will need to be even more bruteforce. Note that CSS only uses 40 bit keys and AACS uses 128 bit keys. Also, unlike CSS and AACS where the keys are fixed for the life of the content, with OmniQ's method, the keys are changing constantly, creating a moving target for any attacker.

I declare under penalty of perjury of the laws of the United States of America that the foregoing is true and correct. Executed this 18th day of December 2017 in the State of California.

<u>/s/ Johann George</u> Johann George

DECLARATION OF MARK VRIELING Regarding OmniQ Proposed Exemption Under 17 U.S.C. § 1201

My name is Mark Vrieling. I am one of the founding partners of OmniQ, having recruited the team we currently have.

I entered the home video business during the 1980s, building Rain City Video, one of the most successful video stores in Seattle, Washington. For decades, I have served on the Board of Directors of the Entertainment Merchant's Association (previously named the Video Software Dealers Association), including a term as Chairman and of the Board.

Even as the home video rental industry matured, major national chains became brand names, and studios began focusing on "sell-through" in conjunction with efforts to drive up the price of a rental (such as by leasing videos to "rentailers" in exchange for profit-sharing with minimum prices), my store performed very well, primarily because our selection of approximately 30,000 movie titles contained so many movies that were simply not available through the distribution channels that the studios preferred, which focused on new releases, included "moratoriums" intended to keep titles off of shelves for a while, and "exclusives" offered to favored retailers, which forced me to purchase from the exclusive retailer at the a retail price instead of wholesale. In fact, there were often times when Wal-Mart became the de facto distributor because the studios' "rentailer" distributors could not beat Wal-Mart's prices.

Having weathered such storms, it frustrated me to see the dramatic shrinking of available titles on account of the studios' efforts to grow the permissions-based delivery that avoided the need to compete with secondary markets (rentals and sales of "previously viewed" copies) once their distribution right was exhausted.

OmniQ began as an initiative to build a user-friendly movie viewing "queue" that would allow a viewer to select a movie without regard to who offered it, or even whether it was offered in a streaming services, cable pay-per-view, electronic sell-through (download), or video on demand (VOD). In fact, the plan was to also include local availability for rental or borrowing at the customer's most convenient video store or public library. Hence the name "OmniQ." The viewer "settings" would enable preference for watching a movie from monthly subscription service or subscribed cable channel before selecting an incrementally more costly option.

The longer we discussed the features that consumers would want from our queue, the more we began to realize that the most pressing problem was that even adding up the various subscription, VOD and EST services, the selection of movies to watch on any given day was but a small fraction of what a store like Rain City Video could offer. We decided then that the best approach was to build the world's biggest video store, drawing on the millions upon millions of DVDs that sit idle on peoples'

shelves because the shrinking number of video stores makes turning on the DVD player an afterthought, reserved for movies one has already watched, and because the dwindling number of DVD and Blu-ray players being sold translates to lessened demand for used DVDs.

As we began to see a market in which the very same first sale doctrine that had driven billions of dollars in new revenue for the studios (over their initial vigorous objection) was being taken over by restrictive models that increased the cost of viewing while reducing the number of choices, we began looking for a solution that would mimic the heyday of video rentals on VHS and DVD, but taking advantage of the more rapid delivery times promised by a networked world. We rejected the notion of copying the movie from the DVD to a hard drive and then breaking the DVD, figuring that a "copy first and then delete" approach relied too heavily on Section 107 for its legality. (The ReDigi experience proved us right.) We also considered and rejected the idea of offering a remote bank of DVD players that a remote viewer could operate, as if it were in their home but with a longer wire. Again, when others tried it and hit a litigation buzz saw, we were proven right in not risking hat a court would consider it to be a public performance.

Cabined between two meritorious but legally problematic solutions, one of which might infringe the reproduction right, and the other which might infringe the public performance right, but with both a copyright lawyer and an experienced engineer on our team, we came up with the solution that is explained in Exhibit 1 to the OmniQ petition – the OmniQ Invention – to shift the work from one material object to another without reproduction, such that a viewer could privately perform the work with the copy residing on their own device rather than on a less useful plastic disc.

Next came the effort to solicit investment. The invention was well received. Our business plans looked good. But then would come the question: But wont' you run into trouble with Section 1201 if you circumvent CSS or AACS?" An unsatisfactory answer to that question (from the investor point of view) was that we could space-shift everything, including the advertisements, fluff and yes, even the TPM, intact, and allow the customer to view it using any of the many players on the market that virtually ignore the TPM. From an engineering and financial standpoint, that solution makes little sense. The CSS and AACS encryption is totally unnecessary, given the fact that our encryption method is demonstrably stronger. CSS and AACS would be completely superfluous after the copy is space-shifted using the OmniQ Patent, but the need to preserve it simply takes up more time, bandwidth, dollars and storage space, ultimately reducing the number of space-shifted movies a person could reasonable store at any one time.

The more satisfactory solution was to attempt to persuade the Librarian of Congress to allow the circumvention of the TPM, but the Sixth Triennial Rulemaking was already underway. The best we could do at the time was to suggest that the Class 8 exemption under consideration at least be granted to meet the narrow non-

OmniQ Class 3 Petition, Exhibit 4

reproductive space-shifting we advocated, but we were unable to do so as Petitioners, and had to simply get a word as a non-petitioning Commenter in during the Reply phase.

