No. 03-5400

UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

LEXMARK INTERNATIONAL, INC.,
Plaintiff-Appellee,

v.

STATIC CONTROL COMPONENTS, INC.,
Defendant-Appellant.

Appeal from the United States District Court
for the Eastern District of Kentucky
(Civil Action No. 02-571-KSF)

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DISCLOSURE OF CORPORATE AFFILIATIONS AND FINANCIAL INTERESTS

Pursuant to Sixth Circuit Rule 26.1, Appellant makes the following disclosure:

1. Appellant is not a subsidiary or affiliate of a publicly-owned corporation not named in this appeal.

2. No publicly-owned corporation that is not a party to the appeal has a financial interest in the outcome of this appeal.

_____ _____

Seth D. Greenstein Date

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STATEMENT OF REASONS WHY ORAL ARGUMENT SHOULD BE HEARD

This appeal involves a novel and unprecedented application of the Digital Millennium Copyright Act of 1998 ("DMCA"). The district court's decision is the first to hold that an original equipment manufacturer can wield the DMCA (a copyright law) against makers of replacement parts that perform noncopyrightable functions. The district court's decision has powerful public policy implications for a multitude of industries, and for consumers who rely upon competitive choices for consumable and replacement parts. This appeal also presents issues implicated by the "abstraction-filtration-comparison" infringement analysis adopted in this Court's recent decision in *Kohus v. Mariol*, 328 F.3d 848 (6th Cir. 2003). Oral argument will enable the Court to address questions concerning the nuances of the case and the impact of these and other issues upon the interpretation of the DMCA and the future of copyright.

JURISDICTIONAL STATEMENT

(a) The district court had subject-matter jurisdiction in this matter under 28 U.S.C. § 1331.

(b) This Court has appellate jurisdiction under 28 U.S.C. § 1292(a)(1).

(c) The district court entered the order appealed from on February 27, 2003. Static Control Components timely filed a Notice of Appeal on March 25, 2003.

STATEMENT OF ISSUES PRESENTED FOR REVIEW

1. A. Whether the district court erred by applying § 1201(a)(2) of the Digital Millennium Copyright Act (DMCA) so as to protect noncopyrightable software functions and toner cartridges.

B. Whether a measure "effectively controls access to a work" under § 1201(a) of the DMCA where, without circumvention, the measure does not prevent unfettered access to obtain, read and copy the works.

C. Whether the district court erred as a matter of law and fact when it failed to exempt Appellant's "SMARTEK" software from DMCA liability even though Appellant's SMARTEK software meets the requirements for an exemption under § 1201 (f)(3) of the DMCA.

2. A. Whether the district court erroneously held that Appellee is likely to prevail on its copyright claim by holding inapplicable the filtration-comparison test and, thereby, finding infringement based on the copying of noncopyrightable elements.

B. Whether the district court misconstrued the fair use defense by holding that Appellee is likely to prevail on its copyright claim although the Appellee's "work" is fundamentally functional and the functional aspects are necessary for others to use in order to compete in the market for repaired and replacement toner cartridges.

3. Whether the district court erroneously entered a preliminary injunction where there is no actual irreparable harm to Appellee and any potential harm is fully compensable by damages, and where the actual harm caused to Appellant, third parties, and public interests outweighs any potential harm to Appellee.

4. Whether the district court abused its discretion by failing to increase the amount of Appellee's bond.

STATEMENT OF THE CASE

On December 30, 2002, plaintiff Lexmark International, Inc. ("Lexmark" or "Appellee"), a manufacturer of computer laser printers and toner cartridges, sued defendant Static Control Components, Inc. ("SCC" or "Appellant"), in the United States District Court for the Eastern District of Kentucky. SCC manufactures parts which others use to repair and refill printer toner cartridges, including Lexmark cartridges. Lexmark asserted that SCC-manufactured semiconductor "microchips" (or "chips"), known as "SMARTEK" chips, should be preliminarily and permanently enjoined, asserting the chips infringed copyright in Lexmark's "Toner Loading Programs" (Count One), and that the SCC chip circumvented a technological measure applied by Lexmark with respect to its Toner Loading Programs (Count Two) and Printer Engine Program (Count Three), in violation of Section 1201(a)(2) of the Digital Millennium Copyright Act.[1]

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[1] Separately, on January 19, 2003, SCC petitioned the United States Copyright Office to exempt the circumvention of the Lexmark technological measure from § 1201(a)(1). SCC's petition, reply comments, and the hearing transcript are available online at the Copyright Office website, http://www.copyright.gov/1201/. The Copyright Office will issue any regulations concerning the requested exemption on or before October 28, 2003.

Lexmark moved for a preliminary injunction. Following a hearing on February 7, 2003,[2] the district court issued a preliminary injunction on February 27, 2003, finding that Lexmark was likely to succeed on the merits of each count. On March 6, 2003, SCC filed a Motion for Clarification of the scope of the preliminary injunction. The district court granted this motion on April 21, 2003, and clarified the scope of the injunction. This appeal of the preliminary injunction followed.

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[2] Eight Amicus Curiae submitted briefs to the district court, all in opposition to Lexmark's Motion; six were admitted after the court had already entered its preliminary injunction. (R. 115–20, Amicus Briefs, Apx. pg. __).

STATEMENT OF FACTS

I. BUSINESS OF STATIC CONTROL

Appellant SCC manufactures and supplies products, including replacement chips and other component parts, to businesses that repair, remanufacture, and refill used printer toner cartridges. (R. 67 Affidavit of William K. Swartz, pg. 2, ¶ 4, Apx. pg. __). SCC employs approximately 1,000 people at its Sanford, North Carolina, headquarters. (*Id.* at pg. 2, ¶ 5, Apx. pg. __; R. 92 Order Stating Findings of Fact and Conclusions of Law, pg. 1, ¶ 3, Apx. pg. __).

II. BUSINESS OF LEXMARK

Headquartered in Lexington, Kentucky, Appellee Lexmark is an Original Equipment Manufacturer ("OEM") of laser printers and toner cartridges. (R. 92 FF/CL, pg. 1, ¶ 1, Apx. pg. __). At issue in this dispute are Lexmark's T520/522 and T620/622 printers and toner cartridges, and, in particular, a small amount of data embedded in chips on Lexmark's cartridges. (*Id.* at pg. 1, ¶ 2, Apx. pg. __).

Recognizing that it can earn higher profits over the life of the printer by controlling the market for high-priced replacement consumables, including toner cartridges, Lexmark sells printers to consumers virtually at cost. (R. 53 Def. Opp. PI, Apx. 3, Affidavit of Lester Cornelius, pg. 3, ¶ 8, Apx. pg. __; R. 1 Complaint, pg. 4, ¶ 12, Apx. pg. __). Lexmark's replacement cartridges are priced from $325-

$414. (R. 3 Plaintiff's Memorandum in Support of Motion for Preliminary Injunction, Ex. B, Declaration of Michael Yaro, pg. 4, ¶ 11, Apx. pg. __).[3]

III. COMPETITIVE TENSION BETWEEN LEXMARK AND THE REMANUFACTURING INDUSTRY

Toner cartridge remanufacturers repair, recondition, and refill used cartridges to create a less-expensive, environmentally sound alternative to buying an all-new cartridge. (R. 53 Def. Opp. PI, Apx. 3, Cornelius Aff., pg. 3, ¶¶ 5–7, Apx. pg. __). SCC is a supplier to this industry. Aftermarket cartridges provide the only competition to OEMs such as Lexmark, and thereby constrain OEM increases in price. (R. 63 Affidavit of Tricia Judge, pg. 2, ¶ 5, Apx. pg. __).

Lexmark continually changes elements of its toner cartridges in an effort to stifle legitimate aftermarket competition. (R. 58 Affidavit of Lynton Burchette, pg. 2–3, ¶ 5, Apx. pg. __; R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 5, ¶ 15, Apx. pg. __). Around 1997–98, Lexmark began placing a small semiconductor chip in its toner cartridges that rendered refilled cartridges unusable, thus preventing repair or remanufacture by Lexmark's competitors. (R. 58 Burchette Aff., pg. 2–3, ¶ 5,

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[3] Lexmark has a two-tier pricing scheme for its toner cartridges: "Prebate" cartridges, more expensive than competitive comparables (William K. Swartz at TR 157–60, Apx. pg. __); and non-prebate cartridges, priced $50 higher. (*Id.*; R. 92 FF/CL, pg. 3, ¶ 12, Apx. pg. __; R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 2, 4, ¶¶ 5, 11, Apx. pg. __). Lexmark contends that it "licenses" prebate cartridges to

Apx. pg. __). Once companies such as SCC designed around such barriers, Lexmark redoubled its efforts to inhibit competition from remanufacturers, relying on a novel and unforeseen application of intellectual property laws to do so.

IV. LEXMARK'S CURRENT CHIPS ALLEGEDLY USE A "TECHNOLOGICAL MEASURE"

In 2001, Lexmark introduced printer toner cartridges for its T520/522 and T620/622 printers containing a more advanced generation of "disabling chips." These new chips, manufactured and supplied to Lexmark by Dallas Semiconductor ("Dallas"), incorporated a mechanism that enable the Lexmark printer to verify that the toner cartridge came from Lexmark. (R. 66 Declaration of Bruce Macdowell Maggs, pg. 2–3, ¶¶ 6–8, Apx. pg. __; Maggs at TR 90, Apx. pg. __). Whenever a toner cartridge is inserted into a Lexmark printer, the printer is powered on, or the printer is opened and closed, a "handshake" is performed between a computer program in the printer (the "Printer Engine Program" or "PEP") and the disabling chip to verify that only toner cartridges authorized by Lexmark are used. (R. 92 FF/CL, pg. 12, ¶¶ 59–63, Apx. pg. __; R. 3 Pltf. Sup. PI, Ex. C, Declaration of Douglas A. Able, pg. 2–3, ¶¶ 8–9, Apx. pg. __). If this

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consumers who must return used toner cartridges to Lexmark. (R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 3–4, ¶ 9, Apx. pg. __).

"handshake" does not occur, the printer will not print. (*Id.*; R. 66 Maggs Decl., pg. 2–3, ¶ 6, Exs. B–C, Apx. pg. __).

The "handshake" requires the printer and the chip on the toner cartridge each to calculate a value, known generally as a "hash" or a "Message Authentication Code" ("MAC"). (R. 53 Def. Opp. PI, Apx. 7, Glossary of Relevant Technical Terms, pg. 3, ¶ 10, Apx. pg. __; R. 66 Maggs Decl., pg. 2–3, ¶¶ 6–7, Ex. B, Apx. pg. __; R. 92 FF/CL, pg. 12, ¶ 60, Apx. pg. __; Maggs at TR 107, Apx. pg. __).[4] The printer reads the disabling chip's hash value and compares it to the hash value calculated by the PEP. (R. 92 FF/CL, pg. 12, ¶ 62, Apx. pg. __). If these two calculations do not match, the printer will issue an error message, and the printer will stop. (*Id.* at pg. 13, ¶ 70, Apx. pg. __). This authentication process is what Lexmark refers to as the "technological measure" at issue in Counts Two and Three of this case. Lexmark admits that the purpose of its technological measure is to protect its aftermarket for toner cartridges—"to prevent unauthorized toner cartridges from being used with Lexmark's T520/522 and T620/622 laser

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[4] These hash computations are calculated using an extremely powerful public domain cryptographic algorithm, known as the Secure Hash Algorithm ("SHA-1"). (R. 53 Def. Opp. PI, Apx. 7, Glossary, pg. 1, ¶ 1, Apx. pg. __; R. 66 Maggs Decl., pg. 3, ¶ 7, Apx. pg. __; R. 92 FF/CL, pg. 7, ¶ 38, Apx. pg. __ ; R. 58 Burchette Aff., pg. 3–4, ¶ 8, Apx. pg. __).

printers…." (R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 2–3, ¶ 7, Apx. pg. __; R. 66 Maggs Decl., Exs. B–C, Apx. pg. __).

Importantly, Lexmark's "technological measure" does not prevent anyone from reading or copying the PEP code or the data on the toner cartridge chip. The PEP and the data on the chip are completely open and exposed in unencrypted form for a person to access. (Dr. Benjamin Goldberg at TR 195, Apx. pg. __). The technological measure only prevents the use of the printer with aftermarket cartridges.

V. SCC'S COMPATIBLE CHIP

Recognizing the need for the remanufacturing industry to have a replacement chip compatible with existing Lexmark printers, SCC lawfully "reverse engineered" the Lexmark chips in order to learn what portions of the data on those chips were necessary for SCC chips to interoperate with the PEP. (R. 58 Burchette Aff., pg. 3, ¶ 7, Apx. pg. __).

In addition to the first authentication sequence described above, SCC also discovered that the PEP performed a *second* authentication upon a small amount of data (55 bytes) on the Lexmark chip, using the same SHA-1 algorithm, *after* the first "handshake" was performed. (*Id.* at pg. 3–4, ¶ 8, Apx. pg. __; R. 66 Maggs Decl., pg. 6–8, ¶¶ 16–20, Ex. D, Apx. pg. __, Goldberg at TR 196–98, Apx. pg. __). After painstaking analysis, SCC learned that if any of these 55 bytes was

changed, the secondary authentication sequence would fail, and the printer would stop working—the same as upon failure of the initial authentication process using the MAC. (R. 58 Burchette Aff., pg. 5–6, ¶ 12, Apx. pg. __; R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 2–3, ¶ 7, Apx. pg. __; R. 66 Maggs Decl., pg. 7, ¶ 17, Ex. D, Apx. pg. __). SCC therefore determined that these 55 bytes constituted a second "lock-out" mechanism, in that to be compatible with the Lexmark printer, any replacement chip must include the entire 55-byte lock-out code sequence exactly as it appears on the chip from Lexmark's toner cartridge. (R. 58 Burchette Aff., pg. 5–6, ¶ 12, Apx. pg. __; R. 60 Affidavit of Dr. Benjamin Goldberg, pg. 7–8, ¶¶ 16–18, Apx. pg. __).

Therefore, to enable its SMARTEK chip to interoperate with the Lexmark T520/522 and T620/622 printers, SCC integrated these 55 bytes into the SMARTEK chip, along with the public SHA-1 algorithm to perform the authentication function. (R. 58 Burchette Aff., pg. 5–6, ¶¶ 12–13, Apx. pg. __). SCC also wrote and incorporated on the SMARTEK chip a substantial amount of original software code to provide other functions to remanufacturers. (Goldberg at TR 208, Apx. pg. __; R. 58 Burchette Aff., pg. 3, ¶ 7, Apx. pg. __). The SMARTEK replacement chips went on the market in or around September 2002. (R. 58 Burchette Aff., pg. 7, ¶ 16, Apx. pg. __).

VI. LEXMARK'S TONER LOADING PROGRAMS

Lexmark responded to this threat by filing copyright applications with the Copyright Office to register two programs that Lexmark knew were resident on its chips: a "Computer Program for Lexmark T520/522 Print Cartridge" and a "Computer Program for Lexmark T620/622 Print Cartridge" (collectively, the "Toner Loading Programs" or "TLP"). (R. 1 Compl., Exs. A–B, Apx. pg. __). Consistent with its non-adversarial and cursory administrative process, the Copyright Office issued certificates of registration for these programs. (Ralph Oman at TR 62, 81–82, Apx. pg. __).

On December 30, 2002, Lexmark filed this suit. Only after SCC received Lexmark's Complaint did SCC learn that the unintelligible string of numbers comprising the 55-byte "lock-out code" was asserted to function also as a computer program (namely, the recently-registered TLPs).[5] According to Lexmark, SCC's inclusion of the 55-byte lock out code was copyright infringement. (R. 58 Burchette Aff., pg. 6–7, ¶¶ 14–15, Apx. pg. __).[6]

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[5] These 55 bytes of data on the Lexmark disabling chip appear as only a string of raw numbers. (R. 3 Plf. Sup. PI, Ex. C, Able Decl., Tabs 1–2, Apx. pg. __; Maggs at TR 137–40, Apx. __).

[6] The T620/622 TLP consists solely of the 55 bytes of data; the T520/522 TLP consists solely of 37 bytes of data. (Maggs at TR 112, 115, Apx. pg. __). Prior to this, SCC had no way to know these "lock-out" bytes represented a "computer program," or functioned other than input to the secondary authentication measure.

A. The Function of the Toner Loading Program

Although, ostensibly, the TLPs approximate the amount of toner remaining in a Lexmark toner cartridge, the purpose of that approximation is to disable a cartridge that has been used or refilled. [redacted]

Despite these disabling functions, Lexmark's expert conceded that both the printer and the toner cartridge will print without a TLP measuring toner (Maggs at

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Prior versions of the Lexmark chip did not include a TLP. (R. 58 Burchette Aff., pg. 6–7, ¶¶ 13–15, Apx. pg. __). Lexmark did not mark the chips with any copyright notice. The purported shrink-wrap "license" that Lexmark includes with its prebate cartridges references only patents covering the cartridge itself—it does not reference any Lexmark copyrights. (R. 92 FF/CL, pg. 3, n.1, Apx. pg. __).

TR 118–21, Apx. pg. __).[7] In other words, the TLP Lexmark claims as the important protected work in fact is not necessary for the printer or the cartridge to measure toner, but is needed only to prevent competitors from repairing or refilling Lexmark cartridges.

B. The Toner Loading Program Code

The code constituting the TLP was largely dictated by external factors: it had to be embedded on a pre-existing chip (with its own circuitry and code), had to work with the printer and its software, and had to satisfy other external elements. (R. 60 Goldberg Aff., pg. 14–15, ¶¶ 27–32, Apx. pg. __; Goldberg at TR 200, Apx. pg. __; R. 66 Maggs Decl., Ex. D, Apx. pg. __; Maggs at TR 101, Apx. pg. __). Within that context, Lexmark's TLPs consist solely of straightforward elementary calculations and scientifically observed facts. Specifically, Lexmark's claim of sufficient copyrightable expression allegedly resides in:

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[7] Lexmark itself was inconsistent on this point. Lexmark's Motion for Preliminary Injunction claimed that the TLPs control critical functions, such that without those programs, Lexmark's printers would not print. (R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 2, ¶ 6, Apx. pg. __). Lexmark's expert contradicted this story.

- Eight computer instructions—"*add*," "*sub*," "*mul*," "*pct*," "*jump*," "*if*," "*load*," and "*exit*"—Lexmark calls its "Remote Programming Language," or "RPL," also referred to as "commands".[8]
- Numeric values or "constants," which Lexmark observed by testing the toner as it interacted with other components.[9]
- The eight commands (above) implement a linear equation and a quadratic equation.[10]
- The TLP merely plugs the "constants" into the equations, in order to calculate the amount of remaining toner.
- Finally, three of the 37 bytes of the T520 Toner Loading Program spell "LXK"—Lexmark's stock ticker symbol.[11]

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[8] (R. 60 Goldberg Aff., pg. 10, ¶ 11, Exs. B–C, Apx. pg. __; R. 66 Maggs Decl., Ex. D, Apx. pg. __; R. 65 Pltf. Reply, Ex. H, Declaration of Wm. Keith Richardson, Exs. A–B, Apx. pg. __, Maggs at TR 94, Apx. pg. __). The commands "*mul*," "*pct*," and "*sub*" are abbreviations for "multiply," "take a percent," and "subtract." (*Id.*)

[9] (R. 60 Goldberg Aff., pg. 8–10, ¶ 19, Apx. pg. __; R. 65 Pltf. Reply, Ex. H, Richardson Decl., Exs. A–B, Apx. pg. __; R. 66 Maggs Decl., Ex. D, Apx. pg. __).

[10] (*Id.*).

[11] (R. 60 Goldberg Aff., pg. 12–13, ¶ 25, Apx. pg. __; R. 65 Pltf. Reply, Ex. H, Richardson Decl., Exs. A–B, Apx. pg. __).

SUMMARY OF ARGUMENT

Section 1201(a)(2) of the DMCA prohibits devices that circumvent a "technological measure that effectively controls access *to a work protected under [the Copyright Act]*" (emphasis added). The district court erred by holding that § 1201(a) applies to the circumvention of a technological measure that controls the functioning of printer toner cartridges, which is *not* protected by copyright laws. The district court applied the DMCA to suppress the sale of *replacement parts*, which is a world removed from Congress's goal of preventing the piracy of copyrighted *works* through digital means.

The district court erred further by holding that Appellee Lexmark's measure is "effective" to "control access," where the technological measure does not prevent entry to, viewing, or even copying of the allegedly-protected programs. This holding is inconsistent with all prior cases, in which courts have found that a measure "effectively controls access" if it prevents entry to systems on which the works are stored, or prevents the works from being read, displayed, or copied.

The district court committed these errors in large measure because it disregarded the policy underlying § 1201(a). As a result, the district court failed to recognize that its interpretation of § 1201(a)(2) creates absurd results, which contravene policies favoring competition and opposing the extension of copyright to noncopyrightable functions and goods.

Further, the district court erred by denying SCC's reverse engineering defense to Counts Two and Three under § 1201(f), where undisputed evidence demonstrated that the SCC chip incorporates independently-created programs that interoperate with a Lexmark program.

The district court committed two fundamental legal errors when it concluded that Lexmark is likely to prevail on the merits of its copyright claim. The district court failed to filter out the noncopyrightable elements of the TLP, in accordance with this Circuit's standard. Further, the court misconstrued and misapplied the test for fair use.

The district court compounded its legal errors by making erroneous findings of fact. Specifically, the district court failed to give appropriate weight to the evidence that the TLP consists merely of an unprotectable method and unprotectable elements used to estimate the amount of toner remaining in a print cartridge, the code for which is constrained by external factors. These elements, individually and collectively, are excluded from copyright protection.

The district court also failed to understand that the TLP performs a noncopyrightable function—that of a "lock-out" code. Under a correct fair use standard, a lock-out code can be copied to facilitate the interoperability of other programs without constituting infringement.

The district court's injunction also was erroneous because Lexmark failed to satisfy the other elements for a preliminary injunction. Because there is no market for the purportedly infringed work and because the infringement was completely innocent, the district court erred by presuming irreparable injury. Although the district court also found that Lexmark could incur economic injury, such injury is compensable by damages and is not irreparable. The injunction disserves the public interest by obstructing remanufacturing, an environmental policy objective expressly favored by federal law, and by reducing price competition. The injunction harms third parties because, as the district court expressly found, it has a depressing effect on the remanufacturing industry as a whole.

Finally, the district court erred by setting the injunction bond too low.

STANDARD OF REVIEW

A district court's order granting or denying a Motion for Preliminary Injunction is reviewed under the abuse of discretion standard. *Performance Unlimited, Inc. v. Questar Publishers, Inc.*, 52 F.3d 1373, 1378 (6th Cir. 1995). "A district court abuses its discretion when it relies on clearly erroneous findings of fact, or when it improperly applies the law or uses an erroneous legal standard." *Id.* (citations omitted).

A district court's findings of fact are reviewed under the clearly erroneous standard of review; its legal conclusions are reviewed *de novo*. *Id.* (citing *NAACP v. City of Mansfield, Ohio*, 866 F.2d 162, 166 (6th Cir. 1989)). A factual or legal error alone may be sufficient to establish that the court abused its discretion in granting a preliminary injunction. *Id.*

Whether a work is sufficiently original to merit copyright protection is a question of fact reviewed under the clearly erroneous standard. *Matthew Bender & Co. v. West Publ'g Co.*, 158 F.3d 674, 681 (2d Cir. 1998).

A district court's findings regarding fair use are a mixed question of law and fact, and are reviewed *de novo*. *Kelly v. Arriba Soft Corp.*, 280 F.3d 934, 939 (9th Cir. 2002).

ARGUMENT

I. THE COURT ERRED BY HOLDING THAT LEXMARK DEMONSTRATED A LIKELIHOOD OF SUCCESS ON ITS DMCA CLAIMS

A. The Court Erred by Applying § 1201(a)(2) to Protect Noncopyrightable Functions and Cartridges Rather Than Copyrightable Expression

In cases of statutory construction, the starting point is the language employed by Congress. *Appleton v. First Nat'l Bank of Ohio*, 62 F.3d 791, 801 (6th Cir. 1995). Section 1201(a)(2) of the Digital Millennium Copyright Act ("DMCA"), 17 U.S.C. § 1201(a)(2), proscribes the manufacture and sale of certain devices that "circumvent a technological measure that effectively controls access to a *work protected under this title* [*i.e.*, the Copyright Act]" (emphasis added). The district court ignored the plain language of the statute when it interpreted § 1201(a)(2) to protect the *functions* performed by the Lexmark software, rather than the software itself. Such functions are explicitly not protected by copyright,[12] and thus are not subject to protection under § 1201(a)(2).

Specifically, Lexmark's technological measure does not protect any expressive aspects of the Lexmark programs, which (if any) would inhere in the literal text of the code. The technological measure at issue here does not impede

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[12] *See* discussion of § 102(b) of the Copyright Act, *infra* at pg. 38–39.

anyone from entering the printer and the chip and obtaining, viewing, and copying the unencrypted, unprotected TLP on the Lexmark toner cartridge chips, and the PEP in the Lexmark printers. (Goldberg at TR 195, Apx. pg. __). The Lexmark measure only prevents the programs (more accurately, the printer) from functioning with a replacement cartridge. As such, the measure does not "control access" to any aspect of the programs that is protected under the Copyright Act. By erroneously interpreting § 1201(a)(2) to protect the noncopyrightable functional aspects of software, the court committed clear error.

Moreover, courts have applied § 1201(a) only where the ultimate object of protection was the copyrighted work. For example:

- Motion pictures distributed on DVD video discs, *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 453 (2d Cir. 2001);
- Software stored on a password-protected private computer network, *Pearl Inv., LLC v. Standard I/O, Inc.*, Civ. No. 02-050-P-H, 2003 U.S. Dist. LEXIS 5376, at *60 (D. Me. Apr. 2, 2003);
- Electronic text and books distributed electronically for secure display on personal computers, *United States v. Elcom, Ltd.*, 203 F. Supp. 2d 1111, 1120 (N.D. Cal. 2002);

- Television programming distributed by cable systems, *CSC Holdings, Inc. v. Greenleaf Electronics, Inc.*, No. 99 C 6376, 2000 U.S. Dist. LEXIS 7675, at *22 (N.D. Ill. June 2, 2000);
- Sound recordings and motion pictures distributed in real time via Internet transmissions, *RealNetworks, Inc. v. Streambox, Inc.*, No. C99-2070P, 2000 U.S. Dist. LEXIS 1889, at **18–19 (W.D. Wash. Jan. 18, 2000);
- Computer games distributed on CD-ROM, *Sony Computer Entm't Am. Inc. v. Gamemasters*, 87 F. Supp. 2d 976, 987 (N.D. Cal. 1999).

In contrast to these cases, the district court held that § 1201(a)(2) applies where the technological measure only ensures the market for Lexmark cartridges rather than prohibiting a person from accessing copyrighted works. This was clear error.

The Lexmark technological measure was designed solely to ensure that only "authentic" Lexmark toner cartridges can be used with Lexmark printers, so that Prebate cartridges can be repaired, refilled, and resold only by Lexmark and not by Lexmark's competitors. That the indisputable object of protection is the cartridge market, and not the allegedly copyrighted software programs, is demonstrated by the facts:

1. Lexmark submitted a sworn declaration from the employee directly responsible for the marketing of toner cartridges and printers in support of its

Motion for Preliminary Injunction, openly conceding that Lexmark incorporated the technological measure in its toner cartridges "[t]o prevent unauthorized toner cartridges from being used with Lexmark's T520/522 and T620/622 laser printers." (R. 3 Pltf. Sup. PI, Ex. B, Yaro Decl., pg. 2–3, ¶ 7, Apx. pg. __).

2. The technological measure protects against unauthorized reuse of the Prebate cartridges, but does not prevent reuse of its higher priced non-Prebate cartridges. Plainly, Lexmark intends its technological measure to protect the business model for its Prebate toner cartridges, not the TLP (which is embedded on both Prebate and non-Prebate cartridges).

3. At the hearing on Lexmark's Motion for Preliminary Injunction, Lexmark's expert testified that the printer will work correctly without a TLP on the toner cartridge. *Supra* at 13-14. All that is critical to printer function is that the technological measure ascertains that the toner cartridge is an authorized Lexmark cartridge. Obviously, if the technological measure prevents the cartridge from working even when the TLP is not there, the real object of protection is the cartridge, not the TLP.[13]

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[13] Lexmark markets the cartridges without any copyright notice for the TLPs or any reference to copyright on its shrink-wrap "license." *See supra* at n.6. There is no evidence that any license is included with the non-Prebate cartridges. (*Id.*)

4. The PEP and the TLPs are completely accessible without circumventing the technological measure. Neither program is encrypted. Using standard inexpensive software analysis tools, anyone can access, read, and copy these programs, without circumvention. (Goldberg at TR 195, Apx. pg. __). If the programs were the object of protection, Lexmark would have protected the software code against reading and copying, as was the case in every § 1201(a) case cited above.

5. Similarly instructive is that [redacted] This further demonstrates that the purpose of the technological measure within this overall system is to protect Lexmark's market for noncopyrightable toner cartridges—not to protect copyrighted works. Indeed, the facts demonstrate that the TLP itself is part of the *real* technological measure at issue in this case—the measure designed by Lexmark to prevent consumers and competitors from refilling and remanufacturing used cartridges.

The district court failed to recognize these critical distinctions, and instead erroneously relied on *Gamemasters*. (R. 92 FF/CL, pg. 45–46, ¶ 89, Apx. pg. __). In *Gamemasters*, Sony applied a technological measure to its copyrighted video

games to prevent its game console from playing unauthorized versions of the games. *Gamemasters*, 87 F. Supp. 2d, at 987. The purpose of the measure was to protect Sony's copyrighted games—not to protect the noncopyrightable functions of the game console itself. The district court's reliance on *Gamemasters* reflects a misunderstanding of the difference between Sony's independently marketed expressive works, i.e. videogames (which are protected by copyright) and Lexmark's printer functions (which by statute are not). [14]

B. The Lexmark Measure Does Not "Effectively Control Access" to a "Work"

Section 1201(a) applies to measures that "effectively" govern "access" to a "work." The district court erroneously applied § 1201(a) where, without circumvention, the measure does not prevent unfettered access to obtain, read, and copy the programs.

In enacting the DMCA, Congress explained the nature of the activities targeted by Section 1201(a): "The act of circumventing a technological protection

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[14] Noteworthy in this regard is the testimony before the U.S. Copyright Office of copyright law expert Professor Jane Ginsburg, who testified that § 1201(a) of the DMCA does not cover "circumvention of a technological measure that controls access to a work not protected under this title. *And if we're talking about ball point pen cartridges, printer cartridges, garage doors and so forth, we're talking about works not protected under this title*." *See* Anti-Circumvention Rulemaking Hearing before the U.S. Copyright Office, May 9, 2003, at 39–40, *available at*

measure put in place by a copyright owner to control access to a copyrighted work is the electronic equivalent of breaking into a locked room in order to obtain a copy of a book." H.R. Rep. No. 105-551, pt. 1, at 17 (1998).[15] Consistent with Congressional intent, courts have found that an effective "access" measure prevents the consumer from coming into contact with, viewing, or taking the copyrighted work, precluding the ability to:

- receive and listen to a transmission of music;[16]
- view encrypted movies and books in an unencrypted perceptible form;[17] and
- view and play video games on encrypted CD-ROM discs.[18]

The district court failed to apprehend the critical distinctions between the interpretations of "access" in these cases and the case at bar. In each of the above cases, the technological measure prevented the user from encountering or reading a

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http://www.copyright.gov/1201/2003/hearings/transcript-may9.pdf (emphasis added). *See also* (R.120, Amicus Curiae Brief of Law Professors, Apx. pg. ___).

[15] *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294, 316 (S.D.N.Y. 2000), *aff'd*, 273 F.3d 429 (2d Cir. 2001); *see also* Staff of House Comm. on the Judiciary, 105th Cong., Section-by-Section Analysis of H.R. 2281 2, at 5 (Comm. Print 1998) (hereinafter "House Judiciary Comm. Print").

[16] *RealNetworks,* 2000 U.S. Dist. LEXIS 1889, at **18–19.

[17] *Corley*, 273 F.3d at 453 (motion pictures); *Reimerdes*, 111 F. Supp. 2d at 318 (same); *Elcom*, 203 F. Supp. 2d at 1120 (books); *CSC Holdings*, 2000 U.S. Dist. LEXIS 7675, at *22 (cable television programming).

copyrighted work. By contrast, a person can access the TLPs and PEP directly from the toner cartridge chip and the printer, respectively, without any interference from the technological measure at all—which illuminates the true nature of Lexmark's scheme to use the TLP as part of the technological measure itself. In no case, prior to or since the case at bar, has any court applied § 1201(a) in an instance when the technological measure permits consumers to find, read, and copy the purportedly protected copyrighted works.

Thus, the district court erroneously held that a technological measure could "effectively control access" where, without "breaking into a locked room," the allegedly protected programs could be accessed, read, and copied. The court thus erred by interpreting § 1201(a) to cover a measure that neither is "effective" nor controls "access" to a "work."

C. The District Court's Interpretation Invites Absurd and Unforeseen Consequences That Will Harm Competition in All Aftermarket Industries

Having refused to review the legislative history of § 1201(a), the district court erroneously applied the statute to circumstances never intended by Congress in enacting the DMCA.[19] To appreciate the nature and consequences of the court's

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[18] *Gamemasters*, 87 F. Supp. 2d at 987.

[19] The district court also failed to recognize that a statute can be ambiguous when applied to a problem never considered by the legislature. *Appleton*, 62 F.3d

interpretive errors in this case requires an understanding of the legislative purpose and context of the DMCA.

In 1998, Congress enacted § 1201(a)(2) "to make digital networks safe places to disseminate and exploit copyrighted materials"[20] by protecting copyrighted works against unauthorized reproduction and redistribution over the Internet and digital networks:

> Fearful that the ease with which pirates could copy and distribute a copyrightable work in digital form was overwhelming the capacity of conventional copyright enforcement to find and enjoin unlawfully copied material, Congress sought to combat copyright piracy in its earlier stages, before the work was even copied. The DMCA therefore backed with legal sanctions the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or password protections.

Corley, 273 F.3d at 435.

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at 801; *SEC v. Ambassador Church Fin./Dev. Group, Inc.*, 679 F.2d 608, 611 (6th Cir. 1982). Where in all likelihood Congress has not considered a particular problem, a court "must analyze the policies underlying the statutory provision to determine its proper scope." *Rose v. Lundy*, 455 U.S. 509, 517–18 (1982); *see also Philbrook v. Glodgett*, 421 U.S. 707, 713 (1975) ("In expounding a statute, we must … look to the provisions of the whole law, and to its object and policy" (citations omitted)).

[20] S. Rep. No. 105-190, at 2 (1998); *see also* H.R. Rep. No. 105-551, pt. 1, at 10; H.R. Rep. No. 105-551, pt. 2, at 21–23 (1998); 144 Cong. Rec. S4439 (May 6, 1998) (statement of Sen. Leahy); House Judiciary Comm. Print at 5; 3 Melville B. Nimmer, et al., *Nimmer on Copyright* § 12A.02, at 12A.11 (2003).

Every case interpreting § 1201(a)—until now—has addressed the types of works considered by Congress when it enacted the DMCA, namely, expressive and creative works such as motion pictures, music, and books. This case is different. The Lexmark "works" are software programs that solely control the functions of a machine—effectively, the equivalent of a machine part.

The legislative history is bereft of any evidence that Congress considered the applicability of § 1201(a) to functional machine code, like the TLPs or the PEP, that is embedded in hardware, that has no independent economic value, and that is not susceptible to piratical redistribution via electronic commerce. This is especially pertinent inasmuch as, when Congress *has* considered extending ancillary rights to the type of embedded computer programs herein at issue, it has denied them protections accorded to more expressive or multipurpose software.[21] Thus it was plain error for the district court to assume from the face of the statute that Congress intended the result reached here.

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[21] *See* Computer Software Rental Amendments Act of 1990, 17 U.S.C. § 109(b)(1)(B)(i) (denying the right to prevent the rental, lease, and lending of "a computer program which is embodied in a machine or product and which cannot be copied during the ordinary operation or use of the machine or product"); *see also* Computer Maintenance Competition Assurance Act of 1997, 17 U.S.C. § 117(c) and (d) (permitting independent computer maintenance companies to load the manufacturer's diagnostic software onto customers' computers).

Unless reversed, the district court's interpretation will lead to absurd results and severe economic consequences in numerous industries that rely on the ready availability of replacement parts.[22] If Section 1201(a) were to protect functions performed by software embodied in replacement parts, then it could readily be abused in a variety of industry contexts:

- automobile manufacturers preventing aftermarket competition for tires, batteries, air filters, oil filters, brake pads, oxygen sensors, wiper blades, or other automotive parts;
- a ball-point pen manufacturer using an "ink low" program to shut out replacement ink refills;
- camera manufacturers attempting to foreclose competing brands of film; or
- makers of remote controls for televisions, VCRs, CD players, DVD players, or cable and satellite boxes preventing competition from aftermarket "universal" remotes.

None of this mischief was envisioned by Congress in 1998, for the simple and obvious reason that Congress never intended the DMCA to be applied in this way.

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[22] Reliance on statutory language alone is unjustified if it leads to an interpretation which is inconsistent with the legislative intent. *Appleton*, 62 F.3d at 801. A court should avoid interpretations that would open the door to absurd results and undesirable possibilities. *United States v. Dow*, 357 U.S. 17, 25 (1958).

Thus, the district court's erroneous interpretation of § 1201(a)(2) should be reversed.

D. SCC's SMARTEK Microchip Is Permitted Reverse Engineering Under Section 1201(f) of the DMCA.

Section 1201(a)(2)(A) of the DMCA prohibits the manufacture of any device that "is primarily designed or produced for the purpose of circumventing a technological measure." Section 1201(a)(3)(A) defines "circumvent a technological measure" as meaning "to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure." To the extent that SCC's SMARTEK microchip does any of these things[23] by interoperating with Lexmark's TLP and PEP, such interoperation is specifically permitted by § 1201(f) of the DMCA.[24]

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[23] The district court asserted that SCC admitted that its SMARTEK microchips circumvented Lexmark's authentication sequence. (R. 92 FF/CL, pg. 18, ¶ 98, Apx. pg. __). This finding is clearly erroneous, as SCC did not make any such admission. SCC instead contended that its SMARKEK chips were designed to be "compatible" with the Lexmark printer. (R. 53 Def. Opp. IP, pg. 2-3, Apx. pg. __).

[24] Section 1201(f) provides: "Reverse Engineering. –

(1) Notwithstanding the provisions of subsection (a)(1)(A), a person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological measure that effectively controls access to a particular portion of that program for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs, and that have not previously been readily available to the person engaging in the circumvention, to the extent any such acts of identification and analysis do not constitute infringement under this title.

Under § 1201(f)(1) of the DMCA, one can circumvent an access control technology in order to analyze elements of a computer program necessary to achieve interoperability. Under § 1201(f)(2), one can develop and use circumvention tools in order to achieve such interoperability. Section 1201(f)(3), most relevant to the case at bar, provides SCC a defense to § 1201(a)(2) for distribution of such circumvention means, for the purpose of enabling interoperability of an independently created computer program with other programs, to the extent that doing so does not constitute infringement or violate other applicable laws.[25] Congress enacted this important exemption in recognition

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(2) Notwithstanding the provisions of subsections (a)(2) and (b), a person may develop and employ technological means to circumvent a technological measure, or to circumvent protection afforded by a technological measure, in order to enable the identification and analysis under paragraph (1), or for the purpose of enabling interoperability of an independently created computer program with other programs, if such means are necessary to achieve such interoperability, to the extent that doing so does not constitute infringement under this title.

(3) The information acquired through the acts permitted under paragraph (1), and the means permitted under paragraph (2), may be made available to others if the person referred to in paragraph (1) or (2), as the case may be, provides such information or means solely for the purpose of enabling interoperability of an independently created computer program with other programs, and to the extent that doing so does not constitute infringement under this title or violate applicable law other than this section.

(4) For purposes of this subsection, the term "interoperability" means the ability of computer programs to exchange information, and of such programs mutually to use the information which has been exchanged.

[25] This defense is particularly pertinent inasmuch as Lexmark concedes that it is possible to distribute competing toner cartridge chips without infringing

of the salutary commercial and competitive interests served by software interoperability, and to ensure, as held by the Ninth Circuit in *Sega Enters. Ltd. v. Accolode, Inc.*, 977 F. 1510, 1527–28 (9th Cir. 1992), that circumvention of technological measures so as to achieve interoperability remains unaffected by §1201(a). *See* S. Rep. No. 105-190, at 32.

The district court held § 1201(f)(3) inapplicable because of its finding that the SMARTEK chip infringed Lexmark's copyright in its TLP. (R. 92 FF/CL, pg. 47–48, ¶¶ 95–96, Apx. pg. __). However, as demonstrated *infra* at II, the TLPs are not protectable by copyright, and, even if copyrighted, they are not infringed under the doctrine of fair use. Moreover, the district court committed clear error by ignoring uncontroverted evidence that the SMARTEK chip contained computer programs, independently created by SCC, that interoperate with the PEP. (R. 58 Burchette Aff., pg. 3, ¶ 7, Apx. pg. __; Goldberg at TR 207–08, Apx. pg. __). Without citing any record evidence, the court accepted a finding that "SCC's SMARTEK chips cannot be considered independently created computer programs." (R. 92 FF/CL, pg. 47, ¶ 94, Apx. pg. __). The court thus committed further clear error in finding a likelihood of success on Counts Two and Three, by

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Lexmark copyrights. *See* Testimony of Ralph Oman, Anti-Circumvention Rulemaking Hearing at 107 (May 9, 2003).

ignoring uncontroverted evidence supporting SCC's defense under § 1201(f)(3) and reaching a finding favoring Lexmark without evidentiary support.

II. THE DISTRICT COURT ERRED BY HOLDING THAT THE TONER LOADING PROGRAMS WERE COPYRIGHTABLE AND INFRINGED

A district court has the obligation and discretion to determine independently the copyrightability of a work. *DBC of N.Y., Inc. v. Merit Diamond Corp.*, 768 F. Supp. 414, 416 (S.D.N.Y. 1991). In order to perform faithfully that obligation, a court must apply the correct tests. The district court failed to do this on the threshold question of whether the TLPs are protectable at all.[26] SCC demonstrated the TLPs consist merely of unprotectable ideas, methods, mathematical equations, and constants. In failing to apply the correct test the district court was unable to recognize that SCC had rebutted the presumption of copyright validity, and it did not look to see Lexmark's failure otherwise to prove protectability.[27]

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[26] Copyright infringement is established if there is (1) a valid copyright and (2) unauthorized copying of the protected work. *Durham Indus., Inc. v. Tomy Corp.*, 630 F.2d 905, 911 (2d Cir. 1980); *see also Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1541 (11th Cir. 1996).

[27] Although a valid certificate of registration from the Copyright Office serves as *prima facie* evidence of copyright validity, that presumption is rebuttable. *Durham*, 630 F.2d at 908. Where evidence casts doubt on the question, validity will not be presumed. *Id.* Once the presumption is rebutted, the burden shifts to the copyright claimant to demonstrate protectability. *Carol Barnhart, Inc. v. Economy Cover Corp.*, 773 F.2d 411, 414 (2d Cir. 1985).

A. The District Court Committed Legal Error by Concluding That the Abstraction-Filtration-Comparison Test Does Not Apply

There is no disagreement concerning the operation of the TLPs, the elements of the TLPs, or that SCC unwittingly reproduced these elements on its chips. The disagreement, and where the district court committed a fundamental legal error, is whether such copying was actionable. As this Court recently pointed out, not all literal copying constitutes infringement. *Kohus v. Mariol*, 328 F.3d 848, 853 (6th Cir. 2003). The copyright holder must prove "copying of constituent elements of the work *that are original*." *Id.* (emphasis in original) (citing *Feist Publ'ns Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 361 (1991)); *see also Feist*, 499 U.S. at 348 ("Originality remains the *sine qua non* of copyright; accordingly, copyright protection may extend only to those components of a work that are original to the author.").

The TLP does not embody any protectable expression. This would have been clear from the application of the correct legal analysis—namely, the identification and elimination of elements that are unoriginal and unprotected, a test adopted by other circuits and urged by SCC. Unfortunately, the district court committed legal error by following Lexmark's contrary urgings, concluding that, because the fact of copying had been shown, "[t]he Court therefore *need not perform any further analysis to determine whether SCC's copying amounts to infringement.*" (R. 92 FF/CL, pg. 36, ¶ 52, Apx. pg. __) (emphasis supplied).

The district court's mode of analysis was expressly rejected by the Supreme Court in *Feist*. There, the defendant had copied the plaintiff's work **verbatim**. Yet the Court filtered out unoriginal elements and, finding nothing protectable remaining, found there was no actionable copying. *Feist*, 499 U.S. at 362–63. The district court also ignored other well-established precedents which teach that filtering out unprotected material is a fundamental step even in cases alleging literal infringement. *See, e.g.*, *Bateman*, 79 F.3d at 1545; *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, 815 (1st Cir. 1995), *aff'd by equally divided court*, 516 U.S. 233 (1996); *see also Gates Rubber Co. v Bando Chem. Indus., Ltd.*, 9 F.3d 823, 834 (10th Cir. 1993).

That which was rejected by the district court has now become this Circuit's cornerstone in *Kohus*. There, this Court established an abstraction-filtration-comparison test requiring a district court first to "filter out the unoriginal, unprotectable elements—elements that were not independently created by the inventor and that possess no minimal degree of creativity—through a variety of analyses." *Kohus*, 328 F.3d at 855 (citation omitted). As part of this analysis, in cases that involve functional works, as is the case with Lexmark's TLPs, the district court must first filter out those elements excluded by statute, dictated by efficiency, compelled by external considerations, or inseparable from the idea itself *before* assessing whether any protectable elements remain. *Id.* at 856.

Application of the two-step analysis would have filtered out as unprotectable at least the following elements of Lexmark's TLP: the command language (which is functional and dictated by efficiency) (R. 60 Goldberg Aff., pg. 4, ¶ 7, Apx. pg. __; R. 66 Maggs Decl., Ex. B, Apx. pg. __); the linear and quadratic equations (unprotectable mathematical formulas, *see* 17 U.S.C. § 102(b)) (R. 60 Goldberg Aff., pg. 8–9, ¶ 19, Apx. pg. __; R. 66 Maggs Decl., Ex. D, Apx. pg. __); and the constants (observed facts).[28]

Next, elements that follow naturally from the work's theme (*scenès a faire*) or those dictated by external factors must be filtered out. *Kohus*, 328 F.3d at 856. Under this prong of the filtration analysis, the length and arrangement of the program,[29] as well as the eight bytes of the derived secret, would have to be filtered out as constrained by the chip. (R. 66 Maggs Decl., Ex. B, Apx. pg. __; Maggs at

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[28] The constants used in the TLPs are dictated by physical properties of the toner and the cartridge components, as well as by the print speeds supported by the Lexmark printers. (R. 60 Goldberg Aff., pg. 15, ¶ 32, Apx. pg. __; Goldberg at TR 204, Apx. pg. ___)

[29] The chip could only hold 55 bytes for the TLPs. (R. 60 Goldberg Aff., pg. 14, ¶ 29, Apx. pg. __; Goldberg at TR 204, Apx. pg. __). The PEP could not accept more than 55 bytes from the cartridge chip. (R. 60 Goldberg Aff., pg. 15, ¶ 31, Apx. pg. ___; Goldberg at TR 204, Apx. pg. __). The sequence of bytes on the chip could not be changed or else the printer would not print. (R. 60 Goldberg Aff., pg. 14, ¶ 28, Apx. pg. __; Goldberg at TR 193–95, 204, Apx. pg. __; R. 66 Maggs Decl., Exs. B–D, Apx. pg. __).

TR 111–12, Apx. pg. __). The commands, if not previously filtered, also would fall outside of protection under this prong as dictated by external factors.[30]

The district court's decision not to perform a filtration analysis essentially removed from serious consideration key defenses that are available to those accused of copyright infringement of computer code, namely the filtration out of non-statutory subject matter, elements necessary for compatibility with other software or hardware elements, elements adopted for efficiency, and standard programming techniques. The refusal to consider these well-established defenses was plain legal error.

B. Lexmark's Toner Loading Programs Are Not Entitled to Protection Just Because They Can Be Written in Different Ways

Having erred by refusing to apply the correct AFC test, the district court compounded this error by grasping for a substitute test. At Lexmark's urging, the district court committed further plain error by analyzing the question of originality based on whether the disputed program could have been written in another way; if so, the district court mistakenly believed, originality was established.[31]

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[30] The TLPs must use the few commands embodied in Lexmark's RPL, since those are the only commands that the PEP understands. (R. 60 Goldberg Aff., pg. 15, ¶ 30, Apx. pg. __; Goldberg at TR 204, Apx. pg. ___).

[31] The district court was led astray from current relevant legal approaches of numerous circuit courts of appeals and considered, as its *main precedent*, a 1985 decision from the District of Minnesota, *E.F. Johnson Co. v. Uniden Corp. of Am.*,

That code might be written in different ways is not a proxy for proof that the TLPs contain original and protectable elements. A few simple examples illustrate the absurdity of such a test. Using the *Feist* facts as the basis for the first example, the possibility that a telephone directory might have been written in a number of different ways was not proof that the particular work in dispute (an alphabetical arrangement) gained originality and somehow became protectable. In *Kohus*, as the second example, alternative latch designs existed and others could have been imagined, yet their existence was not proof that somehow the latch drawing in dispute was protectable.

The mere existence of an alternative cannot endow the allegedly infringed code with originality it does not otherwise possess. As the statute says, certain writings "are not protectable, no matter how described, explained, illustrated, or embodied." 17 U.S.C. § 102(b).

Despite the absurd results inevitably obtained by focusing on alternatives instead of the code itself, the district court not only adopted such analysis but

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623 F. Supp. 1485, 1502 (D. Minn. 1985). (R. 92 FF/CL, pg. 32, ¶ 38 Apx. pg. __). The *E.F. Johnson* decision predates *Feist* and the seminal opinion in *Computer Assocs., Int'l v. Altai, Inc.*, 982 F.2d 693, 707–08 (2d Cir. 1992). *E.F. Johnson* is a throw-back to an era when the law was grappling with whether computer programs were protectable at all or *per se* excluded. *See, e.g.*, *Apple Computer, Inc. v. Formula Int'l Inc.*, 725 F.2d 521 (9th Cir. 1984), and *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3d Cir. 1983). This is not the question here.

repeatedly agreed that the existence of alternatives somehow endowed the TLPs with originality. The district court applied this test to the programs themselves (R. 92 FF/CL, pg. 32–33, ¶¶ 39–40, Apx. pg. __), to the assertion that alternative equations or methods could have been used (*Id.* pg. 32–33, ¶ 40, Apx. pg. __), to the assertion that alternative command or programming languages exist (*Id.* pg. 32, ¶ 39, Apx. pg. __), and to the assertion that alternative constants could have been chosen (*Id.* pg. 33, ¶ 42, Apx. pg. __).

The touchstone of a correct analysis should be the copyright statute itself. Section 102(b) cannot be clearer—an alternative embodiment or way to write an otherwise unprotectable element does not render it protectable. *See* 17 U.S.C. § 102(b). To conclude otherwise was plain legal error.

Yet Lexmark's expert gave testimony that fit only within the incorrect "alternative ways" test urged by Lexmark.[32] He did *not* testify that, in his view, the programs as written were original, or that the programs could be meaningfully re-written within the available constraints (*i.e.*, limited byte space and compatibility with the printer hardware and software). (Maggs at TR 89–90, Apx. pg. __).

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[32] Specifically, he admitted that his standard was: "…[A]re there other ways to do this…since there are diverse other approaches and implementations for each approach, it seems to me that any particular one is creative." (Maggs at TR 103, Apx. pg. __).

These missing considerations are relevant and necessary context for a filtration analysis. In *Kohus*, this Court specifically indicated that an expert must ascertain what elements of a playyard actually constrain the design of a latch, and that any constrained elements were to be filtered out. *Kohus*, 328 F.3d at 857–58. Dr. Maggs' testimony about possible alternatives that were unconstrained by the reality of the chip is simply irrelevant under *Kohus*.

Moreover, there was *no testimony* from Dr. Maggs or any Lexmark witness demonstrating that Dr. Maggs' proposed alternative programs would work on a Lexmark chip in conjunction with a printer and its embedded software. When Dr. Maggs tried to write alternative versions within the chip and printer constraints, he was unable to make meaningful changes. (Maggs at TR 101–06, Apx. pg. __). This further indicates that the program was dictated by external constraints, and, thus, none of the TLP is protectable after the application of a two-step filtration test.

SCC's expert testimony, in contrast, was grounded in the correct legal framework and also in the reality of the chip design. Dr. Goldberg testified in detail that the TLP code was severely constrained by external circumstances. *See supra* at pg. 14-15. Dr. Goldberg tried to rewrite the programs to work within the context of the chip and printer limitations, and he concluded that every element of

the TLP was dictated by functional or efficiency considerations or other external factors. (Goldberg at TR 203–05, Apx. pg. ___).

Dr. Goldberg testified within the context of the correct legal standard. By contrast, Dr. Maggs' testimony was addressed to an incorrect legal standard and should have been rendered irrelevant. Thus, the district court's findings of fact regarding alternative programs are clearly erroneous and should be vacated, and the issue of originality should be remanded for consideration under the correct legal standard.

C. There Was No Testimony to Support Findings That the Command Language Was Expressive, or That the Selection and Arrangement of Formulas, Constants, and Variables Was Protectable Expression

The district court's alternative basis for a preliminary injunction was distilled as: "Lexmark's unique creative computer programming language and its selection and arrangement of appropriate approximation techniques, including the selection, arrangement, and particular expression of formulas, constants, and variables … contain the requisite amount of creativity…." The district court repeated these erroneous findings several times (R. 92 FF/CL, pg. 24, 31, 35, ¶¶ 12, 36, 50, Apx. pg. ___) even though there was no testimony to support them.

It was clearly erroneous for the district court to find that the eight commands of the "programming language" contain sufficient expression to warrant protection.

First, Dr. Maggs provided no testimony that could lead to the district court's conclusion. Dr. Maggs merely testified that he had not previously seen such a language and that he could envision using other commands. (Maggs at TR 94, Apx. pg. __). Yet, alternative visions of a command language are not enough to endow these few operations with sufficient expression to warrant protection. There was no testimony, at the hearing or in declarations, from Lexmark's programmers that they authored these commands or that these commands were expressive. The district court's finding that the command language is protectable is also clearly erroneous from a legal standpoint. Short words or phrases as well as functions are specifically excluded from protection. 37 C.F.R. § 202.1; 17 U.S.C. § 102(b); *see also Murray Hill Publ'ns, Inc. v. ABC Communications, Inc.*, 264 F.3d 622, 633 (6th Cir. 2001).

The district court's finding that sufficient creativity resided in the "selection" and "arrangement" of the formula, constants, and other elements was also erroneous. No Lexmark witness or declarant testified as to the selection of the constants or formulas at all.[33] The district court's only support was Dr. Maggs' testimony that he could rewrite the programs in a different order. (R. 92 FF/CL,

33 [redacted]

pg. 9, ¶ 48, Apx. pg. __). Again, just because a program can be written in another way does not prove that it has any protectable expression in the elements or in the selection and arrangement of the elements. There must be a spark of creativity in the selection and arrangement of otherwise unprotected elements. *Feist*, 499 U.S. at 345. Certainly, just because a telephone directory might be reorganized alphabetically by first name instead of surname or by the sex of the residents does not mean there is the type of creativity necessary to support protection under the Copyright Act. Here, there was simply no testimony about what is expressive in the selection and arrangement of the TLP.[34] Thus, there is no evidence about whether the selection and arrangement rises to the level of protectability.

D. The Conclusion that Fair Use Does Not Apply Was Legal Error and Factually Erroneous

It is undisputed that consumers who purchase after-market cartridges will be faced with a Lexmark T520/522 or T620/622 printer that refuses to print—accompanied by the frustrating message "unsupported printer cartridge"—*unless* certain code compatible with the printer is present on the after-market cartridge. *See supra* at p. 9. Numerous Amici Curiae complained to the district court about

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[34] To the contrary, Dr. Goldberg testified that changes proposed by Dr. Maggs (e.g., listing the quadratic equation code before the linear equation code, or changing the order of the equation for various print speeds) were either trivial or irrational and inefficient. (Goldberg at TR 206, Apx. pg. __).

this anticompetitive Lexmark technique.[35] The chip manufacturer, Dallas, proclaims in a public document that its chips can be used, euphemistically, for "after-market management of consumables." (R. 66 Maggs Decl., Ex. B, Apx. pg. __). [redacted] A Lexmark engineer admitted to the same goal. *See supra* at pg. 8–9. The district court seems to have lost track of these fundamental facts when it erroneously concluded that the TLP does not function as a "lock-out" code. (R. 92 FF/CL, pg. 7–8, ¶¶ 38–45, Apx. pg. __).

The fact remains that the data stream representing the TLP is run through the SHA-1 algorithm in the printer and, unless those data precisely conform to the TLP installed on the chip by Lexmark, the printer will "lock out" the repaired after-market cartridge and will shut down. *See supra* at pg. 9–13. Further, SCC's use of the lock-out code serves a different function than the aspects Lexmark contends are expressive, namely as a program for measuring toner. It is undisputed that SCC

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[35] *See, e.g.*, R. 118 Amicus Curiae Brief, Computer & Communications Industry Assoc., Apx. pg. __; R. 120 Amicus Curiae Brief, Automotive Parts Rebuilders Assoc., Apx. pg. __; R. 115 Amicus Curiae Brief, Int'l Imaging Tech. Counsel, Apx. pg. __.

chips do not use the TLP to measure toner; thus, SCC does not execute the data as a program.

The fair use doctrine is an exception to copyright infringement and is codified at 17 U.S.C. § 107. This exception permits courts to avoid a rigid application of the infringement aspect of the copyright statute. *Kelly v. Arriba Soft Corp.*, 280 F.3d 934, 940 (9th Cir. 2002). Thus, if a part of a program is needed for the purpose of allowing compatibility, then it can be used—either because the compatibility constraint renders the code unprotectable under 17 U.S.C. § 102(b) (*see supra* at pg. 35–38) or because a fair use analysis requires it. *Bateman*, 79 F.3d at 1546–48 (holding that regardless of whether protection is unavailable because the expression is unoriginal or nonexpressive, or whether because of a fair use or a finding of copyright estoppel or misuse, the result is to deny copyright protection to portions of the computer program); *see also Sony Computer Entm't, Inc. v. Connectix Corp.*, 203 F.3d 596, 599 (9th Cir. 2000). SCC's reverse engineering and use of the data stream produced by the TLP is generally shielded from liability under correctly construed precedent. *See Sega*, 977 F.2d at 1518; *see also Connectix*, 203 F.3d at 599.

That SCC's use constitutes a fair use is made even clearer from an application of the four-factor balancing test found in the statute. The four non-exclusive statutory factors are: (1) the purpose and character of the use, including

whether such use is of a commercial nature or is for nonprofit or educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. 17 U.S.C. § 107. These factors must be balanced in view of the objectives of copyright law; no single factor is determinative. *Kelly*, 280 F.3d at 940. The district court misconstrued the nature of each of these factors, thus committing legal error.

(1) The purpose and character of the use for the work: Copying in a commercial context usually weighs against the copier. However, the presumption of unfairness can be rebutted by the particular characteristics of a work. *Id.* at 941 (finding that the exact reproduction of photographs in Internet search results was a fair use because the photos served an entirely different function than the photographer's original images); *Sega*, 977 F.2d at 1522; *see also Hustler Magazine, Inc. v. Moral Majority, Inc.*, 796 F.2d 1148, 1152 (9th Cir. 1986). Here, the district court erred by failing to focus on the use "for the work" and instead focused on the sale of cartridges. If the focus had been on the alleged expression embodied in the TLPs, then it would have been undeniable that the purpose and character of SCC's use is fundamentally not of the so-called expressive aspects of a TLP. SCC's direct purpose in using the data stream was like the use of a key—it

was not to produce a program that was going to compete in the software marketplace, but rather was fundamentally non-exploitive in nature because it was used for its functional significance, not its expression. *See generally Kelly*, 280 F.3d at 941–42; *Sega*, 977 F.2d at 1510.

The court is also free within the context of this factor to consider the public benefit from SCC's use. *Hustler*, 796 F.2d at 1153. The district court did not consider this. Here, the public benefits from increased competition in the market for toner cartridges. SCC's use has no impact on the market for TLP code. Lexmark is not selling its TLP; indeed, it does not sell chips either. Thus, a correct application of this prong weighs heavily in favor of SCC.

(2) The nature of the copyrighted work: The second statutory factor reflects the fact that not all copyrighted works are entitled to the same level of protection. The case law is clear that lock-out codes are not subject to copyright protection. *Sega*, 977 F.2d at 1524 n.7. Thus, on its face, this factor should weigh heavily in favor of SCC. Nevertheless, even if the Lexmark toner code bytes could be protected by copyright, utilitarian works are entitled to thin protection at best. *See, e.g.*, *Sega*, 977 F.2d at 1524; *Connectix*, 203 F.3d at 603. As Lexmark's TLPs are far away from the core of intended copyright protection, and as SCC only used the most utilitarian aspect of the TLP possible, the second factor *strongly* favors SCC.

(3) The amount and substantiality of the portion used in relation to the copyrighted work as a whole: Copying an entire work can be fair use. *See Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417 (1984); *see also Kelly*, 280 F.3d at 943; *Hustler*, 795 F.2d at 1155; *Dow Jones & Co. v. Board of Trade*, 546 F. Supp. 113, 117 (S.D.N.Y. 1982) (finding Dow Jones not entitled to preliminary injunction to prevent the dissemination of full copies of its indices when there was no link between copying and harm to the copyright). The extent of permissible copying varies with the purpose and character of the use. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 586–87 (1999). As discussed above, SCC only uses the functional characters of the code. This factor should not weigh against SCC when it was Lexmark that decided to use the data stream representing the program as part of a "lock-out code." *See supra* at pg. 11-12; *see generally Dow Jones*, 546 F. Supp. at 1201 (denying preliminary injunction because "[n]o group of component stocks short of the entire list for each particular index has any independent value, and that therefore, if there is any possible fair use of the lists, that use must entail literal reproduction"). Thus, a correct application of this factor favors SCC when its efforts indicated the entire datastream had to be used.

(4) The effect of the use upon the potential market for or value of the copyrighted work: It was plain error for the district court simply to presume that in all instances of verbatim copying the market for the work will be harmed. *See*

generally Kelly, 280 F.3d at 944; *Dow Jones*, 546 F. Supp. at 120–22 (refusing to consider the non-copyright harm of competition through trading of stocks when the work had never been sold separately); *American Direct Mktg., Inc. v. Ad Int'l, Inc.*, 783 F. Supp 84, 96–97 (E.D.N.Y. 1992).

The presumption does not apply in all instances. This factor looks to the adverse impact caused by usurping the *demand* for the plaintiff's expressive work. The district court simply never engaged in an analysis of the demand for the TLP at all, much less considered demand for its alleged expressive aspects. If it had, the district court should have concluded that these few bytes of data were not offered for sale or licensed to the public by either party. *Cf. Dow Jones*, 546 F. Supp. at 120–22. In no sense can it be said that SCC has "scooped" the market for Lexmark's TLP. SCC made use of the data in order to make legitimate competition for cartridges possible. This is not an injury cognizable under copyright. *Cf. id.* Furthermore, this factor weighs in favor of finding fair use when a defendant seeks only to become a legitimate competitor in the relevant market. *See Sega*, 977 F.2d at 1523. Hence, a correct application of the fourth factor also favors SCC.

In sum, as a matter of well-established law, Lexmark cannot use copyright to protect its lock-out code against copying by SCC, nor can it interfere with the sale

of otherwise unprotected chips. To the extent that such copying could be deemed to implicate copyright, such copying clearly constitutes fair use.

III. THE DISTRICT COURT ERRED BY FINDING THAT LEXMARK SATISFIED THE OTHER ELEMENTS FOR PRELIMINARY RELIEF

A. Lexmark Has Not Demonstrated Irreparable Harm

1. The District Court Erred by Presuming Irreparable Injury Because There Is No Market for the Purportedly Infringed Works and Any Infringement Is Completely Innocent

The district court presumed irreparable injury on the basis that if a plaintiff in a copyright action establishes a likelihood of success on the merits of an infringement claim, irreparable harm is presumed. (R. 92 FF/CL, pg. 48, ¶ 98, Apx. pg. __) (*citing Forry, Inc. v. Neundorfer, Inc.*, 837 F.2d 259, 267 (6th Cir. 1988)). Importantly, *Forry*'s presumption of irreparable harm is "rebuttable," but this was not considered by the district court. *Id.* This rebuttable presumption of irreparable injury has as its basis the principle that the "market for plaintiff's own product is diminished and perhaps foreclosed by an infringing work." *Jackson v. MPI Home Video*, 694 F. Supp. 483, 488 (N.D. Ill. 1988). In *American Direct Mktg.* the court refused to trigger the presumption when there was no direct competition for the work. 783 F. Supp. at 96–97. In a situation very similar to the one here, the court refused to enjoin the sale of electric toothbrushes when the packaging reproduced copyrighted instructions because "...plaintiffs are

attempting to enjoin the use of the images and text on the package so as to interfere with the defendant's sale of the product in the package. The competition between the parties is over the sale of that merchandise, not over advertising revenue." *Id.* at 97.

Similarly, in this case SCC rebutted the presumption by bringing to the district court's attention the fact that there is *no* market for the purportedly infringed work. (R. 53 Def. Opp. PI, pg. 22, 26–27, Apx. pg. __). Hence, SCC's product does not diminish any market for Lexmark's work. Lexmark did not respond to this point for the obvious reason that there is no independent market for the TLPs.

In the absence of any direct market competition between the works, the presumption of irreparable injury cannot apply. *See, e.g.*, *Lucasarts Entm't Co. v. Humongous Entm't Co.*, 815 F. Supp. 332, 337 (N.D. Cal. 1993); *Marisa Christina, Inc. v. Bernard Chaus, Inc.*, 808 F. Supp. 356, 359 (S.D.N.Y. 1992) (holding that presumption did not apply because plaintiff did not rebut the fact that allegedly infringed work was no longer on the market); *Dow Jones*, 546 F. Supp at 117; *Life Music, Inc. v. Wonderland Music Co.*, 241 F. Supp. 653, 657 (S.D.N.Y. 1965) (finding presumption of irreparable injury rebutted where "works in issue" were not "in active competition with each other").

The presumption of irreparable injury is also inappropriate here because any purported infringement was completely innocent. *Cf. Cadence Design Sys., Inc. v. Avant! Corp.*, 125 F.3d 824, 829 (9th Cir. 1997) (citing 4 Nimmer at § 13.03[F][5], at 13-145). In this case, the undisputed record evidence shows that SCC could not reasonably have known, and did not know, that it was copying anything other than input used as a lock-out code.

In sum, the district court erred by ignoring significant countervailing circumstances which in this case render the presumption of irreparable harm inapplicable or otherwise rebutted.

2. Lost Sales, if Any, of the Purportedly Infringed Work Are Not Irreparable Injury

The district court concluded that even in the absence of a presumption of irreparable harm, the purported infringement "could result in a multitude of harms to Lexmark that would be difficult to quantify. These harms include fewer customer orders, reduced margins, potential market share loss, damage to the reputation of Lexmark's products, and damage to Lexmark's relationships with consumers." (R. 92 FF/CL, pg. 50, ¶ 103, Apx. pg. __).

In its *factual findings*, however, the only injury to Lexmark found by the district court was the lost sales of toner cartridges. (R. 92, FF/CL, pg. 21, ¶ 112, Apx. pg. ___). Although lost sales of toner cartridges would not be a proper

measure of damages for infringement of the *work*, lost sales of the infringed work *itself* is the appropriate focus—even this would constitute economic injury fully susceptible of compensation through money damages. *See Baker v. Adams County/Ohio Valley Sch. Bd.*, 310 F.3d 927, 930 (6th Cir. 2002) ("[P]otential monetary damage does not constitute irreparable harm."); *see also Manakee Prof'l Med. Transfer Serv. v. Shalala*, 71 F.3d 574, 581 (6th Cir. 1995).[36]

The only arguable irreparable injury identified by the district court in its legal conclusions is the asserted damage to Lexmark's "product reputation" and "customer relationships," of which there was no evidence or finding of fact to support such a conclusion. As such, the district court's legal conclusion of "damage to customer relationships" can only be described as speculation. *Cf. Marisa Christina*, 808 F. Supp. at 359 ("The plaintiff has presented no evidence in the record to support what is a wholely [sic] speculative claim of injury."). "[A] claim for injunctive relief cannot be supported by mere speculation that the plaintiff will suffer some future harm." *Smith v. SEC*, 129 F.3d 356, 363 (6th Cir. 1997) (citing *City of Los Angeles v. Lyons*, 461 U.S. 95, 105 (1983)).

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[36] While usually not enough to overcome a claim of irreparable injury in a copyright infringement case, *see Cadence*, 125 F.3d at 827, the lack of a separate market for Lexmark's works mitigates against such a holding here.

B. The Preliminary Injunction Is Contrary to the Public Interest

The district court's preliminary injunction offends environmental considerations, and therefore the public interest, because it discourages the use of recycled toner cartridges by increasing their cost. Federal law, however, specifically promotes the use of recycled toner cartridges as in the public interest. *See* Exec. Order 13101, § 601(a)(2), available at http://www.ofee.gov/eo/-13101.htm.

Moreover, the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4331 *et seq.*, mandates that the federal government "enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources." 42 U.S.C. § 4331(b)(6). Indeed, NEPA "directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States *shall be interpreted and administered in accordance with the policies set forth in this Act.*" 42 U.S.C. § 4332 (emphasis added). The district court's preliminary injunction, by increasing the costs of recycled toner cartridges, is inconsistent with the public interest as defined by NEPA.

The district court's preliminary injunction offends the public interest in a second way, by misusing the copyright laws to protect the market for uncopyrightable goods. *See Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772,

792–94 (5th Cir. 1999) (holding that it is copyright misuse to attempt to obtain a patent-like monopoly over unpatented goods).

C. The Preliminary Injunction Harms Third Parties

The undisputed record shows that numerous third-party toner cartridge manufacturers will be injured by the preliminary injunction. The injunction terminates a source of essential components. (R. 53 Def. Opp. PI, Apx. 3, Cornelius Aff., pg. 6–7, ¶¶ 17–18, Apx. pg. __; R. 63 Judge Aff., pg. 2, ¶ 7, Apx. pg. __; R. 67 Swartz Aff., pg. 6, ¶ 16, Apx. pg. __). Indeed, the district court made a specific factual finding that its injunction could "have a depressing effect on the remanufacturing industry as a whole." (R. 92, FF/CL, pg. 21, ¶ 114, Apx. pg. __). Where such "great public injury" might result from an injunction, a court should refrain from injunctive relief and consider other remedies. *Abend v. MCA, Inc.*, 863 F.2d 1465, 1479 (9th Cir. 1988), *aff'd on other grounds sub nom. Stewart v. Abend*, 495 U.S. 207 (1990).

IV. THE DISTRICT COURT ERRED BY NOT INCREASING THE INJUNCTION BOND

The district court initially set an injunction bond in the amount of $75,000 for the period from the entry of the temporary restraining order on January 8, 2003, until the hearing on the preliminary injunction on February 7, 2003. (R. 38 Order, pg. 1, Apx. pg. __). At the hearing on the preliminary injunction, SCC introduced

evidence that it would sustain damages in the amount of $17,463,580 if the injunction were to remain in effect for two years (R. 67 Swartz Aff., pg. 5, ¶ 14, Apx. pg. __). At the hearing, the district increased the bond amount to $250,000 and extended the injunction to February 28, 2003. (R. 75 Order, pg. 2, Apx. pg. __). On February 27, 2003, the district court issued a preliminary injunction and the same order provided that "the bond previously posted by Lexmark shall remain in effect until further Order from this Court." (R. 91 Order Granting Preliminary Injunction, pg. 1, Apx. pg. __). In its findings of fact, the district court found that a preliminary injunction "will result in substantial lost profits for SCC on the sale of its SMARTEK microchip" and could "affect SCC's sales of other components." (R. 92 FF/CL pg. 21, ¶¶ 11–14, Apx. pg. __). The district court, however, made no findings regarding the extent to which the $250,000 injunction bond was sufficient to compensate SCC for these damages in the event the preliminary injunction was overturned.

The standard of review for the amount of an injunction bond is abuse of discretion. *Division No. 1, Bhd. of Locomotive Eng'rs v. Consolidated Rail Corp.*, 844 F.2d 1218, 1226 (6th Cir. 1988). The district court abused its discretion by not increasing the bond to an amount sufficient to compensate SCC for the injuries that it will sustain as a result of the injunction, given the record evidence that SCC's damages will be in the millions of dollars and the district court's factual findings

that the injunction will cause "substantial" injury to SCC. *See Northern States Power Co. v. Federal Transit Admin.*, 270 F.3d 586, 588 (8th Cir. 2001) (holding that district court abused its discretion by setting bond at $50,000 when evidence showed damage from injunction would be $8 to $10 million, and increasing bond amount to $8 million); *see also Mead Johnson & Co. v. Abbott Labs.*, 201 F.3d 883, 888 (7th Cir. 2000) (stating that district court "should err on the high side" when setting an injunction bond, because damages for an erroneous preliminary injunction cannot exceed the amount of the bond). If this Court upholds the preliminary injunction, this Court nevertheless should modify the order to increase the bond to an amount equal to the record evidence of SCC's actual "substantial" injury of $17.4 million.

CONCLUSION

For the reasons stated above, SCC respectfully requests that this Court vacate the injunction or, in the alternative, increase the amount of the injunction bond to $17.4 million.

Respectfully submitted,

Dated: June 23, 2003

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the type-volume limitation set forth in Rule 32(a)(7)(B). It contains 13,167 words, including footnotes.

_____
Seth D. Greenstein

No. 03-5400

UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

LEXMARK INTERNATIONAL, INC.,
Plaintiff-Appellee,

v.

STATIC CONTROL COMPONENTS, INC.,
Defendant-Appellant.

APPELLANT'S DESIGNATION OF APPENDIX CONTENTS

Appellant, pursuant to Sixth Circuit Rule 28(d), hereby designates the following filings in the district court's record as items to be included in the Joint Appendix:

Description of Entry	**Date Filed in District Court**	**Record Entry Number**
Complaint with Exhibits A-C pp. 1, 4 ▫ Exhibit A (Certificate of Registration for T520/522 Print Cartridge - TX 5-609-284) ▫ Exhibit B (Certificate of Registration for T620/622 Print Cartridge - TX 5-609-285) ▫ Exhibit C (Certificate of Registration for T620 Engine Microde - TX 5-624-273)	12/30/2002	1
Motion for Preliminary Injunction with Memorandum in Support with Exhibits B-C ▫ Exhibit B (Declaration of Michael Robert Yaro) pp. 2-5 ▫ Exhibit C (Declaration of Douglas A. Able) pp. 2-3 ▫ Tab 1 (Table1A: T620 Toner Loading Program; Table 1B: SMARTEK Program for T620)**	12/30/2002	3

▫ Tab 2 (Table 2A: T522 Toner Loading Program; Table 2B: SMARTEK Program for T522)**		
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Order Granting in Part Relief from Temporary Restraining Order p. 1	01/24/2003	38
Memorandum in Opposition to Motion for Preliminary Injunction with Appendixes 3&7 pp. 2-3, 22, 26-27 ▫ Appendix 3 (Affidavit of Lester Cornelius) pp. 3, 6-7 ▫ Appendix 7 (Glossary of Relevant Technical Terms) pp. 1, 3	02/03/2003	53
Affidavit of Lynton Burchette pp. 2-7	02/04/2003	58
Amended Affidavit of Dr. Benjamin Goldberg with exhibits B, C & E pp. 4, 7-10, 12-15 ▫ Exhibit B (Copy of Deposit TX 5-609-284) ▫ Exhibit C (Copy of Deposit TX 5-609-285) ▫ Exhibit E (Explanation of the T520/T522 Toner Loading Program)	02/04/2003	60
Affidavit of Tricia Judge pp. 2	02/06/2003	63
Reply Memorandum in Support of its Motion for Preliminary Injunction with Exhibit H ▫ Exhibit H (Declaration of Wm. Keith Richardson with exhibits A-B)** ▫ Exhibit A (Fountain Engine Code LXK-SCC 7002487)** ▫ Exhibit B (Fountain Engine Code LXK-SCC 7002483)**	02/06/2003	65
Declaration of Bruce MacDowell Maggs with Exhibits B-D** pp. 2-3, 6-8 ▫ Exhibit B (Dallas Semiconductor – DS2432 1k-Bit Protected 1-Wire EEPROM with SHA-1	02/06/2003	66

Engine)** ▫ Exhibit C (Fountain/Hawkeye Chip Layout Version 1.8)** ▫ Exhibit D (Fountain/Hawkeye Cartridge-based Remote Program Specification)**		
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** All or part of these documents designated as "Sealed" in the Court below will be marked and filed as "Confidential" pursuant to Sixth Circuit Rule 30(f)(5).

ADDENDUM OF UNPUBLISHED AUTHORITIES

Pursuant to 6 Cir. Rule 28(g), Appellant Static Control Components, Inc., hereby attaches copies of unpublished authorities cited its brief.

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I hereby certify that on June 23, 2003, I caused one copy each of the foregoing Proof Brief of Appellant to be served by hand delivery on:

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