FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

ALTERA CORPORATION, *Plaintiff-counter-claimant-defendant-Appellee,* v. CLEAR LOGIC, INCORPORATED, *Defendant-counter-claimant-plaintiff-Appellant.*	Nos. 03-17323 03-17334 D.C. No. CV-99-21134-JW/PVT OPINION

Appeal from the United States District Court
for the Northern District of California
James Ware, District Judge, Presiding

Argued and Submitted
April 12, 2005—San Francisco, California

Filed September 15, 2005

Before: Procter Hug, Jr., Warren J. Ferguson, and
Pamela Ann Rymer, Circuit Judges.

Opinion by Judge Hug;
Concurrence by Judge Rymer

COUNSEL

David M. Heilbron and C. William Craycroft, Bingham McCutchen LLP, East Palo Alto, California, for the appellant.

Karl J. Kramer, Morrison & Foerster LLP, Palo Alto, California, for the appellee.

Sandeep Jaggi, Milpitas, California, for *amicus curiae* LSI Logic Corporation.

OPINION

HUG, Circuit Judge:

This case involves an infringement action by Altera Corporation ("Altera") against Clear Logic Incorporated ("Clear

Logic") under the Semiconductor Chip Protection Act of 1984, 17 U.S.C. §§ 901-14 ("SCPA"). Altera also brought state law claims against Clear Logic for intentionally inducing Altera's customers to breach their software license agreements with Altera and also for intentional interference with those contractual relations. A jury found for Altera on all claims and a judgment was entered for $30.6 million in damages, $5.4 million in prejudgment interest and $394,791.68 in costs. The district court judge also entered an injunction preventing Clear Logic from engaging in those activities against Altera. We affirm the judgment and the injunction.

I.

Overview

Filling the gap between copyright law and patent law, the SCPA aims to protect the substantial investment of innovative firms in creating the semiconductor chips that are "at the vortex" of the modern information age. H.R. Rep. No. 98-781, at 2 (1984); S. Rep. No. 98-425 at 7-9. These chips operate microwave ovens, televisions, computers, robots, Xray machines, and countless other now indispensable apparatuses. S. Rep. No. 98-425 at 7-9. Each chip carries its own blueprint. Pirate firms can strip the layers of a semiconductor chip and replicate the design at a cost substantially lower than the original firm's investment. *Id.*

Altera and Clear Logic are competitors in the semiconductor industry. Altera manufactures programmable logic devices ("PLDs"), which are chips that can be programmed to perform various logic functions. A customer uses Altera's MAX+PLUS II software to program the PLD to perform the desired function.[1] The software helps to route the functions

[1]Altera sells chips to companies that use those chips to perform logic functions in devices they produce, not to individual consumers. For example, a company that manufactures printers might purchase PLDs from Altera to perform the functions necessary to operate the printer.

through the thousands of transistors that make up the PLD, ideally achieving the maximum functionality for the particular function desired. Because the PLD can be programmed and reprogrammed, the customer, working with Altera, can continue to work with the PLD and the software until the PLD meets the customer's exact needs. This process can take months.

Clear Logic manufactures a different type of chip: Application-Specific Integrated Circuits ("ASICs"). These chips are designed to perform one specific function and cannot be programmed by the customer. They use less power, are smaller and, for a customer with a large order, are often cheaper. Customers will sometimes start with PLDs and switch to ASICs once they have determined exactly what they need the chips to do. Traditionally, a company that converts from PLDs to ASICs must again start from a high level of description and work toward the end product, the ASIC. This can take a few months and there is a substantial risk that even after the initial attempt, the first chip will not work and more time and money will have to be invested in perfecting the product.

Clear Logic works from a different business model. When customers program Altera devices, using the Altera software, a file called a bitstream is generated. Clear Logic asks customers to send the bitstream to Clear Logic, and Clear Logic uses the bitstream to create an ASIC for the customer. Clear Logic only produces ASICs that are compatible with Altera chips. The laser process Clear Logic uses to create chips with the bitstream allows for a turnaround time of just a few weeks, and rarely produces an incompatible chip.

Faced with the loss of millions of dollars in business, Altera has challenged Clear Logic's business model. In the district court, Altera argued that Clear Logic infringed its rights under the SCPA by copying the layout design of its registered mask works for three families of chip products. Clear

Logic denied the infringement and asserted an affirmative defense of reverse engineering. The jury returned a verdict in favor of Altera on the infringement claim.

In addition, Altera alleged state law claims based on a permitted use provision in its software licensing agreement. Customers can access two versions of the Altera software: one is a free version available on the internet, the other requires a subscription fee but includes additional benefits. In either case, the user must agree to the terms of a license before using the software. The license agreement has taken several forms, but Altera's Vice President of Software and Tools Marketing, Timothy Southgate, testified that it was unlikely any customers were still using older versions of the software because it is not compatible with some of the newer products. Each time the software is updated, the customer must agree to the latest version of the licensing provision. A provision was added to the software license agreement in the early 1990's to prevent competitors from taking advantage of the software. The current version of the use provision, added to the agreement in 1999, provides that customers may "use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by ALTERA or its authorized distributors (the "Permitted Use")." The earlier version did not include the word "sole," but was otherwise similar.

Based on that provision, Altera asserted state law claims for inducing Altera's customers to intentionally breach their license agreements with Altera and also for intentionally interfering with those contractual relations. Clear Logic argued that those claims were preempted by federal copyright law and additionally alleged that the licensing agreements constitute copyright misuse. The district court found as a matter of law that the claims were not preempted and also denied as a matter of law the copyright misuse defense because there was no allegation of copyright infringement. The jury found for Altera on these claims as well.

After the jury trial, pursuant to a stipulation of the parties, the district court determined damages, awarding Altera $30.6 million in damages, $5.4 million in prejudgment interest, and $394,791.68 in costs. In addition, the court issued a permanent injunction preventing Clear Logic's activities that were found to violate Altera's rights under the SCPA and to induce the breach of Altera's software licenses with its customers.

On appeal Clear Logic does not contest the amount of the damage award, only its liability for those damages. It also does not contest the specific terms of the injunction. It contends that the district judge misinterpreted the application of the SCPA, and improperly instructed the jury concerning the defense of reverse engineering. Clear Logic also contests liability under the state law claims.

II.

The Semiconductor Chip Design Process and the Semiconductor Chip Protection Act

Clear Logic and Altera define the stages and terms relating to the chip design process differently.[2] According to Altera, the layout is "the physical arrangement of the components on the chip." The architecture is comprised of "the components and the structures that are physically arranged within the chip." Clear Logic argues that the architecture is essentially a block diagram showing the basic arrangement of the chip. From this conceptual plan, the designer creates floor plans that show the arrangement of functional modules, focusing on how the designer will group major components. The floor plan and the architecture are both at high levels of abstraction. The designer next creates an electrical schematic, which is a

[2]Altera filed a Motion to Strike, objecting to several portions of Clear Logic's Reply Brief. We grant Altera's motion to strike with respect to the discussion of the evidence at page 23 of Clear Logic's reply brief, but deny the remainder of the motion.

two-dimensional abstract drawing. After this, a layout designer creates a three-dimensional layout design which includes the specific placement of all of the elements of the chip and is used to make the glass masks that are printed onto the chip.

Despite their disagreement over the specific definitions of industry terms and the specific steps in the process of chip design, Altera and Clear Logic agree that chip design starts with a high level idea and moves toward the placement of individual transistors on a chip in several layers. Ultimately, the schematics and floor plans are used to develop the specific placement of every transistor that will eventually go on the chip. Glass disks are etched with the pattern for each layer of the chip, and these glass disks, called masks, are printed onto the semiconductor chip, one layer at a time, by photolithography.[3] S. Rep. No. 98-425 at 2-3. Generally, there are eight to twelve layers to the chip, each of which requires a separate mask. *Id.* The series of all of the masks is the mask work.

Reverse engineering has long been an accepted practice in the semiconductor chip industry. By photographing and chemically dissolving each layer of the chip, a second company can recreate the entire mask work for any chip. The process allows legitimate analysis of chips to spur innovation and improvement on existing designs, but also makes direct copying of chips feasible. S. Rep. No. 98-425 at 4. At the behest of the semiconductor industry, Congress sought to protect this important facet of the American economy, and indeed of modern American society, while preserving the validity of reverse engineering as an appropriate form of competition.

[1] After extensive debates, Congress passed the Semiconductor Chip Protection Act in 1985, creating *sui generis* pro-

[3]There are other ways of fixing the mask work on the chip, but the SCPA is intended to protect that pattern regardless of the technological process that takes it from idea to chip.

tection for mask works embodied in semiconductor chip products. The Act borrows heavily from copyright law, and was initially proposed as an extension of existing copyright protection. S. Rep. 98-425 at 9; S. Rep. No. 98-425 at 12-13 (1984) (analogizing mask works to technical drawings or audiovisual works subject to copyright protection). In analogizing semiconductor chips to traditional areas of copyright law, the legislative history notes that, just as a plagiarist who copies only one chapter of a book may be held liable for infringement, a person may be liable for copying a part of a mask work if it is a qualitatively important portion that results in substantial similarity. S. Rep. No. 98-425 at 16-18. The realities of the business world, however, would purportedly make it impractical for a copyist to copy a part of a chip but create the rest of the chip independently. *Id.* Where chips appeared to be similar, Congress assumed that admitting expert testimony to assist in determining whether subtle changes in a mask work layout were significant would resolve the problem of distinguishing a copy from a legitimate reverse engineering attempt in most cases. *Id.*

The SCPA defines a "mask work" as

> a series of related images, however fixed or encoded —
>
> (A) having or representing the predetermined, three-dimensional pattern of metallic, insulating, or semiconductor material present or removed from the layers of a semiconductor chip product; and
>
> (B) in which series the relation of the images to one another is that each image has the pattern of the surface of one form of the semiconductor chip product.

17 U.S.C. § 901(a)(2). A semiconductor chip product, in turn, is

> the final or intermediate form of any product—
>
> (A) having two or more layers of metallic, insulating, or semiconductor material, deposited or otherwise placed on, or etched away or otherwise removed from, a piece of semiconductor material in accordance with a predetermined pattern; and
>
> (B) intended to perform electronic circuitry functions.

17 U.S.C. § 901(a)(1).

[2] The SCPA grants the owner of a mask work the exclusive rights to reproduce the mask work and to "import or distribute a semiconductor chip product in which the mask work is embodied." 17 U.S.C. § 905. The Act does not, however, extend protection "to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C. § 902(c).

Before trial, the district court granted in part Altera's summary judgment motion regarding the scope of the SCPA. The court held that "Altera's layout is fixed in the final chip product: the placement of the components and their interconnection lines on the actual chip are created using masks which are the physical embodiment of the layout design chosen by Altera design engineers. Thus Altera's layout design is more than a mere idea. It is the blueprint for the layout of the semiconductor chip." The court concluded that "the Act is broad enough to cover the type of claims made by Altera," but left for the jury the factual question of whether Altera had proven infringement. Relying on *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555 (Fed. Cir. 1992), the only case to date to examine the SCPA, the court explained that "copying groupings of transistors and interconnection lines may

constitute a violation of the Act."[4] The ruling on Altera's motion for summary judgment involved a purely legal issue which we review *de novo*.

In *Brooktree*, the plaintiff alleged that the defendant company had copied its ten-transistor SRAM cell. 977 F.2d at 1563. The court stated that "If the copied portion [of the mask work] is qualitatively important, the finder of fact may properly find substantial similarity under copyright law and under the Semiconductor Chip Protection Act," even if other portions of the chip were not copied. *Id.* at 1564 (citations omitted). The district court had appropriately allowed the jury to determine whether the copying of the layout of a cell within the chip was an infringement of the act. *Id.* at 1565.

Altera asserts that the placement of groupings of transistors on the chip was copied, and does not specifically address the layout of the transistors within those groupings. Clear Logic argues that the placement of the groupings is a system or an idea and is not entitled to protection under the SCPA. We reject this contention; the boundaries and organization of these groupings are more than conceptual. As both John Reed and John Turner testified, these groupings are physically present in the mask work.

Commentators have suggested analyzing the levels of abstraction in the production of a computer program or a mask work to identify the distinction between ideas and expression, and the degree of similarity, in these formats. *See* 4 *Nimmer on Copyrights* § 13.03 (2005) (comparing the analysis of broad ideas, plots, structure, dialogue, or sequence of events in a novel or play to the levels of abstraction in creating a computer program); *Copyright Protection for Semiconductor Chips*: *Hearings on H.R. 1028 Before the House*

[4] *Brooktree* was a case that originated in a district court in the Ninth Circuit, and thus, the Federal Circuit stated that it applied Ninth Circuit law in addressing the SCPA claim.

Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the Comm. on the Judiciary, 98th Cong. 316-21 (1983) (letter and article submitted by Eric W. Petraske, patent attorney) (identifying ideas from electrical information, geometric information about component placement, size, shape, circuit design within the mask level). Our own cases have suggested such an approach is appropriate. *See Data East USA, Inc. v. Epyx, Inc.*, 862 F.2d 204, 207-09 (9th Cir. 1988). Under this approach, we identify the broad idea behind the design and assess each successive step in the design process, identifying the point at which the idea becomes protectable expression. *See Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 706-12 (2d Cir. 1992) (as amended) (explaining the abstraction-filtration-comparison test for computer programs).

[3] In considering the chip design process, we recognize, as do the parties, that with each step, the ideas become more concrete until they are finally expressed in the layout of the transistors in the mask work. The customer's idea is at the highest level of abstraction, and the schematics and floor plans convey more concrete ideas, designating how the chip may be structured or organized. These drawings are preliminary sketches that would not be protected under traditional copyright principles. *Copyright Protection for Semiconductor Chips*: *Hearings on H.R. 1028 Before the House Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the Comm. on the Judiciary*, 98th Cong. 116-17 (1983) (statement of Dorothy Schrader, Copyright Office). It is not until the level of the mask work, the piece of the process that Congress chose to protect, that there is an expression of that idea. Those ideas that are physically expressed in the mask work are subject to protection under the SCPA.

[4] The district court correctly determined that the organization of the groupings is physically a part of the mask work. The mask work is structured according to the groupings that Altera highlighted and the district court correctly allowed the

jury to determine whether those similarities constituted an infringement of the act. Unlike the outline of an article or the chapters in a book, these groupings physically dictate where certain functions will occur on a chip and describe the interaction of parts of the chip. The placement of logic groupings in a mask work is not an abstract concept; it is embodied in the chip and affects the chip's performance and efficiency as well as the chip's timing. In accordance with the Federal Circuit's holding in *Brooktree*, it is the province of the jury to determine whether those aspects of the mask work are material, and whether the similarity between the mask works is substantial. 977 F.2d at 1570. The district court did not err in finding that the organization of the groupings of logic functions on Altera's mask works, and the interconnections between them, was protected under the SCPA. The arrangement of the transistors within those blocks is also entitled to protection under the SCPA, but, as in *Brooktree*, the jury determines whether the similarities are more important than the differences. *Id*.

III.

Reverse Engineering

[5] The SCPA specifically protects the right of

> (1) a person to reproduce the mask work solely for the purpose of teaching, analyzing, or evaluating the concepts or techniques embodied in the mask work or the circuitry, logic flow, or organization of components used in the mask work; or
>
> (2) a person who performs the analysis or evaluation described in paragraph (1) to incorporate the results of such conduct in an original mask work which is made to be distributed.

17 U.S.C. § 906. This reverse engineering provision explicitly protects industry practices and encourages innovation. The

second mask work must not be "substantially identical to the original," and as long as there is evidence of "substantial toil and investment" in creating the second mask work, rather than "mere plagiarism," the second chip will not "infringe the original chip, even if the layout of the two chips is, in substantial part, similar." *Brooktree*, 977 F.2d at 1566 (quoting *Mathias-Leahy Memorandum* at S12,917). The legislative history, relying on the testimony of industry representatives, indicated that most cases would probably present clear cut evidence of direct copying or of innovation and that in cases falling into the gray area between outright copying and complete originality, the courts should consider the presence or absence of a paper trail by the second firm. *See id.* (summarizing relevant statements from the legislative history discussing reverse engineering and paper trails). A firm that simply copied another firm's mask work would have no evidence of its own investment and labor, whereas a legitimate reverse engineering job would require a trail of paper work documenting the analysis of the original chip as well as the development of an independent design. *Id.* The district court in this case instructed the jury that this was a factor to be considered in determining whether Clear Logic had proven a valid reverse engineering defense.

In *Brooktree*, the Federal Circuit analyzed the defendant's paper trail, but held that "the sheer volume of paper" was not dispositive. *Id.* at 1569. The trail in that case was susceptible to the interpretation that the defendant copied the chip. The court held that the jury was entitled to weigh the evidence and consider the differences in the chips as well as the similarities, and could find the similarities sufficient to invalidate the reverse engineering defense. *Id.*

In this case, Clear Logic challenges the district court's formulation of one of the reverse engineering jury instructions. We look to the instructions as a whole to determine whether they fairly and accurately cover the substance of the law. *Swinton v. Potomac Corp.*, 270 F.3d 794, 802 (9th Cir. 2001).

We do not reverse the judgment if the alleged error in the jury instructions is harmless. *Tritchler v. County of Lake*, 358 F.3d 1150, 1154 (9th Cir. 2004).

The district court instructed the jury that

> A defendant does not infringe the mask works of a plaintiff if the defendant can prove by a preponderance of the evidence that it has engaged in legitimate reverse engineering. A question on the verdict form asks you to indicate whether you find that the defendant has proved that it has — that it engaged in legitimate reverse engineering. To establish a legitimate reverse engineering defense, Clear Logic must prove by a preponderance of the evidence, the following requirements:
>
> Number 1. That Clear Logic reproduced Altera's mask works solely for the purpose of teaching, substantially analyzing, or substantially evaluating *non-protectable concepts or techniques* embodied in Altera's mask works; and,
>
> 2. That Clear Logic *did not use or copy any of Altera's protectable expression* in the Clear Logic chips, but rather *used only the non-protectable concepts or techniques* embodied in Altera's mask works in developing clear logic's own chips, which contain an original layout design.

(Tr. 1478-79) (emphasis added). The judge continued to instruct the jury that

> the law actually permits a competitor to reproduce the mask work if that reproduction is done solely as a step in a process of creating its own original mask work. A mask work is original as long as it exhibits any minimal degree of creativity in any aspect of the

> mask work layout. The requisite level of creativity for originality is extremely low; even a slight amount will suffice.
>
> Notice that I use the term "legitimate" reverse engineering. In the process of reverse engineering, the competitor is allowed to photograph and reproduce a registered mask work. If the competitor uses this information to reproduce a substantially identical mask work, as for example a virtual photocopy, the competitor has not engaged in legitimate reverse engineering.
>
> Legitimate reverse engineering would start with photographing and reproducing the mask work, but the photograph and reproduction is used for the purpose of study and analysis, and then the competitor must combine this study and analysis with its own engineers' engineering efforts to yield its own original mask work.
>
> Because the new mask work is designed to be interchangeable with the registered mask, it may be substantially similar to the registered mask work.

(Tr. 1481-82).

The question on the verdict form pertinent to the defense of reverse engineering stated:

> Did Clear Logic prove that it reproduced Altera's mask works solely for the purpose of analysis to develop its own original layout design, namely one which is not substantially identical to components or groupings of components or interconnections on the corresponding Altera mask work which are material and original?

> *Answer as to each mask works which is the subject of this action. A "Yes." answer is a finding that the defense of legitimate reverse engineering was proved. A "No." answer is a finding that the defense of legitimate reverse engineering was not proved.*

The jury responded "No" with respect to each mask work, finding that Clear Logic had not established a reverse engineering defense for any of the chip families.

[6] The SCPA's reverse engineering provision allows copying the entire mask work. It does not distinguish between the protectable and non-protectable elements of the chip as long as the copying is for the purpose of teaching, evaluating, or analyzing the chip. Although the product created from that analysis must be original, the process of studying the chip is not limited to copying ideas or concepts. The district court's instructions initially define "legitimate reverse engineering" to allow copying and analyzing only "non-protectable concepts or techniques." This is an incorrect statement of the law.

[7] The district judge's instructions in this case were extremely thorough; he made a real effort to make the instructions on this complex subject understandable to the jury. The instructions on the reverse engineering defense extend for several pages of the transcript. The later instructions correctly state the law applicable to the defense of reverse engineering and remedy the initial incorrect statement. They explain that it is permissible to reproduce "a registered mask work" as a step in the process of creating an original chip, so long as the purpose of reproducing the chip is appropriate. The district judge correctly explained that only minimal ingenuity is necessary for a second chip to qualify as original, and he emphasized the distinction between substantial identity and substantial similarity. As the court in *Brooktree* discussed, the similarities in a chip may outweigh the differences. 977 F.2d at 1570. In this case, there was sufficient testimony about both the similarities and the differences in the mask works to allow

a jury to determine whether the Clear Logic mask works were original as defined under the Act. The incorrect statement in the instructions was not prejudicial error.

As our opinion in *In Re Asbestos Cases* stated:

> Prejudicial error results when looking to the instructions as a whole, the substance of the applicable law was [not] fairly and correctly covered. The instructions and interrogatories must fairly present the issues to the jury. If the issues are fairly presented, the district court has broad discretion regarding the precise wording.

847 F.2d 523, 524-25 (9th Cir. 1988) (internal citations and quotation marks omitted, alteration in original). In the case at hand, the interrogatory (or question) presented to the jury was clear and concise and correctly stated the law. It is significant that this was the statement of the law to which the jury particularly responded. We hold that, viewing the instructions and the interrogatory as a whole, the legal issue was fairly presented to the jury.

IV.

Copyright Preemption and the State Law Claims

In addition to Altera's claims under the SCPA alleging infringement of Altera's mask works, Altera alleged that Clear Logic caused Altera customers to use Altera software in violation of its software licensing agreement. Clear Logic argues that the state law claims related to the software licensing agreement are preempted by federal copyright law. The Copyright Act specifically preempts "all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright." 17 U.S.C. § 301(a). The rights protected under the Copyright Act include the rights of reproduction, preparation of derivative works, distribution,

and display. 17 U.S.C. § 106. Whether copyright preemption applies is a question of law reviewed *de novo*. *Waits v. Frito-Lay, Inc.*, 978 F.2d 1093, 1099 (9th Cir. 1992).

The district court found that the Copyright Act did not preempt Altera's state law intentional interference claims based on the "sole use" provision because the claims included an "extra element" not included within the Copyright Act's protections. We agree with the district court.

If a state law claim includes an "extra element" that makes the right asserted qualitatively different from those protected under the Copyright Act, the state law claim is not preempted by the Copyright Act. *Summit Mach. Tool Mfg. v. Victor CNC Sys.*, 7 F.3d 1434, 1439-40 (9th Cir. 1993); *Bowers v. Baystate Techs Inc.*, 320 F.3d 1317, 1323-24 (Fed. Cir. 2003). Most courts have held that the Copyright Act does *not* preempt the enforcement of contractual rights. *See Bowers*, 320 F.3d at 1324-25 (noting that "most courts to examine this issue have found that the Copyright Act does not preempt contractual constraints on copyrighted articles"); *Nat'l Car Rental Sys., Inc. v. Computer Assocs. Int'l*, 991 F.2d 426, 431 (8th Cir. 1993) ("National's use of the licensed programs constitutes an extra element in addition to the copyright rights making this cause of action qualitatively different from an action for copyright."); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996) (noting that "courts usually read preemption clauses to leave private contracts unaffected"). We find the logic of these cases persuasive here.

In *ProCD*, the Seventh Circuit considered a situation similar to the circumstances of this case. A consumer purchased ProCD's software and used it in a manner contrary to the terms of the shrinkwrap license; he put the information on a website and made it available to companies at a fee lower than ProCD's rate, although the terms of the license allowed only for private use. 86 F.3d at 1454-55. Likewise, Altera's customers use software to create a bitstream (which is essen-

tially information) and provide that information to Clear Logic, despite the terms of the agreement that restrict the customers to using that information for programming Altera products. The right at issue is not the reproduction of the software as Clear Logic argues, but is more appropriately characterized as the use of the bitstream. Similarly, the Eighth Circuit distinguished between use and reproduction in *National Car Rental Systems*, 991 F.2d at 432, specifically holding that use is a qualitatively different right. *Id.*

[8] We find these cases compelling. A state law tort claim concerning the unauthorized use of the software's end-product is not within the rights protected by the federal Copyright Act, and accordingly, we affirm the district court's ruling rejecting preemption.

V.

Copyright Misuse

Finding no clear authority for extending the doctrine of copyright misuse beyond "its logical place as a defense to a claim of copyright infringement," the district court rejected Clear Logic's argument that Altera's license agreements should not be enforced because they operate as "illegal tying arrangements because Altera is using its copyright in its programming software to control competition in an area outside the copyright, i.e. Altera's chip hardware." We review this question of law *de novo*, and we affirm the district court's ruling. *See Waits*, 978 F.2d at 1099.

In *Practice Management Information Corp. v. American Medical Association*, we adopted the doctrine of copyright misuse, specifically describing the doctrine as a "*defense* to copyright infringement." 121 F.3d 516, 520 (9th Cir. 2001) (emphasis added); *see also A&M Records v. Napster, Inc.*, 239 F.3d 1004, 1026-27 (9th Cir. 2001) (discussing copyright misuse as an affirmative defense). The Fifth Circuit has dis-

cussed copyright misuse as an "unclean hands defense" which "forbids the use of the [copyright] to secure an exclusive right or limited monopoly not granted by the [Copyright] Office and which is contrary to public policy to grant." *Alcatel USA, Inc. v. DGI Techs, Inc.*, 166 F.3d 772, 792 (5th Cir. 1999) (alterations in original, internal citations omitted).

[9] When copyright misuse applies, we do not allow enforcement of the copyright for the period of misuse. *Practice Mgmt Info Corp.*, 121 F.3d at 520 & n.3. Because the remedy for copyright misuse is equitable, it makes little sense to allow Clear Logic to proceed on an independent claim for copyright misuse when there has been no allegation of copyright infringement. *Cf. Sony Computer Entm't, Inc. v. Connectix Corp.*, 203 F.3d 596, 608 (9th Cir. 2000) (refusing to consider copyright misuse where Sony had not established a likelihood of success on the merits sufficient to merit injunctive relief on a claim of copyright infringement). We have already rejected Clear Logic's copyright preemption argument. We cannot now void the license agreements under the pretext of refusing to enforce a copyright that has not been asserted. Copyright misuse is not a defense to the state law claims asserted by Altera.

VI.

The District Court's Interpretation of the Software License Agreement

In denying Clear Logic's motion for summary judgment, the district court found, as a matter of law, that "if [Altera's] software is used to create a bitstream, which is in turn used to program a Clear Logic device, the software has necessarily been used to program the Clear Logic device." Such a use would be contrary to the permitted use provision in Altera's software license agreement, which provides that users may "use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by

ALTERA or its authorized distributors." Clear Logic urges the court to take extrinsic evidence into consideration and reach a more limited reading of the license provision. We review the denial of a motion for summary judgment *de novo*, and finding no error in the district court's interpretation of the contract, we affirm. *Lee v. Gregory*, 363 F.3d 931, 932 (9th Cir. 2004).

Under California law, extrinsic evidence is admissible if the language of the contract is "reasonably susceptible" of the meaning urged by the parties. *Pacific Gas and Electric Co. v. G.W. Thomas Drayage & Rigging Co.*, 442 P.2d 641 (Cal. 1968). Thus, even if the language appears unambiguous on its face, the court must first make a preliminary determination whether the evidence is relevant to prove a meaning of which the instrument is reasonably susceptible. *Banco do Brasil, S.A. v. Latian, Inc.*, 285 Cal. Rptr. 870 (Cal. Ct. App. 1991). Thus, the parties may introduce evidence to explain the terms of the contract, but they may not introduce evidence of terms not specifically included in the contract or evidence that contradicts the terms of the contract. *Id.* at 891; *see also Brinderson-Newberg Joint Venture v. Pacific Erectors, Inc.*, 971 F.2d 272, 277 (9th Cir. 1992).

As Clear Logic reads the contract, the permissible use provision covers only the use of the software, but not the "output of the program, including the bitstream file." The district court initially rejected this argument, finding that "the unambiguous language of the software license provides that the Altera software may be used to program an Altera device. If the software is used to create a bitstream, which in turn is used to program[5] a Clear Logic device, the software has nec-

[5]Clear Logic makes much of the district court's use of the term "program" with respect to the Clear Logic devices. But if "create" is substituted for "program" in the district court's statement, the result is the same. The importance is not whether a Clear Logic device can be programmed, but that the end device is not an Altera product.

essarily been used to program the Clear Logic device." In its order denying Clear Logic's motion to reconsider, however, the district court stated that it had "thoroughly reviewed Clear Logic's extrinsic evidence for a second time" and found that the evidence did not support Clear Logic's interpretation of the terms.

[10] The intent of the parties is the governing notion of contract law. Altera's intent is clear from the language of its license agreement: Altera sought to prevent competitors from benefitting from its software. The district court correctly gave effect to the terms of the contract and the intent of the parties and we affirm the district court's denial of Clear Logic's motion for summary judgment on that issue.

VII.

Clear Logic's Motion for Judgment as a Matter of Law on Altera's State Law Claims: The Validity of the License Agreements

Finally, Clear Logic argues that Altera should have been forced to prove which customers were subject to which licensing provision, and whether each of those contracts was valid. We review the district court's denial of Clear Logic's motion for judgment as a matter of law *de novo*, *Bell v. Clackamas County*, 341 F.3d 858, 865 (9th Cir. 2003), viewing the evidence in the light most favorable to Altera. *Reeves v. Sanderson Plumbing Prod., Inc.*, 530 U.S. 133, 149-50 (2000).

Altera argues that it did not have to prove that any specific customers were parties to specific provisions, because tortious interference "arises from interference with the contractual relationship, not from interference with any specific contract." Altera cites *Ramona Manor Convalescent Hospital v. Care Enterprises*, 225 Cal. Rptr. 120, 126 (Cal. Ct. App. 1986) to support that claim. The language in that case, however, refers

to the allegedly infringing party's intent at the time of the conduct in question. When the defendant performs the act that causes the interference, the defendant need not know exactly who is a party to the contract, so long as he knows he is interfering with a contractual relationship. *Id.*; *see also Sebastian Int'l. v. Russolillo*, 162 F. Supp. 2d 1198, 1203-04 (C.D. Cal. 2001) (taking note of this distinction); Rest. 2d Torts § 766 (Comment p) (noting that the person inducing a breach must be aware that there is a contract, but need not know the specific parties to the contract). For purposes of alleging the two state law torts Altera has alleged, interference with contractual relations and inducing breach of a contract, Altera must prove not only that Clear Logic knew a contract existed, but must prove, as an element of the breach of contract claim, that a valid contract existed. The terms of a contract on paper, with no evidence that any parties agreed to those terms, do not prove the existence of a valid contract.

[11] Nonetheless, the district court properly denied judgment as a matter of law. The permitted use restriction was added to the Altera software licensing agreement in 1996, and the word "sole" was added in 1999. The addition of the word "sole" makes the intent clearer, but does not alter the legal operation of the terms. Furthermore, the printed bitstreams Altera submitted at trial identify the version of the software, and therefore the version of the permitted use restriction at issue. Renewing a software subscription includes renewal of the licensing agreement, so that customers must agree to an updated version of the licensing agreement periodically, and few customers are likely to maintain an older version of the software because the older version may not support newer product lines. Altera customers cannot use the software, and therefore create the bitstreams, without agreeing to the licensing agreement, including the permitted use restriction. In essence, a valid contract is a prerequisite to the creation of a bitstream from Altera software, and the jury could logically conclude that valid contracts were formed via the Altera licensing agreements before customers sent bitstreams to

Clear Logic. We therefore affirm the district court's denial of judgment as a matter of law on the final claim.

Conclusion

The judgment of the district court and the permanent injunction are **AFFIRMED**.

RYMER, Circuit Judge, concurring:

I agree that the district court's instructions did not constitute reversible error on the record presented to us for review. As the district court held, the selection, combination and arrangement of electrical components in the mask works (which it called the "mask work layout design"), including the placement, orientation, and interrelationship of groupings of transistors and interconnection lines are protectible.

However, I write separately for two reasons. First, to emphasize that our decision today does not mean that the SCPA protects chip functionality or provides protection to chips in any way synonymous with the protections provided through patent law. To the extent our opinion or the district court's rulings pertain to functionality, it is in the context of a case where the experts differed with each other (and even occasionally with themselves) about what the layout design amounts to, and what the architecture of the semiconductor chips at issue is in relation to the organization of components, groupings of transistors, and interconnecting lines. Based on the state of the evidence, I cannot say that the district court erred in allowing the jury to consider the entirety of the mask works for both chips including not only the design layout of the transistors, but also how these transistors came together on the chip to form components and how both chips placed interconnecting lines between those components and groups of transistors. Each side capitalized on the instructions, Clear

Logic arguing that the differences in how it laid out its transistors led to substantial and original design differences between its family of chips and Altera's chips, while Altera argued that the way it grouped its transistors into different components and placed interconnecting lines between those components was original to Altera and substantially copied by Clear Logic. In this way, on the facts adduced in this particular case, the jury could decide whether the expression of those elements in Altera's family of chips was original and substantially similar to the expression of those same elements in Clear Logic's family of chips.

Second, to suggest that this is the type of case in which it might have been useful to have a court-appointed, independent expert. Neutral definitions and a common understanding of the underlying technology would have been extremely helpful as background for determining whether the chips should have been compared for substantial similarity only at the transistor level, only at the component level, or at some level in between.

I salute the district court and the parties for having held a tutorial on the technology. It was undoubtedly valuable to the district judge. The only problem is, it was unreported (which is understandable, as a principal benefit of a tutorial is the opportunity for informal exchange) and thus, it was unavailable to assist *us*. In future cases where such formats are used — and I encourage it, having benefitted from similar tutorials when I served as a district judge — I urge district judges and litigants to consider the possibility of videotaping the tutorial for whatever assistance it may be to the court of appeals.