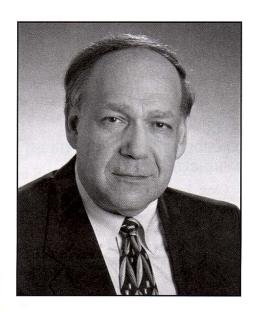# NINTH CIRCUIT REPORT
Semiconductor Chip Protection Act Case Reveals Scope of Act and Enforcement of Internet Software License Agreement

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ALTERA CORP. V. CLEAR LOGIC, INC.[1]

IN 1984 CONGRESS PASSED the Semiconductor Chip Protection Act ("SCPA")[2] to fill a gap between copyright and patent law, protecting semiconductor chips—multilayered devices with substantial investment in the structure, layout and blueprint of the devices. This is only the second reported decision under the SCPA.

This was a battle between Altera, which manufactured programmable logic devices, which are chips that can be programmed to perform various logic functions, and Clear Logic, which manufactured a different type of chip: Application-Specific Integrated Circuits ("ASICs"), which instead of being designed to be programmed, generally are designed to perform one specific function.

Once a customer programs a programmable logic device of Altera, using Altera software, a bitstream file is generated, with the specific program for the customer's purpose. Clear Logic asked its customers to send the bitstream to Clear Logic, and then Clear Logic used this bitstream to create an ASIC for the customer's specific function and purpose.

The case raises interesting issues about the scope of the SCPA, reverse engineering of chips, license agreement violations, preemption, copyright misuse and even tutorials to teach district courts technology, providing a wealth of reportable knowledge for this column.

THE SCPA, INFRINGEMENT AND REVERSE ENGINEERING

First, since we have so few reported cases under the SCPA (this is the second), it is important to review this law, which is quite different from copyright and patent law.

The SCPA defines mask works as follows, and then later contemplates certain reverse engineering:

A mask work is a series of unrelated 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.[3]

The SCPA grants the owner of a mask work the exclusive right to reproduce the mask work, but like the Copyright Act does not 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."[4]

Analogizing to the Copyright Act, the trier of fact must distinguish between ideas and expression, and analyze the degrees of similarity to determine infringement. Here, the mask work sought to be protected by Altera is the placement of groupings of various transistors on the chip. Clear Logic argued that the placement of the groupings is a system or an idea, and not entitled to protection under the SCPA.

The District Court for the Northern District of California had held that the organization of the groupings was a physical part of the mask work; and the Ninth Circuit affirmed, noting that the organization of the groupings of logic functions on Altera's mask works, and the intercon-

nections between them, were protected under the SCPA. The arrangement of the transistors within those blocks is also entitled to protection under the SCPA, but it was up to the jury to review the evidence to determine whether the similarities were more important than the differences.

Interestingly, the Court of Appeals analogized the situation under the SCPA to copyright infringement, where the outline of an article or the chapters in a book may not be protectable, while the content is. In the mask work structure, the placement of groupings of transistors on the chip in a mask work is not an abstract concept, but is embodied in the chip and affects the chip's performance and efficiency, as well as the chip's timing. Thus, it was proper to put this before the jury, and the jury could determine, as it did, that there was infringement under the SCPA.

In enacting the SCPA, Congress also recognized that copying for the purpose of reverse engineering by a competitor, to enable the production of another original mask work, encouraged innovation and was not to be considered infringement.

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.[5]

The Ninth Circuit noted that the second mask work must of course not be "substantially identical to the original" and there must be sufficient evidence of "substantial toil and investment," often shown by a "paper trail by the second firm" showing its own investment in creating a non-infringing mask work of its own.

In the only other reported case dealing with the SCPA, *Brooktree Corp. v. Advanced Micro Devices, Inc.,*[6] the Federal Circuit recognized that it was not "the sheer volume of such paper" which was dispositive, and that a jury must weigh the evidence and consider the differences as well as the similarities in assessing the reverse engineering defense.

Jury instructions on infringement are difficult enough. On reverse engineering they are almost impossible, but here they were not fatally defective. While the District Court's instructions initially incorrectly defined, "legitimate reverse engineering," later jury instructions, and particularly the verdict form, corrected the error and correctly defined reverse engineering, allowing the Ninth Circuit to affirm the decision of the jury finding infringement and no reverse engineering defense.

COPYRIGHT PREEMPTION

Altera also brought suit for state law claims for infringement and contributory infringement against Clear Logic for its causing Altera's customers to use Altera's software in violation of Altera's software licensing agreement with the customers.

Here, at the urging of Clear Logic, Altera's customers use its software to create a bitstream (which is essentially information) and provide this information to Clear Logic, despite the terms of the agreement that restrict the customers to using this information for programming Altera products.

The question in assessing preemption under the Copyright Act is whether the rights sought to be enforced are "equivalent to any of the exclusive rights within the general scope of copyright."[7] The Ninth Circuit held there was no preemption because Altera's state law intentional interference with contract claims based upon Clear Logic's inducing customers to violate their agreements with Altera, contained an "extra element" not included within the Copyright Act's protections. The Ninth Circuit cited the well-known *ProCD*[8] case for the proposition that the extra element existed not because customers reproduced or copied the software, but because the agreement between Altera and its customers restricted the customers to using the information for programming Altera products, and in fact customers were induced to "use of the bitstream." It was not just reproduction, which would provide a similar right against copying, but use, which the Court of Appeals found to be a qualitatively different right.

NO COPYRIGHT MISUSE CONSIDERED, AS NO COPYRIGHT INFRINGEMENT ALLEGED

Clear Logic also argued that Altera's agreements with its customers, represented illegal legal tying, by preventing what may amount to reverse engineering or otherwise permitted copying. Clear Logic believed that such restrictions would be "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."

The doctrine of "copyright misuse" is rarely raised. The Ninth Circuit characterized it as an "unclean hands defense" or an allegation of an illegal extension of the copyright monopoly rights. In any event, it is an equitable defense, which could not be raised where Altera was not alleging copyright infringement here.

It might have to be raised if it rose to the level of an antitrust law violation, but here the Court was not going to allow a copyright misuse defense without an allegation of copyright infringement. While SCPA infringement is within Title 17, it is not copyright infringement.

EXPERT WITNESSES AND TUTORIALS

Finally, in an interesting concurring opinion, having nothing directly to do with the case, Circuit Judge Rymer wrote separately, to make it clear that the decision dealing with the SCPA, protecting chip functionality and to provide protection against copying chips, was not, in his view, "in any way synonymous with the protections provided through patent law."

Here, there had been a great deal of reliance on expert testimony in a difficult technology case, and the jury was allowed to hear it and decide the originality of Altera's chips, and found that there was substantial similarity in the products of Clear Logic. Judge Rymer suggested that this is the type of case where "it might have been useful to have a court-appointed independent expert."

Judge Rymer saluted the District Court and parties for having held a "tutorial on the technology" which was understandably unreported, a principal benefit of which being the "opportunity for informal exchange," but was, as a result, "unavailable to assist [the Court of Appeals]. In future cases where such formats are used, which he encouraged and supported he urged "district courts and litigants to consider the possibility of videotaping the tutorial for whatever assistance it may be to the Court of Appeals."

This last discussion is interesting in that the district courts in California often use off-the-record tutorials to learn the technology through an educational exchange of information and discussion, particularly in patent cases, and yet here Judge Rymer is urging inclusion of that informal discussion in the record to help the Court of Appeals understand the technology, as he had used tutorials in his former life as a district court judge. ⊙

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bibliography
Endnotes

1. 424 F.3d 1079 (9th Cir. 2005).
2. 17 U.S.C. §§ 901–914.
3. 17 U.S.C. § 901(a)(2).
4. 17 U.S.C. § 902(c).
5. 17 U.S.C. § 906.
6. 977 F.2d 1555 (Fed. Cir. 1992).
7. 17 U.S.C. § 301(a).
8. *ProCD, Inc. v. Zeidenberg,* 86 F.3d 1447 (7th Cir. 1996).