tion—preferably suppression of the second-sourcing. But would a court agree to interdict the “fruit of the poisoned tree,” that is, enjoinsale of the illicitly designed chip? It might, but that is doubtful. There would be a better chance of getting an injunction against the clone maker’s misuse of the model as an “endorsement” of the equivalency of the two ICs. Still, success is far from certain. The question suggests a number of cases in which Consumer Reports magazine tried to prevent manufacturers that it

Some business problems do not have a cost-effective solution.

had rated favorably from using the ratings as sales tools. The magazine had only limited success, primarily against actual reproduction of the text of the ratings or false suggestions of CR sponsorship, and it had some First Amendment problems. Here, the unauthorized speech about IC equivalency is clearly not a copyright infringement, even if the simulation output is reproduced (since the copyright covers only the computer program). It is questionable that a court would enforce against anyone a contract in which a customer promised not to disclose truthfully to third parties what he observed when he used a computer program.

Finally, there is a very low likelihood of success in preventing people from trying to discover what the model is by studying the computer program. Not only would it be difficult to prove the facts, but preventing such efforts seems to run counter to the policy of the copyright laws to disseminate learning. Hence a court would be reluctant to help a licensor enforce an anticiuriosity clause in a license. Once the model was extracted from the computer program, if that could be done, it would probably be considered an unprotected “idea,” which users could embody in different programs which they wrote for themselves. However, putting the model at this kind of remove from the manufacturer’s software would probably prevent effective competitive use of the endorsement of equivalency, which IC manufacturers appear to worry about.

In sum, the copyright/licensing route to promoting the aspirations of prop-rietors of IC models does not appear significantly more attractive than the black box approach, which IC manufacturers have already failed to adopt. A chip manufacturer might be able to prevent undesired uses of his model, but he quite likely might not. The legal mechan-
isms available to proprietors of IC models might work, but they do not seem to be strong and certain enough to induce such proprietors to be more liberal in allowing access to their models. Whether or not to adopt a licensing program for software models of ICs, given the risks that the licensing program will not work as planned, calls for a cost-benefit analysis. The benefit of making life easier for chip customers will probably be insufficient, in the eyes of chip manufacturers, to warrant running the risk (cost) of helping clone makers. This conclusion is supported by the assumption that chip makers know what they are doing and what profits them. Their failure to have done this already suggests that they do not think that it pays, rather than it just being an oversight. 5

I do not have a proposal for modifying the law, here, nor do I sense a ground swell of support for such a measure. 7 Not every business problem has a legal solution. This one seems to have neither a technical nor a business solution. There may be unsolvable problems, or, more precisely, problems that it is not cost-effective to solve.

References

1. This leads to adoption of a reduced-stimulus set. Scharf of HHB asserts that he can be “reasonably sure” that an 8-bit register design can be certified as equivalent to another “by implication.” He would accomplish this by testing it with 00, FF, A5, and 5A (hex) inputs and omitting the re-

minder of the 256 possibilities. One may question, however, how comfortable the maker of a medical device or airplane navigation system would be with that approach.

2. VHDL is VHSIC Hardware Description Language, a project sponsored by the US Air Force. A circuit can be represented by a set of statements in VHDL, resembling a computer program. The Technical Committee on Design Automation of the Computer Society of the IEEE has formed VASG, the VHDL Analysis and Standardization Group. VASG is responsible for creating a standard for VHDL, and its Draft Standard 1076 has passed the initial balloting stage of IEEE acceptance.

3. There is an administration proposal to amend the US patent laws to make it a patent infringement to sell unpatented products produced by a patented process. If so, the silicon wafers of the example given in text would be infringing. Even if passed, the proposed law would not apply to IC models, however, because these models are not products.

4. A marketing caveat is important at the outset. This project will clearly not work if diskettes or tapes containing the model are sold or given away. The copyright laws will not support restrictions on what customers do with a product once it belongs to them. Therefore, to have some possibility of suc-
cess, the project must operate as a license in which any material embodying the model is merely “lent” to customers.

5. In Automatic Radio Mfg. Co. v. Haze-
tine Research, Inc., 339 US 827 (1950), Haze-
tine licensed Automatic under approximately 600 patents covering radio apparatus to use the patented inventions in “home” equip-
ment, that is, home receivers and the like as contrasted with broadcasting or commercial equipment. The Supreme Court commented: “The fact that the license agreement covers only ‘home’ apparatus does not mean that the licensee is prohibited from manufacturing or selling other apparatus . . . .” This limited license for ‘home’ use production contains neither an express nor an implied agreement to refrain from production for ‘commercial’ or other use as part consideration for the license grant.”

6. This assumption is basic to the government’s current theories of antitrust enforce-
ment and other economic regulation (the so-called “Chicago School” economic theory). It is a cornerstone of that legal mythology. Surely, it would be presumptuous to operate here on the contrary assumption.

7. An example of a legislative solution would be to provide owners of IC models with protection similar to that given IC layouts under the Semiconductor Chip Protec-
tion Act. This could be done by amending that statute appropriately. But is there a demonstrable need to induce IC manufacturers to make their models and data more freely available, by providing them with effective remedies against unauthorized uses of the models? And would granting manufacturers such protection succeed in inducing them to cooperate? Is there any down side to protecting IC models?

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Low 171  Medium 172  High 173

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