INTELLECTUAL PROPERTY PROTECTION IN THE EDA INDUSTRY

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I. INTRODUCTION*

Whenever a business in the Electronic Design Automation (EDA) industry invests a significant amount of time, money or effort to develop some form of competitive software or hardware advantage for the EDA marketplace, it is important to protect such proprietary interest legally. Typically, this is accomplished by acquiring patents, copyrights, mask works, trademarks, or trade secrets, or collectively "intellectual property." This protection provides the owner of the property with significant rights and benefits, including:

- Enhancement of company valuation (when valued as part of a corporation's capital assets);
- Source of future income (e.g., royalty fees from licensing);
- Recoupment of corporate investment in Research and Development;
- Control of market share (by keeping out competitors or preventing them from imitating proprietary products);
- Deterrence against misappropriation or infringement;
- Recovery of lost profits or damages; and
- Negotiation leverage in defensive "cross-licensing" situations.

* This article is intended to provide only a general overview of U.S. intellectual property protection and basic distinctions between some common categories of intellectual property (patents, copyrights, mask works, trademarks, and trade secrets). Thus, this article should not be relied upon as legal advice.

II. PATENTS

Among the different forms of intellectual property, patents may extend the broadest scope of protection, particularly with respect to software algorithms used in proprietary EDA tools. Patents protect innovative, useful, and non-obvious ideas and concepts, and provide a patent owner with the right to exclude others, for 17 years, from making, using, or selling inventions. In short, the patent owner has a virtual monopoly over the ideas and concepts covered by the patent, even against an "innocent" competitor who independently develops, manufactures, or distributes infringing products.

Inventions that are patentable generally include devices, compositions of matter and processes. Examples of patentable subject matter include: electronic hardware, and computer software, particularly unique methods for logic design, partitioning, synthesis, simulation, emulation, testing, and verification.

III. COPYRIGHTS

Copyrights generally protect original works of authorship fixed in a tangible medium of expression. Copyrights provide the owner with rights to reproduce the original work, make derivative works, publicly display, perform, translate, edit, and adapt the work, and lease or license the work. The scope of copyright protection, however, may be more limited than patent protection because copyrights protect the expression of an idea or concept, but not the concept or idea itself. In the context of EDA technology, this might expose various software programs to reverse engineering efforts, without giving rise to copyright infringement.

Types of subject matter protected under copyrights...
include: original works of literary, editorial, artistic, graphic and musical creation. Software is generally included under literary works and is therefore afforded copyright protection. Where the author of the work is known, copyright protection lasts for the life of the author plus 50 years. In the case of a "work for hire" author, or if the author is unascertainable, the duration of copyright protection is equivalent to 75 years from the date of first publication.

Copyright protection arises automatically in an original work of authorship when the work is fixed in a tangible medium of expression, such as being written on paper, stored in computer memory, or affixed on film. Copyright registration is not mandatory, but placing a copyright notice on the work may provide the owner in a copyright infringement suit. Examples of proper copyright notices are shown as follows:

"© 1992 by Copyright Owner
All Rights Reserved"

or

"Copyright 1992 by Copyright Owner
All Rights Reserved."

V. TRADEMARKS

The general policy underlying trademark protection is to avoid confusing the public as to the source of goods or services sold in connection with a particular mark. Marks are generally used by merchants to identify their goods or services and, as such, the consumer associates the mark with a particular merchant's goods, services, business reputation and goodwill, for example, relating to ASIC design center or test and assembly capabilities. To avoid confusing the public and defrauding the consumer as to the source and quality of the goods and services being purchased, trademark protection provides the first user of a mark, or one with the intent to use the mark, with the exclusive right to use the mark in association with the sale of the goods or services becoming the mark.

Once the right to use a mark is established, the trademark owner retains the exclusive right to use the mark so long as the mark is used in commerce. Registration is not necessary, although it is advantageous to support the trademark owner's claim of right in a greater geographical area. If the owner federally registered the mark prior to November 16, 1989, the initial term of trademark protection is 20 years. After November 16, 1989, the initial term of federal trademark protection is 10 years. These terms are renewable for successive 10-year periods, so long as the mark remains in use.

To be registrable, a trademark should be distinctive, identify the source or origin of the article to which the mark is applied, and not be confusingly similar to another mark. A trademark notice represented by "™" may be used with a mark that is in use in commerce, even if it is not yet registered. "R" (in a circle ®) is used for registered marks only.

VI. TRADE SECRETS

Trade secret protection arises under state law, and its scope of protection may differ from state to state. In general, trade secret protection provides the owner of proprietary confidential information with the exclusive right to use and prevent others from misappropriating such information.

Trade secrets typically include processes, concepts, formulae, devices, or compilations of information which are confidentially maintained and provide the
owner with some business or economic advantage over competitors. For example, in the EDA industry, trade secrets might cover sales and marketing competitive and customer "intelligence", as well as confidential technical data related to software algorithms, product architecture, and particular chip designs and protocols. Trade secret protection exists so long as the owner takes reasonable actions to maintain the secrecy of the information to be protected. Examples of precautions to maintain secrecy include: executing non-disclosure agreements with those to whom confidential information is disclosed (such as employees, independent contractors, or licensees); placing proprietary notices on information to be protected; and having internal company procedures to protect against unauthorized access (e.g., visitor-restricted area). If reasonable measures to maintain secrecy are taken by the owner, trade secret protection of the proprietary information can last indefinitely.

About the Author

DENNIS S. FERNANDEZ practices with the law firm of Fenwick & West in Palo Alto. Dennis received an Electrical Engineering degree from Northwestern University and a law degree from Suffolk University. Dennis is admitted in California, Massachusetts, the District of Columbia, and the United States Patent & Trademark Office. Dennis specializes in protecting intellectual property, particularly computer-related technology involving software and electronics. Previously, Dennis held engineering and management positions at NCR, Digital Equipment Corporation, Raytheon Company, and Racal-Redac.