

Mask Works and Semiconductors

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Introduction and Background

In the United States, the Semiconductor Chip Protection Act of 1984 (Chip Act)¹ provides a mechanism for protecting the topology of mask works associated with semiconductor chips. The topology includes three-dimensional images or patterns formed of metallic, insulating, or other semiconductor material.

The Chip Act was originally intended to provide a benefit to those who invest in chip research, development, and production at a time when patent protection and copyright protection was often not obtainable on semiconductor chips. The Chip Act was intended to prevent competitors from reverse engineering a chip layer by layer and then generating a copy of the chip from this information.

Despite the availability of protection since enactment in 1984, there have been reasonably few mask-work registrations and very few reported law suits brought under the Chip Act. For example, in the U.S. Copyright Office's fiscal year 2003, there were 397 maskwork registrations and seven refusals to register mask works (five for ineligible material and two for being outside of the two-year filing deadline).² One rationale for the relatively few registrations is that there are easier ways to create competitive products than through infringement and that the protection offered is narrow in scope and short in duration compared to patent and copyright protection, respectively.

One may speculate that there may be more interest in mask-work protection in the near future due to increased work in areas such as biochips and nanotechnology. In the

appropriate cases, mask-work protection may provide a reasonably inexpensive and relatively quick manner of obtaining intellectual property rights to at least supplement other types of protection.