Preserving Patent and Trade Secret Rights for Motion-Picture Special Effects

By Jeffrey J. Blatt

This article describes some of the legal issues surrounding the protection of inventions created in the course of motion-picture production. Its purpose is to provide readers with a basic understanding of patent and trade-secret rights, and to explain how these two sources of intellectual property rights apply within the specialized area of special effects development for motion pictures.

Special effects have played an important role in motion-picture productions since the early days of the film industry. In recent years, millions of dollars have been invested in creating unique special effects sequences for films. Box office hits such as *ET, Terminator, Terminator II,* the *Star Wars* trilogy, *Alien,* and *Aliens,* exemplify the captivating power of special effects and underscore the economic significance of special effects in contemporary filmmaking. The individuals and companies involved in the development and production of motion-picture special effects often discover unique systems and processes to accomplish the desired special effects. It is not surprising, therefore, that a number of high-technology companies in the U.S. and abroad have attempted to market products that emulate special effects conceived for feature films. Examples of instances where the special effects preceded the actual product include such concepts as flat panel cathode ray tube (CRT) displays, virtual reality three-dimensional imaging systems, computer-aided modeling, hands-on display, robotics, and cellular phone technology.

Intellectual Property

Despite the ingenuity and creativity employed by those involved in the development and production of special effects, very little attention has been given to the production of intellectual property created as a result of these efforts. In light of the substantial sums of money expended, the number of inventions resulting from these expenditures, and the enduring economic value of special effects technologies in general, such inattention is difficult to explain. Of particular concern is the fact that through inattention and inaction, numerous potentially patentable devices and processes are not protected, and the rights to these inventions are needlessly lost.

Patents

The U.S. Constitution grants Congress the power "[t]o promote the Progress of Science and Useful Arts, by securing for limited times of Authors and Inventors, the exclusive Right to their Respective Writings and Discoveries." Congress created the patent system in order to promote the progress of science. The patent system does this by granting exclusive rights to the "discoveries" (inventions) of inventors in return for the disclosure of the invention to the public. In particular, a patent grants the patent holder the right to exclude others from making, using, or selling the claimed invention for 17 years.

To obtain a patent, an inventor must file a patent application describing the invention in detail and claiming the patentable aspects within the U.S. Patent and Trademark Office. If the claimed invention meets certain patentability requirements and the disclosure of the invention in the patent application is sufficient, a patent will be granted. The patentability requirements, however, are stringent. To merit patent protection, an invention must meet the following three criteria.

First, the invention must be novel. Novelty requires that the claimed invention not be known or used by others before the act of invention by the inventor, and that the invention not be in public use, on sale, or described in a printed publication more than one year prior to the filing of the patent application. It should be kept in mind that a new combination of previously known elements in a certain manner to produce a certain result may be patentable, even though each of the individual elements used are known by others.

Second, the invention must be useful. Devices that violate known physical laws, such as perpetual motion machines or warp drive engines, are not considered useful unless the inventor builds a working model. In most cases, however, the processes and apparatus designed for use in motion-picture production will be considered useful.

Finally, the claimed invention must not represent an obvious modification of an existing process or device. In particular, the patent laws state that if an invention would have been obvious to a person having ordinary skills in the technical field to which the invention pertains, that is not patentable. Although this requirement can be vague and difficult to evaluate, patent counsel will be able to assist the special effects inventor in evaluating whether or not the invention may be considered obvious by the Patent Office.

As previously mentioned, a patent application must be filed with the Patent Office within one year of the date the invention is first in "public use," "on sale," or described in a printed publication. Thus, the inventor has a one-year grace period in which to file a patent application. However, any public use, sale, or publication of the invention by the inventor or anyone else more than one year before filing a patent application will preclude the possibility of ever

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obtaining a patent. This often occurs when an inventor describes the invention in a trade journal, offers the invention for sale to anyone, or uses the invention in public prior to obtaining advice from patent counsel.

The necessity of filing for patent protection in a timely fashion takes on even greater importance if patent protection in foreign countries is desired. In contrast to the one-year grace period offered by the U.S. Patent Office, many countries refuse to grant patent protection unless a patent application is filed prior to any public disclosure. This potential problem can be remedied by filing a patent application with the U.S. Patent Office before any public disclosure of the invention. This action will protect foreign patent rights, since there exist patent treaties that grant inventors the same filing date in a foreign country as the filing date of a patent application registered in this country. Thus, as a general rule, if any foreign patent protection is desired, a patent application should be filed in the U.S. Patent Office before the invention is publicly disclosed in any manner.

Motion-Picture Production

In the area of motion-picture production, the on sale and public use rules can present rather unique problems for the protection of inventions developed for use in the filming of a motion picture. In order to illustrate a few of these unique problems, a hypothetical setting involving Zappo, a fictional special effects production company, is outlined below. This situation was chosen to illustrate the various timing considerations in the protection of novel motion-picture techniques in the course of motion-picture production.

Assume Zappo Co. is a special effects house that has been awarded a contract to produce certain special effects for a new space opera to be produced by a motion-picture company. To achieve the desired visual effects necessary for production, Zappo developed certain improvements to well-known bluescreen techniques. These improvements, heretofore unknown in the industry, advantageously provide fewer problems with specular reflections from spacecraft models, and permit a wide spectrum of models having different colors and surface characteristics to be used in the bluescreen and matting process.

Also assume that the invention is not actually displayed or shown in the motion picture, but is rather used solely in the making of the motion picture. The newly invented process was developed at Zappo and was used in the production of the special effects sequences in the motion picture. In addition to employees of Zappo, employees of the motion-picture production company, certain actors, and other third-party crew members were present during the actual use of the novel process outside of its premises, and eventually, the motion picture, including the special effects sequences filmed using this improved bluescreen process, is released worldwide. Zappo would now like to pursue patent protection on its novel bluescreen process and offer the novel process for license to other special effects and motion-picture production companies.

Zappo may initially have to confront the problem of a possible public use prior to the filing of a patent application for the improved bluescreen process. If a relatively large number of people who were not employees of Zappo were exposed to the improved process during the filming of the special effects sequence, then this could constitute a public use of the invention, which would prevent a patent from ever issuing unless a patent application was filed within one year of such use. If only a relatively small number of people were exposed to the improved process, arguably, no public disclosure would have occurred and the issue would be moot. To ensure that the process developed by Zappo is adequately protected, it would be best to require all individuals on the set to sign a confidentiality agreement prohibiting them from disclosing any confidential processes, data, techniques, or other apparatus developed by Zappo to which these people are exposed.

In any event, even assuming that only employees of Zappo were exposed to the novel process, or alternatively, that individuals not employed by Zappo were required to sign confidentiality agreements before being exposed to the inventions, the public release of the motion picture incorporating the special events would constitute "public use" of the invention. In the U.S., Zappo would then have *one year* from the date the motion picture was released publicly to file a patent application. Any delay beyond one year would forever preclude Zappo from obtaining a patent on its improved bluescreen process. The release of the motion picture constitutes a public use of the invention, because otherwise Zappo could exploit the invention as long as it remained secret and then apply for patent protection once the invention had been leaked to the public. The practical effort of this would be to protect the invention beyond the statutory 17-year period of patent protection.

Also, unless Zappo files a patent application with the U.S. Patent Office *before* the release of the motion picture, the foreign patents may be lost. Accordingly, to preserve any possible foreign patent rights, counsel should recommend to Zappo the following actions. First, *all* employees of Zappo who may be exposed to the novel bluescreen process must sign a confidentiality agreement. This will protect the use of the invention during the filming of the motion picture and prohibit it from being considered public use, thus preventing the one-year grace period from starting. Second, a U.S. patent application, incorporating the special effects created by the invention, should be filed *prior* to the release of the motion picture. This will ensure a filing date that precedes any public disclosure. If these two actions are taken, all domestic and foreign patents will be protected from being accidentally forfeited.

Trade Secrets

If Zappo fails to file a patent application within the one-year grace period, and thus had forfeited its rights to file a U.S. patent, it is left with one recourse: it can attempt to protect the novel bluescreen process as a "trade secret." A trade secret is something that is not publicly known and gives Zappo a business advantage over its competitors. A trade secret may be an idea, process, business practice, formula, device, machine, or other component. A trade secret must be maintained as a "secret" in order to preserve any value.

To protect its newly invented process as a trade secret, Zappo must take affirmative steps to maintain the process as

a secret. Again, the use of confidentiality agreements is very important. For example, if the secret must be disclosed to a person outside Zappo, then that person must be required to sign a confidentiality agreement prior to the disclosure to prevent the loss of trade secret protection. This confidentiality agreement would provide that the person receiving the trade secret information not use the trade secret or reveal it to anyone else, thereby protecting Zappo's rights. Eventually, however, it is likely that someone outside of Zappo will learn of the trade secret information through legitimate means, such as independent development or reverse engineering. At that point, Zappo's trade secret rights will no longer exist. Trade secrets, therefore, are a relatively inexpensive form of intellectual property protection, which provide protection only until an outsider is able to figure out the secret using legitimate means, including reverse engineering the manufacturing process.

It order to protect its inventions, Zappo would be advised to obtain confidentiality agreements from all those exposed to the invention and to file a U.S. patent application prior to the public release of the motion picture incorporating the special effects created with the invention. Through this process, all domestic and foreign patent rights are protected, and if for some unforeseen reason the invention did not meet the strict patentability requirements, then the invention could be maintained as a trade secret.

Publication

Special effects professionals often inform others in the industry about recent developments by publishing a technical article in publications such as the *SMPTE Journal,* published by the Society of Motion Picture and Television Engineers. However, any such publication of the invention would effectively destroy most foreign patent rights and would mark the beginning of the one-year grace period within which Zappo must file its U.S. patent application. Accordingly, if the company desired to submit an SMPTE or other technical paper to be published at an industry conference, then it is vital to file a U.S. patent application prior to the publication of the paper in order to preserve foreign patent rights. The paper's publication would also have the effect of revealing any trade secrets contained within the paper as of the date of publication.

Outside Submissions

With respect to submissions or suggestions from outside third parties, a separate but related issue arises within the motion-picture industry. These outside third parties may be employees of other special effects companies or movie production houses. These suggestions must be handled with great care to preserve good will and, at the same time, to avoid the risk of unexpected civil liability. A particular danger lies in the receipt of unsolicited "inventions" or ideas submitted in confidence with an expressed or implied expectation of payment if the invention is used. The idea submitted may be of no value or it may be patentable. It may even be available without cost from other sources, such as in SMPTE papers, or it may be similar to something on which the special effects company has already begun development. Nevertheless, if the company permits an idea to be submitted to it in confidence, rejects it, and later uses anything remotely similar, it may be alleged that the company has been unjustly enriched. In such a case, the special effects company may at least lose the goodwill of the person who made the submission, and it may incur a considerable legal liability, especially if proof of prior development has not been preserved.

For this reason, an employee of Zappo should not permit an outsider to disclose to him any invention until the matter has been cleared with management, and an appropriate agreement with respect to compensation before the proposal or idea is submitted and signed. This type of problem can be avoided by not reviewing or accepting proposals in confidence without prior written agreement. If Zappo wishes to review or accept a proposal by an outsider with respect to special effects techniques, then legal counsel for Zappo should provide a form agreement to be signed by the outsider prior to Zappo's acceptance of the proposal for consideration.

Although such a procedure is the preferred method for receiving proposals from outsiders, the reality in the industry is that numerous outsiders often make various proposals regarding techniques, devices, and improvements to particular special effects productions. In fact, in motion-picture production, a premium is often placed on the free exchange of ideas to advance the art. New ideas and approaches are frequently published in such journals as the *SMPTE Journal* and may be discussed at monthly SMPTE section meetings in Hollywood, San Francisco, or New York.

Conclusion

It may be perceived by those in the special effects industry that the requirement of confidentiality agreements imposes an impractical burden on the free interchange of ideas in the production of a motion picture. Thus, from a legal perspective, it is recommended that confidential disclosure agreements to preserve both trade secrets and patent rights be executed. In addition, it cannot be assumed that clients will always heed advice during the sometimes stressful moments of a motion-picture production.

With this in mind, the following recommendations, which minimize the intrusion into the day-to-day operation of the special effects company, while maximizing the protection of rights, can be made. First, a special effects company should file a U.S. patent application on any potentially novel processes, techniques, or apparatus prior to the public release of the motion picture incorporating the techniques using the device or apparatus. In addition, all cast, crew, and vendors who are on the production sets should be required to sign a confidentiality agreement precluding them from using or informing others about any inventions they are exposed to.

Although there may be certain instances in which public disclosure may have arguably occurred during the motion-picture production phase, in most cases it can be reasonably assumed that in general, the special effects company's rights are preserved until the motion picture is released. Once the U.S. patent application is filed, the special effects company is free to publish, disclose, and license the technology to others in the industry.