Intellectual Property Issues for Architects, Engineers, & Surveyors

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Introduction

We truly live in a litigious society today. There are many ways to interpret most legal matters. Even with benefit of established laws, intellectual property, its rights, and its protection are broadly interpretative. Each year many cases are litigated regarding the infringement, licensing, and transfer of intellectual property.

Intellectual property is any number of types of products of the human mind. It can be thought of as those products of literary expression such as books and articles; those of artistic creativity such as art, film, and musical composition; and those of scientific and technical nature such as engineering and architectural graphics and specifications. Included in the definition of intellectual property are inventions, service marks, and trademarks. Intellectual property, for the most part, is property that is derived from the mind rather than the hand. It has, by its very nature, potential monetary, and therefore commercial value. Architects, Engineers, and Surveyors should consider work products and project information as intellectual property with intrinsic value that should be appropriately guarded. We will see later why it is important to designate these products as *instruments of service* when preparing professional service agreements.

It is quite amazing how few categories of items fall outside of the broad interpretation of intellectual property. Examples of items which are not considered intellectual property are historical events, common information, mere facts, and items in the public domain. General accepted facts are things such as directory listings (which are nothing more than compilations of non-creative items) and blank forms. Items become public domain after expiration of any right or law protecting them as intellectual property. Works of the Federal government (funded by taxes) become, for the most part, immediate property of the public. Please note that products of state and local governments and products created by third parties for the Federal government are not necessarily considered in the public domain.

Affirmative Rights

Copyright, trademark, patent, and trade secret laws provide affirmative rights (protection) for intellectual property. Trademark laws protect the unique (distinctive, original or well-known over time) symbols, logos, designs, and other aspects such as colors, packaging, containers, etc. that are utilized by industries to identify their products or services, and differentiate them in the common market. Patent law grants the creator (inventor) of a new and non-obvious invention the right to exclusive use of that invention. Trade secret law provides the owner of commercial information that generates a competitive edge, the right to keep others from using that information if the information was improperly disclosed to or acquired by a competitor, and the owner of the information took reasonable precautions to keep it secret. For the purpose of this course, it will be assumed that the likelihood of the Architect, Engineer, and Surveyor student of encountering trademark or trade secret issues in day to day practice is somewhat remote. Engineers may find themselves involved with chemical or manufacturing processes, or inventions, which entail the use of the patent form of intellectual property rights. More

importantly, all three profession's work products tend toward the pictorial, graphical, and textural category whose logical form of intellectual property protection is that of the copyright. Because copyright is common to all three professions, this form of intellectual property right will be the focus of the course and the only form that will be discussed in depth.

Patents

The U.S. Patent and Trademark Office, an administrative branch of the U.S. Department of Commerce, issue patents. Patent Law is found at 36 USC Section 101 *et seq*. There are three types of patents: *Utility* patents cover processes, machines, compositions of matter, and improvements in existing ideas of any of the foregoing. *Design* patents cover nonfunctional aspects of a functional manufactured article. An example of a "design" would be a completely new product package shape that in and of itself does not improve the functionality or containment efficiency. *Plant* patents cover literally that: asexually or sexually reproduced plants and flowers that are both novel and non-obvious. Of particular interest to the Engineer are utility patents.

Items of intellectual property which the Engineer could encounter that should be considered for patent protection would include: biological inventions, chemical inventions, chemical formulations, computer hardware, computer software, containers, cosmetic formulations, electrical inventions, electronic inventions, fabric, food formulations, food inventions, hardware and houseware, machines or parts thereof, manufacturing processes, mechanical inventions, medical accessories and devices, packaging, photographic processes, recreational gear, sporting goods equipment, and toys.

Additional information regarding patents and the method to file for a patent can be obtained from:

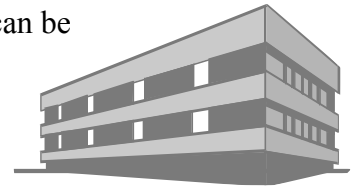
Commissioner of Patents and Trademarks
U.S. Department of commerce
Washington, D.C. 20231
Information line: (703) 557-4636
http://www.uspto.gov

Copyright

The exclusive source of copyright law in the United States is found at 17 USC Section 101 *et seq*. Presently it is referred to as the Copyright Act of 1976 and it is amended from time to time. Important to Architects and Engineers are amendments made in 1990 that added protection for design expression in a completed building. Prior to the passage of the Architectural Works Copyright Protection Act, drawings were eligible for protection as *pictorial* or *graphic* works. Building designs, however, were not afforded any protection. From the amended 1990 Title 17, United States Code, at §101:

> An *architectural work* is the design of a building, as embodied in any tangible medium of expression, including a building, architectural plans, or drawings. The work includes the overall form as well as the arrangement and composition of spaces, and elements in the design, but does not include individual standard features.

Reduced to its simple form, this says that the actual physical building can be protected by copyright. While not an exhaustive list, among technical items that are generally considered copyrightable are: architectural drawings and renderings, arrangement of facts, artwork, blueprints,



buildings, charts, computer software, databases, engineering plans, flowcharts, forms, interior designs, landscape designs, lectures, maps, models, photographs, plot plans, procedures, project designs, record books, reports, schedules, scientific treatises, structural plans, and technical drawings.

Among items that are generally considered non-copyrightable are: biological inventions, chemical inventions, computer hardware, electrical or electronic inventions, facts, chemical formulas, furniture design, manufacturing processes, mathematical algorithms, mechanical inventions, and symbols. As previously mentioned, many of these items enjoy intellectual property protection through laws that deal with patents and possibly trademarks.

Architects, Engineers, and Surveyors are retained as independent consultants to perform services that result in tangible mediums of expression, *i.e.*, plans, specifications, reports, *etc.* As such, they are not simply hired to produce these documents as "works made for hire". Therefore, the proper phrase for these mediums of expression, these forms of intellectual property, is *instruments of service* since they become the objects in which the performance of services is delivered. In most cases, it is quite clear that the Architect, Engineer, or Surveyor is an independent contractor and as such owns the right to the intellectual property. (An Architectural, Engineering, or Surveying firm is considered the author and owner of the instrument of service when a work is created by an employee of that firm during the course and within the scope of his or her employment. This is called a *work made for hire* arrangement. Many times this relationship is formalized by the execution of an *employee agreement* wherein ownership is clearly defined.)

<u>Copyright Registration of Documents</u>

Should a design professional formally apply for copyright registration of instruments of service? It depends. Copyright protection automatically attaches to any technical document of authorship when it is written, prepared, complied, drawn or drafted in a tangible medium of expression. In the past this has been referred to as common-law copyright. Two additional and independent steps to insure protection are the attachment of a correct notice of copyright to the document and the formal registration of the document with the U.S. Copyright Office. The copyright notice is optional and is not legally required. While the registration process is relatively simple and inexpensive, (preprinted forms, with instructions, are provided by the U.S. Copyright Office on-line), virtually no design practitioner undertakes formal registration.

Instead, Architects, Engineers, and Surveyors have long attached "notes" and statements to their drawings forewarning potential unauthorized users to beware of illegal activity. While these inserted statements are impressive and may serve a useful utility, they are not usually proper copyright notices because they do not contain the prescribed symbol ©, date, word "copyright", or claimant's name. Two typical examples of such statements are reproduced below:

> No part of this drawing may be reproduced by photocopying, recording or by any other means, or stored, processed or transmitted in or by any computer or other systems without the prior written permission of Joe Surveyor, PLS. Copies of this plan without an original signature and impression seal are not valid.
>
> These drawings and specifications are the property of the architectural firm of Acme, Jones, Smith & Associates, P.A. They are not to be printed, photographed, copied, loaned or used without permission of an authorized representative of the firm.

In case of infringement, the owner of unregistered instruments of service may not file a legitimate court action for remedy. This notwithstanding, in instances where the copyright is not registered, and litigation becomes necessary, the owner of the instrument(s) of service is not prohibited from taking such action after the infringement, understanding that delays will result while the formal registration process is being undertaken.

If the student's situation warrants registration, each instrument of service will need to be carefully examined to determine if it falls into the graphical or textural category. Quoting directly from 17 USC §101, pictorial and graphical works include *two-dimensional and three dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions, maps, globes, charts, diagrams, models, and technical drawings, including architectural plans.* To register pictorial and graphic works with the U.S. Copyright Office, the owner would use Form VA, *Visual Arts.* According to 17 USC §101 literary works *are works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied.* Because there exits no specific right for the coverage of architectural and engineering specifications, procedures, and instructions, they must be legally concluded to be a form of literary work. Consequently, were it to become desirable to register such an instrument of service, the copyright claimant would use the government form TX for a non-dramatic literary work. All of the U.S. Copyright Office forms can be viewed at the website listed below.

Instruments of service that may fall across both categories, *e.g.* charts or schedules, should be handled based on the "means of expression" test. If the primary means of expression were lines and figures then the instrument would be registered as a graphic work. If the primary means of expression were through words and text, then the instrument would be registered as a literary work.

Additional information regarding copyrights and the method to register instruments of service can be obtained from:

Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000
Information line: (202) 707-3000
http://www.copyright.gov

Of particular interest to all three professions (Architects, Engineers, and Surveyors) would be the Copyright Office circular 40 entitled *Copyright Protection for Works of the Visual Arts.* Of particular interest to Architects would be circular 41 entitled *Copyright Claims in Architectural Works.* The forms and circulars hotline is (202) 707-9100.

While recent changes to copyright law have lessened the importance of the concept of "publication", it is still worth taking time to briefly discuss because a publication date can establish the running time of a copyright. Drawings and specifications are only considered "published" under Title 17 of the United States Code when they are first made available to the public on an unrestricted basis. It is thus possibly conceivable to issue construction documents

to clients and contractors, with restrictions on disclosure of their contents, and thereby not "publish" them. This is not true of these same documents were they to be displayed online for bidding. Documents are generally considered published where access is widespread via computer. Placement of instruments of service in public plan room services such as McGraw-Hill Construction Information Group's F.W. Dodge, is left by this author to others for proper legal interpretation with regards to the definition of publication. Past interpretations have gone so far as to liberally consider the filing of instruments of service for obtaining building permits as an act of publication.

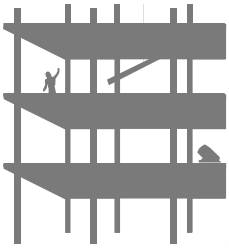
Retaining Ownership through Contract Language

Two important intellectual property concerns to Architects, Engineers, and Surveyors are the resulting professional risk and associated liability with the control (or loss thereof) of document ownership. It should be intuitively obvious that with loss of ownership and control of instruments of service comes heightened risk and liability. Ownership transfer allows the reuse of the instruments of service, with or without modification, on any other project so desired, possibly for an application in which their use is not appropriate. In the absence of an agreement to the contrary, instruments of service which are not even formally registered are the property of the Architect, Engineer, or Surveyor.

For the technical professional, the single best method to mitigate loss and retain control of intellectual property is not through formal copyright registration, but rather through correct and proper contract language. Please note: the information provided here is for general knowledge; contract language establishes legal duties and rights and the student is encouraged to have his or her agreements reviewed by competent jurisdictional legal counsel.

Twenty or so years ago, the following passage in a professional service agreement (contract for professional services) was not uncommon and generally accepted by the Architect, Engineer, or Surveyor:

> All technical data, evaluations, reports, drawings, and other work products, all in their original form, resulting from any services performed under this Agreement, shall become the property of the Owner and shall be delivered to the Owner upon completion of such services, whether the Project for which they are made is executed or not. The Architect (Engineer, Surveyor) may retain copies thereof for internal use and files, but shall not permit external use of such material without prior written approval of the Owner.



This type of contractual language attempting to transfer ownership rights in project design information to the client or owner is no longer prevalent. This can be attributed in part to the use of standard forms of agreement provided by the American Institute of Architects (AIA) and the Engineers Joint Contract Document Council (EJCDC). Even though the final negotiated professional service agreement may make statements insisting on the receipt of original copies of instruments of service, it must be remembered that ownership and retention of copyright is inconsequential to possession of the actual documents. Surrender of original copies of instruments of service does not, in and of itself, transfer copyright ownership. One sure way to quickly relinquish rights is to blindly accept service agreement language that refers to documents such as plans and specifications as "works made for hire". Under copyright law works-made-for-hire arrangements transfer the rights of the originator of the documents.

In order to provide a sample of proper contract terminology, an excerpt from the consensus standard document AIA B141-1997 *Standard Form of Agreement Between Owner and Architect with Standard Form of Architect's Services* is reproduced below:

> 1.3.2.1 Drawings, specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service for use solely with respect to this Project. The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service and shall retain all common law, statutory and other reserved rights, including copyrights.

The student should refer to the entire subsection 1.3.2 **INSTRUMENTS OF SERVICE** of the latest version of AIA B141 to gain a complete understanding of the importance and utility of standard forms of agreement. Summarized, the subsection goes on to authorize the client to retain copies of the documents for his or her normal activities. Similar language is found at Paragraph 6.04 in consensus standard document EDCDC 1910-1 *Standard Form of Agreement Between Owner and Engineer for Professional Services*.AIA Contract Documents and information about AIA programs and services are available from:

> The American Institute of Architects
> 1735 New York Avenue, NW
> Washington, D.C. 20006-5292
> AIA Information Central: (800) 242-3837
> http://www.aia.org

EJCDC documents may be purchased from The National Society of Professional Engineers (NSPE) Product Fulfillment by calling (800) 417-0348. The American Consulting Engineers Council (ACEC) and the American Society of Civil Engineers also distribute EJCDC documents and forms.

<u>Originality and Authorship Issues</u>

A "compilation" *is a work formed by the collection and assembling of preexisting materials or data that are selected, coordinated, or arranged in such a way the resulting work as a whole constitutes an original work of authorship* [17 USC §101]. In a broad sense, this course could possibly be considered an example of a compilation. The majority of the course content is readily available factual information that is compiled in a creative fashion. Then what about the use of CAD symbol libraries?

Does the incorporation of downloaded copyrighted architectural or engineering details and symbols to produce a technical drawing render that portion of the document uncopyrightable? The guarded answer is no. Examples of such sources of details and symbols are Arch-Elec™, PartSpec®, PlantSpec®, and CADBlocks®, in addition to any number of major equipment manufactures who provide free access to CAD equipment symbol libraries, some via the Internet. In copyright law vernacular, this is an example of an authorized use of copyrighted material to produce a compilation of original material. In other words, you have been granted the right to form a technical drawing by selecting, collecting, and assembling preexisting graphical entities in a unique way that in turn forms an original work. In essence, the copyright owner has given the user a non-exclusive unlimited license to utilize the symbol software. The phraseology used at the Web site CADRegister.com regarding this matter is:

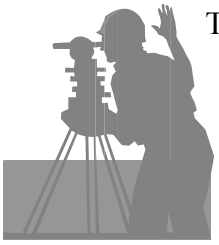
> You may make unlimited copies of the CAD drawings for the exclusive purpose of incorporation into your own drawings and designs (the "User Drawings"). You may treat the User Drawings as your own creations as long as the CAD drawings are not the primary source of value of the User Drawings.

Moreover, let us not forget your obligations as a licensed professional. Your state's licensing laws require that you exercise individual professional expertise in your work.

What is the difference in a compilation and a derivative work?
A derivative work is one that owes its existence to preexisting material to which sufficient original creative modification has been effected, resulting in a new product representing an original work of authorship. An example of a derivative work would be a jazz arrangement of a Broadway standard tune. With that said, reuse of another design professional's plans with even radical changes should be approached cautiously. Absent an explicit transfer of the right from a copyright holder may spell trouble with regard to potential infringement by the "borrower".

With that said, let us examine a situation in which an attempt to register a compilation (or would it be a derivative?) work may invalidate an otherwise copyrightable instrument of service. For illustrative purposes, let us hypothetically assume that an architectural firm is commissioned to provide a total building design. In order to accomplish efficiently the M/E/P (mechanical, electrical, and plumbing) design, the Architect retains the services of an engineering firm. As is common practice today, the Architect supplies the Engineer with "shell" or envelope architectural plans in electronic format to which the Engineer can incorporate or "layer" the various M/E/P aspects of the building design. The Architect now possesses a totally integrated technical drawing comprised of "compiled" sheets, each covering a specific design aspect of the building. The Architect then registers this entire assemblage of design documents for "blanket" protection, which includes the works of others, *i.e.,* the Engineer. Failure by the Architect to list these components as *derivative work* on the registration form would imply that the entire compiled instrument of service is original. This omission could possibly invalidate the copyright if ownership rights are contested at a later date.

Intellectual Property Issues Unique to the Land Surveyor
Of the three professions that are the subject of this course, the Surveying practice presents the largest challenge with regard to protection and control of instruments of service concurrent with interpretative copyright law. Neither Architect's nor Engineer's work products are normally exposed to the broad general public to the extent as are the Surveyor's.



The surveying profession consists of many areas of expertise and practice. The more familiar fields that immediately come to mind are cadastre/topography, cartography, construction, hydrographic, mineral, and photogrammetry. Forms of intellectual property such as charts, globes, maps, photographs, plot plans, and relief models have already been mentioned as being readily protected under existing copyright law. The Cadastral (more commonly known as Land) Surveyor carries out his duties for the public record to determine value, extent, and ownership of property for the purpose of conveyance and taxation. The Land Surveyor has the unique problematic issue of recordation.

Although deeds may invoke them, unrecorded survey plats generate legal uncertainty with regards to land conveyance. Consequently, most states require that all plats be recorded, *i.e.*, placed in the public record. Unfortunately, Land Surveyors relinquish control of their instrument

of service by the recording of a plat. The public can freely obtain copies of recorded documents for their personal use. No philosophical or legal change in this regard is forthcoming. The Land Surveyor's consolation is that the act of placing, for the purpose of recordation, a plan, plat, or other document in a government office, such as the register of deeds office, does not transfer copyright ownership. It is important to note that public record and public domain are not synonymous, although this appears to be a common misconception. Unfortunately, it is little consolation when the author (copyright holder) of his or her own work can not control the extent of its reproduction and receive corresponding compensation for his or her effort.

Troublesome areas of interpretation regarding the Surveyor's instruments of service are frequently their originality and creativity, both aspects being important tests of copyrightability. While most instruments of service are clearly copyrightable, retracement surveys and topographic maps fall into question. In the case of the retracement survey, the practitioner is merely recovering and verifying previously established information, hence the possible failure of the originality test. In the case of the topographic map, it could be concluded that the contour lines presented are merely a compilation of facts. The student will recall that facts are not copyrightable because they lack creativity. The interpretations of these specific areas are left by this author to others.

Summary

Intellectual property covers a broad range of subjects and topics. Technical graphics, specifications, surveys, reports, and the like, are the forms of intellectual property associated with Architects, Engineers, and Surveyors. These forms of expression, fixed in a tangible medium, are known as instruments of service. By copyright common law, ownership of these instruments of service is established at the time of their creation.

The technical professional must exercise the control of ownership of instruments of service in order to limit risk and liability. Simultaneously, he or she must also be cognizant of the ownership and rights of others with whom they may be professionally associated. The Land Surveyor is particularly vulnerable to loss of control of instruments of service because of existing legal precedent with regards to public records. While the Land Surveyor may retain copyright ownership of certain instruments, this is little consolation when current public law encourages freedom of information and unlimited access and use of instruments of service placed in archives by the necessity of legal compliance.

While copyright registration is a legally forceful and relatively inexpensive means of protection, it is rarely pursued by the technical practitioner probably because is assumed somewhat cumbersome and time restrictive. The design professional can alternatively assume a proactive or passive approach to registration because copyright registration can be accomplished ex post facto. Appropriate service agreement (contract) language is of utmost importance in the retention of intellectual property ownership.

Additional Resources

The Nolo Press, which offers self-help information on a variety of legal subjects, has information on copyright law. Look for the intellectual property topic under the Legal Encyclopedia. Point your browser to http://www.nolo.com.

The United States Copyright Office website at http://www.copyright.gov offers regulations, guidelines, forms and links to other useful copyright websites. Application forms in PDF format can be actually filled out on-line at this government site and printed.

An excellent legal search engine is available at http://www.findlaw.com. Navigate around the website until you locate subject matter dealing with copyrights, patents, and trade secrets.

The law firm of Jeffrey R. Kuester can provide you with copyright information sources via their website at http://www.kuesterlaw.com.