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Risk Management Tools for the Design Professional



David Roberts

David Roberts, of [Roberts Construction Law, LLC](#) in Atlanta, concentrates his practice on construction law and architectural copyrights. A registered architect since 1977, David was a faculty member at University of Tennessee School of Architecture. He practiced architecture for more than 17 years before beginning his law practice. He is a frequent speaker and author on the topics of standard form design and construction contracts, copyright in construction, and the legal implications of CAD and BIM (Building Information Modeling) on professional design practices. He is a past-chair of the Atlanta Bar Association Construction Law Section.



a/e ProNet
Dave Johnston, Executive Director
info@aepronet.org
www.aepronet.org

The Design Professional in the Age of BIM *Things that change; and things that don't.*

by David Roberts

Seen any changes the past thirty years in the delivery of professional design services? Sure, you have—particularly in the area of construction documents. Raised stools and drafting tables, pounce, and lead-darkened calluses on the middle finger of the draftsmen have, for the most part, yielded to CAD. Although CAD's promise of error-free drawing may have proven elusive, many of its other promises have been fulfilled. Some even appear understated in hindsight—in part because CAD and the Internet seem to have been made for each other. Their combined effect reduces trying to list all the ways CAD has changed project delivery to a futile exercise.

Like CAD in the '80's, BIM seems to hold similar promise today—a fact not lost on contractors, A/E's, and project owners alike. Digital models are more-and-more often offered or requested as "deliverables." And multiple models for the same project are not uncommon—as building team participants explore their usefulness at various stages of design and construction. Some models are used much like enhanced CAD construction documents, provided and controlled largely by the A/E. But many incorporate data contributed by sources other than licensed design professionals, including suppliers, fabricators, contractors, and subs. Not surprisingly, many contractors and construction managers view BIM as a means for carving out an increased share of the project delivery pie—and are taking full advantage of it as both a marketing and performance tool. Some of them have even become the *primary* creators and custodians of digital models. Of course, that is not altogether unnatural. After all, it's hard to ignore a tool that can show *what* will be built—and also to be useful in actually building it.



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Although BIM's ultimate effects are as yet unknown, two "traditional" principles will continue to apply as they unfold: *First*, regardless of the A/E's role in the BIM process on a given project, society continues to place primary importance on the A/E's unique duties as protector of public safety when it comes to building design and construction. And *second*, authors (including A/E's and others) typically continue to control copyrights in their technical drawings and designs—unless they divest themselves of those rights in writing. The "promise of BIM" aside, any member of the building team who ignores these two "traditional" principles does so at some risk.

Public safety.

In the United States, it is state law that predominantly governs the practices of architecture and engineering. Those laws are almost invariably rooted in the states' so-called "police powers" (i.e., those safeguarding life, health, and property). As part of their implementation, states typically issue regulations governing the use of professional titles and application of professional seals and signatures to A/E reports and documents. Those regulations, almost without exception, require that seals and signatures of design professionals of record be placed on "for construction" documents.

Thus, the act of sealing and signing construction documents is a solemn one. Generally, seals are to be applied only when the plans were prepared by the registrant or under the registrant's direct supervision and control. In the last two decades, some states have modified their regulations to allow application of digital seals and signatures. But sealing is of such importance that those regulations can also call for digital authentication or seal-removal mechanisms aimed at disabling or obliterating digital seals and signatures before they are transmitted outside the control and supervision of the sealing registrant. These life-safety-related obligations cannot be avoided by contract.

That said, it is conceivable that some persons may wrongly conclude from the choices given in certain form contracts (as to who may have custody and control of a digital model) that the decision is *primarily* one of contract. They might also assume that control of a model can be routinely assigned by contract to someone other than the A/E of record. Such an assumption would likely be a mistake—in part because the duty of the A/E of record to care for the health, safety, and welfare of occupants of structures built using BIM cannot be diluted, discarded, or delegated to nonprofessionals merely by saying so in a contract. Parties to a design or construction contract simply cannot use that contract to nullify the A/E's continuing, public-protective role. In the case of a "for construction" digital model, conceivably, an A/E's transfer of control or supervisory custody of the model to a person outside the A/E's organization (i.e., direct control) could compromise the A/E's ability to maintain the model's integrity or to exercise unrestricted professional judgment over

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its contents. Such a transfer could well be deemed improper— as parties may not contract to do a thing not permitted by law.

But that is not to say that a “for construction” digital model can never be used by other members of the building team independent of the A/E of record. For example, it is predictable that a “for construction” model might be subsequently reproduced and modified by a cabinet supplier to prepare shop drawings (or even to fabricate the cabinets). In such a case, there is nothing whatsoever improper about delegating model custody or control to a non-registrant— provided that subsequent use takes place only after the registrant’s seal and signature have been removed, disabled, obliterated, or disclaimed (or other steps have been taken as required by law).

Copyright— to every cow her calf.

In the Anglo-American legal tradition, law typically lags behind developments in technology. For example, for some time after the proliferation of the printing press in Great Britain, printers freely published authors’ works, reaping the rewards of the authors’ creative efforts. Predictably, this had the effect of discouraging those efforts. Why go through the arduous process of creation, if others are allowed to capture the rewards of your work? Authors, too, must eat. In response, Parliament, in 1710, enacted the Statute of Anne, which gave authors the rights to their work (i.e., to every cow her calf). The Statute of Anne was an initial attempt to use copyright to balance: (A) the benefits shared when the public can enjoy the author’s creative work, with (B) the author’s incentive to create that work. That same attempted balance has been incorporated in the U.S. Constitution since its beginning in 1787.

As a general rule, copyright protects creative, original expression. A copyright is actually a right to *exclude* others from reproducing, modifying, displaying, or distributing that expression without the author’s consent. Though it was once an open question, it is now well-settled law that construction documents and other technical drawings can be the proper subject of a copyright— and, since 1990, so can the design of a building.

Although a copyright comes into being at the instant that even minimally creative expression become “fixed” in some tangible medium (whether paper, computer, 3-D, etc.), with limited exceptions, federal courts will enforce that copyright only *after* the work is registered with the U.S. Copyright Office. The Copyright Act rewards prompt registration with enhanced enforcement remedies.

In the absence of a writing that sells, transfers, or assigns the “exclusive” rights to reproduce, modify, display, or distribute a work, the author typically retains those rights, until they enter the public domain (most often, decades later). That said, courts have come to recognize a practical exception to this “writing requirement” in the doctrine known as “implied non-exclusive license.” It is frequently applied in the

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context of construction. In simplified form, it says that if A asks B to create a drawing, and B creates that drawing, and A pays or gives B something of value for that drawing, then A obtains an “implied non-exclusive license” to use that drawing on the subject project. That is true even though A and B did not specifically discuss “copyrights” beforehand and even though B technically continues to hold the *exclusive* copyrights in the work created. But implied non-exclusive license may not be a completely satisfactory solution for A— particularly if A is a building owner. Consider the case (common enough) where B, after being paid by A to create a design, sells the same design to C (for perhaps less than what A paid B for creating it). Unless there is some agreement between A and B prohibiting that sale, B is likely free to do just that. It’s not difficult to see how A might experience some angst over B’s conveyance of rights to the design to C— especially if A and C are competitors. But in the absence of a writing indicating that A obtains *exclusive* rights, this scenario is entirely possible. And it happens.

Infringement is violation of an exclusive copyright; and it can be a costly proposition for the infringer. A successful copyright plaintiff can recover actual damages *plus* profits of the infringer attributable to the infringement. Depending upon the timing of the infringement and registration of the copyrights, courts can assess statutory damages, which can include an award of attorneys’ fees and can significantly exceed the amount of actual damages.

Infringement can expose more than just the prime copyist to liability. Depending upon the circumstances, a person who contributes to or controls infringing activity— or actively participates in it— can be jointly and severally liable with those who perform the actual infringing acts. In one notable case, this resulted in an infringing replacement architect’s being held liable to the original architect not only for the replacement architect’s profits— but also for the contractor’s profits on the same project (where the contractor had participated with the replacement architect in the infringing conduct). It turns out that the contractor’s profits were substantially larger than the replacement architect’s entire fees. The importance of fluency in this realm was underscored by the opinion of the appeals court in that case, which stated, in part: “[Replacement architect] claims that he did not seek the advice of his own attorney because his attorney had no experience in copyright matters. We find this argument troubling for a number of reasons. First, it seems odd, bordering on obtuse, for an architect to retain counsel wholly inexperienced in copyright matters, especially given the fact that every AIA contract contains provisions about copyright ownership[.]” *Johnson v. Jones*, 149 F.3d 494, 504 (6th Cir. 1998).

The Copyright Act also provides for injunctions against infringing use. This is a potentially very important remedy, especially if the infringing acts (e.g., construction of an infringing building design) are still in progress. And even after infringement has

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taken place, plaintiffs have sought injunctions to stop the sale of completed buildings that were alleged to be the product of infringement.

All that being said, much of the cost and misery that infringement causes can be avoided by careful attention to copyrights at the contract stage of a project. Contracts should make clear who is to own the copyrights in project-related expression and in what ways the protected expression can be used by other project participants. Today, this issue is more often than ever addressed by owners and A/E's at the beginning of a project. It is not uncommon for owners to negotiate to require the lead A/E to transfer project-related exclusive copyrights to the owner as the design is created. But, as noted above, exclusive copyrights are generally retained by the author unless transferred (or licensed) in writing to another. Therefore, vigilance both upstream and downstream in the creative process is required. You can't sell what you don't own. If an A/E agrees by contract to transfer all copyrights to the owner, but has failed to *obtain* exclusive copyrights from its subconsultants in writing, the owner (and the A/E) may be surprised with a claim of infringement that they did not see coming. Naturally, negotiating copyright transfers at the late stages of project design or construction will likely prove to be a far more difficult and frustrating task than obtaining them during the "honeymoon phase."

In the context of BIM, where multiple A/E's, suppliers, and others can contribute data to a model, all of this places enormous importance on establishing correct and clear ownership of copyrights in the data incorporated in a BIM. It is never a bad idea to ascertain the copyright pedigrees of incorporated data at the outset of a BIM project (or any other project) and to continue to do so with each new contribution to the model (or design).

Conclusions.

First, neither a contract nor its BIM protocol can change the rule that design professionals must act with continual diligence where life safety is implicated. Thus, A/E's must remain wary and vigilant in maintaining the control and integrity of digital models that are used for construction.

Second, until they someday enter the public domain, all copyrights have owners with exclusive rights. While ownership can change by contract, that potential only increases the importance that each project participant must place on understanding the source, integrity, and ownership in copyrights in data incorporated in a digital building model (in the sense of both technical competence and intellectual property).

BIM-project participants who ignore either of these long-standing principles expose themselves to great risk.

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