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Counselors at Law

BIM is Coming, BIM is Here – Now What?

An Analysis of Legal Issues

**Presentation to the
New York Building Congress
Architect's Leadership Council**

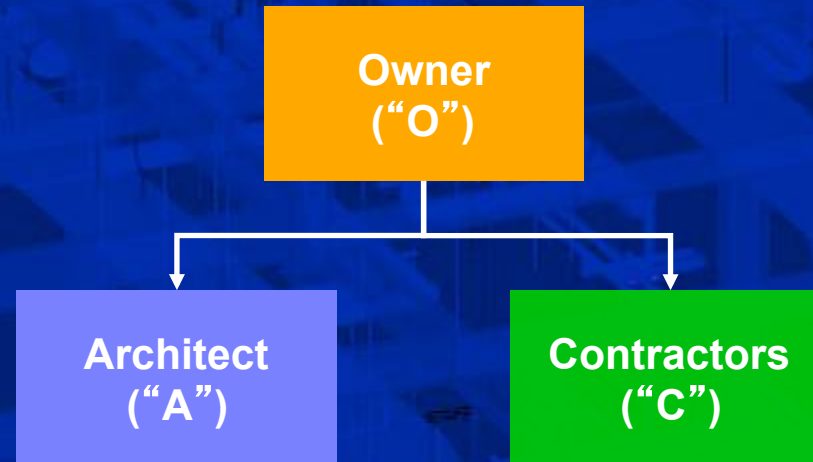
Tuesday, May 15, 2012

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Historical Legal Framework

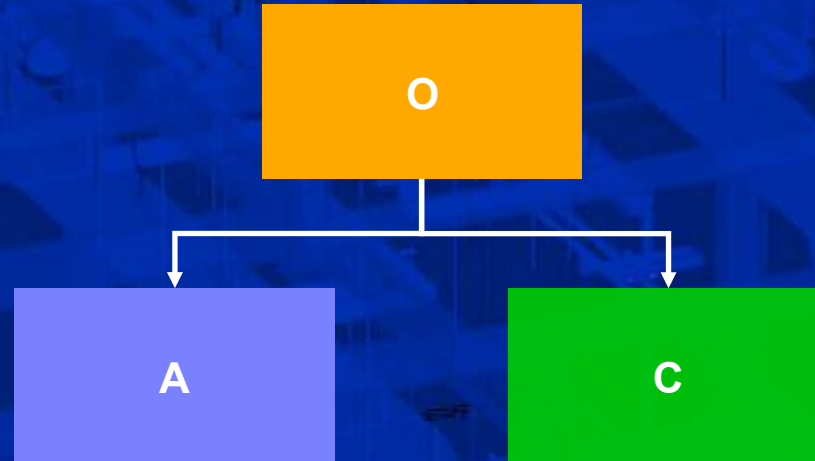
- Separation among Owner, Design Team and Construction Team.
- Distinction based on concern that profit motive would trump safety

Risk/Reward Traditional Tripartite Structure



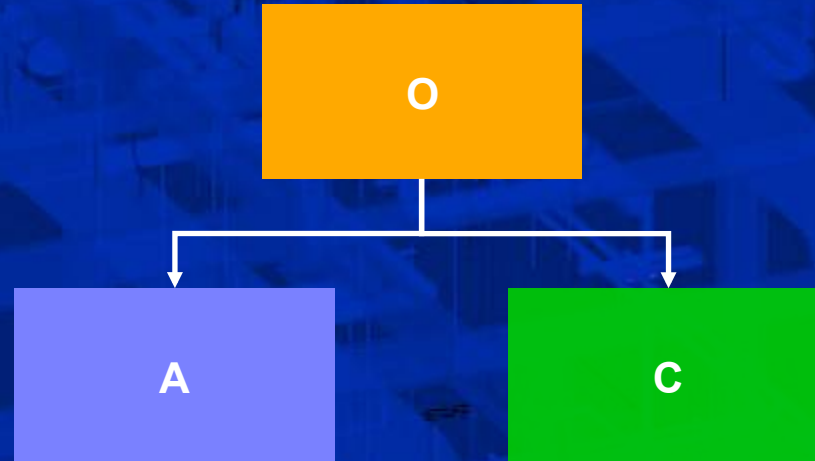
- Well-established, clearly understood allocation of risk/reward
- Huge body of law defining each party's obligations to the other.
 - These may vary state-by-state with respect to, e.g., privity and economic loss

Risk/Reward Traditional Tripartite Structure

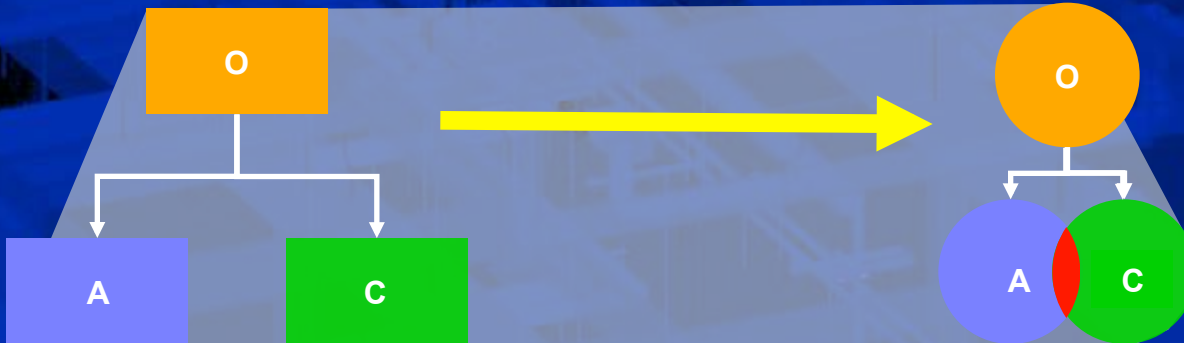


- Owner responsible for providing the Contractor with a set of drawings that is error-free and buildable
- The Design Team furnishes no warranty, and is governed by the relevant Standard of Care.

Risk/Reward Traditional Tripartite Structure



- Disconnect between Owner's liability to Contractor and Designer's Liability to Owner
- Contractor typically could not sue Architect directly for design errors/omissions due to lack of privity



BIM begins to blur these well-understood allocations of responsibility (risk/reward).

BIM' s Family of Documents

AIA E202-2008

ConsensusDOCS 301

Both forms are designed as exhibits to
Owner-Architect Agreements.

The AIA Documents and BIM

E202-2008

- Building Information Modeling Protocol Exhibit
- AIA's first document specifically addressing BIM

The AIA Documents and BIM

- Designed to address **process, procedure and protocols**
- Does not fully address legal implications of BIM use

E202-2008

An Overview of Key Provisions

§ 1.1 This Exhibit establishes the **protocols, expected levels of development, and authorized uses** of Building Information Models on this Project and **assigns specific responsibility for the development of each Model Element** to a defined Level of Development at each Project phase.

E202-2008: An Overview of Key Provisions

- **Article 1.2 Definitions:**
 - A Building Information Model is a digital representation of the physical and functional characteristics of the Project.
 - “Building Information Modeling” means the process and technology used to create the Model.
- There is **no single, legally-adopted definition of BIM**

E202-2008: An Overview of Key Provisions

- **Article 1.2 Definitions** (cont.):
 - “Level of Development” describes the level of completeness to which a Model is developed.
 - “Model Element” is a portion of the Model representing a component, system, or assembly within a building or building site.

E202-2008

An Overview of Key Provisions

- Significant portion of E202 describes expected Level of Development of Model Elements at various stages of design or construction
- **Different terminology** for the phases than in traditional contract documents

E202-2008

An Overview of Key Provisions

- **Section 1.2.4:** “The Model Element Author is the party responsible for developing ... a specific Model Element to the Level of Development required for a particular phase of the Project.”
 - Author may include other licensed or unlicensed professionals and/or contractors
 - Could create legal issues for the professional and others

E202-2008: An Overview of Key Provisions: Information and Model Management

- **Information Management and Control Questions:**
 - Who determines the management framework?
 - Who controls the model?
 - Who has authority to direct modifications or delegate responsibilities for the progression of the model?
 - Who bears the costs of model management?

E202 Approach to Information Management

- Project architect responsible for IM from the inception of the Project (Section 2.4.1).
- The information management responsibilities may be assigned to other parties at other project phases (Section 2.4.1).

E202 Approach to Model Management

- **Section 2.4.2:** Person responsible for managing the Model shall facilitate establishing protocols for:
 - Model origin, coordinate system, and units
 - File storage locations
 - Processes for transferring and accessing Model files
 - Clash detection
 - Access rights
 - Other protocols

E202 Approach to Model Management

- **Section 2.4.3:** Person responsible for managing the Model shall have ongoing responsibilities to:
 - Collect incoming Models
 - Aggregate model files and make available for viewing
 - Perform clash detection
 - Maintain Model archives and backups
 - Manage access rights
 - Follow protocols

ConsensusDOCS Approach

- **CD301 Section 3.1**

- Information Management is coordinated by the Owner's appointed "Information Manager"
 - (check box for: Architect/Contractor/Other)
- Independent costs associated with management are borne by Owner.
- IM can be replaced at any time by the Owner at its discretion.

Deficiencies of Contractual Treatment

- Does not fully address reality that multiple parties contribute to the Model
- Could require the Architect to assume responsibility for work of other parties **outside of the architect's area of practice, licensure and insurance**



Understanding the Legal Risks Presented by BIM

Legal Issues Related to BIM

- Shift in Traditional Approach to and Definition of Design Phases
- Unclear legal relationships among the parties
- Questions concerning ultimate responsibility to third parties for damages
- Liability for the Architect's own errors/omissions and those committed by others
 - Collaboration by Architect in construction issues or contribution of contractors or others to the BIM model before completion of the design

Standard of Care

- Potential heightened standard of care, with less margin for error
- Based upon actual or perceived ability to eliminate mistakes through BIM technology

Legal Issues Related to BIM (cont.)

- Ownership of intellectual property
- Licensing issues: sharing design responsibility with non-licensed actors
- Insurability issues
- Control and management of information
- Software/Technical Interoperability and Related Issues

Ownership

Who owns the **BIM** models?

Copyright and Ownership Questions

- Does the Architect own the copyright for its portion of the design?
- Do the construction team members and other professionals own the copyright for their respective contributions?
- Who owns the Architect's standard details if they are incorporated in the Model?
- Who owns the final integrated design?

The AIA (E202-2008) Approach

Section 2.2: “In contributing content to the Model, the **Model Element Author does not convey any ownership right** in the content provided Any subsequent Model Element Author’s and Model User’s right to use, modify, or further transmit the Model is specifically **limited to the design and construction of the Project.....**”

The ConsensusDOCS Approach

- Similar operative language:
 - “In the absence of any express language to the contrary ... nothing in this Addendum ... shall be deemed or construed to deprive or dispossess a Contributor of **copyrights or license rights held by that Contributor in its respective underlying contribution to any Model.**”
 - As under AIA E202, Architect does not have primary rights to the design **“as a whole.”**

The Contractual Approach

A Critique

- Fails to sufficiently preserve the Architect's traditional copyright interest in its design
- Creates **an intellectual property stew**, with each entity that contributes to the model owning the individual ingredient it contributed to the mix.
- Risk of disputes at the intersection of different contributors' input
 - E.g., claim by contractor's employee to ownership of overall design based on contribution to model

Collaborative Design Input

Licensing Issues

- New York and Most States Prohibit Any Person Other than a Licensed Professional from Determining Technical Design

Unlicensed Architecture Prohibited

New York

- **Section 7302 of the NYS Education Law**

Only a person licensed or otherwise authorized to practice under this article shall practice architecture or use the title "architect".

- **Section 6509 of the NYS Education Law**

“Each of the following is professional misconduct, and any licensee found guilty of such misconduct . . . shall be subject to the penalties prescribed in section sixty-five hundred eleven: . . . (7) Permitting, aiding or abetting an unlicensed person to perform activities requiring a license”

Other States

California

- **Section 5582.1(a) of the Cal. Bus. & Prof. Code**

Prohibits a licensed architect from “affix(ing) his or her signature to plans, drawings, specifications, or other instruments of service which have not been prepared by him or her, or under his or her responsible control.”

- **Section 5535.1 of the Cal. Bus. & Prof. Code**

Defines responsible control as “that amount of control over the content of technical submissions during their preparation that is ordinarily exercised by architects applying the required professional standard of care.”

Other States

Florida

- Sections 481.225 and 481.227 of the Florida Statutes:

An architect is subject to discipline for, among other things, “Delegating or contracting for the performance of professional responsibilities by a person when the licensee ... knows, or has reason to know, such person is not qualified by training, experience, and authorization when required to perform them.”

Potential Insurability Issues

- Potential issues for the Architect

- Did you assume liability for contractors' work, which may fall outside the scope of your insurance?
- Did you engage in non-professional services, which are outside the scope of your insurance?
- In a state that doesn't allow you to share design responsibility with an unlicensed person, is participation in collaborative design an illegal act, which might render your PL insurance null and void?

Accuracy of Data: The AIA Approach

- E202-2008, Section 4.1.2:

“...Model Users and subsequent Model Element Authors may rely on the accuracy and completeness of a Model Element consistent only with the content required for the level of development identified”

Accuracy of Data:

ConsensusDOCS Approach

- C-DOCS BIM Addendum sec. 4.3.11: Participants' Dimensional Accuracy Representation:
 - [] Each Contributor represents that the dimensions in its Contribution to a Model are accurate and take precedence over the dimensions called out in the Drawings or inferred from the Drawings...
 - [] Each Contributor represents that the dimensions in its Contribution to a Model are accurate to the extent that the BIM Execution Plan specifies dimensions to be accurate...
 - [] Contributors make no representation with respect to the dimensional accuracy of the Contributor's Contribution to a Model. A Model can be used for reference only and all dimensions must be retrieved from the Drawings."

Accuracy of Data under the Form Contracts

- **AIA E202** shifts from traditional view that only hard copy of documents may be relied upon and that electronic documents are solely for the contractor's convenience
- **ConsensusDOCS** provides more flexibility, including option to retain traditional approach
 - But Owners could require Architect to guarantee accuracy of Model and information

Risk of Software Defects and Failures

- **Traditional Approach:** contractual disclaimers of defects and deficiencies related to interoperability of systems and software

Risk of Software Defects and Failures

AIA E202-2008

- No language on software defects.

C-DOCS BIM Addendum

- “A defect in the software used in the creation, modification, federation or other use of a Model ... shall entitle a Party to a time or other excuse from performance, but only to the extent that the Party could not have avoided any delay or loss by the exercise of reasonable care...”
(Section 5.8)

Accuracy of Data under the Form Contracts

- Failure of the AIA E202-2008 to address the issue, together with “reliability” language in Section 4.2, may create **risk of liability** for technical problems over which the **Architect has no control**
- ConsensusDOCS **appears** to provide protection by referring to **reasonable care** standard, but language appears to protect Contractor against delay claims **without providing protection to Architect** for the same problem

BIM Risk Management: Contractual Approaches

Option 1: Definition of Contract Documents

“BIM Files do not constitute Contract Documents or Construction Documents and shall not relieve the Owner’s Construction Manager from its obligations to comply with the Contract Documents and Construction Documents. BIM Files furnished by Architect may be used by the Owner’s Construction Manager and its Subcontractors for **informational and reference purposes only.**”

BIM Risk Management: Contractual Approaches

Option 2: Disclaimers in Body of Contract

“BIM Files shall be furnished to Users solely for the convenience of the Users and for informational and reference purposes only. ... The Architect makes **no representations or warranties**, expressed or implied, regarding ... **accuracy or completeness** of BIM Files or the data and/or information contained therein.”

BIM Risk Management: Contractual Approaches

Option 3: BIM Addendum to Contract

May include some or all of the following:

- Definitions and instructions concerning digital files format
- Limit use “for informational and reference purposes only”
- Disclaimer of warranties; Contractor uses at its own risk
 - May allow limited reliance, but only to extent identical to 2D Construction Documents
- Allows re-transmission only to third parties that sign the Addendum or a similar document and agree to be bound by its limitations

BIM Risk Management: Contractual Approaches

Option 3: Addendum (cont.)

- Indemnity against claims arising from use of the Digital Files or information therein
 - Including variations of data due to mechanical or technical failure or design changes which were not incorporated in the Digital Files
- Architect's right to terminate Owner's or Contractor's rights to use Digital Files

BIM Risk Management: Contractual Approaches

Indemnification of Architect

Owner shall, to the fullest extent permitted by law, **defend, indemnify and hold the Architect harmless** from any and all actions, claims, etc. ... in connection with **use ... of the BIM Files** Including claims which may arise due to deletions, omissions or variations of data due to mechanical or technical failure ... or design changes which were not incorporated in the BIM Files.

Critical Legal Questions

- How will the growing use and functionality of Building Information Modeling affect the design professional's standard of care?
- In time, BIM may lead to a heightened standard of care that begins to approach an expectation of perfection

Conclusion

Who Knows what Tomorrow Brings

- As with all new relationships, it may take years before the legal ramifications of BIM will be fully known.
- Over time, judges and juries will provide interpretations that may surprise not only the lawyers but also project participants.

An aerial photograph of a multi-story building under construction, showing a complex network of steel beams and concrete slabs. The entire image is overlaid with a semi-transparent blue filter. In the center, the text 'Q & A' is written in a large, bold, yellow font.

Q & A