Revit Architecture 2013

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Who Owns The BIM?

Just recently I was reading the newly published New York City *BIM Guidelines*, issued by the NYC Department of Design and Construction (DDC). You can find it here:

http://www.nyc.gov/html/ddc/html/pubs/publications.shtml

For this article I am going to quote heavily from this publication. This doesn't mean, however, that the NYC DDC is doing something out of the ordinary. Their document is more or less similar to lots of others I have seen these last few years. But this one does take it to a whole new level.

GENERAL GUIDELINE PURPOSE

So why does one need BIM guidelines? They are needed for settling the technical details including:

- General agreements about the project, scope, participants, and so on
- Software and ICT infrastructure
- Level of development
- Model and drawing standards
- Responsibilities and liabilities

There is also another use: settling ownership rights. In addition, it is this point that often leads to some weird developments.

HOW DID WE DO THIS, AGAIN?

Not so long ago, in a place similar to ours, there were buildings built from drawings. Architecture was pure and unspoiled, which resulted in mind-blowing pen drawings. Or, with more sophisticated methods, the Rotring pen was traded for a computer mouse and the lines were drawn on screen.

Anyway, the point is the design was, by definition, a conceptual idea of what the building should look like. It was simply not possible to draw the entire building, so architects and engineers resorted to drawing the typical parts once and then some exceptions to those parts. With that, the owner and contractor had the tools to envision and/or construct the building.

In those days, too, there were often quarrels about who "owned" the design. Architects positioned themselves as a form of artist, and their work as a form of art and, therefore, protected by artistic copyright laws.

Owners and contractors in their turn argued that they should have the right to amend and change this "design intent" as they saw fit. After all, they paid for it.

In my humble opinion, both were somewhat right. An architect's (and engineer's) work often is the result of creative, artistic thinking. Architects (and engineers) have given the people of this world structures of unspeakable beauty that enriched our environment. Moreover, at times they have given horrific ugliness, but that's beside the point.

But all these structures are not the same as paintings, sculptures, and similar types of art. They're objects of use—meant to be worn down, revitalized, adapt to changing needs. Upholding this copyright too vigorously would dramatically decrease the lifespan and usability of these structures.

Practical beings that we are, most of the time a compromise is made: the owner/contractor can amend things, but once the design intent is at stake, the architect/engineer gets a say. Of course, there are always exceptions, in both ways. Some architects get bullied into

giving up their rights; other times owners are left with a completely useless heap of bricks and steel that does not meet their demands without the possibility to change it.

SO WHAT CHANGED?

In the old days, an architect was designing buildings. That's it. And he had a bunch of engineers providing him with valuable feedback and technical responses to his design. When the design was finished, the contractor got the drawings, made some more of his own, and then the entire thing was built. Period.

Each party was responsible for his/her own part. They all made their own drawings, reports, calculations, and so on. At best, they could use information provided by other team members as an underlay for their own work.

Now let's look at the comprehensive list of uses the DDC sees for BIM:
1. Existing Conditions
2. Site Analysis
3. Programming
4. Engineering Analysis
5. Design Authoring
6. Sustainability (LEED) Evaluation
7. Design Review
8. Code Validation
9. Clash Detection
10. Cost Estimation
11. Construction System Design
12. Phase Planning
13. Digital Fabrication
14. Record Modeling
15. Asset Management

Now this stuff was bound to happen in the old days, too—in one way or another. The difference lies in the amount of integration between all these workflows. As the DDC puts it:

BIM strengthens collaboration by allowing all members of the design team to accurately add to a shared database information about how a building looks and functions. Using this information, the BIM database creates a virtual model of a building at every stage—from design conception through construction and occupancy.

This integrated workflow means two things:
1. It's no longer possible to just get away with "design intent." A BIM is, by definition (if applied to all 15 uses), a fully functional virtual building.
2. All this information is contained within a single file. When there are multiple files, they are connected.

So this has a major influence on the whole ownership debate. It's not about "just" the design anymore. It's about owning all the information contained within the BIM. It's about the participants' technical knowledge, patents, copyrights, and highly sensitive corporate information.

This statement seems bold, but is ironically stressed by the DDC's

take on model ownership:

DDC holds ownership of the BIMs including all inventions, ideas, designs, and methods contained within the model. This includes, but is not limited to; the content submitted as part of the BIMs itself.

Outside resources, such as consultants and/or contractors, using the BIM are granted temporary use of it for the duration of the project. After project completion they are required to return all copies of the BIM to the DDC.

DDC holds ownership of all the contents within the models from project conception (pre-schematic design) all the way to completion (construction)

WHY IS THIS BAD?

Let's look more closely at what the DDC is stating here because basically, it's a dead letter—wrong in so many ways it seems discordant with the rest of the document which, in fact, seems well thought through.

- I can relate to the DDC taking ownership of the design. I don't agree, but it's a never ending struggle. They're not the first entity thinking this will benefit them, and they won't be the last. But that is only the beginning…
- Ownership of all ideas and inventions? Seriously? **Maybe** they can get away with bullying an architect or engineer into surrendering their design, but this will not ever work. Does the DDC really think a manufacturer like, say, Alcoa (biggest manufacturer of aluminum building facades) is going to surrender its patented products?
- Ownership of methods contained within the model. Is this about modeling methods? So we can't model things twice in the same way? Autodesk® will love this one. Or are we talking about construction methods specified in the model? Contractors cannot use the same work methods again?
- DDC holds ownership of all the content? Again: Alcoa will have to surrender its BIM content? Or Autodesk, for that matter?
- All outside resources are required to return all copies of the BIM? Who is going to check this? How do they want to enforce this? What about insurance companies demanding to keep a copy of one's work for liability reasons?

It seems as though I am exaggerating a bit, but I'm really not. This is what the DDC is stating, down to the letter.

Is it their intention to be so rigid? I hope not, for several reasons:
- It would cost an arm and a leg in lawyer fees to enforce this. I mean, it's not like manufacturers are going to comply. Or any other design/build party for that matter. And they can't. Surely the IRS, their accountants, and/or their liability insurance would want some proof of their work.
- It rules out warranty on a job well done. So a model is turned over to the DDC. And, at some point in the future, it turns out to be wrong—costing the DDC, or one of the associated public agencies, a load of money. How will they hold their

design/build partners liable? They don't have a model anymore. They can simply state, "It wasn't me. Can't prove it, since I had to turn over everything, but it wasn't me." I'm no lawyer, but my common sense says that when the DDC willingly took ownership, they took ownership with all faults and defects.

*   It kills innovation. So I got a job for the DDC. I can do either one of two things:

    a. Get the job done. Just get it done—nothing more and nothing less.

    b. Get the job done and do it in the best way possible. Explore innovative new thoughts and ideas. Invest in new production methods because when they turn out to work, I can reuse them in future projects.

    Now look back at the DDC's take on Model Ownership and tell me which route you are going to take. I bet it's not option b. Why? There's no long term for you. You get paid, you deliver, and then you lose all rights to your work. So why put in something extra for future benefits?

*   It's just plain and utterly wrong. A person's, or company's, ideas, thoughts, inventions are theirs. It's the foundation of our economic system. You come up with something brilliant? Then you get to benefit from it—whether it's something everybody uses thoughtlessly day in, day out like a paper clip, a staggering world-changing thing, or just capturing the concept of beauty in a pile of dirt and metals. The fact that somebody else will be using this does not make a difference.

WHAT WAS THE DDC THINKING?

I cannot look in the hearts and minds of the people drafting this Guideline. I can, however, tell you what most companies want: CONTROL.

They want to be able to use and leverage their BIM. And they should—they paid for it. They want to be able to change it, alter it, expand it. In five years they want to be able to implement new insights.

What they don't want is to be dependent on third parties for the above things. Pay extra every time they want to change the model in any way. To be suddenly faced with a bankrupcy of the model owner. Or a "misplaced" file. A server crash, wiped backups, and so on.

Let me be very clear: all of these are equally valid arguments. They come from a long line of real-life examples.

IS THERE A SOLUTION?

Look around you. Almost everything you see, use, and hear is subject to the same solution. There is even an acronym for it (and boy, do we love our acronyms): EULA—End User License Agreement.

They come very simple (Best to Use before), somewhat more complicated (Warranties that come with consumer goods) to downright ugly (lease contracts on buildings and insurance policies).

That's basically what we need for BIM, too. An agreement which constitutes the following things:

*   Ownership of the BIM – who owns what piece of the model, the ideas, innovations, and processes it contains? In my humble opinion, everybody keeps their share. But that's just me.

*   User rights – which parties are entitled to use and/or alter the BIM, and for what purposes? For instance, an architect remains owner of the design and is entitled to use it for commercial reference, but not to rebuild the building somewhere else or sell any data in or relating the BIM. The building owner does not own the model, but has full user rights to maintain, alter, or delete any information in his/her copy. And so on…

OR the architect surrenders his ownership (see point 1) but is granted certain user rights.

*   Warranty – What if something is wrong with the model? Who is liable? And for what? And for what period of time until the warranty expires?

*   Warranty limitations – What actions limit the warranty of the model and the data inside? For instance, if an owner decides to do a renovation, the data concerning the mechanical systems may not be valid anymore.

*   User limitations – What actions are specifically NOT allowed by users? Think about reselling the BIM or any content in it, re-use of other participants' vital company information, and so on.

The basic point is that writing down "Put your hands where I can see them and hand over the BIM" just doesn't cut it anymore.

Martijn de Riet is a self-employed BIM Consultant from the Netherlands, working with Revit since version 5.1. Martijn has a bachelor degree in Building Science. After his studies, he started his own engineering firm working for contractors, architects and private clients. Starting in 2007 his company transformed into a full-time BIM consultancy service. At the moment, Martijn's clients vary from mid-sized architectural firms to the largest Dutch General Contracter and MEP Engineering firms, with a focus on specific corporate solutions, design and implementations of Revit and BIM workflows. Martijn is a member of the Dutch Revit User Group and currently working on creating a Master Template and Component Library. He provides lectures for companies, technical universities, and seminars on a regular basis.