Specifications within BIM



Green Building Encyclopaedia

I was flicking through this month’s Journal to see yet another article wherein the author was explaining the virtues of BIM technology. With its data rich environment, 3D modeling, *complete with specification*, which I was pleased to see, as it means they still can’t get rid of it. He then tackled a new approach with BIM of customized searching ability which is just computer justification jargon since someone had to put the information in there for him to find.

‘Complete with specification’ = not a document anymore but data attached to objects

I wonder if the specification can be extracted as a single complete document?

He then waxed lyrical about the mixture of all the stakeholders working on a single 3D model file

Such a big file that everybody has to upgrade their hardware, operating software, RAM, software, broadband and tea breaks whilst the files open.

He then goes on to the Contractor peeling back the layers of information and discovers something in missing which immediately generates a Request For Information. This indicates to me there has been no improvement in the provision of information with all the BIM applied.

If the spec is in the objects it can only carry the component products and materials information.

The assembly information comes from the drawings.

The fixings or mortar or glue lines has to be objects with their own spec attached

Processes feel unattached

Workmanship feels unattached

Tolerances feel unattached

Testing feels unattached

I often say a single line on a drawing can mean 5 processes, not easily attached to a space between objects.

British library floor thresholds under doors made by up to 7 trade contractors in many different permutations depending upon the floor finish and build ups, could be a BIM nightmare.

Does IFC have a ‘by which trade contractor’ cell?

Remember that RIBA stages have been changed to fit with modern procurement for the big projects and big practices and it is now useless for normal architects and normal projects (the vast majority of the profession?).

The Contractor still has the same attitude of ‘I won't do it until someone tells me what it is and I will be paid extra money based on the number of RFI I have issued’, but still expects the Architect to provide it.  Thus maintaining the status quo.

Specific notes that the architect asked to be included in the spec, feel unattached.

Do BIM IFC COBie classification tables have an 'extra notes' cell.

When we do a really thorough spec, it avoids the need for so many RFIs

I don’t feel confident that our thorough approach to specification is accommodated.

Since NBS have been the stakeholders in BIM then the tables will be thin like NBS clauses.

NBS Create may have had to get better at thickening up the clauses.

But NBS approach (never mix prescriptive and performance in the same clause) prevents BIMers and us from being thorough in the specification to defend against substitution and so not RFI-free yet.

Under this regime we will all have to fit the confines of the BIM Spec straightjacket.

The BIM has fallen short of the expectation that the entire body protagonist claim for its wonderfulness.

I think it will fall short for a long time yet.

A second article appears in the Main Journal about Bullring Station Birmingham originally designed Super Trendy Foreign Office, now renamed and regrouped and off the job.

Finally the station is almost complete bar the two temporary barriers manned by heavies to prevent passage.

They make the station a pedestrian nightmare walking 500 meters between platforms via 'coloured lounge' to central concourse to 'coloured lounge' to platform, instead of 20 meters, negotiating 2-4 ticket barriers without really understanding if your ‘in’ or ‘out’ at any stage.

The Grand Central is vast and a vibrant public thoroughfare added to by those short cutting through the block, its bordering on incomprehensible with those temporary barriers; 'coloured lounges' devoid of their identifying colours (too b obvious for high brow architects? or VE’s out?)

The peripheral retail feels so peripheral that train information focused footfall may fall a bit short.

In the text it states the detail was done for them by WS Atkins and Haskers indicating they could not do the whole project themselves. The article goes on to say there was an acrimonious split after 8 years on project so Foreign Office left. It might have been to do with Value Engineering done by MACE on the roof, so the usual culprits again.

Yes and the VE shows in the creases in the stretched fabric of the atrium ceilings' sinuous shapes.

It looks good with your glasses off and terrible with them on.

Sadly the bolt on mirror stainless steel frippery facade looks terrible too, bad geometry, misalignments, dents and bad reflections.

No spec could have solved the facade geometry but could have improved the appearance “aligned joints, no dents and good reflections” and could have improved the ceiling. “No creases".

I feel it worth noting if there had been a spec by you and I in place, we would have been able to overcome BIM in the first article and MACE’s Value Engineering in the second article with our text and MACE would not have been able to drive a train through it (see article in The Guardian)

Can you imagine the RFI meetings everybody in the 3D model searching for the BIM’d specification fragments to see if its ‘in the spec’ or not.

And claims for the bits ‘added’ even if they were in but nobody found it yet.

No specification author to ask where is the clause, because 100 cad jockeys assembled 1000 objects with BIM’d clauses and nobody knows 'the whole spec'.

The other document comes to mind the B of Q, does that not exist in reality as well?

Except in the 3D Model BoM Bill of Materials?

This is feeling like a bit of a nightmare for RFI meetings.

I suspect that BoM may more-easily be printed, but many schedules from many drawings or 1 BoM?

I wonder if in the BIM enabled world they could tolerate a hard copy specification and bill of quantities?

I hope you agree.

I had not expected to still feel angry with all this.

I am giving a CPD about spec in the NBS world on Thursday I think I may turn this response into another CPD seminar or a page on Green Building Encyclopaedia.