Information flow through the whole construction process

Gary Ross
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Who the #**@ are you Baldy?

Gary Ross MSc

• Holds Masters Degree in CAD in Construction (that’s BIM in old money)
• Whole life experience in BS Consulting and contracting
• Three years at Autodesk working with Revit MEP
• Chair of:
  • Government BIM Hub (WM)
  • BSRIA BIM Network
• Sits on:
  • CIBSE BIM Group
  • UK Government Soft Landings group
  • Revit Midlands user group

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Background
What is BIM?
The Government push

"This Government’s four year strategy for BIM implementation will change the dynamics and behaviours of the construction supply chain, unlocking new, more efficient and collaborative ways of working. This whole sector adoption of BIM will put us at the vanguard of a new digital construction era and position the UK to become the world leaders in BIM."

Francis Maude
Minister for the Cabinet Office

BIM and Soft landings mandated on all projects from 2016 (2015)

Expected savings circa 20% on all projects from various methods

Heavily reliant on industry professionals and software development
What is it?
What can it do?
What can't it do?
The Project

- My Aunt Nora
- FM
- Public
- Architect
- Town planner
- Demolition
- Council
How does BIM do that?
Why BIM?

Traditional “coordinated” drawing

- Usually based on out of date information
- Only ever coordinated in 2D
- Usually not buildable
- Actual manufacturer info etc usually ignored
- Dumb graphical representation

Properly coordinated BIM drawing

- Approaching concurrent design
- Modelled in 3D
- Build-ability assured
- Based on manufacturer specific information
- BIM information included
- Output to Prefabrication

Material | Copper
--- | ---
Roughness | 0.00150mm
Connection | Soldered
Class | EN1057
Flow | 0.25m³/s
Excerpt from a presentation by David Philp February 2013
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Figure 14 shows how this process will operate. Data is developed by the supply chain using PAS1192-2:2013 as can be seen through the Common Data Environment at the top of the page. This data set as defined by the EIRs is passed through the issue process (green football in the diagram) into some type of data management service. The native files, 2DPDFs and COBie files are stored in a Repository. The COBie file is then validated by comparing the COBie data with the demand matrix (PoW - LoD). Figure 15 details this process, with the results being presented in a new COBie spreadsheet which is coloured in red, amber and green, depending upon data validation criteria described below. Once all the cells have turned green the COBie data is ready for further use, indicating the ability to answer the Client Questions, cost planning and other high value uses. It will be further possible to use Uniclass (2) to further sort the COBie data to enable it to be used by other audiences or users.
Data transfer

- Inception
- Design
- Construction
- Handover
- Operation

Typical data flow at present

Amount of useful data vs. time
How can we fix that?

BIMSphere have tools to:

- Link design calculations to Revit Models
- Use manufacturer specific objects in Revit
- Link procurement and O&M data to Revit
- More to come...
The Sysque solution

Sysque lets you model construction level detail in Revit using manufacturer specific parts. This allows the model data to be transferred through the entire construction lifecycle rather than re-working.
The ArtrA solution

ArtrA handles all of the most widely used BIM formats and links those to any form of data.
Without Amtech tools...
With Amtech tools...
Data transfer with Amtech

DATA FLOW WITH APPROPRIATE ASSET INFORMATION AND BIM DATABASE TOOLS SUCH AS LUCKINS™ AND ARTRA™
Discover BIM

To BIM or not to BIM?

Our five steps to BIM success

Understanding the BIM consequence

It’s all about the ROI

The power of good data

BIM data flow

Interoperable data

Education and training
Thank you

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