



Revit Technology Conference 2007

“Documentation”

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SESSION: Documentation in Revit

Introduction

- Documentation in Revit
 - leverage and efficiencies
 - tips & tricks
 - traps
 - best practices
 - relevant to all disciplines
 - not a step by step guide
 - not the same as RUGS Conference 2006 documentation sessions



RTC Conference 2006

Recap: RTC Conference 2006 – Documentation

- Basic Documentation - Glen Cunnington – Monumentum
 - **1. Documentation Management**
 - Prepare you plan of attack!
 - **2. Review**
 - Audit the design model
 - **3. Standards**
 - Establish your practice standards
 - **4. Views**
 - Prepare the views you intend to document
 - **5. Sheets**
 - Setting up drawings
 - **6. Annotation**
 - Annotating your views
 - **7. Detailing**
 - Adding detail to your views
 - **8. Production**
 - Printing, exporting and revising
- Advanced Documentation, Gary Kleyn & Daniel Smith, Glanville Architects
 - Download the PDF of the talk from the RUGS website



Documentation in Revit

- Documenting large projects
 - Controlling your drawings:
 - » model objects
 - » drawing referencing
 - » section & elevation markers
 - Handling numerous drawing sheets
 - Hybrid Revit / DWG drawings
 - Using colour and 3D in documentation
 - 2D vs 3D documentation
 - 2D documentation
 - Scale and level of detail
 - Look and feel of drawings
 - Standardisation



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A short history of BIM

- BIM in 1980
- 3D CAD
- PCs & 2D CAD - a retrograde step
- More 3D CAD & building modelling
- BIM in 2000
- Snapshot vs Live 2D views
- Drawing stability



Controlling your drawings

- First you must control model objects:
- Revit 2D views are live representations of 3D models
 - sometimes too alive!
 - model objects - how were they created? (eg. Floors)
 - Protecting invisible objects (floors, shaft openings, rooms)
 - Locking, aligning & pinning
 - Reference planes -
 - » locking, naming and heights
 - » Scope boxes
 - Worksets for locking
 - Design options for locking



Controlling your drawings

- Controlling views:
 - Dependant views
 - View dependancies (Sections & callouts)
 - Copying views
 - Rotating views
 - Crop boundaries
 - Scope boxes
 - 2d / 3d grip handles - grids, sections & reference planes
 - View templates
 - apply to new views tickbox



Controlling your drawings

- Controlling drawing referencing:
 - section & elevation markers
 - By scale
 - Hide element (annotation) in view
 - Hide category (view visibility)
 - By type - select all instances
 - Section boxes
 - Scope boxes
 - Sections markers
 - Copying to create callouts
 - Callouts
 - Original vs dummy callouts



A multitude of sheets

- Handling numerous drawing sheets
 - View templates
 - Scope boxes
 - Reference planes
 - Browser organisation - folders vs naming conventions
 - Locating views on sheets
 - Working on views on sheets
 - Pin views on sheets



Hybrid drawings

- Hybrid Revit / DWG drawings
 - Importing & Linking DWG files:
 - Link vs import
 - Origin & rotation
- DWG detail drawings
 - Link vs import
- Scanned detail drawings
 - Link vs import
 - File sizes



Revit / DWG drawings

Importing & Linking DWG files :

- Project position and orientation
 - Project origin (x=0, y=0)
 - » Spot dimension coordinates
 - » Origin to origin
 - Project North / true north (Shadows)
 - Tools project position /orientation
 - » relocate project
 - » Rotate true north
 - Shared coordinates
 - Distant origins
 - X-Refs in links



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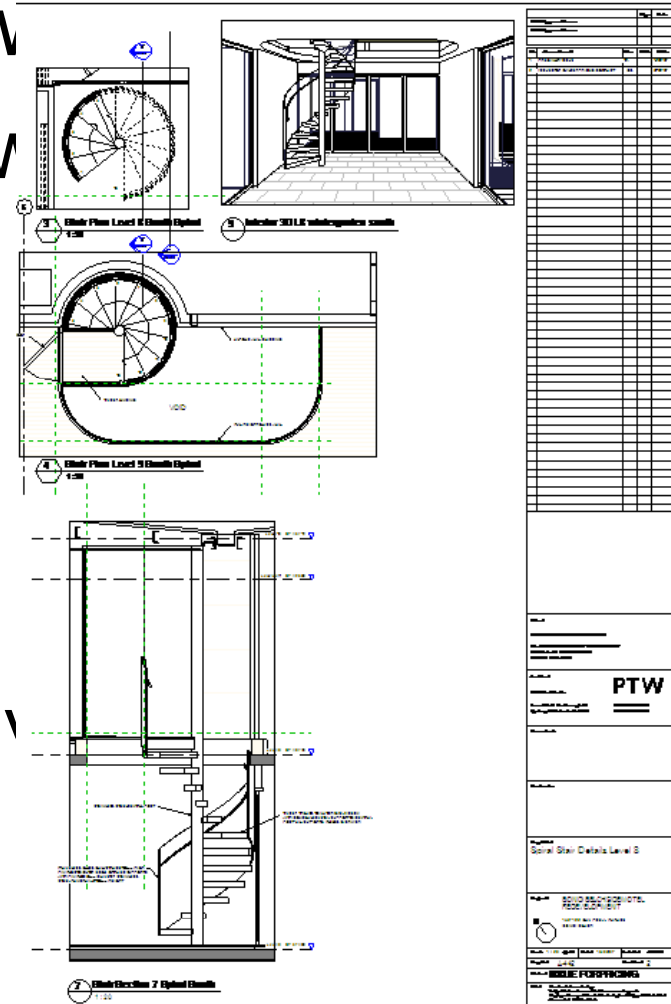
Colour in documentation

- Masking regions
- Filled regions
 - translucent regions
- Rooms and area fill
- Shadows and shading



3D documentation

- Cutaway 3D view
- Standard 3D view
 - orient view
- Annotation limits
- View rotation
 - section boxes
 - crop regions 3D





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2D vs 3D documentation

- Detail groups
- Detail components
 - Load family
 - nested in 3D families
- Imported details
- Imported raster images



2D documentation

- Drafting views
 - Save views / insert views
- Legends
 - Place on multiple sheets
- Wall legends
 - Plan or section model views
 - Dependant views



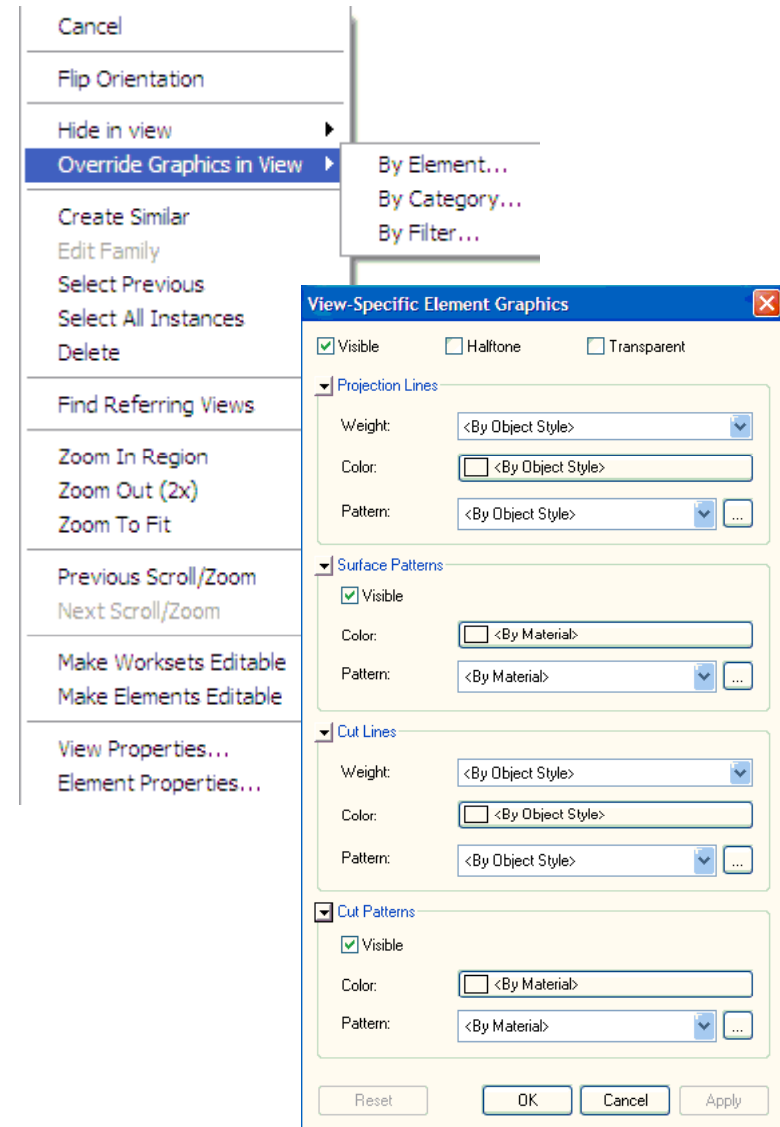
Scale and level of detail

- Detail level - coarse, medium & fine
 - By system (walls) or by users (families)
 - more detail at larger scales
 - project stage (Sketch design, DA, construction)
 - 2D vs 3D; Presentation vs documentation
- Visibility
 - family object visibility 3D / 2D views
 - Yes/No parameters
 - Type parameters
 - subcategories
 - Symbolic lines



Look and feel of drawings

- Linetypes / weights
- Line patterns
- Linework tool
- View visibility
 - Over-ride in view
 - Halftones
 - Underlays
- Superimposing views
 - Stepped elevations





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Standardisation

- Naming conventions
 - views
 - families
 - subcategories 3D component families
 - subcategories 2D detail families
 - for filters
- Object styles
 - subcategories



Annotation

- Spot elevations on sloping surfaces
- Break-line detail family
- Tags
 - tags - types vs. instance
 - wall tags - rotation
 - tags at different scales
 - tag rooms for finishes



Summary

- Refer to RUGS conference notes 2006
- Use Revit to enforce standardisation
- Use the tools Revit provides - learn them gradually by always questioning if there is a better way
- Revit is just as good a documentation tool as it is a 3D modelling tool



2006 Summary

Basic Documentation – Glen Cunningham, Monumentum:

- **Don't be afraid to use drafting tools to work over the model to add detail**
 - After all, this is how you would normally document and detail a project
- **However, always maintain the model integrity**
 - I.e. avoid using drafting tools to correct (or quick fix) your model.
- **Embrace the program**
 - Including benefits (and limitations)
- **Take the time to establish office standards**
 - It will take time... But the effort will pay off
- **Spell Checker**
 - It's not perfect, but it's built in.
- **Stuffing around**
 - Whilst it's a constant temptation ...
 - ... Maximum productivity relies upon minimum stuffing around.
- **Flexible set-up**
 - Allow for some flexibility with the initial set-up of a project.
- **Hot keys**
 - Establish an office standard for keyboard accelerators and use them.
- **View naming**
 - Name views to assist with clarity and the simplicity of navigating through the Project File.



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2006 Summary

Advanced Documentation - Gary Kleyn & Daniel Smith, Glanville Architects:

- Do not assume that a person taking over a project knows how you have built the model
- Do not keep things to yourself, share your knowledge
- Do not try to continue to do something unsuccessfully for more than 15 minutes, ask for help
- **DO NOT DUPLICATE YOUR WORK, USE THE PARAMETRIC CAPABILITIES OF REVIT**



Questions

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