

Ergotechnics Visionary Presentation On Utilising ADB With Autodesk® Revit® Building

What is ADB?

"Activity DataBase is a briefing and design package with an integrated textual and graphical database, an interface with AutoCAD® and an extensive graphical library."

<http://adb.dh.gov.uk/>

What Does ADB do?

- Loads equipment into rooms.
- Ensures rooms designed and loaded using ADB conform to the necessary department of health requirements for healthcare facilities.
- Schedules equipment/rooms/doors etc
- Compares required equipment with the equipment placed in the design.

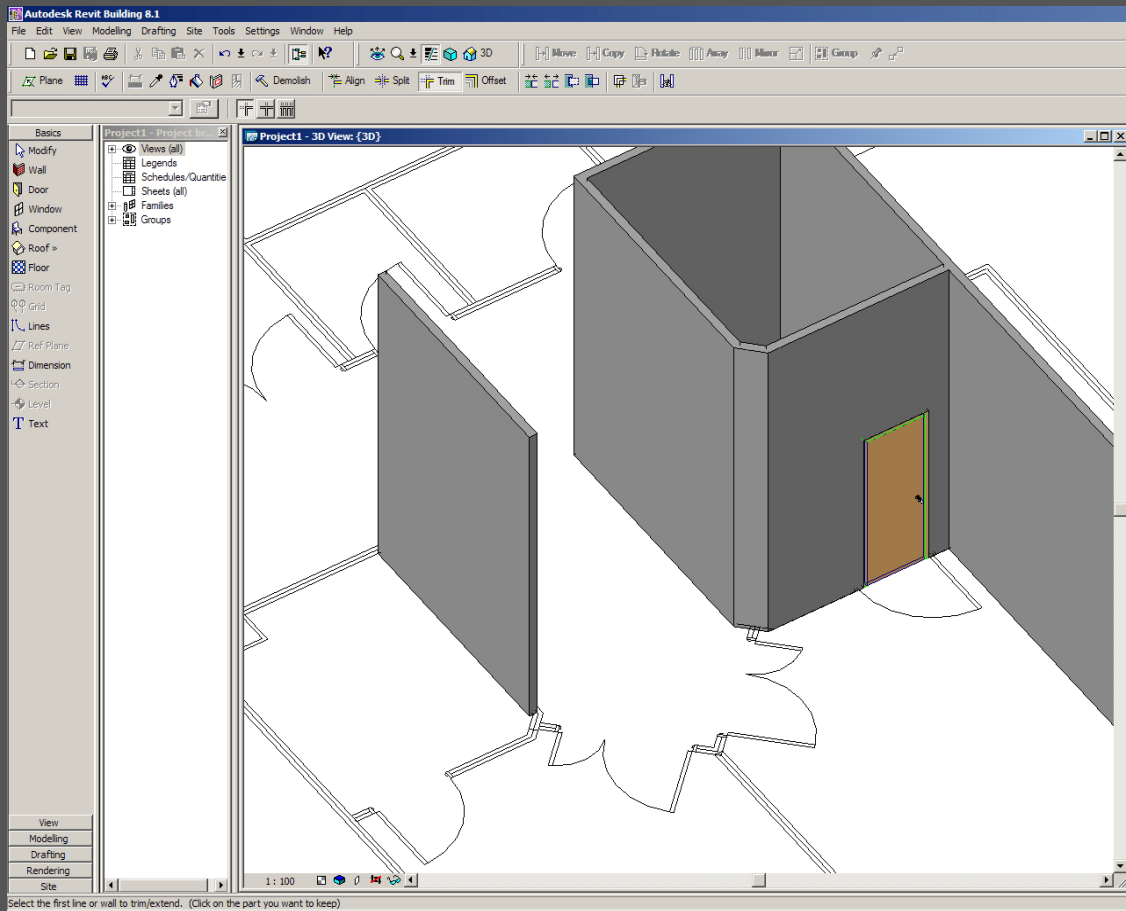
Ergotechnics' Vision

ADB (for AutoCAD users) and Codebook with ADB libraries (for Microstation's users) is an add-on used with the CAD software to design the healthcare building layouts. Ergotechnics' vision of Revit Building and ADB not only increases accuracy, but reduces the amount of time spent on room loading. The unique way that we demonstrated the link process within a Building Information Model created with Revit enables editing throughout to be fully coordinated and Ergotechnics prepared this forty five minute presentation specifically for the ADB User Group meeting.

Ergotechnics' Presentation

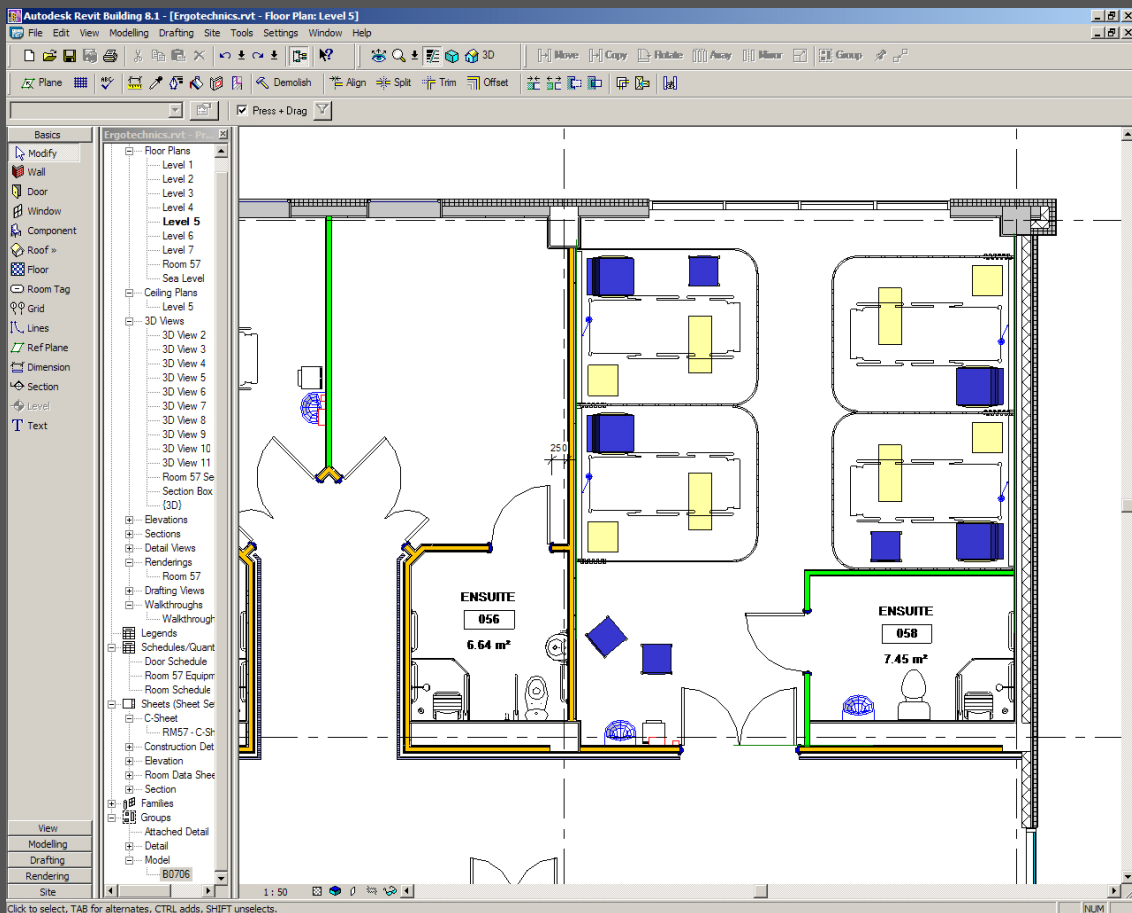
Compatibility:

AutoCAD and Microstation are used on large projects as various different consultants can produce their drawings in a format everyone else can use. Because of this it is important to show that not only can AutoCAD dwg and Microstation dgn files be exported from Revit Building, but also that these file formats can be imported into Revit Building.



Room Loading:

Once we had created rooms in our 3D Revit model from placing walls on the imported 2D dwg file the next stage was to show how the groups that Ergotechnics had created could be used to load the rooms quickly, accurately, and efficiently. These groups we have created have a huge amount of intelligence built into them: the groups have reference planes defining the minimum size for the room, and either the walls can be aligned to suit the equipment or the equipment can be aligned to suit the walls. Once the reference planes are aligned with and locked to a wall any wall mounted equipment will maintain a relationship with that wall. Likewise any equipment with a relationship to wall mounted equipment will maintain that relationship too. The example used was moving a wall in a bedroom. The headboard, bed, bedside cabinet and curtain track all moved automatically with the wall. Obviously some equipment, like chairs, are loose so do not have any constraints controlling its positioning. Although loaded into the room as part of the group, these can be moved freely.



Visibility of Equipment:

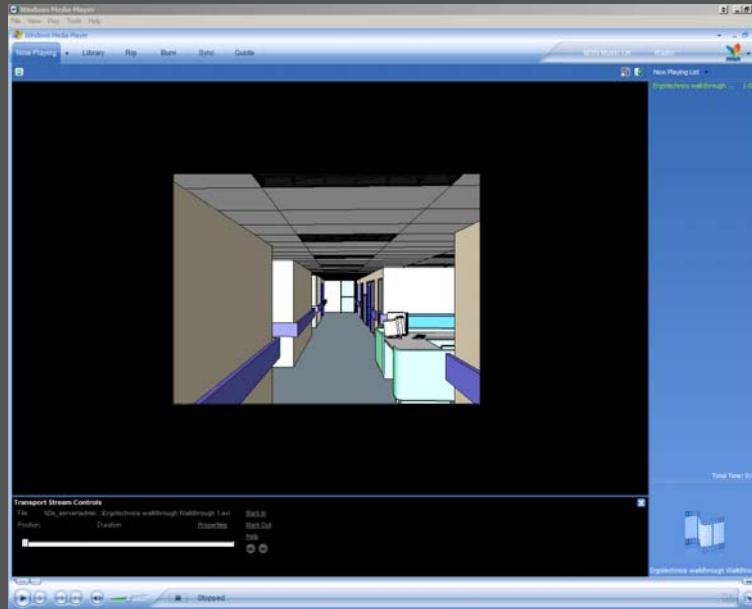
There are three groups equipment is split into in ADB: Contractor to supply and fix; Trust to supply, contractor to fix; and Trust to supply and fix. These groups, one, two and three, have been built into the Ergotechnics grouped equipment so that each room can have one or two groups switched off just as can be done in AutoCAD and Microstation.

Equipment Scheduling:

ADB and Codebook produce schedules. To show the simplicity of schedule generation in Revit Building we created an equipment schedule for the room we loaded. Once the link between Revit Building and ADB has been developed this will be able to produce a comparison between the required equipment and the designed equipment.

Animation:

To conclude the demonstration in as impressive manner as possible we created something we know that the NHS Trust are very keen on seeing. As with the generation of the 3D views we benefited from the fact that everything we had created was in 3D. This made it an easier task to draw our path and set the walkthrough to record. Finally we showed a walkthrough in avi format.



The presentation as a whole was to show that anything that can be done by ADB and AutoCAD, or Codebook and Microstation will be able to be done faster and more accurately in Revit Building, and in addition to what's required Revit can do much more.

Having shared the Ergotechnics vision there was much excitement within the Cathedral Room at Richmond House, Whitehall. Many people commented that they had felt that we had indeed shown them a glimpse into the future where everything will be available within a fully rendered 3D environment.

