

autodesk® Customer Success Story

Image: Bentel Associates International

Bentel Associates International



When Bentel Associates International (BAI) tested a new building design and documentation system, **Autodesk Revit**, on the design development of a 100 000m² mall in Riyadh, Saudi Arabia, it might have been accused of being over ambitious. The result, however, was a resounding endorsement of the software, which has advanced significantly from both a design perspective and the speed with which it creates documentation – be it a client presentation, construction documents or window schedule.

"Autodesk Revit allows us to explore spatial designs - with changes reflected immediately in all views - and to quickly generate client presentation material."

– **Edmund Batley**, director for Middle East projects, Bentel Associates International, Johannesburg

Thalia Galleria, Riyadh

BAI tried Autodesk Revit out as part of a series of pilot programmes that introduced the new software to South Africa. The technology has a 'smart', model-based approach to design, as opposed to the unintelligent, drawing-based methodology of traditional CAD packages. Autodesk Revit creates an intelligent virtual model of a project. Models are saturated with every shred of information about a structure and all documentation developed during the design process is derived from the model. 3D views, renderings, walkthroughs, plans, sections, elevations and schedules are extracted from the model. Gone are the isolated concept models that require all data to be re-created as detailed documentation.

Autodesk Revit has a revolutionary approach to digital building design, which BAI put to the test on the design development of the extensive Thalia Galleria in downtown Riyadh in the Kingdom of Saudi Arabia.

According to **Edmund Batley**, BAI's director for Middle East projects, the vast Galleria lent itself to the exploration of 3D entities and spatial manipulation much more than similar projects, which are usually planning and layout oriented.

Dynamic Spatial Composition

The retail complex is a double volume centre composed of a series of thresholds where retail entities, surfaces and materials are visually interlinked vertically and horizontally. The dynamic spatial composition includes entrance features, courts, entertainment zones and architectural features such as lifts, bridges and escalators.

"Autodesk Revit provided a digital environment that enabled us to view all spaces from any point, and for the very first time allowed us to explore the scale and nature of the design as a true 3D entity," says Batley.



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Impacting On All Facets Of The Design Process

Not only did Autodesk Revit provide an authentic digital design environment for BAI designers, its significant operational benefits impacted positively on all facets of the design development of the Tahlia Galleria project. The ease of use, automation of tedious CAD chores and elimination of coordination errors saw documentation for client presentations – renderings, walkthroughs, plans, elevations and sections – for the 100 000 m² project being created in just three weeks. One person who had completed a basic, three-day Autodesk Revit training course generated all the documentation.

“It’s the speed with which you can get something to presentation format that’s phenomenal,” says **Victor Prentice**, the associate responsible for information technology at the practice. “You can quickly create a good looking presentation that is automatically shaded – you don’t have to separately apply materials.

While the software’s ease of use and speed are a boon, its ‘revise instantly’ capability sets it apart from other older generation technologies. The unique feature means that a change made to the virtual model of a building is immediately reflected in all views – graphic or text – of the structure. A modification to the size of a beam is immediately reflected in all sections, elevations and plans. The information is also immediately updated in the appropriate schedules. Nothing has to be regenerated – all views are instantly updated.

Improved Collaboration

Another benefit of the technology noted by BAI is the collaboration it fosters between design specialists and construction specialists.

“There is much greater synchronicity between the two departments,” says Prentice. “A linear design development process can cause degradation of the integrity of designs, with construction specialists coming in after the creative team to make practical changes that impact on the look and feel of the design.

“With Autodesk Revit, both teams work on the model concurrently and construction specialists have an opportunity to make input early in the design process. Not only does it give everyone a sense of ownership of the project, but we’re better placed to give our clients the best possible quality designs,” says Prentice.

Worksets

Autodesk Revit has been designed for large teams. The building information model is stored in a single database. On a multi-user project, the database is divided into worksets, which allow the single database file to be shared between multiple team members over a network.

Worksets allow team members to work simultaneously on different parts of the building database using a local copy of the model file without interfering with the work of others. Autodesk Revit manages and coordinates changes as team members save their work to the central file location of the network. For larger, more complex projects, Autodesk Revit models can be linked together.

Autodesk Revit can be used as a stand-alone product or together with other Autodesk software tools, ensuring clear communication of design data within the extended project team. Autodesk Revit is interoperable with AutoCAD software and can import, export and link to DWG, DXF, and DGN files.

Learn More

More detailed information about Autodesk Revit is available on the Autodesk website. Visit www.autodesk.co.za or phone Amanda Wesson on (011) 805-1555 for more information about the technology.



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