



Images: Pynenburg and Collins Architects

COLLABORATING WITH CONSULTANTS

3D TRANSFER BETWEEN ARCHICAD AND REVIT STRUCTURAL

The uptake of new technology is not always smooth, but when something works well and provides a clear benefit, architects usually come around pretty quickly. ArchiCAD's IFC file transfer capabilities fall into this category and more and more architects and engineers are using IFC to exchange 3D data.

Grant Rayner, CAD Manager from Pynenburg and Collins Architects is one of the first around to use IFC technology. One of his current projects, ABN Amro House in Wellington, is a large-scale commercial building that his team has been charged with adding 5 new floors onto. When Rayner had his initial meeting with the engineers, he broached the idea of using IFC to collaborate.

"We had just received the information from Graphisoft on how to use IFC in ArchiCAD12, and it turned out that the engineers could use our IFC files on their systems, even though they were running different CAD software. As it was the first time either of us had used it, I just said 'Lets give it a go, I'll send you over a file with all our layers on it, you can turn off all the layers you don't need and see if you can use it.' I followed the simple instructions in Graphisoft's tip sheet on how to set up the IFC file and it went off without a hitch," says Rayner.

One of the major advantages Rayner sees in using IFC is the way it helps architects and engineers stay on the same page. *"Quite often, we're so caught up in our respective disciplines,*

it's hard to appreciate what the other designers are trying to achieve. In our case, the engineers are occupied with trying to hold the addition together, but we need to say to them, 'we can't have this beam here, it's obstructing head clearance in the stairwell.' It's not always easy for people to visualize from a 2D plan, so being able to share 3D really helps," he says.

Another key advantage is accuracy and attention to detail. In Rayner's case, the project had a tricky situation where two existing floors of apartments had to make way for the new addition. The engineers' initial model didn't pick up the overlap of floors, but Rayner was able to look at it and easily see that they had confused the existing 15th floor with the proposed new one.

Using IFC transfers allows for easy clash detection on a visual level, doing away with the traditional overlay of 2D files and documents that are commonly swapped by consultants to coordinate their work. *"With IFC, you don't have to run the risk of laying 2D layers over the top of each other for every floor, instead the engineers model is simply inserted relative to our model and away you go,"* says Rayner.

Although the IFC file swapping has been a resounding success, Rayner says he has learnt from his initial experience. *"Due to the design process, we were already quite well into the project when the engineers came on board, but knowing how easily we can collaborate using IFC, I would provide IFC files to them much earlier next time,"* he says.