



up close + personal with

# ben cohen

// words ara jansen



## How did you get started in the building industry?

I began as a cabinetmaker, did roof carpentry and eventually moved into building. I was working as a builder and had my own business before I moved into full-time software development. Building work was very attractive to me when I was younger because it's outdoors, physically demanding and gives you independence. But I was also always interested in computers and programming. I've always found it relaxing, like doing a puzzle.

## While you work for a well-known builder, you also have an interesting and innovative business of your own. Tell us a little about that.

Seven years ago I was running my own small building company. At the time I was doing design and construct extensions including second storeys. It's decently complicated work and I needed 3D software to help solve a lot of design issues, which are particular to second storey extensions. ArchiCAD really helped communicate the design with the client and showed them a 3D view of the house before it was extended.

I bought ArchiCAD from the local re-seller, Bruce Brunton and I ended up working for him. ArchiCAD is 3D Building Information Modelling (BIM) software. Instead of drafting lines, the designer creates a 3D model that automatically produces all the plans, elevations, sections, schedules etc. In WA, ArchiCAD is fast becoming the industry standard software for building design.

While the software could show you where the roof timbers went it couldn't show you quantities. As a builder, I also wanted

to know how long the lengths of wood were. There was no way to get this information out of the software. So I learnt something about programming, which I am now fully conversant in, and modified ArchiCAD to get quantities out of it. This tiny change to ArchiCAD grew to become a unique system of getting quantities direct from ArchiCAD. This was the seed that grew into the 4D Library.

## So necessity became the mother of invention?

Yes, this was the beginning of my software development career and later I bought the 3dEDGE Library from Bruce, renaming it the 4D Library. This has now become an extensive library of parts that takes into account local specifications, standard sizing and anything relevant to WA and much of Australia too. Ninety-five per cent of my clients are in WA but my tools are relevant for the entire Australian market.

ArchiCAD is made in Hungary by Graphisoft so it's not localised for WA. Out of the box, the user cannot automatically create documentation and 3D models that work well with local documentation practices. The 4D Library, which I sell separately to ArchiCAD, makes that all much easier. I'm continually adding components to it and it pretty much includes everything right down to the kitchen sink, literally. If you can think of a part you might buy for a house - from bi-fold doors to showerheads - it's in the library.

The 4D Library is the only product of its kind in the world made specifically for the Australian market. There are definitely other products, but nothing localised and therefore not as

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practical. It's a complete tool kit for designers and drafts people and comes with more than 160 objects, which are smart, or parametric. That means something like one window can be thousands of shapes and that's just one of the parts in the library. So the 160-plus parts in the 4D Library actually have millions of possible configurations.

**How have you used this innovation as part of your job with Blueprint Homes?**

I'm the CAD manager at Blueprint, together with the 4D Library and some customized parts we are able to extract most of the quantities we need directly from the ArchiCAD model. Things like brickwork, lintels, plaster, painting, cabinetry, door frames and furniture, electrical, concrete, metal roofing and framing are all measured from the ArchiCAD model and imported directly into our scheduling system, Databuild.

For this sort of advanced system to work at a building company, it's essential for upper management to understand and support the system. Craig Park, the general manager at Blueprint Homes, has been instrumental in enabling the quantities system to be implemented correctly. Without his commitment to innovation, the project would have been doomed.

**With the impending added star in energy ratings, how can you utilise the library?**

The 4D Library not only allows the designer to easily create great 3D models of their design, but makes the next stage - the documentation - just a few clicks away. The tedious parts of documentation, like door and window schedules, room elevations, energy and air movement compliance and electrical legends are all automated.

With the imminent arrival of 6-Star energy ratings, we are going to see big changes to our current workflow in the building industry. I recently completed the ABSA four-day course in 6-Star energy ratings using BERS energy modelling software. I have started talking with the developer of BERS to find a way to get the 4D Library and ArchiCAD to import data into the BERS software. This has the potential to be a huge time saver, allowing the designer to quickly see the impact of a design change.

**What do you like to do in your non-working time?**

I'm married with two young children so we do lots of hanging out together, whether it's at home, at the beach, somewhere like the zoo or riding our bikes. I like to mountain bike and play golf. We all love to travel. I love gadgets and I'm always looking out for what's new and interesting. **BC**



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