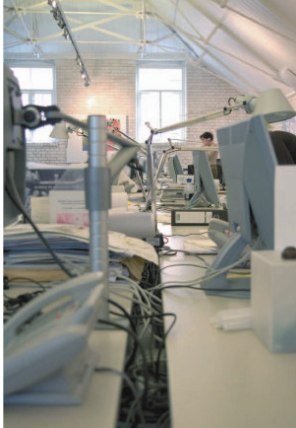


Architectural computing is about more than just design programs. BDP gave David Littlefield a behind-the-scenes look at how IT is being used to assist the administration of this massive practice.



What makes BDP tick?

Written by David Littlefield of BD. Article first published in BD on Friday May 20th 2005



BDP is no stranger to the advantages of IT. As long ago as the 1970s, the practice began developing electronic record systems, and it even put together its own cad program, called Acropolis. But by the end of the eighties, when more off-the-shelf packages began to appear, BDP realised the burgeoning software industry could relieve the practice of conjuring up its own solutions.

“We decided that designing computer software was not what we should be doing,” says Paul Davies, BDP’s Group IT Director. Even so, Davies has still got a lot on his plate.

BDP’s IT regime is spectacularly complex, as you’d expect for a practice with a dozen offices and 950 staff. Lying at the heart of this system are Progression and Informat, two products from software developer RedSky IT that help to provide BDP with what could be called an information hub.

And BDP does need an information hub. This is a practice that uses Autocad and Microstation in equal measure; it’s a practice where 95% of design staff have been issued with laptops; a practice that has introduced an internal charging regime for IT services (see box); a practice that uses a dizzying range of programs for everything from timesheets and human resources to accounts and financial forecasting; and that is figuring out how to network seven offices, including one in Paris, to produce designs for a £785 million PFI hospital complex in Leicester.

A good place to start is with Progression — an information-management system used by firms including Arup, FaberMaunsel, BroadwayMalyan and SheppardRobson. These are all big firms — and that is the point.

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Progression handles the basics, such as electronic timesheets and billing information. It contains job numbers and can accurately provide details about who has worked on what, when they did it and how much of their time ought to be charged to whom. It isn’t entirely automatic — staff still have to make a deliberate effort to log on, and timesheets still have to be signed off by a supervisor. But as a result of

installing this system, staff once employed full-time to chase paper can now be redeployed to do more valuable work.

The introduction of Progression has meant BDP has been able to control and rationalise a huge volume of projects. But because the practice is a multi-site operation, each office tended to give different job numbers to the same project, or even the same drawing. So after using Progression for five years, Davies decided it was high time to restructure all the project data held in Progression into individual contracts. This process, which took “a long time”, was complete by last Christmas and the practice now has a coherent and consolidated company-wide system in place.

More recently, Davies introduced Informat. This is a web-based “front-end” system that provides a user-friendly interface with Progression and its various plug-ins. Essentially, it’s an intranet. The beauty of this pairing is that what would normally be “back-room” information becomes easily accessible.

“It’s opening up back-office systems to front-end people,” says progression product manager Graham Long. “It stops people having to go to accounts and ask for something. It’s now self-service — you just look it up.

"And then there's Corporate Database. This is a new RedSky IT product, but one that was developed to BDP's specification (and will be called "Project Records" by the practice). It has yet to go live, but, when it does, BDP staff are promised they will be able to interrogate Progression (and other data sources) in a much more intelligent way, and they will have access to key data, such as contact details, completed jobs, project teams and so on. "You could ask something like 'how many jobs have we done with Bovis on an international scale, and who did we deal with?'," says Davies.

This kind of thing helps to prolong and protect the corporate memory. In fact, "knowledge management" has a high profile at the practice, which is working hard to make sure that expertise (or at least basic project information) doesn't walk out of the front door when a member of staff leaves the building.

One of the chief problems is changing the culture of the business to get staff used to inputting data in the first place. Davies could force the issue and introduce a series of electronic prompts to remind architects to tick the relevant electronic boxes. But he is reluctant to do this.

"You can't have all these prompts coming up every five minutes giving people forms to fill in. The process has to be as unintrusive as possible. But you do have to get the information in," says Davies. "One factor is that the people who put the data in aren't always the same people who want to extract that data."

Eventually, BDP should end up with a system that allows almost any management-related enquiry to be answered: what is the financial viability of retail work in the South-east compared with the North-west? How many jobs worth more than £10 million has the practice done, and who worked on them? The practice is also using a Progression plug-in called Proform, which provides project-based financial forecasting and cash-flow information. And, eventually, the archiving potential of these integrated systems will provide a drawing-retrieval facility on top of the disaster-recovery system currently in place.

Davies stresses that these systems don't provide a replacement for proper thinking. The data won't provide a marketing or management strategy. Neither will it tell you whether or not to pitch for a specific job — that's up to the experience and judgment of senior staff. "But the data could support a gut feeling."

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There is a good joke that Microsoft boss Bill Gates once commented that, if General Motors had developed automotive technology at the same rate as the computer industry developed, we'd all be driving \$25 cars that did 1,000 miles to the gallon. To which GM replied that, if it had developed technology like Microsoft, your car would crash twice a day, you'd have to buy a new one every time they repainted the lines on the road, and the air bag would ask "are you sure?" before deploying.

The computer industry and its solutions often seem unnecessarily complex. It seems to reside in its own parallel world of strange logic.

Earlier this month BDP opened the doors of its IT operation and gave BD a warts-and-all picture of what goes on in the back room of a large practice. It is clear that servicing an architectural practice is an almighty undertaking, requiring considerable resources and a large amount of effort. The energy expended to oil the wheels of the more glamorous design machine is amazing.

It is easy to imagine that a firm of BDP's size has all the answers and running the IT department is merely a trouble-shooting operation. In fact BDP is still wrestling with big issues such as archiving, data input and retrieval, knowledge management and the sheer cost and complexity of making the right software available to the right people. Even with the help of software developer RedSky IT, these aren't simple processes —developments take longer than intended, new initiatives take time to bed down, and different systems need to be cleverly bolted together.

You can't help thinking: "Does it have to be this complex?" No wonder less well-resourced practices resist IT solutions and prefer to keep information locked up in people's heads or in bulging filing cabinets. Often, though, IT firms do have genuine solutions to architects' problems, but you need to employ an expert just to understand the brochure.

BDP and RedSky IT have a good working relationship, but what happens when you don't have that? You have to cope with what comes out of the box as best you can. Overleaf, Designhive reviews View 5Inifinite, a program that lets you model and animate natural environments. Our reviewers say it's an excellent program. But they struggled to import lighting settings from 3DStudioMax, and found they were restricted to pre-determined heights for features such as mountains. This is plain daft. Perhaps there is a way around these problems, but you may need an IT department as capable as BDP's to find the answer.

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