DProfiler™ Macro BIM Technology

What is the innovation and why it is innovative?
DProfiler™ is a highly innovative technology that has raised the bar in preconstruction. As a "macro" building information model (BIM) solution, DProfiler™ is used during the planning and conceptual design phases to produce an accurate, simultaneous cost estimate of a proposed design. While other BIM solutions deal with "micro models" that provide value in downstream processes such as production of construction documents and clash detection, DProfiler™ is used specifically to help owners make better, more informed decisions.

Early in a project's design, an assumption gap exists between owners, architects, and contractors which often leads to an inaccurate budget. Today's process generally causes tremendous rework spurred by cost reduction efforts that occur too late in the design process. We call it "value engineering", but it really adds no value at all. DProfiler™ reduces this assumption gap by connecting intelligent data to a simple visual model. Models can be graphically modified and the domino effects of the changes can be studied in real time. Project stakeholders can now accurately compute building costs, energy costs, and site work costs in minutes and, most importantly, understand the relationship between design and cost as a team.

This interactive technology also serves as a catalyst for collaboration, sustainability, lean methodology, target value design and integrated project delivery (IPD). This innovation changes the interaction between owners, architects and contractors to create superior project value through improved predictability and reduced risk in far less time.

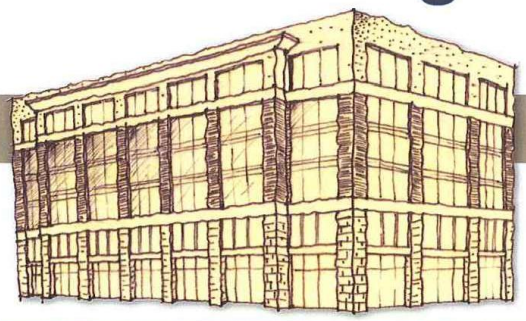
What did it change or replace?
According to the US Department of State, approximately 70% of the construction cost drivers are set during the planning and conceptual phases. Many projects start with a hand-sketch and may have an initial budget established from historical costs applied on a square-foot basis. These budgets are highly inaccurate and do not account for variations such as the site, materials used, building height, and many others. A more thorough opinion of cost may be produced by a professional estimator in a process that generally requires a few weeks and produces a detailed estimate based on their assumptions and experience. These estimates are often more precise, but not necessarily more accurate. The largest source of the inaccuracy is that the estimator's assumptions are not clearly understood by the other project participants. In short, the team is not on the same page, but they don't yet know it. Using DProfiler, the estimator's opinion is clearly understood and differences in the assumptions and expectations can be addressed immediately rather than left unchecked to bust the budget later.

Where and when has it originated, been used, and expected to be used in the future?
The 100-year old Beck Group's mission is to revolutionize the AEC industry by fundamentally re-thinking the delivery process, resulting in order-of-magnitude improvements in value. Integrating design, engineering, construction and development services into one organization, Beck is driven to eliminate the wasteful practices created when each discipline separately optimizes for their own bottom line. This mission necessitated technology that was unavailable in the marketplace, thus Beck Technology was born in the mid-1990s and DProfiler was brought to market in November 2006. Holding over 25 patents, Beck Technology now serves the AEC community working with innovative architecture, construction, and owner organizations in the US, Canada, Mexico, South Korea and Brazil including 25 of ENR's Top 100 Contractors and the US Government at the General Services Administration (GSA), Department of State, and the Army Corps of Engineers (USACE).

"DProfiler is the future of conceptual estimating," said Tim Blood, an estimator at Sundt Construction, Inc., a leading builder based in Tempe, AZ. "This is a 'napkin-sketch-level' estimating program that allows us to begin with little more than an owner's ideas and the square footage of the project and we build from there, answering all the 'what if ' questions to see how they affect cost and fit within the budget. The program provides not only a detailed estimate to the owner, but also a 3-D model of something that maybe they couldn't picture before. A huge advantage of the program is that it enables a project team to make intelligent design decisions before any investment has been made in design. We can set design parameters, which the owner can carry forward into design. This ensures that the project comes in under budget, and it also eliminates re-design. When we're done, the owner can go to their architect and know what they can afford and what their building looks like."

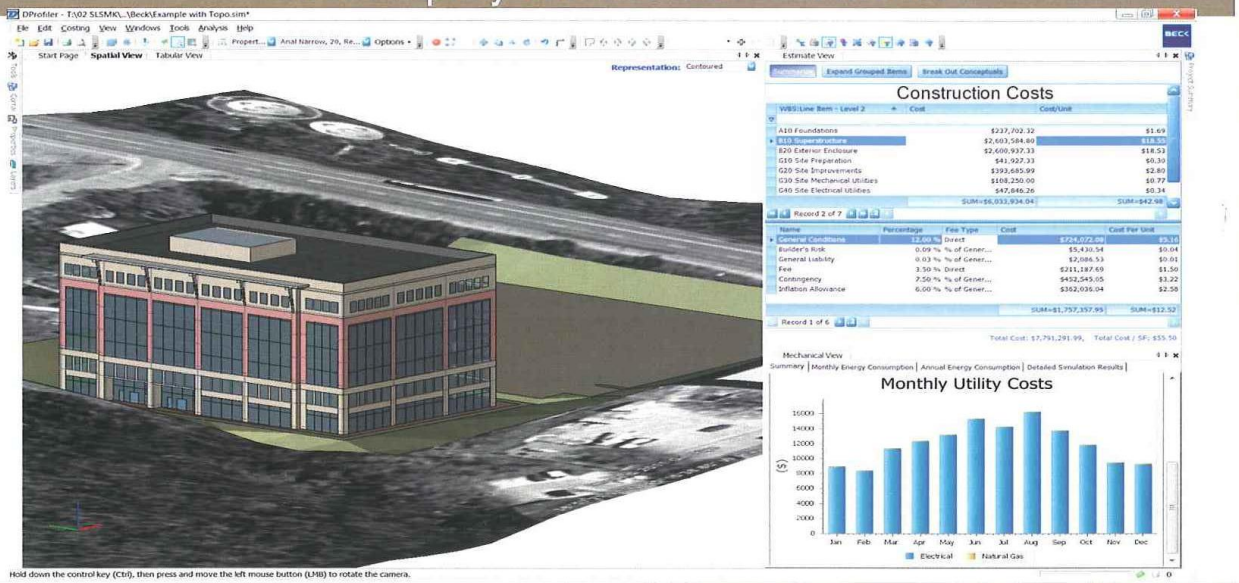
What is DProfiler?

3D Modeling + Cost Estimating



Start with a concept…

…and rapidly create a 3D cost model



When to use DProfiler?

DProfiler ← → Other BIM Tools

Macro BIM			Micro BIM		
Pre-Design	Conceptual Design	Schematic Design	Design Development	Bid Documentation	Contract Administration

While other BIM software was created for design and highly detailed analysis, DProfiler was created specifically for early budgeting and value engineering.