

editor's note



WHILE WALKING ALONG PRINSENGRACHT IN AMSTERDAM recently, I was struck by a feeling of familiarity. The 19th century row houses really didn't look much different from older

sections of New York or Boston. And when I stopped to look at a building under renovation, I thought about how little construction had changed in the past century. Sure, the stairs were steeper and the wiring and plumbing were out of date, but the overall sense of sameness remained.

But a few hours later, I listened to a presentation by Bentley Systems and my world was rocked. In Bentley's world, lasers scan existing buildings to create point cloud models with unerring accuracy. You can load your structural or mechanical model onto your iPad and then move it around a room to compare the as built results to the original plans. Smart PDFs allow you to embed structural data into pictures and digital rights management ensure the integrity of the data. You can open an i-model in Excel and quickly calculate the steel tonnage. And you can plug your model into an AECOsim energy Modeler to see how changes will effect the energy usage of the completed project.

And more Buck Rogers stuff is coming. I saw a program that will take standard Microstation images and convert them to 3D images. Project them with a \$1,400 projector and slap a pair of active matrix glasses on your client and it's like being on site (but not as cold or windy). And I saw a demo of a design model using Microsoft's Kinect as the controller. A presenter could now stand in front of a large screen and manipulate his model by moving his hands through the air.

And I expect to see a lot more in April at NASCC: The Steel Conference (April 18-20 in Dallas) where the Technology in Steel Construction Conference will also be held. The sessions kick off with an overview of existing hardware, software and services available today. Other sessions look at Integrated Project Delivery, BIM Workflow, how to extend office technology to the field and a look at the potential legal pitfalls of technology. One session even focuses on the latest technology from cutting-edge vendors, including Design

Data, AutoDesk, AceCad, Tekla and, of course, Bentley. (Visit www.aisc.org/nascc for more information.)

Of course, in reality it's not just design which has changed. When you read the pages of this magazine or walk the exhibit hall floor at The Steel Conference, you'll see how fabrication is changing and how the tools for design and construction are evolving.

And it's not just structural engineering that's changing. The entire built environment is rapidly advancing. As I sat through Bentley's presentation, I heard about the winners of their BE Inspired Awards. These projects ranged from bridges to utility distribution. If you're interested in looking at advancements in fields adjacent to your own, check out www.Bentley.com/yearininfrastructure. You'll see how various firms utilize cutting-edge software on everything from power plants to city planning.

But perhaps the best news I heard during Bentley's presentation was also the most surprising. While every economist I've heard in the last month has been full of doom and gloom, Bentley had some good news. They measure utilization of their software and not surprisingly 2010 was depressed and 2011 wasn't much better. But the end of 2011 is showing a markedly upward turn. Even in the U.S., where the economic upturn lags the rest of the world, there appears to be an uptick.

I know we're advancing technologically. I just hope we are economically, too.

See you in Dallas!

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