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A/E/C TECHNOLOGYLINK II



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High-Tech Projects Headline at A/E/C SYSTEMS 2000

Keynote #2:
On Tuesday,
June 6,
2000 Dr.

Joel Orr returns to moderate the AEC Internet Revolution panel, a two-hour intense discussion about the Internet and its ability to improve your bottom line.

The panel includes Yoav Etiel, Vice President of Marketing of Bentley Systems, Daryl Magana, President and CEO of Bidcom, Eric de Keyser, CEO of Bricsnet, Carl Bass, CEO of buzzsaw.com, Robert J. Majteles, President and CEO of Cephren, and David Lemont, CEO of Revit Technology Corporation.

One of the most exciting events at A/E/C SYSTEMS 2000 will be an event called *A Day in the Life of a Project*. This event highlights six of the industry's most visible high-tech project collaboration efforts, including:

- Haskell Company uses web-based project hosting from Meridian Project Systems for a KB Toys Project
- Cubus Corporation, The Jerde Partnership, and the Boyer Corporation demonstrate the power of technology on the 2002 Gateway Olympic Project
- HITT Contracting highlights its integration of MP Interactive's e-Builder during the construction of America Online's Dulles Campus Project
- The cooperative effort between Beers Construction and Fulton Country School System to manage lifecycle building projects using e-Builder.
- Cyra Technologies, Raytheon and Chevron retrofit Detroit Edison's Monroe Power Plant

Raytheon Improves Plant Retrofit Design with 3D Laser Scanning

Detroit Edison's Monroe Power Plant is a soaring 10-story structure built in 1971. It has a power capacity of 3,000 megawatts and is one of the largest fossil-fuel power plants in the United States. Recent regulatory requirements issued by the U.S. Environmental Protection Agency (EPA) require that the Monroe plant undergo some significant redesign and modification to meet current federal emission guidelines. Meeting these standards required the redesign of the boiler building and associated structures; the building was already crowded with equipment.

Step one, according to the project engineer, Raytheon Engineers & Constructors, Inc., was to develop an accurate as-built 3D model of the existing plant. Traditional manual walk-downs or photogrammetric methods were deemed to be far too costly, time-intensive and dangerous. Instead, Raytheon looked to a new technology called Cyra 3D laser scanning from Cyra Technologies, Inc. The scanning system is a 2-foot-by-2-foot box that sits



Oklahoma-based DigitalEPC initiated its procurement site with about \$8 million worth of materials and equipment to offer, including some \$900,000 worth of stainless steel from Switzerland.

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on a tripod. It has a range of more than 300 feet with an accuracy of 1/4" at 160 feet. Over the course of five days, Raytheon engineers moved the scanning system around the plant, capturing 3D "point clouds"—a dense grid of spatially positioned points—from which Raytheon could extract point-to-point distances immediately following a scan. Raytheon used Cyra software to convert the point clouds into 3D models for transfer to a solid MicroStation model,

including geometrical objects such as pipes, steel beams and valves. Overall, the Raytheon team believes it will save millions of dollars in subsequent rework while creating the 3D as-built model in less than half the time of traditional methods—and at a fraction of the cost!

To hear more about this project and other high-technology applications, be sure to visit *A Day in the Life of a Project* at the A/E/C SYSTEMS 2000 show.

Primavera's PrimeContract e-commerce marketplace opens online this July and promises to "sift through the noise," offering collaboration, commerce and project control in one space.

ContractorHub.com
and Actrade
Capital, Inc.

announced a strategic partnership that will enable contractors and suppliers to pay for materials and services