



## Autodesk Inventor Helps Company Create Ideal Concert Hall Experience

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### Mark Richey Woodworking Crafts Visually Stunning, Acoustically Sound Woodwork for New Performing Arts Center Using Autodesk Software

SAN RAFAEL, Calif., Aug 31, 2010 (BUSINESS WIRE) --

[Autodesk, Inc.](#) (NASDAQ: ADSK) has named [Mark Richey Woodworking](#), a high-end architectural woodworking firm, as the Autodesk [Inventor of the Month](#) for August for expert use of [Autodesk Inventor](#) software in developing and installing the precision millwork required for a new performing arts center.

Helzberg Hall is a 1,600-seat music hall that is part of the new Kauffman Center for the Performing Arts in Kansas City, Missouri. Without Inventor software, fabricating and installing the woodwork in Helzberg Hall would have taken two to three times longer--and cost three times as much--according to Greg Porfido, Mark Richey Woodworking chief operating officer.

When complete, Helzberg Hall will house the Kansas City Symphony and host other performance groups of all types and genres. Designed by architect Moshe Safdie, the organically curved, open design of Helzberg Hall will allow members of the audience to interact with each other naturally and enjoy virtually perfect sound quality.

To develop the complex woodwork for the 80-foot-tall, domed Helzberg Hall, Mark Richey Woodworking needed to ensure that each wood part aligned perfectly with other parts to create smooth, polished surfaces. Additionally, designers had to meet specific density requirements dictated by the acoustical design developed by acclaimed acoustician Yasu Toyota, as finishes, surfaces and geometry play a crucial role in the acoustic performance of a room.

#### Digital Prototyping Simplifies Complex Modeling

Training and consulting services from Autodesk Gold Partner M2 Technologies helped Mark Richey Woodworking to successfully incorporate [Digital Prototyping](#) into its processes and tackle the project more efficiently. The interference-checking capabilities of Inventor software proved particularly valuable in ensuring all the parts fit together correctly.

"Creating digital prototypes of the various wooden elements allowed us to identify and fix problems ahead of time, before we'd cut a single piece of wood," said Ritch Winokur, engineering manager at Mark Richey Woodworking. "If there were any interferences between the parts and the structural elements of the hall--or among the parts themselves--we would just remodel the part in Inventor software."

Inventor software enabled designers to digitally model the different curvatures and complex 3D geometry of each wooden part, while [Autodesk Vault Manufacturing](#) software helped them to effectively manage and keep track of the project's thousands of unique parts. This approach ensured that each wooden part aligned perfectly with other parts, letting Mark Richey Woodworking achieve the organic, smooth surfaces needed for the concert hall.

Inventor software also greatly enhanced coordination among Mark Richey Woodworking's various partners on the project, such as the metal fabricator and the general contractor. Using Inventor to check geometry that the metal subcontractor had supplied for the hall's rail work, for example, enabled Mark Richey Woodworking to catch a potential error and resolve the issue virtually, rather than on-site.

"By reducing reliance on physical prototypes, Digital Prototyping saves companies time and money," said [Robert "Buzz" Kross](#), senior vice president, Manufacturing Industry Group at Autodesk. "Mark Richey Woodworking's work on the Helzberg Hall project shows how Digital Prototyping can significantly streamline even the most complex and demanding assignments."

#### About the Autodesk Inventor of the Month Program

Each month, Autodesk selects an Inventor of the Month from the users of Autodesk Inventor software, which takes manufacturers beyond 3D to Digital Prototyping. Winners are chosen for engineering excellence and groundbreaking innovation. For more information about Autodesk Inventor of the Month, contact us at [IOM@autodesk.com](mailto:IOM@autodesk.com).

#### About Mark Richey Woodworking

Headquartered in Newburyport, Massachusetts, Mark Richey Woodworking crafts and installs high-end architectural millwork that is among the finest in the country. For additional information, visit [www.markrichey.com](http://www.markrichey.com).

#### About M2 Technologies

M2 Technologies, Inc. is a manufacturing technology firm specializing in the delivery of advanced manufacturing design solutions from Autodesk, Edgcam and other select providers. The company helps clients design, build, implement and maintain their design automation solutions. M2 is an Autodesk Premier Solutions Provider and one of the largest volume sales organizations in the United States for Autodesk Manufacturing Solutions. For more information, visit [www.m2t.com](http://www.m2t.com).

#### About Autodesk

Autodesk, Inc., is a leader in [3D design](#), engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries - including the last 15 Academy Award winners for Best Visual Effects - use Autodesk software to design, visualize, and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio

of state-of-the-art software for global markets. For additional information about Autodesk, visit [www.autodesk.com](http://www.autodesk.com).

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