



Creating Playground Rides That Are Safe and Fun with Autodesk Inventor Software

February 23, 2011

Japan's Nitto Sangyo Digitally Designs Rocking Toys

SAN RAFAEL, Calif., Feb 23, 2011 (BUSINESS WIRE) --

[Autodesk, Inc.](#) (NASDAQ: ADSK) has named Japanese playground equipment manufacturer Nitto Sangyo as Autodesk [Inventor of the Month](#) for February. Using [Autodesk Inventor](#) software, the company develops rideable toys that are safer and more durable than standard commercial playground equipment.

Nitto Sangyo designs and manufactures "Link Mini" rocking toys in the shapes of cartoon characters, airplanes, animals and other fun objects for children. Most rocking equipment relies on a large metal spring -- which can be subject to structural fatigue -- to induce rocking motion. With the Link Mini, the rideable portion is supported by an interior cylindrical pole that sways back and forth within a precisely calculated range of motion.

Since it relies on a solid inner structure rather than a metal spring, the riding portion of the Link Mini never falls to the ground, even if fatigue occurs -- making the toy safer for children to use than spring-based rides. Since only a few parts need to be replaced when fatigue occurs -- rather than the entire product -- the Link Mini is also superior not just for safety, but also in terms of cost and ease of maintenance.

A Single 3D Digital Prototype from Start to Finish

Working in conjunction with Autodesk reseller Otsuka Corporation, the Nitto Sangyo design team uses [Autodesk Alias Design](#) software to create the free-form curves of the Link Mini's rideable surfaces, ranging from dinosaurs to bunny rabbits. Importing this conceptual design data into Autodesk Inventor software enables the team to more easily carry out the next step of the process and perform structural analysis on the interior support structure. The team also performs simulations on the Inventor digital model to calculate the differing impact of varying body types of children, enabling the overall design of the ride to be modified until it meets or exceeds operational requirements.

"Using Autodesk [Digital Prototyping](#) software has been very beneficial to our product development processes," said Taro Ogura, design manager at Nitto Sangyo. "We have successfully created the Link Mini faster and at lower cost, largely due to the smooth integration between Inventor and Alias software."

Eliminating reliance on physical prototyping reduced the development time of the Link Mini by about two months, all while reducing overall costs by nearly US\$6,000 (500,000 yen) per product.

"Nitto Sangyo's unique rocking toys provide a fresh approach for playgrounds," said [Robert "Buzz" Kross](#), senior vice president, Manufacturing Industry Group at Autodesk. "Digital Prototyping is helping the company make smarter choices at every step of the design process, ultimately allowing it to manufacture equipment that performs as the designers' intend."

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.

About Otsuka Corporation

Otsuka Corporation is a Japan-based company mainly engaged in the system integration business. The Company operates in two business segments. The System Integration segment is engaged in the development of systems, the manufacture and sale of ERP products, CAD/CAM/CAE solutions, as well as the electrical and local area network (LAN) construction businesses. The Service and Support segment provides data recovery services and other support services for network systems, as well as provides educational support services.

About Nitto Sangyo Co., Ltd

Founded in 1939, Japan-based Nitto Sangyo manufactures a comprehensive range of playground equipment for public facilities. For additional information, visit www.nitto-sg.co.jp/.

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.

Autodesk, AutoCAD, Alias, Autodesk Inventor and Inventor are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. Academy Award is a registered trademark of the Academy of Motion Picture Arts and Sciences. All other brand names, product names or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

© 2011 Autodesk, Inc. All rights reserved.

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=6622003&lang=en>

SOURCE: Autodesk, Inc.

Autodesk, Inc.

Clay Helm, 415.547.2425

clay.helm@autodesk.com

or

Alyson Moses, 312.297.7430

alyson.moses@edelman.com