



## **Yazaki Successfully Deploys CAE Wire Harness Production Application Based on Open CASCADE**

*Developed to support wire harness design tasks, this new application speeds the production of 2D cabling schemes, thereby helping to ensure safety and performance in 1 out of 5 automobiles on the market today.*

([PRWEB](#)) April 28, 2002 -- Using Open CASCADE for product data management and 2D visualization, the Yazaki Corporation of Japan has successfully completed deployment of its new application for the production of automotive wire harnesses for all leading Japanese and international carmakers. The application automates the wire harness design and production cycle, providing rapid access to information while improving quality and reducing costs. The CAE Wire Harness application is installed on 550 seats in Yazaki's factories around the world.

The wire harness functions as the electronic nervous system of an automobile. To answer the challenge of the growing number of electronic devices that have caused the number of wires per vehicle to more than double in the last ten years, Yazaki has developed many innovations that aim to reduce wire diameter and weight, as well as cabling complexity. The CAE wire harness application includes a number of features that take into account these innovations and facilitate their incorporation into harness design.

The application was developed jointly by Yazaki and Nippon Steel Solutions. In addition to the data management and 2D visualization components, the Open CASCADE company provided a wide range of development services, including technical on-site assistance, a Platinum support solution and specific developments to fit the Open CASCADE components to Yazaki's particular needs.

Tailored development tools for greater automation of the cable design process

After receiving the cabling model from the carmaker, Yazaki engineers use the application to reproduce the model drawing interactively on screen in order to design how the wire harness will be produced. The application allows generating cables and verifying their length and the information necessary for wire harness production. Once the design is verified, a full-size drawing is printed and sent to the factory for production.

Open CASCADE components are necessary for on-screen visualization of the harness, as well as for the interactive services allowing the user to manipulate the model. In addition, Yazaki and Nippon Steel Solutions used the Open CASCADE Application Framework and foundation classes to cut development process time in half.

According to Masaaki Tanikawa, manager of the Third Development Department in the IT Division at Yazaki, "Open CASCADE is unique on the market. We chose to use it because of its large number of independent, open-source development components and tools, which can be readily integrated into CAE projects like the wire harness application. Since our application brings together different development environments, we were thus able to choose the most appropriate and cost-effective development tools for our project."

Yazaki Corporation

Yazaki Corporation, a leading Japanese Tier One supplier of vehicle power and data solutions to the automotive industry, manufactures and markets a wide range of products, most prominent among them the automotive



wiring harness. Other products include: instruments and components for automotive use, electric power and transmission cable, solar energy systems, and gas equipment.

Yazaki gave the Japanese auto industry its first wiring harness in 1929 and currently holds the world's largest market share. Yazaki has developed a long list of innovations which improve wire harness quality while reducing weight and girth. Among these are innovations like electronic and multiplex systems which integrate the wire harness with other electrical system component functions and the use of optical fibers in the harness itself.

"Yazaki" is the general name of a group of 73 companies, including five companies in Japan and 68 companies at 150 locations in 31 countries outside Japan. Yazaki counts 11,055 employees in Japan and 114,585 internationally. Sales were 485.9 billion yen in Japan and 349.1 billion yen internationally, as of June 2001. For further information, see <http://www.yazaki-group.com/e/>.

#### Nippon Steel Solutions

A member of the Nippon Steel group, Nippon Steel Solutions was created in April 2001 to provide system solutions that meet the new business challenges of a global, increasingly deregulated economy driven by the Internet. As a systems integrator, NS Solutions plays a central role in efficiently connecting businesses and systems and making the most of their potential.

NS Solutions optimizes its expertise and the advanced information technologies acquired in the steel industry in order to provide integration of neutral open systems. The company makes the most of leading-edge technologies and products acquired through strategic alliances with Oracle Corporation and other global firms, in addition to the advanced IT capabilities of its various laboratories for systems research and development.

NS Solutions aims to become Japan's top systems integrator by ensuring customer success through optimal infrastructure solutions -- from database construction to networking -- in industry, finance, the public sector and other major markets. Along with the construction of large-scale systems to seamlessly link corporate systems in Japan and throughout the world, NS Solutions actively develops business in new areas, including the outsourcing of services to support sophisticated IT and e-commerce solutions. The NS Solutions Internet site is: <http://www.ns-sol.co.jp/e/index.html>.

#### Open CASCADE

The Open CASCADE company brings greater productivity to industrial customers and software editors by assisting them in the creation of value-added applications. To attain this goal, Open CASCADE provides turnkey application development and a broad range of services based on an innovative open-source approach. These services include consulting, technical assistance, training and project expertise and aim to bring about the optimal implementation of the user's development project. Open CASCADE customers include leading industrial companies, software editors and research organisms, such as Alcatel Space, BMW, Bureau Veritas, CEA, EADS, Mitutoyo, RINA, Samtech and Usinor.

Open CASCADE is the leading open-source tool for 3D modeling worldwide and is used for the development of trade-specific technical and scientific applications ranging from mechanical CAD/CAM/CAE to AEC (Architecture, Engineering and Construction) and GIS (Geographical Information Systems).

The Open CASCADE components can be downloaded free of charge at: <http://www.opencascade.com/getoc>. The Open CASCADE company is a subsidiary of EADS Matra Datavision.



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