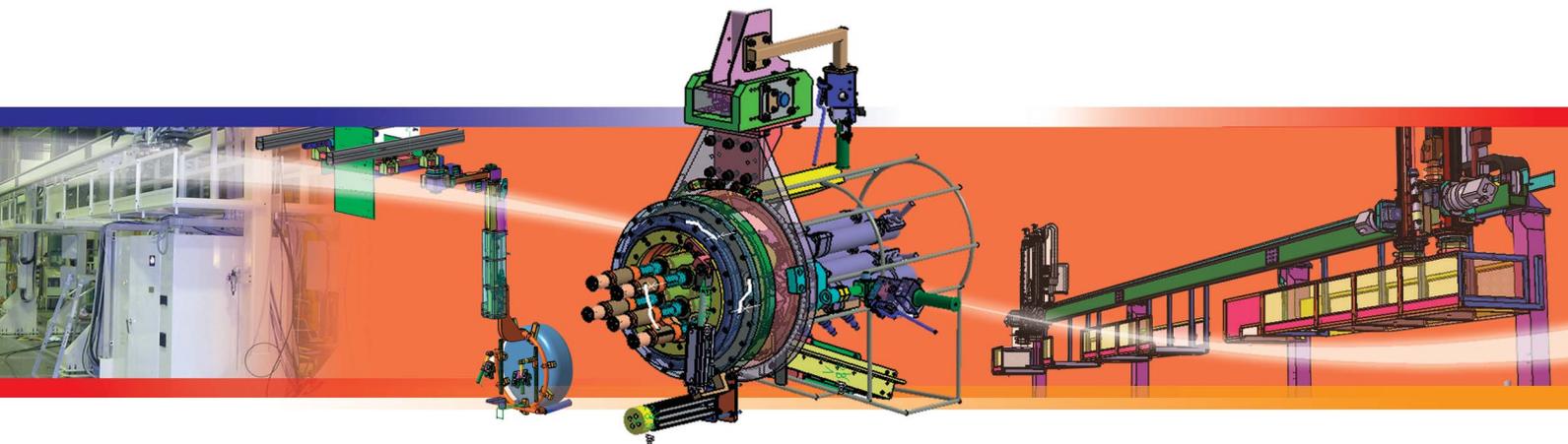


Ochiai Nexus Corporation

Connecting people and technology with CATIA PLM Express



Overview

■ Challenge

Japanese automotive production facility manufacturer Ochiai Nexus needed to streamline its design process

■ Solution

Ochiai Nexus adopted CATIA PLM Express to enhance design collaboration

■ Benefit

Collision detection at the design stage has cut the need for rework by 86%, while standardizing parts has improved design quality and reduced design time



"CATIA PLM Express allows us to design more standard parts, improve design quality and reduce design time."

Tomoki Komiya
Facility Engineering Section
Ochiai Nexus Corporation

Ochiai Nexus

Automotive conveyor and assembly machine manufacturer

Japan's Ochiai Nexus Corporation designs, manufactures and delivers automotive conveyors and assembly machines to leading automakers. Founded in 1900 as a manufacturer of agricultural equipment, Ochiai Nexus has gained a wealth of expertise in machine technology over the last century. Today, the company and its 100 employees are making significant contributions to the automotive industry through customized production facilities that meet its customers' needs.

Designing assembly machines with CATIA

Before Ochiai Nexus turned to CATIA, the company was using a 2D CAD system. Due to the increasing need to exchange 3D CAD data with its automotive customers, Ochiai Nexus

adopted CATIA in July 2004 and soon put it to use in product design, notably for assembly machines with complex surface geometry.

2D design team leverages benefits of 3D

Although Ochiai Nexus used CATIA to design complex equipment, it nevertheless considered its existing drawing database sufficient for simple equipment. However, in order to increase competitiveness, Ochiai Nexus needed to produce more precise quotations as well as exchange 3D data with automotive OEMs in addition to 2D drawings. To address these new requirements, Ochiai Nexus turned to *CATIA PLM Express - 2D Layout for 3D Design* that leverages drawing design methodology for a smooth transition to 3D.



Ochiai Nexus successfully completed a pilot implementation and the company plans to fully deploy the solution in its production environment. *2D Layout for 3D Design* enables Ochiai Nexus to import existing drawing data into 3D and to modify the 3D model by simply editing dimensions as in a drawing.

"By standardizing our design processes thanks to CATIA PLM Express, we can leverage the power of 3D throughout our entire development process thereby improving precision and shortening lead time. We are also looking forward to sharing design know-how and reducing errors thanks to CATIA's knowledge-based capabilities." stated Mr. Komiya.

Reduced rework by 86%

Prior to the introduction of CATIA, designing tire mounting machines and hub nut fasteners required the experience and intuition of experienced engineers because the shapes of these machines were so complex. And very often designs had to be revised after the prototype had been produced.

Today, it is possible to detect collisions during the design phase, even in the most remote locations. This was not possible in 2D. In one case, the total amount of rework required for a particular piece of equipment was decreased by as much as 86%.

Other advantages of using CATIA include the ability to accurately calculate design weight and to directly convert 3D design data into machining data. The weight estimation function has proved especially useful. Before, engineers had to manually calculate the design weight of the assembly line equipment, which was time-consuming and prone to errors. Now, all they have to do is select the materials to be used and CATIA automatically calculates the precise weight and locates the center of gravity.

3D data improves communications with customers

The introduction of CATIA PLM Express has also improved Ochiai Nexus's communication with its customers. "Customers find the 3D data easier to grasp, which ensures immediate understanding and improves communication," Komiya said. "This enables all stakeholders -- including customers -- to participate in the initial design evaluation, which improves productivity and reduces costs."

As one of the earliest users of CATIA PLM Express in Japan, Ochiai Nexus is moving ahead to further improve the efficiency of its design environment, with the ultimate goal of using CATIA for all its design activities.



"Thanks to CATIA, the amount of post-design rework has decreased dramatically. The more complex the shape is, the more remarkable the savings are."

Haruo Nakano
Facility Engineering Section
Ochiai Nexus Corporation



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