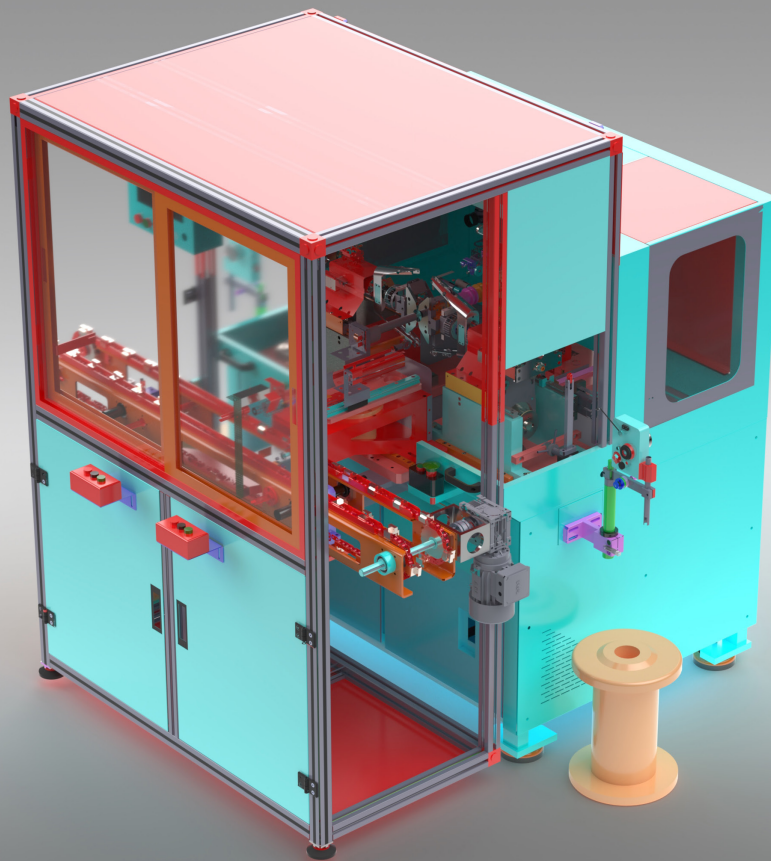


CIMTRIX SYSTEMS PVT. LTD.

IMPROVING AUTOMATION AND SPECIAL-PURPOSE MACHINERY DEVELOPMENT WITH SOLIDWORKS AND 3DEXPERIENCE WORKS SOLUTIONS

Case Study



Cimtrix Systems added **3DEXPERIENCE** Works modeling, design, data management, collaboration, and communication solutions to its **SOLIDWORKS** implementation to continue its growth as a leading manufacturer in the Indian automation industry and as the largest supplier of armature winding machines, like the one shown here, by improving internal and external collaboration, data sharing, and communication to increase efficiency, boost quality, and shorten delivery times.

Challenge:

Improve collaboration, data sharing, and communication among internal designers and engineers—comprising multiple design units in different geographic locations—and external vendors to increase efficiency, boost quality, and shorten delivery times.

Solution:

Add modeling, design, data management, collaboration, and communication solutions from the **3DEXPERIENCE** Works portfolio, which operate on the cloud-based **3DEXPERIENCE** platform—including **3DEXPERIENCE SOLIDWORKS**, Collaborative Designer for SOLIDWORKS, Collaborative Industry Innovator, and 3DSwymer roles—to its existing SOLIDWORKS installation of SOLIDWORKS CAD mechanical design, SOLIDWORKS Simulation analysis, and SOLIDWORKS Electrical CAD electrical design solutions.

Results:

- Improved internal/external collaboration, data sharing, and communication
- Reduced IT overhead by not having to purchase/maintain servers
- Cut file search time by 50 to 60 percent
- Realized data access by key personnel from anywhere worldwide

Established in 1994, Cimtrix Systems Pvt. Ltd. has grown from a retrofitting and technology upgrade services provider to become a leading manufacturer in the Indian automation industry. Today, Cimtrix is the largest supplier of armature winding machines in India and a significant solution provider of coordinate metrology equipment, which design and manufacturing engineers use to precisely measure the features of machine parts during production, in India and around the world. The company's product offering includes 3D coordinate measuring machines (CMMs), optical vision measuring machines (VMMs), and metrology solutions; motor manufacturing equipment; solutions for the battery industry; CMM measuring, 3D scanning, and reverse engineering services; AC servo motors, DC servo motors, and



"3DEXPERIENCE Works data management capabilities enable us to more easily assign the projects to the designers, track the progress of the assigned tasks, and maintain revision control and related drawing changes. We have multiple units and vendors in different locations; hence the **3DEXPERIENCE** platform is critical for managing our data while designers access design files and collaborate from all of our locations. This data management solution also reduces IT overhead in terms of adding servers and their maintenance because it is hardware-independent and operates in the cloud."

— P. Pushparaj, Head of the Design Department

drives; and special-purpose machines (SPMs) for special and custom applications.

Cimtrix designers and engineers have relied on SOLIDWORKS® solutions—including SOLIDWORKS CAD mechanical design, SOLIDWORKS Simulation analysis, and SOLIDWORKS Electrical CAD electrical design solutions—to develop the company's products since 2007. However, as the company has expanded worldwide, it has established multiple design units, which are located in different locations, and relationships with many vendors, and has experienced issues related to effectively communicating, collaborating, and sharing data among and across these groups, according to Head of the Design Department P. Pushparaj.

"We started using SOLIDWORKS in the 2007 but now we have multiple units at different geographical locations, and until recently there have been challenges in communication and data sharing with other designers and vendors," Pushparaj explains. "Collaboration and communication between our users and the vendors was becoming difficult. It used to happen through mails and Google® drives, but that approach made it difficult to track the latest designs, and we faced communication gaps.

To resolve this situation, we needed a cloud-based solution for collaborative, powerful, and connected PLM [product lifecycle management].”

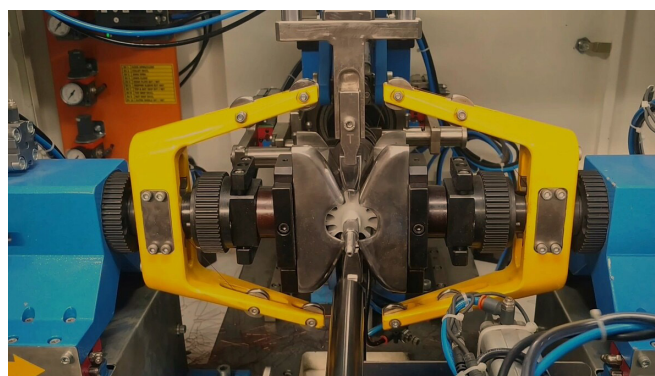
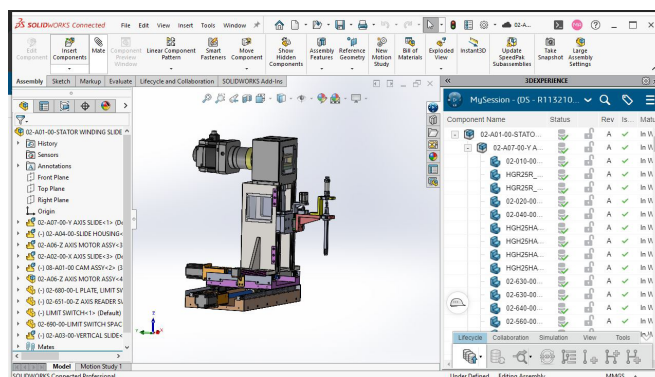
Cimtrix decided to add modeling, design, data management, collaboration, and communication solutions from the **3DEXPERIENCE**® Works portfolio, which operate on the cloud-based **3DEXPERIENCE** platform—including **3DEXPERIENCE SOLIDWORKS**, Collaborative Designer for SOLIDWORKS, Collaborative Industry Innovator, and 3DSwymer roles—to its existing SOLIDWORKS installation of SOLIDWORKSCAD mechanical design, SOLIDWORKS Simulation analysis, and SOLIDWORKS Electrical CAD design solutions.

“Our requirements were for a cloud-based solution that support easy collaboration and communication, as well as an easy way to track project progress and manage users,” Pushparaj recalls. “We began using **3DEXPERIENCE SOLIDWORKS** in January 2023 after we heard about it from BEACON, our SOLIDWORKS reseller, and then got familiar with the **3DEXPERIENCE** platform through some of the BEACON webinars and events that we attended.”

GREATER COLLABORATION FUELS GROWTH

Using the combination of **3DEXPERIENCE** Works and SOLIDWORKS solutions, Cimtrix has realized the greater collaboration, data sharing, and communication necessary to support its global growth. “The **3DEXPERIENCE** platform stands out for its collaborative capabilities, integration across the product development lifecycle, innovative tools, and cloud-based architecture, which has helped us to adapt to changing project requirements and scale as needed,” Pushparaj stresses.

“All of the tools that are required to complete our product development process—right from initial communication with vendors to the final documents shared with vendors—are all available in a single platform,” Pushparaj adds. “So, in this case, the **3DEXPERIENCE** platform saves a lot of time, and the other advantage is that vendors’ production teams can access these files on their shop floor and we can share any kind of file formats requested with the **3DEXPERIENCE** platform. Also,



With the cost-effective, transparent data management capabilities in the cloud provided by **3DEXPERIENCE** Works solutions, Cimtrix Systems has not only realized increased efficiencies through greater design reuse but also is leveraging improved collaboration to fuel its growth.

we like the user interface of the **3DEXPERIENCE** platform, which is designed to be user-friendly, making it accessible to a wide range of users, from designers and engineers to project managers.”

COST-EFFECTIVE DATA MANAGEMENT IN THE CLOUD

By adding **3DEXPERIENCE** Works data management solutions to its existing SOLIDWORKS installation, Cimtrix has realized transparent data management in the cloud without the exorbitant hardware and software costs of traditional data management systems. “Our development process begins with concept design, which is followed by prototyping, FEA (finite element analysis) analysis, and manufacturing, with FEA analysis and manufacturing completed by vendors,” Pushparaj points out. “Once the design is finalized, we proceed with manufacturing, which is followed by assembly by an in-house department.

"3DEXPERIENCE Works data management capabilities enable us to more easily assign the projects to the designers, track the progress of the assigned tasks, and maintain revision control and related drawing changes," Pushparaj continues. "We have multiple units and vendors in different locations; hence the 3DEXPERIENCE platform is critical for managing our data while designers access design files and collaborate from all of our locations. This data management solution also reduces IT overhead in terms of adding servers and their maintenance because it is hardware-independent and operates in the cloud."

FINDING AND REUSING DESIGNS MORE QUICKLY AND EASILY

In addition to fostering more productive collaboration and managing data cost-effectively in the cloud, 3DEXPERIENCE Works solutions make product design data more accessible in the cloud and make it easier to search for and find a particular file, which supports greater design reuse. "3DSearch and 6W Tags are very useful tools for us because they make it easy to search for a specific file and save 50 to 60 percent of our time," Pushparaj notes.

"The 3DEXPERIENCE platform provides us with a unified, secure place to collaborate on designs more easily, which helps keep projects and people on track," Pushparaj says. "These are good solutions to have because they not only support greater sharing of information and ideas through shared communities but are also accessible to anyone worldwide: from designers to sales personnel to anyone who needs access to product information."

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