



O2M Project

Improved learning with instructor-led training and online Companion libraries

The blended-learning approach helped reinforce concepts taught in class thanks to Companion exercises and their step by step solutions.

Bernard Wietkowski
IT Manager
Leoni

Challenge

A group of 33 companies participating in the O2M Project needed to be trained on V6 in order to build a platform that supports and streamlines the design and multi-physical simulation processes of a mechatronic system.

Solution

Partners were trained via a tailored O2M Training Program based on a blended learning approach that combined instructor-led classes and Companion online courses.

Benefits

More than 100 mechanical, electronic, systems engineers and managers were interactively trained using this blended-learning method.



O2M (Outil de Modélisation et conception Mécatronique /Mechatronic Modeling and Design Tools) is a project co-sponsored by two European Competitiveness Groups - Mov'eo and System@tic. Initiated in November 2007, the objective of this innovative R&D project is to provide a common platform for the design, simulation, and manufacture of mechatronic systems enabling a continuum of data throughout multi-engineering modeling. 33 companies from the automotive industry coming from three main backgrounds are participating in this project. They are major automotive companies such as VALEO, RENAULT, LEONI, and CONTINENTAL, together with other suppliers such as ALTAIR, CEDRAT, and LNE, and universities and academic entities that include SUPELEC, SUPMECA, and ENSEA.

A two-step process

The project was divided into two phases. In the first phase, which took place between November 2007 and July 2009, the participating partners formalized needs specifications required to perform targeted processes through scenarios based on innovative mechatronic systems addressing key automotive challenges. The scenarios identified were the design of an actuated tailgate, the design of an integrated alternator/starter reversible system and one that covers the development process of the underside of a car seat.

Once these scenarios were formalized, a list of related enhancement requests were submitted to R&D divisions from DS and the other O2M software partners so that they can develop the necessary functionalities, either on top of existing V6 products or via the creation of new products, that will enable the companies to perform each of the above-mentioned scenarios. In phase 2 participating O2M partners were invited to a dedicated workplace set up at DS campus in Vélizy, France to play an active role in validating and challenging the accuracy of DS's mechatronic platform.

Using a blended learning approach to prepare users for phase 2

Prior to the testing, partners needed to learn how to use the V6 products impacted by the enhancements they requested. For this, the DS project team designed a training program tailored to the needs of each partner and based on the DS University's blended learning approach. This would enable each user to test his/her scenario under the best possible conditions. Skill ramp-up took place in the summer of 2010 on products in the CATIA, ENOVIA and SIMULIA product lines using instructor-led classes and Companion-based learning. Approximately 100 users were trained using this method. "The blended learning approach has the advantage of enabling students to reinforce concepts seen in class with exercises and evaluations that they can perform at their own pace," explained Jefferson Terrisse, O2M workplace leader.

Leaving no stone unturned

Feedback from participating partners echoed Jefferson Terrisse's observation. Christine Vivier, in charge of the competency center at Valeo, leading automotive parts manufacturer and joint leader, with DS, of the O2M project, found the blended learning approach very practical and efficient: "Normally when we attend a class, we are so busy taking notes we sometimes miss what was said by the instructor. Using the Companion in the classroom enabled us to review concepts that were not entirely understood in class or that

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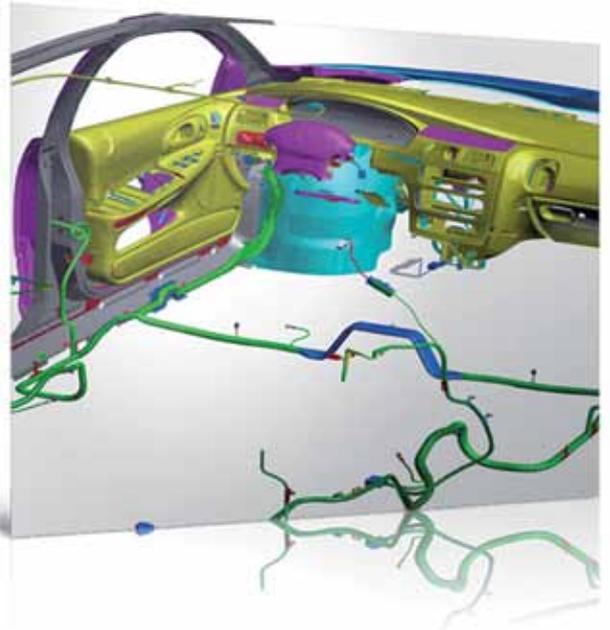
Christine Vivier
Competency center manager
Valeo

needed reinforcing and this, at our own pace.” Another aspect of the Companion are the numerous exercises available that students can perform to ensure that concepts were thoroughly understood. “The exercises were a vital part of our learning process, which is why they were systematically completed during each class,” said Christine Vivier.

Another partner, Leoni, global supplier of wires, optical fibers, cables and cable systems for the automotive and other industries, tested scenarios for the design of embedded electric wiring used in car seats. The training program attended by the 14 Leoni designers participating in the O2M project, concerned CATIA electrical products. The blended learning approach was particularly appreciated because, “it helped reinforce concepts taught in class thanks to Companion exercises and their step by step solutions,” said Bernard Wietkowski, IT Manager, Leoni. “We also tested our knowledge using the Companion quizzes, which helped us identify the concepts we would need to question the instructor about during class.”

The O2M project is an illustration of the positive synergy between DS and the partners participating in this project. Mr. Wietkowski appreciated the workshops organized at DS Campus, viewing it as a perfect opportunity to directly interact with DS engineers. “Collaborating with Dassault Systèmes engineers was an excellent opportunity for us to express our ideas and suggestions and to benefit from first-hand explanations of the developments that were made,” stated Wietkowski.

The blended approach provided an ideal learning platform for O2M partners that combined the best of both teaching methods. Attending a class, with an instructor, was complemented by Companion exercises and tests, which reinforced user knowledge and provided a well-rounded learning experience.



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