

Eurocopter Improves Product Development Operations with Web-based Visualization Solution

Eurocopter
Marignane, France
www.eurocopter.com

Industry:
Aerospace & Defense

Annual Revenue:
US\$5.32 billion

Employees:
13,000

Oracle Products & Services:
AutoVue Electro-Mechanical
Professional

“Acceptance of the software is very high, and we get many compliments for our strategic decision. Most of the functions are self-explanatory, which means that users hardly need more than 10 minutes of training.” – Manfred Seiler, Head of Technical IT, Eurocopter

The French, German, and Spanish Eurocopter Group, formed in 1992 by the merger of the helicopter divisions of Aerospatiale-Matra and DaimlerChrysler Aerospace, is the world’s leading manufacturer of civil and military helicopters. Manufacturing, maintenance services, and related activities—such as supplying airplane manufacturer Airbus with door systems, emergency exits, and cargo hatches—comprise the company’s activities.

Eurocopter, which is a subsidiary of EADS, develops its helicopters and aircraft components at three locations: Donauwörth, and Ottobrunn in Germany and Marignane in France. The company distributes production over six main plants in France, Germany, and Spain. Eurocopter also supports 16 regional offices and affiliates on all five continents to provide customer service locally.

Global distribution of development and production, and the growing trend toward outsourcing development tasks to international system suppliers represented a major challenge for the company, according to Manfred Seiler, head of Technical IT at Eurocopter. The company was outsourcing almost one-third of all development tasks, and this figure was rising. At the same time, the company faced growing pressure to reduce development cycle times and costs.

Eurocopter needed to improve the efficiency of its product development operations and other business processes. One possible starting point for improvement was the way in which Eurocopter communicated computer-aided design (CAD) data across the company.

Key Benefits:

- Improved productivity and efficiency by enabling employees in various departments to quickly and easily view computer-aided design (CAD) information
- Provided user-tailored functionality and an easy-to-use visualization system to drive user acceptance
- Enabled the sales staff to show customers CATIA designs offsite via mobile access to designs
- Integrated the visualization solution with the company's product data management solution
- Saved one man-year as users from various departments can now access the CAD data they need more rapidly and without support from the designers
- Streamlined support and software updates by providing a Web-based visualization solution

Digital product development enables Eurocopter to shorten development cycles for its helicopters, but it requires powerful tools to make the digital data accessible to non-CAD departments. The helicopter manufacturer commissioned a comprehensive benchmark to select the appropriate visualization solution. Ease-of-use, the range of supported formats, and Web-based implementation all led Eurocopter to Oracle's AutoVue Electro-Mechanical Professional (previously known as AutoVue SolidModel Professional).

Improving Access to CAD Data

In its development and design operations, Eurocopter had deployed Computer-Aided Three Dimensional Interactive Application (CATIA) V4 and V5 on 700 UNIX workstations, and most users still used the old version for their design work. Colleagues in process planning, production, quality assurance, and procurement, who generally worked on PCs, were unable to access the CAD data directly unless they had an expensive UNIX workstation. Eurocopter installed a few CAD workstations in production and process planning, but staff members rejected them because the software was very complicated.

Most departments could only access the Tagged Image File Format (TIFF) files of the released drawings in the digital archive if they wished to view or print a drawing. The representation quality, however, in the standard viewer was inadequate, particularly when viewing electrical circuit diagrams. Migration from Windows NT to Windows XP made the information flow even less satisfactory since the Windows XP viewer could not render multi-page TIFF documents correctly. The pressure to act became even greater as the volume of data exchanged with Eurocopter's suppliers grew. In addition, not all of the data was in the CATIA format. Data recipients at Eurocopter had to convert the data—an inefficient and time-consuming process—and read it into CATIA, even if they only wished to take a brief glance at a document.

Eurocopter started searching for a visualization solution that was easy to use and deploy, selecting AutoVue Electro-Mechanical Professional.

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Manfred Seiler
Head of Technical IT
Eurocopter

Ensuring Ease of Use

More than 200 employees in production, process planning, quality assurance, procurement, and technical sales are using AutoVue Electro-Mechanical Professional with growing intensity.

“Acceptance of the software is very high, and we get many compliments for our strategic decision,” said Manfred Seiler, head of technical IT, Eurocopter. “Most of the functions are self-explanatory, which means that users hardly need more than 10 minutes of training.”

Furthermore, the range of functions available has been tailored to system users in order to keep operation of the software as simple as possible. For example, the production staff now has only the functions they actually need available on their touch screens.

Eurocopter employees primarily use AutoVue Electro-Mechanical Professional to view CATIA models, but they also view CAD data in formats such as SolidWorks, initial graphics exchange specifications (IGES), Verband der Automobilindustrie - Flächenschnittstelle (VDA-FS), and AutoCAD DWG (drawing) or DXF (drawing exchange format). Of course, users can view all the demanding TIFF data from the digital drawings archive and print it in far better quality than with the standard Windows XP viewer. The software also supports various Microsoft Office formats.

A Web-based Solution

One crucial advantage of the AutoVue solution was the option of implementing the software as a Web-based solution. “In particular, viewers that support a variety of different formats need to be updated relatively frequently because some change has been made to the formats,” Seiler said. “The Web-based solution is ideal in terms of support since this means that new software versions only have to be installed once, namely on the server.”

Additional AutoVue licenses are also available to users for mobile use. These licenses can be installed locally on the users’ notebooks as standardized packages. Nevertheless, the software is always updated across the network as soon as the notebook is connected.

Staff from technical sales use these mobile licenses to allow them to show customers the CATIA models from the design department. Eurocopter also plans to equip service engineers with AutoVue Electro-Mechanical Professional so that they can use the three-dimensional (3D) models to better identify faulty helicopter components on site.

Integration with Product Data Environment

Today, Eurocopter uses its AutoVue solution in a stand-alone environment. Users can simply call the Web client and open the file they wish to view. To allow users to find files more rapidly, Eurocopter employs a Web-based system that searches all product data management (PDM) databases over the intranet, extracts the relevant file and views it in the AutoVue system. The browser-based solution also offers the option of launching a file download or making the file available for data exchange with other locations or external partners directly on the internet via a high-security server.

The Web-based query system takes account of the PDM environment at Eurocopter. In addition, the AutoVue system is directly linked to Eurocopter's SAP-based production planning system. The ease with which it can search across databases ensures a high level of acceptance among users. Eurocopter also plans to integrate its AutoVue system directly into its PDM system as the default viewer to visualize any type of document.

Impact on Bottom Line

While AutoVue certainly delivered tremendous benefits for Eurocopter, it is difficult to quantify an exact return on investment. Seiler estimated that Eurocopter possibly saved what amounts to one man-year as users from various departments can now access the 3D CAD data they need more rapidly and without having to request the data from the designers. Eurocopter realized additional benefits in the dispatch department, where staff are now using AutoVue to quickly establish the dimensions of components they need to ship. The company has not yet exhausted the solution's potential benefits. The company's United States subsidiary has decided to implement the visualization software and others are still in the decision-making process.

Eurocopter is also studying the system's digital mockup (DMU) capabilities. As Seiler explained, Oracle's AutoVue Electro-Mechanical Professional is a business-critical solution for Eurocopter.

Why Oracle?

In order to eliminate accessibility barriers and other weaknesses, Eurocopter searched for a visualization solution that was easy to use and deploy. In a comprehensive benchmark, the service provider assessed which of the various commercially available products met Eurocopter's requirements.

In addition to the software's ease-of-use, the supported data formats, and representation and print quality were also important criteria. The software's adaptability and the flexibility of the licensing model were also significant considerations. In virtually all categories, AutoVue Electro-Mechanical Professional outperformed all other solutions; and unlike the other solutions, AutoVue handled the data in the original native format. One benefit of viewing the data in its native format is that it enables extremely precise measurements in Oracle's AutoVue Electro-Mechanical Professional—an advantage particularly welcomed by quality assurance users.

Eurocopter is the world's leading manufacturer of civil and military helicopters. It is a subsidiary of EADS, a global leader in aerospace, defense, and related services.