CUSTOMER STORY

3Dconnexion

CLAAS design engineers rely on SpaceMouse® Pro and CadMouse for constructing agricultural machinery

Founded in 1913, CLAAS, a family-owned company, is one of the world's leading manufacturers of agricultural machinery. Headquartered in Harsewinkel, Germany, the company is the European market leader in combine harvesters.
CLAAS is also the market leader for another large product group, self-propelled forage harvester. CLAAS is also at the forefront of global agricultural technology with tractors and balers and forage harvesting machinery.
The product range also includes state-of-the-art agricultural information technology. It is well known that CLAAS is a very traditional company, but its working methods are extremely modern: The agricultural machines are designed with the CAD application CATIA™.

Equipping new workplaces

Currently, around 600 CAD workstations worldwide at CLAAS get equipped with new peripherals, which are then standard equipment for every design engineer. The 3Dconnexion SpaceExplorer 3D-mouse, which has been used for many years, will be replaced by its successor, the SpaceMouse Pro. In addition, users get a CadMouse instead of a normal mouse. The CadMouse is equipped with CAD-specific functions. It has a dedicated middle mouse button and an intelligent mouse wheel.

A major advantage of the two-handed operation, which is highly valued by the employees, is the improved ergonomics in the workplace because the regularly one-sided load is distributed to both hands: the left hand navigates, while the right hand takes over the editing. This improves the posture of the user, because they automatically sit upright. For design engineers who work five days a week for eight hours or more on a CAD workstation, that's a significant relief. And it also helps engineers to work more efficiently: for example, they can set the center of rotation of the object with the CadMouse and execute the rotation with the SpaceMouse Pro. „Especially for designer engineers with larger hands, the shape of the CadMouse is a significant improvement. With the standard mouse used before, after a long working day I often had the feeling of holding it too long and too strong," says Christian Bociek, CAx coordinator at CLAAS Selbstfahrende Erntemaschinen GmbH.

One of the challenges at CLAAS is navigating within deep and complex product structures, while at the same time paying attention to the sovereignty of different users. The reason for this is a cross-location and departmental collaboration on projects. For this environment the SmartScroll function and the complete locking of the scroll wheel as a mouse button are very helpful. „This allows me to navigate by scrollwheel through the tree structure or in CATIA™ through the specification tree, without running the risk of accidentally executing

functions or stretching the geometry," explains Christian Bociek. The high sampling rate of the CadMouse was praised by the CLAAS design design engineers. It enables enormous accuracy, which allows a precise navigation even within very small details. Especially in the sketching or drawing of small components of agricultural machinery, this accuracy is very important.

The coexistence of two software versions

CLAAS is one of the first companies to switch from the previous CATIA™ Version 5 to CATIA™ 3DEXPERIENCE®, Release R2013x. Of course, the roll out does not take place over one day, so both versions run in parallel. This underlines the advantages of the newly introduced SpaceMouse Pro and the CadMouse. „It makes work a lot easier that CadMouse and SpaceMouse Pro work flawlessly with both software versions," says Christian Bociek. By configuring the 3Dconnexion devices, each CLAAS design engineer can make individual settings that can vary depending on the application. The 3Dconnexion mice recognize in which environment the user is currently active and automatically adjusts the functions as well as the commands stored in the radial menu. The change from one software version to the other is therefore no limitation in the operability and the work runs smoothly. Customisation is also possible outside the CAD environment, for example when changing to Office programs, where the mouse's individual key assignment can be used for commands such as copy / paste.

Especially in CATIA™ V6, the 3D mouse is very helpful. Because some of the CLAAS products are not displayed upright in the CAD program, but in perspective on the side. This happens for historical reasons, as 2D drawings have been transferred from the drawing board to the software and supplemented by a third level - the z-axis. If gravity is activated in CATIA™ V6, with a normal mouse, the navigation in certain angles is not possible and the product cannot be rotated around a certain axis. To do this, the setting must be changed each time via the options menu. „But it's much faster and easier if the designer uses the SpaceMouse Pro to navigate," says Christian Bociek. „The 3D mouse responds properly, and all actions can be performed without having to go through the settings."

Before the introduction of the CadMouse, there was a short testing phase with five devices. The designers, who had the opportunity to take part in this test, were so enthusiastic that the decision was made quickly. The third mouse button is highly appreciated by all who work in CAD environments. Its program-specific functions or commands can be carried out much easier and faster than by clicking on the mouse wheel. „We are very satisfied as we are convinced by functions of the 3Dconnexion devices and the two-handed workflow and the navigation works smoothly and flawlessly," concludes Christian Bociek.