



MULTI-USER VR | FEBRÜ BÜROMÖBEL VIRTUAL REALITY

FLUX VR

Create and present virtual reality rooms yourself

THE TASK

Making room planning a tangible experience for the customer - that is the mission of Febrü Büromöbel GmbH from Herford.

Particularly when it comes to planning rooms and interiors, one often has to resort to two-dimensional methods in order to be able to communicate ideas and designs. This can quickly lead to misunderstandings and communication hurdles.

To overcome these, an application should be developed that takes a project that is already planned in 3D and turns it into a VR space that can be experienced together with other people using virtual reality glasses. This process should be as automated as possible so that no major additional effort is required for each room or project.

THE SOLUTION

VR App + Content Management System + Spectator mode - A well thought-out combination

In order to link directly to the existing design process at Febrü Büromöbel GmbH, a content management system (CMS) was first developed. This serves as the central control for the virtual reality worlds. Employees can export their rooms designed with the pCon.planner program into the FBX exchange format and upload them via the CMS. A background process then converts this data so that it is optimized for display in the virtual reality app. This process includes, among other things, reducing the amount of data for smooth display on the glasses without any visual loss. In addition to managing the 3D spaces, the CMS is also used to control user and authorization management. Febrü can use it to create new users as well as define which VR rooms these users should have access to. By means of a standardized log-in in system, they can then log in to the VR app, in Spectator mode and also in the CMS to create new VR worlds.

At the heart of the entire project was a virtual reality app for the Oculus Quest was created. These wireless VR goggles allow users to move around in six degrees of freedom to explore virtual spaces. Once a user logs into the app, they can download the rooms provided and shared with them via the CMS and then virtually immerse themselves in a desired room. There, all users who have currently dialed into that room are represented by virtual avatars. It is not necessary to be physically in the same place, as the link is established via the Internet. With the help of a controller, users can also travel further distances in the VR room that the real room in which they are located during use would not allow. Via a voice chat, users exchange ideas and discuss what they have seen.

The third component of the package is represented by the Spectator mode. This desktop application makes it possible to display what is happening inside a VR room for users without VR glasses. After the usual log-in, one dials into a shared room and then accompanies active users on their journey through the VR world.

THE CONCLUSION

A system that fits seamlessly

The automated conversion process reduces the additional effort to turn a normal 3D room into a VR room to a minimum. This process can be handled by Febrü and its contractual partners themselves with just a few clicks. The resulting multi-user VR worlds offer customers a completely new view of the products, which can be experienced with almost all senses.



THE ADVANTAGES

FLUX VR in spatial planning and design

... connects directly to the design process with existing tools

... does not require any conversion work on the 3D models

... helps to bridge distances and save travel time

... enables new perspectives on ideas and designs at an early stage of the design process

... can also be shared in conference situations for a wider mass of people without VR glasses

If you want to know more, just contact us, visit our demo room in Rheda-Wiedenbrück or write us a message.

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