

Bridging the gap between CAD design and Augmented Reality

CADAR

CADAR is Augmented Reality headset that enhances the familiar and known desktop modelling experience by adding an extra layer of interactivity and visibility to your workflow. It is designed mainly to be used in conjunction with a mouse and keyboard at a desktop monitor, but is also able to be used in collaborative environments with multiple users to enable the fluid communication of designs.

The CAD stage of the design process is often a stage that takes a significant amount of time and effort and can prove to be a struggle for many. Errors and mistakes are commonplace due to the complexity of this process, and these can easily add up, lengthening the process. The normal CAD experience is conventionally carried out on flat, 2D displays, often within a small viewport that is surrounded by other UI elements. This makes understanding the created 3D geometry difficult and can result in misunderstandings in size, form, and proportions. Virtual Reality technologies have proven to be very helpful when viewing and understanding 3D models due to their ability to show imagery in stereoscopic vision, and ability to allow users to naturally move around and manipulate 3D models. However, these Virtual Reality technologies are limiting in other ways as they block access to the desktop experience, cutting off access to the mouse and keyboard, which are essential tools when creating CAD models parametrically. CADAR aims to combine the advantages of VR with the familiar and known desktop CAD modelling experience

to create an Augmented Reality environment that accelerates and better informs the modelling process. It provides users with stereoscopic vision of their 3D models and uses hand tracking to add extra functionality to their workflow, all without impeding the usage of the monitor, mouse, and keyboard. Users are free to "grab" their 3D models and rotate them however they like, and interactive panels are easily placed around their AR environment to allow for a cleaner, more optimised workflow.

The familiar desktop CAD experience, enhanced and accelerated with Augmented Reality.

CADAR also allows users to work in a collaborative environment with other CADAR users who can all see and interact with the currently displayed model. This makes sharing and viewing designs a more interactive and informative experience for everyone involved.

