Digital Realities

Augmented

Mixed

Virtual

Introducing the 'Digital Realities'

Digital Realities is Theorem's product family for the Augmented (AR), Mixed (MR) and Virtual (VR) reality markets. Providing a 'Visualization Experience' for the new low-cost devices like HoloLens, HTC Vive, Android, Windows tablets and smartphones. Enabling the worlds of engineering and manufacturing to take advantage of these new technologies.

By integrating gaming technology which is the basis of the new devices with our proven ability to optimise and stream engineering data, we are bridging the gap between gaming and industry, solving challenges and creating the ultimate interactive user experience.

Built from the ground up using the Unity graphics engine the Visualization Experience delivers stunning graphical representations of your CAD and PLM data. This is a real game changer, making AR, MR and VR visualization available at a price point which makes these new technologies affordable by all, it democratises access to CAD and PLM data. Taking it out of the rarefied CAVE and Powerwall space in to the design office and shop floor.

Delivering CAD and PLM data through a graphics engine, like Unity, and then viewing it in the Visualization Experience on a smartphone, tablet or headset, enables engineers to truly experience their designs in a more natural and realistic way.

Multi-Device Technology

Being Multi-Device, the application allows you to use your CAD and PLM data, in the same visualization application, on ALL of the different low-cost devices, you are not tied to one type of device, choose the device which is optimal for your use case.

Your data only needs to be optimised and prepared for use once using Theorem's 'Optimisation and Experience Servers' and then delivers the same Visualization Experience across all supported platforms helping to save money on data preparation, training and support.

These low-cost devices are bringing an entirely new dimension to the way you can interact with your Engineering and Manufacturing data, democratising the use of AR, MR and

VR, complementing the use of Caves and Powerwall's by putting the technology in the hands of everybody.

Each device delivers its own unique experience, albeit using the same application. Choosing which one is right for you will depend upon your use case and budget, but whichever route you take, you won't require expensive hardware to run Theorem's Visualization Experience Application, or even have a need to have specialists prepare data or install and run it.

The application can be downloaded and installed on each device in minutes.

Digital Realities Visualization Experience

The Visualization Experience for the Microsoft HoloLens, Windows 10 and Android based devices can be used anywhere in the 'real-world' (creating a 'Digital-Twin') and do not require the need to be tied to a workstation, Powerwall or Cave, bringing a new dimension to how a user can visualize and experience their data. The Visualization Experience for the HTC Vive is fully immersive delivering a rich Virtual Reality experience.

Each device supports a rich visualization experience, allowing users to view, manipulate and interrogate their CAD and PLM data using a combination of hand gestures and for HoloLens voice controls.

Our Background

We have been helping engineering and manufacturing users leverage the value of their CAD and PLM assets for over 25 years. That knowledge enabled us to recognise that the new devices coming to market from the worlds of gaming, smartphones and social media was about to open up a whole new way to visualize those CAD and PLM assets. They dramatically change the cost and access to the worlds of Augmented, Mixed and Virtual reality, enabling everyone in engineering and manufacturing to have that rich visual experience.

We have been able to build on our experience of helping the worlds leading automotive, aerospace, defence, power generation, transportation and white goods OEM's and suppliers utilize their CAD and PLM assets in new technologies, to enable them to reduce their design and manufacturing cycles, whilst improving product quality.

Our history enables us to create the ultimate interactive user experiences utilising existing CAD and PLM data assets from the following formats:

Formats

- CATIA 3DEXPERIENCE
- CATIA V5
- CREO
- Inventor
- JT
- NX
- SolidWorks
- STEP

In Summary

Theorem's 'Digital Realities' simply equals:

- One application.
- One set of data.
- Multiple Devices.
- Low-cost.
- Easy to use.

If you've never experienced CAD and PLM assets in the Digital Realities realm, now you can!

Our Visualization Experience must be 'experienced' in order to realise the potential as a video, brochure or WebEx really can't reproduce the same level of emotion or interaction. You just need to decide which device best suits your requirement.

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