Meta2 headset

AR & Digital Agents
Collaborative workspace

Collaborative AR Workspace

Using the Umajin real time collaboration capabilities multiple users can participate in the same working session.

- VR head mounted: Any openVR headset such as the HTC vive can be used to view the elements in the shared workspace – inside a synthetic world. Controllers can be used to pick, point and manipulate elements. This is particularly useful for remote participants.
- AR Head mounted: Tethered AR displays or android smartphone powered AR headsets can be used to provide a view of the real world with the synthetic elements overlaid
- AR on phone and tablet: The device can act as a window into the real world with the synthetic elements overlaid. Items can also be selected for direct manipulation in a working orientation.
- 3D Gesture control: With Intel RealSense support Umajin are specialists at fingertip tracking in 3D space. This input can be added into the shared workspace for direct manipulation!

Workspace content can include items such as charts and graphs, different types of documents, 3D simulations, 3D models of equipment, vehicles, clothing or buildings as examples and 3D digital agents to provide workflow support.

Users in the same session can highlight, tag, edit/draw, comment and manipulate these items in the shared view.

Umajin's unique serious 3D engine makes any data collection, and application components able to be rendered into these environments just as it uses 3D acceleration to render even traditional flat applications. This allows users to take advantage of applications which may aid in the collaborative process to be used inside the 3D environment.

Sessions can be recorded and outputs shared with participants.

Digital Agents
A.I. augmentation

Rendered A.I. Agents

Umajin provides a set of fully 3D digital agent characters, and the ability to create new models and voice fonts.

These agents can speak and process command trees. They are able to utilise A.I. backends such as IBM Watson, Cortana or Alexa – or utilise just voice to text services and perform the natural language processing aspect directly on device.

Each participant in a shared AR session will have their own avatar to augment their experience. The avatar is used for workflow support to help complete tasks, search items or databases and adjust complex parameters in simulations.

In the example above users can ask questions of the Avatar about simulated turbine performance. This is an interactive query as they can ask for adjustments or make adjustments to the simulated model and see the results.

The key capability which makes the visual avatar productive without extensive domain specific language training is the visual interface. The avatar can present refinements to questions and commands available directly in the view. Users then know exactly what they need to say to get the outcomes they want removing a common frustration with chatbots and other forms of AI.

At the 2016 London IBM Cognitive event the first Umajin A.I. Avatar was launched. Powered by IBM Watson she was able to control the entertainment console in a Nissan Leaf car.