

Mixed Reality Training Experience

POWERED BY ADAPTIVE LEARNING & PERFORMANCE SUPPORT (ALPS)

Providing leaders with the information needed to make informed, focused decisions to improve the skills of their performers efficiently and effectively.

Northrop Grumman's mixed reality training experience, powered by ALPS, puts you in the center of the action. In this demo, you will carry out two tasks using the Microsoft HoloLens and the HTC Vive. As you complete the tasks, your performance will be tracked and the experience will adapt to your skill level providing specific training designed to improve your performance. This demo shows how mixed reality technologies can be integrated to provide realistic training to individual performers. But, more importantly, it demonstrates how a training system can adapt to individual performers' needs as well as analyze performance to identify the strengths and weaknesses of an organization.

NORTHROP GRUMMAN

ALPS

What is the system?

ALPS is an NGC system that provides the learner with customized learning paths and additional supportive materials with a focus on achieving subject mastery. System outputs feed an organizational dashboard that shows how individuals are performing and what types of early intervention might be required, which gauges the efficacy of particular learning tools for the training class as a whole. The advantage for the learner is a dynamic, tailored learning approach that leverages and supplements the individual's strengths while circumventing unproductive training approaches. From an organizational standpoint, ALPS provides the opportunity for comprehensive, long-term learning, greater return on investment for educational or training expenditures, and deep insight into which educational assets are yielding positive results.

What else can integrate?

ALPS is also able to gain additional data from Human Dimension-based assessments and biometrics—such as heart rate monitors, muscle sensors, facial recognition, and EEGs—which can be used to generate more realistic training and assessment scenarios and performance models.

How do we use it?

For this demo ALPS is tracking the user's AR and VR actions, collecting and storing user variables, dynamically adjusting the user's training based on his or her performance, and making recommendations for organizational-level training based on the total performance of all users.

AUGMENTED REALITY (AR)

What is the device?

The Microsoft HoloLens is a special augmented reality technology that superimposes 3D imagery into the wearer's view of physical space.

How do we use it?

Augmented reality enables learners to train and experience with interactive objects while still within their present surroundings. In this demo, the HoloLens is used to provide a constructed 3D view of an urban area and to allow the user to select an observation post to gather intel. The leadership decision made here will influence the user's VR experience.

How to use

- 1 Place the HoloLens on your head and adjust the fitting.
- 2 Look at the map and follow the guided instructions, which will teach you how to
 - Air tap buildings or buttons
 - Air tap and hold to zoom or pan around

How to Air Tap



VIRTUAL REALITY (VR)

What is the device?

The HTC Vive is a virtual reality headset that creates an immersive 3D space giving the user the sensation of physically interacting with the environment with the controllers and headset embedded with motion tracking sensors.

How do we use it?

In this demo, we use the HTC Vive to continue to facilitate the leadership and decision-making training in a virtual environment. The user will have to make key decisions to mark targets from the field of observation.

How to use

- 1 Place the HTC Vive on your head.
- 2 Adjust the Velcro straps on the top and side of the harness.
- 3 Pick up the controller and the training experience will guide you through the steps to collect and label intelligence.

For more information, please contact:

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