Exanaview Author 1.2

How-To Guide: Capture and move real world objects

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App Overview

The Exanaview app allows the user to create connected immersive 3D spaces in real-time in their real world environment as Augmented Reality (AR) content. The user can also create 3D objects in their real world environment.

App Content

Users can create the following content in Exanaview:

Regions: Immersive 3D geometry that represent interior and exterior spaces.

Prims: 3D geometry that connect regions and can also represent interior and exterior spaces.

Objects: 3D geometry that represent solid items.

Textures: Images that are captured from the real world environment and applied to regions, prims, and objects.

Planes: 3D surface geometry used to create AR content in the real world environment.

App Tips

When using the Exanaview Authoring App, keep the following in mind:

- Use the app in a well-lit environment with colorful patterns and details so that the AR enabled device can "see" the environment and perform adequate tracking. Avoid plain solid light colored environments with no colorful patterns or details in them.

App Screen Layout

The Exanaview Author App has the following layout:
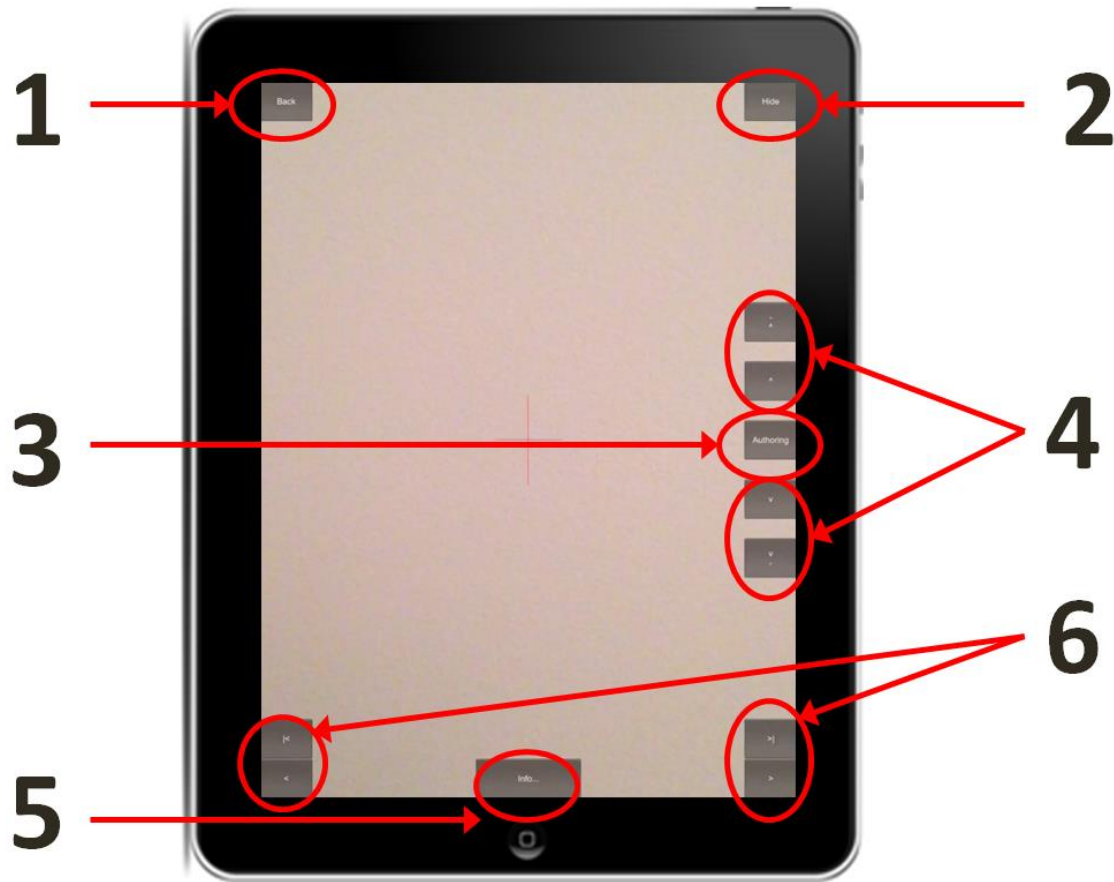
1 – Back Button: Return to previous page.

2 – Hide Button: Turn off the display of the buttons to view the AR content unobstructed.

3 – Action Group Button: Display the current action group.

4 – Action Group Navigation Buttons: Iterate through the action group options.

5 – Action Button: Perform an operation when the action button is pressed.

6 – Action Navigation Buttons: Iterate through the action options.

## Activity: Capture and move real world objects

Items used:

- Objects
- Textures

Prerequisites:

- Any room with items or fixtures that have a solid box-like structure. For example, a room with items such as a file cabinet, counter, bookshelf, fireplace, credenza, etc.
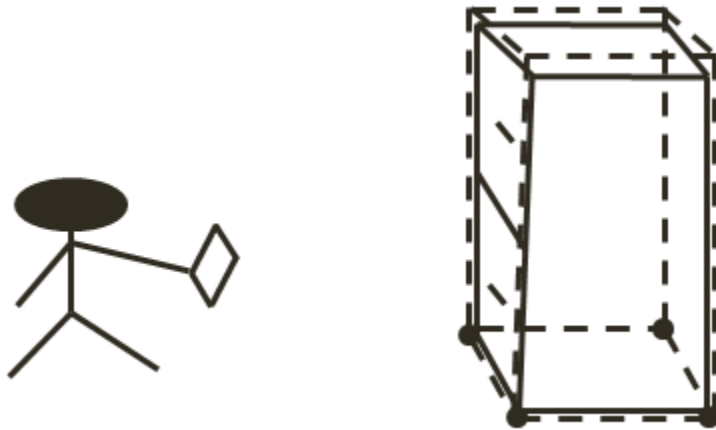
Create the 3D model of the real world object

1. Launch the Exanaview App. Follow the instructions for scanning the area and press "Done" when finished.
2. Press "Author Content" to begin creating AR content.
3. Aim the device crosshair at one of the bottom corners of the object on the ground and press "Add Point" under the "Points" group to add a point. Repeat adding points in a clockwise or counter-clockwise order at each object corner along the ground similar to the example in the image below.
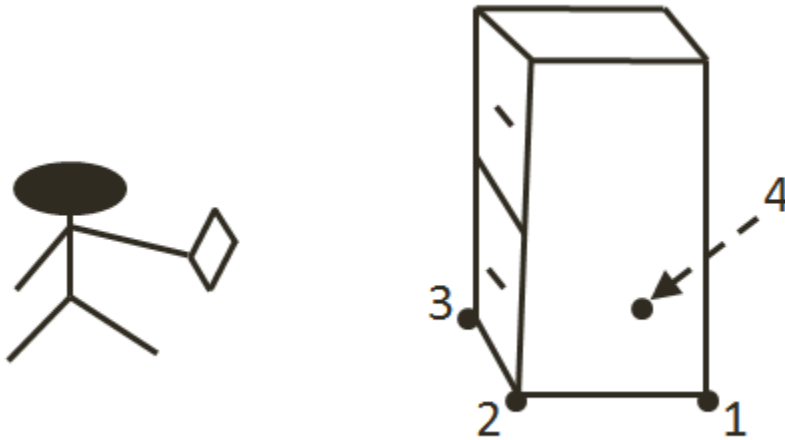
4. Press "Extrude Create Object" under the "Authoring" group to create 3D geometry that represents the approximate shape of the real world object. Swipe in a horizontal motion to adjust the height of the geometry. The height should match the height of the real world object as shown in the example

image below. Press "Done" when finished. A solid non-textured 3D model representing the real world object will be created.

Capture and apply textures to the 3D object

1. Walk around the created model and real world object until a line of sight is found that can see the most surfaces (3 surfaces in the case of this example).
2. Press "Unset Plane" under the "Planes" group. The group name should now say "Planes" instead of "Planes (*)". From the found line of sight position, aim the device crosshair at one of the object surfaces and press "Capture Object Group" under the "Texturing" group to capture an image from the view and apply it to all the visible surfaces on the created model representing the real world object.
3. Walk around to the other surfaces of the created model that don't have a texture applied to them and aim the device crosshair at the surface without a texture and press "Capture Object" under the "Texturing" group to capture and apply a texture from the current view to that single surface. Press "Back" when done capturing and applying textures to all the surfaces.

Move the created 3D object

1. Aim the device crosshair at the created 3D model representing the real world object and press "Select" under the "Selection" group to select the captured 3D model. Aim the device crosshair at any surface on the created 3D model and press "Manipulate…" under the "Manipulate" group. A coordinate triad will be displayed on the created 3D model where the device crosshair was aimed.
2. Press "Select Plane…" under the "Planes" group. The select plane page will be displayed listing the planes in the upper left corner on the device display. Press the button for the "Main Ground" plane. A "(*)" should now appear next to the name. Press the "Back" button.
3. Using the swipe gesture, move the created 3D object to a desired location. Press "Back" when done moving.

Note:

- If the active plane under "Planes" is set to "Main Ground", the user can move 3D objects around by swiping anywhere on the device screen. If the active plane is not set (a "(*)" is not displayed next to the "Planes" group name), the user must swipe directly on a 3D object on the device screen to move 3D objects.