Mobile Touch Camera

How to use

Camera

Attach the MobileTouchCamera script to the game camera. Done. Ensure proper parameter set-up. For sidescroller cameras, make sure CameraAxes is set to XY. For top-down cameras, make sure XZ is set as axes.

Note: For perspective cameras it is recommended that the ground of your scene is rooted at y = 0 for top-down cameras or at z = 0 for side-scrolling cameras. In case this cannot be ensured, the proper offset must be set in the Ground Level Offset inspector variable.

Parameters

- **Cam Zoom Min/Max**: For perspective cameras this value denotes the min/max field of view used for zooming. For orthographic cameras it denotes the min/max camera size.
- **Cam Overzoom Margin**: The cam will overzoom the min/max values by this amount and spring back when the user releases the zoom.
- **Boundary**: These values define the scrolling borders for the camera. The camera will not scroll further than defined here. Depending on the Camera Axes this either affects the XY or the XZ position of the camera.
- **Cam Follow Factor**: The lower the value, the slower the camera will follow. The higher the value, the more direct the camera will follow movement updates. Necessary for keeping the camera smooth when the framerate is not in sync with the touch input update rate.
- **Auto Scroll Damp**: When dragging quickly, the camera will keep autoscrolling in the last direction. The autoscrolling will slowly come to a halt. This value defines how fast the camera will come to a halt.
- **Ground Level Offset**: This value only needs to be changed when your ground level is not at 0. E.g. In case your ground level is not at y = 0 for top-down cameras or at z = 0 for side-scrolling cameras you need to adjust this value to the proper ground level.
- **PerspectiveZoomMode:** When using a perspective camera, the zoom can either be performed by changing the field of view, or by moving the camera closer to the scene.
- **On Pick Item (2D)**: Here you can set up callbacks to be invoked when an item is tapped on.
- **On Pick Item (2D) Double Click**: Here you can set up callbacks to be invoked when an item is double-tapped on.

Picking

For item picking & dragging, attach the MobileTouchPickable script to any pickable item that also has a collider component. Once this component is attached, you can select the item by tapping on it, and then drag it around once it's selected.

In case the collider of a pickable item is not placed at the root of the item but on a child instead, you may want to set "Pickable Transform" to the root gameObject that you want to move by dragging.

For advanced settings, attach the MobilePickingController script to the game camera. You can then tweak the following variables.

Mobile Picking Controller Parameters

- **Snap To Grid**: When set to true, the position of dragged items snaps to discrete units.
- **Snap Unit Size**: Size of the snap units when snapToGrid is enabled.
- **Snap Offset**: When snapping is enabled, this value defines a position offset that is added to the center of all objects when dragging. When a top-down camera is used, these 2 values are applied to the X/Z position.
- **Snap Angle**: When set to Straight, picked items will be snapped to a perfectly horizontal and vertical grid in world space. Diagonal snaps the items on a 45 degree grid.
- **On Pickable Transform Selected:** Here you can set up callbacks to be invoked when a pickable transform is selected.
- **On Pickable Transform Deselected:** Here you can set up callbacks to be invoked when a pickable transform is deselected.
- **On Pickable Transform Moved:** Here you can set up callbacks to be invoked when a pickable transform is moved.

In addition to the global snap offset setting on the Mobile Picking Controller, an additional local offset can be defined for particular pickables by tweaking the Local Snap Offset variable on the Mobile Touch Pickable component.

More Information

https://bitbendergames.wordpress.com/unity-asset-store-support/

Credits

Programming: BitBender Games

Asset Store Background: http://opengameart.org/content/trees-bushes

Demo Scene Graphics: http://opengameart.org/content/lpc-a-shootem-up-complete-graphic-kit

Testing Devices: Rarebyte OG

Version history

v1.4

- Added translation-based pinch zoom for perspective cameras.
- Added events for item touble tap.
- Added event for selected item updating position due to being dragged by the user.
- Added helper script FocusCameraOnItem for auto-focusing the camera on a selected item or collider.
- Switched to using a custom inspector for the MobileTouchCamera component.

v1.3

- Proper tooltips added to all inspector variables.
- Added snapping of dragged items.
- Reworked boundary clamping algorithm.

v1.2

- Moved all position update code to LateUpdate().
- Added position interpolation to fix stutter problems on iPads running games at targetFrameRate=60.
- Warnings when the camera doesn't look in the direction defined by the axes.
- Fixed position offset of picked items in orthographic camera mode.
- Fixed pinch to zoom in unity remote-testing and win-standalone mode.

v1.1

- Made the manual zoom-factor obsolete. Zooming-speed now purely depends on the distance of the fingers when pinching starts.

v1.0

- Initial release.