

UserInputGesture

General

This plug-in channel extends the Quest3D user interface to support multitouch gestures in Win 7. UserInputGesture recognizes pan, scale, rotation, and other gestures. Legacy support (single touch) still comes with the standard UserInput channel.

Children

1. wPosX: OUT pointer X position in local window space (value)
2. wPosY: OUT pointer Y position in local window space (value)
3. scaleOrAngle: OUT scale factor or rotation angle (in rad) (value)

Description

A call to this channel provides four results: If a positive value is returned, the first two children deliver the position of the pointer in screen space. Child 3 provides a factor: It delivers the actual size factor in case of a scaling gesture, or the actual rotation angle in case of a rotation gesture.

A typical application would detect the gesture type by reading the return value first and then process the children values accordingly. In order to facilitate a broad application spectrum, only absolute values are provided. It is up to the application to detect and store the initial values at the beginning of a gesture event sequence to enforce a reference situation.

A negative value of -1 indicates that no appropriate touch device was found, -2 tells that trial/lite version limits are reached. In summary, this value channel returns with:

- 2 limitations reached (trial or lite versions only)
- 1 touch not available
- 0 idle
- 3 zoom gesture active
- 4 pan gesture active
- 5 rotation gesture active
- 6 two-finger tap gesture active
- 7 press and tap gesture active

Tips

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- Use only one UserInputGesture channel.
- Gestures are not limited to 2D. In order to manipulate an object in a 3D scene, it has to be identified first with a pick operation. Any further processing is similar to well established ways of mapping screen to object/world space.
- Make yourself familiar with the touch and feel of interactions by checking other Win7 gesture enabled applications first. Slow down in the beginning and don't forget to lift up the fingers.
- Look into the the Debug window for detailed reports.
- Known problem: Quest3D editor may crash while saving or publishing a cgr, if a Preview Window is open. Remedy: close all Preview beforehand.

Legal note: Permission granted for evaluation and educational purposes only (trial version), commercial use requires an explicit license agreement (lite or full version).

Volume, runtime duration, and expiration restrictions are enforced with trial and lite licenses. Details can be found by reading the output of the Debug Window, and on my web page. Be prepared to cope with this situation in your application.

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Tutorial:

See the annotated [Gesture2Dtest.cgr](#)

A screenshot of the Debug window:

- Indicates all applicable restrictions
- Informs about the device properties

```
Previous project cleared, opened new proje
>>>> Trial license restrictions apply
- Edit access allowed through: 7 2011
- Volume restriction : 100
- Edittime restriction (min.): 10
- Runtime restriction (min.): 5
>>>> Read touch device properties:
NID_INTEGRATED_TOUCH
NID_MULTI_INPUT
NID_READY
>>>> Touch device found, flags = 193
```