

PrimeSense Labs: Grab Detector

Performing the Grab Gesture

The grab gesture recognized by this library is intended to be performed by “pinching” with all of the fingers together, as illustrated below:

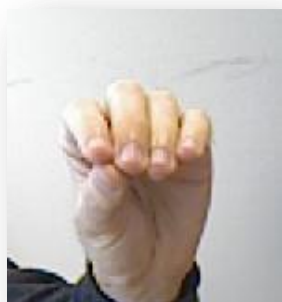


Figure 1 - Grab (front view)



Figure 2 - Grab (side view)

The user should *not* perform grab by closing the fist. Closing the fist (as illustrated below) might be recognized as grab, but possibly with degraded performance. Instead, try to perform the gesture as Figures 1-2 above.



Figure 3 - Closed fist - NOT intended grab gesture

To trigger a release gesture, simply open the hand, such as the figure below



Figure 4 - Release gesture (open palm)

Operational Setup

- Requires VGA depth & color input, with both depth-color registration and time sync enabled. See included sample for setting this up.
- The grab detector works up to a distance of around 2 – 2.5m from the sensor
- Performance may be degraded in dark rooms, as the detector makes use of both depth and color input
- Fast motions of the hand may lead to false grab/release detections
- Please note that the grab event may be fired a few frames after the actual hand closing

Developer Usage

The basic usage, as demonstrated by the included sample, is to use the NiTE hand tracker to track a hand in the scene, and use the IGrabDetector interface to detect a grab gesture on that hand. The IGrabDetector interface is updated with the latest position of the hand, and it returns grab/release events (or can be polled for latest state).

To detect grab gesture for multiple hands simultaneously, you need to create a separate IGrabDetector instance for each hand.

Note that the grab detector release includes a data file (grab_gesture.dat) which is required for using the grab detector. The location of this data file can be specified as part of the grab detector API, so you can place it in a more convenient location if desired.

See the sample & API documentation for additional information.