

EMMTI Final Project  
Gesture Definitions for Kinect Concept Map Actions

**Calibrate:**

Action: stretch arms horizontally to maximum, wave both hands upward by at least 20cm (2.54cm = 1in), and then move back.

Speed: fast (for waving upward).

Feature: adjust mapping ratio according to (arm stretch length : screen diagonal length).

**Select** a node:

Action: push right hand (or left hand) forward by at least 10cm.

Speed: very fast.

**Deselect** a node:

Action: push right hand (or left hand) backward by at least 10cm.

Speed: very fast.

**Drag:**

Action: select a node, move hand to move it, and then deselect it (using the same hand).

Speed: no requirement (for moving).

Feature 1: can move two nodes at the same time with both hands (?)

Feature 2: auto-enlarge the node immediately after grabbed, and restore to normal size when moving (?)

**Link:**

Action: move right hand to one node, left hand to another node, select both nodes at the same time.

Speed: the interval between two “select” actions should be within 1 second.

**Delete:**

Action: after the node is selected, wave right hand to the right (or left hand to the left) by at least 30cm.

Speed: fast

**Zoom:**

Action: move both hands in opposite directions, outwards to zoom in, inwards to zoom out.

Speed: slow-medium

If we allow moving nodes by both hands, zooming is not suggested to be done with gestures because it's hard to interpret whether the user wants to zoom or to move both cursors.)

**Group:** -- needed?

Action: keep two hands unmoved for 5 seconds.

Speed: zero)

Adding a node and labelling a link are suggested to be done manually in OS X.