Drawing a Graph Using Body Gestures

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KiDGraD

- Using **Ki**nect to **D**etect skeletons for **Gra**ph **D**rawing
  - A gesture-based user interface for drawing graphs
  - Recognizes specific body gestures using the Microsoft Kinect sensor
  - Evaluated a prototype implementation with a preliminary user study

Interface
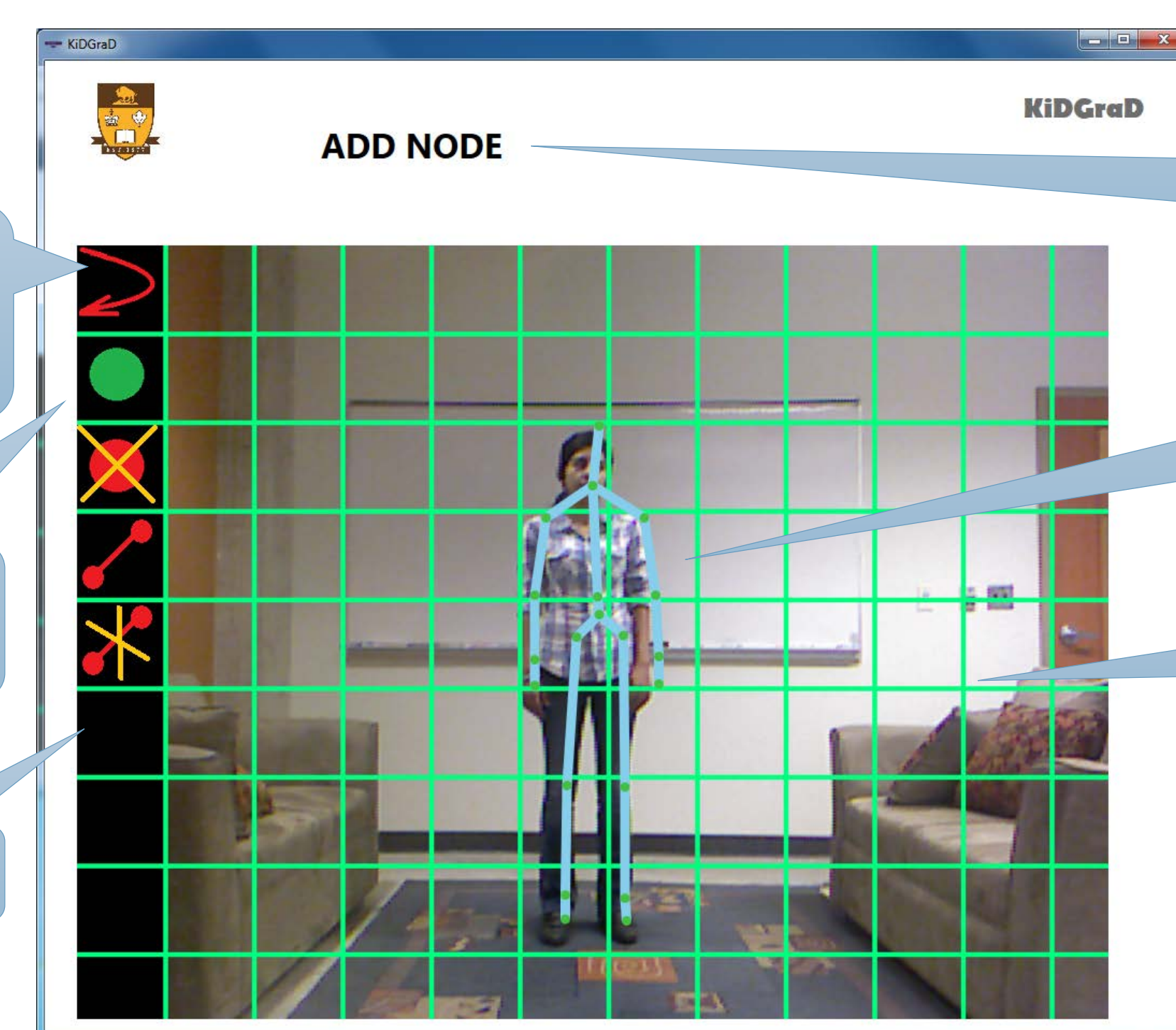
- Active command in **black** (Unlocked) or **red** (Locked)
- Reset button clears the drawing area.
- User image overlayed with skeleton in **blue**
- Active command in **green**
- Gridded drawing area
- Sidebar
- ADD NODE / KiDGraD

Features

- KiDGraD uses a Microsoft Kinect to recognize body positions and gestures
- Specific gestures correspond to selecting operations, adding or removing nodes, adding or removing edges, and selecting grid points.
- Users can select operations using gestures or voice commands.
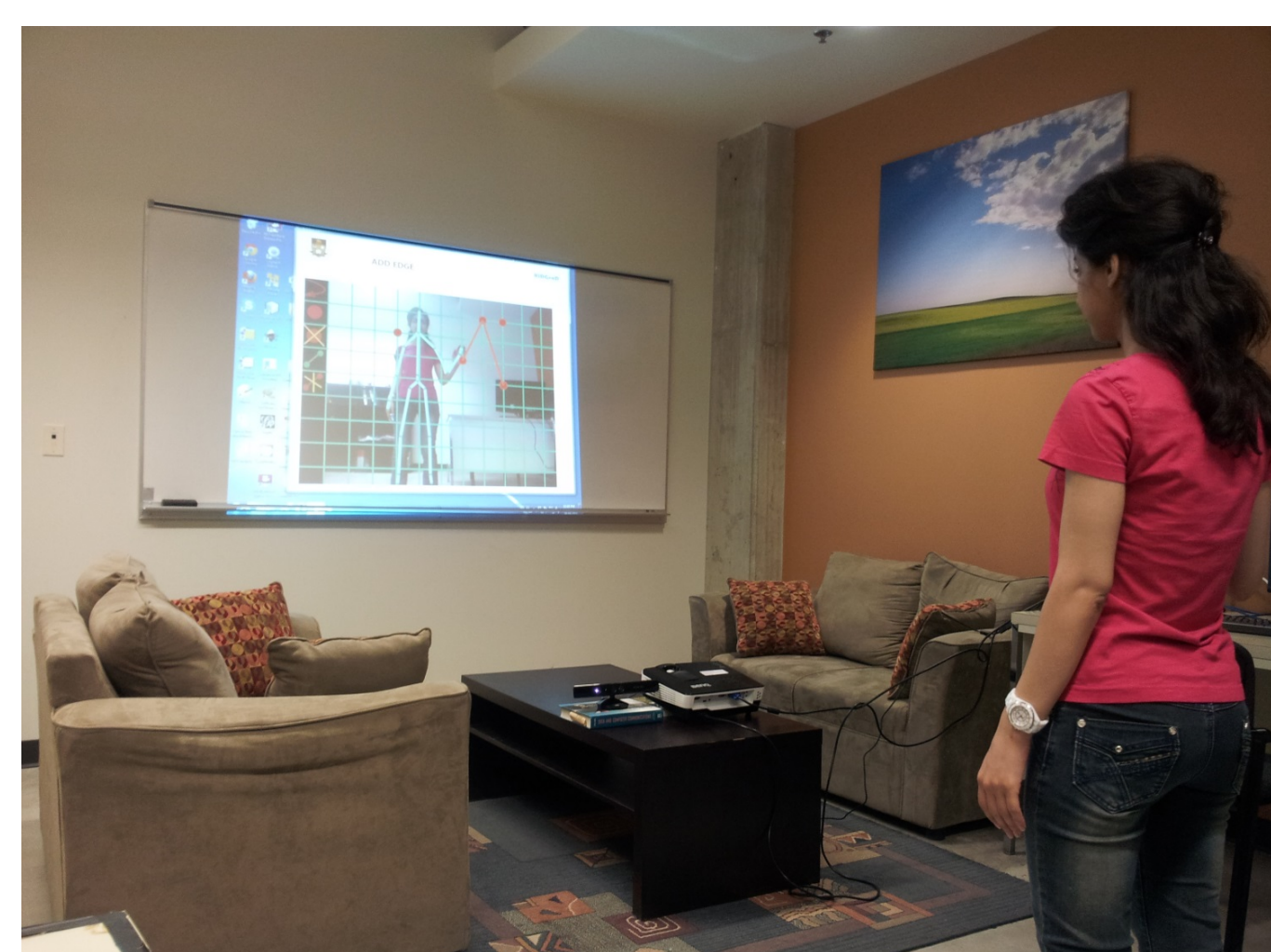
Add/Remove Node Functions
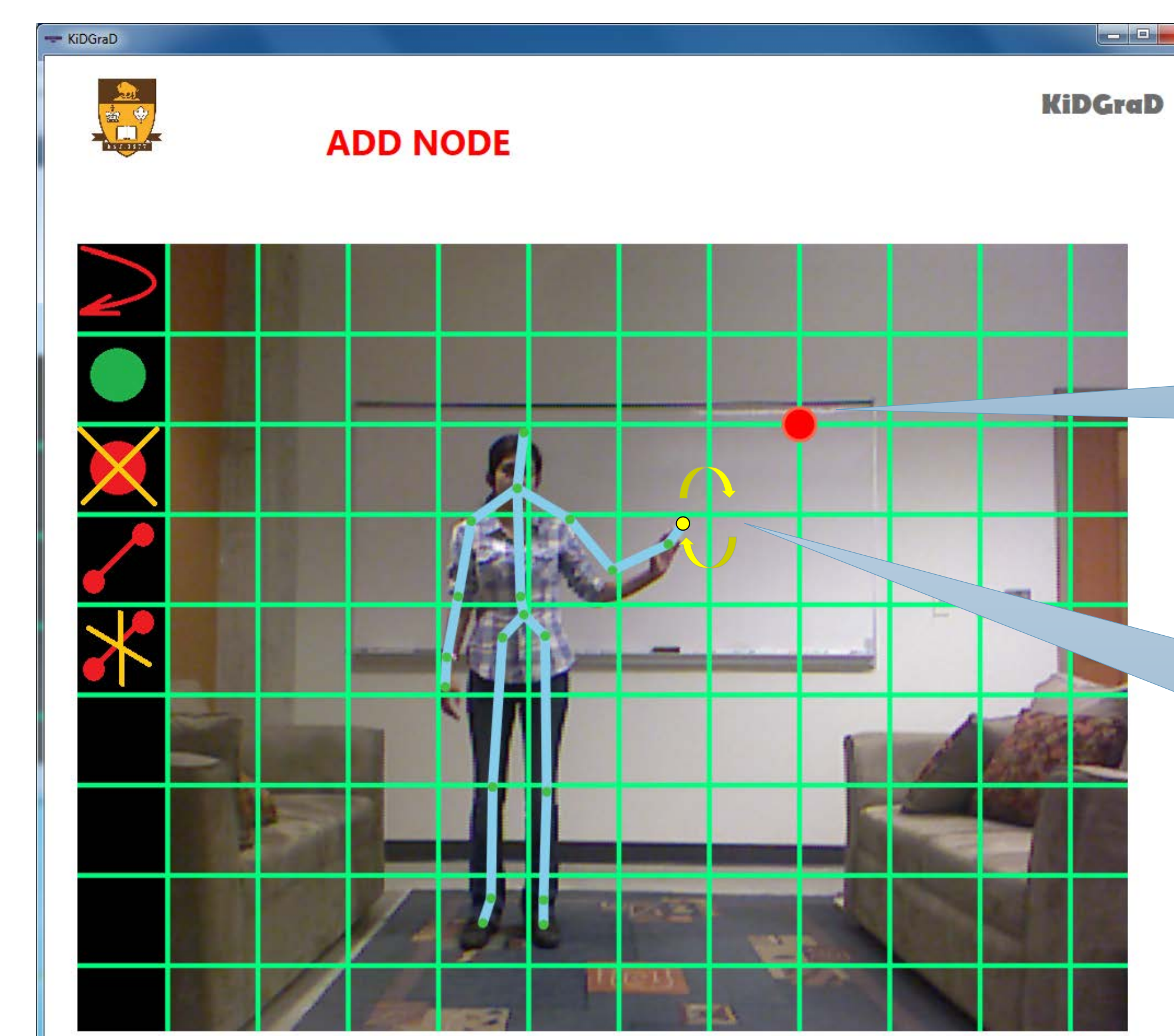
- Step 1: Activate the command.

Posture for "Add Node"

Posture for "Remove Node"

- Step 2: Draw / delete a node.

ADD NODE / KiDGraD

- Nodes are drawn in red.
- Rotate the right hand around the target grid point twice.

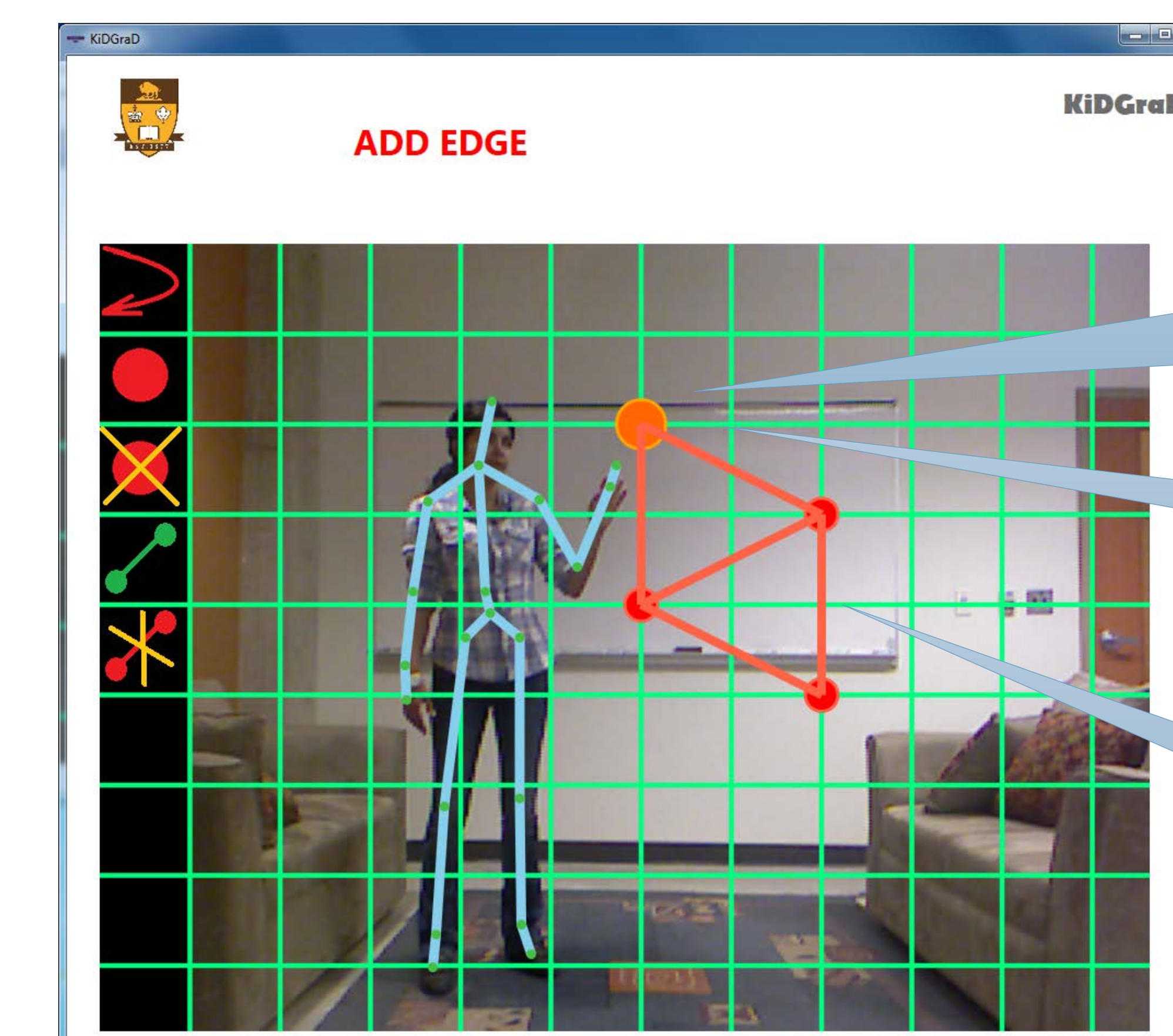## Add/Remove Edge Functions

- Step 1: Activate the command.

Posture for "Add Edge"

Posture for "Remove Edge"

- Step 2: Choose the endpoints of the edge.

ADD EDGE / KiDGraD

- Rotate the right hand around the target grid point twice.
- The first selected endpoint flashes.
- Edges are drawn in red.