Two-Handed Gesture Datasets

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1 Two-Handed Gesture Datasets

- Goal: use of both hands to manipulate objects in 3D space,
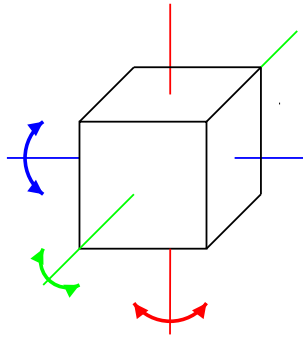
- Applications: games such as Tetris 3D.

Figure 1: The 6 possible rotations for a cube in 3D.

1.1 Set-up

- Two cameras (standard Webcam with USB port) to capture two-handed gestures occurring on a desk in front of a display (Figure 2).

Figure 2: The setup: two synchronized USB webcams.

- Synchronized acquisition at 12 images per seconds.

1.2   The database

This database consists of 7 different two-handed gestures.

(a) Rotations in all the 6 directions and a "push" gesture (Figures 1 and 3):

- Rotate front / rotate back,
- Rotate up / rotate down,
- Rotate left / rotate right,
- Push.

Figure 3: Example of two-handed gestures.

(b) Total number of records:

- Number of persons: 7
- Number of sessions per persons: 2
- Number of records per sessions: 5

Thus, a total number of 10 video sequences per persons and per gestures.
The average duration of sequences is no more that 2 or 3 seconds.

(c) Train/Test protocol:

- 4 persons have been used for training,
- the 3 others for testing.

(d) Available for download at: `http://www.idiap.ch/ marcel/Databases/twohanded/main.html`.