3D visualization for Handle datasets and distributed hand accelerometers

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Objectives:

- Using gravity as a vertical reference for finger pose estimation.
- Visualization of the hand configuration based on finger pose.

Data:

- Distributed data acquisition architecture.
- Multi-platform C programs and Python scripts for data acquisition.
- XML Storage.

Visualization:

- Pre-processing of XML with Matlab.
- Python scripting for linking data to visualization.
- 3D Blender for 3D visualization.
- Multi-platform C program with QT framework for 2D visualization.

Results:

- Visualization results using Blender and Matlab for processing the XML files of a dataset.
- Result of using the visualizer in a M.Sc. Thesis where a distributed hand accelerometers were used.

Future results:

- Unified software for 2D/3D sensor representation.
- Public release of the software.
- Intuitive and easy-to-use software package.