

Brainstorm

Jens Christensen

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Tracking

- depth
- optical flow
- Template matching
- Orientation
- GoodFeaturesToTrack()
- object recognition
- Multiple cameras
- Multiple objects at the same time
 - Give the tracked object a unique name
 - Mark it (with a rectangle/ellipse ...)
- Object detection
 - Find an object and start tracking it
- Draw
 - ROI (Region of interest)
 - Circles/Rectangles ...
 - Points to be tracked
 - Fill region

Image processing

- Scaling
- RGB/Grayscale
- Change image type
- Canny
- Hough Lines
- Color Histogram
- FindContours()
- Masking
- Filters
 - Gaussian
 - Smooth()

Data structures

- kdtree
- Octree
 - Spatial indexing
 - Nearest neighbor search

Calibration

- Get actual distance
- Find Reference points
- Use multiple kinects

Graphical user interface (GUI)

- Save data
- Set objects to track
- how to track
- Data
 - FPS
 - Which objects is currently tracked
 - 3D map of the path the object has taken
 - Coordinates

App