

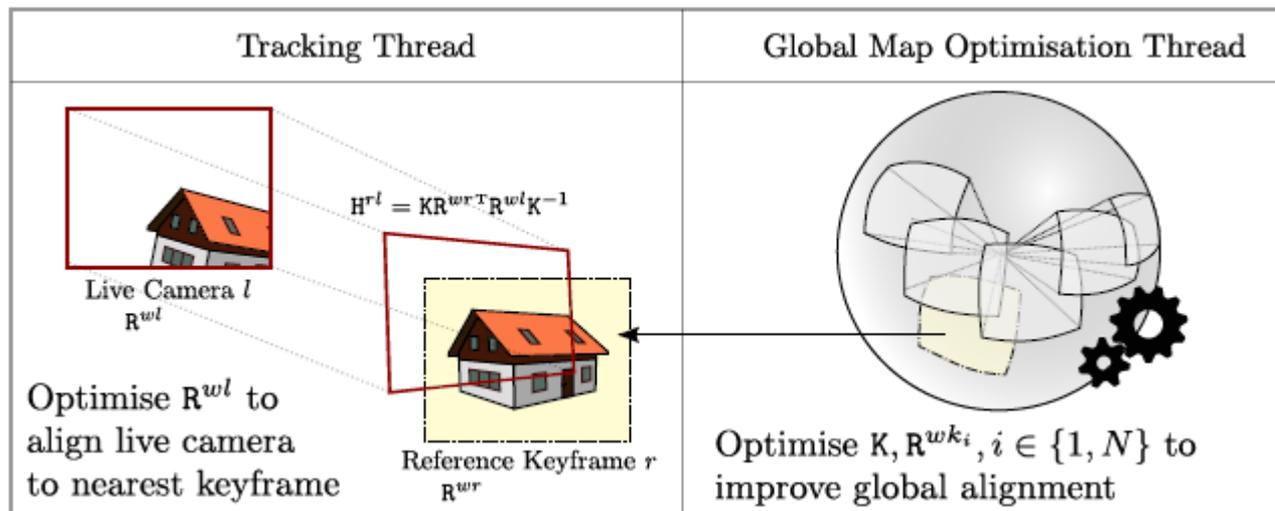
Real-Time Spherical Mosaicing using whole image alignment

Project Proposal

team5

Task clarification

Implement real-time video mosaicing algorithm based on parallel image alignment via ESM and global optimization of a map of keyframes over the whole viewsphere.



Solution Implementation

- Local Motion Estimation
 - **Status**: done according to the paper
 - Comment: whole image alignment + ESM
- Global Map Optimization
 - **Status**: in process
 - Comment: ESM
- GPU implementation using OpenCL
 - **Status**: already using pyopencl
 - Comment: memory vs. performance

Solution Implementation

- Real-time video camera tracking
 - **Status:** test implementation is done
- Parallel threads implementation
 - **Status:** already done in camera tracking
 - Comment: may need revision in ROS implementation
- ROS implementation
 - **Status:** test implementation is done
- Relocalisation (Recovery from Tracking Loss)
 - **Status:** planned
- System performance/accuracy estimation
 - **Status:** planned