

Automatic Pose Synchronization

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Project Requirements Presentation

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Background and Motivation

- Computer aided medical procedures
 - Different medical instruments and robots move separately
 - Multiple pose information streams
 - Different instrument positions → different lags at different times
 - Actual position and orientation is crucial

Problem Statement

Synchronize different pose streams in time

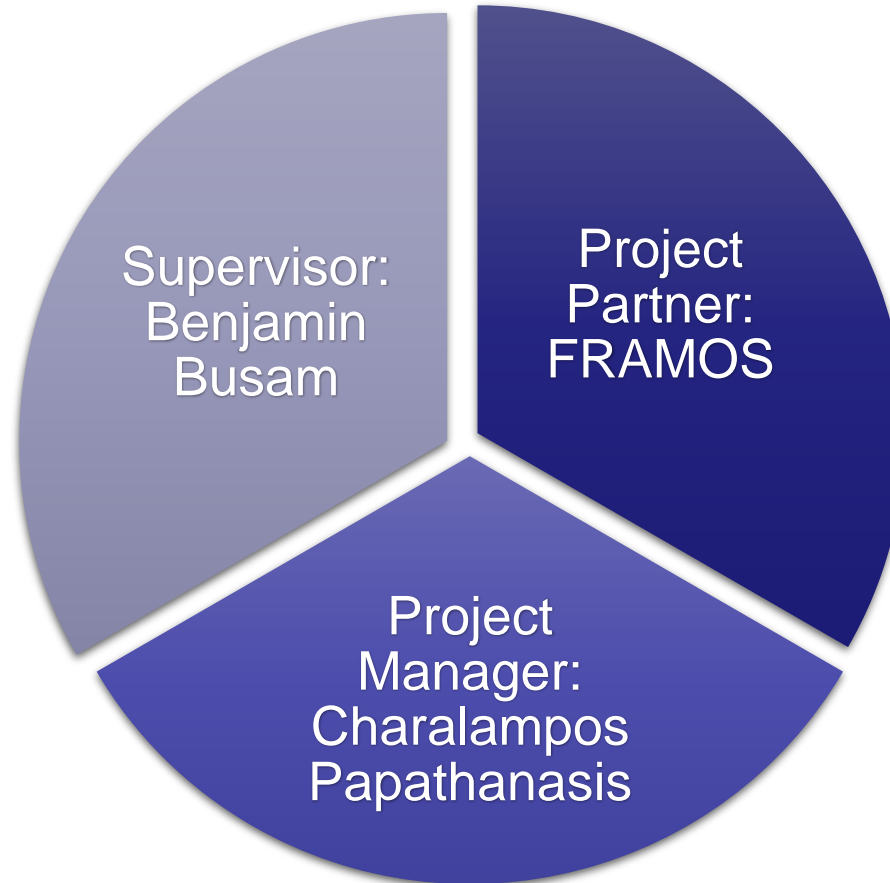


Lag minimization



https://www.sapling-inc.com/blog/wp-content/uploads/2011/04/GettyImages_85406496.jpg (24/10/16)

Stakeholders



Requirements and Specifications

- Use of Quaternionic Upsampling¹
- Alignment of different tracking streams
- Visualization Framework
- Demo

Source: B. Busam, M. Esposito, B. Frisch, N. Navab **Quaternionic Upsampling: Hyperspherical Techniques for 6 D-o-F Pose Tracking** International Conference on 3D Vision (3DV), Stanford University, California, USA, October 2016

Tasks

Communication interface

Quaternionic Upsampling

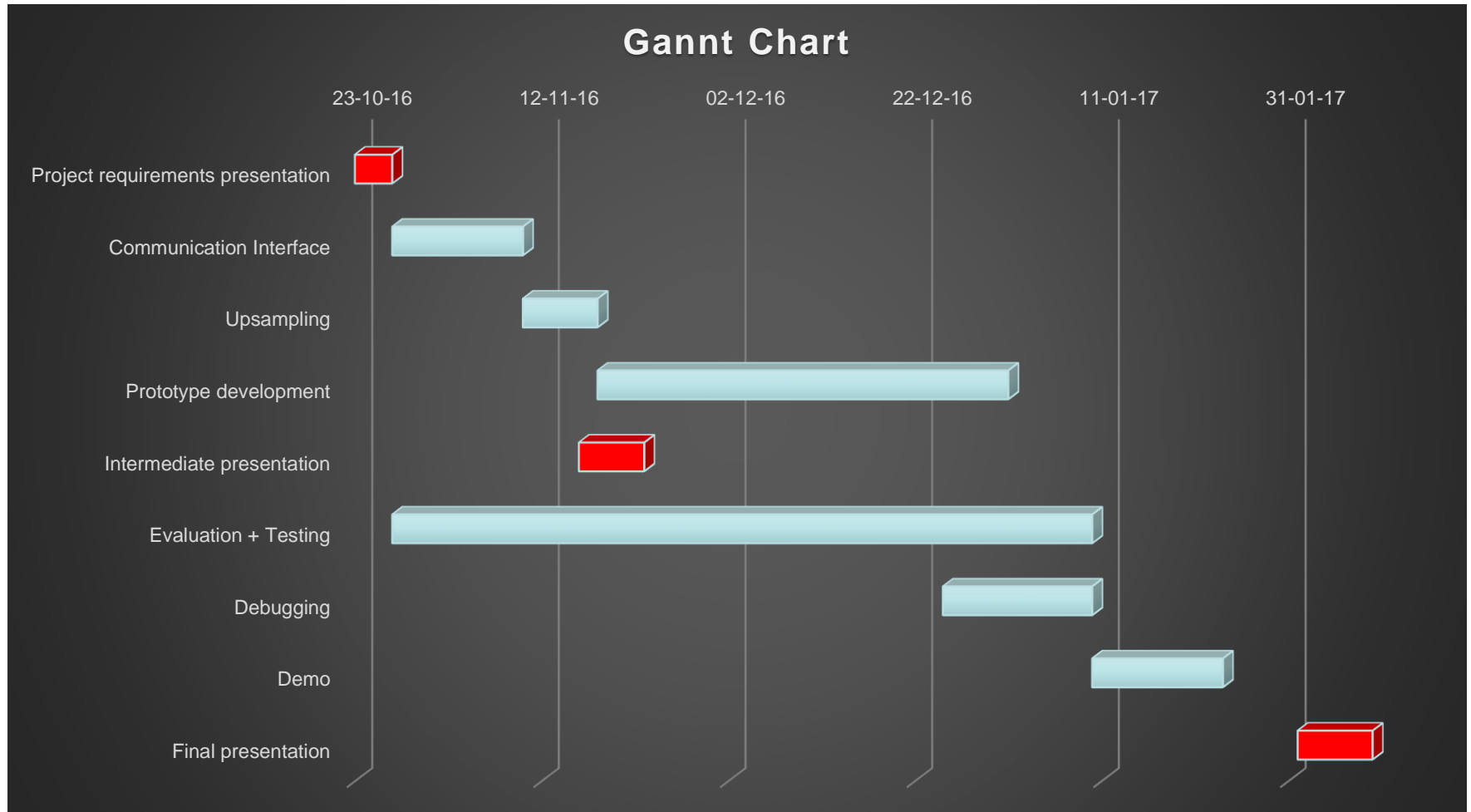
Prototype – Synchronization of artificial data streams

Real time poses evaluation

Debugging

Demo

Work Packages and Milestones



Thank you!

Questions??