



*Project Management and Software Development for
Medical Applications*

A Virtual Multi-View Optical Tracking System

Project Requirements Presentation – 27OCT16

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Supervisor: Benjamin Busam

Partners: FRAMOS & IFL

Presented by: Mahdi Hamad

Background and Motivation

Need to track medical instruments and imaging devices

All available solutions suffer from some problem

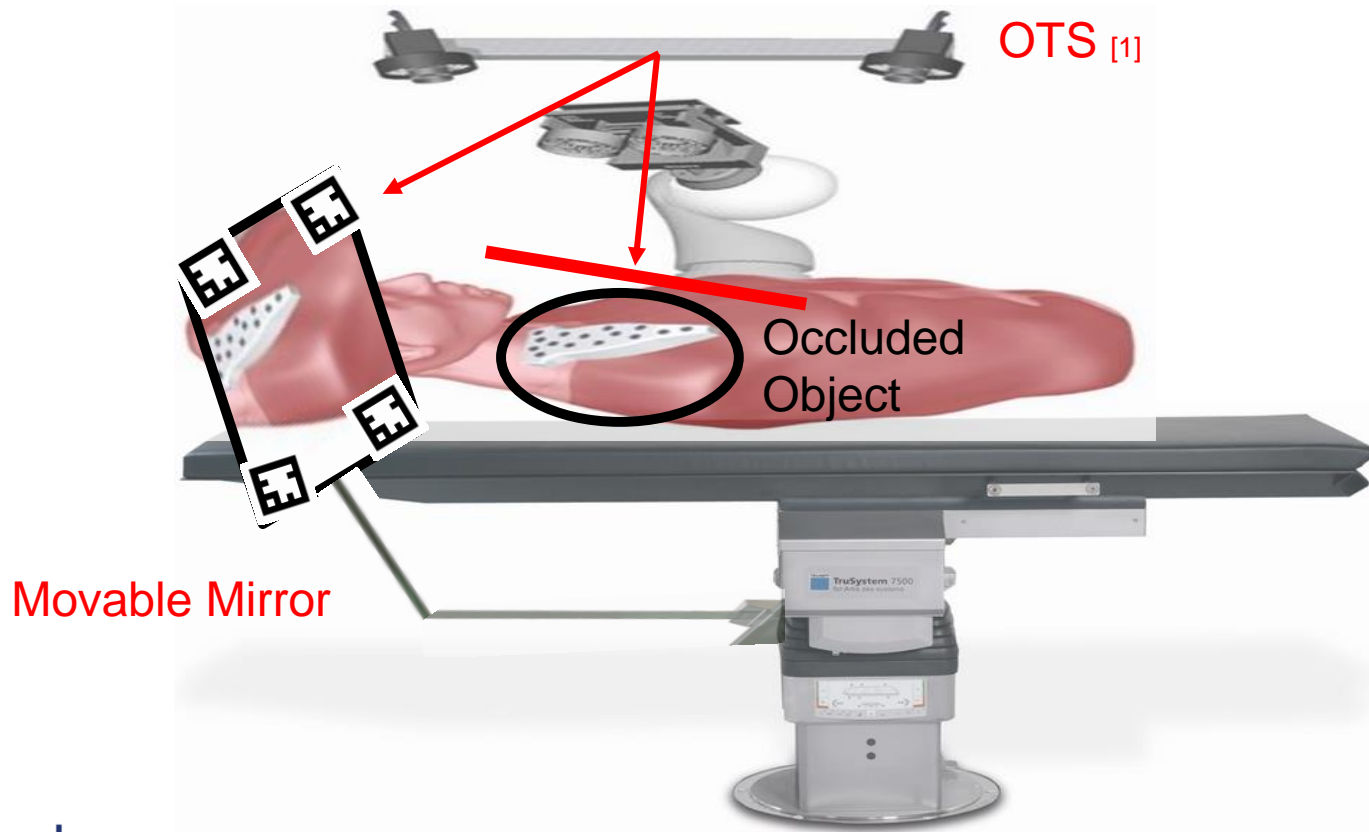
Most accurate tracking system: Optical Tracking System

Suffers from strong line of sight restriction



Problem Statement

Build a first prototype framework to overcome the line-of-sight issue by using a moveable tracked planar mirror



[1] https://www.framos.com/fileadmin/media/pdf/news/2015/FRAMOS_OTS/framos-ots_flyer_engl.pdf (October 25, 2016)



Stakeholders

Project Partners

FRAMOS^[1]

IFL^[2]

Supervisor

Benjamin Busam

Project Manager

Mahdi Hamad



[1] <https://www.amos.com/> (October 25, 2016)

[2] <http://campar.in.tum.de/Chair/IFL> (October 25, 2016)

Requirements and Specification

Tracking

- Tracking of the movable mirror & tool

- Fusion of data from OTS & mirror

Testing

- Performance of prototype is evaluated in different occlusion setups

GUI

- Client-Server Communication Interface

- Real time status of virtual camera's

Environment

- Ubuntu, C++, Qt



Tasks

Setting OpenIGTLink communication interface

Tracking of mirror & tool

Estimation of virtual camera position

Fusion of data from virtual camera & OTS

Tests / Verification

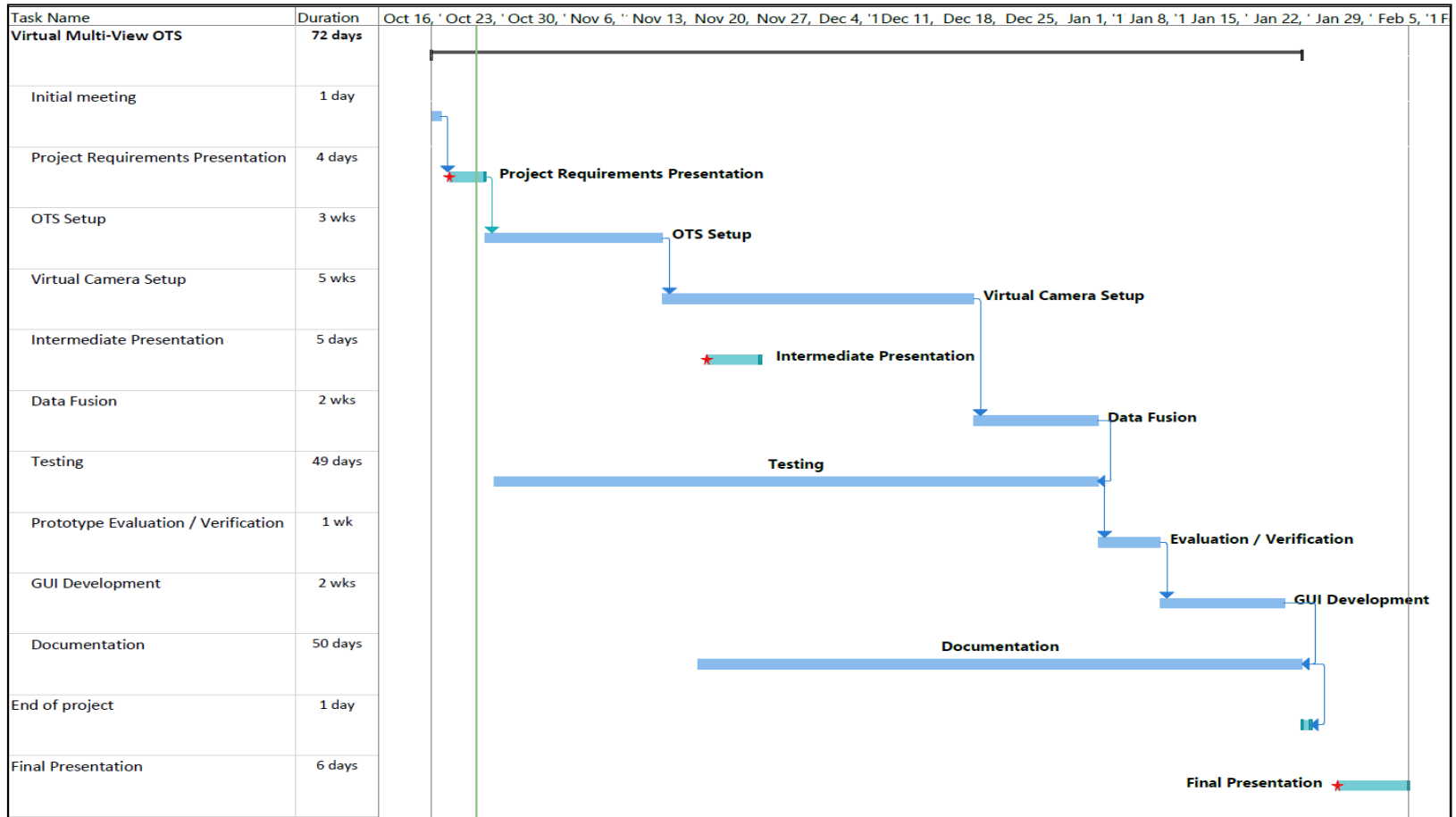
GUI Development

Documentation / Report



Work Packages and Milestones

Gantt Chart^[1]



[1] Created by MS Project

