Team Name: Under Construction

Product Name: vMemo

Team Members
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Project Description

Our Vision
Our team will develop vMemo: a software product that manages construction site supervision – providing location tracking and graphical augmentation over on-site structures.

What problem is the project solving?
Currently, there are no dedicated services to assist contractors with:
- On-site walkthroughs
- Easily pointing out and handling construction flaws
- Facilitating subcontractors in performing location-specific tasks

Why is this problem important?
The vMemo will help make performing daily on-site checkups more efficient through:
- Providing three-dimensional renderings from walkthroughs
- Allowing for annotations to be made on real world objects, handled in an organized manner
- Allowing for desired 3D objects to be superimposed within three-dimensional space through the use of augmented reality

How is this problem solved today?

- On-site evaluations are performed by taking large sets of photos on a daily basis
- Notes regarding all tasks to perform on a job site, also known as "punch-items", are tagged on two-dimensional schematics
- Contractors use Procore software in order to make visual edits on top of digital two-dimensional schematics

Project Outcome/Define Initial Project Milestones

Specification
- Meet more with mentor to discuss specs/project details
- Decide between Unity SDK and Java API for application programming

Design
- Visually represent the system
- Learn about/tryout the technologies behind the Project Tango SDK
- Determine the possibilities for interacting with Procore's code base

Prototyping
- Pair in teams of two to make sample apps to get familiar with Project Tango
- Create and assign tasks on Trello

Implementation
- Use the camera's field of view and infrared 3D sensors to measure distance between two 3D points.
- Use Project Tango's position tracking, motion tracking, and depth detection to put 3D annotations onto real world objects.
- Build a proper UI

How do you plan to articulate and design a solution?

Implementation platform and technologies
1. Unity Game Engine with Project Tango Unity SDK
2. Android SDK
3. Files hosted on AWS S3

Overview the process model you will employ to achieve the milestones

- Daily scrum meetings
- Google Drive for document storage
- Trello for project management
- Slack for team communication
- Github for repository and version control
- Establish coding standards
- Agile workflow process