AUT
UNIVERSITY

Redefining the Use of
Augmented Reality

Project Plan

Version 1.0
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Jason Gerbes
1274664

Joshua Son
1388288

Paul Lee
1264218

Sean Young
1302108

Contents

0.0 Version History

VERSION 1.0

Version 1.0 is the original version of the Project Plan Document. This version of the document was created as part of the Project Proposal Version 1.0.

1.0 High Level Overview

1.1 Approach A: An Augmented Reality Platform Application

Approach A will result in a singular Augmented Reality platform application. The application will group together AR content from all of Luminary's clients, and may allow the creation of content by the platforms users.

It has been decided that the usefulness of the application depends on the discovery of a new utility purpose for the Augmented Reality technology. Approach A is preferred by Luminary.

1.2 Approach B: An Augmented Reality App Plugin Extension

Approach B will result in an Augmented Reality plugin extension which adds AR capabilities to pre-existing applications. This technology will allow app developers to implement Augmented Reality technology into their app without having to invent the technology.

The plugin would allow developers to focus more on the AR content and less on the technology. Luminary would be wholly satisfied with this approach, but it is to be considered a backup plan.

1.3 Phase One: Investigate Potential Uses of Augmented Reality

Phase One will reference Action Research methodology to discover, investigate and verify possible uses for Augmented Reality technology. The creation of an Augmented Reality platform (Approach A) relies on the discovery of a utility purpose of the technology.

Phase One will be concluded after four weeks, or once an appropriate use for the AR technology has been discovered.

1.4 Phase Two: Determine the Approach to be Implemented

Phase Two will include the deciding of the approach we are to implement. This decision will depend entirely on the outcome of Phase One. We will implement Approach A only if a utility purpose was discovered in Phase One, or we will instead implement Approach B if Phase One was unsuccessful.

The outcome of Phase One will be discussed with the project supervisor and the client, and a decision will be jointly made about which approach will be implemented.

Phase Two is expected to be concluded after one week.

1.5 Phase Three: Implement the Decided Approach

Phase Three will implement the approach decided at the conclusion of Phase Two. We will follow the Extreme Programming methodology for the planning, execution and evaluation of the software system.

Phase Three will result in a completed implementation of either Approach A or Approach B.

The exact timeframes for Phase Three must be decided after Phase Two's completion, but the expected overall duration of Phase Three is fourteen weeks.

2.0 Work Breakdown Structure

Disclaimer: The processes stated are indicatory only and subject to change later into development. It can be expected that some sub-processes cannot yet be accounted for.

Below is a high-level work breakdown structure in tabular form with PMI numbering:

1. Phase One: Investigate Potential Uses of Augmented Reality
    1.1. Individual Research (based on Action Research Methodology)
        1.1.1. Plan
        1.1.2. Act
        1.1.3. Observe
        1.1.4. Reflect
    1.2. Collaboration of Ideas
        1.2.1. Presentation of Individual Research
        1.2.2. Group Discussion
        1.2.3. Prioritisation of Ideas
    1.3. Proof of Concept
        1.3.1. Qualitative Assessment
        1.3.2. Prototyping
        1.3.3. Determination of Viability of Ideas

2. Phase Two: Determine the Approach to be Implemented
    2.1. Determine the Viability of an Augmented Reality Platform
        2.1.1. Assess the Discovered Uses of Augmented Reality
        2.1.2. Discuss the Discoveries with the Client
        2.1.3. Assess the Risks of the Platform
    2.2. Compare the Viability of the Two Approaches
        2.2.1. Determine the Risks of the App Extension Approach
        2.2.2. Compare the Risks of the Two Approaches
    2.3. Decide Which Approach to Implement

3. Phase Three: Implement the Decided Approach (based on Extreme Programming Methodology)
    3.1. Plan
    3.2. Design
    3.3. Coding
    3.4. Testing
    3.5. Evaluate (Listening Through Feedback)
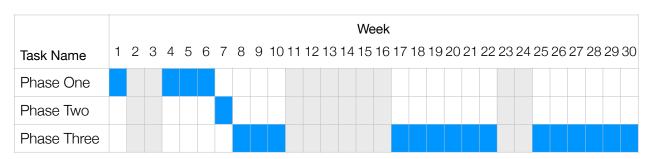
3.0 Time Management

3.1 Project Schedule

Disclaimer: This project schedule is indicatory only and subject to change. It is to be interpreted as a high-level overview of the project tasks only and will be refined later into development.

Project Start Date: 30 March 2015 (week 1)
Project End Date: 25 October 2015 (week 30)

Task Name	Week																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Phase One	█			█	█	█																								
Phase Two							█																							
Phase Three								█	█	█							█	█	█	█	█	█			█	█	█	█	█	█

- Phase One: Investigate Potential Uses of Augmented Reality
    Duration: 4 working weeks
    - Start Date: 30 March 2015
    - End Date: 10 May 2015

- Phase Two: Determine the Approach to be Implemented
    Duration: 1 working week
    - Start Date: 11 May 2015
    - End Date: 17 May 2015

- Phase Three: Implement the Decided Approach
    Duration: 16 working weeks
    - Start Date: 18 May 2015
    - End Date: 25 October 2015

3.2 Milestones

Each of the three phase end dates will be considered a major milestone of the project, as will the project start date and end date. As the phases are broken into smaller sub-processes, minor milestones will be set during each phase (especially during the implementation - Phase Three).

These milestones will be agreed with the supervisor and client, and will usually result in a deliverable of some description. The final deliverables of each phase are crucial for the following phase, with Phase Three resulting in the completed project.

4.0 Scope

The project is split into three phases: an investigation phase, a decision phase and an implementation phase. The result of the investigation phase will determine the outcome of the decision phase.

The decision phase will then determine which approach will be followed in the implementation phase. The scope of the implementation phase will be determined after the decision phase as many of the requirements have not yet been determined.

Disclaimer: The information below is a current, incomplete view of the scope as of 25 March 2015. It is expected that the scope will change throughout the projects' phases.

4.1 Objectives

We aim to create a system which:

- Implements Augmented Reality in a new way.
- Provides value for the user.
- Is bug-free.
- Can handle multiple content types.
- Efficiently manages storage and cellular data usage.
- Is expandable — can be developed by Luminary further.

4.2 High-Level Requirements

The high-level requirements of the system are below. These requirements will be refined throughout the project.

- We need to complete a methodical investigation of the possible uses of Augmented Reality.
- We need to collaboratively determine with Luminary the viability of the two proposed approaches.
- We need to implement an Augmented Reality system based on the chosen approach.

4.3 Major Deliverables

Each phase will result in a key deliverable:

- Phase One — Research findings document for discussion with client and supervisor.
- Phase Two — An overview of the assessment of the viability of the two approaches. Luminary will provide us with a letter of confirmation of their chosen approach.
- Phase Three — The completed application will be delivered at the conclusion of this phase.

4.4 Boundaries

The boundaries of the scope are as follows:

- We will not be creating the Augmented Reality content. This will be done by Luminary.
- We will not be responsible for marketing the application.
- The UI and UX design will be decided by Luminary (in part).
- We will not be creating the Augmented Reality technology itself. Vuforia will instead be used. Our focus will be on the implementation of the technology.