AR Maps

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THE GOAL

- Create a mapping service that is built in augmented reality.
- Provide a landscape reference and information source service.

THE PURPOSE

- Provide a mapping application that is created for city walkers that avoids confusing directions.
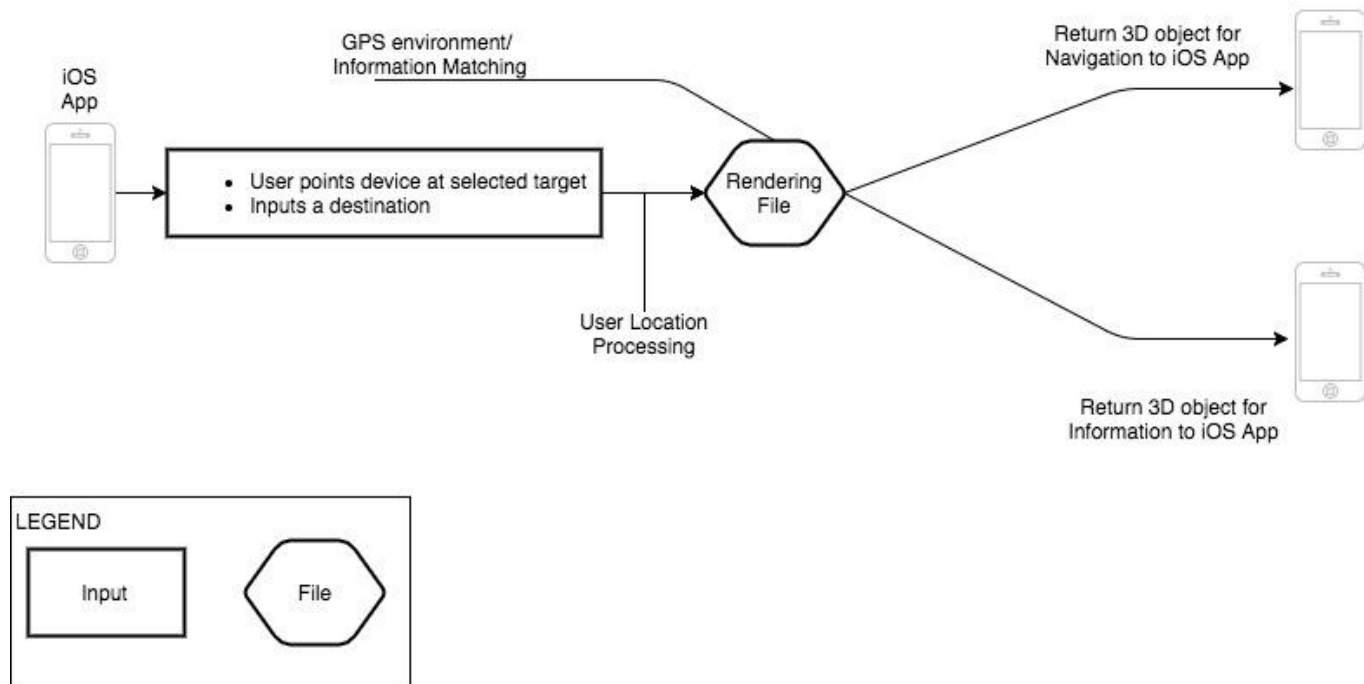- Enhance user reality for a better life.

PROJECT ABSTRACT

AR Maps is a mapping service built-in augmented reality. The goal is to allow a user to get to their destination while avoiding confusing directions. The path is drawn over a real-world objects so that the user has a better understanding of where they are. This will help to enhance the user's reality to improve their life. In addition to the mapping, we plan to include a landscape reference and information source service. This will allow the user to take a picture of the environment get some information related to the objects in it.
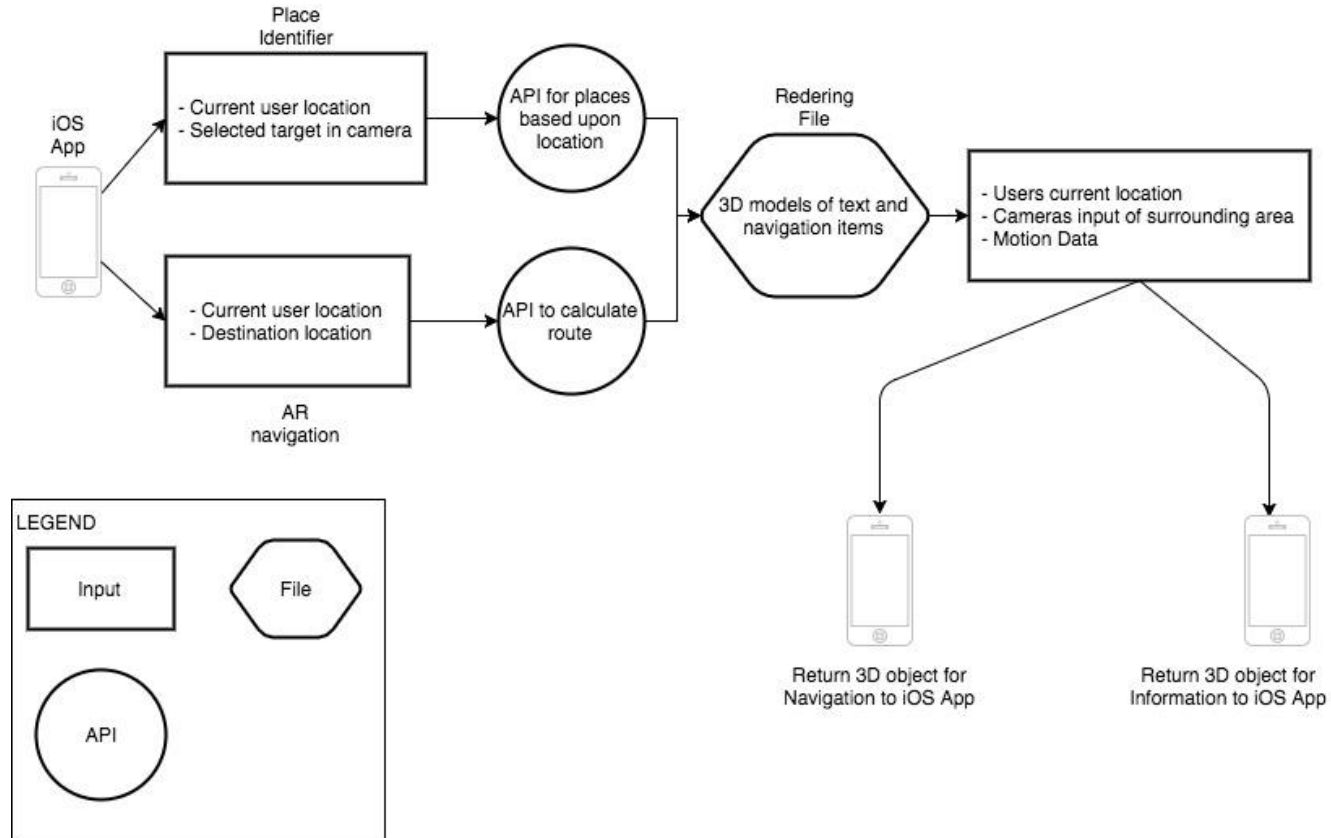
USER STORIES

- As a tourist, I want to have interactive maps to explore the place I am in, so that I can find places to go and things to do in the place I am touring.
- As a city walker, I want to see directions of where I am going over top of the real world, so that I can see where I am supposed to go based upon the real world.
- As a curious passerby, I want to be able to point my phone camera at a building and it tell me information about it, so that I do not have to go through the work of trying to look it up.
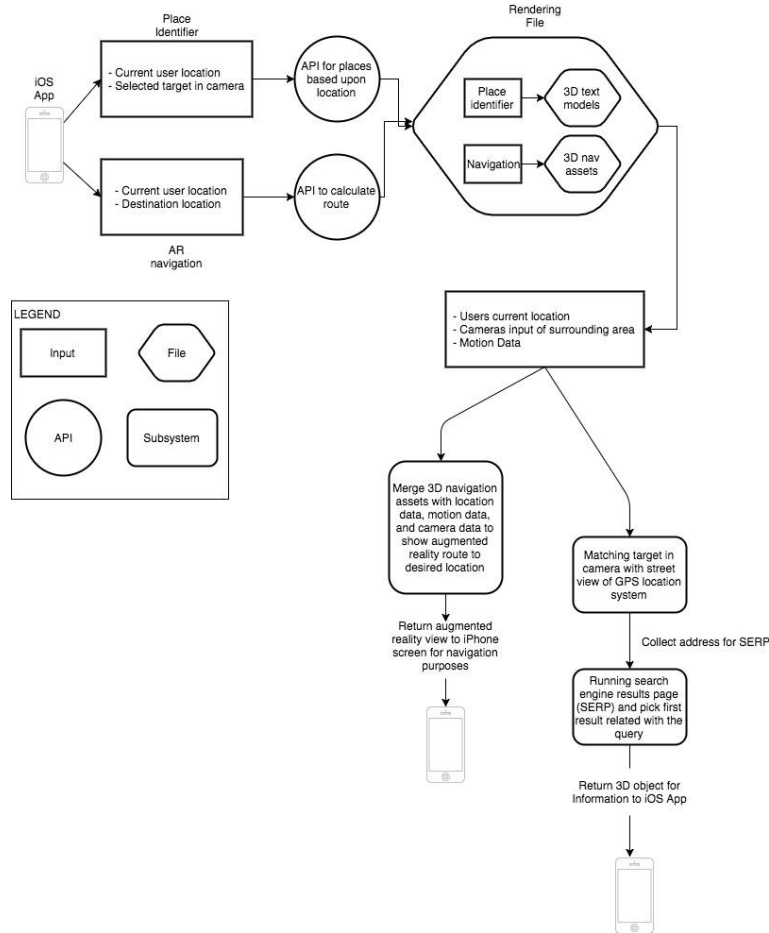
DO:

D1:

D2:

Place Identifier

iOS App

- Current user location
- Selected target in camera

API for places based upon location

Rendering File

Place identifier → 3D text models

Navigation → 3D nav assets

- Current user location
- Destination location

API to calculate route

AR navigation

LEGEND

Input

File

API

Subsystem

- Users current location
- Cameras input of surrounding area
- Motion Data

Merge 3D navigation assets with location data, motion data, and camera data to show augmented reality route to desired location

Return augmented reality view to iPhone screen for navigation purposes

Matching target in camera with street view of GPS location system

Collect address for SERP

Running search engine results page (SERP) and pick first result related with the query

Return 3D object for Information to iOS App

WORK ASSIGNMENT & PROGRESSION

Number	Task	Assignee	Start	Finish	Hours (estimate)
1	Research mapping API's (google, apple, waze, etc)	Ben	11/06	11/06	4
2	Research if a server side will be needed	Ludo	11/07	11/07	2
3	Define requirements for the server (if it is needed)	Ludo	11/07	11/07	2
4	Design UI / UX	Ben	11/08	11/22	20
5	Research for the design of UI (look at other mapping apps)	Ben	11/08	11/22	5
6	Investigate capabilities of Apple's' AR Kit	Ludo	11/08	11/11	10
7	Specify the limits in which AR will be accurately paired with GPS	Ludo	11/11	11/11	5
8	Develop front end - interface	Ben/Ludo	12/1	2/20	40 each (80 total)
9	Develop back end - preliminary basic map system	Ben/Ludo	12/1	2/20	40 each (80 total)
10	Mock up designs for UI / UX in a vector software	Ben	11/22	11/30	5
11	Get feedback on mock ups of designs	Ben, Ludo	11/30	11/30	2
12	Implement location services using the decided on mapping API	Ben	1/8	1/10	5
13	Create project and set up with github	Ben, Ludo	11/6	11/6	2
14	Test Preliminary Map System	Ben, Ludo	1/10	1/11	4
15	Build Linking system between Device Camera and Map System	Ben	2/20	3/16	60
16	Build Linking system between Addresses and Search Engine	Ludo	2/20	3/16	70