Omni-Vision

A sleek HUD app inspired by smart glasses and augmented reality applications.

What are your overall objectives for the project?

The overall goal of the project is to create a unique HUD (head's up display) experience that is inspired by smart glasses and augmented reality applications. The short-term goal is to make a mobile app that is valuable in it's own right, but with the long-term goal that this app will be "portable" into a smart glasses framework.

What problem(s) are you solving?

What user goals are you making possible?

Currently, a user must glance from the real world, to the device, and back repeatedly if the information being displayed is contextually relevant to the real world situation. This constant back-and-forth is the problem, the need is a solution for that problem, and the goal is to come up with a sleek, easy use and highly functional app as a solution.

Stories, Scenarios & Frustrations
Part 1: The Driver

A passenger in a car needs to see the outside environment and maps and emailed instructions all at once. This is not usually possible. Typically, the person must use a smart phone to see either maps or email, but not both and not at the same time. Most importantly the user must constantly glance from the road to the device and back. Problems arise because, for example, when traveling on the high-way the outside environment changes rapidly — in the time it takes to look down at a device, check the map, then check instructions in an email and then look up the exit or road may have passed.

Stories, Scenarios & Frustrations
Part 2: The Student

A person who is at a lecture needs to be able to constantly see the lecturer or screen. But they also need to able to see relevant information like supporting docs, charts, graphs, pictures, etc. Typically, when the user has a device they they must continuously switch their attention from looking up at the lecturer or down at the device. Problems arise when the lecturer points to something or shows something and the person misses it because they were looking down at their device.

What is/are the main takeaways from your research findings?

1. The UI needs to be clean, sleek and intuitive. That means easy, fast navigation i.e. a few buttons that have clearly defined functionality, and a layout that can be navigated quickly and intuitively.

2. The features need to offer digital information that is contextually relevant as defined by the user at a given point in time.

3. The use of features needs to maximally effective yet minimize obstruction of the field of view i.e. There is fine balance between the size of a feature (how much screen space it takes up) and the remaining screen space being used for the field of view (camera view).

Who is your target audience?

They are smart, information driven individuals; multi-taskers.

Recap

This is a HUD app that should feel like an AR app that would be deployed on smart glasses. The basic idea is that when a user needs information from their device that is relevant to the surrounding real world environment they must continuously switch from looking up at the world and down at their device — and in the time it takes to do this either the the real world context can change, or the digital information is not available without looking away from the real world. Essentially users sometimes need to see real world and their digital information at the same time, but currently they cannot do this - the Omni-Vision app provides a solution to this problem.

What features will you include? And Why?

They should map to your user goals, offer a coherent rationale for why they were chosen.

Part 1.

A sleek, intuitive UI. -- Why? --This ties together the whole experience of the features into a cohesive, compelling UX.

Camera View -- Why? -- Foundational feature, allows the user to see the real world in front of them. It literally gives a surface on which to present digital information to the user within their field of view.

What features will you include? And Why?

They should map to your user goals, offer a coherent rationale for why they were chosen.

Part 2.

Google Maps API. -- Why? -- Offers location-relevant information to user who needs to provide directions.

YouTube API. -- Why? -- Offers video content related to anything relevant to the context of the user's particular situation (Student, Other Persona).

Gmail API -- Why? -- Provides a "read-mostly" source of information relevant to users in their particular situation (Student, Driver, Other Persona).

WikiPedia API. -- Why? -- Provides a rich "read-mostly" source of information relevant to a user's situation (Student Persona).

Text Message content provider. -- Why? -- Provides vital, time-sensitive information relevant to the context of the user's situation (Driver, Student, Other Persona).

How will this differentiate from your competitors?

Currently every HUD app I researched was display only - they did not provide any UI driven functionality e.g. speedometers, maps. They offer read-only information. Omni-Vision will be offer a high degree of UI driven functionality. For example, searching WikiPedia or manipulating YouTube videos.

Are there any constraints you have to work with?

1. The specific way Camera View gets implemented may cause complications with subsequent implementations of features such as YouTube.
2. The time allotment (2 weeks) will constrain how many features get completed especially if aspects like Unit Testing and UI Testing are going to be employed.