**Allen Rabinovich**

**Milestone 1**

## ABSTRACT

Hitchhiker's Guide to Earth (HG2E) is a mobile interface to a web-based system that connects geographic data with user-editable content. HG2E is intended to be used on location-aware devices, and as such, will be capable of automatically retrieving the existing content, as well as automatically filing any content the user may choose to add.

The system, if designed correctly, will facilitate of the process of spatial tagging as well as provide the user with greatly increased awareness of his surroundings.

In order to evaluate this hypothesis, a number of alternative versions of the interface will be tested (see ideation sketches for more information): the primary differences between versions of the interface is in the amount and type of system input the user will produce from the mobile device, as well as in how the users are made aware of the information related to their current location.

The interface will be tested in two stages: with a low-fidelity prototype, and a high-fidelity prototype. Both tests will be conducted in San Francisco, with users who have self-identified as fitting the groups targeted by this project (see Task Analysis).

## TASK ANALYSIS

The users targeted by this project are primarily tourists who seek out-of-mainstream destinations: such tourists are frequently backpacking students, history or architecture buffs, or generally people who are extensively interested in travel. Such users are interested in exploring their destinations in much greater detail than average tourists, and for that reason, require more information that normally available.

Currently, these users are limited to using guidebooks and maps in their travels. In addition to paper sources, users may also solicit help from locals or people who are knowledgeable of any given area.

However, these sources appear to be insufficient both in the amount of data they provide nor in the speed of delivery of that data. Thus, an appropriate mobile device can serve as a replacement for inefficient (and heavy) book guides: such device will allow access to much larger quantities of information, as well as deliver it automatically, without forcing the user to solicit it.

Furthermore, given the exploratory inclination of the users, it is hypothesized that the users of such devices are likely to be interested in not only receiving the data, but also contributing to it. Thus, the new interface will also include the wiki-like option of contributing to the information pool.

**IDEATION**

See attached.

**EVIDENCE**

On two separate occasions, I observed tourists around major destinations in San Francisco: The Legion of Honor, Golden Gate Bridge, Cable Car Turntable, as well as less popular attractions with rich history and/or architecture: Fisherman's Wharf and Tea Garden. On a number of occasions, I saw tourists trying to shuffle their camera, maps, and a guidebook, and reading details attentively for minutes at a time. While it was difficult to judge whether these tourists were able to find the information they needed, their experiences appeared awkward and frustrating.

I also conducted contextual inquiry with 3 users, all of whom self-identified as avid travelers (2 are architecture photographers, and one is a visual arts student and an independent filmmaker), and all three indicated that they've had problems finding information on their surroundings as they traveled in the past. 2 of the interviewed users (the photographers) indicated that they used the famous "Eyewitness Guide" books when they traveled through Europe, but frequently found themselves lacking information about a particular location or building they were observing. While the book guides provided enough information about major attractions, it did not go into sufficient detail about less

important landmarks and left its readers craving for more information. The visual arts student pointed out that as she travels, she frequently wants to know “where to go next”, but does not have a good knowledge of interesting spots nearby.

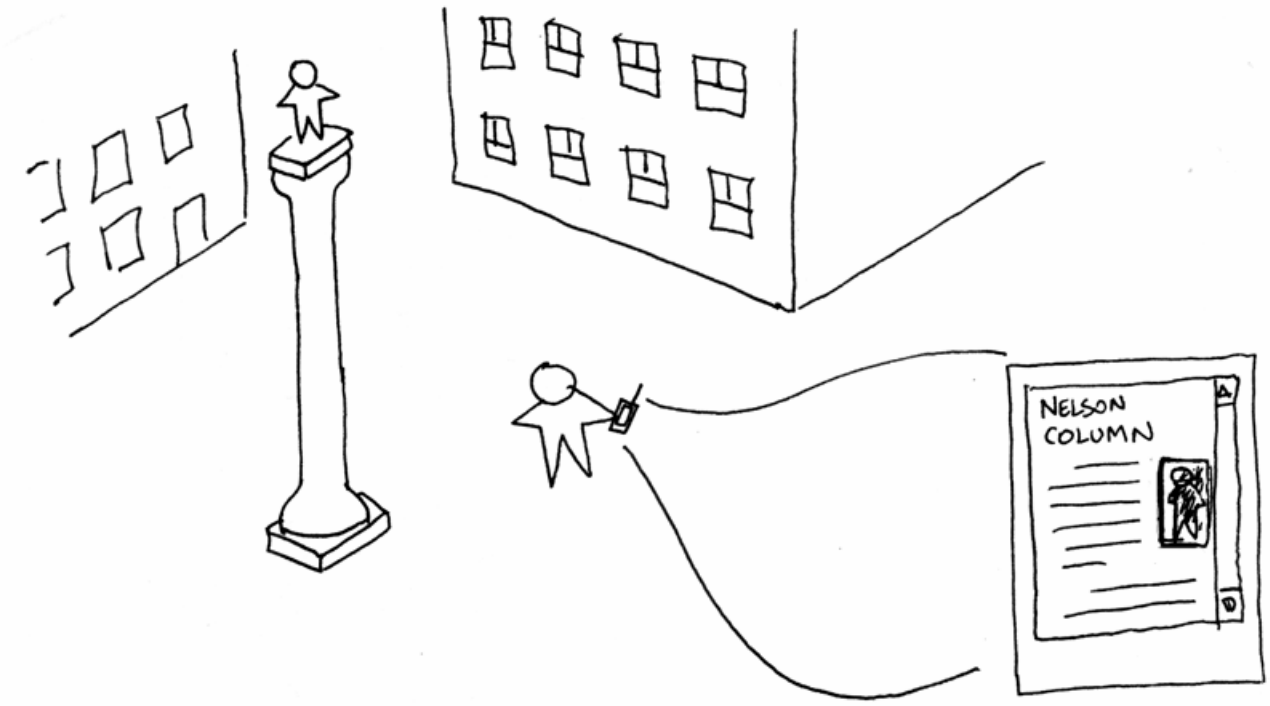
All three users indicated that they would be interested in contributing to a repository of information tied to geographic locations, but 2 users were skeptical about making such contributions while on the move. They suggested that it would be easier to contribute to such database via a desktop-based interface, and make mobile interface centered on retrieving information.

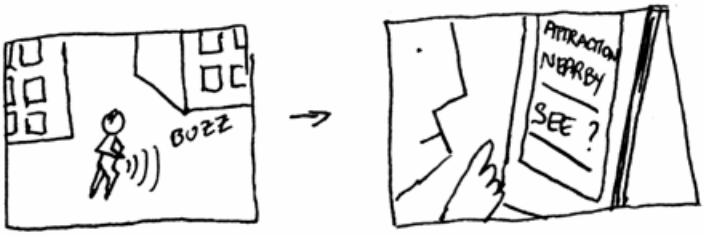
**FURTHER EVIDENCE**

I plan to conduct further contextual inquires with a larger number of users, as well as provide them with lo-fi prototypes of the system to test out. I will build a number of alternatives for the interface to determine the one users react most positively to.

**EVALUATION PLAN**

After determining the precise form of the interface via the lo-fi prototype testing, I plan to build a hi-fi prototype based either on a smartphone, or a PDA (I would rather use a PDA, but I have not yet been able to acquire one for testing), and test it with a number of users. I will use Stanford campus as a backdrop, and I will bring users here who have never been on campus before, or visited briefly and have not seen most of it. I will then run a simulation of a typical user experience, and observe users behavior and interaction with the mobile device. In addition, I will also ask users to fill out a post-test questionnaire, detailing their preferences and assessing the satisfaction from the experience.



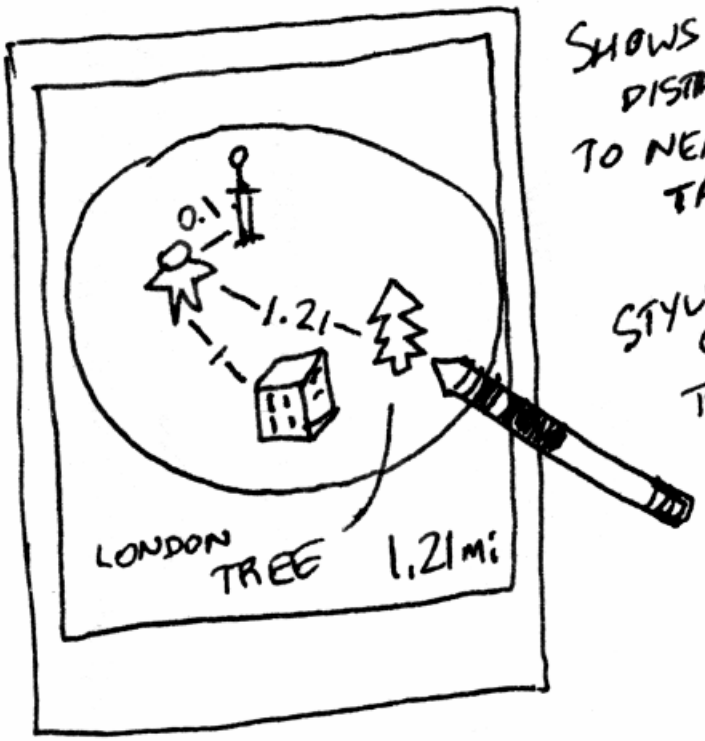

IF THE PERSON IS IN THE VICINITY OF A TAG, THE DEVICE BUZZES




AND INFORMS UBER ABOUT IT.

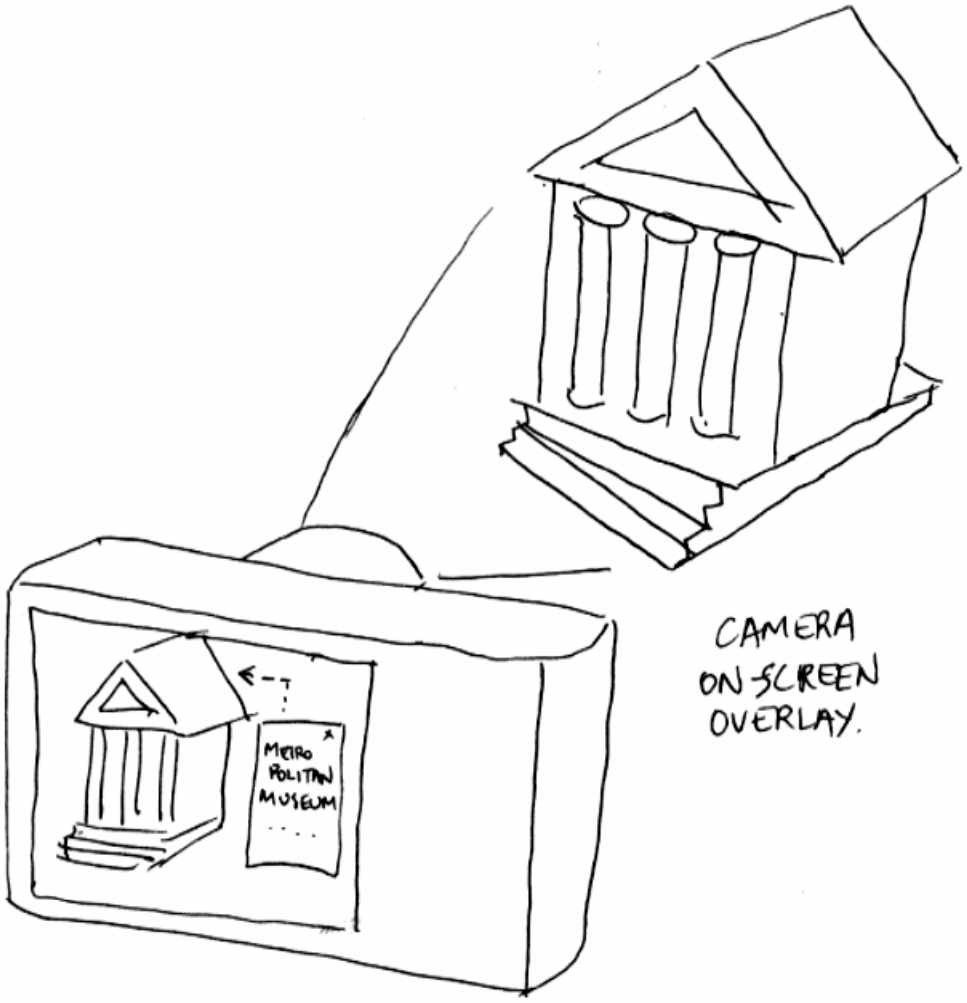
DEVICE MAY ONLY BUZZ WHEN THE ATTRACTION CORRESPONDS TO INTERESTS.

POINTING DEVICE AT OBJECT TO GET RESULTS

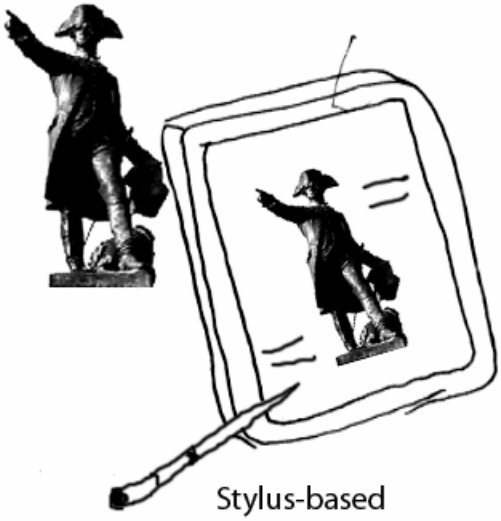

SHOWS DISTANCES TO NEARBY TAGS
0.1
1.21
1
STYLUS OVER TO EXPAND
LONDON TREE 1.21mi

GPS COORDINATES
DIRECTION
SEARCH FOR TAGS HERE

VOICE GUIDE
YOU ARE LOOKING AT THE MAIN ENTRANCE OF THE PLAZA HOTEL. BUILT IN 1901, THE PLAZA IS ...

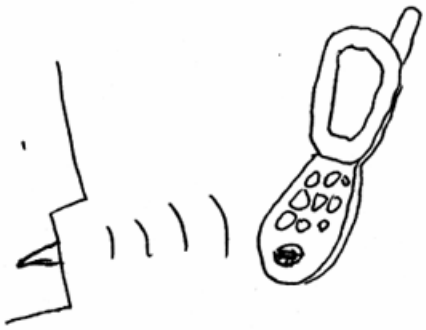



CAMERA
ON-SCREEN
OVERLAY.



Stylus-based
hand-writing annotation

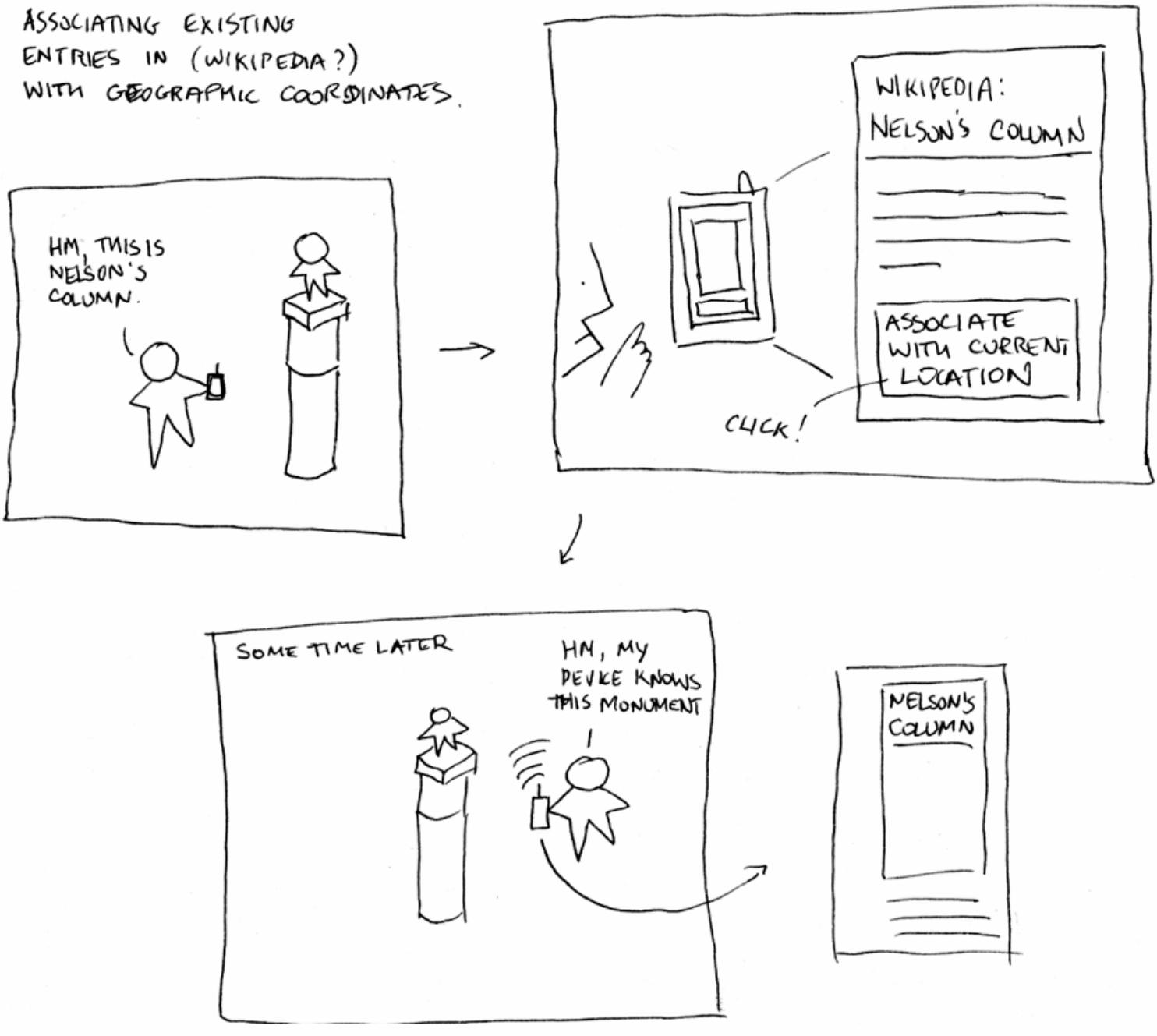
INPUT MODALITIES



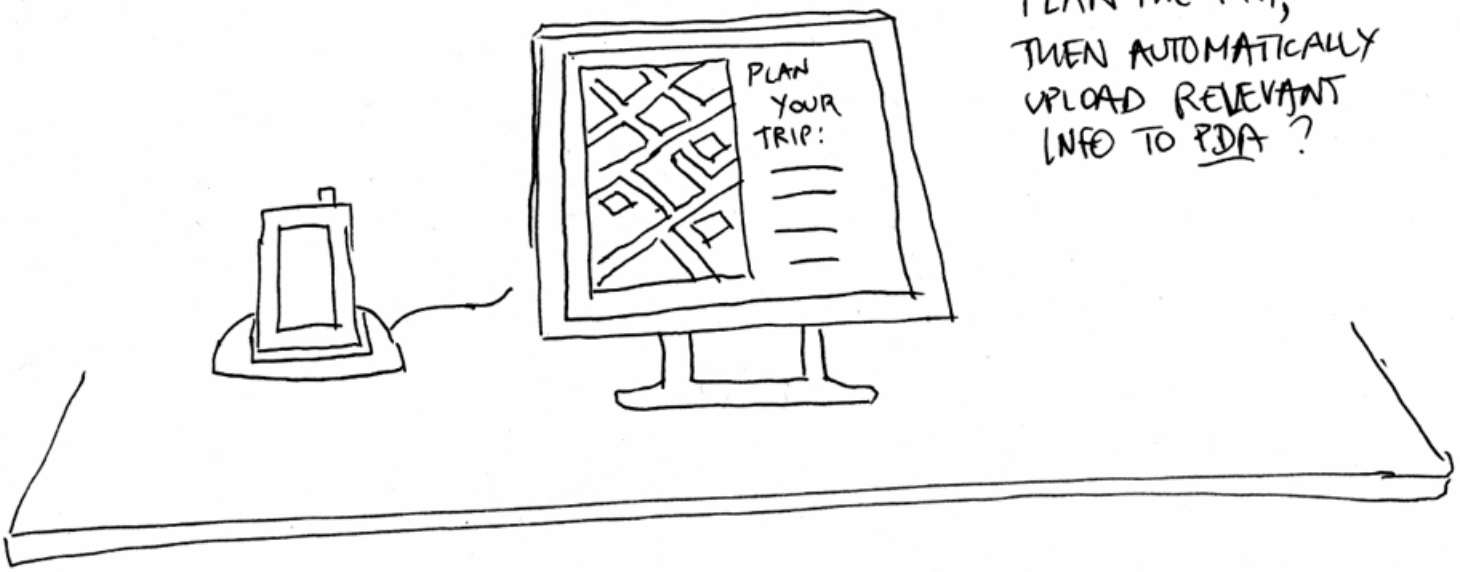
VOICE INPUT?

LEAVING "VOICE NOTES" ASSOCIATED WITH LOCATION THAT OTHERS CAN PICK UP LATER?

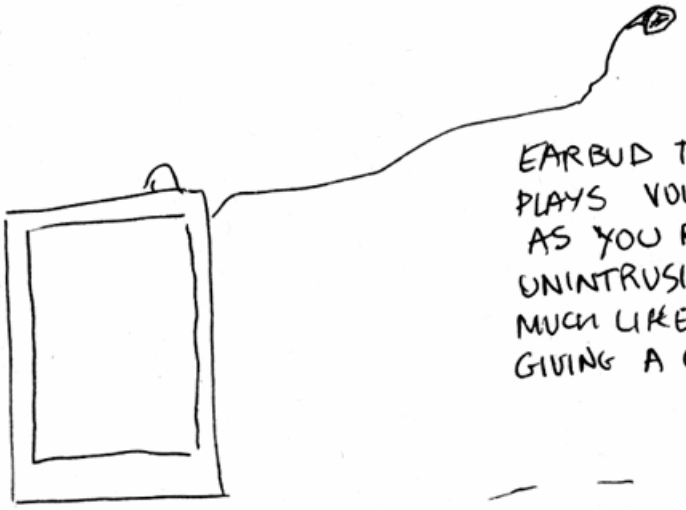
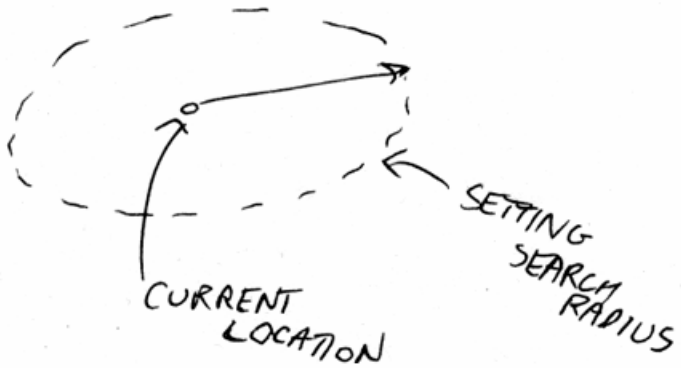
ASSOCIATING EXISTING ENTRIES IN (WIKIPEDIA?) WITH GEOGRAPHIC COORDINATES.



TRIP PLANNER?




PLAN THE TRIP, THEN AUTOMATICALLY UPLOAD RELEVANT INFO TO PDA?



EARBUD THAT PLAYS VOICE GUIDES AS YOU ROAM AROUND UNINTRUSIVE, ~~SPAM~~ MUCH LIKE A PERSON GIVING A GUIDED TOUR.