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| Department: | University of Hawaii **(UH)** |
| Division: |  |
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| Summary: | Develop campus map enhancements (based on Google Maps) to provide wayfaring guide for large campus environments. Develop an augmented reality overlay that can create preferred mapping locations to enhance Google Maps for businesses or organizations with campuses that have multiple points of interest (e.g. many buildings and visitation locations). Create an app to help folks navigate a campus, along with the necessary back-end data collection functions to support the app. |
| Full description submitted: | *Can you help me find* …  Remember when you visited a large city, town or campus for the first time, armed with suitably vague directions like *just head to the Student Center*, or, *the Bookstore*, or, *the President’s office*? How long did it take to figure out the nuances of finding suitable parking, staring at random signage, or paper maps ruffling in the wind (if you could find a paper map)? How many people did you have to ask for directions before finding your destination?  Today, each of us would typically pre-load destinations into one of our mobile devices (or if you’re old, one of those Garmin GPS things – or if you’re really old, unfold your map and trace routes on the map). We’d launch Google Maps, and say navigate to … <fill in your destination>. Here’s a couple of interesting examples of actual results.  Check out the current Google Maps driving directions result for *University of Hawaii System*:    (by the way, that’s the **Art** **Building** in the middle of campus).  Or try, *University of Hawaii at Manoa* – which results in a pin location fronting Sakamaki Hall (on Dole Street), ignoring the “street address” of 2500 Campus Road (which is Hawaii Hall, home of the Chancellor’s office).    Unless someone took the time to craft a map specific to your visit, you’ll get close, but will likely need to find some local signage or other resources to complete your journey. Current Google Maps location services are limiting when using publicly available street addresses for buildings or locations on large campuses (e.g., UH Manoa campus). Note that Google Maps does provide a means for individuals to enter their own map reference pins. Visitors that are new to such campus locations often waste gobs of time attempting to find particular offices or suitable drop-off locations unless they use multiple local maps or other resources to figure out how to navigate such large campuses – the problem is the same for large businesses located in multiple buildings throughout a city.  A search for driving directions to *Bachman Hall* (location of the President’s Office) results in a default to the University of Hawaii Foundation (at the same street address), and suggests you drive to the middle of Dole Street, and hop out of the car. The convenient location is the visitor parking lot just mauka of Bachman Hall, that provides a convenient and safe dropoff location.    Both Lyft and Uber currently use Google Maps as the basis for location determination, and driving directions. For organizations, such as UH, that have campus locations with clusters of buildings around official street locations, these address-based locations provide ineffective drop off/destination locations. In the example above, *Bachman Hall*, on the UH Manoa campus has a street address of 2444 Dole Street; an address in the middle of a busy street, with no convenient pull-out or drop-off location. Out of town visitors are often deposited further down the street by taxis or ride-sharing services, often next to the Law School Library. The ideal drop-off location for Bachman Hall is the visitor lot near the bus stop, entering off University Avenue, between Bachman Hall and Sinclair Library.  Besides signifying points of interest and guidance for visitors to campuses, UH also has other uses for augmented reality mapping, including mapping of tree species on campus,    WiFi coverage,    and, a number of other likely candidates, including, places to eat, vending machines, visitor parking, permit parking zones, computer labs, and various student services offices.  OUR CHALLENGE:  We seek a mobile friendly app that will help support visitors finding their way around our University campuses (remember that we have ten campuses and dozens of other statewide locations). The back-end or administrative side of the app must be simple to maintain, so that we can easily support the hundreds, or thousands, of points of interest for visitors to UH. Such an augmented reality map should have utility for any geographically distributed, medium or large organization.  *Your challenge, should you decide to accept it, will be to create a high-value, mobile friendly solution to this problem, by providing a simple and convenient means to augment Google Maps to help provide a friendly and useful tool for visitors to our campuses. As always, should you or any of your HACC teams be caught or killed, the secretary will disavow any knowledge of your actions … have fun!* |
| Comments: |  |