**Mike Winiski  
GIS Pre-Project Proposal**

**Background:** I outlined several possible ideas for my capstone project during week two, including a spatial analysis of Martian literature, development of augmented reality layers, mapping specimen collections, and Haitian relief (see my week two post for more details). In earlier courses I’ve delved deeper into each of these topics, except for the latter, which has developed only within the last week. Even though I’ve put time into learning more towards the other topics, the Haiti project is the most compelling, since the investigation has the potential to help those in need. I met with a friend at church on 3/22 to learn more about the work he is beginning in Jeremie, Haiti (approximately 30,000 people). He is in the process of hiring a full-time physician to staff ad-hoc clinics that may be established at local churches. I’m still in the process analyzing the available data and defining the current need. Here are the initial goals.

**Objectives:**

* Better understand the medical needs in the Jeremie area and the geographic distribution of those requiring medical care;
* Develop strategies for getting those in need of medical attention to the appropriate clinic in the region around Jeremie and utilizing resources to their fullest extent;
* Establish the effective reach of the clinics;
* Combine historical and crowd-sourced maps to paint the clearest picture of the situation on-the-ground, as well as communicate the procedure so that it can be replicated in other, similar situations.

**Methods:**

* Use accepted methods to identify disease risk zones based on geographic parameters, environmental conditions, documented cases, and population distribution;
* Analyze transportation networks and terrain to identify the most appropriate outreach zones for each clinic;
* Develop tools to allow end-users to easily enter new geographic information (perhaps web-based) and for the analysis to be updated based on shifting population distribution and medical need.

**Outcomes:**

Analysis and maps that provide clinic staff with a clearer picture of the distribution of population and disease in the Jeremy, Haiti area and how to best reach those in need;

Develop an interface (possibly web-based) that allows end-users to enter information about conditions on-the-ground, so analysis can be updated.

**Possible Venues:**

Paper and presentation - conference TBD. The ESRI Health Users Conference may be appropriate. A similar project was described here:

http://proceedings.esri.com/library/userconf/proc00/professional/abstracts/a187.htm

**Concerns:**

I don’t have much experience at all with remote sensing. It’s not clear to me how much of this will be required for this project. At this point, I’m not sure what technology the clinics will have. Paper maps that are updated periodically, may be more useful. Perhaps the folks at Harvard will be able to share what current initiatives, if any, are in place in the Jeremie area.

http://cegrp.cga.harvard.edu/haiti/