Evaluation Assignment 1 –
Website and Stakeholders, Goals
and Task Analysis

Graduate Student/Consultant Name : Ridwan Ahmed Khan
Graduate Student/Consultant Email : ridwank@mtu.edu
Undergraduate Group No. : Team 1: Team Volcano

Date: 01/28/2015
1. **Short Description of the undergraduate system**

Pacaya Volcano Activity monitor is a web application aimed to help tourists and their guides take notes of the changes of Pacaya Volcano activity. Primary users (tourist and tour guides) will go to the website and upload information of their observation of the volcano. They can also upload photos to depict the current situation of the volcano in the system. The system will show the accumulated activities/information of the volcano in graph view.

2. **Stakeholder Onion Diagram**

![Stakeholder Onion Diagram](image)

*Figure: An onion model of stakeholder relationships. Each circle represents a different stakeholder zone.*
3. **Stakeholder’s short descriptions**

Our kit or product is the web application which will help users to log activity of the Pacaya Volcano.

Primary stakeholders of our system is tourist guides and the tourists. They will log the activity of the volcano using the web application.

Secondary stakeholders are the client or Professor Greg Waite, his graduate student who will the data inputted by the primary stakeholders aka end users. They will collect the data and see the pictures taken by the tourists and the guides to analyze the activity of the volcano. Pacaya park authority is also a secondary stakeholder who has access to the data and can use this data to forecast events of the volcano for safe tourism.

Tertiary stakeholders consists of undergraduate developers of the system, graduate consultants. Undergraduate developers will develop the system and graduate students will evaluate the system and test its usability.

4. **Stakeholder’s Goal Influence Table**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Goals</th>
<th>Contributing Influence</th>
<th>Restricting Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourists and Tour Guides</td>
<td>Completely collect information</td>
<td>Information</td>
<td>Comprehensive app</td>
</tr>
<tr>
<td></td>
<td>Take pictures</td>
<td>Pictures</td>
<td>Easy and fast interactions</td>
</tr>
<tr>
<td>Professor Waite</td>
<td>Analyze data</td>
<td>Insights of the</td>
<td>Data in proper format</td>
</tr>
<tr>
<td></td>
<td>Filter out unnecessary data</td>
<td>volcano activity</td>
<td>Graphical realtime data</td>
</tr>
<tr>
<td>Park Authority</td>
<td>View the data</td>
<td>Inform tourists of the</td>
<td>Ample data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>volcano activity</td>
<td>Real time data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warning</td>
<td></td>
</tr>
<tr>
<td>Developers and Consultants</td>
<td>Develop the application</td>
<td>Functional application</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>Usability testing</td>
<td>Fully tested application</td>
<td>Manpower</td>
</tr>
<tr>
<td>Professor Waite’s student</td>
<td>Analyze data</td>
<td>Insights of the</td>
<td>Formatted data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>volcano activity</td>
<td></td>
</tr>
</tbody>
</table>
5. Summary of Stakeholder’s Goal Influence Table

Tourists and tour guides are the end users of the system. They will visit the Pacaya volcano and see its current state. They will observe the activity and take pictures of the volcano. They will fill out information form in the system and uploads pictures of that current time. Professor Waite will view the data from the system. He will see the graphical representation of the information collected so far. He will also see the pictures of the volcano and delete unnecessary pictures. In this way he will form proper data from the cluttered information provided by the end users for analysis. He will analyze the data and provide insights of events on the activity of the volcano.

Professor Waite’s students will also view the data and analyze it. He/she will do research on how to use this data to get more sophisticated and correct activity prediction for the future. Pacaya volcano park authority will view the data in order to get foresight of the future events. They will observe the data in order to assess the current state of the volcano and can issue warning for the tourists if it is unsafe to go there.

Developers and consultants of the system will develop the system application and test it for usability. Developers will develop the application according to client’s needs and consultants will run usability test cases to check if the application has all the functionality and can be properly used.

6. Personas

Two primary users’ personas are given below

- Tour Guide
  - Name : Sheldon Cooper
  - Age : 24
  - Gender : Male
  - Occupation : Tourist Guide
  - Language : Fluent in both English and Spanish
  - Technical Knowledge: Can use smartphone
  - Residence : Guatemala
  - Description
 Goals: His goals include helping tourist to visit Pacaya Volcano and provide information on it. Another goal is taking pictures of interesting spots of the volcano and uploading it in the system application using smartphones.

 Behavior:
 He goes to Pacaya Volcano monitor with tourists. He enjoys telling people about the history of the volcano. Then he shows the tourists the volcano monitor applications. He takes pictures and uploads it in the system. He is proud to contribute useful information.

 Relations to other people: He is one of the primary user of the system. He also helps other primary user – tourists to use the system. He provides tourist with information about the volcano from the system.

 Tourist
 o Name: Monica Harper
 o Age: 35
 o Gender: Female
 o Occupation: Photojournalist
 o Language: Fluent in Spanish
 o Technical Knowledge: Cannot properly use smartphone
 o Residence: Spain
 o Description:
   ▪ Goals: Her goal is to visit and know more about Pacaya Volcano. She wants to write a feature article on Pacaya Volcano.
   ▪ Behavior: She hires a tour guide and goes to visit Pacaya Volcano. She takes lots of photo. The tour guide shows her Pacaya Volcano monitor and how to use it. She gets interested and uses the application. She uploads some photos and get some pointers from the applications for her article.
   ▪ Relations to other people: She is one of the primary users of the system and uploads photos in the system.

 Two secondary users’ personas are described below:

 Professor
 o Name: Cirius Black
 o Age: 45
 o Gender: Male
 o Occupation: Professor
- Language: Fluent in both Spanish and English
- Technical knowledge: Can use smartphone
- Residence: England
- Description:
  - Goals: His goal is to get the data about Pacaya Volcano and monitor its activity. He also wants to analyze the data for better understanding of the activities of the volcano.
  - Behavior: He uses the application and see the data. He then filters out the unnecessary data, deletes some photos. He gets annoyed if there is lot of useless data. He analyze the data and is excited about the proper prediction of the volcano monitor.
  - Relations to other people: He authorizes the development of the system and acts as a client. He tells the developers how the system will behave. He also works with park authority for the use of the system in real life scenarios.

- Park authority
  - Name: Helena Thompson
  - Age: 32
  - Gender: Female
  - Occupation: Director of the Pacaya Volcano Park
  - Language: Fluent in both Spanish and English
  - Technical knowledge: can use smartphone
  - Residence: Guatemala
  - Description:
    - Goals: Her goal to check the activity of the volcano using the application and issue warning if the volcano activity is rough and it is unsafe for tourists to visit it.
    - Behavior: She regularly checks the system application and view the data. If there is any irregularity in the activity of the volcano, she takes decision based if the volcano is safe for tourist. She thinks over it cautiously and at the slightest sign of danger, she shuts down the park. She can quickly judge the situation.
    - Relations to other people: She works with the researchers/Professor on the system development. She also facilitates the training on the system for tour guides.
7. Simplified HTA

- Upper level views
  - Home view
    - Navigate
    - Site info
    - New Activity
    - Graphical Monitor
  - Navigate
    - New Activity
    - Graphical monitor
    - Return to Home view
    - Admin login
  - Site info view
    - Navigate
    - Graphical monitor
    - New Activity
  - Admin view
    - Edit activity
    - Graphical monitor

- Lower level views
  - New Activity view
    - Photo
      - Save
      - Cancel
    - Activity type
    - Time
    - Location
    - Comment
      - Save
      - Cancel
  - Edit Activity view
    - Photo
      - Delete
      - Update
8. Summary of Simplified HTA
In the upper level views, we have home view, navigation and site info view. In the home view, there are some description of Pacaya volcano and its exquisite pictures. Through navigation, we can go into different views like new activity view etc. Administrator can also log in and go to admin view from where he can go to edit activity view. Site info view has common information about the sites.
In the lower level views we have new activity monitor page where an user can log activity of the volcano. Next is Edit activity view which only an admin can access to modify the data. Then in graphical monitor view, we can visualize the input data by the users in graphical form and also import those datas.

9. Appendix
My notes from meeting
Lucaya Volcano Monitor

Meeting 1-2

- Tour is 3-4 hours, not to the summit
- 20 personas

- GPS data from pictures
- Young, most young male people, two
- guides with a tourist, not necessary.
- Time: sunset until guides can take pictures
- some data: local, US, Europe, a lot of
- young people.
- Two primary users

- What happens in summit
- Lava flow
- Guide write them down
- For locals, it is important, director, admin, park authority
- Guide provide inform as motivation

- Real-time monitoring data
- In person, by the best

Hierarchical task analysis

Download: raw image data — any format
- pictures & data on USB
- Map with visual data
Meeting with Pacaya
3 undergraduate students 2 grad consultants
11th February meeting

App overview:
dynamics of volcanoes, guatemala

A tool - visitors and tour guide

Main users

"current condition and changes"

building sensors there

→ color of flame
→ atmospheric condition
→ new features

in a form

Feedback

Web app

Timeseries
Presentation

Page 2

Page 3
→ different types of data integration
  ex: data falls, pictures, GPS data

→ caching issues

→ send email what kind of exam

→ User accounts → nice to have open to everybody

→ Spanish and English

→ new data insertion and display
  graphical and textual

→ a student helper to look into the data

→ graduate student/researchers

→ institution for maintaining data
→ log of major events.

- professor

→ forest guy