CS5760: HCI & Usability Test

Evaluation Assignment 1

Website and Stakeholders, Goals and Task Analysis

STAFF GAUGE PROGRAMMING APP

(Project Team # 4)

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Undergraduate Team #4: Programming Staff

We are developing a front-end app for our Scientist Dr. Ben Ruddell (Arizona State University) through which citizens or scientists through their voluntary participation will upload and visualize staff gauge hydrology data The Staff Gauge application can be accessed from mobile web browsers which includes an HTML 5 based form for collecting data relating to water gauge readings, location, and timestamp from different water sites like trails, park, rivers etc. Since the user of this application can be a professional or an amateur, so the form is intended to be simple and comprehendible. The data can be both in text and/or picture form which will be stored in Tomcat Database Server in compliance with ODM schema typical to Hydrology data storage. Upon uploading the data, user will be able to see a visual output of their data along with other user's observation data.

Stakeholder Analysis

Onion Model for Stakeholders:

The Stakeholder Onion Model shows the relationship of different layers of stakeholders which help towards a successful final project. The stakeholder Onion Model usually comprises of four layers, namely the **product, Primary stakeholders** who are the end user who directly interact with the app, **Secondary stakeholders** are benefited from the results of the product or support the primary users. They are also termed as *functional beneficiaries* and **Tertiary stakeholders** represent the wider environment, who are not directly related but are important, e.g. public, developers etc. For our project the Programming Staff Gauge app can be considered as the product/kit. The other possible stakeholders of our app in terms of the Onion Model are:

- **Primary stakeholders:** Citizen, Scientist, who will be using/operating the app to upload the staff gauge hydrology data or view data output.
- **Secondary stakeholders:** Citizen, Scientist, who will be using the app and also be benefited by its user feedback (visualization of the aggregate data).
  Citizen is a huge domain. Depending on the type of citizen and their goals will categorize them to be a Primary or Secondary Stakeholder.
- **Tertiary stakeholders:** Developer team (app designer and coder), consultants (evaluate and test the app), Professor Dr. Pastel (not a direct user of the app but can monitor it), the people of the areas who are benefited by the app results (society). MTU is also benefited by the overall outcome of the app through student's involvement to the app but is not a direct user, hence a Tertiary stakeholder.

The HydroDesktop Database/Backend can be accessed by different stakeholders, such as- the Scientist, Professor, Developer Team, Consultant (optional) and MTU.
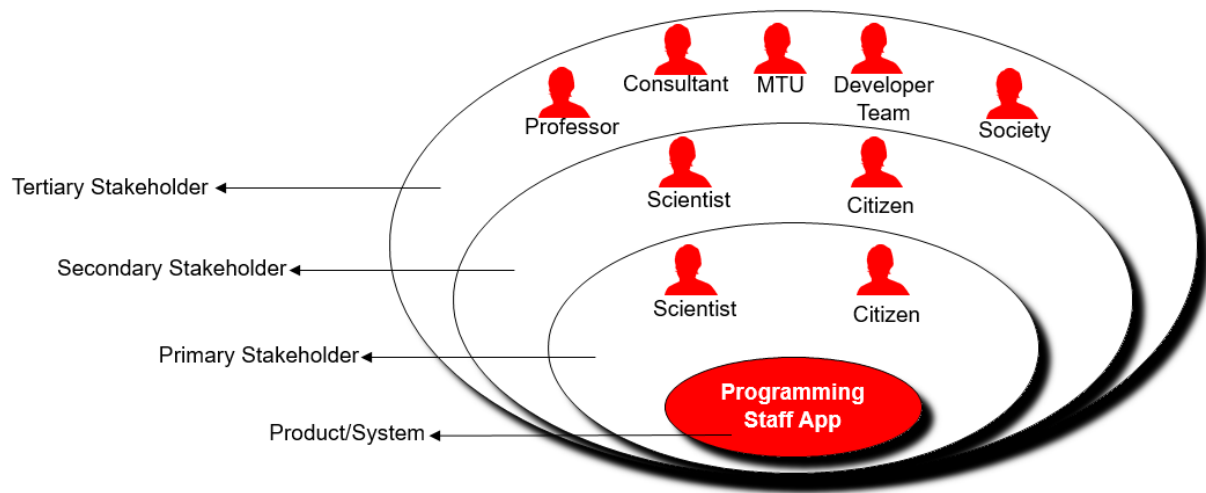
*Figure 1: Programming Staff App Stakeholder Onion Model

Stakeholder Goal Influence Table:

Stakeholder	Goals	Influences	
		Contributing	**Constraining**
Citizen	Collect data	Input & upload data	Easy & comprehensive interactions
Scientist	Collect complete data & view results	Analysis of the aggregate data	Programmable input & viewing access
	Successful application	App design	Design/server constraint
Professor	Successful project	Project design & communication criteria	Project constraints
Developer Team	Success app: fulfilled requirement, comprehendible, secure	App design, code	Design, server, interaction constraint
Consultant	Easy and efficient app	App evaluation	App constraints
MTU	Secure and success app	App Protocols	App constraints

Personas

Primary Users:

Persona:	Primary User
Photo:	
Fictional name:	Rebecca Brown
Job title:	High School Student
Demographics:	• Gender: Female • Age: 16 years • Height: 5' 3" • Weight: 125 lbs • Right handed • Lives in Baraga, near swampy area
Personal Characteristics	She is an attentive student and does her assignments in time. She tries to maintain quality in whatever task she does. She has taken the geography course.
Environment:	She is excited in using her first smart phone but is not a regular user. She can be considered as a beginner to smart phone. Her desktop has a broadband connection and she browses internet for at most an hour a day mostly to get help for her assignments. She does not have an email account.

Persona:	Primary User
Photo:	
Fictional name:	Matthew Havens
Job title	Assistant Librarian, Portage Lake Library
Demographics:	• Gender: Male • Age: 52 years • Height: 5' 11" • Weight: 170 lbs • Left handed • Father of two children • Lives in Houghton • MA in Library and Information Studies
Personal Characteristics	He is focused, helpful within a strong leadership role. He is conscious about his health and surrounding environment. He likes to take a walk by the Portage lake while going to his office in the morning. During Summer he goes for fishing in Portage Lake every weekend with his family. He likes to take pictures with them during fishing.
Environment:	He is comfortable using a computer and refers to himself as an intermediate Internet user. He is connected via high speed Wi-Fi connection at work and home. He uses email extensively and uses the web about 2 hours during his work day. He is a regular user of smart phone.

Secondary Users:

Persona:	Secondary User
Photo:	
Fictional name:	Dr. Li Fang
Job title	Senior Hydrologist, Scintilla Labs
Demographics:	• Gender: Female • Age: 43 years • Height: 5' 2" • Weight: 118 lbs • Right handed • Married • Mother of two children • Lives in Appleton
Personal Characteristics	She is devoted to research works. Very organized in nature and does time management efficiently for every task. Has good skill in teaching and communicating with project members. Highly motivated in contributing to the betterment of the nature. She is very family oriented and likes go hiking with her family.
Environment:	She is an extensive user of technology. Her Hydrology Lab is equipped with computers connected with a central server of the organization. Uses several apps and software for data analysis. Browses internet for at least 5 hours a day. Uses smart phone and laptop both at home and lab.

Persona:	Primary User
Photo:	
Fictional name:	Mike Jensen
Job title:	Farmer
Demographics:	• Gender: Male • Age: 61 years • Height: 6' 2" • Weight: 192 lbs • Right handed • Married • Grandfather to four • Lives in Green Bay
Personal Characteristics	Extremely hard working. Motivated to finding newer ideas of enhancing the healthy growth of crops. Maintains a fixed routine of farming and household chores every day. Visit places mostly for the purpose of collecting knowledge related to his farming. Passes his leisure time with grandchildren.
Environment:	Has a desktop with no internet connection (dial-up if necessary). Uses internet only through his smartphone once or twice a week. He refers himself as an irregular internet user. But is a user of farming related apps when necessary.

Simplified HTA

The simplified HTA given below is considered to be started from the Home>Login page:

Upper Level View:

Location Selection View

Location goals view

    Navigate

    Select Location

Navigate view

    New form

    Edit form

    Return to Home

Site alert view

    Confirm

    Navigate

Aggregate Data Selection View

Aggregate Data Goals

    Navigate

    Show Aggregate Data

Site alert view

    Confirm

    Navigate

Lower Level View:

New form view

    Data type

    Text

        Gauge Number

            Save

            Cancel

Water Level

Save

Cancel

Timestamp

Save

Cancel

Picture

Browse Picture View

Save

Cancel

Edit Form view

Form list

Form 1

Form 2

Form 3

…….

……..

Form type list

Text

Edit Text

Save

Cancel

Picture

Change Picture View

Save

Cancel

Upload Form

Upload

Cancel

Show Aggregate Data View

Show

Cancel

Summary of HTA:

The user will login to his/her account from the homepage of the web app. Then Select a Location of which the data corresponds. Then choose a new form or edit a previous form or return to Home. Then confirm your selection.

If you have chosen a new form then select the data type: Text or Picture. Selecting Text will open a form with text fields to insert text by the user. Save all of the input. If Picture type data was chosen, then browse a picture and save, cancel otherwise.

If Edit Form was chosen then select your form from a list of previously saved forms from the user's account. Again choose your Data type and then you will be shown the previous form with the previous input to edit. After editing select save.