

## **Abstract**

This report first briefly describes the basic idea behind iPatts, the application. Also, the analysis of the stakeholders is delineated. The analysis includes stakeholders onion model with a description of the stakeholders, and stakeholders' goal-influence table that delineates the stakeholders' goal and influence on this project. A persona is also designed. Finally, a simplified Hierarchical Task Analysis is delineated.

## **Description of the system**

The application allows users to track, record and document their travel events. Since the number of smartphone users is continuously increasing, this application will be designed to be utilized on smart phones.

## **Stakeholder Analysis**

This this section stakeholder analysis is demonstrated. Fig. 1 delineates the stakeholder onion model which falls into four main levels: iPatts, the proposed application, primary, secondary, and tertiary stakeholders. Herein, the primary stakeholders are students who utilize the app on their smartphones. It is worth mentioning that, in the initial stage of developing the app, students might be the only users, primary stakeholders; however, in the future there might be other users that utilize this app for other purposes other than educational ones. The secondary stakeholders are the scientists (i.e. Dr. Zhang) who use the outputs. The designers, developers and evaluators of the app are considered as tertiary stakeholders as they directly influence on the project

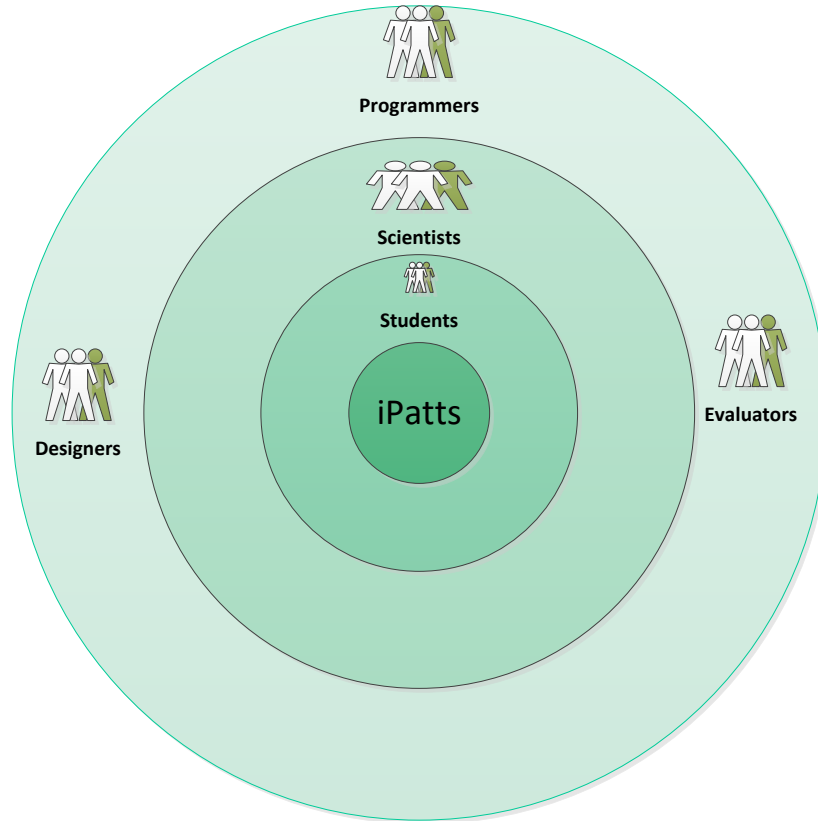


Figure1: Stakeholder Onion Model

Table 1 outlines the stakeholders' goal-influence table which elucidates the role of the aforementioned stakeholders by describing their goal and /or influence on this project.

Table 1: Stakeholders' goal-influence

Stakeholders	objectives	Influence	
		Contributing	Constraining
Students	To use the proposed app as instructed by their professor	Report the output to their professor	Time constraint
Scientists	To achieve valuable results that can be used to address the issues that left open in the real world	Provide developers with requirements and expectations, that lead to develop a more accurate system	Limited budget Limited time (project deadline)
Designers and programmers	To develop an application that not only meets the requirements, but also brings satisfying results	Design and develop the app in a constructive fashion	Limited time to address all the expectations
Evaluators	To evaluate and test the app's performance	Provide developers with beneficial evaluation	Limited time

## **Summary of stakeholders' goal-influence table**

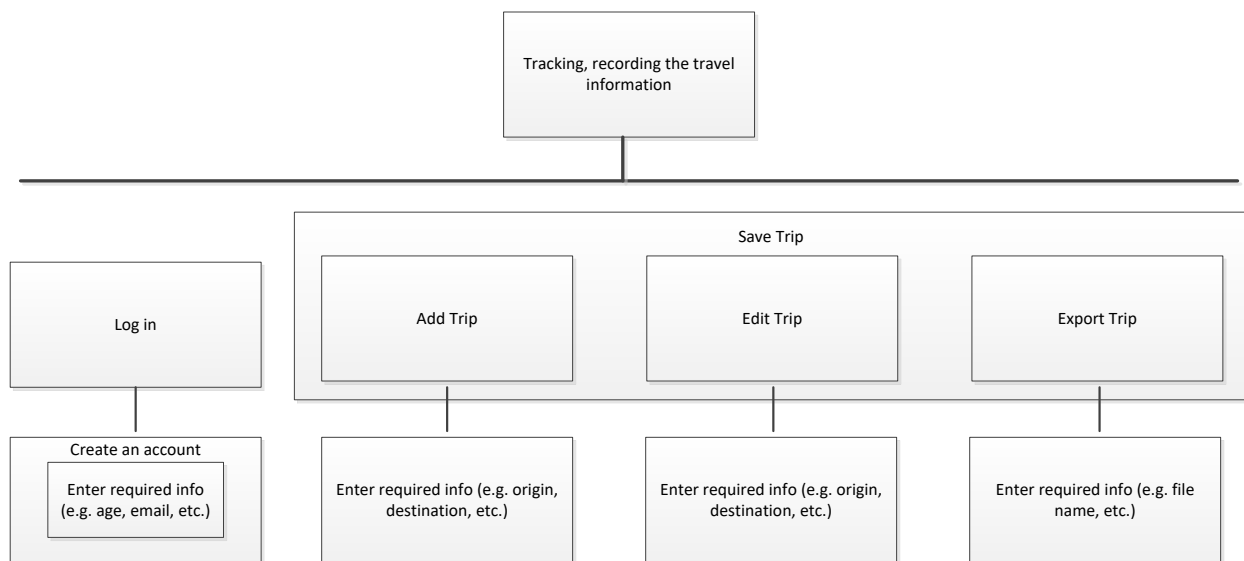
As mentioned the earlier, at the initial stage of iPatts, students are the only users of the application. Therefore, users will be students in the class taught by Dr. Zhang. Once developed, students use the application on their smartphone for a certain period of time and will provide the scientist with the results. The accuracy of the results is a key success of this app; thus, students should utilize the app appropriately, as instructed. The scientist provides the designers and programmers with the requirements and expectations that help them to develop the application as desired. Therefore, the developers aim at developing an application that meets the requirement. Also, the evaluators' objective is to provide the developers with a constructive feedback that helps them to develop a more efficient application.

## **Persona**

James is a 26-year-old Ph.D. student in the computer science department, Michigan Tech University. His research interest includes intelligent transportation system applications. Also, he works with his advisor as a graduate research assistant; thus, he comes to the campus every day. This semester he is taking a 3-credit course that offers by the department of civil engineering. As one of his assignment, James should record his daily travel information for about a month. According to the assignment, the travel information includes any short and long-distance travels. To accomplish this goal, James and other students are provided with iPatts application that helps them to track, record and document their travel information. James installs the app to his smartphone, logs in to it every time he goes somewhere and will provide the information to the instructor.

## Simplified Hierarchical Task Analysis

Figure 2 depicts the simplified HTA. We can observe that the main objective of the application is at the higher level. In addition, the intermediate level represents the tasks to achieve this goal. The lowest level also demonstrates the tasks and/or sub-tasks that need to be performed to accomplish those in the intermediate level.



## Appendix

Please see the notes from the interview with the scientist in the following links.

[Designers and programmers' notes](#)

[Evaluator's notes](#)