METU, Department Of Computer Engineering

Graduation Project
Proposal Form

Project Information

Title

Smart bookmark for tracking reading habits

Target

Public [ ]   Restricted [x] (Group "Hoppers" students)

Proposer Information

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IP (Intellectual Property) Information

All rights of the idea end product reserved to our team members.

Project Description and Background Information

Description

The project aims to develop a smart bookmark device and a mobile application for printed books. It provides users to keep some statistics and get notifications during reading period, and also it is expected to be used as book recommendation and a book sharing platform.

User can save the information (name, page etc.) of the book into the account by querying ISBN information on database. Therefore, user can keep which books he/she read.

The bookmark can track how much you read with the help of sensors and timers, and send this information to mobile app which you can check your reading progress. For example, user can see reading speed, and how much is left of the book. When the book has not been opened for a specific time, the app sends a reminder to user.
User also can take picture of particular sentences or paragraphs from the book and the images are sent to application to be stored as text files. The user will be able to share his notes.

The application can make new book recommendations by evaluating the books read by user already. It is also a social platform which a user can share books with the other user.

Similar Products/Projects

Though there is not certain information that this product has been on the market, there is a campaign in Brazil, in June 2014 which called "Tweet for a read" [1], try and help people to finish the books they've started. This product is connected to twitter via wifi. If a week passes without the book being opened, the bookmark will tweet any of author's remark.

Justification of the proposal

The purpose is to improve the reading habits of our society.

Through e-book readers people have built an ongoing habit of reading electronic books. However, this rate is controversial in printed books. According to a survey conducted by UNESCO in 2013 the ratio of reading books in Turkey is just 0.01%. The smart bookmark aims to increase that ratio.

Project aims to solve the for minority of reading rate.

Contributions, Innovation and Originality Aspects of the Project

A new device that tracks your reading habits in printed media.

There has not been a mobile application that connects the printed book to your mobile phone. This smart bookmark application sends notification based on how much you read. The smart bookmark differs itself from its competitors like other reminder applications, by providing a user centred notification system. It uses a book recommendation system based on users book choices.
 There is a book sharing system based on the books that the user finished which uses the social network of the application. User can share books among his social contacts.

It is a portable device which user can connect to an application, and this application can send a notification to user when book hasn't been opened for a specific time. The book marker can track the time reader has spent on the book. By adding new sensors to the smart bookmark, how much left in the book can be calculated based on the reading pace of the user.
There is a recommendation and sharing platform in the application. Recommendation system based on the rating from the user and the time on the book. For example, if the reader shows more interest in the book, the recommendation system will suggest the same type of book genre/author next time.
Readers can also take quotes from the book by using their telephone camera. The notes will be kept in the user's directory. The user will be able to share these notes as well.

Device will be designed as an embedded system which includes sensors, timers, and the wireless module between the hardware component and software component (the application). Book suggestions will be a user centric recommendation system.
Our project will be the first in the national and the international markets.

It provides a new marketing area between publisher houses, wholesale traders and the readers according to the data provided by the user.

Technical Aspects of the Project

The project consists of 2 units:
1) Smart bookmark device
2) Mobile application
- The bookmark is a smart device including a light sensor, a timer and wireless technology. Time and reading rate calculation based on the sensor and timers. We will manage a custom communication protocol between the physical bookmark and the mobile application itself. The application will be able to collect data from the sensors.
- Users can have their own accounts on mobile application, and the application is used for keeping book information (name, author etc.), notes from related book and reading progress data. Recommendation and sharing platform is also based on the mobile application part.

Targeted Output, Targeted User/Domain Profile

There will be a physical bookmark and a mobile application. Smart bookmark is designed for literate people. Anyone who can read a book and use a mobile phone is in the user domain.

Project Development Environment

Planned hardware / software technologies and programming languages to be used:
Java, Android, .NET

Planned methods, tools and techniques to be used:
Visual Studio
And appropriate electronic prototyping platform

External Support

Required hardware and software support for project:
Light sensor
Timer
Wireless technology

References

[1] http://adigaskell.org/2014/07/30/how-tweet-for-a-read-is-encouraging-reading/
https://vimeo.com/97274073