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Team C

PostCardBuddy

Project Experiences

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Contents

1 Introduction

This document aims to describe how the work has been conducted during the project. It also contains the groups reflections on the work process and the difficulties with different parts of the project.

2 Methods and Techniques

2.1 Elicitation

To find relevant elicitation techniques, *Software Requirements - Styles and Techniques* by Soren Lauesen have been used as a guidance[1]. A first stakeholder analysis was conducted and the different stakeholders were then approached using different elicitation techniques.

The stakeholder analysis was done through discussions within the group. To find out who those were, a discussing were taking place about who will interact with the system and with whom the system will interact with. From that discussion the stakeholders that was the most important ones for this system could be collected.

The following elicitation techniques were used prior to release 1:

Brainstorming Used as a first step within the team to come up with basic ideas and functions. During the brainstorming session the functions specified by the key customer were also considered.

Questionnaire The questionnaire was sent out to people within the end user group. Questions from the brainstorming session were used. People answering where asked to grade functions with grade 0-5, where zero stood for not interesting and five for very interesting. An age field was added to see if there was a difference in interest of various functions between ages.

Interviews In order to improve the understanding of the kind of product envisioned by the key customer an interview session was conducted early in the elicitation process. Although the interview provided valuable insights the main impression was ambiguity, both in terms of the role our key customer would have and exactly what the product should do. Given more time it would have been beneficial to invest in achieving a better consensus within the customer group before conducting the interview. Additional interviews will be conducted during the requirements specification process. Furthermore, two separate companies in the postal service business have been contacted with the intention to conduct interviews. However, it has proved difficult to get past the first line support and get a hold of an appropriate contact. A possible explanation for this is that the postcard business is only a minor part of the postal services market and there is probably nobody with a clear responsibility for this area.

Prototypes Three team members created one prototype each, independently of each other so as not to affect each other's ideas. It was decided to do this right away due to the time constraint upon this project. The prototypes are meant to be used for ideas to the graphical interface of the application. The use of prototypes is considered a suitable technique for this project since there are many easy to use and free programs available to make them and it gives not only the stakeholders but also the authors of the requirements a good idea of what it should look like and be able to do. It will be specifically be used when eliciting requirements from prospective end users.

Document study There is already a similar existing application on the market and it was used to further elicit functionality not already thought of and also to perhaps eliminate functionality that intervenes with the user experience. This was done after the initial brainstorming, to avoid making an identical application and not interfere with the team's creativity. This will be done more thoroughly for release 2.

Focus group

2.2 Specification

Context diagram A context diagram will be used since it is easy to use at the time for validation and verification. The diagram gives a good over-view of the system, both for the use of the client but also for the developers.

2.3 Validation

Prototypes The prototype gives the customer a unique opportunity to validate how the product matches their expectations. The prototypes will be contentiously adapted to the customers' needs and wants and new features will be added (or others removed) so that it becomes a good reflection on where the project is going.

2.4 Prioritization

3 Reflections

3.1 Elicitation

The reason for selecting the method to collect our stakeholders was because it is a fast method which meant that is was possible to start working, such as contact some of the stakeholders. The prioritization for each stakeholder were also stated through discussion within the group. This was both a very hard but also a very easy task. The hardest part was that when stating our stakeholders, the focus were on the stakeholders that would in some way interact with the system. Therefor all of the stakeholders were very important. Further in the projects development, it became clear on which stakeholders that meant more and who does less. That meant that suddenly the prioritization was more or less done.

Prototypes A program was used for constructing the prototypes that has worked very well so far. It also proved to be of use for brainstorming new ideas and features, since the program itself offered a lot different options on how to do things. From discussion with the costumer team new ideas for features emerged when the costumer tried the prototypes. The prototype helps the costumer to verify that the application conform to their requirements and also gives them a opportunity to feel if something was missing or wrong.

Questionnaire Figure 1 presents the result of the questionnaire, which 38 persons answered. To get answers from that amount of people was no problem and it gave a start of what the users were interested in. The result of this is that the functionality "Share postcard on social media" was not important and "Suggestion for GPS-based images" was appreciated. This will be considered for release 2. The result also shows that the desired functionality did not change that much depending on the age. Using a questionnaire was interesting since it gave a good idea of the functions people are interested in. However, as the questionnaire

was created it was desirable that it is quick to answer. Therefore, only ten questions were used to maximize the number of respondents and the quality of the answers. Afterwards it was realized that some interesting functionalities were missing. Knowing the interest of these functionalities as well could be of interest and might be investigated further prior the next release.

Document studies Document studies: The already existing app is easy to use and slim. It does not contain a lot of functions but there are enough. Most of the basic functions are already implemented. However, there are definitely some functionalities that could be of use that are not implemented. Also, the library of images is not very big and GPS based images depending on your localization only works in Sweden and Denmark. Thinking about this for release two and three would be a good idea.

Data model Creating the data model for the data requirements was in itself an exercise in elicitation. While gradually developing the ER-diagram new entities and relationships that were not easy to spot in the beginning started to emerge. This was largely due to dependencies between between different types of required data.

Data dictionary/Virtual windows Creating a data dictionary or virtual windows is a lot similar to doing a data model, from an elicitation point of view. Doing all three might be unnecessary (if elicitation is the purpose), but doing two of them would definitely be of value. The virtual windows technique especially is good for realizing what types of data might be missing from a certain feature.

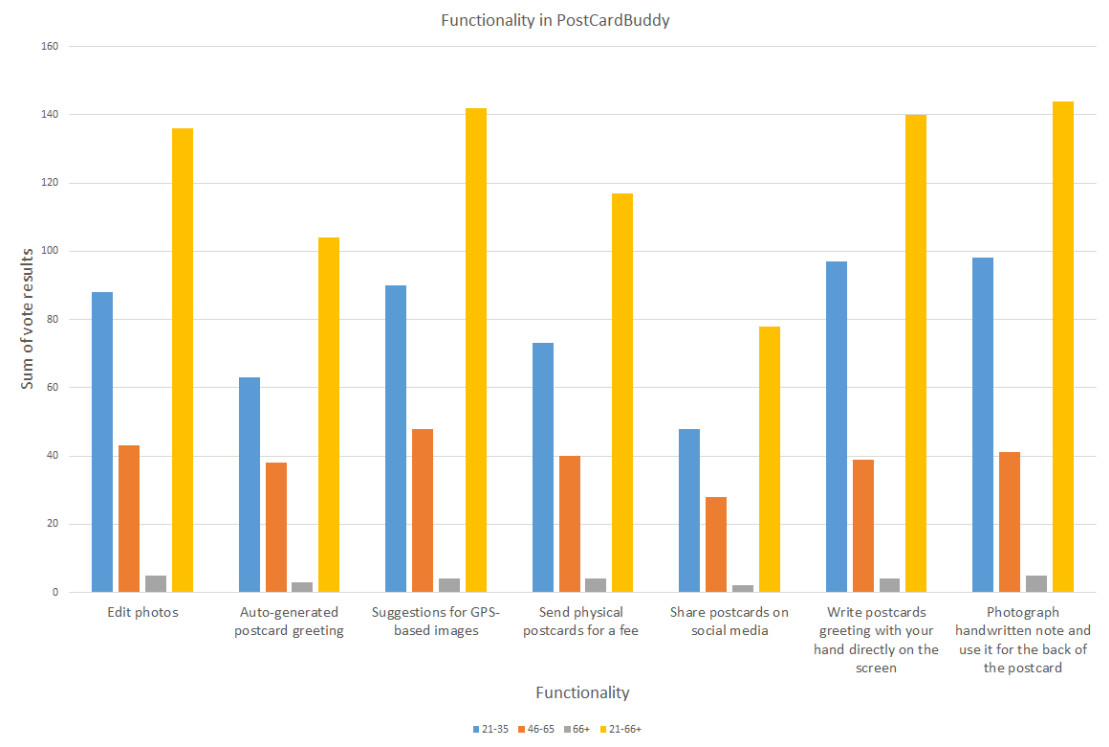

Figure 1: Result of the questionnaire on the desired functionality in PostCardBuddy

3.2 Specification

Context diagram The first context diagram created is presented in PMv2. The first diagram is very limited and contains too little information to understand the system. The updated diagram is presented in release 1 of the report System Requirements. The biggest problem creating a context diagram is that it should be big enough to present important details, but small enough to be able to get a overview of the system. Therefore it is very important to think through which components it should contain, and which should be left out. This difference is often personal, which we noticed during the creation of release 1, which led to some discussion. The most time of the discussion were spend talking about if the back-end should be presented and how the functionality that is used within the mobile should be presented.

The changes of the context diagram between release 1 and release 2 was mostly added description of every parts. These descriptions were easily added without any problem. Also the contacts were added, which was a part that was missing in the previous version. It is very easy to miss parts of the diagram. To find out that every part is within, it is very good to try to describe each chain and see if it is easy from that description to follow in the context diagram.

Data model The data model is a good tool to easily visualize dependencies of different systems and stakeholders. If done thoroughly it could be used as a good starting point for developers, and in particular database developers. But the more complicated the data model becomes, the harder it gets for non technical personnel to understand it. And in the same way it loses some of its value for developers if it is not thorough enough. This trade off probably means that this technique should be combined with some other tool, such as a data dictionary, to adequately satisfy technical as well as non-technical personnel.

Data dictionary/Virtual windows The data dictionary is probably the simplest tool for specifications. It's easy to write down but can become tedious and it's hard to see relationships between data. As a complement to a data model it's very good for properly communicating a specification. Virtual windows are very helpful for non-technical personell and is a very efficient way of presenting an overview of what types of data are needed for a specific feature.

3.3 Validation

3.4 Prioritization

4 Personal Statements

References

[1] Soren Lauesen, *Software Requirements - Styles and Techniques*, Pearson Education Limited, 2002