Analysis of User Interface and User Experience on Comrades Application

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Analysis of User Interface and User Experience on Comrades Application

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Abstract. The purpose of this research was to analyze user interface and user experience in Comrades application, so that user's purpose can be found through a design. The development stage of its interface uses goal directed design method and then analyzes the user experience done by using user flows to describe the problems experienced by users. Based on these issues will be redrawn using an experience map that can illustrate recommendations for a better user experience. The result of research on user interface and user experience of Comrades application can be concluded that the development of interface using Goal Directed Design method has better testing level from previous interface, user can easily find its purpose in usage of Comrades application, and result of recommendation done at interface Comrades application so that users can feel the user interface and a better user experience was fulfilled with proven value usability testing task better.

1. Introduction

User Experience and User Interface is one of the important components in a software. However, inappropriate interfaces can lead users to easily leave the software already built [1]. An application when built based on a mental model of the developer, without any mental user model can cause problems i.e. the user could not have found his purpose in using the application [2, 3].

After conducting interviews and observations to five users using the Comrades app, the current User interface has provided a poor experience, as it makes users confused and quickly bored. For example, as in Comrades main feature that provides reminders for taking drugs, the feature has a different interface with the usual reminder feature, since it has no floating button on the feature page, which does not indicate that the user can add reminders or alarms in the feature. This results in the user's purpose in using Comrades app unfulfilled [4].

Therefore, the purpose of the analysis research on the user interface and user experience of Comrades application is by way of building the interface by using the Goal Directed Design method which has better testing level than the previous interface [5, 6]. This analysis is to help Comrades application developers find User interface and User experience based on user's motivation and goals, and provide results in the form of evaluation and recommendations to improve the design owned Comrades application.

The purpose of this research was to analyze user interface and user experience in Comrades application, so that user's purpose can be found through a design.

2. Research methodology

Research methodology, which was used to conduct this research, was referred to UI/UX Analysis [7]. The following Figure 1 shows the flow of research methodology.

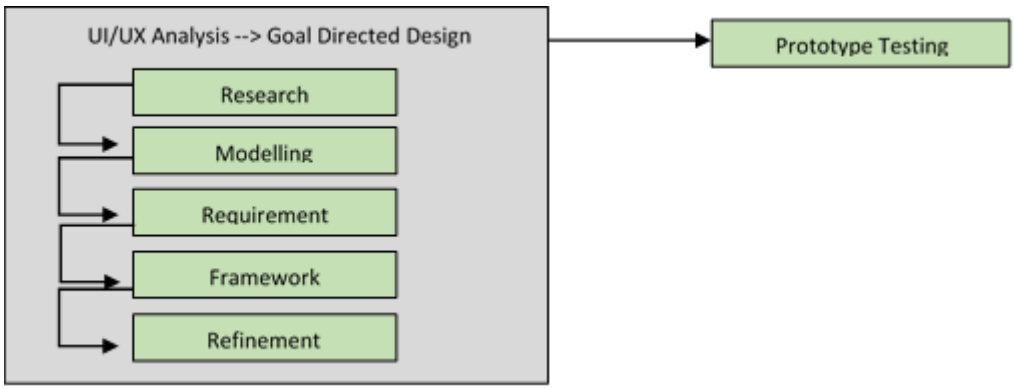


Figure 1. Research methodology.

Based on Figure 1, this study was initiated by UI / UX analysis using Goal Directed Design [1]. The method of Goal directed design has several stages [6]: Research to find out the current product condition by using some technique that is: Interview, Review of library, Evaluation of product. Modeling is the stage of defining the results of research to find a pattern of users that can be described through persona. At the requirement stage, the results of the persona as a scenario, to find the specific purpose of the specified persona, and also describe how the user interacts with his environment. While the Framework is the stage to build a sketch or mockup interface design to be created. Refinement is the stage of defining the details of the display used, such as icons and other visual elements in the form of digital prototype. In Prototype Testing will be an analysis of the results obtained from the test by comparing the interface in the current Comrades application with the interface on the Comrades digital prototype application that uses the goal directed design method in accordance with usability parameters [8].

3. Results and discussion

In this section will be explained each stage based on research methodology. This stage is divided into two major stages of UI / UX analysis and prototype testing by involving graha community as user.

3.1. UI/UX analysis using goal directed design

Interest is the motivation of users and should describe what the user wants to accomplish. To get the user's destination is used goal-directed design method that seeks to bridge between research and design [1, 5, 7].

3.1.1. Research. Research is conducted to obtain qualitative data about Comrades applications and target users who will be the actual users of Comrades application products. Qualitative data describes the needs, goals and motivation of users in using Comrades application which will be built its interface design model. In addition to qualitative data collection, product evaluation is also conducted to analyze problems that users experience when using Comrades applications. Interviews conducted to developers and the HIV / Aids community using usability testing to make it easier to find out what the applications of Comrades are currently. Two of the five users think the current interface is very good, less than half of users think that Comrades application interface is currently very good, there are features that make users frustrated or require more concentration to use it, there are still features that lack interface elements, therefore it would be better if the fix to cover the current deficiencies, so that users do not feel the obstacle in using Comrades application.

3.1.2. Modelling. In the stage of modelling the stages of drawing characteristics of the user using the tool that persona, by conducting interviews to users Comrades application of usability testing stage, then obtained the results of the following persona [9, 10].

3.1.3. Requirement. At the requirement stage a depiction of a scenario of the use of Comrades application using a storytelling tool that is able to describe what the user needs from the Comrades application interface when its use, the result of construct storytelling will be built a site maps that are able to describe any page that will interact with the user [5], as for site maps on the interface design to be built can be looked figure 2.

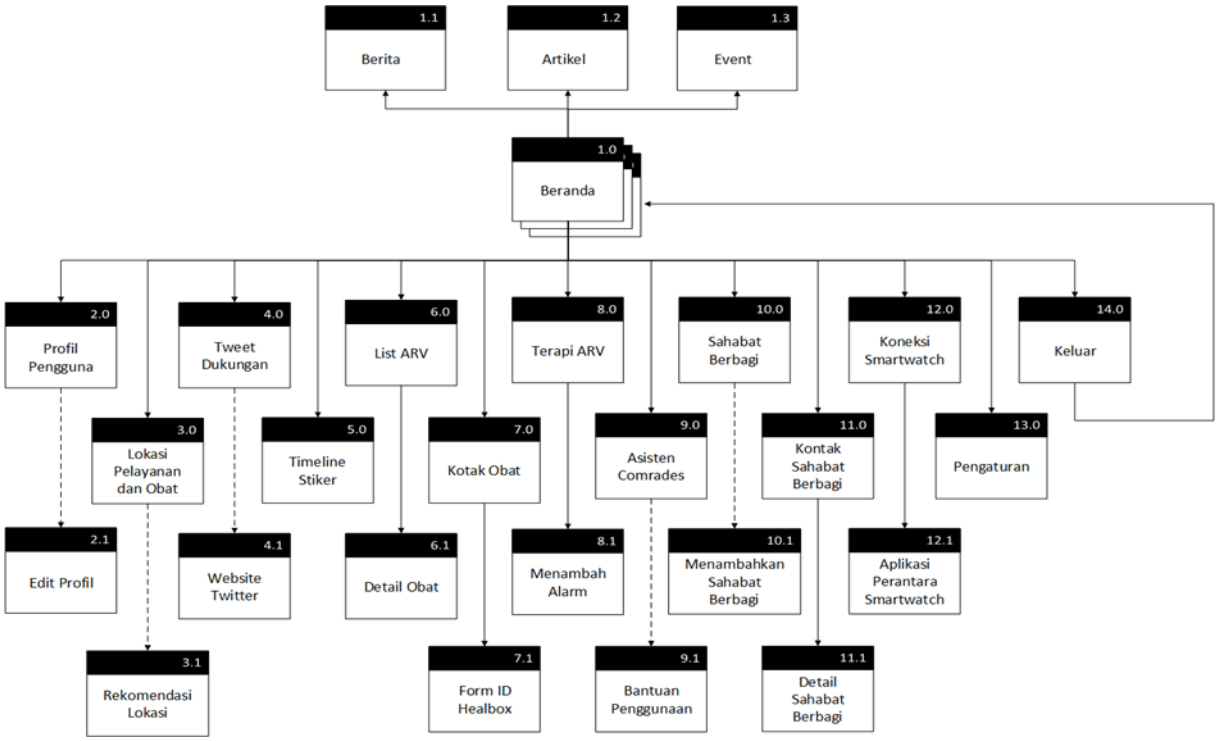


Figure 2. Site maps Comrades application.

3.1.4. Framework. Based on the previous stages we can create a mock up or design in the form of a sketch of the interface that will be built [11], here is the mock-up of some recommended interface: (Figure 3-6).

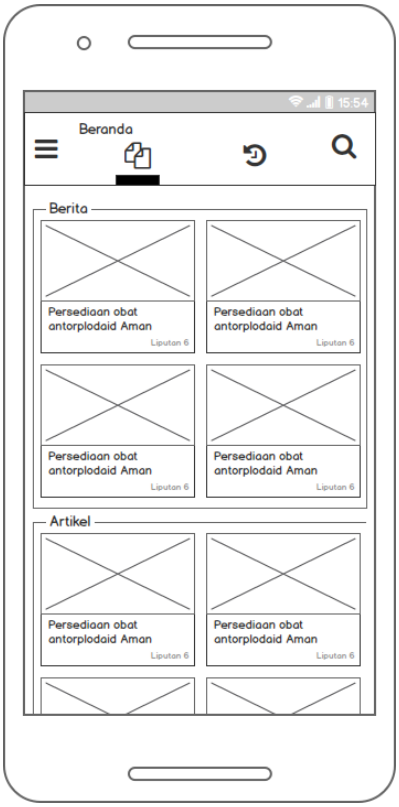


Figure 3. Home page.

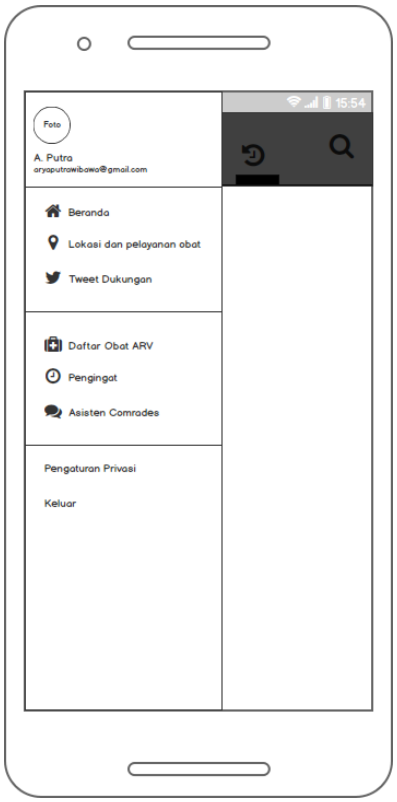


Figure 4. Maps navigation.

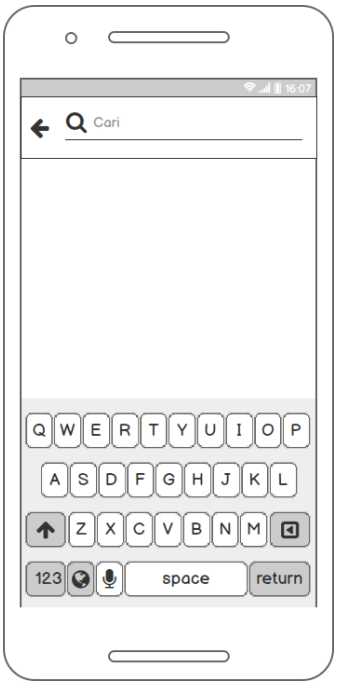


Figure 5. Search page.

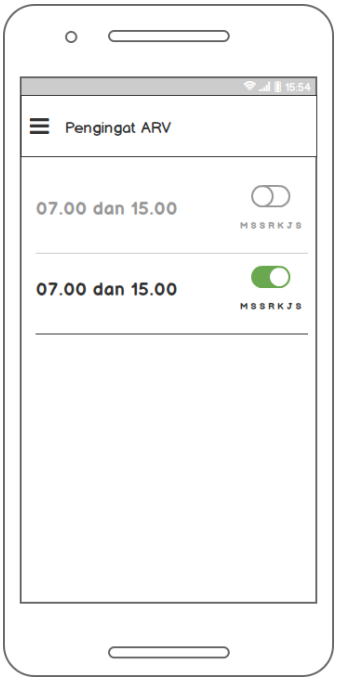
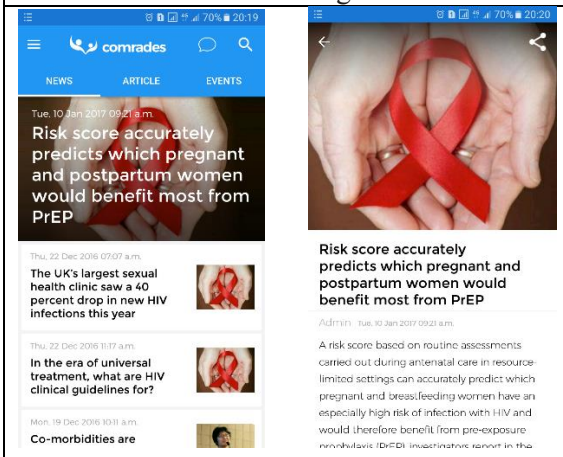
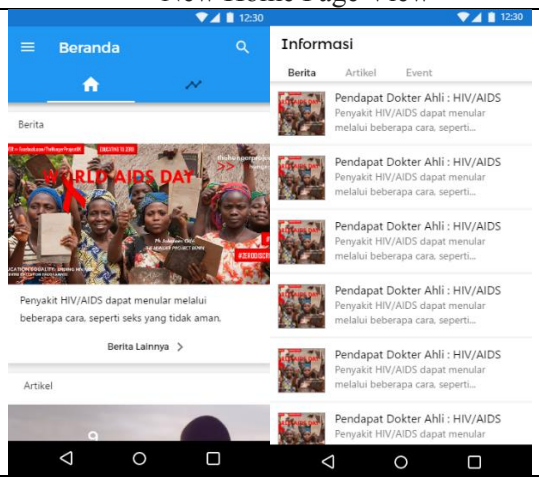


Figure 6. Reminder page.

3.1.5. Refinement. This stage will focus on the system design to be used. The design was built following the Material Design guidelines provided by Google to build an interface for Android devices. The

designer is filled with colors, icons and other elements used in the design process, and every element to design the use of design guidelines to guide the interface design of Android, as Google has provided material design guidelines to match the perception and identity of a product interface [5, 7]. To find out the recommended interface creation results using destination design method, interface comparison is built. Here is a comparison between the current interface and the interface built with the goal directed design (GDD) method, the design result built with the goal directed design (GDD) method has been determined and built on the standard design guidelines, in each design present in the prototype. (See Table 1)

Table 1. Comparison of current design with design with Goal Directed Design (GDD).

Old Home Page View	New Home Page View
	

3.2. Prototype testing

After performing the implementation of the interface analysis results, then the implementation will be carried out on the user experience using the Experience Map [7]. The result will be used as a recommendation to the developer so that the Comrades application does not cause any constraints in its use, confusion and loss of user concentration from the use of Comrades applications.

3.2.1. User experience implementation. The implementation phase of the user experience is done by describing the experience map [2, 7], which is where the experience map is the stage where all the information that has been defined and described for the user experience design recommendations is loaded in a single table so that the information provided will be much more effective and clear.

3.2.2. User interface implementation. Implementation is done by making improvements to the view of the Comrades application interface at this time, for each interface design that has been made can be seen in the attachment prototype.

Prototype testing is done using by usability testing, to the user and to interview the developer [8, 12]. Based on the results of interviews with developers, the developers feel helped by the recommendation of the interface to Comrades application, which later can be the development of Comrades applications. There are the tasks the user performs when the test is done. The results obtained from what users do from the execution of tasks and can be looked at table 2.

Table 2. Assignment of tasks.

Tugas	Pengguna 1	Pengguna 2	Pengguna 3	Pengguna 4	Pengguna 5	Jumlah	Keberhasilan
Tugas 1	1	1	1	1	1	5	100%
Tugas 2	1	1	1	0	1	4	80%
Tugas 3	1	1	1	1	1	5	100%
Tugas 4	1	1	1	1	1	5	100%
Tugas 5	1	1	1	1	1	5	100%

The results of interviews with developers on the user experience design recommendations described using user flows and experience maps can be looked at table 3.

Table 3. Assignment of tasks.

No	Question	Answer
1	Is the user experience design recommendations given can be understood and implemented?	Yes can, despite the new tools used are still recognizable developers can use it to improve the next development stage.
2	Is the recommended user experience design gives a different picture of what the user can feel the comrades application?	Previously not known that the flow of Comrades application usage can affect users, but as seen from the user flows. User picture much sense obstacles in their use

4. Conclusions

Based on the results of implementation and testing that had been done, it can be concluded that the development of the interface using the goal directed design method produces an interface that corresponds to what the user wants to accomplish or matches the user's purpose. Although in Comrades applications there are many main functional, but not all functional will be used and required by the user. Therefore, the formation of functional categories that adjust the needs. The existence of user interface recommendations to improve usability of Comrades applications after comparing the appearance of current Comrades application with display on digital prototype built. The construction of an interface can be constructed based on the developer's skill, but it is advisable to do user research so that the built interface is not based on the developer models mental, but based on the user's mental model.

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