Application of Palembang City Info as a Sharing Media of Urban Information in Palembang City

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Abstract
Information technology advancement had become a primary need for the use of smartphones in society. The use of smartphones in society was generally used to interact on social media such as: Facebook, Instagram, Path, etc., and the applications of message exchanged such as: WhatsApp, Telegram, Blackberry Messenger, etc. The amount of social media users in Indonesia made people not only used mainstream news media as a news reference, but also people tended to make social media as a reference in searching for information. Information which was often shared by social media was information which related to urban problems such as traffic congestion, traffic accidents, criminal acts, loss, and events which took place in a city. Answering the urban problems which occur, society needed an Android based mobile application which could be used to share information about events that happened. With this application, users could find out various information about the activities that happened in Palembang city in real-time. This application allowed users to convey information in real-time if the users found something or lost something, both goods and people, and this application allowed event makers and community to promote program or community they made easily, so that other users could also search and come easily to the event or community place held.

Keywords—Mobile Applications, Information Sharing, Urban Information.

1. Introduction
Social media is a collection of internet-based applications, based on ideology and Web 2.0 technology, so it allows users to create and exchange content [1]. Results of a survey conducted by the Ministry of Communications and Information Technology [2], shows the 5 most popular social media in Indonesia, namely Facebook (65 million users), Twitter (19.5 million users), Google (3.4 million users), LinkedIn (1 million users), and Path (700 thousand users). The amount of social media users in Indonesia make people not only use the mainstream news media as a news reference, but also people tend to make social media as a reference in searching for information.

Information which is often shared on social media is information which relate to urban problems such as traffic congestion, traffic accidents, criminal acts, loss, and events in the city. Information can be in the form of important information for the public because of the urgency and benefits of information which can help society. Through a friendship system on social media, not all news on the share can be known by all users of the social media.

Answering the urban problems which occur, society need an Android based mobile application which can be used to share information about events that occur on the road around Palembang city. The information is in the form of events which are happening on the street of Palembang city, such as information about street damage, street lights damage, traffic lights damage damage, public facilities damage, traffic accidents, criminal incidents on the street, and congestion on the street. The Application can also be used to report the loss and discovery of valuable goods. Using
this application the user can directly report the incidence of personal property loss, so that other users can help the process of finding such items. This application can also be used to share information about events and communities in Palembang city. So this application will assist users with a navigation system to the place where the event takes place. The information will be uploaded to the application with the help of users’s Android smartphone connected to the internet. Then other people who use this application on smartphones can see the information.

In Faizah Alkaff's research entitled Analysis and Design of Social Media Software for Sharing Discount Information. A software in the form of social media is produced whose users can share information about discount and can search discounts based on location and context. social media for sharing discounts must have features to enter discount information, display discount information according to location and context and provide a search feature and display user profile data [3]. In Yuda Eka Fisabilillah’s research entitled Designing a Social Networking Application to Share Loss Information. The application is equipped with a search feature to ease users in finding lost information, information can be displayed based on lost news titles, loss news categories, and types of loss news. The application is also equipped with GIS technology, this technology is a feature which can provide visual information (maps), it is displayed based on loss location of an object [4]. In the Fajar Masya’s research entitled Web-Based Public Complaint Service System at the National Police Public Relations Division. The Public Complaints Service System at the National Police Public Relations Division collects data on the types of services which is arranged in a basic system with interactive concepts to present information in the form, types, procedures, requirements, and time. In addition to information about the service also provides the latest news about the national police. Public Complaints Service System at the National Police Public Relations Division is an effort to improve the quality of services in the field of information services to the public by DivHumas Polri [5].

2. RESEARCH METHODS

Rational Unified Process is an iterative software development approach, focusing on architecture-centric, more directed based on use case driven. Explanation of stages performed in the Rational Unified Process method as follows:

a. Inception
   This stage is more about modeling the required business processes (business modeling) and defining the needs of the system which will be created (requirements). If at the end of this stage the desired target is not achieved then it can be canceled or redesigned so that the desired criteria can be achieved. Object limits / milestones are used to detect whether a system requirement can be implemented or not.

b. Elaboration
   This stage is more focused on system architecture planning. This stage can also detect whether the desired architecture can be created or not. Detect the possible risks which might occur from the architecture created. This stage is more about system analysis and design and system implementation which focuses on prototype systems. If at the end of this stage the desired target is not reached then it can be canceled or repeated again. Architectural boundaries / milestones are used to detect whether the needs of a system can be implemented or not through the creation of architecture.

c. Construction
   This stage is focused on the development of components and system features. This stage is more on the systems implementation and testing which focus on the implementation of software source code. This stage produces a software product which is a prerequisite for initial operational capability milestone or boundary / initial operational capability milestone.

d. Transition
   This stage is more on system deployment or installation so that it can be understood by user. This stage produces software products which have become a prerequisite of the initial operational capability milestone or initial operational capability limits. Activities at this stage included in user
training, maintenance and testing of the system whether it meets user expectations. The software products are also adjusted to the needs identified at the inception stage. If all objective criteria are met, it is considered that the product release milestone has been fulfilled (the product launch milestone) and software development has been completed [6].

3. RESULTS AND DISCUSSION

1. Inception Phase

In this research, the researchers use observation techniques in collecting information or data. Researchers conducted observation directly to the main streets of Palembang City. So that researchers can get valid data from the conditions which are happening in Palembang City. The data obtained will be used in making applications which are being developed by researchers. The following are observation data obtained from observations to the roads in Palembang.

Observation which was carried out by researchers was conducted by approaching several roads in Palembang City directly. The researchers obtained several data such as the data of frequent traffic congested, road which has many damages, big events which are usually held in Palembang, and places where many societies gather. The following data were obtained from the observation and can be seen in Table 1.

| No | Location Name         | Description                                                   |
|----|-----------------------|---------------------------------------------------------------|
| 1  | Patal Intersection    | Frequent traffic congested                                    |
| 2  | DPR Office            | Events are often held and Frequent traffic congested          |
| 3  | Kuto Besak Fortress   | Events are often held                                         |
| 4  | Sekip Ujung           | Frequent traffic congested and road conditions are damaged at some point |
| 5  | Agung Mosque          | Frequent traffic congested                                    |
| 6  | Punti Kayu            | Frequent traffic congested and road conditions are damaged at some point |
| 7  | Kambang Iwak         | A place the various communities gathered                     |

2. Elaboration Phase

This phase is the phase for making architecture that forms the basis of the system. Workflow that many executed in this phase is the analysis and design.

A. Use Case Diagram

Use Case Diagram is a modeling for behavior of the application to be made. The use case describes an interaction between one or more actors with the information system that will be created. This Use Case diagram describes what can be seen by the user. This diagram illustrates what interactions can be done by the user through an Android device, more details can be seen in Figure 1.

B. Activity Diagram

Activity Diagram illustrates the various flow of activities in the system which is being designed, how each flow comes, the decision that might occur, and how they ended. Activity diagram can also describe parallel processes which may occur several executions. Activity diagram is a special state diagram, where most of the state is action and most of the transition in trigger by the completion of the previous state (internal processing). Activity diagram (figure 2) describes various flows of activity performed by the user.
3. **Construction**

   The third stage in implementing software design, at each interaction also shows processes such as design, implementation, coding, and data storage.

4. **Transition**

   This stage is more focused on deployment or installation of the system in order to be understood by the user. This stage produces software products which becomes a prerequisite for the Initial Operational Capability Milestone or the initial operational capability limits.

   **A. Implementation of Application**

   The Implementation is implementation stage and at the same time testing the system based on the results of analysis and design that has been carried out on the implementation of the design results into applications.

   **1. The View of Login Page**

   Login page contains a page for logging into the application. For more details, see in Figure 3.

   **2. The View of New User Page**

   New user page contains a page for registering a new user id of the application. For more details, see in Figure 4.

   **3. The View of Home Page (Map Menu)**

   Home page on the map menu tab, contains a page for choosing which map you want to use. For more details, see in Figure 5.

   **4. The View of Map Page**
Map page, contains a map with markers according to the selected menu, navigation buttons, add button, and list button. For more details, see in Figure 6.

5. **The View of Add City Info Page**
   Add City Info page, contains a form for adding a new location. For more details, see in Figure 7.

6. **The View of Lost and Found Page**
   Lost and Found page, contains a form for adding a new location. For more details, see Figure 8.

7. **The View of Add Event Page**
   Add Event page, contains a form for adding new locations. For more details, see in Figure 9.

8. **The View of Add Community Page**
   Add Community page, contains a form for adding a new community. For more details, see in picture 10.

9. **The View of Location Report Page**
   Location Report page, contains a form send to sending reports. For more details, see Figure 11.

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Figure 3 Application Login Page
Figure 4 User Registration Page (New User)
Figure 5 Application Main Page
Figure 6 Map Page
Figure 7 City Info Page
Figure 8 Lost and Found Page
4. CONCLUSION

1. With this application, users can find out various information about the activities which are happened in Palembang City in real-time.
2. With this application, users can convey real-time information when the users find something or lose something, both goods and people.
3. With this application, the event creator and the society can easily promote events or communities which they create, so that other users can easily find and come to the place of the event or community.

5. SUGGESTION

1. Add transaction menu or ticket online ticket purchase for city event menu, if the event held requires a ticket to attend.
2. Application is developed for other mobile operating systems which is currently also widely used by people such as IOS, Blackberry, and Windows Phone.

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