

The Prototype of Zakat Management System in Indonesia by Using the Social Society Approach: A Case Study

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Abstract- Giving alms (Zakat) to people in need is an obligation for Muslims to create justice for others. In Indonesia, there are already several institutions dealing with the issue for zakat, among others the body formed by the government, namely Badan Amil Zakat (BAZNAS) or a body formed by the community. Each Zakat institution already has a system used to register Muzaki (the person giving Zakat) and Mustahiq (the recipient of Zakat). However, there are some disadvantages to their system. First, the level of distribution of Zakat to the needy is still very low compare to the level of Zakat acceptance, which is about 60%. This is due to Mustahiq data owned by Zakat institutions are not real-time due to lack of officers in searching for Mustahiq data. Second, the data among the Zakat institutions that are still not integrated, thus allowing duplication of giving Zakat to the same Mustahiq. On the other hand, there is the possibility of Mustahiq not receiving any donations at all. In this research, we have created a new approach involving civil society to participate recommending Mustahiq's data and allow Muzaki to be able to give Zakat directly to Mustahiq. Then, we created a proxy database for communication among existing Zakat institutions. The result of this research is the design and prototype of new system

Keywords— Zakat; social environment; Zakat Information System Mustahiq, Muzaki, Indonesia

I. INTRODUCTION

Indonesia is a country with the fourth largest population in the world, below the state of China, India and the United States. It has population is about 255,461,700. From those population, around 88.1% or 205 million people are Moslem [1]. This makes Indonesia the country with the largest Muslim population in the world, above Pakistan and India. However, based on data from the Central Statistics Agency (BPS) in May 2016, there were approximately 27.76 million or approximately 10.7% of the population identified as poor [2]. To help the poor become even better, in Islam religion there is an obligation for Muslims who have the capability to provide help, usually giving money, to the needy. To facilitate the collection from the afford individuals and distribution of the alms (Zakat) to poor, the Indonesian government sets up a body of national zakat abbreviated to BAZNAS [3]. On the other hand, there are also non-government agencies which usually established by

Foundation that doing the same thing like BAZNAS, for example: Dompot Duafa, Rumah Yatim, PKPU, etc.

In practice, there are several problems associated with the collection, validation and distribution of zakat [4] [5] [6] [7]. The first related to the distribution of zakat which is still under expectations. In 2015, the Zakat collection is nearly 3,653 billion IDR, however, it can only distribute 2,251 billion IDR. The gap between collecting and distributing is nearly about 40% [8].

The second problem is correlated to integration of data among agencies. The government agency and every non-government agency still use their own data. That mean, some recipient (Mustahiq) may be recorded and facilitated twice in the different agencies. The third related to the searching process of the Mustahiq which usually hard to find and sometimes not up to date. The number of Mustahiq recorded in Jakarta in 2015 is only 13,531 people and on August 2016 as many as 11,558 people. It arises due to the limitation of agency staff who collect the information of the Mustahiq.

Fourth, there is no system that can be used easily whenever there are some Muzaki (the people who have the capability to give Zakat) who send the Zakat directly to the Mustahiq. Some Muzaki, due to the limitation of BAZNAS collection channel prefer to give it strictly to Mustahiq. The impact of this situations is there is no validation of the Mustahiq who are given by Muzaki.

Therefore, in this study, we propose a new design approach of Zakat information system which uses the power of social society to solve those problems. We suggest people who are in social environments can propose candidates of receiving donations, more and more people are proposing, then that potential recipients will be more likely to be used as recipients of zakat institution. In addition, we tried to offer the involvement of the public directly to distribute Zakat to use a mobile-based system which have been validated by one or more agencies. The system design approach that we advise will employ the map location of the Mustahiq, furthermore the Muzaki can cut the process of the donation directly to the Mustahiq without worrying of the validation from the agencies.

For the process of integration between Zakat institutions, the design that we propose involves a proxy database that can be accessed jointly by all institutions of zakat, and the data can

also be used by the system based on mobile applications by prospective charity. In this case, we designed several web services that can be used to process the data transaction.

This paper is organized as follows: the next section presents related work; Section 3 discuss the existing and propose system architecture; system design will be talk in Section 4; Section 5 conclude this paper with a summary and future work.

II. RELATED WORK

Several studies related to zakat system implementation in Indonesia have been done, the research use case study in certain area, among others by which research about development of [9] Zakat information system in Tasikmalaya. This research tries to regulate the process and management of zakat based mosque, to connect between management of Zakat. There is an interesting point in this research, namely the low trust Muzaki to distribute Zakat through official institutions, so the level of Zakat acceptance in Tasikmalaya in 2012 only reached 4 billion IDR, while the potential is 2 billion IDR

Same researches which tried to build an application for managing Zakat have created by [10]–[13]. The study explains that Mustahiq and Muzaki's data entry systems are still manual-based and vulnerable to data loss because they do not have a database to store Muzaki and Mustahiq data. Therefore, the authors designed a Web-based application system for data entry Muzaki and Mustahiq with ease and have an organized database so that the data needed more easily inputted. Other research makes computing zakat mall and zakat based on android profession. Application only to facilitate users in the calculation of zakat profession. This application uses prototype and design methods using UML diagrams such as use case diagrams, activity diagrams and sequence diagrams.

However, the above research cannot be used to solve the problems that exist in this study, that is related to the input mechanism of Mustahiq candidate data. Prior research only provides tools for Mustahiq and Muzaki's data input process, but does not discuss how to make this Mustahiq candidate data in real time. In our research, we use the citizen to citizen (C2C) approach, so we use the surrounding community to participate in recommending Mustahiq candidates. So, that data that will enter is real-time and accuracy is stronger because more and more recommendation will be more convincing the data is valid.

Other problems related to the distribution process are also not discussed in previous studies. Though there is a large gap between the acceptance and distribution of zakat from amil zakat institutions. This may be the case because many people give their zakat directly to Mustahiq [14]. This process is very susceptible to duplication and distribution are not targeted. In this study, we tried to keep providing opportunities for Muzaki to give zakat directly to Mustahiq by viewing the location Mustahiq previously recommended by the local community. To bridge the process of data collection in amil institutions, the data Mustahiq candidates who had been recommended by the community before becoming Mustahiq must be validated by zakat amil institutions. Thus, a proxy database will be built as part of data integration between existing zakat institutions.

III. SYSTEM ARCHITECTURE

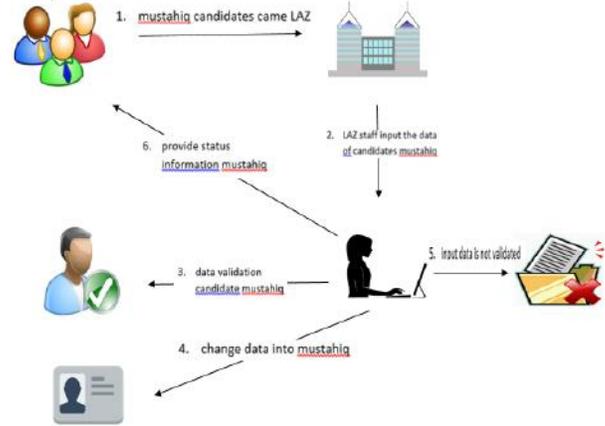


Fig 1 Existing Process for Inputting Mustahiq data

Fig.1 describes how the standard process performed by amil zakat institutions in order to process and validate the data search Mustahiq candidate to become Mustahiq. This process becomes very slow because the prospective search process Mustahiq still done traditionally. While in Fig.2, the C2C approach, this search process will be greatly helped by the help of the community who will recommend the Mustahiq candidate data, so that Amil institutions will focus more on the data validation process.

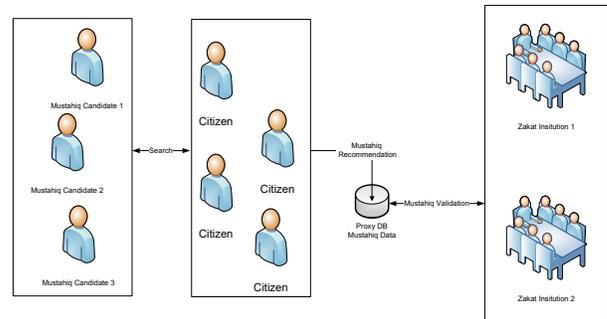


Fig 2 Propose Recommendation Model

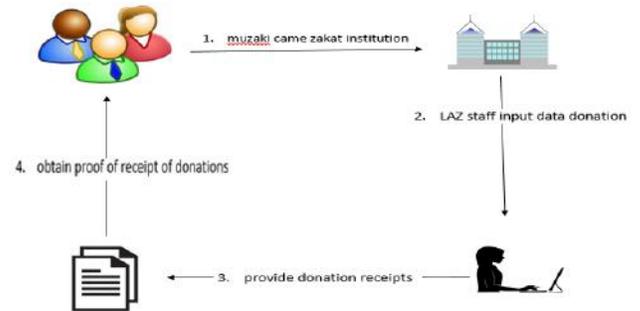


Fig. 3 Existing Donation Process

Fig.3 describes how Muzaki usually donate, first Muzaki comes to Amil Zakat institution and then donates. Indeed, there are several other channels for Muzaki to provide donations such as using bank channels and supermarket outlets. However, Muzaki's habit of providing funds directly to Mustahiq still cannot be fulfilled if using the existing system. In the system to be designed, Mustaki can donate donations directly to Mustaqi, because Mustahiq's data can be found based on Mustahiq address registered in amil institution, as seen in Fig.4.

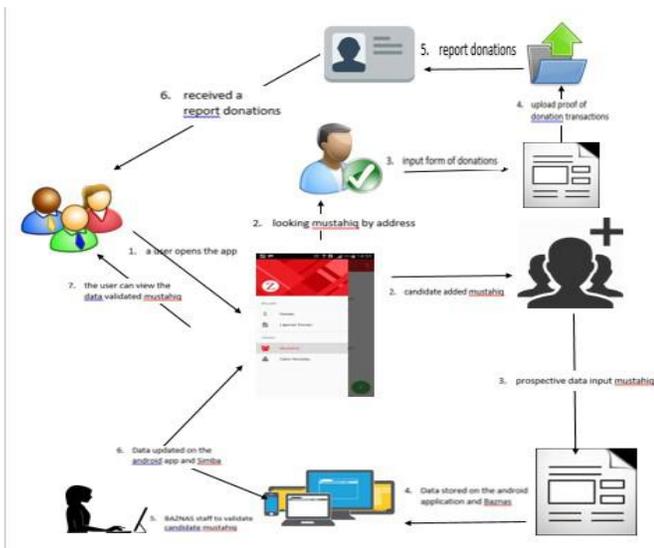


Fig. 4 Propose donation system

IV. RESEARCH METHOD

4.1 System Requirement and Analysis

Is a stage-setting features, constraints and objectives of the system through consultation with users of the system. All of these things will be set out in detail and serves as a system specification. There are 4 components at this stage:

a. Definition Issues

In this component, the problems faced in developing the system need to be defined, for example how to develop an application that is used to analyze and compare with the application system of zakat collection and distribution of funds previously.

b. Literature Study

Reference source is the author of books, articles, e-books and BAZNAS official website. The book is the advice of experts and professors in this study were used to study the data. Complete data from the book list can be found in the bibliography. Moreover, the authors also use google media as its internet media

c. Analysis of Needs

At this stage, an analysis of the system of collection and distribution of funds already running on BAZNAS through interviews to the chairman of the IT BAZNAS. In a study of data collection required methods or techniques specific data collection, so that the process can study

bargain smoothly. The author did a few steps of data collection such as:

a. Interview

At this stage, the authors conducted interviews with the head of IT of BAZNAS Jakarta on August 24, 2016 with Mr. Achmad Setio to ask the system already running on the system BAZNAS collection and distribution of zakat funds from various institutions who have joined the SIMBA system.

b. Observation

In this method, the data obtained with a few issues to review the research field in order to get the facts. Observation was held on August 4, 2016 at various charity institutions, namely the orphanage as well as direct observation areas that support the greatest charity reception

d. Limitations

At this stage determined by the access rights of each user or system applications that will be developed. Defined user access rights based on user roles applications.

e. Analysis System

In this component of the analysis system described include weakness of the old system, so it needs to be developed and compared it with the validity of the system to be developed by the researchers.

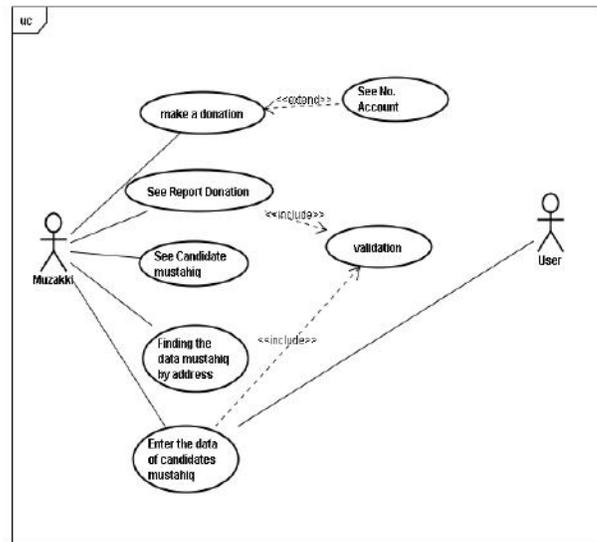


Fig. 5 Use Case Diagram

V. SYSTEM DESIGN

Based on the results of the analysis and architecture we have made before, we make a mockup system design that will be ready to be implemented. The mockup matches the Use-Case we've created. Among them:

a. Recommendation module

The public can make recommendations by providing coordinates of addresses and supporting data of Mustahiq candidates, then uploading photographs related to

Mustahiq candidates (see Fig.6). This data will be used by amil institution for data verification process.

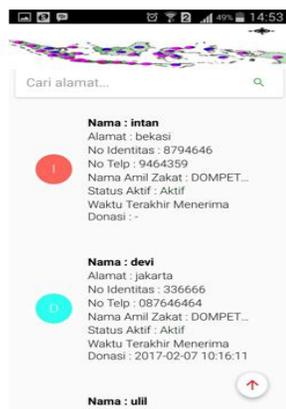


Fig. 6 Register Mustahiq Candidate

b. Donation module

In this donation module, Mustahiq candidates who have been verified by amil body will appear on the screen android based application system in the form of tables. Muzaki can search Mustahiq based on an address close to the position of the Muzaki map. Then Muzaki can donate directly to Mustahiq. In order for the data to be recorded, then Muzaki must provide data in the number of donations already given. Then the system will be recorded and institutions Amil Zakat can update the data based on the proxy database we have created.

V. Conclusion

This research tries to build a prototype for the zakat system by prioritizing the community participation approach. It is used to solve some zakat constraints especially in terms of minimizing the gap between zakat acceptance and distribution. Secondly, to try to integrate the zakat system owned by Amil zakat institutions in order to exchange data with each other. In making this prototype we also try to utilize API from google map so that zakat distribution process can be faster and create proxy database with help of web service that can be accessed by Amil Zakat institution to exchange data. For further research, some features related to zakat issues should also be included in this prototype. Among them, the interface with the tax system and payment system of zakat

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