Social Accountability Monitoring using Mobile Phones

Edward Reynell, Hannah Thinyane and Ingrid Siebörger
Department of Computer Science
Rhodes University, P.O. Box 94, Grahamstown
Tel: +27 46 6038291, Fax: +27 46 6361915
email: g07r2049@campus.ru.ac.za, {H.Thinyane, I.Sieborger}@ru.ac.za

Abstract – Local government processes require meaningful, informed and effective participation from civic actors and government themselves in order to remain democratic. This project will investigate the use of mobile phones as a tool for enabling and improving upon this participation. MobiSAM, a system which aims to supplement the social accountability monitoring process of local municipalities has been designed and partially implemented. This project concerns itself with the client side of the system and will investigate tools and techniques to allow service provision across heterogeneous mobile operating systems, handsets, and interaction styles. In order to maximise public participation, costs associated with the service will need to be kept to a minimum and interface localization will need to be paid close attention to.

Index Terms — Social Accountability Monitoring (SAM), service delivery, mobile phones

I. INTRODUCTION

South Africa's constitution obliges local government to perform certain tasks including providing a democratic and accountable government for local communities; ensuring the sustainable provision of services to communities; promoting social and economic development; as well as encouraging the involvement of communities and community organisations in matters of local government [8]. Although intentions of local governments are often genuine in their desire to "positively affect democracy and bring about social and economic change", many of these ideals have unfortunately yet to be obtained [6, p11]. Inadequate service delivery is often attributed to poor capacity, limited monetary resources, corruption and a lack of effective leadership [6]. As a result, citizen response often takes the form of protest and strike action. While these are a means of participating in local government matters, they are not considered meaningful in that they alone do not bring about lasting positive change [2]. In spite of the challenges, however, local governments are structured in such a way as to increase meaningful citizen participation by "placing more power and resources at a closer and more easily-influenced level of government" [7, p136].

The key to successful public involvement is to ensure the "meaningful, informed and effective participation" of citizens in government processes [9, p1]. However, adequate mechanisms and skills are required in order to hold service providers accountable for their performance (or lack thereof).

The Social Accountability Monitoring (SAM) methodology is one such mechanism which has been used to hold service providers accountable for their performance in many Southern African Development Community (SADC) countries [9]. Developed by the Centre for Social Accountability at Rhodes University, the SAM methodology has been used to monitor government at both national and provincial levels. While untested on local governments, it is deemed to be well suited to this application.

Although plagued by low literacy rates and poor access to formal education, South Africa's mobile penetration rate is comparable to that of many developed nations – with over 100 subscriptions per 100 inhabitants, making mobile phones an ideal platform for enhancing the SAM methodology [10]. This mobile phone enhanced SAM methodology will allow civic actors to play a larger role in local governance by providing them with a direct means to interact with local government and express their needs. Mobile phones have the potential to be used in many of the processes, though this project will focus on a select few, namely, citizen satisfaction surveys, social auditing and the monitoring of service delivery.

This paper describes initial work into the use of mobile phones for social accountability monitoring. It provides a technical description of the work in progress to enable heterogeneous mobile handsets to be used for social accountability monitoring.

II. BACKGROUND

The potential for ICTs to assist in increasing the efficiency and effectiveness of the public sector has been investigated since the early 2000s [5]. ICT-facilitated reforms in the public sector are varied and have been identified by Heeks as being increased efficiency, more efficient and effective decentralised decision making, an increase in accountability information, as well as forming the "conduit for deliver[ing] new forms of public service" [4]. Focusing solely on mobile phones and Internet access, there are a variety of instances of both being successfully used within the public sector for different purposes, including accelerating government response to citizen requests, improving emergence response and assessment [1], encouraging voter turnout and fostering political mobilisation [3].

III. RESEARCH GOALS

Through evidence-based engagement with local government, the project aims to encourage meaningful citizen participation within local government matters. This increased engagement will ideally result in increased

accountability of local government, improved service delivery and lasting positive change. In reaching these objectives, tools and techniques allowing service provision across heterogeneous mobile handsets, operating systems and interaction styles will be investigated. Suitable client applications will be developed and deployed in strategically chosen areas with client/server communication being implemented via both HTTP and Short Message Service (SMS).

IV. Approach

The project will follow the spiral model with a number of iterations being completed during the duration of the project. Each iteration consists of four steps, namely: requirements gathering, design, implementation and evaluation. The project's iterations have been decomposed into the following steps:

Iteration 1

1.) Identify service delivery projects from municipality's yearly budget (i.e. a road that requires fixing, pipes which need replacing). Decide on four projects, each in a separate community, giving a fair representation of the Makana municipality. Conduct a baseline study within these chosen communities. Determine the top 10 most common phones. Software will then be developed for these devices. 2.) Create interface prototypes (expecting a few predominant phone types). 3.) Develop prototype applications. 4.) Evaluate the effectiveness of said prototypes.

Iteration 2

1.) Identify changes in requirements. 2.) Create a collection of updated application prototypes using Nokia's Flowella. 3.) Develop most suitable prototypes into working applications. 4.) Finally, conduct an in-depth user study.

V. Design and Implementation

The system will use the client/server architecture, as shown in figure 1. The portion of the project described in this paper concerns itself only with the client side of the MobiSAM system. The server side of the project has already been implemented and takes the form of a web application based on the Model-View-Controller (MVC) architecture. Not only does the MVC architecture allow for increased flexibility through "separation of concerns" but it also enables the tailoring of the service to specific clients and end-users.

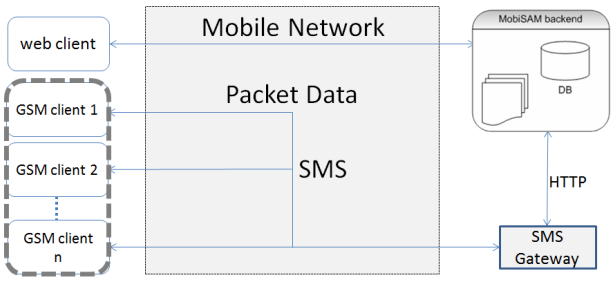

Figure 1: MobiSAM System Architecture

Android, BlackBerry and Java ME platforms are assumed to be most prevalent, however, exact figures will be determined by baseline study. Clients will take the form of an application installed on a user's handset, should their device support it. If not, access to the service will be reachable via the handset's Internet browser. Supported devices are yet to be determined. The client application will need to possess a variety of qualities including multilingual support, cross platform support, involve minimal cost to the user and support a variety of different poll types. The client application will allow the users to register to use the service, edit their profile, search for polls and take relevant polls.

Communication with the MobiSAM server will take place via the mobile network and will be service provider independent. Should the handset support it, communication will take the form of packet-data, otherwise regular Short Message Service (SMS) will be used for information exchange. The client application will detect the host device's capabilities and choose the most appropriate method.

VI. Conclusion

This paper introduced and outlined work in progress towards a mobile phone enhanced version of the SAM methodology, MobiSAM, and is concerned with the client portion of the project. The application will allow citizens to voice their concerns to local government, promoting evidence-based engagement and ideally resulting in a noticeable increase in meaningful citizen participation, leading to improved service delivery.

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Edward Reynell received his joint Honours in Computer Science and Information Systems in 2011 from Rhodes University and is presently studying towards his Master of Science at the same institution.