



A Novel Evaluation of Civic Suggestion in Civil Project Work Completion Using Android IoT Devices

SathishKannan.R¹, Dr.P.Kuppusamy²

M.E Student, Dept. of CSE, Gnanamani College of Technology, Namakkal, Tamilnadu, India¹

Professor, Dept. of CSE, Gnanamani College of Technology, Namakkal, Tamilnadu, India²

ABSTRACT: The Civic Suggestion system is a wireless system, which provides instructor with the ability to actively engage people in particular area. Currently, Government retrieves the suggestion and complaints from particular concerns, about the working status of Government civic work via online. The dependency of current people suggestion system on personal response units is less than desirable. Most of them ready to post their suggestions at a particular time then they need more expensive devices

This paper proposed the approach of civics Suggestion via IOT devices. People can post their suggestion by selecting a particular option of the message that will be sent by the instructor. Then the service messenger takes the required action based on the suggestion. Analysis of the system reveals that it can be implemented at low cost and it will provide a government real time suggestion .This enables people to avoid corruption. It can therefore be concluded that SMS-based civic suggestion system is feasible and beneficial to people and government

KEYWORDS: Civic Suggestion System (CSS), mobile, Short Message Service (SMS), Suggestion

I. INTRODUCTION

As of February 2013, there are 6.2 billion mobile subscribers, globally. This translates to 87% of the population. Even though, sales of mobile devices are still on the rise and growth in this area is being led by smartphones. SMS remains the most popular form of communication with 8 trillion SMS messages being sent during 2013. Ubiquitous access and low implementation costs make SMS the ideal platform for building a Novel Evaluation System (NES). People are also familiar with the operation of cellphones and so the learning curve for such a system would be marginal. One challenge that must be overcome, however, is that of SMS transmission costs.

The goal of this paper is to develop a NES that allows people to use SMS to engage themselves about the ongoing government projects.

A. Existing Public Suggestion Systems

Feedback Application

Initially, suggestions are given through the application form. Here each department has a separate application form. Public have to get that application and fill their individual identity and opinion by handwritten and then it should be submitted to the certain one. Secondly, people need to meet the officers face to face, some people are frisson on that, other method is that particular officer reach that place and analyze the work status and he will give suggestion to government. Here some officers are not honest and so there exist corruptions.

Online Feedback Technique

Nowadays, most of the government departments are using only the online feedback technique, while opening the web page there exist a feedback button. In some of the websites it requires some attributes like Name, E-Mail, Designation, organization, or username and password. Most of the websites require an e-mail id that is must to post their feedback in that website. At this point only an educated person can make use of it. Another type is the online



International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 3, Issue 5, May 2015

feedback technique in which there is a need to create an individual login along with the individual identity. With the use of that login only they can post their feedback.

Voice Suggestion

In the online feedback technique, people are not getting more aware about that procedure. Other than that, most of the public do not have time and space to post their feedback through online. Here, they introduced a new technique called voice call. People will call a particular number and post their feedback. In this technique, client will have a default computer voice through which people can post their feedback.

II. RELATED WORK

Several works has been done in this field. In [7] authors check the staff performance level via bar chart through staff and student interaction system. In this paper we can check the status of the work via the chart through the people suggestion. In [2] Student Response Systems are wireless systems that provide lecturers with the ability to actively engage students in the classroom. They work by providing students with an individual response unit, which students subsequently use to respond to queries posed during the lecture. Similarly in this paper they can share the information about the projects and get the feedback from people and take necessary action related to the suggestion. Here also each enduser have individual response unit.

In the survey of previous suggestion techniques, the feedbacks are posted through online and phone calls, but the priority is for the former method. Initially, in civil department the website for getting tender's feedback[4] .While opening the web page there exist a feedback button, which links to the feedback form that contains some attributes such as Name, E-Mail, Designation, organization, and the feedback textbox. As the form requires an E-mail id to post the feedback, only an educated people can make use of it. Also, it does not mention any particular tender and it is meant only for general feedback.

Secondly, the transport service has both methods of posting feedback. The website for bus service [5]. Here, the suggestions are sent from a person's E-mail. This form also includes E-Mail account and SMS. As like the above technology, only educated people can make use of this service. There also exists a toll-free number through which a passenger can airmail their complaints. Not more than one user can post their feedback simultaneously at a time via a phone call. Also, it is a time consuming process.

Lastly, the Electricity board website [6]. This is dissimilar from the previous websites. Here, to post feedback we need to create a personal login which requires region name along with consumer number. Only after creating the account we can login. It follows the same problem as above technologies that only the educated people can use it.

III. PROBLEM STATEMENT

Other than with SMS, there is no cost-effective and efficient means of posting suggestion in large areas. For an online, opening a webpage in the rural areas are too tedious and slow and some people may attempt to cheat by signing into other's account. For a SMS, sending multiple-choice question may take only less time to respond.

Thus, the response of the people reveals that they are getting more aware of the government projects. The only form of the network communication that the people have is via the cellphones. The purpose of this paper is to investigate the status of the ongoing projects that make use of SMS, at a reasonable price, and to determine whether this system would be a viable option to solve the problem at hand. The instructors cannot expect the people to spend their own airtime answering questions via SMS at normal network rates.

B. Online feedback system

The tender portal of government is central source of procurements of goods, service and works. Whenever the tender is announced in a particular area, the final status of that project can be viewed only by On-line Tender Information System. In the existing system the people are not much aware about the suggestion system and they do not have much time to enroll themselves in this process. Therefore, to overcome this issues the project is mainly developed

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 3, Issue 5, May 2015

based on the concept, that all the citizens in a particular area can share their opinion through Short Message of Service (SMS), and so the people can be able to know much information about the tender and the updated services.

C. Purpose of Introducing CSS

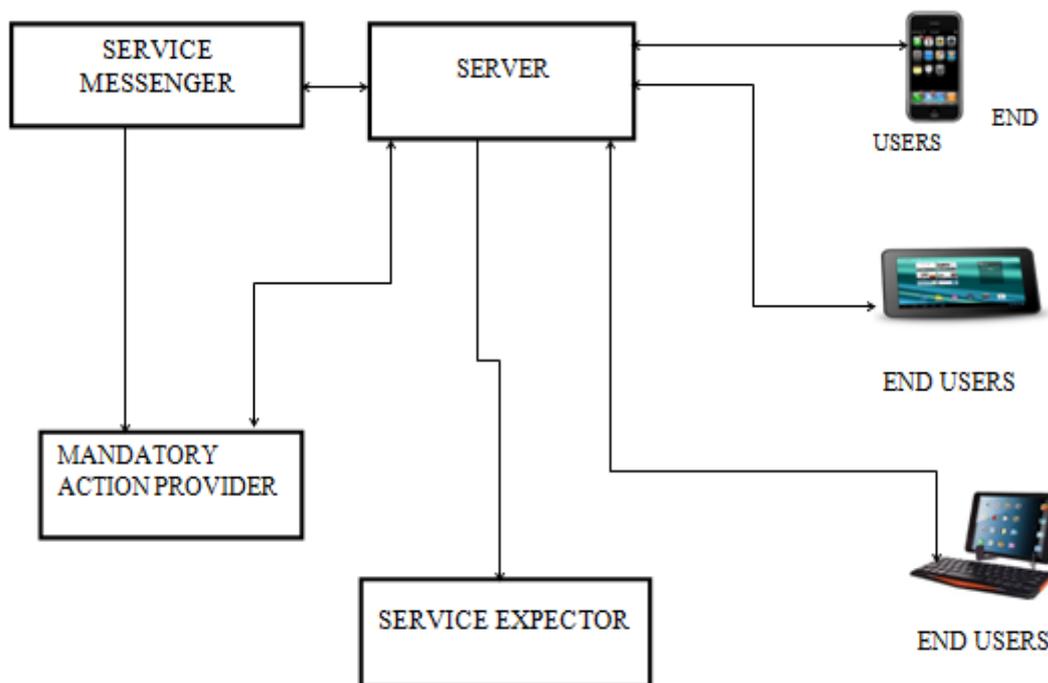
People suggestion system was introduced in order to assist the government/people. Most of the people are not aware of the government processes of their native places. Also some people may hesitate to enquire the status of their required process. In this context, CPS's ability to hit the nail on the head has contributed towards its increasing popularity. The reason for this are two folds, initially, peer interactions facilitates extensive learning and secondly instant knowledge retention suggestion via this system forces the instructor to reinforce the concepts that people didn't understand instead of being oblivious to the underlying problems.

IV. NOVEL EVALUATION TECHNIQUE

The above diagram shows slave is servers who hold entire data and share that data between the access provider and the enduser's, Service messenger is who one provides services to IOT devices and the slave. The IOT devices are mostly android handheld devices and some of them are pc's these are the enduser's.

A Novel evaluation system is a wireless system that provides suggestion with the ability to actively engage people in a place. These systems allow people to respond to questions posed via IOT devices in the form of SMS instead of doing it through online. For this reason, it would be convenient to develop a SMS based system that can be accessible to all the people.

Civic Suggestion system was introduced in order to assist the government/people. Most of the people are not aware of the government processes of their native places. Also some people may hesitate to enquire the status of their required process. In this context, CSS's ability to hit the nail on the head has contributed towards its increasing popularity. The reason for this are two folds, initially, peer interactions facilitates extensive learning and secondly instant knowledge retention suggestion via this system forces the instructor to reinforce the concepts that people didn't understand instead of being oblivious to the underlying problems,





International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 3, Issue 5, May 2015

D. ALGORITHM

- 1) The access provider creates the message and store in the slave.
- 2) The slave get updated the enduser's get the notification and that information.
- 3) Each enduser's reply that message that value store in the slave.
- 4) After the particular time the Access provider will watch the enduser's reply via any graphical view

Graphical View can be calculated by the below formula

$$REP = \sum_{k=0}^W Y + N + S$$

$$NT = \sum_{k=0}^W (YW + NW + SW) - W$$

REP=Total Number of Reply

W=Number of Phone numbers in that particular table

Y=Number of EndUser's POSITIVE

N=Number of EndUser's NEGATIVE

YW=POSITIVE EndUser's Phone Number

NW=NEGATIVE EndUser's Phone number

SW=SUGGESTION EndUser's Phone Number

S=Number of EndUser's SUGGESTION

NT=Total Number of Non-Reply

- 5) The Access provider take the mandatory action through the SLAVE
- 6) If the SLAVE value is less than the norm the Mandatory action cannot be taken.

NORMS can be calculated by the below formula or algorithm

$$\text{POSITIVE} = (\text{Total Number of Y} / \text{Total Number of W}) * 100$$

$$\text{NEGATIVE} = (\text{Total Number of N} / \text{Total Number of W}) * 100$$

- 7) Slave will store the entire value.

V. RESULT AND DISCUSSION

In this section, we aim to compare the performance measure of various suggestion systems with our SMS system: In Fig .1, x-axis represents the various feedback systems and y-axis represents the percentage of people involved. Here, in online system there are only about 18% of people involved in responding whereas in voice system about 28% of people are responding and our SMS based system includes about 65% of people's feedback.

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 3, Issue 5, May 2015

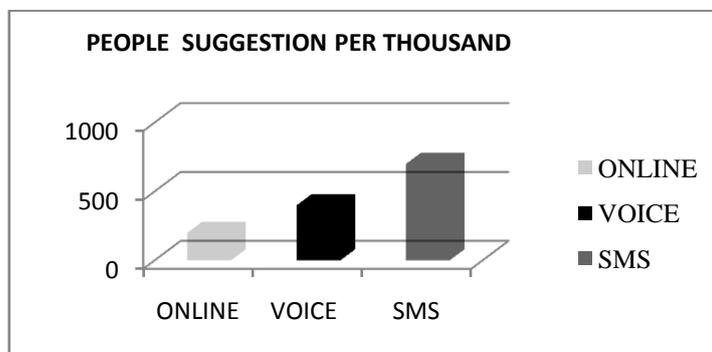


Fig.1: It shows the comparison between the NES(Mentioned as SMS) and the previous feedback system

In Fig. 2, x-axis represents the different suggestion systems and y-axis represents the amount of time and cost spent for those feedback systems. The online system consumes more cost comparing to the other two systems whereas, the time taken can be lesser than voice system and more than SMS system. The voice system takes more cost than SMS system and lesser than online. Our SMS system overcomes those issues and takes lesser time and cost than the former systems.

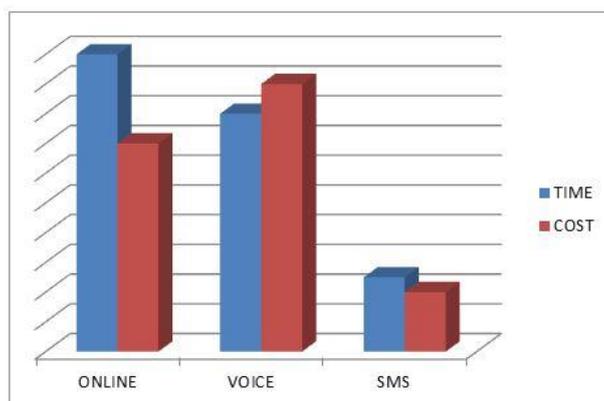


Fig.2: It shows the time and cost consuming between previous Feedback system and NES

In Fig 3, In online system, only 200 people out of 1000 gets aware about that system and in voice system, about 400 people gets aware out of 1000 whereas, in our system around 700 people can be aware on the ongoing processes.

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 3, Issue 5, May 2015

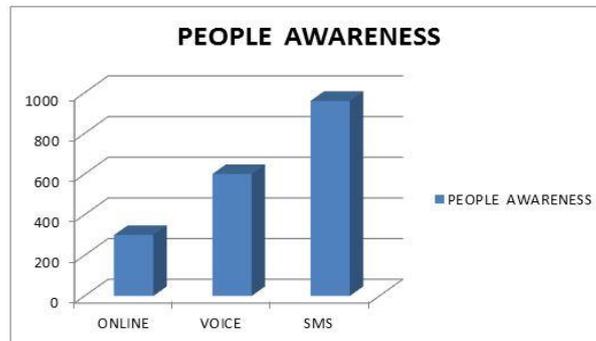


Fig.3: It show how much Civic getting aware this system

VI. CONCLUSION

The goal of this paper is the creation of an SMS-based Civics Suggestion System that exposes its functionality via an HTTP interface. To determine whether this system could be used to solve the issues defined in the above problem statement. As part of this goal, a client application should be developed to test the functionality of the interface. A literature survey was conducted to evaluate the state of current suggestion and Response Systems. This system can reduce the cost and time of sending the suggestions. It can retrieve the suggestions instantly from the people and takes necessary action immediately. In future, this SMS suggestions system can be applied in government and the private companies, colleges and it can be used for complaint purpose. It can also be developed in other mobile application technologies.

REFERENCES

- [1] Question SMS – SMS Based Student Feedback System Narayanan Shyam and Yasmin Binte Musthafa Centre for Instructional Technology National University of Singapore.
- [2] David Kyle Brown Grahamstown, "An SMS-based Student Response System", South Africa November 2012.
- [3] Firduas Bin, Maji Sidek. S faculty of information and communication technology, "The development of short messaging service (sms) application for the school usage".
- [4] www.tenders.tn.gov.in
- [5] www.tnpsc.in
- [6] www.tnebn.net
- [7] Hong Chong Ming, Kenneth and Lam Poh Fong, Lydia, 2009, 'Effectiveness of the Classroom Response System in Tutorials', *CDTL Brief*, April, Vol. 12 No. 1.
- [8] CITations, 1 November 2007, Dr Ismail Talib gets his students clicking with the Classroom Response System <http://blog.nus.edu.sg/citations/2007/11/01/dr-ismail-talib-gets-his-students-clicking-with-the-classroom-response-system>

BIOGRAPHY

Mr. R. Sathishkannan received his Bachelor's degree in Computer Science and Engineering from CSI College of Engineering, India, in 2013, He Currently Pursuing Master's degree in Software Engineering from Gnanamani College of Technology, Anna University Chennai, India. His specializations include Internet of Things, Software Engineering, Software Testing and Networks.

Dr. P.Kuppusamy received his Bachelor's degree in Computer Science and Engineering from Madras University, India, in 2002, Master's degree in Computer Science and Engineering from Anna University and PhD from Anna University of Technology, Coimbatore Chennai, India, in 2007. Currently, he is currently working as a Professor and Head of the Department at the Department of Computer Science and Engineering, Gnanamani College of Technology, Namakkal. His specializations include networks, Cryptography, Distributed Computing and Internet of Things. His current research interests are ad hoc networks and mobile computing.