AN EVALUATION OF TECHNOLOGY AS DEMOCRACY BUILDING TOOL IN AFRICA

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Abstract

This positional paper describes an ICT4D project still in its infancy stages. It starts by a brief description of the role ICTs are playing in shaping democracies around the world, then we describe a new technology for multimedia distribution, we introduce the concepts of information ecology and information viral effect. And finally we outline what would be our contribution to the workshop and what we hope to gain from the workshop.

Key Words

HCI, Interactive design, value-centered design, ICT4D, mobile devices,public displays, information ecology.

Back Ground

ICTs role in building of democracy around the world is constantly being seen various context around the world, in the American presidential debates being podcasted in real time through the internet[1].

The "rock the mobile vote[2]" project that was aimed at providing information about candidates to America's youth via the cell phone , the e-voting and mobile election monitoring have rolled out in many of the established democracies across the globe.[3]

Britain's premiership elections in 2005 utilized the mobile phone from the beginning of the campaign to inform voters on the voting process, locations of polling booths and how elections work ,up until to announcing the final election.[4].

Although there are isolated examples of ICT use in building democracies in the developing world most notable is activist in a sealed-off Burma using mobile phones to send multimedia messages of abuses to the world[5], this success seems to be limited to the developed world. The limitations arise from many reasons including but not limited to cost of access, lack of or insufficient bandwidth,, unreliable connections, lack of computing facilities, and primarily computer illiteracy.

Thus our study will be looking at technologies that try to give solutions to some of these challenges, as a means of delivering democratic information to the African electorate.

Overview of the Study

Our study focuses on ICTs as tools in democracy building in Africa, specifically in voter education in South Africa. We will be working in collaboration with the Institute for Democracy in South Africa (IDASA)[6], a Non-governmental-not for profit Organization involved in the development of democratic electoral systems across Africa. They play a leading role in the training of electoral officers, election monitors and voters.

The success of their work depends on the rapid and timely transmission of messages, and the messages ability to inform, and cause changes in decision making. This work has often been done using radios and print media , they have also been able to use their web portal (www.e-politics.org.za) and distribute CD's as a resource for election material for the people who have access to personal computers or the internet.[7]

In an effort to improve their reach to the electorate, we will be introducing a new technology that utilizes public displays and mobile phones for multimedia distribution, and study the reaction to this new technology, in terms of value of information distribution and speed of distribution.

We have divided this study into two broad areas, namely; information ecology – a concept by Nardi & O'Day [1] which looks at the role of technology in the human environment; Information Viral Effect, – a phenomenon used in marketing of goods and is usually known as 'word of mouth'. In our work, we will be concentrating on how the type, clarity and perception of media and the technology can be used to spread democracy information around.

We begin looking at the mobile phones and the public displays as the technology before we briefly describe the two areas of interest.

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[1] http://www.guardian.co.uk/media/2007/jul/23/broadcasting.digitalmedia
[2] http://www.wired.com/politics/law/news/2004/03/62611
[3] http://politicsonline.com/content/main/specialreports/2007/top10_2007/
[4] http://news.bbc.co.uk/1/hi/uk_politics/vote_2005/frontpage/4457723.stm
[5] http://mobileactive.org/mobiles-myanmar
http://daily.stanford.edu/article/2007/10/1/opedBeBoldForABetterBurma
[6] www.idasa.org.za
[7] Information courtesy of IDASA

Mobile Phones.

At almost exponential growth, the mobile phone has become ubiquitous to communication with an estimated 75% increased penetration in some parts of Africa annually, making them five times more accessible than personal computers [2].

A study by the Center for Development Research (ZEF) [8], at the University of Bonn found out that that promoting ICT is of equal importance in Sub-Saharan Africa as promoting basic needs and that mobile phones are the main sources of information developing countries. It further states that they have leapfrogged classical means of communication like radio, TV and even print media The ease of mobility and ownership of these small hand held devices can allow for both personal and commercial communication.[3]

Public Displays

Public displays have been used in communities as a source of information sharing and gathering and were usually in simple forms of chalk boards, or pin up posters but recently they have become digital presenting information in multi-media formats in areas of high traffic such as restaurant hotel lobbies, and commuter stations, they have become virtually indispensible in mass communication; [4].

Posters , bill boards, stickers , banners and flyers have been used during many elections in addition to the convetional T.V and radio channels as tools to communicate with the electorate in an effort to help them make a decision on whom or how to vote[9].

These modes of communication are adopted as a way of reaching out to people who due to reasons of poverty, geographical isolation or illiteracy are unable to access the information in other forms. The value of the boards is simplicity and perception. They are usually made up of pictures and tailored for a given community in terms of language and location thus increasing levels of understanding while initiating discussion and encouraging social participation thus strengthening social ties. [5,6].

The Big Board

The big board was created as a cheap alternative to access of information withincommunities in the developing world, where internet connectivity might be hindered by cost , geographical positioning and or by lack of supporting infrustructure . It is made up of an interactive public display and user mobile phones with a Bluetooth connectivity interface. [7]

While this tool was not created with democracy being its sole purpose we will be building on this idea to study ways in which we can work with, or improve this technology so that it can be a technology to be employed for democratic purpose.

Information Ecology

We will be looking at how to create a balance between human beings and technology as a means to creating a democractic 'space[10]'. In this study we will be looking at the "Big Board" a technology that combines the pervasiveness of the mobile phones and the non-intrusive nature of public displays as a tool of communication in the developing world within a human controlled environment which is determined by factors that lead people to 'actively seek information and make judgments, reducing decision uncertainties' [8].

Information Viral Effect

The term 'viral effect 'has been used to refer to the exponential spread of information within a given community with the purpose of behavioral change [9].

This is a phenomenal being used by many organization as a marketing tool and is usually referred to as "word of mouth" marketing

This phenomenon has been furthered by entrant ICTs. We will be looking at how a similar approach can be applied in the democracy building.

Design and Evaluation

There are some established "Value centered interactive design" [10,11] evaluation techniques that are aimed at applications created for the developing world which we will be using they include bridges.org's RA/RI criteria[11] and Patton's[8], Utilization focused methods. .

Working with the IDASA we will be looking at the effect of messages relayed through the big board and mobile phone will have in the communities through feedback that we get from them through further inquires of specific information and probably their voting decision.

[8]http://my.opera.com/bibberle/blog/2007/02/01/internet-and-mobile-phones-crucial-for-d

[9] Information courtesy of IDASA

[10] Space : made of people, information and technology not limited by geographical boundaries

[11] http://www.bridges.org/Real_Access

Initial results from unrelated study indicate a high learning among users with basic education upon encountering the technology for the first time; Further observation indicate that people tend to pass forward items of information that they perceived to be fascinating or importance to that party.

Conclusion

Since this year's conference theme is about balance, we look forward to finding ways of evaluating ICT4D applications where the results are qualitative; such as perception and understanding, where users might not be able to be monitored and where the conceived change might be felt a long time after the study was carried out.

In addition we are interested in contributing our ideas on *Value based interactive design* as the way forward for, Human Computer Interaction in the developing world, as it puts the value being imparted to the humans by the technology as the primary actor in design, rather designing with no value addition in mind.

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