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## Exuma: A Secure Mobile Communications Platform

My focus is in the creation of secure mobile communication platform, which can allow users to anonymously post/blog about any issues without the fear of personal persecution. Exuma will be a secure mobile communications platform, which can be used to help further encourage the use of mobile phones as tools for the creation and growth of grassroots journalism

My direction would first involve researching the political, economical and social, impact that mobile devices have had on developing countries. My research would review the usage patterns of mobile devices by people in developing nations. I would like to know how the mobile devices are being used to not only communicate with each other but as well as creating an communications platform which would act as an alternative platform to bypass the limitations of free speech within their nations.

What new and unique about your approach?

My approach in using mobile devices in the creation and growth of grassroots journalism is unique because it deals with one of the major obstacles, which prevents people from sharing their beliefs, and that is fear of persecution.

This fear can be overcome if Exuma is able to provide a secure mobile communication platform, which will allow users to anonymously blog/post about any issues without the fear of personal repercussions.

Rationale:

My project is important because not only do journalists in African countries face intimidation, threats, jail, and even death, but so do the citizens of these countries. These citizens, who bear the brunt of corrupt, inept and oppressive governments are the ones who do not have the opportunity to have their voices and I believe Exuma, and even the discussion of a secure mobile communication platform, is a step in the right direction towards addressing this important issue. Developing Exuma is interesting because it uses an emerging technology, which has been taken for granted in developed countries and using it in an innovative way to address an age-old question of free speech. Exuma is relevant because the growth and influence of mobile devices on society will only increase. Now the question is how can you use mobile technology in a innovative way to address a social concern plaguing almost all the developing nations.

With the advent of mobile technology and its decreasing cost and rapid availability, this is the perfect time to explore and attempt to find out how mobile technology can be used to address and initiate the growth of grassroots journalism. I myself saw firsthand the need for the growth of grassroots journalism from my travels to my home nation of Eritrea, as well as to Egypt, and Morocco where freedom of speech is extremely limited. This my own personal experience which has encouraged me to build Exuma.

The problem I am trying to solve is how mobile technology can be used to help with the creation and growth of grassroots journalism in developing nations. The issues that I am exploring include the social, political and economical impact and implications of mobile technology on developing nations, with a focus in Africa. I also will be exploring the mobile security implications (limitations, weaknesses) and uses of mobile devices in addressing the growth of grassroots journalism in developing nations. I am trying to build a secure mobile communications platform, which can be widely adapted by current mobile users as a downloadable or shareable application, which can be used to help further enable the growth of grassroots journalism in developing nations. The discussion on the use of mobile devices to help further grassroots journalism is also something that I want to initiate and encourage. My overall goal is to create a secure mobile communication platform, which would be used to help address and initiate a social change through the use of mobile devices.

I am creating Exuma for the average mobile user in a developing African country who has access to a GSM enabled mobile phone. I plan to use an application, which can be downloaded and shared (via Bluetooth), which will enable people to encrypt their message content and conceal their identity. Any user can use Exuma with a GSM mobile device, especially in its initial form, which will focus on the encryption of audio files and the anonymity of the subscriber's identity. People sending media files will use the application individually but on the receiving end, the media files can be viewed and shared by anyone. Exuma can be shared between users as long as the phones are Bluetooth enabled can be used by either individual users or groups of users to document and share events and news of importance.

Exuma will be used in all parts of developing nations in which there are mobile communications networks. I can envision Exuma initially being introduced through human rights or NGO type organization and then spread through a peer-to-peer contact network system, from one mobile user to another as long as both users have bluetooth. Exuma will be a repeatable experience for the end users. Exuma will be masked as a typical program application on the mobile device so that in case a user is detained, it will not be easily identifiable. Exuma can also be easily deleted in order to avoid detection by the authorities. This will effect my design process because I am going to attempt to make the overall interface as simple and cohesive as possible. It will follow the guidelines of witness, record, and share/ upload with as few steps as possible.

The intended nature of the user's experience is to witness, record and upload any media assets, which the end user has decided, are of importance to be shared within Exuma. The process of using Exuma will be made as simple as possible so that the end users can efficiently use it. The GUI interface will be quite simple and the process to upload will involve as few steps as possible. The three types of media files that can be uploaded will be audio, video and image files. I will be using J2ME and PGP encryption in attempting to build Exuma.

Exuma as an open source platform will never truly be completely finished but the beta version of it will be presented and released during the thesis presentation week. The beta version, which will be demonstrated during thesis week, will enable the encryption of an audio file, and inform the audience on how the platform itself will function.

The success of Exuma will depend on two key factors; the first is the successful implementation and use of the platform by users in developing nations.

The second factor would be the participation of developers worldwide who not only understand its importance, and will work on and contribute to its base code to ensure its stability and always improved upon.

Exuma will be a controversial platform and there will be several obstacles in attempting to successfully release and implement it.

The first and foremost obstacles would be the legal obstacles which might seek to prevent its release. These legal issues will need to be carefully reviewed before it is fully deployed. The second and most critical obstacles is how to ensure that Exuma is never compromised in any shape or form, so that the end users identity and the message sent or received is never revealed.

I understand that there will be other obstacles as well ranging from the cultural and social uses of mobile devices in the various developing nations as well as the high illiteracy rate and the high cost of data plan packages and even how Exuma can be actually put in the hands of the people in these countries. I am aware of these issues and am researching how to best resolve them and will upload information