

Give a Hand: A Modern Approach for Donating in the Mobile World

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ABSTRACT

The purpose of this paper is to define an iPhone application named “Give a Hand” that will serve as a donating tool for all catastrophic events. Give a Hand will integrate resources such as the Associated Press and JustGive.org to provide users with the capabilities of donating to global and local causes pertaining to catastrophes. Select social networking sites will be incorporated into Give a Hand to establish a community where users can showcase their current contribution to their peers. The primary goal of Give A Hand is to provide a service in which users will be informed and constantly updated on current and past catastrophes.

Introduction

Catastrophes happen in a blink of an eye, affecting the lives of many and leaving behind chaos and long lasting effects. When it comes to informing the world of such events it is evident that the news media plays an important role in these situations. Their primary function is to inform millions of individuals with an unbiased opinion about the current catastrophes witnessed.

One of the most influential and most used forms of news media is a news network channel. According to research done by the PBS news network, more than sixty percent of Americans watch television news daily. Therefore, many might agree that the majority of Americans use television as their primary source for news. To grade their performance, the television news networks do a superb job of keeping the viewer informed of breaking news, however, the entire news media fails to remind viewers about the current and latter conclusions of any catastrophe. Thus, the majority of followers tend to forget about the catastrophe, leaving the affected victims in desolation.

For instance, the oil spill in the Gulf of Mexico that began on April 2010 is still affecting many surrounding communities as the leakage of the oil has threatened the extinction of many wildlife species (Green Living 2). Although the spill was contained with a temporary plug, many victims are still jobless and the affected environment continues to be contaminated and uninhabitable. The media has ceased notoriety on this issue, making it seem like the problem is solved while there are many individuals who are suffering from their loss of natural habitat and resources.

This research will focus on using one of the latest mobile technologies, the iPhone platform, to create a service in which users will have access to all catastrophe related

information, whether it be recent or past. In our service, we will feature updated information on any given story with capabilities like donating to a cause, networking among peers, and a map view of the selected vicinity.

Related Work

Currently, there exist different online services that help individuals be aware of disasters around the world. These online services allow the creation of different groups to help such disasters, facilitating individuals to make donations and stay updated about the cause they contributed to. Nevertheless, these online services have yet to hit the mobile technology market, providing an opportunity for research in this field.

JustGive.org is a website that connects users to online charities around the world. Within the website, users can browse through an online database to find charities, information about tax benefits, and even connect with friends and family to join different causes. The website uses a secure server for online transactions so users know that their personal information will be safe. With a database of over 1.5 million different charities, JustGive.org gives users many options for donating money. A user can search the database by location, Tax ID / EIN, or by name. In addition, users can also search by zip code and find local charities to make an impact in their city. After deciding what charities to donate, users can add them to a shopping basket, allowing them to contribute to different charities simultaneously. JustGive.org also provides “The JustGive Guide” which helps users narrow down their charity search based on categories (e.g. Crime Prevention, Arts & Culture) and find something relative to their interests.

While JustGive.org provides users an excellent way to find and donate to a variety of charities, it may be difficult for some users to be aware of a certain issues and consider

a donation wisely. Most users tend to donate to a cause based on the information they know and what charity represents it. However, JustGive.org does not include a section on their site dedicated to inform the user on the most significant issues currently affecting the world.

Causes.com

Causes.com is another resource for informing individuals about non-profit organizations involved with events happening around the world. According to the core values of Causes.com, “Whether you are an activist who wants to stop genocide or a nonprofit that promotes literacy, Causes can be your platform. It is a tool to help people go from caring about issues to doing something to make change.” Even though Causes.com does not pertain to catastrophic issues, their means of raising money and awareness is effective and can serve as a starting point for Give a Hand. One feature provided on the website is the “option of donating your birthday” to charity, which allows a user to make a wish for a particular charity and allow users to contribute to their wish. With this feature, they have raised over 8 million dollars. When donating money to a cause, Causes.com suggests to the user an idea of how much money to donate and how it will help.



Bring the joy of a family to orphans in China!

\$15	Baby Clothes
\$20	Baby Bottles
\$40	Provide care for a child for 2 weeks.

Causes.com uses the power of social networking to its full potential by integrating its service with Facebook, allowing users to sign in to Causes.com through their Facebook account. This links both their Facebook and Causes.com account so users can easily publish causes from the website onto their Facebook profile, spreading the word to their friends and promoting their cause. With such an expanded network, individuals are empowered to help change and impact the world.

CauseWorld

CauseWorld has both a website and an iPhone application that merge to make it easy and convenient to donate to different causes around the world. The iPhone application consists of collecting karma points from checking into participating stores or scanning certain products at the store. These karma points are then donated on the website to the cause of the user's choice and some causes require different amounts of karma points. The donations are made possible by large corporations such as P&G, Citi, Kraft Foods, and Sears.

CauseWorld also has a live activity feed on their website that showcases activities from current CauseWorld users. Whenever a user donates to a cause, their account name pops up and specifies whether they helped a cause or earned a badge. This is a good initiative to get people to participate and get involved, since with the rise of social networking, users have the impulse of sharing what they're doing with the world. Incorporating a live activity feed to Give A Hand that synchronizes to a user's Facebook account would be a powerful tool to spread the word and raise awareness to the expanding Facebook community.

Yéle

The Yéle organization was able to capitalize on technology by setting up a donation pool that anyone could donate to through text messages. Each message that was sent donated five dollars to the organization for emergency relief in Haiti. According to the organization's website, this group was able to raise over 7 million dollars within a nine month span from individuals who donated online and through text

messages. Donations went toward providing water, food, shelter, medicine and medical supplies.

Problem Definition

Throughout the decades, the World Wide Web has become an essential tool for establishing communications among individuals across the world. With the capabilities of video conferences, chat rooms, e-mails, and other services that the Internet provides, the world relies on these tools for their business or personal needs (e.g. staying updated on current developments). Recently, a growing trend for individuals with these capabilities has been to keep up with current news, whether it is following their favorite celebrity on Twitter or keeping track of friends on Facebook. With this idea in mind, many major news channels thought it would be a superb idea to interact with users through the use of Facebook pages and Twitter feeds that would ultimately help their audience become aware of current situations. The news branch has considered and begun to follow this trend, but there are still ways in which this form of communication can be improved.

Through studying the U.S. media branch closely, one of the trends that we have found to be a regular practice was the short amount of time that a current story would be displayed on either their television network or their web page. On average, a given story lasted no more than three days on each network and no more than two days on their web site's home page. Once the given story has been circulated, a user would need to search the website in order to retrieve it. One problem with this is that the results from the search usually showed ambiguous or non-relevant stories. News channels strive to acquire breaking news that will entertain and keep an audience, but this in turn, leads to many serious world issues being featured for only three to seven days and eventually being

pushed aside. Hence, our studies show that many important issues are being ignored due to the core values of U.S. news networks. Many individuals are still affected by these events yet our awareness of them diminishes quickly with the next story in circulation.

In our research, results show that it is a trend for individuals to forget about these types of situations or mistakenly think that the issue has been resolved, but most of the time, the situation stays the same or escalates due to the lack of help. The media does not cover certain developments closely enough after the initial week of the event, so the viewers tend to forget. One might conclude that if viewers had more exposure to these issues, they may have more initiative to make a difference. In the current media cycle, yesterday's news becomes irrelevant, but the news does not stop evolving after media coverage ends.

The disaster in Haiti is a great example of the type of information we wish to target. The earthquake in Haiti devastated the country, leaving many people without homes or food. Most major news networks publicized Haiti's conflict for about one month at most, but the earthquake that devastated Haiti continues to have effects on Haitians to this day. Thousands were left with nothing, and additionally, October 2010 brought a cholera outbreak in Haiti. By November 5, flooding waters from Hurricane Tomas contributed to more than five hundred people dying of the disease. The victims are in great need of any one's help and yet the media has completely forgotten about Haiti since it is no longer considered to be breaking news. It would be ideal to keep everyone informed of a crisis until it has been resolved, as well as encourage individuals to not only become more aware but also to participate through donations or volunteer work.

Proposed Solution

When observing the popularity of cell phones, one can conclude that the mobile industry has made significant strides in its technologies. Features such as a multi-touch display, MP3 support, camera and video capabilities, and most importantly the inclusion of application development and distribution, has transformed the mobile market and converted the cell phone into a mobile computing device. Many now consider a smart phone a must-have accessory, as having such a multitasking device on hand is a very convenient commodity. Unfortunately, there are many different software platforms for mobile devices, making it difficult to make an impact on all mobile users at the same time. Android, WebOS, and iOS are among a few operating systems with strong application development. According to a statement from thedailyshow.com, WebOS has over 1,000 applications available to users. Android has over 20,000 applications, and the iOS has over 140,000 (as of October 2010 this number has risen to 300,000). Since the release of the iPhone, Apple has sold over 70 million units worldwide (Canalys). With the iPhone currently leading the market with total number of applications available, a large community of resources would be available to attract developers. According to GoMo News, the iPhone has become the most popular mobile device of today's generation (GoMo 3). Because the iPhone has a high popularity rate, a powerful development community, and a large audience, these characteristics led to the selection of the iPhone platform for our research.

Throughout its lifespan, the iPhone has seen many updates to the iOS, expanding its feature set and enticing more customers and developers to support the product. For example, iOS version 2.0 introduced the Apple App Store and the support for native

applications using the iPhone SDK. With the App Store, developers now had a new medium for which to distribute their applications to a large mobile network. This in turn, resulted into the creation of many popular applications such as Facebook, Google Maps, and Skype, that permitted users to have access to information at all times. The App Store has had over 7 billion downloads and is accessible from the iPhone, iPod Touch and iPad. The consistency in the iOS software for Apple's mobile devices, as well as the advantages of the iPhone platform, provides the flexibility we need to introduce an application to the world and reach a large audience.

The solution to our problem consists of designing and developing an iPhone application, which provides a user-friendly interface and satisfies the requirements to help societies in need around the world. Give a Hand will allow the user to access and follow up on catastrophic news, conveniently make donations to a cause of their interest with a touch of a button, and share donation activities among social networks such as Facebook. Our primary goal is to integrate services provided by the Associated Press and JustGive.org. The Associated Press will provide the news content for Give a Hand, while JustGive.org will establish a connection with charity organizations in which the user can donate to.

In order to acquire news from the Associated Press, Give a Hand will be utilizing the Associated Press Application Programming Interface (API), which includes the Breaking News API and the Search API. The Breaking News API provides developers the ability to retrieve a list of available categories and then request content (such as stories, photos or video) from a specific category. The Search API allows the developer to make basic free-text searches of content. Searching may be based on keyword, similar

news items, related media, latitude and longitude searches, zip code, and searches by site ID. For both the Breaking News API and the Search API, responses are provided as XML in the hNews microformat that contain standard ATOM and XHTML elements. For requests made by Give a Hand, a sample request could be an address such as:

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http://developerapi.ap.org/v2/categories.svc/?apiKey={  
apiKey}
```

(Where *apiKey* is a unique access key provided by Associated Press during the registration process).

With such capabilities used by Give a Hand, users will be able to find their information easily and efficiently.

Another resource that Give a Hand will incorporate is the website JustGive.org. This website will help provide an adequate list of organizations that raise funds for charities and support causes. Once a user reads an article, they will have the option of donating to that particular issue by following a link to JustGive.org through an interactive button. This feature will be present in every article provided and will return a full detailed list of the relevant charities that the user can donate to. Donation transactions will be processed through the JustGive.org website, as it provides the user with a secure manner to exchange funds. With the Associated Press API and the ability to donate through JustGive.org, Give a Hand will create a connection between news and charities.

The application will be designed to provide quick and easy access to news media content. Currently, graphical user interface is divided into five views that represent a different functionality. The views consist of a home view, a news view, a map view, a bookmark view, and a preference tab. The home view is represented by a live feed of the current day's news so users can easily access and view the most current information. The

news view will contain new headlines pertaining to disasters from the previous week, the option to search for past news, and the option to bookmark any news of specific interest to the user. The map view will be an interactive display of the affected locations described by the news events with the use of Google Maps. This display will provide the user the ability to easily access any news by simply selecting a point on the map. The bookmarks view allows the user to follow up on news of their concern. This capability grants the users the option to receive notifications for new developments related to a specific story that was previously read. Keeping users informed and constantly updating them, makes this a core feature of our application. To our advantage, JustGive.org and Causes.com connects with social networking sites such as Facebook and Twitter. This is very beneficial tool since these social networks are very popular and they allow charities to be recognized among millions of users. Within time, Give a Hand can become a popular application that can change the process of donating and helping communities in need.



Technologies Used

Our project used Apple's XCode Integrated Development Environment (IDE) that is only compatible with OS X. This platform provides a set of tools and services that allows for the development of iPhone applications and is the basis for our research. Apple's XCode IDE functionalities include the ability to generate code and create an adaptable graphical user interface through the use of Interface Builder. To establish a collaborative environment among our group, the services of GitHub repositories were used in which users had the option to edit and upload code that facilitated the debugging process.

What we Learned

Objective-C

Since all iPhone applications are written in Objective-C, our team was required to learn this programming language. We found this to be a challenging task since a majority of the group had no prior experience with Objective-C. The unique syntax used in the language was problematic. Stanford University provided an online course which gave an in-depth explanation in building iPhone applications and exposure to Objective-C. This course provided the group with the guidance necessary to begin our research.

XML Parsing

Give a Hand will be using the Associated Press as our primary news source. In order to read the data into our application the data must be parsed, taking in only the title, content, and pictures. During our research, we found various methods in which to parse data. Such methods include loading all the data from the requested site, partially loading some of the data, or load only data specifically requested from the application.

Google Groups and Google Documents

Google Groups and Google Documents provided the collaboration tools we needed in our research project. At the time, we were not able to acquire a private GitHub account and Google Documents allowed the ability to share files (e.g. XCode projects, research papers) to our team. Google Groups allowed us to post messages, share ideas, and work efficiently.

iPhone Platform

After completion of the application, it is required to have an Apple developer account to test Give a Hand on the iPhone hardware and submit the application to the App Store. After submission, Apple verifies the application and then decides if the application meets their standards, thereby allowing the addition to the App Store.

GitHub

Another service that we utilized is GitHub, an online public and private repository that allows users to share projects and make changes. Users can upload and download project files and add comments to inform project members of any revisions made to files.

Team Work

Besides the new technical skills acquired, we learned to successfully work as a team. Working as a team involved sharing ideas, sharing different points of view, and agreeing on changes and implementations to the project. After each member shared their ideas, the group agreed on the best idea or combined different ideas into a single one.

Conclusion

There is a lack of consistent coverage for disasters due to the patterns of circulating stories within the U.S. media. Give a Hand will focus on making users aware of ongoing world catastrophes and provide a way to contribute to that cause. This application will serve as an interface between a user, the news pulled from the Associated Press, and donation organizations that can be found on JustGive.org. Give a Hand will engage the user to become more involved with what others are enduring around the world, and also encourage them to donate to catastrophe organizations and help change the world one donation at a time.

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