

Mobile Application Development for eDonar

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Abstract: *Health can be defined as ‘emerging mobile communications and network technologies for healthcare’. This concept represents the evolution of ‘traditional’ systems from mobile phones and wired connections to the use of more compact devices and wireless connections in health organ donation for Mobile Application Development for the Donation (eDonar) Human Organ systems. The emerging development of m-health systems in the last decade was made possible due to the recent advances in wireless and network technologies, linked with recent advances in nanotechnologies, compact biosensors, wearable devices and clothing, pervasive and ubiquitous computing systems. This paper mainly focuses on mobile mode donor system for human organs with the ease of services.*

Keywords: No Direct Donation (NDD), electronic patient record (EPD), organ procurement organization (OPD), organ procurement organization (OPO)

1. Introduction

Access to organ donation and transplantation is essential in the provision of quality healthcare in the universe, especially where providing organ transplant can be the difference between life and death. In six people who could have been saved by an organ donation dies because a matching organ does not become available. It is a deplorable situation and one that must not be ignored. It seems to me that nothing is more truly a reflection of our shared humanity than when we take steps to save another person’s life – even more so when that person may well be a total stranger. This is one of the best method of Increasing community education and awareness campaigns to encourage people to have discussions with their families about organ donation. Employing specialists in hospitals to help families through the difficult decisions about consenting to organ donation providing guidelines to doctors who help them uphold a person’s desire to become an organ donor. Rapid advances in wireless communications and networking technologies, linked with advances in computing and medical technologies facilitate the development and offering of emerging mobile systems and services in the healthcare sector. The objective of this paper is to provide an overview of the current status and challenges of mobile health systems (m-health) in emergency healthcare systems and services (e-emergency). The paper covers a review of recent e-emergency systems, including the mobile application technologies used, as well as the data transmitted. These advances will have a powerful impact on some of the existing healthcare services and will reshape the workflow and practices in the delivery of these services. A brief review of the spectrum of m-health systems and applications and the potential benefits of these efforts was presented in a recent paper by our group. Moreover, an edited volume was publishing, covering a number of areas in Mobile Application Development for the Donation Human Organ systems. The objective of this paper is to provide an overview of the status and challenges of m-health in health organ donations systems and services.

2. Research Problem

An organ transplant is a surgical operation where a failing or damaged organ in the human body is removed and replaced with a new one. An organ is a mass of specialized cells and tissues that work together to perform a function in the body. The heart is an example of an organ. It is made up of tissues and cells that all work together to perform the function of pumping blood through the human body. Any part of the body that performs a specialized function is an organ. Therefore eyes are organs because their specialized function is to see, skin is an organ because its function is to protect and regulate the body, and the liver is an organ that functions to remove waste from the blood. The paper reviews recent health organ donations systems, including the wireless technologies used, as well as the data transmitted (electronic patient record, bio-signals, medical images and video, and other).

A graft is similar to a transplant. It is the process of removing tissue from one part of a person’s body (or another person’s body) and surgically re-implanting it to replace or compensate for damaged tissue. Grafting is different from transplantation because it does not remove and replace an entire organ, but rather only a portion. Not all organs are transplanted. The term “organ transplant” typically refers to transplants of the solid organs: heart, lungs, kidneys, liver, pancreas and intestines. Animal and artificial organs may also serve as transplantable organs. Other types of transplants that are less invasive or may require specialized procedures include:

- Skin transplants or grafts
- Corneal transplants (corneas are the outer layer of the eye)
- Bone marrow transplants

3. Motivation

The other source is for donor organs is a living person. Living donors are often related to the patient, but that is not always the case. Spouses and close friends frequently donate

organs to ailing loved ones. Some people who wish to donate their organs may decide to donate to a stranger. A few not-for-profit organizations maintain lists of willing living donors. For example, the National Marrow Donor Program maintains a list of people willing to donate bone marrow to a stranger and there are a variety of non-related living kidney donor organizations that maintain regional lists of willing donors. Individuals who wish to donate one of their organs to a stranger may also initiate a no directed donation (NDD). No directed donors approach either a transplant center or a nationally sponsored organ procurement organization and offer one of their organs for transplant to anyone who may need it.

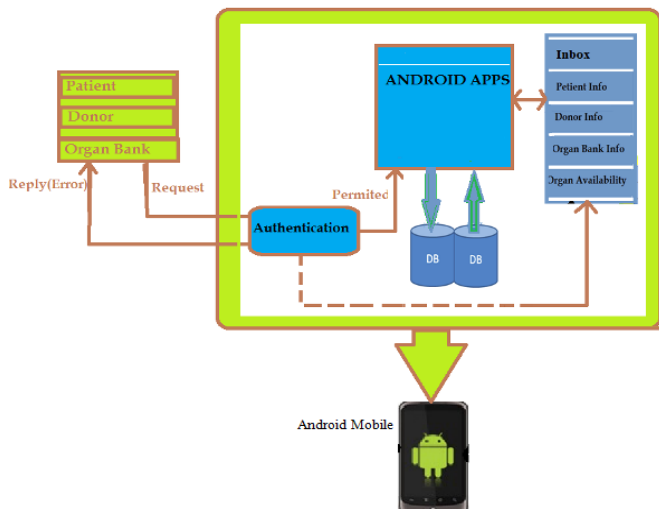


Figure 1: Architecture Diagram

4. Literature Survey

Distributing organs:- If a person does not have a readily available living donor or is ineligible for a living donation because their predicted outcome is questionable, they are placed into a waiting pool for an organ from a cadaver by their transplant center. The application such as “Organ for Mclinic” will be maintain the list of the organs. And where it will be available in the nearest of the patient or the hospital. When donor organs become available after a person dies organ procurement organization (OPO) takes the organ into custody. The OPO then matches the donor organs with the appropriate transplant patients by gathering information about the donor organs and entering it into a computer program. The program takes this information and compares it to information about the patients in the waiting pool. The computer then generates a ranked list of transplant patients who can receive the donor organs. Information that factors into this ranked list include:

- Organ type, blood type and organ size
- Distance from the donor organ to the patient
- Level of medical urgency (not considered for lung transplant candidates)
- Time on the waiting list

Condition:-After the generation of the ranked list, the donated organ is offered to the first patient’s transplant center. However, the first person on the ranked list may not receive the organ. Additional factors to be evaluated before

the organ procurement organization selects the appropriate candidate are:

- Is the patient available and willing to be transplanted immediately?
- Is the patient healthy enough to be transplanted?

Once the appropriate candidate is located, the organ procurement organization takes the organ and delivers it to the transplant center where the transplant will be performed. This entire process must occur very quickly as organs are only transplantable for a short time period after they’ve been removed. When the transplant patient is ready for the donor organ, the transplant center then surgically removes and replaces the failed or failing organ through the following general procedure:

1. Make an incision in the body near the failing organ
2. Cut the arteries and veins that run to the organ
3. Remove the organ through the incision
4. Take the new organ and insert it into the body by incision
5. Connect the new organ to the arteries and veins
6. Close the incision

5. Experimental Result

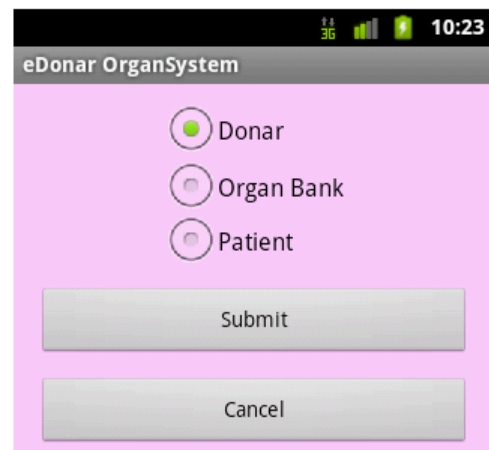


Figure 2: Donar/OrganBank/Patient Login Activity

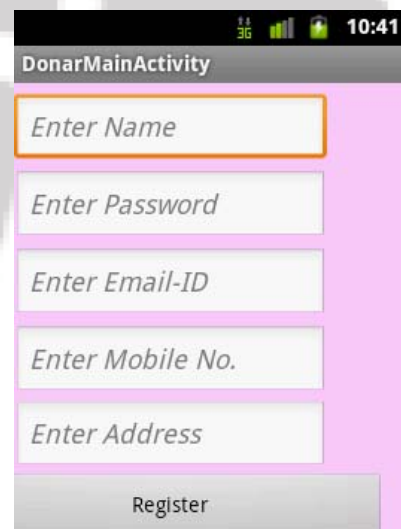


Figure 3: Donor Registration

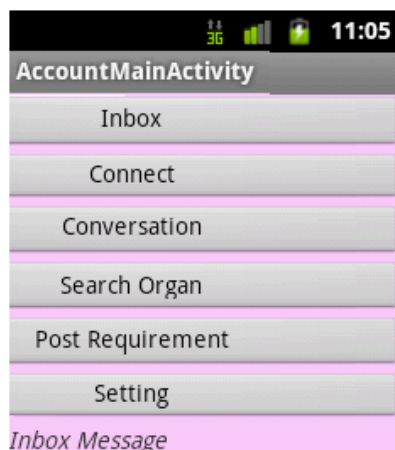


Figure 4: Donor/OrganBank/Patient Dashboard

6. Methodology

At present to transplant the organ is not much a big problem. But the patient who searches a donor for organ transplant is one of the biggest problems. Now days so many organ banks are available, but the patient don't have much idea about where it is located? There is organ is available? If the organ is available but the donor is not ready to donate his organ in on time, this is also a problem for the patients.

These types of problems should solve using such systems. This system will be work only with the mobile devices. So the common people who can easily to solve their day to day problems. When the patients need an organ in emergency situation they can use this system and find out where the organ is available. Then they can easily to find out where it will get very nearest to the user. And it will show you to the actual location of the particular organ bank. Here the system uses the help of the Google map for trace the location for particular location.

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