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***Preliminary Definition***

***Final Phase II***

**Team T-MIP**

[**www.tmip-helpeople.com**](http://www.tmip-helpeople.com)

**Team Members:**

Taraneh Parvaresh

Mairon Toçi

Ian Bùi

Pooria Kamran Rashani

Project Phase I: Requirements Elicitation: Initial Understanding

# Summary

Requirements for this project were elicited from several sources:

* The elderly (family and friends)
* Mobile apps available on the market
* Web sites that provide support for people with communicative disorders or impairments
* Data from previous projects

We gathered the information through Internet searches, by reading white papers, by examining other apps, and via personal communication with people - either in person or online.

Based on what we have found, it appears the mobile device market already has numerous apps to assist the elderly. However, these are all disparate apps that do not communicate to one another much, or not at all. And their touch-based interfaces are primarily designed for people with vision. In those rare cases where other means of input and output are available (e.g. audio), the design varies greatly from one app to another, making learning to navigate those apps rather difficult for older people.

The main objective of these requirements is to achieve a simple and unified interface through which existing as well as future apps can be used by older people, with or without impairments, to accomplish important daily tasks using mobile devices.

## I.1 Terminologies

The following terms regarding different **App Types** shall be used within the context of this product to mean specific things:

1. **Resident** – any app that physically resides on the device, which can be:
   1. **Native** – is built into this product
   2. **Non-Native** – is not a part of this product and can be either:
      1. **Integrated** – can communicate with this product via an API
      2. **Standalone** – is not integrated with this product at all
2. **Non-Resident** 
   1. **Web-based** (e.g. Pandora)
   2. **Network-based** (e.g. Teleconferencing)

# Preliminary Definition

## Stakeholders and Domain Requirements

***Stakeholders***

The elderly population, being our main target user group, represents the most important stakeholder. However, because age affects different people in different ways, it is not easy to generalize what their needs are. Therefore, from a system requirements perspective, we shall limit our scope to some of their most common needs, and perhaps extend the product in future versions to accommodate more requirements.

A related group of stakeholders are those who help care for the elderly. These could be family members, caretakers, doctors, etc. Our product will make it easy also for them to assist the person under their care with everything from installing the product to using it on a day-to-day basis.

A third group of stakeholders are those in the public space whom the elderly might need to call upon in case of emergencies, such as Fire, Police, Ambulance, etc. Again, our product will make it easy for the needy to contact help and for emergency personnel to securely obtain the necessary biodata about that person quickly and accurately.

Besides the elderly, another group of stakeholders consist of people with communicative disabilities. They can be the blind, the deaf, the mute, or those with memory impairments. Although these are not our primary target group of users, they nonetheless represent an untapped market segment that also can benefit from our product and therefore many of their needs are also taken into account.

On the Product Development side, other stakeholder groups whose requirements were also considered are: Investors; Sales/Marketing; Management; Engineering; Support.

Last, but not least, are the requirements by other mobile app makers on the market with whom we have a symbiotic relationship. They have a critical role to play in the success of our product and, conversely, we can help them reach a larger market segment than what they currently have.

***Domain Requirements***

|  |  |
| --- | --- |
| **RID** | **Requirements Specification** |
| DR1 | System shall provide multiple input methods |
| DR2 | System shall provide multiple output methods |
| DR3 | System shall provide API to integrate with other apps |
| DR4 | System shall make use of device’s built-in GPS capabilities |
| DR5 | System shall make use of device’s Bluetooth capabilities |
| DR6 | System shall provide Text To Speech (TTS) functions |
| DR7 | System shall provide Screen Reader functions |
| DR8 | System shall support multiple mobile OS’s |

## II.2 Functional Requirements

The purpose of HELPeople is to assist elder people and also people who are suffering from disabilities in order to communicate easily using different input and outputs methods of communication and feel ease to use our product. HELPeople will help them to have all applications in one product together and it supports integration to some of the applications that they already use them in their phone. The platform shall assist the users by:

|  |  |
| --- | --- |
| **RID** | **Requirements Specification** |
| FR1 | Provide a tool to user so s/he can interact with the product and give commands to do certain tasks via speech or by touch |
| FR2 | Generating speech output for those who are visually impaired so that the user can hear rather than seeing the pictures or menus |
| FR3 | Provide a way for user to select categories via touch or speech |
| FR4 | Providing an easy access to most common in use apps or favorite ones |
| FR5 | Change the settings and configuration according to their need |
| FR6 | Allow changing and managing applications in HELPeople! |
| FR7 | Providing a way to remember their family members and friends |
| FR8 | People who are suffering from memory loss should be able to remember places they visited before or remind their parking place |
| FR9 | Assist them to remind their medication/food/drink and etc |
| FR10 | Assist them to remind their scheduled meetings/appointments |
| FR11 | Providing a way for family members to add reminders in users calendar |
| FR12 | Placing emergency calls |
| FR13 | User should be able to listen to music |
| FR14 | Users who are visually impaired should be able to surf the web |
| FR15 | Mute user should be able to communicate to others via HELPeople |
| FR16 | User should be able to use camera to recognize objects or family and friends |
| FR17 | User should be able to keep track of his meal and nutritional info |
| FR18 | User should be able to use HELPeople for entertainment purpose |
| FR19 | User should be able to use a torch to help him/her in dark places |
| FR20 | User should be able to use magnifier in the product wherever needed. |
| FR21 | Each menu should be available by minimum clicks. |

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## II.3 Non-Functional Requirements

The product should provide a usable environment so that all groups of people can use it easily and should assist them with performing their daily tasks more conveniently. Therefore it should meet some Non-functional requirements in order to be useful. These requirements are listed as below:

|  |  |
| --- | --- |
| **RID** | **Requirements Specification** |
| NFR1 | Installation time should be quick enough |
| NFR2 | Product should consume less battery power |
| NFR3 | Product should occupy less memory space |
| NFR4 | Product should be easy to use |
| NFR5 | Application should be properly categorized |
| NFR6 | Application icon picture should be meaningful |
| NFR7 | Product should be extensible |
| NFR8 | While running, product should respond quickly to command |
| NFR9 | Essential icons should be reachable all time. |
| NFR10 | User should be able to personalize the applications |