

MuMail – A Simple Multimedia Email Client

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Abstract. Elderly people today often keep contact with their friends and relatives through modern means like email. However, email smartphone apps are often quite difficult to operate, confusing their elderly users with too many options or showing erratic behavior due to mistakes in complex swipe gestures. We developed the app MuMail especially for elderly users, which simplifies the ability to share pictures and voice-messages over email, but not text. MuMail offers a simple GUI especially designed to take away complexity. Below are described the design decisions and a preliminary evaluation of MuMail.

Keywords: Seniors · Smartphones · Share · Email · iOS
Multimedia attachments

1 Introduction

Elderly people are often scared of modern technology but more and more connect to their family and friends using email, apps, or messengers. This counteracts the fact that many elderly people live on their own and get more and more isolated due to immobility, and loss of friends. Using modern communication means thus is important to feel connected and to be part of an active community. In fact, being able to use email today turns out to be a key factor for a healthy social life for elderly people.

Though more and more seniors own smartphones, they use them differently compared to other age groups. According to a [4] a large proportion of the sample of seniors reported own a cell phone (73%), but very few used it to text messages (2.5%) or for Internet purposes (3.5%). It clearly shows that this is one area where senior citizens are well behind the total population in having and using the advanced technology. It is very similar in case of social networks. Studies show that social networks such as Facebook or Twitter do not attract elderlies at all. Even when they have Internet connection, 90% state they never use social media, and only 6% use it at least once per week. Instead, they are often confused by the complexity and functionality of communication software, and thus avoid using it. The idea of “MuMail” is to provide simple means for communication for elderly people, in order to connect them to their friends and relatives by email, without the burden of overly complex functionality. “MuMail” only allows to send and receive multimedia content as attachments, something that dominates the way elderly people communicate with their social contacts.

2 Related Work

Finding the easiest way to contact seniors with their family and friends was the fundamental motivation. The goal was to find something that would simplify the everyday life of elderly people and to provide them an effortless tool to share moments with their beloved ones.

Basically, there are three types of solutions for making complex simpler – senior apps, senior launchers and senior phones. Senior *apps* are the kind of solutions which also MuMail provides – simplified apps with just the functionality users need. Senior *launchers* change the whole smartphone GUI in such a way that elderly people can use them easier. This might include e.g. bigger icons, and less functionality. Senior *phones* finally denote phones specially designed to be simpler and exposing less functionality from the ground up.

As an example, the app *Oscar Senior*¹ is a senior app for smartphones and tablets, which should make the life of seniors easier. It offers a simple and friendly environment full of useful applications that help even complete beginners. Oscar offers a simple and well-arranged graphical interface with large elements and characters that are preferred by seniors. Additionally, the application is running in safe mode and blocks all pop-ups or notifications and allows the user to leave the application. Seniors will find everything they need on the Internet, from e-mails to useful applications such as medication reminders. Simplified communication enable seniors to make a video call with one click, or share photos or text messages to loved ones. The application can provide a course that teaches seniors, and can be used based on what is technically proficient.

BIG Launcher² is the first of its kind that has been developed for the elderly or for people who have certain vision problems. This launcher uses large buttons and large fonts to optimize work with smartphones running Android, to help seniors with problems reading smaller fonts and buttons.

Finally, there are several senior mobile phones, like BLU Tank 3 or Doro 410.³ Such phones are usually simple, mainly for phone calls, with large physical buttons. As a special feature, some do have SOS buttons to send emergency SMSs to selected group of contacts.

To conclude, there have already been attempts to solve the problem addressed, each of the tools presented has its pros and cons. There are no definite solutions, only partial ones. Seniors should not be burdened by complicated functions, which will waste time and the risk that they will simply refuse to use smartphones anymore. Being a senior app, MuMail offers a simple design and users can see directly at first glance the purpose of each GUI element.

¹ <https://play.google.com/store/apps/details?id=com.oscarsenior.oscar&hl=de>.

² <http://biglauncher.com/home/de/>.

³ <http://www.makeuseof.com/tag/5-mobile-phones-senior-citizens/>.

3 MuMail

Figure 1 shows a use-case diagram depicting how MuMail works. The app starts with a welcome page where the users can log in (Fig. 2). Before someone can use this app, the person must first have a valid email account. Many elderly people in western countries today have one, but are reluctant to use or manage them. Thus, this part of the setup might be done with the help of relatives or friends.

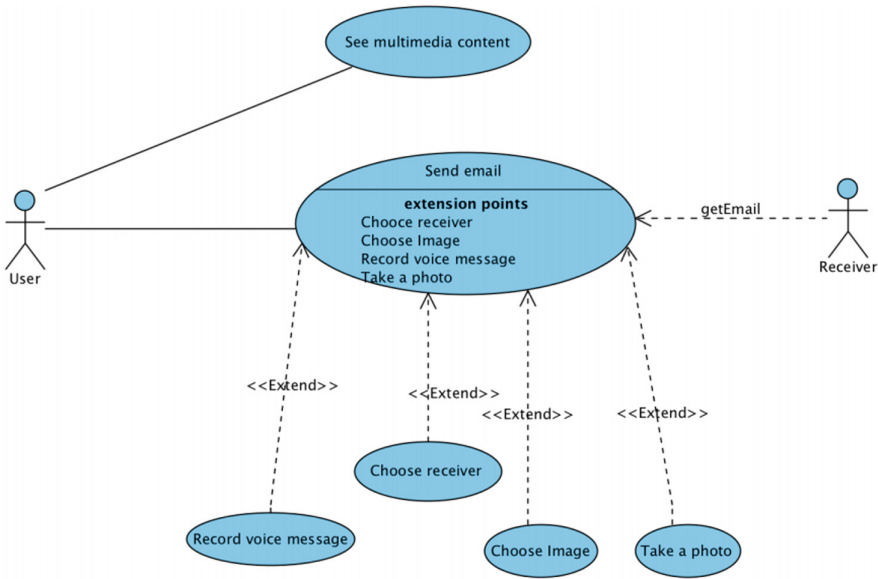


Fig. 1. MuMail use-case diagramm

Once the login is complete, the user can use the app immediately and use it in emergencies to ask for help. When the user logs in the next time, he will be forwarded to the Inbox page of MuMail without any further intermediate steps. This was also one of the main objectives of MuMail that design and operating the app is as simple as possible.

MuMail supports all major email providers, including Gmail, Hotmail, Outlook etc. As soon as the button “Done” is pressed, MuMail checks whether all data has been entered correctly and if so, the user is redirected to the inbox page (Fig. 3).

Inbox

This is the most important page of the whole app. All the multimedia content is shown on this page. Users can browse through pictures, or play the voice messages. There is only one “Settings” button. Here the user can change his email account. With a simple swipe gesture the user can update his inbox and see, if there are any changes in the mailbox.



Fig. 2. MuMail login page

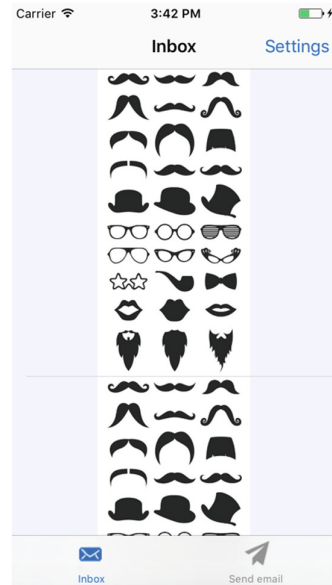


Fig. 3. MuMail inbox page

All the media content is saved in a sample UITableView, so with a simple swipe the user can browse between images and voice messages.

Sending Emails

MuMail is designed to work just with multimedia content like photos or video. However, users can send e-mails. First, a user can choose the recipient. To make it more convenient, users do not have to type a name, they just have a simple list with names and pictures, where they can choose the recipient with one tap. Then they have two options to choose from, they can either send an image or record a voice message. Users can choose images from the phone gallery or take a picture instantly. There is a limit for sending, i.e. a maximum of three images, to prevent seniors from sending too big emails. To send a voice message, there is a “record” icon. With the “play” icon users can hear, what they just recorded. Again, the design goal was to keep things simple and intuitive (Fig. 4).

Once the “Send email” button is clicked and an Internet connection is available, an indicator will be shown that the email was successfully sent.

Choose a recipient

To make choosing of a recipient easier, there is a list of favourite contacts, which can be edited by the user any time. User sees the email addresses and the pictures of their contacts, so seniors will not have to type a complicated email address by they own (Fig. 5).

To add a new contact, users simply press the “+” icon. Here they can type the email address and set the image for the contact. After pressing the “Done” button the contact

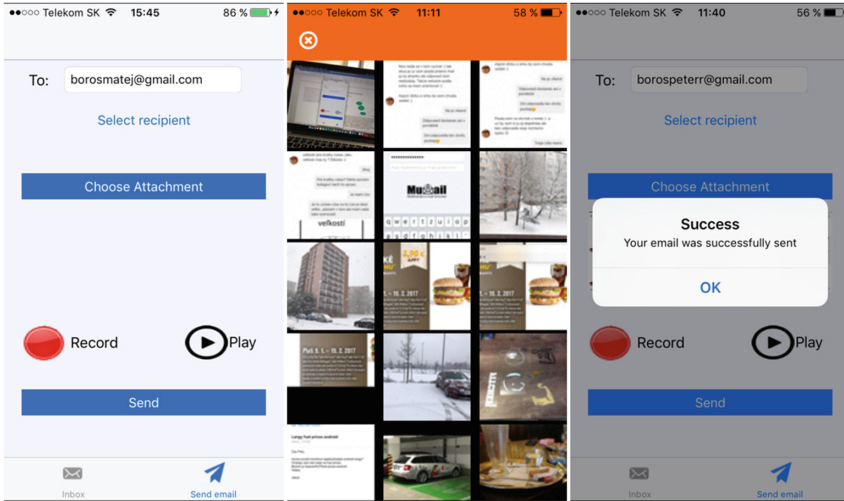


Fig. 4. MuMail send Email page

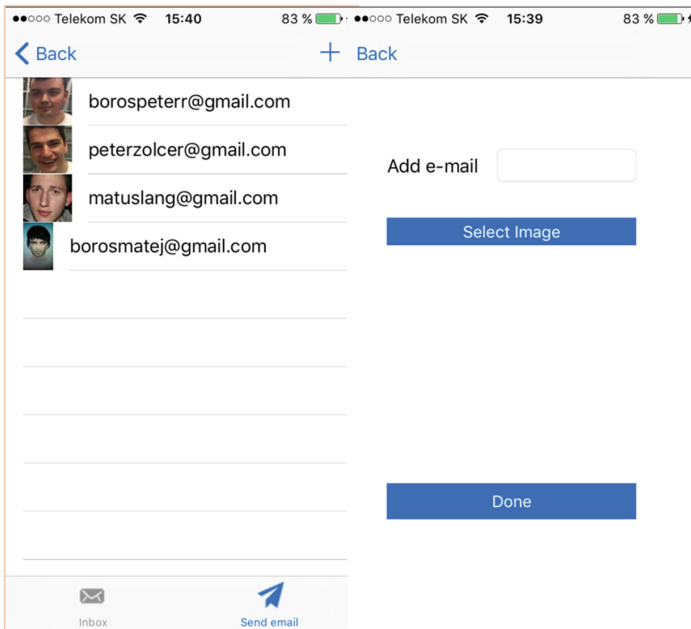


Fig. 5. MuMail select recipient page

will be added to the list and is ready to be chosen. If the user decides that he wants to delete a contact from the list, he can do it with a simple swipe, being a native iOS gesture.

4 Experimental Evaluation

After thorough technical evaluation using simulators and real iOS devices like iPhone 6S and iPad we tested the MuMail with an older person.

Our test person was a woman, 60 years old. She is still working and uses her email account. For testing she used an iPhone, but she does not own a smartphone herself. On this phone, MuMail was set to her email account. For doing this she actually did not need any help. After a successful login, voice messages and the images were shown in her Inbox immediately. She was very satisfied with swiping, seeing the pictures, hearing voice messages, there was no immediate problem that would stop her using the mail client.

Sending an email worked satisfactory as well. There is no button, which she could not understand or misuse in some way. She chose a contact from her favorite list, which had been configured for her. She was also able to add new contacts to this list by herself.

Likewise, attaching photos and sending them worked well with her, and she was able to send according emails without problems. In fact, the test person was so fond of MuMail that she is using it ever since.

5 Conclusion

Our goal was to connect seniors to their loved ones or their social peers by using a simple, multimedia oriented smartphone email client taking away unnecessary complexity. We have not seen such an app anywhere before. Instead, email clients and other multimedia apps in one way or the other are very difficult to be used by elderly people.

MuMail is an email client that delivers exactly this, simple audio/visual email for seniors based on standard email technology.

In the future we will continue to improve MuMail to include more functions without making the client more complicated. This includes e.g. audible notifications in case new emails were received. We will also include more languages in order to make MuMail internationally usable, especially in high-tech societies with a large senior population.

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