

Minithesis: Pigeon

In an attempt to facilitate communication between people with limited technological access through the creation of an experimental phone-based social network, Pigeon was created. Pigeon is a voice message exchange system for friends and family. The idea of this project began with a desire to connect loved ones who live far away and are unable to communicate as often as they might desire, such as a young girl who lives in Belize and her father who lives in Los Angeles, working several jobs to send money back home to their family, who can only communicate with an international call once a month.

The motivations for this project are: a desire to work with issues of people living in poverty, a hope to enable personal storytelling or communication, and a goal to use accessible communication technology for these ends (See Figure 1). Pigeon exists in the intersection of these motivations. It aims to create a more affordable and accessible conduit for communication by offering a

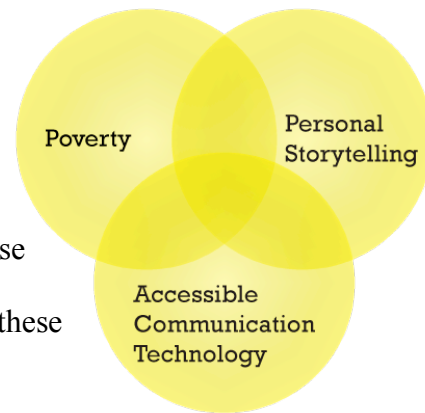


Figure 1. Motivations and goals

voice message bank, which can be locally accessed listen to messages from distant contacts. With Pigeon, a person can leave several personal messages that are available to the contacts that they have chosen.

Other technologies, such as Twitter, Skype, Rebtel, and even phone cards, have approached this problem in a variety of ways. Twitter^{1,2} provides a space for short text updates, which are viewable online and in other mediums to contacts. Twitter allows you

¹ www.twitter.com

² "Twitter in Plain English", <http://www.youtube.com/watch?v=ddO9idmax0o>

to connect to those that matter to you more often by letting them know what you are doing. Pigeon similarly provides a place for a person to leave an update about their current goings-on. Instead of being facilitated online, however, Pigeon requires only phone instead of internet access.

Skype³ attempts to connect people by providing a more affordable method of international calling. Skype is a downloadable program for computers, which provides direct Skype to Skype voice communication for free and Skype to landline or mobile phone at a considerably lower rate than would be available on a traditional phone network. Pigeon is designed to provide local numbers for accessing the system, which similarly allows a much lower amount of monetary investment for the user allowing them to communicate more often than with direct international calling. As opposed to Skype, Pigeon does not require a computer with special software, but only a phone with access to a local network.

Rebtel⁴ is a similar internet-based phone system which provides local phone numbers to dial for international communication. A person is able to pay for a local number, which connects them to an international number. Pigeon differs from Rebtel in that by providing asynchronous and group communication. It allows a person to record a message on her own time frame and makes it available to all of the friends that they have become contacts with.

Phone cards are also related in that they provide local phone number facilitating more affordable long distance communication. It is possible that Pigeon advertising or sign up information could be handled through phone card outlets that people are already

³ www.skype.com

⁴ www.rebtel.com

comfortable with. Imagined promotional materials can be found below which will be referenced in the more detailed explanation of the Pigeon system (see Figures 4, 5).

These pamphlets could be folded and attached to “Pigeon cards” which would take the familiar form of phone cards.

To get to the idea of Pigeon as it is now in concept and implementation, a series of prototypes were

carried out. Early prototypes explored the potential role of a system that would exist in the middle of the motivations and goals discussed above. Figure 2 shows the original storyboard idea for

Pigeon. In this same

round of prototyping, ideas of text-message based international school social network were explored along with beginning coding implementation options such as with Voice XML (VXML).

Further rounds of prototyping delved more deeply into coding. Instead of VXML, CallXML was used, which is a similar language employed by Voxeo⁵. These languages are exciting as they allow for a developer to implement voice-based internet exchange in a

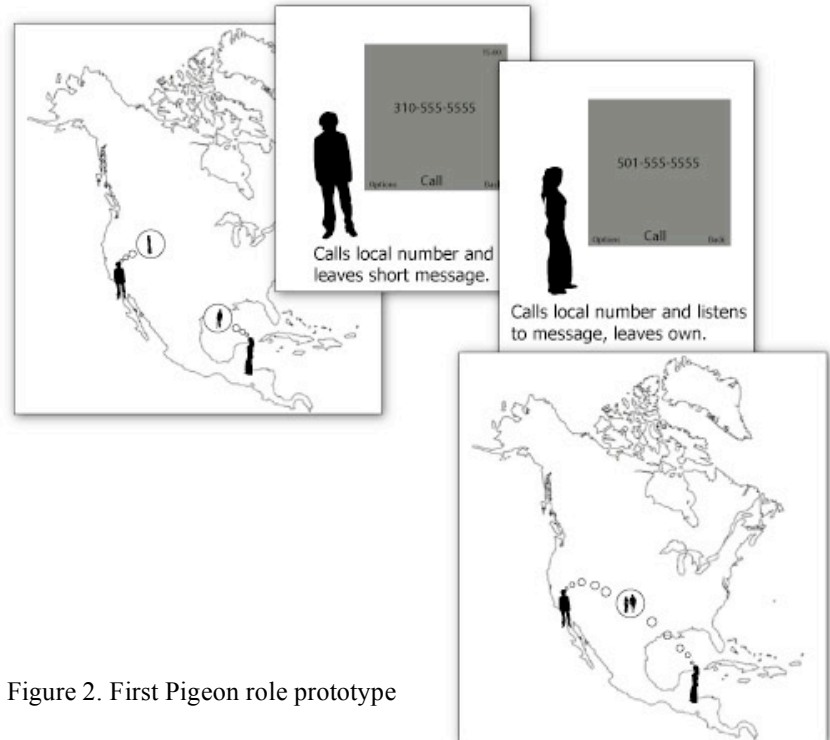


Figure 2. First Pigeon role prototype

⁵ www.voxeo.com

similar way to simply creating a HTML website. By using PHP and a MySQL database in prototypes, the CallXML pages were dynamically altered to include information such as the login number of a user. This makes it possible to deliver the correct content such as a particular user's contacts and to make sure that when a user records their messages they are properly stored.

In addition to coding implementation, user specific scenarios were created to inform the type of interaction that users would have on the system. A 9-digit Pigeon login number was created to provide ample room for scalability with a relatively memorable set of numbers (e.g. 552-888-098). Each Pigeon number is associated with a personal identification number (PIN) allowing for secure login and for the member number to be publicly accessible as a means for establishing contacts. Each Pigeon member is also able to create a recording of her "Pigeon name" that identifies her on the system. Once a person has become a contact through their member number, they never again hear the number but instead hear their contacts reference by their Pigeon names.



Figure 3. Pigeon logo

These prototypes led to the current iteration of Pigeon in existence today. The name "Pigeon" references both a carrier pigeon and pidgin languages. Pigeon delivers your messages to those you care about that are far away in whatever language you speak (see Figure 3). The visual identity for Pigeon is clean and simple using only yellow, white, black, and grey, to demonstrate the simplicity of communication that Pigeon enables. A drawn pigeon is shown carrying a text bubble in active flight, working hard to get your messages to those that matter (see Figures 4, 5).

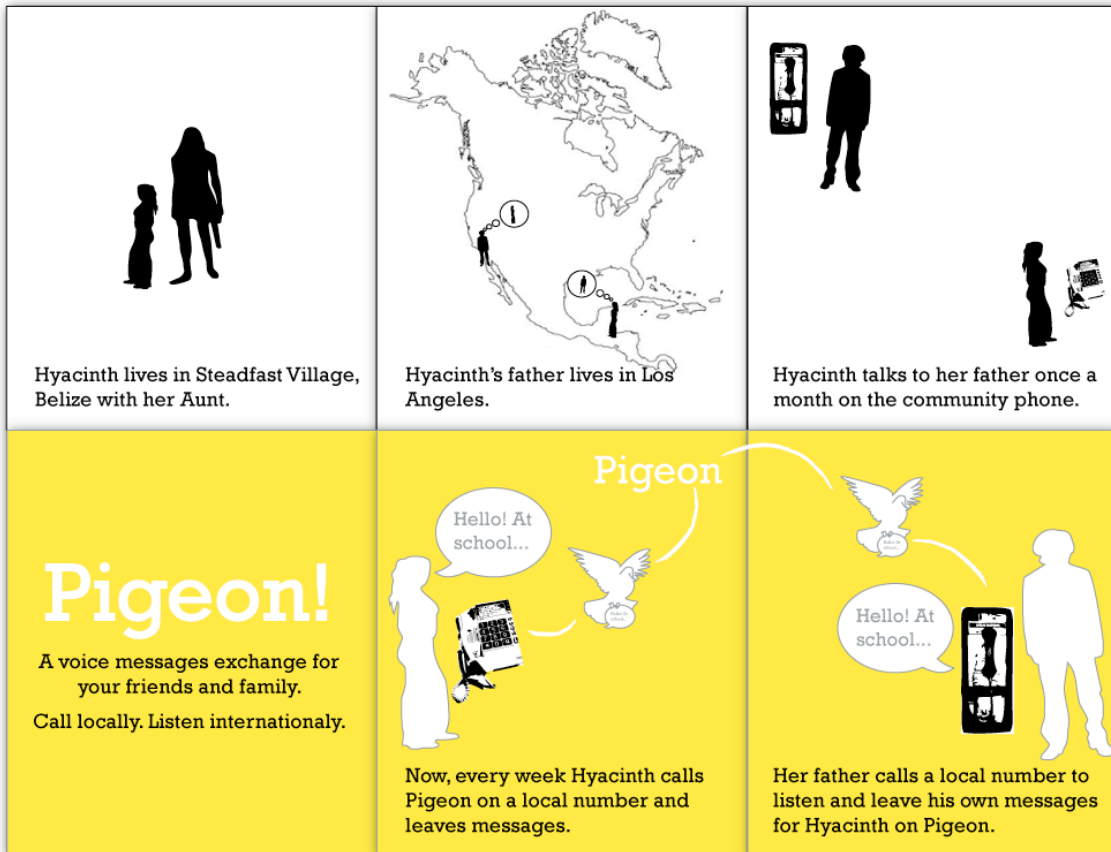


Figure 4. Pigeon Storyboard, Long distance communication



Figure 5. Pigeon Storyboard, Group communication

Pigeon as it is imagined today is a voice message exchange for friends and family that is accessible on a local number so that it is more affordable than direct international calling. As shown in the storyboards (Figures 4 and 5), with Pigeon people are able to communicate more regularly and are from that able to feel more connected to the people they love.

When a person calls into Pigeon, they are first asked to provide their Pigeon member number and then are asked to provide their PIN. This information is checked against a database, and if a person is signed up and their PIN is correct, they are logged on. Once logged on, a person can choose to listen to messages, record a message, manage message, manage contacts, manage groups, and record their Pigeon name.

A pre-alpha version of Pigeon has been implemented and tested with 3 pretend Pigeon member numbers for logging in. Users generally had an easy time navigating the system. There were suggestions made about tightening up some language, which has already been incorporated. Users seemed to greatly enjoy the Pigeon name recording. Some simply said their name, but many said their name with a particular, obviously intentional inflection. Other said nicknames or funny phrases to identify themselves. Some users recommended changes which will be incorporated into Pigeon in future iterations such as playing the member's Pigeon name when they are at the main menu, a message delete option after recording and not liking a message, and some sort of auditory feedback to indicate loading happening if there is any system lag.

Furthermore in the future, Pigeon will activate the remaining options of the menu for user testing. While users in New York, Arkansas, and Spain were able to try the system, a even more broad user testing sample is completely necessary. Language

support should be added to incorporate Spanish at the very least. Currently text-to-speech is employed for the prompts, and experimentation in recorded voice prompts would be useful along with the use of other text-to-speech ‘voices’.

Pigeon has been an exciting way to find the intersection point between the three motivations propelling this project. Even in it’s pre-alpha state, Pigeon has huge room for expansion and potential application beyond its original imagined context. The Pigeon concept provides an interesting idea for asynchronous phone-based message exchange, which has the potential to bridge communication barriers by employing accessible and affordable communication technology as a means for individual to tell their personal story, or what is currently happening in their life.