Project Research Document

Multi-lang Messenger

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1. Detailed Discussion:

The idea which I have chosen is a multi-lingual messenger app using the Microsoft Translator Text API. The user sends a text message by their preferred language, but the recipient in the other end receives the message by a selected language. The Microsoft Translator Text API is the middleware which translates the sent text message into the recipients desired language.

After I spent six months in the Erasmus+ program in France I realised many have trouble writing in a different language, especially in real-time conversations where the receiver expects a reply instantly. There are many external tools such as Google Translate, Odyssey Translator and many more which enables users to translate to many languages, but these are usually external applications. What Multi-lang Messenger does is translate end to end user’s messages to each one’s preferred language.

Our world is connected more than ever because of many reasons, yet there can never be real connection without communication, in this fast-passed world, there is an expectation of instant solution to myriads of problems, understanding of the problems in one’s proficient language reduces the duration which may cause misunderstanding in the overall context of the problem.

This application is intended for exchange students in a different country, employees during business trips in a foreign-land, to anyone wishing to learn a new language, the best way to learn a language is to be constantly reading, writing or speaking it; the great advantage of Multi-lang Messenger is it doesn’t hinder the understanding of the receiving party since they’ll be receiving the text in their preferred language.

Finally, I wish to collect all the user’s activities and add a dashboard to the application. This application can be used for advertisement purposes and if the maintainer wishes to add features to the application visualising data in an intuitive manner may help understand the overall use of the application.

1. Existing Applications in this domain

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| Application Name | Description | Difference with Multi-lang Messenger |
| iTranslate (http://www.itranslate.com/imessage-keyboard?ref=producthunt) | The iTranslate iMessage & Keyboard App works prefectly with iMessage, WhatsApp, Facebook Messenger or any other messaging app. You can also use it to reply to your Emails or communicate with your team members on Slack. | This is a plugin which can be attached to any application but not an application itself, thus it has a different purpose as a whole compared to Multi-lang Messenger. |
| Google Translate | A feature on Android phones will allow users to translate text within any app, meaning users of chat apps such as WhatsApp and Facebook Messenger will instantly be able to understand someone speaking in a foreign language.  Previously, people would have to switch to the Google Translate app or search for a translation on the web. Integrating within Android apps means users just have to select a piece of text and press a button to translate it. |  |
| Tbot | Tbot is an automated buddy that provides translations for Windows Live Messenger. It was first launched in 2008 as a prototype pre-dating many other bots and has since become immensely popular. You can have one-on-one conversations with Tbot or invite friends (group conversation) who speak different languages with Tbot translating for you |  |
| Lringo+ Messenger Translator | Lringo+ Messenger is a messaging service aimed at eliminating language barrier. Lringo supports cross Language chating with instant translation.  **Reviews**:  **Theophan Geevarghese**: Awsome but slow  **Skylar Cook**: This app is sweet Im talking to someone in spanish i met thru xbox, its a pretty good idea the translator is on point  **Musa Gardezi:** Musa Good software... Really appreciated. Yes there are some features need to fix. But at least having something to communicate all over world. Very convenient |  |

1. Platform, Technologies and Libraries x 1/2 Page

**Xamarin.forms & Web Application**

I am planning on using Xamarin forms/Visual Studio for Mac as the platform in which to build my applications from. In VS for Mac you’re enabled to build an app with C# and the code is compiled to native Android & IOS.

I am also thinking of instead of this I can simply build a web application which users can use in any device or platform.

**MVC**

The Model View Controller is a software architectural pattern for implementing user interfaces on computers. It divides a given application into three interconnected parts. This is done to separate internal representations of information from the ways information is presented to, and accepted from, the user. This is the architecture I wish to use for my project.

**Microsoft Translator Text API**

Microsoft Translator Text API, part of the Microsoft Cognitive Services API collection, is a cloud-based machine translation service supporting multiple languages that reach more than 95% of world's gross domestic product (GDP). Translator can be used to build applications, websites, tools, or any solution requiring multi-language support.[[1]](#footnote-1) This is the main API which I will be using to translate the text messages.

1. The risks

The main library I am relying on is the Microsoft Translator Text API to accurately translate the text which is sent across from on user to another. I wish to also add the Text Analytics API which determines the sentiment of the users, this can be used to be added on the dashboard which tracks the users’ moods in different times of the day or which users are satisfied with the product etc.

If these API provide the correct results this will help the completion of the app and the progress otherwise it will be hard to get this done.

1. Microsoft.com (https://www.microsoft.com/en-us/translator/translatorapi.aspx) [↑](#footnote-ref-1)