



Set Squared

MILESTONE 1: OCTOBER 1, 2013



VERNACULAR

SET SQUARED

ISDS 3100 FALL 2013

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Executive Summary

Vernacular is an English-to-Spanish translation application, which reads an incoming text message and translates the message to Spanish. The app will translate messages by means of its own complex algorithms designed to handle communication between the end user and a second party. While Vernacular is in active mode, it will recognize, read, and translate incoming text messages. The translation will appear similar to a caption and displayed underneath the original text message. By allowing users to recognize the Spanish equivalent of what they are currently reading, Vernacular will act as an innovative and efficient tool to study Spanish effortlessly while text messaging.

Vernacular will be available to anyone with an iPhone or Android phone and is interested in learning the Spanish language. Text messaging is a contemporary and prominent form of communication, which makes this application perfect for anyone who sends texts frequently. Whether the user is learning a new language as a hobby or by necessity, Vernacular is perfect for any student and supplements other forms of language education. Unlike other language learning applications, Vernacular will provide its users with a simple and effortless way to learn Spanish by incorporating practice into the user's daily communication.

Vernacular will be designed to appeal to a broad audience, from elementary school students to senior citizens, who would like to supplement the study of Spanish into their everyday life. Many students who are encouraged to take a foreign language through grade school do not incorporate their new found knowledge past examinations and homework; therefore, the time devoted to learning Spanish may quickly become a waste. Vernacular's vision is to make learning Spanish as a second language simpler, more convenient, and fun by translating text messages on a user's native messaging board in order to supplement the user's learning through memory association. In order to accomplish this task, a team of translators will prepare many complex algorithms, which will be capable of translating Spanish vocabulary, slang, phrases, grammatical differences, and punctuation. This code will be compiled into Vernacular's Spanish dictionary as the source of every translation. While the application is active, Vernacular's objectives will be to access the incoming message, translate it, and display the translation within the native messaging board under the original received text. Overall, Vernacular's goal is to provide users with timely and accurate English to Spanish translations within seconds of receiving incoming text messages.



Project Scope

General Information

Product Name:	Vernacular
Class:	ISDS 3100 Section 1 – Fall 2013
Team Leader:	Member Rotation

Problem/Opportunity Statement

Spanish is quickly becoming a prominent language, which many people are interested in studying. Due to the nature of society, our schedules afford little time to dedicated periods of language study and immersion. In this situation, it could be opportune to convert standard everyday conversations into Spanish and display the translation in a manner that affords passive learning and recognition of patterns.

Project Objectives

To afford users the ability to interact with Spanish translations of personal messages received via text message.

Project Description

A new application will be constructed which will intercept incoming text messages, construct logical Spanish translation of the intercepted text, and display the translation

Technical Requirements

1. Product must accept any English incoming message as an acceptable input.
2. Product must not violate operating system messaging security.
3. Product must not delay delivery of original message for translation purposes.
4. Translation must appear when Vernacular is active.
5. Translation must not appear when Vernacular is inactive.
6. Translated messages will accommodate incoming messages of any size.

Project Deliverables

- Team Report
 - September 13, 2013
 - Team Leader:
 - Christopher Roberson
 - Presents:
 - Organizes team information, contact information, rejected ideas, selected ideas, and individual member qualifications into a presentable format.
- Milestone 1: Requirements Gathering and Data Analysis
 - October 1, 2013
 - Team Leader:
 - Danielle Johnson
 - Presents:
 - Executive Summary, Project Scope Statement, System Description, Functional Requirements, Non-Functional Requirements, Alternatives Evaluation, Results of Research, Preliminary Screens/Forms, Current Leader, Next Leader
 - Restates:
 - Summary of contextually relevant information presented in Team Report



- Milestone 2: Use Cases
 - October 17, 2013
 - Team Leader:
 - Gunner Raedisch
 - Presents:
 - Actor Glossary, Use Case Glossary, Use Case Diagram, Use Case Narratives, Current Leader, Next Leader, Member Contributions
 - Restates:
 - Project Scope Statement, Functional Requirements
- Milestone 3: Data Flow Diagrams
 - November 14, 2013
 - Team Leader:
 - Mark Wallace
 - Presents:
 - Context Level DFD, Level 0 DFD, Level 1 DFDs, Current Leader, Next Leader, Member Contributions
 - Restates:
 - Project Scope Statement, Functional Requirements, Use Case Diagram, Use Case Narratives, Product Screens/Forms
- System Proposal
 - November 19 or 21, 2013
 - *Exact date TBD*
 - Team Leader:
 - Victoria Bourgeois
 - Presents:
 - Persuasive PowerPoint Presentation of the team description, application description, operational use cases
 - Restates:
 - Summary of all previous deliverables

Estimated Project Duration

2 to 3 months

Limits And Exclusions

At the time of delivery, the final product will access the inbuilt Spanish dictionary, translate, and display incoming messages only in Spanish. Other languages (excluding English) will not be included as a product of this phase. Non-native or incorrect punctuation will be excluded from final translation and restated verbatim if an alternative is not interpreted.

Peer Review

The completed product will be presented to and reviewed by Professor Andrea Houston and our colleagues of ISDS 3100 Section 1.



System Description

Before Vernacular is available to the public, users who desire to translate messages into Spanish must do so manually. Users must copy incoming text messages, access a separate translation application, paste the message into the translator, and view the translation there. Users who aim to incorporate Spanish into their daily communication find this process tedious and time consuming. Therefore, many are not be able to efficiently practice translating Spanish within their daily communication via text messages. Because this process is so lengthy, most people would not even think or want to translate their text messages. In order to enable users to incorporate Spanish into their daily conversations, Vernacular will create an easy method of including Spanish translations into text messages, which is typically the most popular form of communication amongst Vernacular's intended audience. Unlike the manual processes in existence today, Vernacular aims to let users experience a new method of learning Spanish as a second language in a fun, easy, and interesting approach unlike any system on the market.

There are similar applications that have been developed to do some of the functions of Vernacular, but none translate text messages in the user's native messaging app. For example, the free Android app, [Google Translate](#) is a simple language translator. The user selects which language to translate to and from and then displays the correct translation. While it is similar to Vernacular, it does not translate language and display it directly into the native messaging application. Another app, [SMS Translator](#) is a free application that translates incoming text messages into English. It is also standalone application, which means it does not work with your native messaging application and only translates to English. Vernacular is the first application, which combines the simple features of a text translator into one easy plug-in that works flawlessly with your already familiar messaging app.



Functional Requirements

1. Read, translate, and display text
 - 1.1 The application will read incoming text messages once received.
 - 1.2 The application will translate the words or phrases.
 - 1.3 The application will display the translation within the native messaging board.
2. On/Off Capability
 - 2.1 The user will be able to control when the application operates.

Nonfunctional Requirements

1. Cultural
 - 1.1 The system must be able to support Spanish grammar.
 - 1.2 The system must be able to support Spanish punctuation.
2. Performance
 - 2.1 Translation speed will be monitored and controlled at an acceptable level.
 - 2.2 The system will run on Android and Apple smart phones.



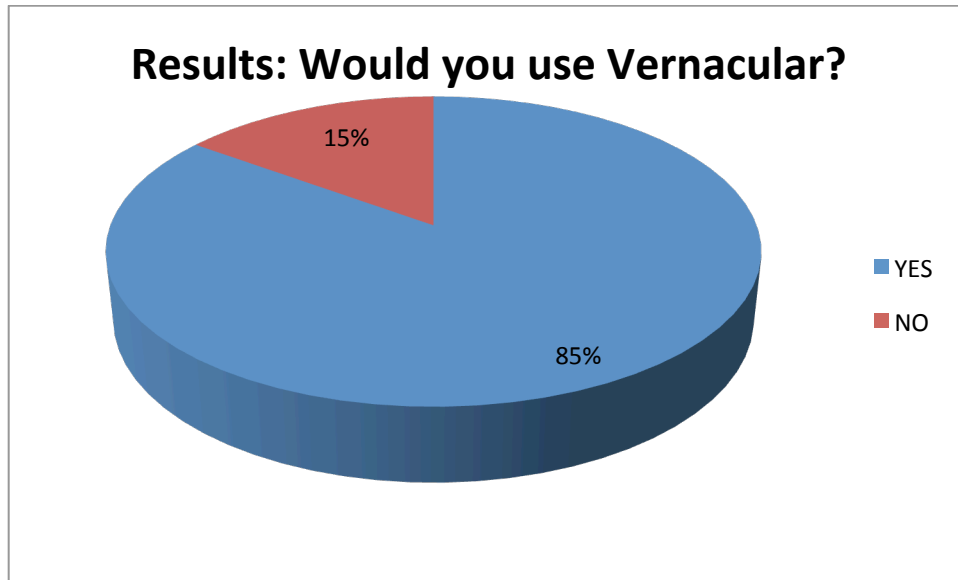
Alternatives Evaluation

Criteria	Weight	Vernacular		SMS Translator		Google Translator	
		Rating	Score	Rating	Score	Rating	Score
Requirements							
Read Incoming Message	20	5	100	5	100	0	0
Translate Message	20	5	100	5	100	5	100
Display in Native Application	20	5	100	0	0	0	0
Ease of Use	10	5	50	4	40	5	50
Spanish Specific	15	5	75	0	0	0	0
Internal Dictionary	15	5	75	0	0	5	75
Total	100	-	500	-	240	-	225

5=Good fit; 0=Bad fit

Results of Research

1. Based on the information about our product, would you consider using it?



Collectively, as a group, we asked a total of 40 people this question. We received a response of *yes* from 34 of these people, and a response of *no* from the other 6.

2. If no, why not?

Most Common answers:

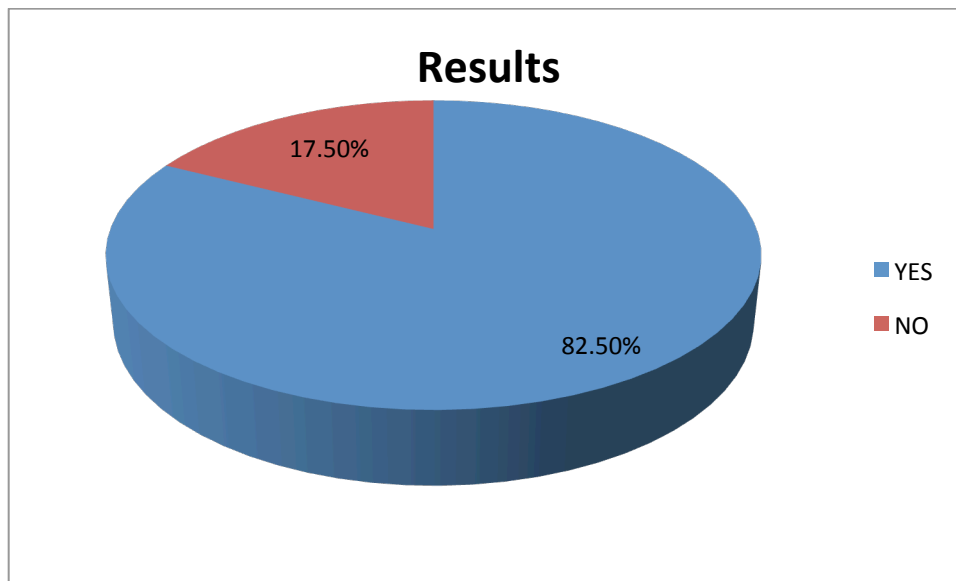
- While it is good in theory, learning another language requires knowing how to change verb tenses not just memorizing basic vocabulary
- I'm not interested in learning Spanish.
- I've never been in a situation where I need to translate my text messages into Spanish
- Don't like the language restriction

3. If yes, what was most appealing about the product?

Most Common Answers:

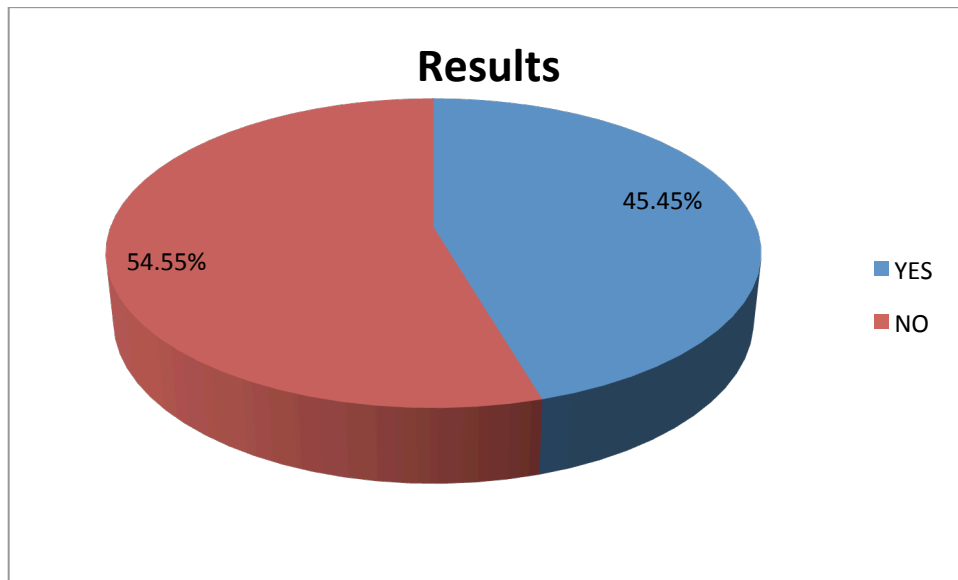
- The convenience of real-time translation.
- Wow, what is not appealing? Communication is a vital part of the human experience. By limiting ourselves to one language, we cut ourselves off to most of the world. With this application I could communicate with the Spanish-speaking world without having to learn the language. I want these new experiences, but I do not want to do any actual work to accomplish this. I believe most people would agree with me, so the app would definitely sell.
- It would be a great help when studying or learning Spanish because the greater amount of exposure you have to the language, the better you learn it.
- This is an incredible idea! A simple way to learn "conversational Spanish" for those of us who don't have the time to dedicate to traditionally studying a foreign language.
- This is very clever. I send hundreds of texts in a day, so my Spanish learning will continually be enforced. Please make this now.
- Both the original and the translation appear.
- It seems user-friendly and the GUI is impressive despite looking simple.
- It's a good way to learn sentence structure as well as common every day vocabulary for a language.
- I think it's important for Americans to learn Spanish as the language is on the rise; we need to be more diverse.

4. Would you use this for educational purposes?



Collectively, as a group, we asked a total of 40 people this question. We received a response of yes from 33 of these people, and a response of *no* from the other 7.

5. Anything you would potentially not like about the product?



Collectively, as a group, we asked a total of 11 people this question. We received a response of *yes* from 5 of these people, and a response of *no* from the other 6.

Comments people made about things they may potentially not like about our product:

- a. Accuracy of the translation
- b. I would like to see how the program deals with slang or urban dictionary words. Would it process them well or throw an error?
- c. Can it be used vice-versa?
- d. I might want to use it abroad, and I'm not sure it could be functional in that way.
- e. Will it slow down the phone?

6. Are you currently using a similar product?

A total of 11 people were asked this question, and 100% of them answered *no*.

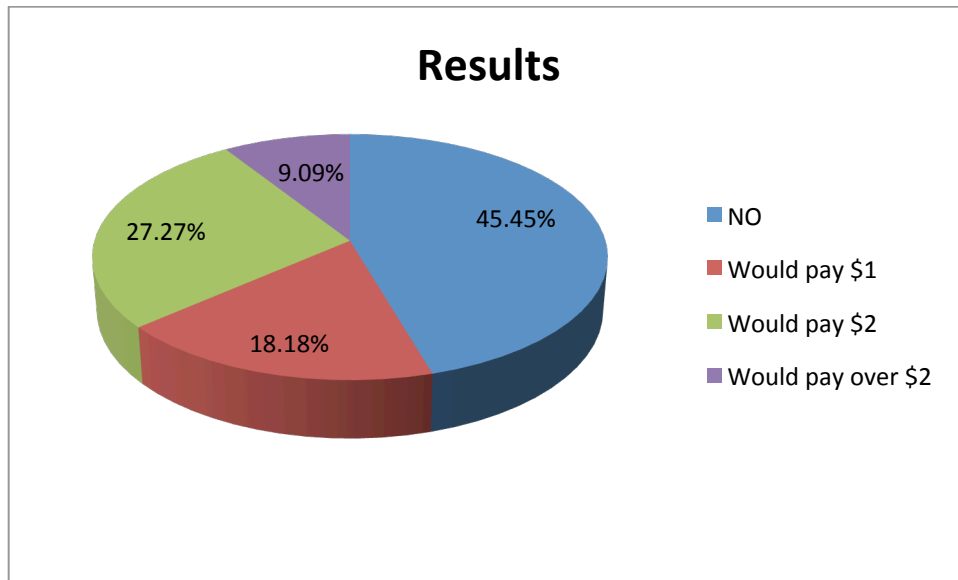
Note: The reasoning behind only 11 people being asked the last 4 questions of this survey were added to the overall survey after we had already began collecting a significant number of results on the first four questions, which were all on our survey monkey survey: <http://www.surveymonkey.com/s/3F6RJ7L>

In addition, none of the 11 people asked this question were currently using, or had used a competing app similar to Vernacular in the past,. Therefore, the surveys were unable to evaluate the user experience with competing products.

7. If yes, are there any problems or issues with using it?

See question 6

8. Would you be willing to pay for this app? If so how much?

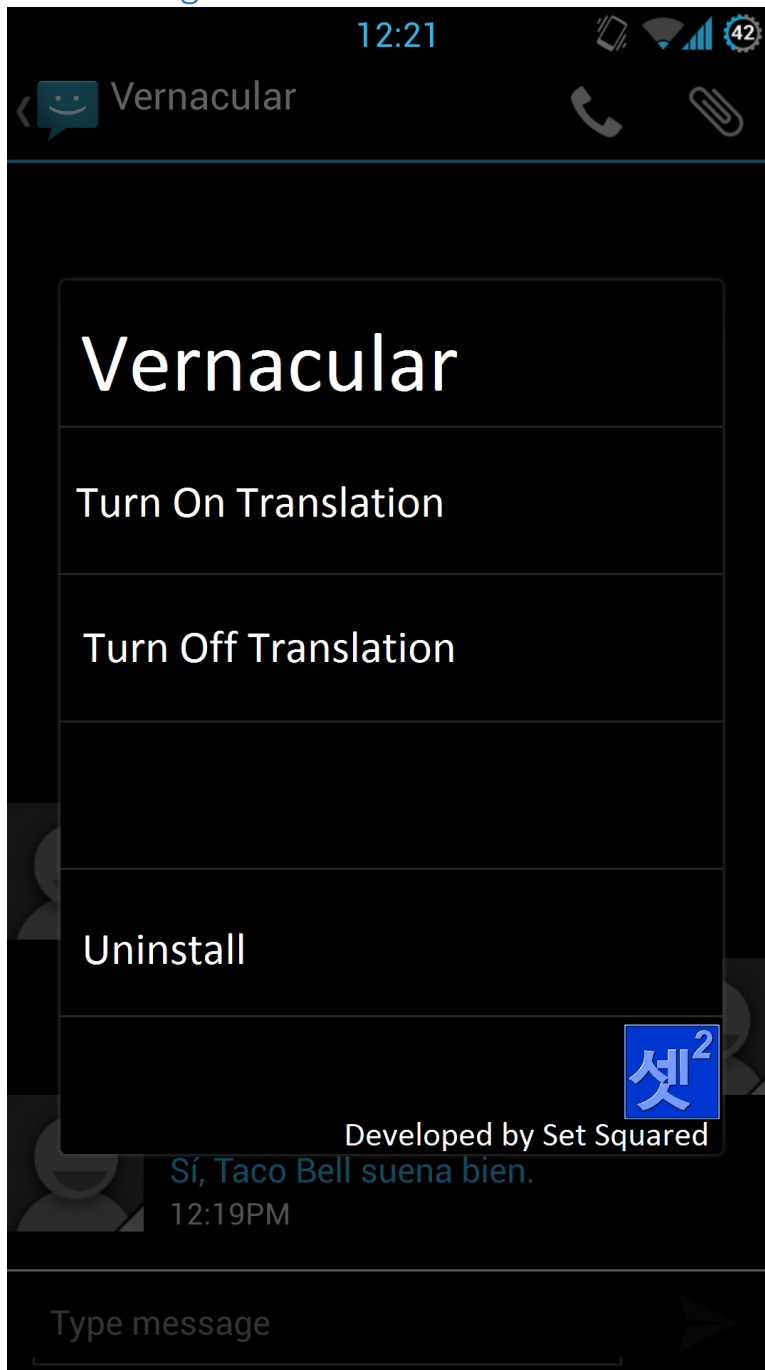


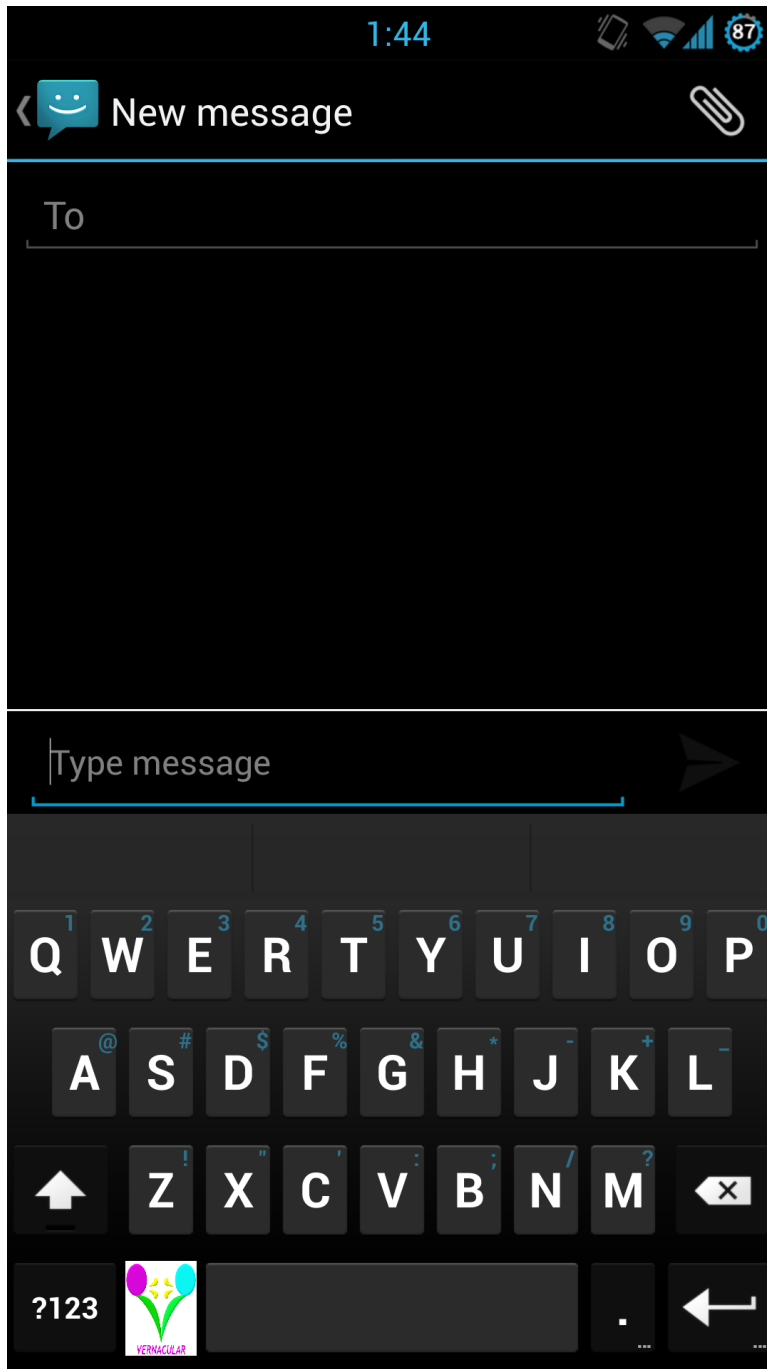
Collectively, as a group, we asked a total of 11 people this question. We received a response of *no* from 5 of these people, the rest of the results are as follows:

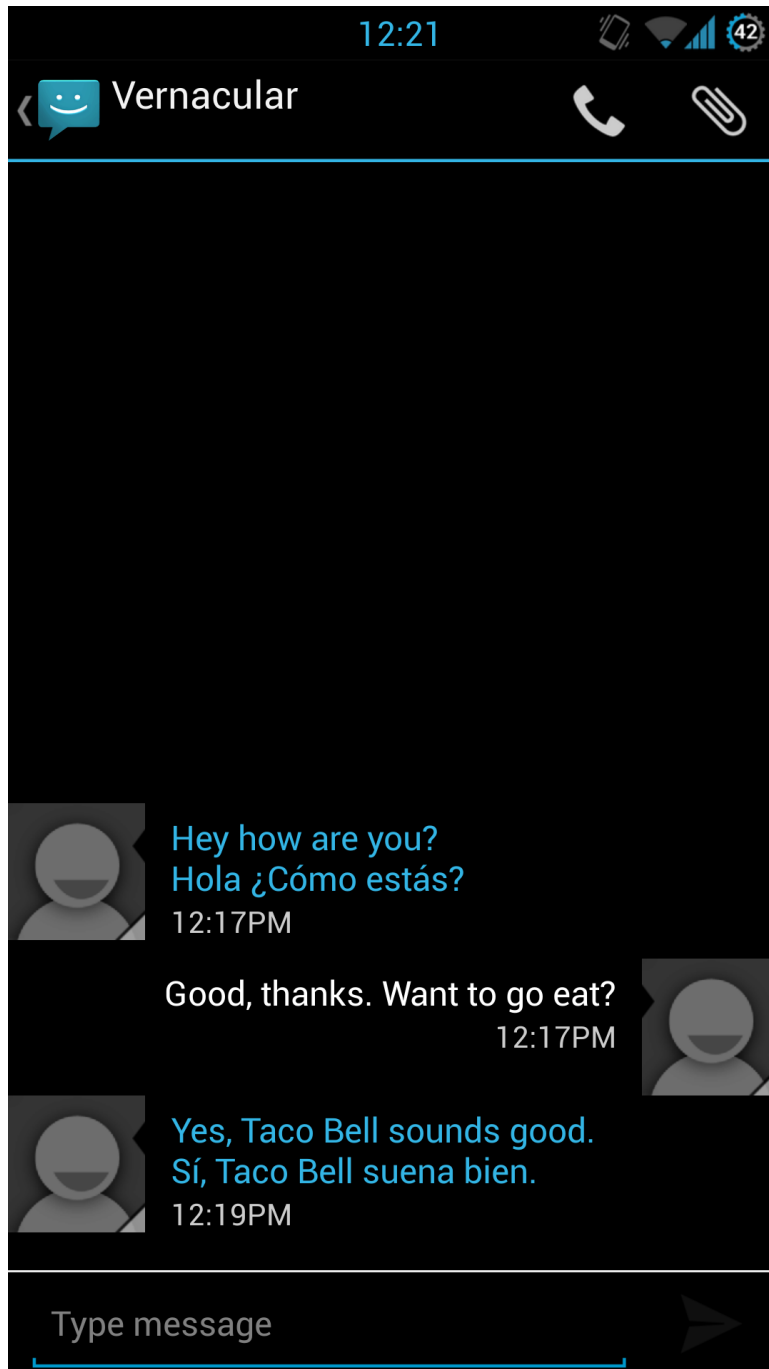
- 2 people said they would pay \$1
- 3 people said they would pay \$2
- 1 person said they would pay \$15



Preliminary Screen Designs









Detailed Activities

1. Team Leader (Milestone 1) – Danielle Johnson
2. Team Leader (Milestone 2) – Gunner Raedisch