The Product Proposal

The Product Proposal will serve as a “product pitch” or “elevator speech” for the product your team decides to pitch to us. The Product Proposal will effectively explain the product in sufficient detail for the reviewers to understand your idea and vision, and what features you intend to provide to the users of your system. The Product Proposal should contain the following:

1. **Team Introduction**: This will include your team name, product name, members of your group, and each member’s role.
2. **Product Idea**: For this project, you and your team will incubate a concept/product/application that will:

    a. Implement a three-tier software architecture
    b. Provide a web site/web application and native Android UI client
    c. Equally draw upon the disciplines taught in both CSE 3330 and 3345
    d. Be deemed appropriate for Academia
    e. Other than the previous requirements, you and your group are free to create anything.

3. **Market Analysis**: This section explores which products already exist in your project area. Who are your competitors? What features do they provide? What user groups do they appeal to (target audience)? What are they lacking, etc.? Use your analysis to assert the validity of your project, how your project differentiates itself, provides better experiences/services/features, and ultimately merits its creation and success.
4. **Product Features**: Using your project idea and Market Analysis generate a high level feature list that your project will offer. This sections needs to exhibit adequate thoughtful consideration. Project leveling will primarily be done using that which is communicated in this section.

5. **Intended User Group(s)**: What user groups is your project targeting? These should closely relate to “User Profiles” that will be used during the Design Phase for your project.

“KeyChat”

By Chris Kvamme, Hunter Houston, Tyler Hargett, Calvin Owens, Taylor Bishop, Khalid Fallatah

1. Team Introduction - KeyChat

- Chris Kvamme - DB / Product Owner
- Hunter Houston - DB / GUI
- Tyler Hargett - DB Lead
- Calvin Owens - Middle Tier Lead / Security Lead
- Taylor Bishop - GUI Lead
- Khalid Fallatah - GUI

2. Product Idea

KeyChat will be a secure, easy to use private messaging service. The service will be accessible on the web and via a limited Android application. The service is focussed on security and privacy. For that reason, messages will be encrypted, not saved on the server, and messages will disappear from the user after a certain amount of time (think SnapChat).
Our team’s second main focus, behind security, is making a simple product that conveys as much of its core value as possible within the first, simplest iteration. Past experiences have led us to believe that if an MVP version of the product does not portray the key value-adding features then there will be plenty of room for failure during the development process. The product itself, a secure messaging service, was born out of paranoia regarding government and hacker spaying. Spying is a very hot topic right now, making this the perfect time to release a secure messaging capability.

3. Market Analysis

KeyChat is in a niche market where there is currently no strong incumbent. There are some products and applications out that have similar features however none that have the same target as KeyChat. KeyChat will distinguish itself from the competitors by having different features and a slightly different target audience compared to others such as Hemlis and SnapChat.
The closest competitor is an application called Hemlis. Hemlis is targeting the same audience that we will target. Hemlis is going to feature secure messaging where the messages are encrypted and nobody is supposedly going to be able to read them. However, Hemlis has not been released yet and is still in development. Another difference is that Hemlis is only going to be available on iOS and Android. We will be releasing a mobile solution as well as a web service which will separate us from Hemlis.
Another similar product is SnapChat, who claims to have safe picture messaging. However, their definition of safe is simply that they do not store any of the photos on their server and after the pictures are opened they are deleted from the device. This product is targeting a slightly different market than what KeyChat will target considering our advanced security emphasis on text based messaging.
These other applications validate KeyChat as marketable due to their similar features and user

segments. However KeyChat's differences will push it past the competition since it will be more focused on security and a slightly different target audience. Another key difference is that KeyChat will provide a full web service as well as a mobile solution.

4. Product Features

The main idea behind Keychat is security. This is translated into the ability to send secure messages that are encrypted and not saved on the server to ensure privacy for the users. All features of the product are geared towards privacy. We have laid out the the development of the features into three iterations.
In the first iteration we focus mainly on the backend. We will start by making a web user registration page that allows users to sign up for the service. We will implement a profile page as well as a settings functionality to cater to certain preferences the user may have. You profile page display a minimal amount of information, such as your username and the ability to add a tagline. No pictures can be uploaded to the profile because our main focus is security. In the settings page, we will allow the user to lock their account and to change their current username. However, once an account has been locked or changed it can not be accessed again and the username becomes unusable. For the Andriod app, all we will do in the first iteration is set up its communication with the server.
In our second iteration, we begin to design the chat features on the website. We will implement a buddy list feature which displays users they have had previous conversations with. Though the past usernames will appear, the conversations are all erased after the session is terminated. Users will also have the ability to block specific user names from attempting to communicate with them. In this iteration we will also implement the messaging feature in the website. It will appear similar to a Google or AIM chat. The server will also be setup to allow for all these features.
For this iteration of the Android app we will design a login screen. After logging in, they will be able to send messages back and forth to other users.
In our final iteration of the product, we will add on a few more features to the web application. When users send a message, that message will only appear for a maximum of 15 seconds before being permanently deleted. This is one of many features that when coupled with our main encryption feature will allow for complete end-to-end security. Users will also be able to flag other accounts as "compromised". In case someone attempts to communicate with users under a false identity, flagging their account will let us know where to investigate should this account need to be locked.
Our last step for the Android application will be to add profile and settings features. These settings will very closely resemble the profile and settings features on the web application, which are very simple and based around security.

5. Intended User Group

We have two main user groups. The first is people who are very concerned about security,

called the ‘Hardcore group’, and the second is people who are slightly concerned about security and care more about the fact the KeyChat is simple and easy to use, called the ‘Softcore group’. We plan on our core users being Hardcore. They are computer/security savvy people who want to send sensitive information without the possibility of government/hacker intervention. The Softcore group will most likely be our secondary user group. They are aware of the NSA scandal that is so popular right now, and thus care about security, but are attracted to KeyChat primarily because of how easy it will be to use. These people are SnapChat users. By imitating some SnapChat features, we will be able to translate work that SnapChat has done to convey value in our own product.