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|----------------|-----------------------------|----------------|--------------------|
| PROJECT | Titanic Mobile Email Client | UX | Mobile Design Team |
| TEAM | Mobile Business Team | LEGAL | Pi Legal Division |
| PM | Carolyn Holmes | LOCAL. | Ryan Seacrest |
| DEV | Tina Fey | | |
| TEST | Anderson Cooper | RELEASE | Oct 1, 2009 |

Table of Contents

| | |
|-------------------|---|
| Executive Summary | 1 |
| Justification | 1 |
| Scenarios | 2 |
| Goals | 2 |
| Product Plan | 3 |
| Localization | 7 |
| Delivery | 7 |
| Schedule | 7 |
| Reference | 8 |

1. Executive Summary

Titanic Mobile Email client is a super lightweight email client for iPhone that loads only one email from the user's inbox. Titanic is the first product of the Fifo Suite, a group of iPhone apps that make procrastination impossible by only allowing workers to take one task to completion before they may begin another.

2. Justification

2.1 Improve Worker Productivity

Research shows that American office workers spend 4 hours of every day answering email, and 25% of that time is spent re-reading email they have already read, but did not respond to the first time. If workers answered all their emails the very first time they saw them, it would save them 1 hour a day that they could spend on other work or at home with their families. The Titanic Email client only shows the user one of their emails at a time and does not load another until the user has responded to or deleted the one they already have. It makes it impossible to read an email and then work on something else before finishing with it, or even view an email more than once, thereby increasing worker productivity.

2.2 Platform

There are 6.5 million iPhones currently in use in the United States and 98% of users are using their data connection to send and receive information, including email. Because the iPhone is a mobile device, Titanic will work for the user anywhere they have a data

connection, so they don't have to limit their increased productivity to the time they are sitting at their desks. The simplicity of the iPhone SDK and App marketplace will vastly decrease our time to market.

There are tentative plans to expand the Titanic experience to other platforms, including a desktop mail client, but given our limited resources and the Dev owner (Tina Fey)'s extensive experience with the iPhone SDK, those are strictly non-goals at this time.

3. Scenarios

3.1 Mobile Office Worker

Sharon works in a large office in Seattle, but commutes from Everett via the Sounder train. She prefers to use her hour-long commute in the mornings and evenings to get caught up on email using her iPhone. She often finds that her phone takes a long time to load her large inbox while on the train and that browsing through all the messages to find one she's looking for is a pain on the small screen. She often will only finish responding to 2 or 3 messages in a morning's commute, with the rest remaining when she gets to the office.

One day before her commute, Sharon installs the Titanic mail client from the AppStore. When she opens it up, an email loads almost instantly. Since she doesn't have to waste any time browsing or loading more mail, she deletes or responds to the message and is promptly met with another one. Sharon is able to work through 10 emails before she gets to the office, thereby reducing the amount of work waiting for her in her regular desktop client.

3.2 Student

Tom is a college freshman taking an extra heavy class load this semester. He often feels overwhelmed by the heavy amount of information he receives over email, and will find himself reading communication and assignment from his professors and TAs in class instead of paying attention. All the information coming in at once causes him to stress about all he has to do instead of focusing on what's in front of him.

Tom has installed Titanic on his iPhone and is now using it to receive all his email. While he's in class, he sees that he has a new email. It is a notification from a professor of an upcoming homework assignment that is due in a week. Tom reads it, but chooses not to delete or reply since he will need the information later, instead redirecting his attention back to the professor knowing that no new email will be popping up to distract him.

4. Goals

4.1 P1 Goals

- A fully functioning mail client that downloads one message from an inbox at a time
- Support POP and IMAP/SMTP email protocols
- Delete functionality
- Reply functionality, including a plain text editor

4.2 P2 Goals

- Support Exchange email protocol
- Push functionality

4.3 Non-Goals

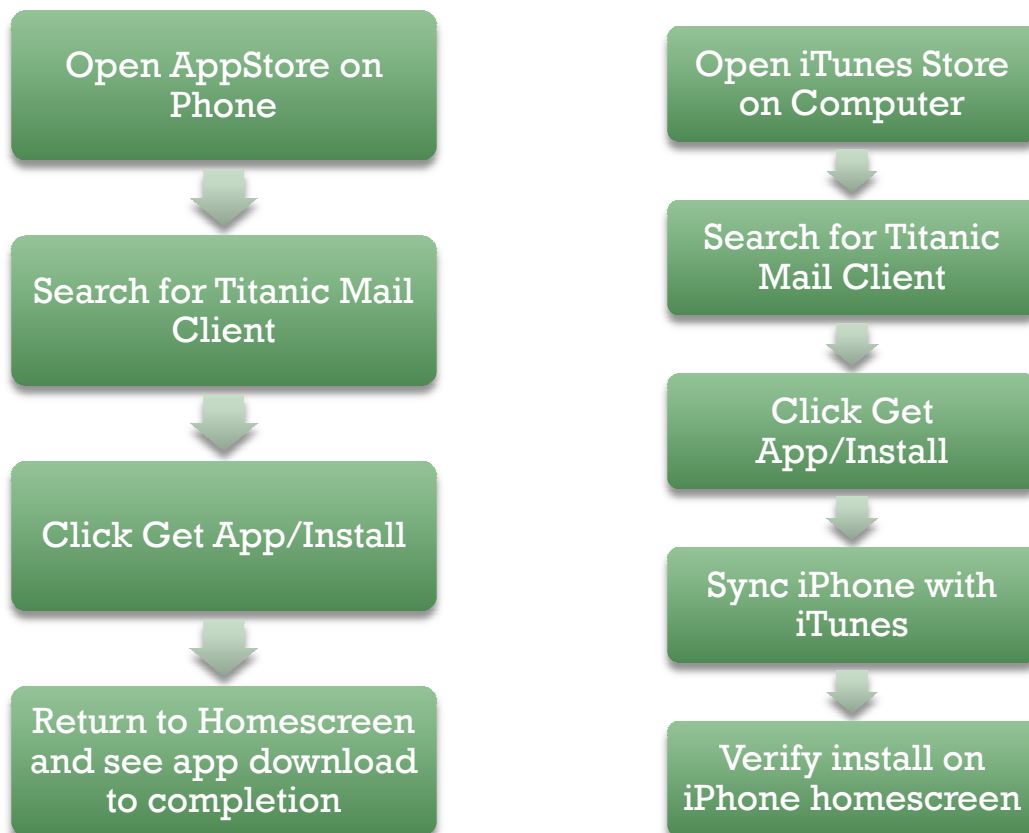
- A desktop client
- Browsing multiple emails
- Dismissing or Triage of emails so they remain in inbox, but another email is shown in the client
- Support for multiple email addresses
- Saving drafts of replies
- Sending a “new” email – client is reply-only
- Attachment viewing

5. Product Plan

5.1 Experience

5.1.1 INSTALL

iPhone App install process is standard for all apps and can be completed from the device or as a sync from iTunes. The experiences are:

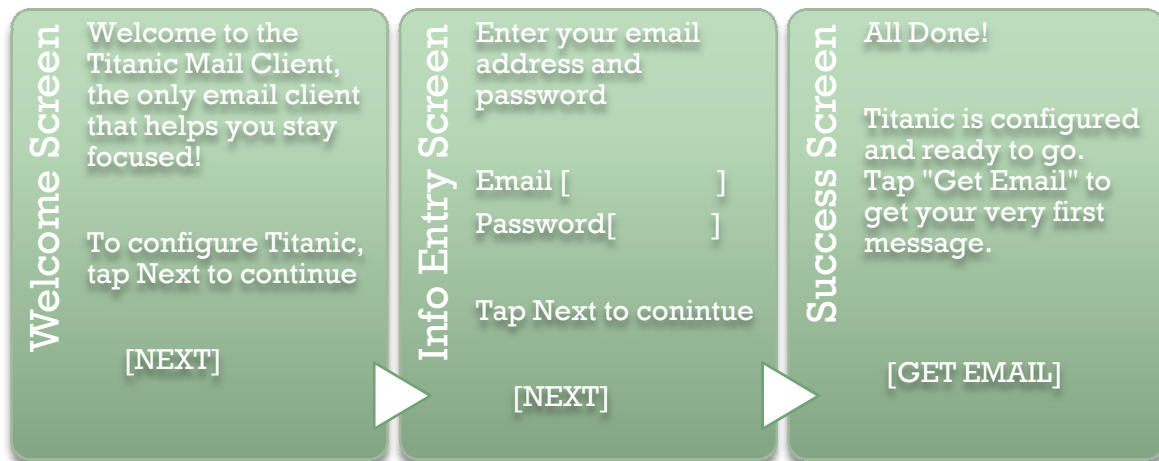


5.1.2 SETUP/CONFIGURATION

Setup is run the first time the app is launched until it is successfully completed. If the users exits the app before completing setup, they will be prompted to set up next time they enter the app.

NOTE: the app can only be configured once. If the user desires Titanic to work with a different email address, they must uninstall and reinstall the app to run setup again. The only information the user needs to enter to configure Titanic is their email address and password.

Here is a screen by screen mock-up of the setup process.



Components of Setup:

- Welcome screen Next button
- Info Screen Email field
- Info Screen Password field
- Info Screen Next Button
- Success Screen Email button

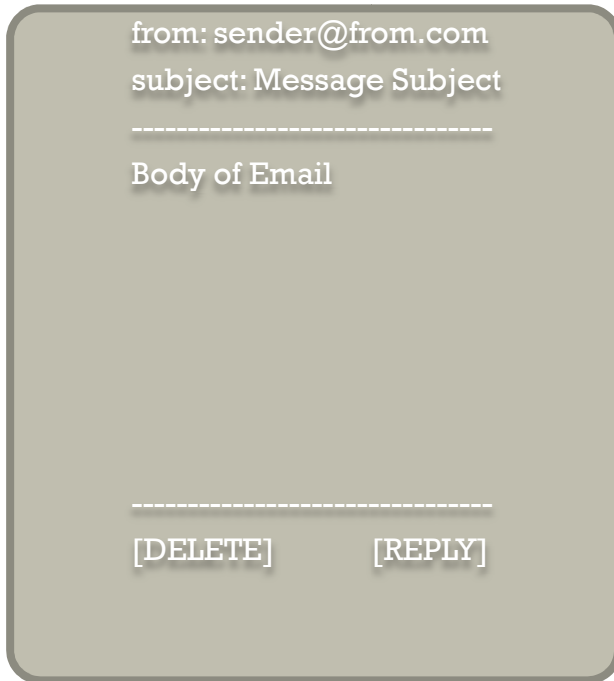
Actions of Setup:

- Tap Welcome Screen Next -> Info Entry Screen Appears
- Tap Info Screen Email -> keyboard pops up with finished action
 - Emails must include suffix (example: carolyn@pisoftwareinc.com)
 - Tap Finish button -> close keyboard and display entered data in field
- Tap Info Screen Password -> keyboard pops up with finished action
 - Letter flashes as typed and then hid with asterisk for privacy
 - Tap Finish button -> close keyboard and display entered data in field
- Info Screen Next Button -> configures email, takes to success screen
- Tap Success Screen Get Email Button -> Main Screen (see regular use section)

If the Email and Passord entered are not valid, the Info Entry Screen does not go to the success screen and instead resets to give the user another chance.

5.1.3 REGULAR USE

To open the app, tap the Titanic app on the iPhone homescreen. Setup will run if it has not yet been completed, otherwise it will go straight to the main Titanic screen:



Components of Titanic main screen:

- The sender's email
- The email's subject
- The body of the email
- Delete button
- Reply button

Actions from Titanic main screen:

- Scroll of from, subject, and message body
- Zoom of from, subject, and message body
- Tap Delete -> Deletes message, downloads next email from inbox
- Tap Reply -> Opens text box with a send action
 - Tap Send -> Sends reply, downloads next email from inbox

5.1.4 CLOSING THE APP

As with all iPhone apps, pushing the home key will close the app. Unsent replies will not be saved.

See documentation for iPhone SDK for more detail.

5.1.5 UNINSTALL

Uninstall of this app works like all iPhone apps. Tap and hold on the icon on the homescreen until the screen appears wobbly. Then click the (x) on the Titanic icon

See documentation for iPhone SDK for more detail.

5.2 Implementation

5.2.1 GENERAL CODING STANDARDS

The app will be constructed using the iPhone SDK and meet compatibility standards for OS 3.0 and later. It will be written in-house, from scratch, in the Objective-C language. All visual artifacts, artwork, fields, text, icons, and buttons will come from the Apple-approved elements provided in the SDK with the exception of the app icon that appears on the homescreen. The home screen icon will be designed in-house by the Experiences team assigned to this project, and will feature the name of the app and the bow of an old-fashioned steam ship.

For more information about artwork and development standards for the iPhone, please review the SDK documentation.

5.2.2 EMAIL SETUP

It is a P1 goal to support both POP and IMAP/SMTP email addresses, and a P2 for Exchange, to be completed if there is sufficient time in the schedule. All server resolution is attempted automatically based on the user's complete email address and password. If the user's email provider does not support automatic resolution, there configuration cannot be supported and they will be unable to use the app.

If the client attempts and email resolution during setup but it fails to configure properly, the info entry screen resets so the user may try a different email address. The screen is not versioned based on whether or not any attempts have previously been made (this should be strongly considered for inclusion in future releases).

We fully expect that most POP addresses and some IMAP/SMTP addresses will resolve automatically with no trouble.

5.2.3 MESSAGE FETCH

The app always maintains a status field that is current anytime the app is open, and is saved as part of the app state when closed and reloaded from memory on launch. There are 2 statuses:

`_EMPTY` – this is default, Titanic is not storing any unanswered email

`_FULL` – Titanic has downloaded a message that has not yet been responded to or deleted

AT LAUNCH: Load status. if `_EMPTY`, attempt to fetch a message. Else if `_FULL`, verify message is still in inbox on server. If not, switch to `_EMPTY` and attempt to fetch a message. If so, load stored message into UI

WHILE `_EMPTY`: attempt to fetch a message every 5 minutes.

WHILE _FULL: verify message is still in inbox on server every 30 minutes. If not, switch to _EMPTY and attempt to fetch a message

ON DELETE: Send delete message to server. If successful, switch to _EMPTY and attempt to fetch a message

ON REPLY: Send reply message to server. If successful, switch to _EMPTY and attempt to fetch a message

ON SUCCESSFUL MESSAGE FETCH: switch to _FULL

ON CLOSE: store status. If _FULL store current message.

A message fetch will always get the oldest message in the inbox, whether it has been read or not.

The UI must always be cleared when the status is _EMPTY, and must always be populated with the latest message when _FULL.

6. Localization

Titanic 1.0 will be provided only in English. The localization team will provide all strings to be included in the final product.

7. Delivery

The completed App will be signed off internally by dev, test, PM, loc, legal, and experience before being submitted as an executable to Apple for approval. Apple may deliberate for up to 6 months, though it is more likely to be in the 2-4 week timeframe before coming back with approval or suggestions. If they reject and make suggestions, we will fix them and resubmit. Once the app is approved, Apple will post the app to the App Store where customers can begin downloading it.

Titanic will be considered complete when it is submitted to Apple, but owners will consider it highest priority if further work is requested.

8. Schedule

| Dept. | Owner | People | Days |
|------------|------------|--------|------|
| Dev | Tina | 2 | 5 |
| Test | Anderson | 3 | 5 |
| Loc | Ryan | 1 | 1 |
| Legal | Legal Team | 1 | 1 |
| Experience | UX Team | 2 | 1 |

Week One: All dev work, localization, and experience work to be completed

Week Two: All testing and legal work to be completed

Total Resources: 9 people

Total Days: 29

Delivery: 2 weeks from start

9. Reference

iPhone SDK <http://www.iphone.com>

The Email Conundrum. Article by American Worker Magazine
<http://americanworkermagazine.com/12345>

IMAP/SMTP APIs <http://theimapstandard.com>

POP APIs <http://popstandard.com>