NEWS PHONE APPLICATION

Deliverables III

COP 4331 Section 1
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GROUP 8

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1 TEST RESULTS

Modification history:

Version	Date	Who	Comment
v1.0	09/20/10	Stephen Rodriguez	Initial test plan created
V2.0	11/28/10	Stephen Rodriguez	Test Results

1.1 Introduction

1.1.1 Overall Objective for Software Test Activity

- The objective for the Software Test Activity is to ensure that the mobile application meets all of the standards of the client, as well as ensuring the software runs without any errors.
- The software test effort should be able to catch any bugs in the application. By catching the errors in the test effort, it will ensure that application of the highest quality will be delivered to the client.

1.1.2 Reference Documents

- Concept of Operations
- Project Management Plan
- Software Requirements Specification

1.2 Description of Test Environment

The hardware that will be used to test the mobile application will be a mobile phone running at least the Android 1.6 operating system. Also, when developing the software, an Android simulator will be used. The testers will include both the developers of the software and users who have never used the application before. The application will be tested on multiple phones running different versions of the Android operating system.

1.3 Overall Stopping Criteria

Testing will continue until a fatal error has been reached. All of the errors prior to the fatal one will be recorded. The list of errors will then be replicated and corrected, including the fatal error.

Once no errors are found during a test run, the software will be thoroughly tested by each team member to provide a sufficient amount of test cases for the error-free software.

A product that is considered “good enough to deliver” is a product in which there are no known errors in the cosmetics and the software.

1.4 Description of Individual Test Cases

Test Objective	Test Description	Test Conditions	Expected Results
The ability to connect to the website.	The user will run the application	Running the application to ensure the user is testing in a new session	The application will boot up completely in a sufficient amount of time.
The ability to select one of the five main sections; US, World, Money, Entertainment and Sports.	The user has the option to select each of the 5 news sections	Running the application to ensure the user is testing in a new session	The application will be able to load each section successfully.
The ability to have a “show more” button.	The user will be shown 5 articles per section. If the	Running the application to ensure the user is testing in a	When the user selects the “show more” button, a longer

Test Objective	Test Description	Test Conditions	Expected Results
	user wants to read the rest of the stories, he/she will be able to select a "show more" button and the full story will be shown	new session	list of articles show.
The ability to read an article	The user selects an article desired to read	Running the application to ensure the user is testing in a new session	The user is able to read the article with the use of the application.
The ability to jump between News Sections from within the Article lists	When the menu button is selected, the user has the ability to select a different section besides the section he/she is in	Running the application to ensure the user is testing in a new session	The user is able to switch between sections without going back to the main menu
The ability to long-click the article to get the Article's options menu	When the user selects and holds the selected article, the Article's options menu appears	Running the application to ensure the user is testing in a new session	The user is able to view the Article's options menu by a long-click
The ability to mark an article as read	When an article has not been read, the article title's font is in blue	Running the application to ensure the user is testing in a new session	The user knows the article has not been read, when the article title's font is in blue
The ability to mark an article as unread	When the article has been read, the article title's font becomes purple	Running the application to ensure the user is testing in a new session	The user knows the article has been read, when the article title's font is in purple
The ability to receive an error message if the device does not have internet access	When the user is until to gain internet access, an error message appears to let the user know of the lack of internet accessibility	Running the application to ensure the user is testing in a new session	An error message is displayed informing the user about lack of internet connection
The ability to refresh the article lists	The user is able to refresh the article to ensure update articles are available	Running the application to ensure the user is testing in a new session	The application has the most up to date article available for the user

1.5 Test Results

Test	Tester	Date tested	Test environment	Test Result
The ability to connect to the website.	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successful connection to the website.
The ability to select one of the five main sections; US, World, Money, Entertainment and Sports.	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successful ability to select one of the main sections.
The ability to have a "show more" button.	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully about to view more articles upon request
The ability to read an article	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully loaded an article for the user to read.

Test	Tester	Date tested	Test environment	Test Result
The ability to jump between News Sections from within the Article lists	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully able to switch between sections
The ability to long-click the article to get the Article's options menu	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully able to obtain the article's option menu after a long-click
The ability to mark an article as read	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully marks read articles
The ability to mark an article as unread	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully marks unread articles.
The ability to receive an error message if the device does not have internet access	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	An error successfully displays when the device does not have internet access.
The ability to refresh the article lists	Andy Harmic, Stephen Rodriguez and Tyler Zaino	11/28/10	Android Emulator, Version 1.6 firmware and Version 2.2 firmware.	Successfully able to refresh the article lists

1.6 Conclusion

Once our code was written, we were able to successfully use the application. The application itself works wonderfully. The only problems in testing was the use of the 1.6 firmware, it sometime suffered "force close" messages and was a little bit slower loading the application/articles. We believe this may be due to the older and slower software available to the phones and not a problem in our application. However, other than speed, the application seemed to work excellent for the android phones.

2 USER'S MANUAL

Modification history:

Version	Date	Who	Comment
v1.0	11/26/10	Karl Banks	Initial User's Manual
v2.0	11/27/10	Tyler Zaino	User's Manual complete

2.1 System Description

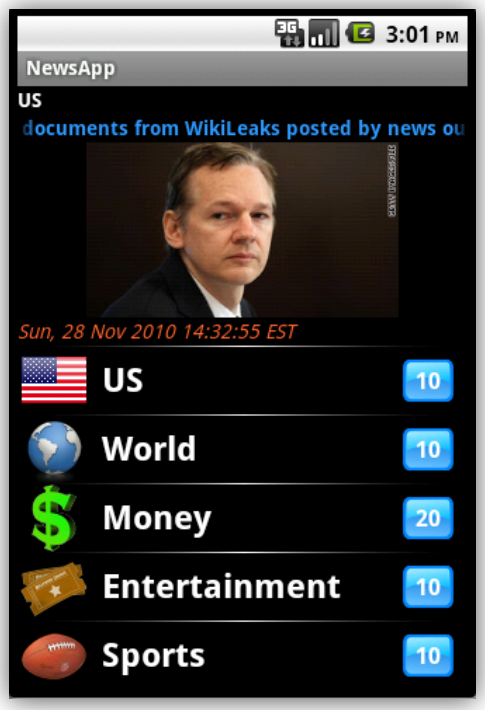
The CNN NewsApp is a mobile application that delivers news directly to any Android device running the application. It retrieves news from five different sections, World, US, Money, Entertainment and Sports. The application allows the user to first pick which section of news they would like to read, and from there they are presented with the article title along with a short description. The user then has an option to either open the article in the application, or they have the option to open it within the Android device's built-in browser. Also the application allows the user to search through older articles by using the "See More" option located at the end of the article list.

2.2 System Requirements

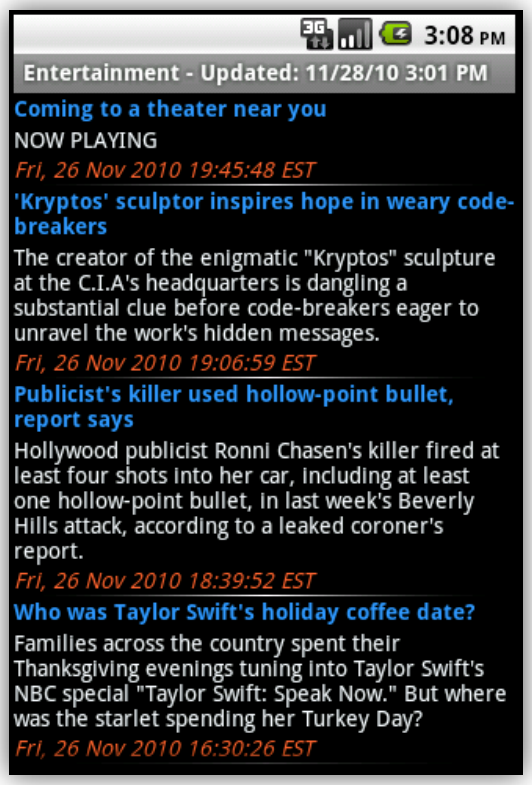
- Android Phone
- Android OS 1.5 or higher
- Internet Connection (Wi-Fi or 3G)

2.3 User's Manual

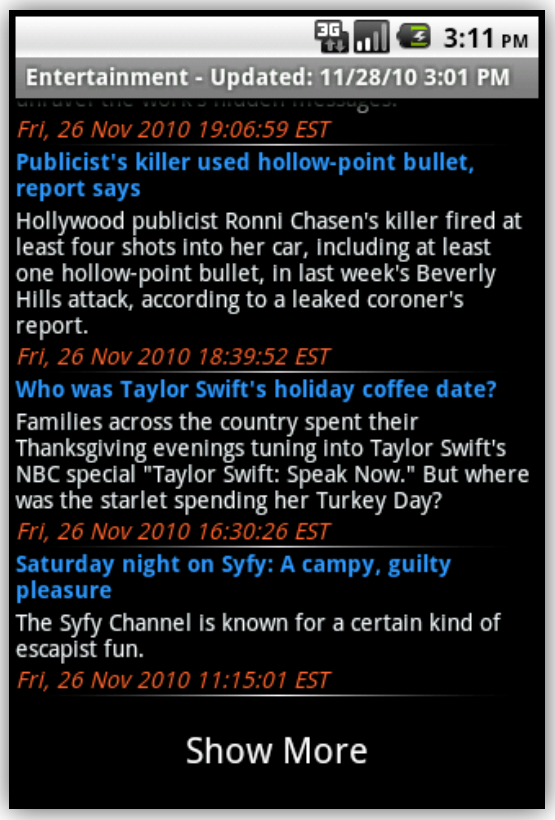
1. Open the application by clicking the NewsApp icon.



2. Once the application is fully loaded, the user is presented with the main screen. Here the user can select which subject of news they would like to read.



3a. By clicking the subject, the user is then presented with a list of articles grabbed from the CNN website.

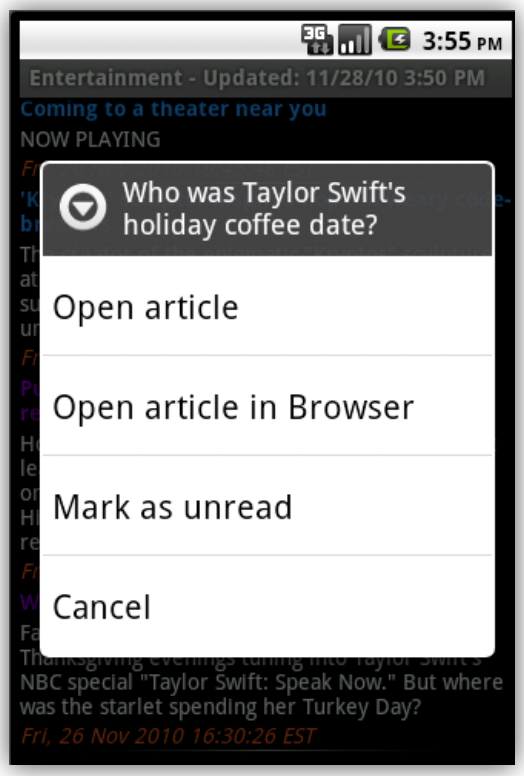


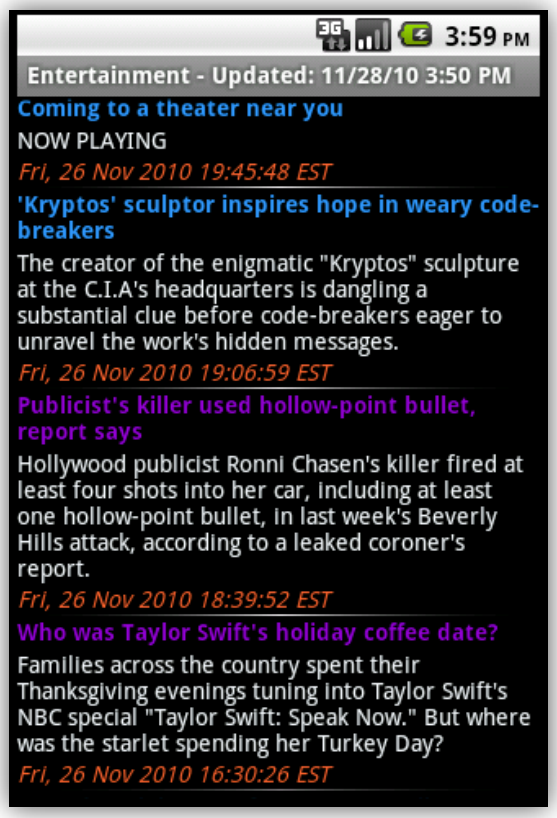
3b. If the user is not satisfied with the articles presented, they are able to see more articles by scrolling to the bottom of the article list and clicking “Show More”

4. Once the user finds an article they are interested in, they are able to simply click the article and load it into the application.

5. The user is also presented with more options by long-clicking the article in the article list.

- Open article – Simply opens the article within the application.
- Open article in Browser – Opens the article within the Android devices built-in browser.
- Mark as Read/Unread – Marks or unmarks the article in the article list to show if the article has been read or not.





6. At any time, if the user wants to jump to another genre of news, they can simply click the Menu button on the Android device.

3 SOURCE CODE

Visit http://ucf.karlbanks.com/cop4331/deliverables.php to obtain the latest copy of the Source Code. The downloadable file, *SourceCode.zip*, contains the following:

- NewsApp.zip
- jsoup-1.3.3.jar

Note that both of these files are required to execute the News Phone Application. For more information, see the Build Instructions in Section 4 of this document.

4 BUILD INSTRUCTIONS

The following build instructions assume that the developer is using Eclipse, with ADT, and that the appropriate Android SDK (Windows, Mac, Linux) has been installed. For more help, please see the **Quick Start** section below.

For **other IDE** instructions, please visit http://developer.android.com/guide/developing/other-ide.html.

4.1 Before You Begin

NewsApp's intended target is **Android 1.6**. Therefore, it is **REQURIED** that **SDK Platform Android 1.6, API 4, revision 3** be an installed package on your development computer. However, NewsApp **WILL RUN** with **Android 1.6 or HIGHER**, so your AVD may target **Android 1.6 or HIGHER**.

4.2 Required Libraries

The NewsApp project is dependent on the **jsoup-1.3.3 or HIGHER** java library. A copy can be obtained from http://ucf.karlbanks.com/cop4331/deliverables.php (in the SourceCode.zip package) or directly from http://jsoup.org/download.

Download the .jar file to the desired location on your file system. Instructions on how to reference the file will be detailed in **Configuring Build Path** section below.

4.3 Developing in Eclipse, with ADT

1. Download the SourceCode.zip file from http://ucf.karlbanks.com/cop4331/deliverables.php.
2. Extract the file contents to the desired location on your file system.
3. Launch Eclipse IDE.
4. Click **File > Import...** from the Eclipse menu bar.
5. Select **General > Existing Projects into Workspace**
6. Click on the **Next >** button.
7. Click on the **Browse...** button under **Select root directory**.
8. Navigate to the location where you saved the NewsApp project.
9. Select the NewsApp folder and click the **OK** button
10. The project should be selected in the **Projects** table.
11. Make sure the field **Copy projects into workspace** is selected.
12. Click on the **Finish** button.
13. The NewsApp project should now be open in your Package Explorer.
14. Please see the **Configuring Build Path** section below before continuing.
15. If you haven't already created an AVD, see the **Creating an AVD** section below.
16. To run NewsApp in the emulator, please see the **Running on the emulator** section below.
17. To run NewsApp on a device, please see the **Running on a device** section below.

4.4 Quick Start

The steps below provide an overview of how to get started with the Android SDK. For detailed instructions, start with the Installing the SDK guide.

4.4.1 Prepare Your Development Computer

Read the System Requirements document and make sure that your development computer meets the hardware and software requirements for the Android SDK. Install any additional software needed before downloading the Android SDK. In particular, you may need to install the JDK (version 5 or 6 required) and Eclipse (version 3.4 or 3.5, needed only if you want develop using the ADT Plugin).

4.4.2 Download and Install the SDK Starter Package

Select a package and download it to your development computer. To install the SDK, simply unpack the starter package to a safe location and then add the location to your PATH.

4.4.3 Install the ADT Plugin for Eclipse

Set up a remote update site at https://dl-ssl.google.com/android/eclipse/. Install the Android Development Tools (ADT) Plugin, restart Eclipse, and set the "Android" preferences in Eclipse to point to the SDK install location. For detailed instructions, see ADT Plugin for Eclipse.

4.4.4 Add Android Platforms and Other Components to Your SDK

Use the Android SDK and AVD Manager, included in the SDK starter package, to add one or more Android platforms (for example, Android 1.6 or Android 2.2) and other components to your SDK. If you aren't sure what to add, see Which components do I need? To launch the Android SDK and AVD Manager on Windows, execute SDK Setup.exe, at the root of the SDK directory. On Mac OS X or Linux, execute the android tool in the <sdk>/tools/ folder. For detailed instructions, see Adding SDK Components.

4.5 Configuring Build Path

If installed, the proper Android library (**Android 1.6**) will automatically be referenced after the NewsApp project is imported into your Eclipse workspace. However, two or more error messages will prevent the application from running. The errors are due to a missing library (**jsoup-1.3.3 or HIGHER**). The following instructions detail how to provide a reference to the missing jsoup library:

1. Right click on the NewsApp project in the Package Explorer.
2. Select **Build Path > Configure Build Path...**
3. Under the **Libraries** tab, select the missing jsoup-1.3.3.jar file.
4. Click on the **Edit...** button.
5. Navigate to the location where you saved the jsoup .jar file.
6. Select the jsoup-1.3.3.jar or HIGHER.
7. Double click or click on the **OK** button to select the file.
8. Click on the **OK** button to finish referencing the jsoup library.
9. The error messages should disappear and NewsApp can now be run.

4.6 Creating an AVD

An Android Virtual Device (AVD) is a device configuration for the emulator that allows you to model real world devices. In order to run an instance of the emulator, you must create an AVD.

To create an AVD from Eclipse:

1. Select **Window > Android SDK and AVD Manager**, or click the Android SDK and AVD Manager icon in the Eclipse toolbar.
2. In the *Virtual Devices* panel, you'll see a list of existing AVDs. Click **New** to create a new AVD.

3. Fill in the details for the AVD.
   Note: Be sure to define a target for your AVD that satisfies NewsApp's Build Target (**Android 1.6 or HIGHER**).
4. Click **Create AVD**.

Your AVD is now ready and you can close the SDK and AVD Manager, create more AVDs, or launch an emulator with the AVD by selecting a device and clicking **Start**.

For more information about AVDs, read the Android Virtual Devices documentation.

4.7 Running on the Emulator

Before you can run NewsApp on the Android Emulator, you **must** create an AVD.

To run (or debug) NewsApp, select **Run** > **Run** (or **Run** > **Debug**) from the Eclipse menu bar. The ADT plugin will automatically create a default launch configuration for the NewsApp project. Eclipse will then perform the following:

1. Compile the NewsApp project (if there have been changes since the last build).
2. Create a default launch configuration (if one does not already exist for the project).
3. Install and start NewsApp on an emulator (or device), based on the Deployment Target defined by the run configuration.

If debugging, NewsApp will start in the "Waiting For Debugger" mode. Once the debugger is attached, Eclipse will open the Debug perspective.

To set or change the launch configuration used for NewsApp, use the launch configuration manager. See Creating a Launch Configuration for information.

4.8 Running on a Device

Before you can run NewsApp on a device, you must perform some basic setup for your device:

- Declare NewsApp as debuggable in the manifest
- Enable USB Debugging on your device
- Ensure that your development computer can detect your device when connected via USB

Read Setting up a Device for Development for more information.

Once set up and your device is connected via USB, install NewsApp on the device by selecting **Run** > **Run** (or **Run** > **Debug**) from the Eclipse menu bar.

*Portions from Android's Dev Guide: http://developer.android.com/guide/developing/eclipse-adt.html

5 PROJECT LEGACY

Modification history:

Version	Date	Who	Comment
v1.0	10/21/10	Jason Heintz	Initial pass through
v2.0	10/22/10	Aaron Birencwaig	Worked on Analysis section
v3.0	10/28/10	Jason Heintz	Worked on Roles section
v4.0	10/29/10	Jason Heintz	Final compilation of document

5.1 Roles

Project Work	Team Members	% per Member
Team Webpage	Karl Banks	100
Concept of Operations	Karl Banks	50
	Tyler Zaino	50
Software Requirements and Specifications	Jason Heintz	50
	Aaron Birencwaig	50
Project Management Plan	Andy Harmic	100
Project Management Report	Andy Harmic	50
	Karl Banks	50
High-Level Design	Andy Harmic	50
	Karl Banks	50
Detailed Design	Jason Heintz	25
	Tyler Zaino	25
	Aaron Birencwaig	25
	Stephen Rodriguez	25
Test Plan	Stephen Rodriguez	100
Test Results	Stephen Rodriguez	70
	Tyler Zaino	15
	Andy Harmic	15
User's Manual	Karl Banks	50
	Tyler Zaino	50
Build Instructions	Andy Harmic	100
Project Legacy	Jason Heintz	50
	Aaron Birencwaig	50

5.2 Analysis

5.2.1 Assessment of the Quality of the Final Product

The quality of the final product is very high. The application works very well and covers all requirements and expectations, while still being user friendly. The product will work under almost any circumstances experienced by the phone except for that of catastrophic.

5.2.2 Recommended Use of the Final Product

The News Phone Application is targeted for those people that are always on the go and who still like to keep updated in what is happening in the news. The application can run on the latest Android phones and can be used at all times of the day. The only requirement needed by the application is an internet connection, which is either obtained through phone's cellular signal or WiFi signal.

5.2.3 Known Problems

At this current date, we do not have any outstanding problems with the product. All problems that were found during development and testing were taken care of immediately. There are areas in which improvement may be desired, but there are currently no know problems with the News Phone Application.

5.2.4 Adherence to Project Plan

We have followed our project plan very closely and stayed exactly on time or ahead of schedule the entire course of the semester. Our project estimates, as far as time concerns, were all met. Since we made the estimates reasonable and realistic, we were able to adhere all deadlines. We did not have any deviations from our estimates because we took accurate guesses and with the combined efforts of the team, and we were able to complete the project and even provide over and above what was required.

5.2.5 Defect Analysis

There are no known defects in our phone application. Our application is small scale and the software development model that we used proved to be successful. We were able to create our code and test it without any errors detected in every case that we could possibly think of. Every version that we have works flawlessly to our knowledge, the only difference being the end versions are highly embellished with cosmetic and speed enhancing features.

5.2.6 Quality Assurance

We believe that the testing and quality assurance activities that we performed on the application were very adequate. We tried to test the application under any circumstance that we could foresee the end user using the application. The testing and QA was conducted in a timely manner, but the only suggestions we have for possible improvement is to have outsiders, unfamiliar with the product, test it for effectiveness.

5.2.7 Configuration Management

Our configuration management plan went very well. We specified in deliverable 1 that our plan was, “We will use Subversion to handle version and change control. Karl will be responsible for managing the version control software and repository. Every team member should make an effort to learn Subversion and the general procedures for working with a version control system. If we have difficulty using Subversion, we will resort to email to ensure that every team member has the most recent version of the project.” Our practices were quite sufficient and we were all able to access the most recent version almost always at our will. Because our Configuration Management plan worked so well, I don’t think that there is anything that I would say that we could have improved on in this area.

5.2.8 Suggestions for the Future

Our project went extremely well with very few setbacks, with this being said, there is really no need for changing the way that we approached it on projects of similar size. The suggestions for future teams would be to stay on schedule and not fall behind, make realistic expectations and utilize all of the teams members strengths, try to find a webs source for getting news updates from a news site that allows users to take its’ articles for mobile news applications, and making the code created is easy to use with other news sites in order to make the project reusable and profitable if other customers are interested in purchasing a similar product. For a project of 10 or even a 100 times this size, again all the things above would still apply, but focusing more on setting accurate time tables, understand that not everything could be predicted so allowing lapse times, and making sure everyone’s strengths are being fully utilized would be critical. In addition, more team members or a far larger time frame would be necessary for something larger as this phone application project was quite appropriate for the time allotted.