Section I – Abstract
The goal of my project was to create software to help facilitate the tracking of a game of Ultimate Frisbee. The idea was to combine the functionality of two products, which formed the inspiration for the project. The first is the (now unsupported) iPhone app “Ultistats”. Ultistats is an app designed for the iPhone to help Ultimate Frisbee coaches manage their teams. It collects statistics on a team and individual level by providing an easy interface to input basic information about what is happening in an Ultimate game and compiling the information into usable data. The other inspiration for the project comes from various game tracking software that exists for other sports (for example espn.com’s GameCast, nfl.com’s Game Center, or CBSSports.com’s GameTracker). On these websites, a user can view updates of a sports game live online with information provided by someone inputting the events of the game. This makes it possible to closely follow what is happening in a game that is not being covered by a TV or radio station. With my project, I created software that pulls the best from both of these sources: the visual data collection and live online updates from commercial game tracking software along with the open platform and Frisbee focus of UltiStats. The final product is an Android application and associated web site called The Ultimate Tracker.
To create the application, I used the Android SDK along with the Eclipse ADT. To host the website, I used Google App Engine. To facilitate communication between the two components, I used the softwarePubNub.

Section II – App
The Android app component, which is available in the Google Play store as The Ultimate Tracker, provides the on the field interface. Game spectators can manage their teams, the players who play on their teams, the tournaments their teams attend, and the games they play at those tournaments. Once this administrative detail is attended to, they use an intuitive visual interface to report the progress of a
point of ultimate. This data is stored both locally and (if there is an internet connection) remotely to facilitate live streaming of the game. The local copy of the data is used in statistics collection. The app user can then view player by player and team statistics broken down by game, tournament, and lifetime. The hope is that the statistics will be a useful enough feature to provide incentive to coaches to use the app to track the game so that the data can be collected.

Section III – Website
The other component of the project is the website, which can be viewed at avifirstapp.appspot.com. Here a user can find a list of currently streaming games, which link to a game page specific to that game. On the game pages, users can view the flow of a game that has been uploaded. They can either view it without live updates, in which case they can navigate through the game with buttons as one might do with a chess match. Or, they can switch to live updates and watch the game progress live without any refreshing or other action by the user.

Section IV – Technology
The website was written in Python, HTML, and Javascript. It is hosted on Google App Engine. The app was written in Java using the Eclipse ADT and Android SDK. The communication between the two was facilitated with the tool PubNub, which is an HTTP streaming (also known as comet, or reverse Ajax) client. PubNub allows realtime updating of subscriber clients when publisher clients post new data.

Section V – Source Code
The source code can be found in the CPSC 490 report library.