

Introduction

It can sometimes be hard to find the latest scores when you're on the road, but the 3T! will enable frantic fans to be able to keep up with how their favorite teams are faring! The sport's Team Tracker, or 3T!, will let you choose up to five professional or college sports teams and display the scores for the more recent game. Scores will automatically update and, if the option is enabled, the phone will vibrate or play a sound to let you know there has been an update. Additionally, you will be able to use it to launch a web search for the latest information about your chosen teams.

Interview Questions

To gauge the opinions of our potential users, we devised a questionnaire that looked to find out what people thought about using their smartphone for sports applications. We asked various questions to get a better understanding of how our users use their cell phone. Our questions assumed a certain type of sports fan with a desire to get easier, or more, access to sport scores.

1. How do you currently get your favorite team's score (Select all that apply: Website, App, Television, Other)?
2. If you have a favorite place to get your team's scores, what is it?
3. What do you like about the place?
4. What do you dislike about the place?
5. On a scale of 1-10, how would you rate the place?
6. Are there any missing features you wish it had?
7. Would you like an app that automatically notifies you of your team's scores as they occur?
8. How would you rate that feature (of no use -> very useful)?
9. How many teams do you follow?
10. How often do you check their scores?

Interview Results

Each group member interviewed one person. The summary of results to each question is collated in the table below.

	Summary
Question 1	Most people trust Google, ESPN, Goal, and Yahoo when it comes to retrieving their team's scores.
Question 2	A majority feel ESPN is the most credible source for sports news. They have a website, application, and television channel.
Question 3	Positives: These applications are convenient with readily available news and their favorite teams are accessible.
Question 4	Negatives: No details besides scores, not enough highlights, cover sports the user aren't interested in.
Question 5	Ratings of these sources are consistently 7 or 8 out of 10.
Question 6	Include more highlights and details about the games as they happen.
Question 7	A majority would appreciate receiving push notifications of their team's scores as they occur.
Question 8	Usefulness of this feature is rated average 4 out of 5.
Question 9	The average number of teams being followed is between 4 to 6.
Question 10	Some constantly check scores throughout the duration of the game (every 10 minutes) while others wait until after the game is over to check scores.

- The Internet was the most common source for scores, with most just using Google to search for scores. ESPN was the most common non-Google site mentioned. Television was also a common answer, though one of our interviewees told us he prefers to watch (American) football games with no knowledge of the score, and therefore actively avoids discovering the score.

Google's convenience was listed as the most common "favorite" place to get a score. One interviewee told us that the "Google Now" function on his Android phone already delivers the scores to him, updating in real time.

- Television was also listed as convenient, since these potential users were already watching the games/sport.

- One interviewee had a small complaint about irrelevant information (information about sports/sport teams he was not interested) popping up on his ESPN web visits.
- The ratings ranged from 7-8 (out of a maximum of 10) for the existing sources.
- The most common feature request was a desire to make it easy to get more details quickly.
- Several interviewees had no desire for our application (an application that automatically notified them of scoring updates as they happened).
- Those that did, rated the auto-updating feature as a 4 (out of a maximum of 5).
- Most follow 4-6 teams, but one interviewee only followed Professional Golf and the Redskins.
- How often interviewees checked scores varied greatly, from “every 5 to 10 minutes during games” to “never” (he preferred to watch the games with no fore-knowledge) to “once a month.”

There was a surprising lack of (expressed) desire for this application, although some said that if it allowed for an easy/quick way to get additional details, they would like that feature even more. This likely means we will need to change our project to focus on the feature most requested, which is a way to quickly get to additional news about the teams.

Personas

"Dennis"

Dennis is a 42 year old accountant. He is married with two children. Sports were a passion of his while growing up, both the competition of playing sports as well as watching them. He played high school and some college football. From an early age, Dennis and his father would watch Giants games on Sundays in the fall. His father was an avid Giants' fan and he became an avid Giants' fan as a result. He also played fantasy football with his college buddies. Now, however, his job and family duties don't leave him much time to indulge in his passion for sports.

"George"

George loves golf. He plays just about every Sunday with his three brothers, with a lot of teasing based on who did poorly that week. He is also a huge fan of Professional Golf, and particularly of Tiger Woods and a few others. Since he himself is out golfing Sunday mornings, he cannot be at home watching the tournaments on television as they happen. Fortunately, one of his brother's told him about 3T!

Our two personas are based on a super fan of one team and a fan of a sport without teams, two very different types of sports fans. A third possible Persona would be someone who just wants to track ALL teams within a specific sport. This kind of user seemed most likely to have already chosen other very powerful tools to gain the information they wanted.

Tasks

User-Task Matrix

Users	Task 1	Task 2	Task 3	Task 4
Sports fans.	Set favorite team preferences.	Check scores of games.	Check additional information about teams, players.	Send information about scores, news, standings, schedule & stats to friends.

Task Matrix

Task	Frequency	Priority	Task Details
Set favorite team preferences.	Rarely	Low	User sets team preferences so favorite team scores are displayed on the main page.
Check scores of games.	Very Often	High	User checks scores of games of favorite teams and other teams.
Check additional information about teams, players.	Occasionally	Medium	User checks for news, schedule, standings and stats of teams and players.
Send information about scores, news, standings, schedule & stats to friends.	Occasionally	Low	User e-mails, texts, or uses social media such as Twitter or Facebook to send information to friends.

Scenarios

"Obligations"

Dennis is very excited about this Sunday. His favorite team, the Giants, is playing against their arch-nemesis, the Cowboys. He is also interested in some of the other football games and baseball playoffs. The last few Sundays, Dennis has had to work and this Sunday will be the first opportunity in almost a month that he has had to sit down on the couch and watch his beloved Giants. Maybe he'll order some pizza. He is going to eat, relax and watch football for a change. Just then, his wife Cindy comes in and reminds him that they have tickets to "Jersey Boys" for this Sunday. Cindy had ordered the tickets in July and Dennis agreed at that time to go because a Giants game in October wasn't on his mind in July. He had also turned down Cindy on her three previous requests to do something so he felt obligated to agree to go. The tickets were also expensive and it is too late to try to sell them. He feels he has no choice but to cancel his plans and go to "Jersey Boys". However, he would still like to be informed of the score and the news about the Giants-Cowboys game. He downloads the 3T! – sporTs Tally Tracker app and sets the

Giants in the preferences as one of his favorite teams. He also sets the preference for the phone to vibrate when there is a change in score of the Giants-Cowboys game.

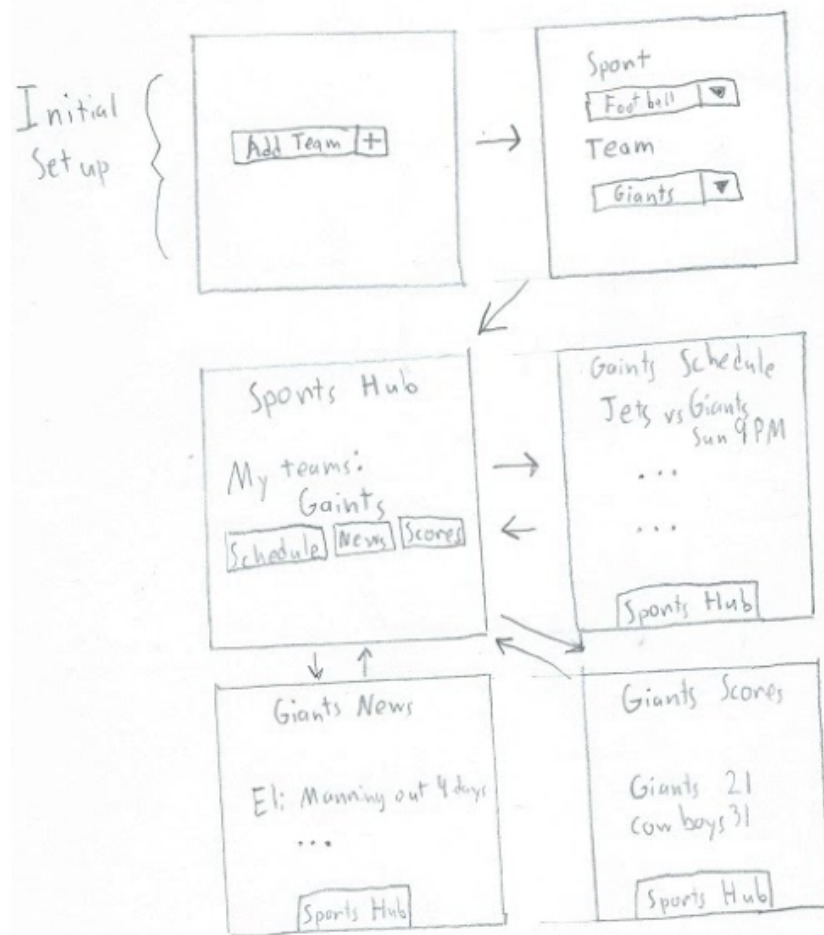
"How's Tiger Doing?"

George likes to know how his favorites are doing in real time, even when he himself is out on the green. Even better, he loves to tease his older brother Matt when Matt's favorite, Vijay Singh, is having an off weekend. As he and his brothers walk or ride from tee to tee, he updates them all on the current standings. "Looks like Tiger is up by 7!" "Vijay just missed a 4 foot putt!" A couple of quick taps lets him quickly access additional information, such as how many holes remain for each golfer, who is above or below par, how each player is trending, and more. George loves knowing he has all this information at his fingertips. Even better, when there's an article he wants to share, a quick tap lets him send it to all his brothers.

Our Scenarios are based on users who do not have the ability to watch sports live or directly on television. Our interviewees revealed that users who already have a source of access are not likely to look for a new source. One that is demonstrably better may be adopted, but it looks like our best customers would be those who currently lack a favorite source or those who need access when they do not have the ability to browse either the internet or television.

Lo-fi Prototypes

Prototype 1: "Quick Look Up"



When our application is initially downloaded, the first screen of the prototype will appear. It will show that the user has not entered any favorite teams that they may follow. The app will always allow users to add more teams which is demonstrated in the second step. The third step shows what the list will look like when the teams have been added. After this initial, one time setup is completed, the user will have an overview of their teams and the option (in the 3rd screen) to either view schedules, news and scores of their favorite teams. Many of our interviewees explained that they believed that this application should be quick and not require much user interaction which is why the initial setup step was included in this design. Once the teams are setup, the sports hub allows for easy look up. This process only requires two steps; the first is opening the app and the second is clicking a corresponding button.

Targeted user requests:

Most follow 4-6 teams, but one interviewee only followed Professional Golf and the Redskins.

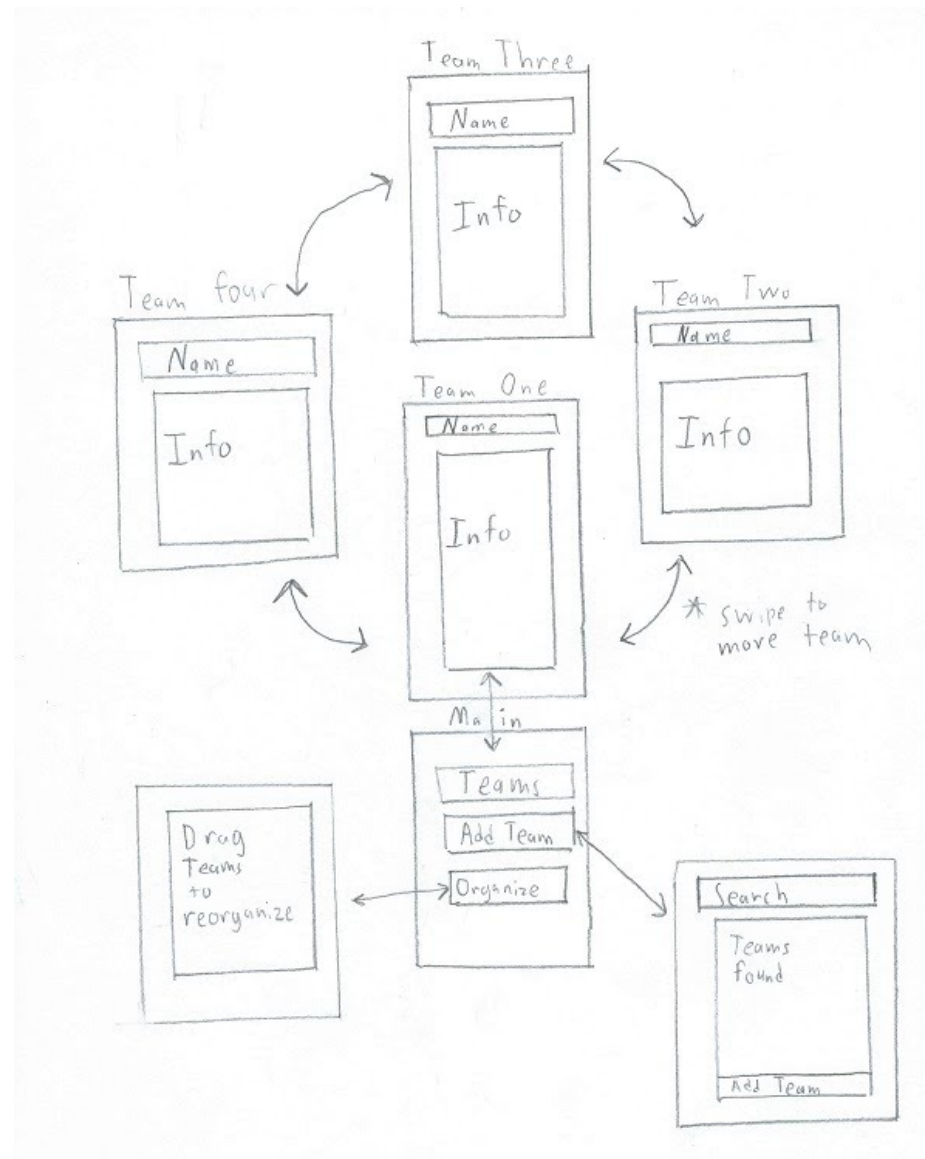
Pros:

1. Simple to use.
2. Easy look up.

Cons:

1. Longer to get info on all teams

Prototype 2: "Quick Information"



After the initial installation, the user is placed onto the "Add Teams" screen where they add all the teams they are interested in following. When loading the app with teams added, it will go to the "Main" screen. The main screen has three paths available, adding new teams, going to the teams you have followed, and reorganizing the team order. Adding a new team is done by searching for a team and then selecting the one you are interested in and clicking the "Add Team" button. By hitting the "Teams" button you immediately get information of your first team. You can get information on other teams by swiping left and right. Finally, you can hit "Organize" button which allows you to reorganize the teams because the teams that are in the middle of the list are more challenging to get to.

Targeted user requests

"The most common feature request was a desire to make easy to get more details quickly"

Pros:

1. User's would get more information right away
2. Teams can be reordered to get to favorite teams faster

Cons:

1. Longer to get to the teams in the middle of the list.

Lessons Learned

Both of our prototypes are based around the data gathered from the interviews we conducted. We had a main focus on question four of our survey "What do you dislike about the place?". Our prototypes fix the problems of other sports sources. We would only provide information on teams that the user has selected to follow. The two prototypes have two different focuses. Prototype one has a quick look up to allow a large amount of teams, but it gives up quicker information. While prototype two, is focused on getting information to users quicker, but it has a more advanced interface and is less friendly towards large number of different teams. After developing the lo-fi prototypes we realized that we could not include all of their suggestions such as an option to send information about scores, news, standings, schedule & stats to friends. Developing the lo-fi prototypes helped us see what are actual application could include compared to what our users were looking for. Using the scenarios we created based on the users we interviewed, it was very important that our application was something that the user could easily access their favorite team's statistics. Although both designs have the same concept the layout and actual setup is very different. When we go to make our final decision for the hi-fi prototype it is important that we keep our user needs at the top of the list which is to have a sports application that is quick and easy to use.

Hi-fi Prototype

Overview:

This Hi-Fi prototype demonstrates our mobile interface and interactive flow of the 3T mobile application.

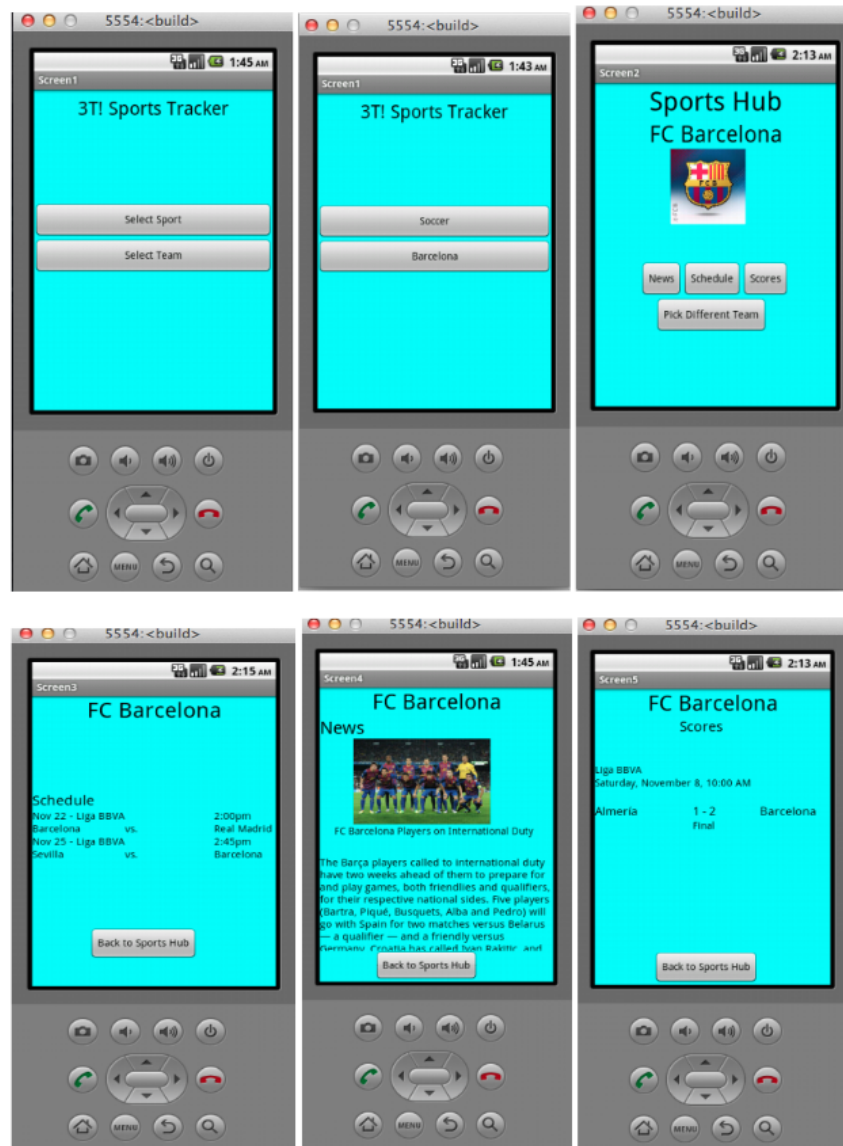
In this scenario the user starts by going through the initial setup/main screen choosing a sport and team. For demonstration purposes, we have limited the selection to the NY Giants football team in the demo.

After selecting the combination of a sport and team, the app loads up a team hub with three buttons:

- News - displays the newest article about the team
- Schedule - displays the upcoming games along with dates
- Scores - displays the latest scores

The user can also go back another team by returning to the main screen from any team hub page.

Sample Screenshots:



Lo-Fi to Hi-Fi Changes:

We built the Hi-Fi Prototype from the "Quick Look Up" Lo-fi Prototype. The largest change was the removal of the initial setup page, replacing it with the sport/team selection page. We also fixed a design flaw by placing a button in the sports hub that directs users to select a different team. These added features give users more navigational tools and power to access the content they desire.

How to use this prototype:

While this proof of concept prototype only has preloaded data for the NY Giants, the basic interface allows users to see the interaction flow.

- Application begins on the sport/team selection page.
- Click "Select Sport"
 - A list of available sports will be displayed. This list will include many more options in the final release.
- Select "Football"
 - The sport/team selection will reappear, displaying a "Select Team" option and a "Reset" button, which allows you to return to the first step if you selected the wrong sport. The "Reset" functionality is not functional at this time.
- Click "Select Team"
 - A list of available teams will be displayed. This list will include many more options in the final release.
- Select "Giants"
 - The Giants team hub will be displayed.
- Click "News"
 - The most recent article about the currently selected team will be displayed. The final release will include links to additional news articles.
- Click "Back to team hub"
- Click "Schedule"
 - The currently selected team's recent and upcoming schedule will be displayed, including scores for recent games.
- Click "Back to team hub"
- Click "Scores"
 - The score for the team's most recent game will be displayed, broken down as needed by sport (showing quarters for football or innings for baseball).
- Click "Back to team hub"
- Click "Choose another team"
 - The sport/team selection page will be displayed again.

Choosing a sport and team other than NY Giants will bring you to a placeholder page that explains that this demo does not contain content for those teams.

Heuristic Evaluation

Details Provided to the Evaluators

The 3T! – sporTs Team Tracker app is designed to be a quick and easy way to keep informed of the latest scores and news for your favorite teams. This version of the application does not yet have networking, so live data will not be available for testing. Placeholder data for the NY Giants has been added to the application to allow for testing of the application's mobile interface and interaction flow. Other options are still included to give testers an idea of what the final layout will look like. Choosing a sport and team other than Football and NY Giants will bring you to a placeholder page that explains that this demo does not contain content for those teams. Later versions will include the ability to save a list of (up to) five favorite teams for quick access and will push notifications when there are updates to scores or news.

Evaluation 1

Evaluated system name: 3T! SporTs Team Tracker

Heuristic	Your assessment: What is the problem? Where is it? Why is it a problem	Severity of the problem (Minor, Fix later, Fix now) & Recommendation (how should it be fixed)
Visibility of system status (e.g., are users kept informed about what is going on?)	Info provided clearly explains what is currently working.	N/A
Match between system & real world (e.g., is the language used at the interface appropriate for the user?)	Perfect match. Messages are clear.	N/A
Consistency and mapping (are the ways of performing similar actions consistent? is mapping between user actions and performed tasks consistent and clear?)	Good consistency	N/A
Recognition rather than recall (e.g., are objects, actions and options always visible?)	Recognition for sports and teams is good.	N/A

Evaluation 2

Heuristic	Your assessment: What is the problem? Where is it? Why is it a problem	Severity of the problem (Minor, Fix later, Fix now) & Recommendation (how should it be fixed)
Ease of input, screen readability and glancability (e.g., is info easy to enter; screens content easy to read and navigate?)	1) Text and images are too small. 2) The background makes everything a little hard to see.	1) Minor. Just increase the text and image sizes. 2) Minor. Change the background color to make objects easier to see.
Flexibility, efficiency of use and personalization (e.g., is interaction efficient? is personalization supported?)	No problem	No problem
Aesthetics and minimalist design (e.g., is any unnecessary and irrelevant information provided?)	No problem	No problem
Error prevention and management (e.g., is it easy to make errors? is it easy to recognize that an error has been made?)	No problem	No problem

Unfortunately, neither of the heuristic evaluation teams gave us any general advice.

Based on the feedback gathered from the evaluations, we increased the font size of all text (by 13-33%) and replaced the cyan background with a more neutral light grey. We also replaced the text boxes with labels, as suggested.

Finally, we also added a note that explained that this demonstration version of the application only had simulated data for one sport team, the NY Giants in order to avoid confusing additional testers.

Conclusions and future work

Our initial scope was for a much more powerful version of the same app, with the ability to save a short list of favorite teams plus pushed notifications for team scores and news as they happen. With no previous experience, this was beyond our ability to produce for this course.

We also learned that choices must be made and the design must be balanced between a desire to add additional features and a desire to keep the application simple and easy to use.

We learned that even with our relatively short list of features, we had several different visions of the way the application would look, flow, and function, requiring the team to negotiate on the specific details for the application.

In the end, we decided on a minimalist design, and may have actually made it too minimalist, resulting in a comment that our design was "bland." We improved our design based on the feedback left by the two heuristic evaluation teams, increasing the font size to make the app easier to read.

For the future, we would like to add the following features:

- save a (short) list of favorite teams (or players for non-team sports)
- allow users to set the background and text colors to match their favorite team's colors
- add notification options for the following:
 - game alerts to let users know a game is about to begin
 - score alerts when a favorite team scores (or are scored against)
 - news alerts when the team (or team players) appear in the news
 - changes to league standings for saved teams
- additional stats for teams and players

We also learned that keeping a careful eye on usability guidelines during the planning phase will reduce the amount of time wasted during the actual development and testing phases.