

# Papi™ Interface Design

## Red Sox Fans' Game Time Companion



Attention: Annie Folker, Founder  
Presented by: Benjamin Nargi, Kamchan Kang,  
Lexie Kirsch, Shanshan Duan, and Alexander Golin  
April 25, 2017

To: Annie Folker, Founder  
From: Monstah Design Group  
Date: April 25, 2017  
Re: Full-Scale Development

Ms. Folker,

We would like to thank you and the Boston Red Sox organization for giving us the opportunity to present a full-scale concept for the Papi™ experience.

In this report you will find a design brief that explains the design rationale, conceptual model diagrams, a structure diagram that illustrates the interface flow, and the style guide used in the design of the interface. Next, you will find example screens of the interface that demonstrate Papi's variety of functional capabilities. Finally, you will find appendices for the focus group data, personas, and usability tests data that influenced the design.

As fans of the game, we all took personal enjoyment in trying to bring to life a pleasurable experience for the fans of a historic organization. We look forward to your feedback and requests as we move forward on the Papi project. If you have any questions or comments, please let us know.

Respectfully,

Benjamin Nargi, Kamchan Kang, Lexie Kirsch, Shanshan Duan, & Alexander Golin  
Monstah Design Group

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## DESIGN BRIEF & VISION STATEMENT

Throughout the design process, Monstah Design Group took into great consideration the needs of Papi's users. The range of Papi is relatively narrow due to its specific use case - the Red Sox game. Papi is intended to be used to help the user better navigate and enjoy the social aspects of a Red Sox game. To keep the viewer more engaged in the game, Papi provides its user the freedom to view game through 20 strategically placed high definition video cameras in the park, including 12 individually fixed on each of the 9 players in the field, the 1 batter, and the 2 dugouts. Meanwhile, the game statistics, access to play-by-play commentary, and the user's personal virtual assistant "Papi," are always being displayed across all screens in an effort to help users navigate the game. The proposed Papi interface meets the user's needs by matching the user's expected conventions derived from previous use of other devices, making the interface easy to use. The welcome screen provides the user two ways of logging into Papi; using a username/password or scanning their gameday ticket. The design not only tailors itself toward a wide group of users but also brings a more personalized experience to the user.

The user's needs are also accommodated in the navigation of the interface. The user may be holding the Papi while watching the live game. This means the user cannot be relied upon to perform tasks which require fine motor functions. The app's functions should be accessed with minimal interactions. With this in mind, Monstah Design Group decided to use large horizontal tabs, in addition to horizontal swiping as the primary mode of navigation. When using the app, the options offered under each function category (food, scores, sox store), users can swipe to the left, bringing information from the right to the forefront in a scrolling manner. Breadcrumbs and slightly clipped content are used to alert the user there is more content off-screen.

Not only does this design meet the requirements of the user as defined from conceptual models and focus groups, but it meets the requirements of our client who contracted Monstah Design Group to produce the included screen designs, as well as to complete the associated design process, represented in the personas, style guide, and conceptual modeling included in this document. Not only does the design meet the functional requirements, but the color palette adheres to the colors used in Red Sox's branding. Monstah Design Group believes that the presented interface is the best solution to the interface design challenge, which is why we are honored to present this work.

## DESIGN PROCEDURE

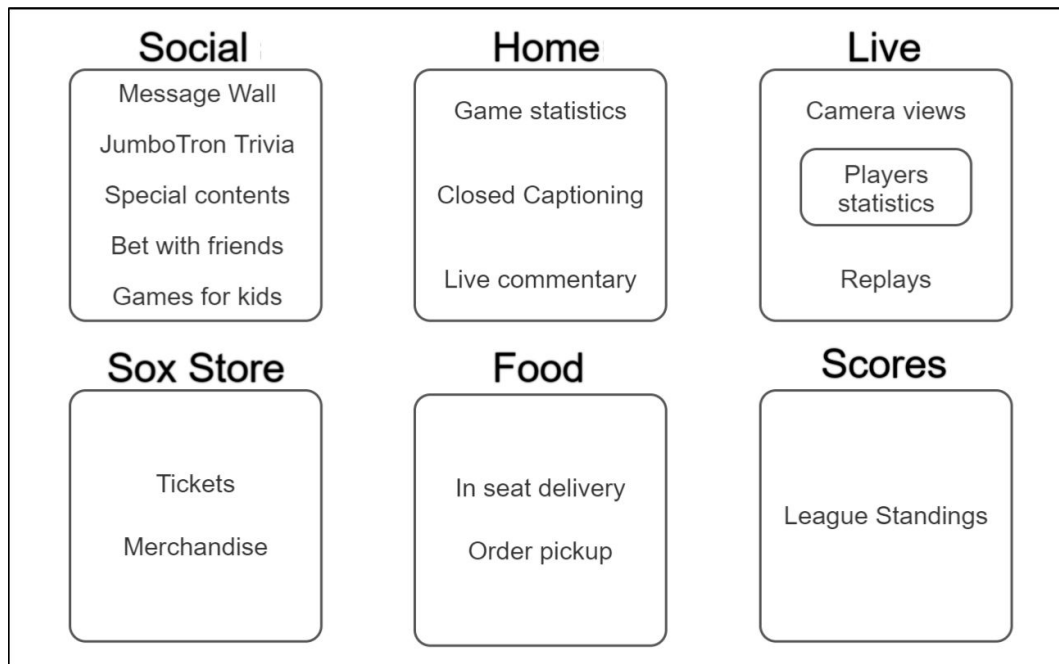
At Monstah Design Group, we're committed to implementing quality, user centered design. To that end, we began a multi-staged approach to designing the interface for the Boston Red Sox' Papi™ application-- starting with the users. Firstly, we conducted a five person focus group, in which the team introduced the participants to the general concept of Papi™, and asked the group for opinions as well as anecdotal experiences with watching baseball, either at home or at a stadium. The protocol and results of this focus group can be found in Appendix A. Using this information, the team was able to develop four personas (Appendix B) that allowed us to begin designing a general flow for the application.

We constructed two low fidelity wireframes, and then met to discuss the pros and cons of each, ultimately deciding on a direction that was a combination of the best aspects of both, all verified against the data collected in the focus group. The screens of the low fidelity mockup can be found in Appendix C. Using the low fidelity mockup as a strong foundation, the team developed a high fidelity version of the application, which was compiled into an interactive prototype for testing using Axure. The prototype can be found at the following link:

<https://tinyurl.com/34PapiBig>.

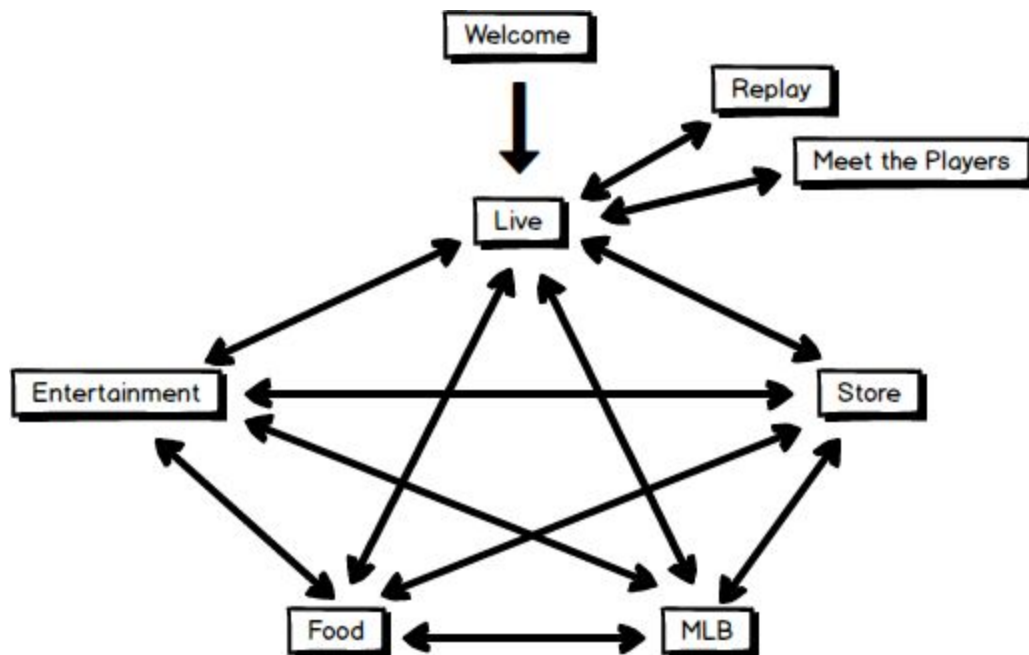
With a complete prototype, Monstah Design Group was able to begin their in-depth user testing. The team recruited five participants of varying familiarities and affinity for baseball, and asked them to use the prototype to complete a set of tasks, which can be found in Appendix D. Some of the sessions were recorded on video, and all results were collected in a spreadsheet, which can be found in Appendix E. Using the information gathered during the user experience sessions, the team adjusted their high fidelity interface, and have included it in the body of this report.

## CONCEPTUAL MODEL DIAGRAM



Shows the conceptual model that we based our UI structure on. Items of close proximity were grouped together (e.g., tickets and merchandise for Red Sox in “Sox Store”) and big categories were separated by the different types of interests that the user might have during the experience of using the device; rather than trying to group them by equal amounts of content that can be categorized within them (i.e., Although there is lot less content in the “Food” category compared to the “Social” category, it is of equal importance to the user).

## UI STRUCTURE DIAGRAM



Shows the user interface structure diagram. The menu bar items allow this structure to be webbed, but certain features are linear making this a hybrid structure.

# STYLE GUIDE

The Papi<sup>™</sup> user interface...

1. Shall use the hex colors
  - a. #E03A3E (Red)
  - b. #112C57 (Blue)
  - c. #FFFFFF (White)
2. Shall have a portrait and landscape mode
3. Shall use icons consistent with the game of Baseball
4. Should use icons coupled with text
5. Should use a san serif font when conveying the app's information
6. Shall adhere to Red Sox branding guidelines
7. Should offer a consistent header bar for increased situational awareness
8. Should allow a user to view a video feed of a baseball game as a picture-in-picture (PIP)
9. Should have photos of baseball players involved in the current game
10. Should have a strike zone diagram similar to MLB Gameday
11. Should use shadows and lighting to convey hierarchy and depth
12. Should not be text heavy
13. Shall be touch friendly
14. Should provide system state data (battery, connection, time remaining, etc.)
15. Should use animations in a way that conveys direct manipulation
16. Shall accommodate users with visual impairment
  - a. High contrast text
  - b. Text-to-speech
17. Should use bold, crisp, natural images (not stock, low-res)
18. Shall engage a user with a friendly tone
19. Shall be personalized for each user
20. Should be manageable by ages 8-99



## UI Colors

The main UI colors are used for action buttons, alert messages, and form elements.



## Typography

### Typefaces

Papi's primary typeface is Avenir — a robust typeface with legible numbers that renders well at all sizes.

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
1234567890

### Font Sizes

The font scale consists of 4 different font sizes.

Peter Piper picked a peck  
of pickled peppers

46px - extra large

Peter Piper picked a peck of  
pickled peppers

38px - large

Peter Piper picked a peck of pickled  
peppers

28px - Medium

Peter Piper picked a peck of pickled peppers

18px - small

### Font Weight

There are three font weights available to use - light, medium, and heavy.

Aa

Light

Aa

Medium

Aa

Heavy

## Buttons

Fingertips typically require 44px to comfortably fit within a touch target.



Large Button



Medium Button



Small Button

## Primary Button & Secondary Button



Primary



Secondary

## HIGH FIDELITY MOCKUPS

Image 1. Shows the welcome screen. Users can login using a username and password or by scanning their ticket.

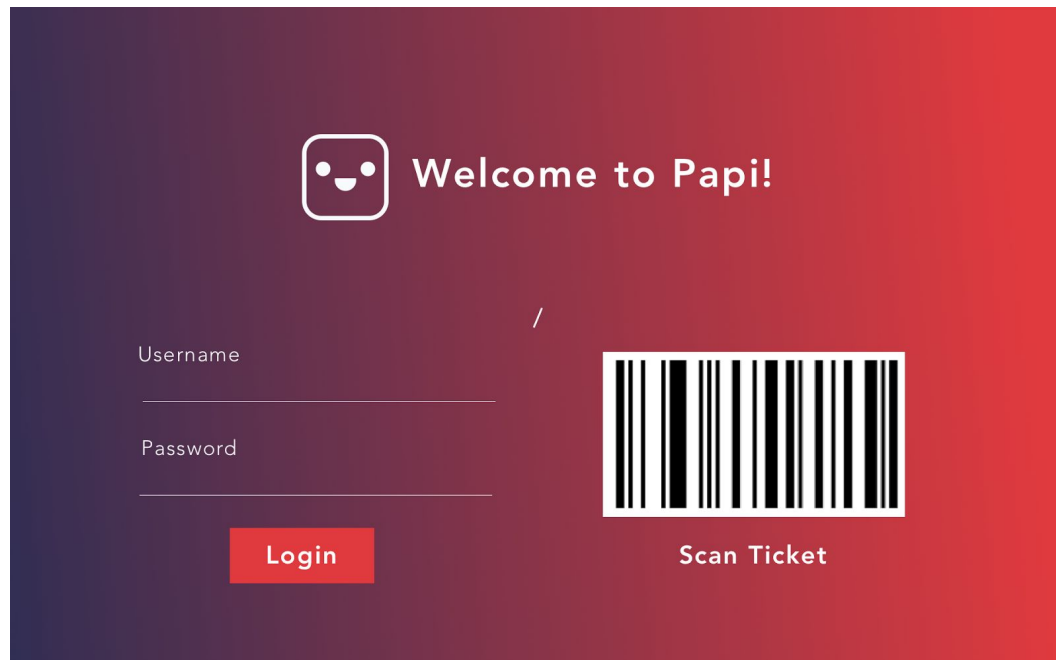


Image 2. Shows the field view of players.

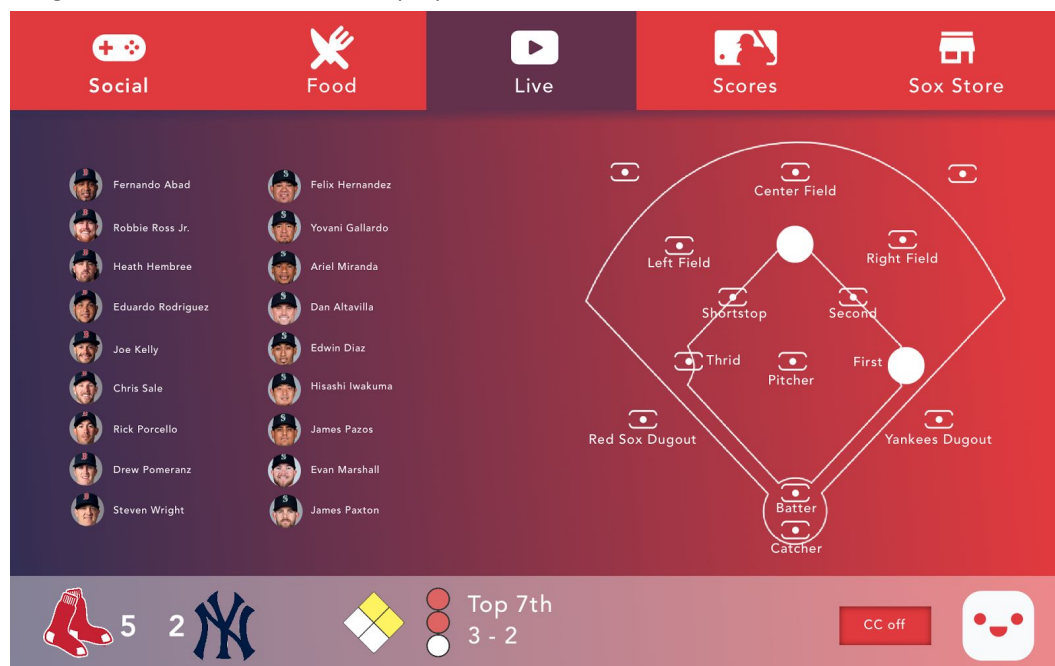


Image 3. Shows the status of a selected player.

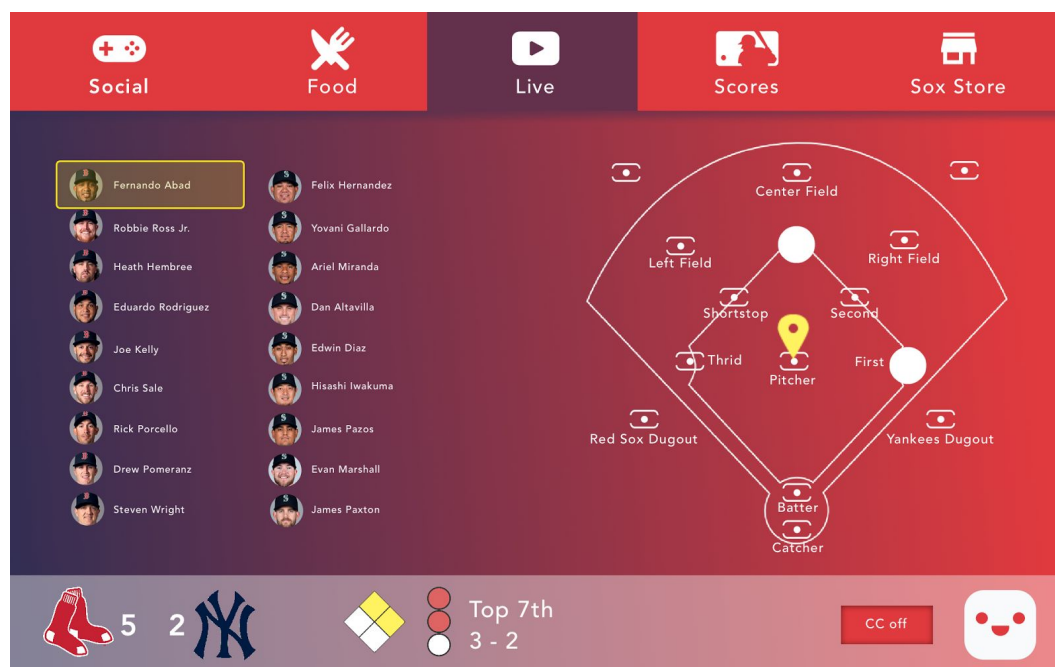


Image 4. Shows expanded player information.

The screenshot shows the MLB.com app interface. At the top, there are five navigation tabs: Social, Food, Live, Scores, and Sox Store. Below the tabs is a search bar labeled "Search Red Sox Player". The main content area displays a player card for Pablo Sandoval. The card includes a photo of Sandoval, his name, physical attributes (3BB/T: 5/85" 11"/255 Age: 30), and a bio section with his nickname (Kung Fu Panda), birth date (8/11/1986), birthplace (Puerto Cabello, Venezuela), high school (Academia Centro de Estudio Carabobo, VEN), and debut date (8/14/2008). Below the bio is a table of statistics.

Year	AB	R	H	HR	RBI	BB	AVG	OBP	OPS
2017 Stats	53	7	12	3	10	0	.226	.276	.691
MLB Career Stats	3744	448	1073	119	519	11	.287	.338	.789

At the bottom of the screen, there is a scoreboard showing the Boston Red Sox (5) leading the New York Yankees (2) in the Top 7th inning, with a 3-2 lead. There are also icons for a diamond, a red circle, and a "CC off" button.

Image 5. Shows the social interaction screen for betting, games, messages, etc.

The screenshot shows the MLB.com app interface. At the top, there are five navigation tabs: Social, Food, Live, Scores, and Sox Store. Below the tabs is a large banner image featuring a close-up of a player's face and the text "Watch Pregame Interviews". Below the banner are four red buttons with white icons and text: "JumboTron Trivia" (question mark icon), "Bet with Friends" (stack of coins icon), "Game for Kids" (alien icon), and "Message Wall" (speech bubble icon). At the bottom of the screen, there is a scoreboard showing the Boston Red Sox (5) leading the New York Yankees (2) in the Top 7th inning, with a 3-2 lead. There are also icons for a diamond, a red circle, and a "CC off" button.

Image 6. Shows the food ordering screen.

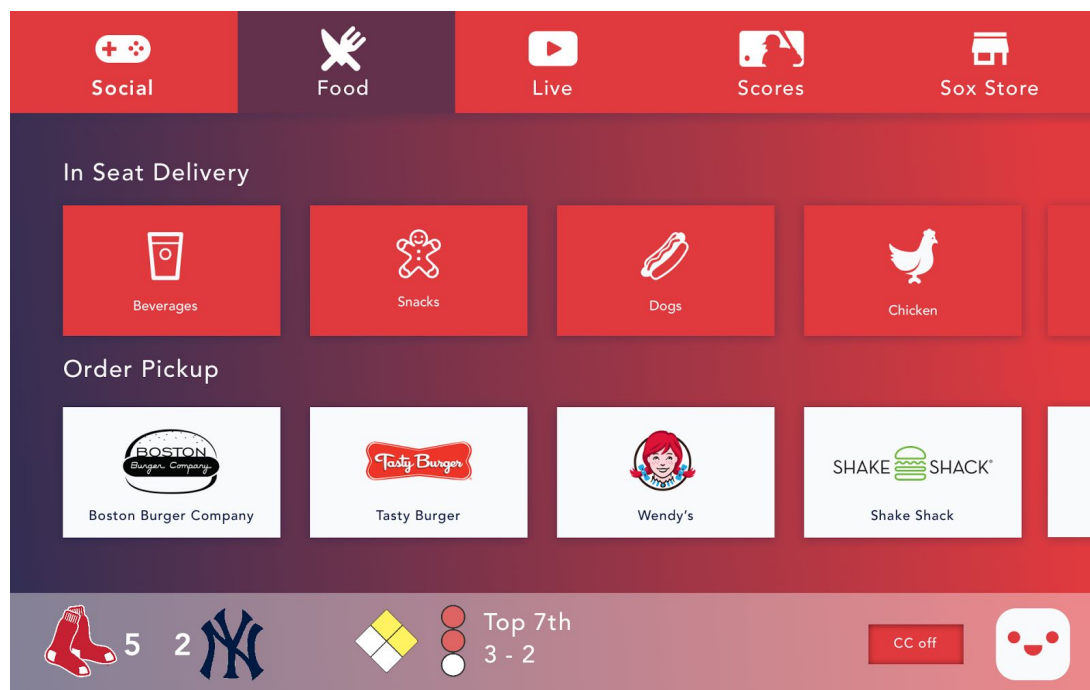


Image 7. Shows the scores across the league.

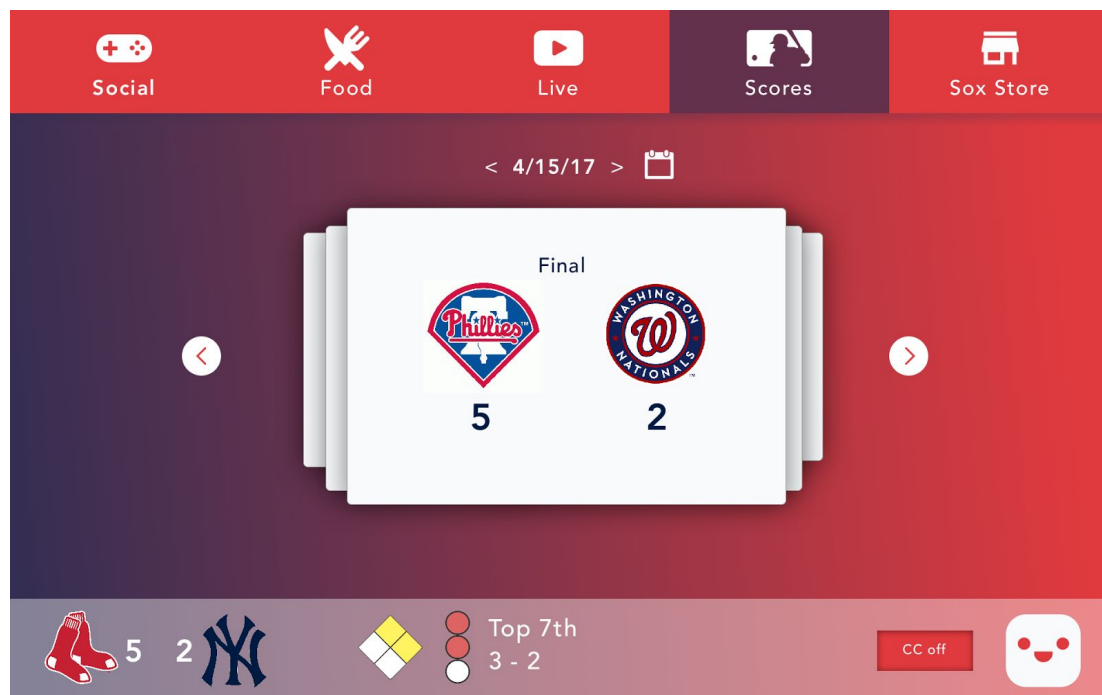
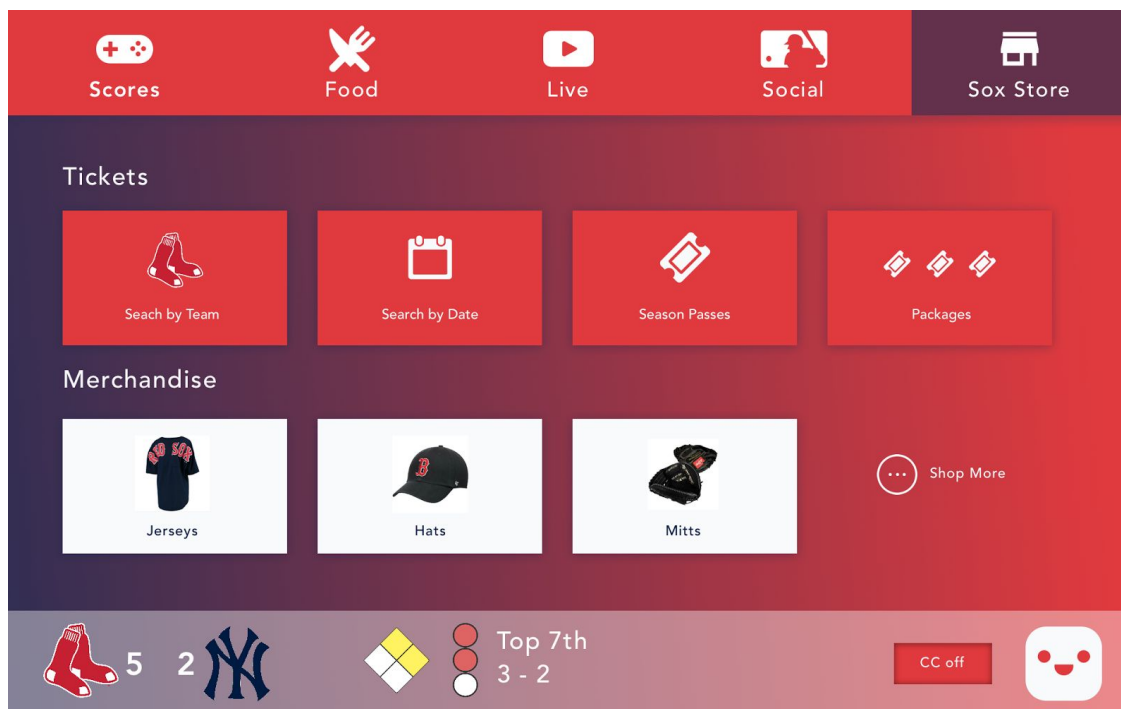


Image 8. Shows the replays on field cameras. Users have the ability to zoom in/out.



Image 9. Shows the Red Sox merchandise store.





## APPENDIX A: FOCUS GROUP PROTOCOL & RESULTS

Good afternoon and welcome to our session. Thanks for taking the time to join us to talk about a design product that we are working on, which is a tablet that will help with the experience of watching a Red Sox game. My name is \_\_\_\_ and assisting me is \_\_\_\_\_. We are all students from a computer interface design class at Tufts. For the design of this Red Sox project, we want to know what you like about the game, what you don't like, and how the experience might be improved.

There are no wrong answers but rather differing points of view. Please feel free to share your opinion even if it differs from what others have said. We're recording the session because we don't want to miss any of your comments. However, we won't use any names in our reports. You may be assured of complete confidentiality. The report will help us design a better product concept for the tablet.

Questions:

How do you feel about red sox games in general?

- "I'm bored"
- "As a Yankees fan, I think they can get a little rowdy, but they're fun. Lots of energy"

Have you been to a game before? What do you like the most about the live experience?

- Yes, social aspects
- Yes - different senses, like the smell of the food and the sound of the crowd screaming, and there's so much more going on, like going to a concert.

Are there things you are dissatisfied with, that you would like to see changed?

- I'd love to play games when it's slow/bored
- Would like to browse the internet when it's slow/bored
- Had no idea what was going on, like the rules, and also when the person was announcing things

If not, Imagine going into a red sox game/baseball game, what factors may contribute to a good experience?

- I like the idea of renting a tablet -- not having to bring my ipad/carrying my own device
- Good seats, free stuff, meeting a mascot and taking a picture, catching a baseball

Suppose you are provided a tablet to facilitate your game experience, what do you expect to see on them? How and when will you use it?

- Would like to order food (seconded)
- Would like to hear the commentary (radio/TV)
- Would like to view statistics
- Betting
- Scores of other games
- To use when I didn't know what was going on
- Read what commenters are saying
- Social media! #RedSox
- Zoom in on players

**PROS**

- Go to socialize with friends and drink
- Go for the sport - it's exciting to see it live versus on screen
- Like chanting and excitement from others
- Cold beer, outdoors, environment

**CONS**

- Hungry - had to wait in line for food and missed part of game
- Hard to understand what's going on unless you're with a friend who can explain it - what's the significance? Is this person about to break a record?
- Sometimes have to ask friends what's happening
- No reviews of plays, so you can't see what happened in slow motion like on TV
- Lots of lines

**IMPROVEMENTS**

- Cheap beer, more available
- More available food and bathroom options = no waiting in line

**TABLET FEATURES**

- Online queue for bathroom, food
- Option to order food and have someone bring it to you
- Batter and pitcher stats when they come up
- Click on a stat and find out how it's calculated/what it means
- Play-by-play commentary
- Instant replays
- Play by play bets with friends
- Play a game for prizes, enter contest for prizes - ride a zamboni, get tickets
- Recommendations for sports bars/restaurants to go to after game (get a discount)
- Alerts that game is resuming
- Option to turn different features on/off/silent-mode b/c you don't make the tablet take away from the social experience
- Games to distract kids
  - Wouldn't want to bring own tablet to game - would rather get it there

## APPENDIX B: PERSONAS

### Persona A

Joe, 50, is an architect in Boston who coaches a little league team on the side for his 8-year-old son, Mark. Joe and Mark both love baseball, and they go to multiple baseball games each month. Joe thinks going to games is a good teaching opportunity for Mark who wants to join the Red Sox when he's older. It's also a good father-son bonding opportunity. Joe never went to baseball games when he was a child, but he remembers collecting and trading baseball cards with his friends in middle school and playing on the baseball team in high school. He made it on the varsity team his sophomore year but had to stop playing the following year when he injured his ulnar collateral ligament. By the time his elbow had fully recovered, Joe had discovered architecture and never looked back. Nonetheless, he's excited that his son shares his love for the sport, and he's excited to use Papi™ as a teaching tool. He pictures himself manipulating the replays to point out specific movements and choices that the players make. With the help of this technology, and Joe's support, Joe thinks Mark is going to get an athletic scholarship for sure.

### Persona B

Jessica, 39, is the CEO of a large software company in Cambridge. She has a very demanding job, so she's always tied to her phone, but she loves her company and knows no one else could do what she does. Her husband, Darryl, is a stay-at-home dad for their three children. Jessica has two siblings, but she is closest with her younger brother, Michael, who is a sponsor for the Red Sox. Michael attends most Red Sox games, in the comfort of a luxury suite, and he has extended an open invitation to Jessica and her family to join him. Although Jessica is not a baseball fan, Darryl and their oldest child are huge Red Sox fans, so she tries to go to games with them when she can. At the most recent game, Jessica was pleasantly surprised to find Papi™ in the luxury suite. As a former software engineer, she was instantly drawn to the tablet, and as someone who doesn't know anything about baseball, she was excited to find that she could use the tablet to keep up with the game. Now she can recognize most of the players by name and identify some of the different types of pitches.

### Persona C

Matthew, 19, is a sophomore at Tufts University. He has been dating Jackson, a member of the baseball team at Tufts, for a little over a year. They met during freshman orientation when Matthew was tossing a frisbee on the academic quad and almost hit Jackson when he threw the frisbee farther than intended. Luckily for Matthew, Jackson is accustomed to catching flying objects and caught the frisbee with ease. Thus began their first conversation, followed by many more, until eventually they started dating. Although Matthew isn't very interested in baseball, he usually attends Jackson's games to show his support. On the anniversary of their relationship, Matthew thought it would be fun to take Jackson to a Red Sox game and try out the new Papi™. They found that they didn't use the tablet much because it distracted from their conversation and the game, but they were glad that they decided to try it out because Jackson entered the trivia contest and won a free Red Sox hat! Plus, there were other Tufts students at the game who used Papi™ to send messages to Matthew and Jackson. Since the other

students were seated far away, they used the messenger system to coordinate and purchase tickets for another game at which they could sit closer to each other. They also discussed who wanted to call the Uber back to Tufts after the game.

**Persona D**

Connor, 10, spends most of his free time playing video games. His proudest achievement is the time he beat all of his friends at Super Smash Bros Brawl while playing as Wario, one of his least favorite characters. Connor's parents don't like that Connor spends so much time playing video games, but he's doing well in school, so they don't complain. Instead, they make an effort to do activities with him outside of the house. First, they went on a family hike, but Connor complained the entire time. Next, they tried bowling, but when Connor kept missing the pins, he got frustrated and refused to continue playing. A similar thing happened when they tried miniature golfing; Connor got stuck on a hole and threw his putter down in a fit of tears. Eventually, Connor's parents decided to take him to a baseball game. Since Connor's dad has connections with the team, they were allowed in a luxury suite. Connor hates baseball, but he loves Papi™, because he can use it to order food and play games. If his parents ask him what he's doing, Connor switches the screen to look like he's watching the game or interviews of the players. Satisfied, his parents leave and Connor returns to his games.

## APPENDIX C: LOW FIDELITY SCREENS

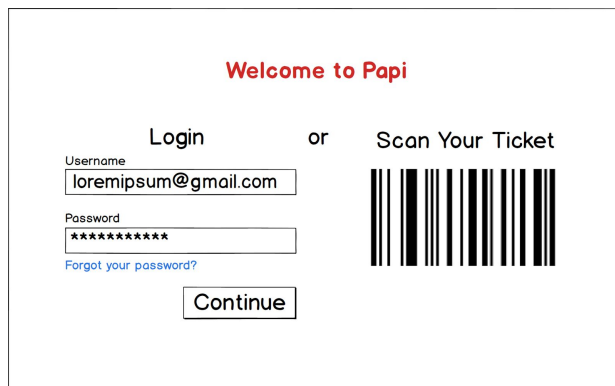


Figure 1: Welcome Screen

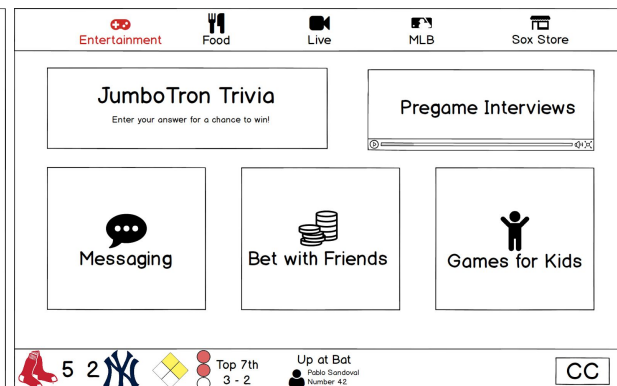


Figure 2: Entertainment View

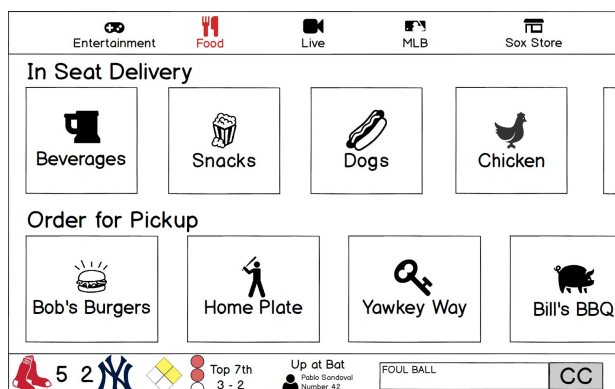


Figure 3: Food View

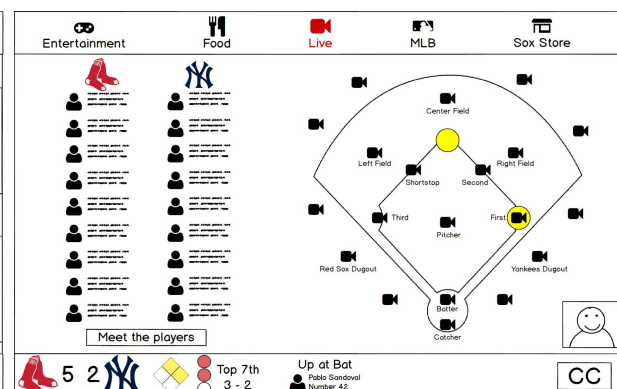


Figure 4: Live View

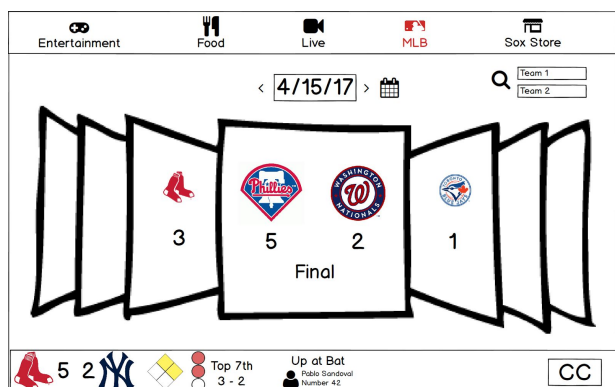


Figure 5: MLB View

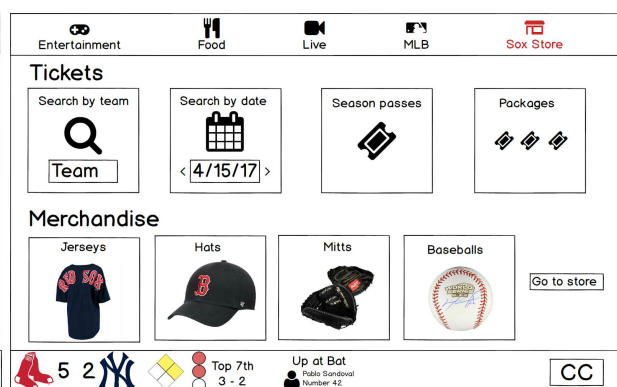


Figure 6: Store View

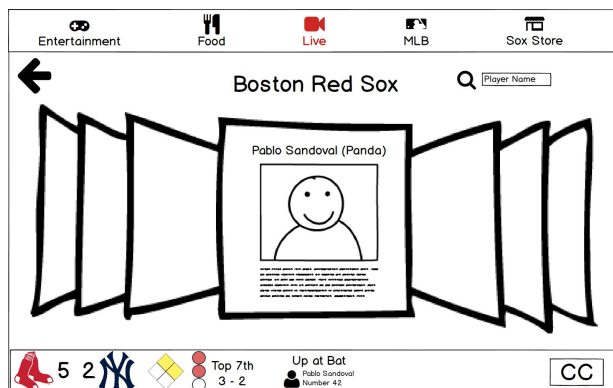


Figure 7: Player View

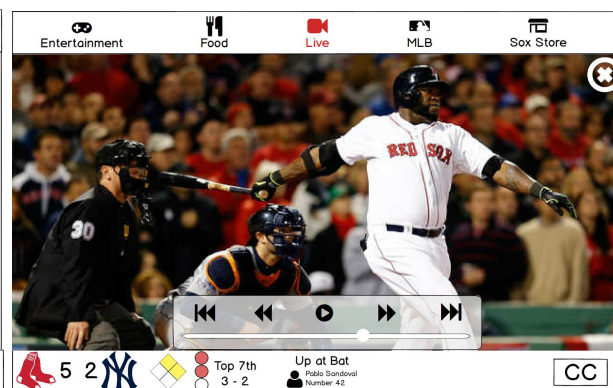


Figure 8: Video Playback



Figure 9: Messaging

## APPENDIX D: UX SESSION TASKS

- **Task 1:** Please log into Papi!
  - The username is “tufts”
  - The password is “12345”
- **Task 2:** What position does Fernando Abad play?
- **Task 3:** You want to make a bet on the game. Please make a bet using Papi
- **Task 4:** You’re now hungry. Order some chicken to eat.
- **Task 5:** You want to watch a live view of the game. How would you do this?
- **Task 6:** You want to bring home a souvenir for your cousin. Order them a small jersey.

# APPENDIX E: UX SESSION RESULTS

	Participant	Test Date	Test Time	Moderator	Age	Gender	Occupation	BG experience	Impairments				
P01		4/22/17	3:20	Ben Nargi	27	F	US Pacific Asian Relations	Summer	None				
P02		4/22/17	3:40	Ben Nargi	54	F	Stay at home	Account executive -- advertising/comms Liberman/Appalucci	Near/far sighted.				
P03		4/22/17	10:00	Ben Nargi	31	M	Software Engineer	Advert. Allentown.	Glasses				
P04		4/22/17	4:10	Ben Nargi	20	F	Chem Eng	Research/Gov't	None				
P05		4/23/17	2:00	Alex Golin	21	M	Data Analyst and Consultant	Years of computer science education with a strong inking for digital and web design	None				
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	How did the tasks go?	Mistakes?	Close calls?	Difficulties?	Initial Impressions?	Easy of use (1-10)	Rating explanation
P01	Trying to find the enter button  I typed the user name/password, and now I can't login  I tapped login	Picked name. Looking at the pitcher. He's the pitcher. I'm not sure what the two yellow circles are. I'm no knowledgeable of baseball so I could be completely wrong.	Bet with friends. Did it	Yes.	Yes	Sox Store -- clicked it. Did it	Went very smoothly.	No	I thought the camera would use the surface -- would be taking pictures.	Didn't know what the yellow circles were.  Papi was a player.	Really cool. If I was immersed it would be cool.  Nice app. I would use it.	9	Just the login. And seeing confirmations.
P02	Someone didnt log out. Didnt complete task. This is someone else not me.  Why would I have to push login button. The Username and password should have been activated. I still don't know the purpose. Will it keep my score? Then yes	He's highlighted. Now I'm trying to figure out if the yellow tear drop is his position. Can't check using other players. First base and second is lit up. I don't know what signifies fernando. No key.	I don't think I made a bet. It's not explicit enough to explain what needs to be done to bet. seems like I've done something but I didn't want it to happen. I felt like a mistake was made. Papi didn't explain well enough.	I think I ordered the chicken. I wasn't sure how much it is or unsure how it's getting. Do I even have a selection? Sandwich, chicken fingers -- what is it?	OK	Ordered small. didn't specify quant. Checked MLB didnt take.	Overall -- it was easy to follow. The bet was not. The umbrella of entertainment confused things. bet with friends is confusing. Make more friendly for first time users.	Not really. Just the first one (login). Takes some exploration. MLB seemed like an umbrella category.	Couldn't tell who pitcher was. Needs a key	I think it's good.	9	Just a little line of explanation would make it a 10.	
P03	Yes. Didn't understand the login screen	Found player. Didn't know what position. Was confused by the yellow circles	Made the bet. Didn't think bet would be in entertainment	Ordered food. was confused to a "chicken" category	OK	Ordered jersey.	Easy enough. The live view with the roster was confusing. Thought that the roster shown was the entire red sox roster.	-	-	-		6	
P04	Hit enter to login. No go. Hit login. Go	Clicked on him. tried to click on him again. Is he the pitcher?	Clicked entertainment--intended to click through all of it. OK	Clicked food. Tapped Chicken. GO.	Clicked Live. Clicked camera. Clicked play. Exited out.	Went to the Sox Store and clicked on the jersey. User felt that the transaction was completed, but felt it would be nice to be issued a more definitive confirmation that the transaction went through.	Well. Simple.	Not that I know of.	Straightforward. I think entertainment. Wasn't sure what it was.	Wasn't sure if a task was done. But I think it was a user test.	Seemed useful.	8	Tab's were nice. Tasks gave it a way.
P05	Understood the general procedure of logging in, however struggled with the prototype's implementation. Felt the task was completed, and explained he's familiar with prototyping shortcomings.	Was able to find the player easily due to familiarity with the Red Sox, though he commented that the highlighting on the live view field seemed contradictory and confusing	Had to think about where to find the betting function, and ultimately settled on entertainment. Said it made sense it was there, but that it wasn't an aspect of the application he would have thought to look for. He felt like the bet was made after completing his interaction.	Immediately clicked food, and then chicken. Felt that there could have been another menu ensuring that the user could select their desired options.	Had no problem navigating to live and then the camera function. Understood the player controls immediately	User felt like he knew how to complete the tasks, but felt some of them could have been made a bit more in depth and detailed, such as the issuing of a confirmation after a transaction.	No explicit mistakes	Betting was the one that the user had to think about the most, but ultimately made the right call.	Figuring out where betting would be housed and how exactly it would logically work.	Felt that it looked like an interesting and modern take on a baseball centric interface. Wondered if it might feel too different than the Red Sox's aesthetic.	8	The general structure made sense to him and he felt he could move around the application very easily.	