

# KERRY M<sup>C</sup>CRORY

front end

interactive designer

prototyper

technologist



CASE STUDIES

# TABLE OF CONTENTS

## **UNITED 2.0** **BOOKING PATH**

United Miles as a form of payment

## **UNITED 2.0** **BOOKING PATH**

Flight Reservation Bundles

## **UNITED 2.0** **CHECK-IN**

Advanced Seat Reservation

## **UNITED 2.0** Additional Projects

# UNITED 2.0 / Booking Path / United Miles as a Form of Payment / Project Overview

### My Role:

UX, Design, Researcher, Prototyper

### Team:

- 1 Account manager
- 1 Senior Manager
- 1 User Researcher

### The Problem:

UNITED needed a way to integrate a new system to pay for travelers flights using the mileage points they have already accumulated. It needed to be understandable and easy to use.

### The Ask:

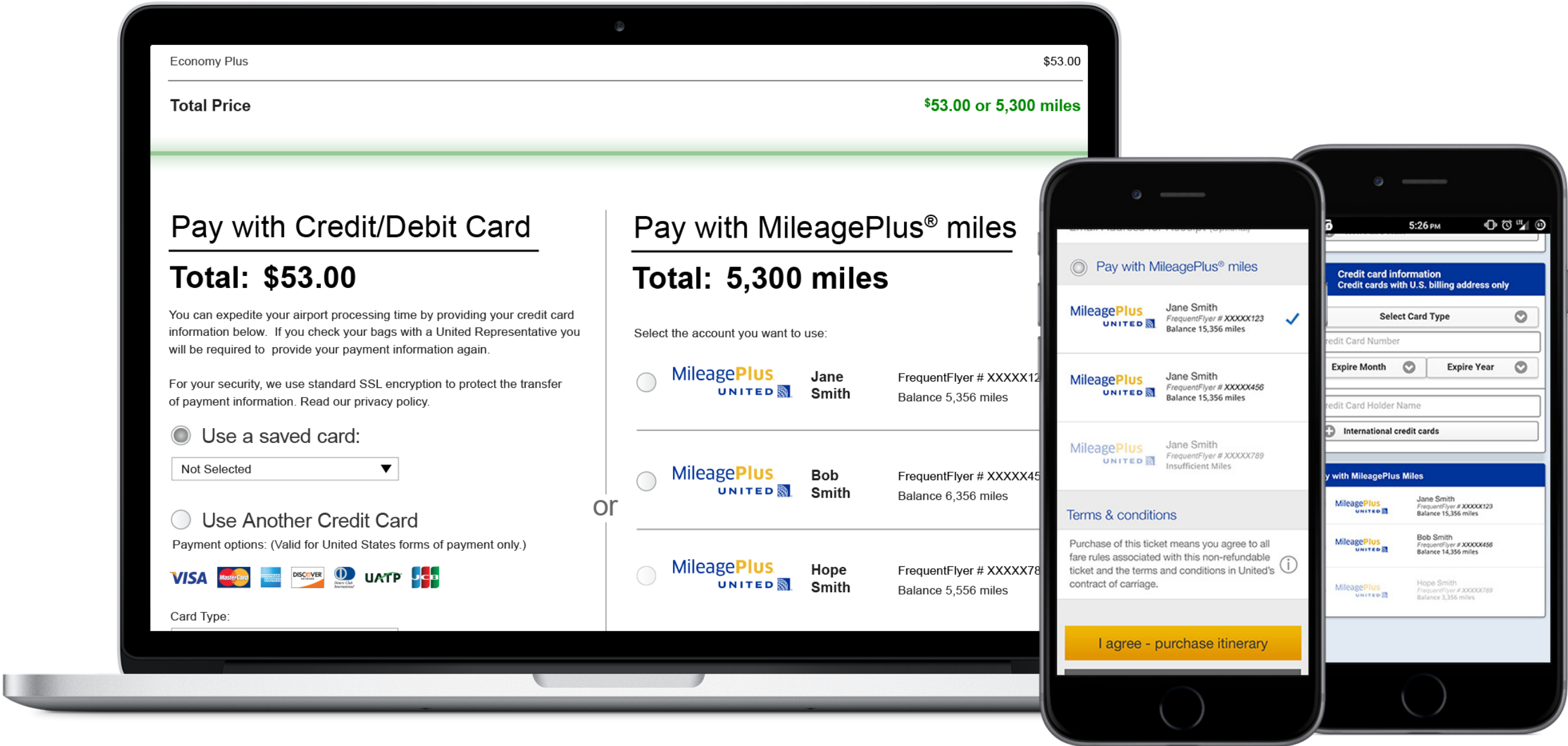
I was tasked with leading a team to come up with an easy and accessible way to accomplish this. I also needed to integrate the new payment system into the existing booking path across multiple channels (web, mweb, APP).

### Deliverables:

Sketches, Wireframes, User Research, Paper Testing, Prototype testing, Visual Designs, Axure and HTML.

### Project Duration:

5 weeks



# Research

As we started this project, we began by looking into the flow of booking a flight on UNITED.com. Our researcher noted that we should focus on the kiosk experience first as that is the main point of access for same day travelers, which accounts for most of UNITED's business.

# Methods of Research

## IN AIRPORT RECON |

I began by conducting in-airport user research to note how users interacted with the kiosk experience. We paid close attention to drop off points where customers would abandon the kiosk to stand in line for an agent as well as the total time it took for someone to get through the payment screens.

## MARKET RESEARCH |

Analyze competitor sites to evaluate dollar / mile conversion

## PROTOTYPES |

Internal Paper prototypes, external html prototypes to gauge how users react to the addition of miles as a form of payment.

# Insights

We found that users were very enthusiastic about the ability to redeem their already accumulated miles for future ticket purchases. We also learned that customers wanted to be able to use their accumulated miles for ancillary things such as in-flight wifi and food.

# Solution

Our team took all of the customer feedback and set out to create a user friendly easy to understand mileage redemption system, and then integrated it into the current payment system.

**Initial State:**  
Mobile Web Experience  
Kiosk Experience

**Credit card information**  
Credit cards with U.S. billing address only

Select Card Type

Credit Card Number

Expire Month  Expire Year

Credit Card Holder Name

International credit cards

**UNITED** 7:30am English Exit X

**Chicago, IL (ORD) → Houston, TX (IAH)** 1 of 1 flights

Select the area of the aircraft where you would like to sit.  United First\*  Business First\*  Economy Plus\*  United Economy\*  Unavailable  Exit door  Exit row  Your Seat

	01	02	06	07	08	09	10	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
K	K		K		K			K	K		K		K		K		K		K		K		K		K		K	
C	C		C		C			C	C		C		C		C		C		C		C		C		C		C	
A	A		A		A			A	A		A		A		A		A		A		A		A		A		A	

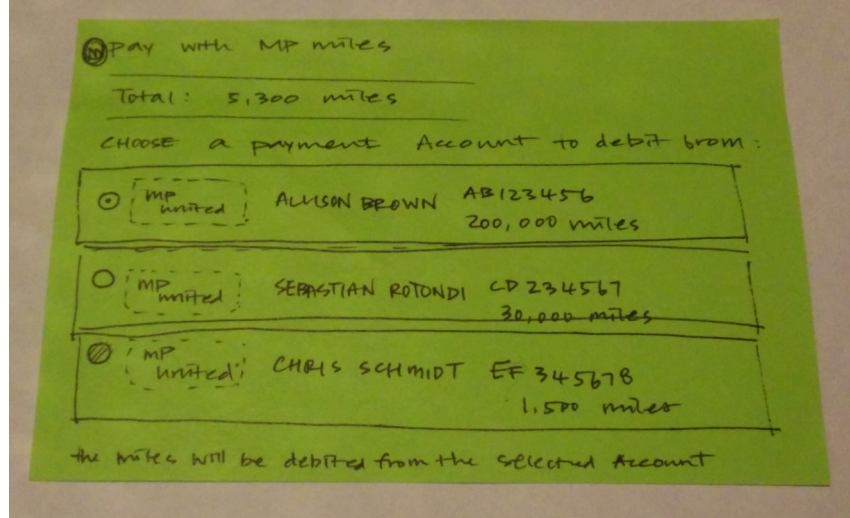
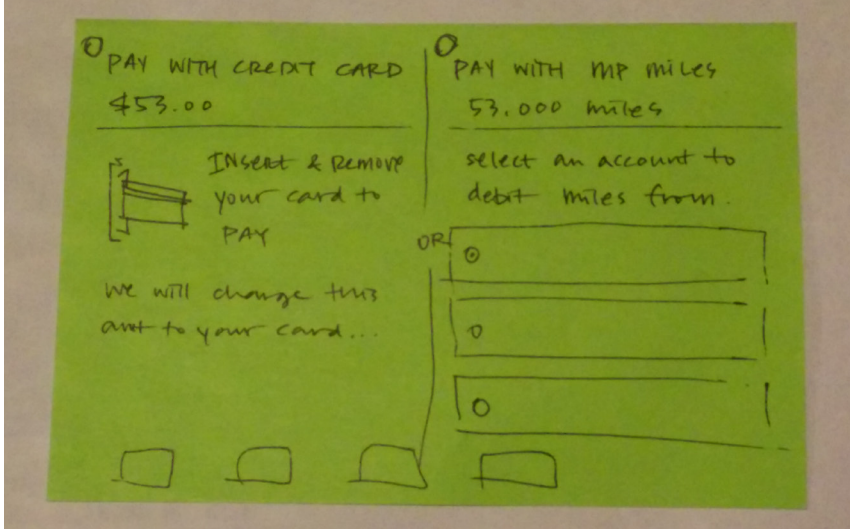
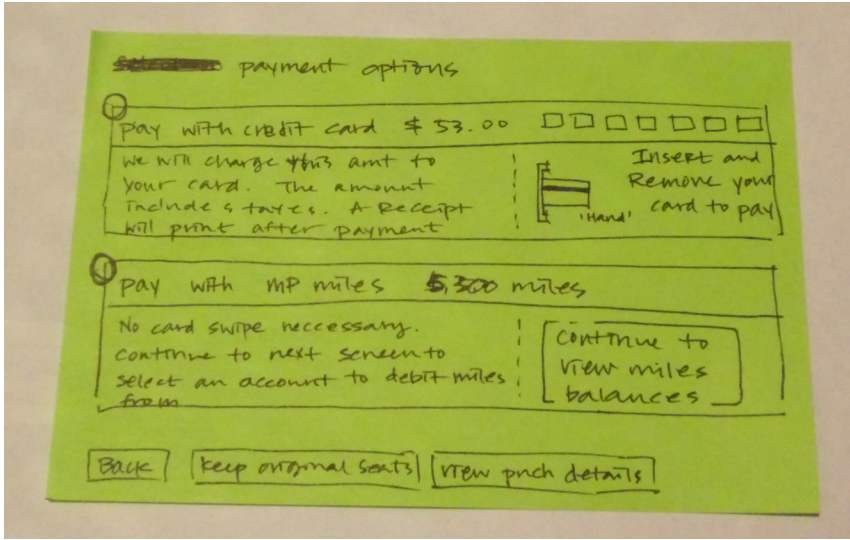
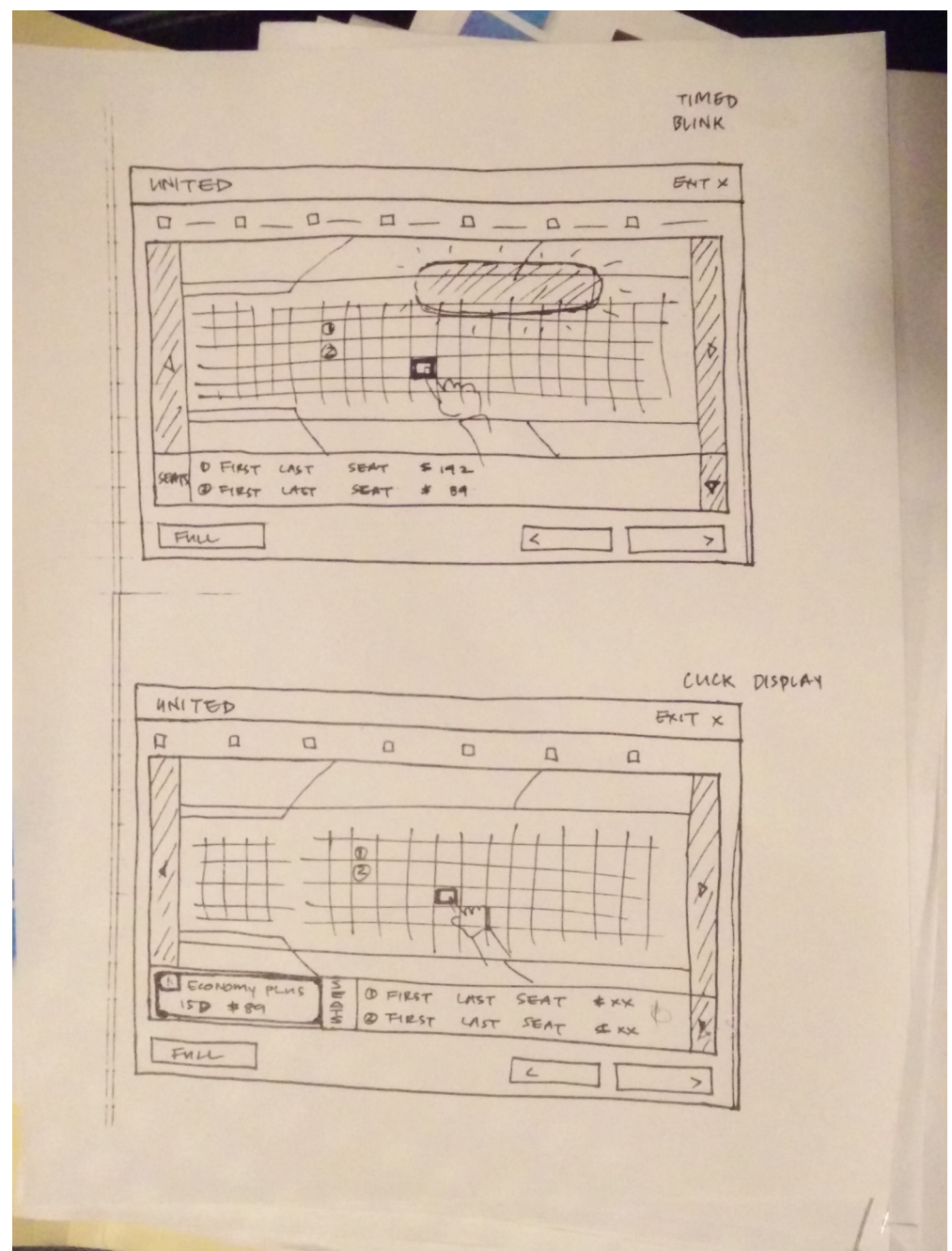
<input type="checkbox"/> <b>UNITED FIRST®</b> Not available for purchase <ul style="list-style-type: none"> <li>Flat-bed seats with on-demand entertainment</li> <li>Complimentary wine and a multi-course meal on most flights.</li> <li>Personal device entertainment is available, go to <a href="http://united.com/pde">united.com/pde</a> for setup</li> <li>Wi-Fi is available for purchase</li> </ul>	<input type="checkbox"/> <b>BUSINESS FIRST®</b> from \$179 <ul style="list-style-type: none"> <li>Spacious flat-bed seats</li> <li>Complimentary wine and a multi-course meal on most flights</li> <li>On-demand entertainment and an amenity kit</li> </ul>	<input type="checkbox"/> <b>ECONOMY PLUS</b> from \$80 <ul style="list-style-type: none"> <li>Up to five extra inches of legroom</li> <li>Seating near the front of the United Basic cabin</li> <li>Complimentary soft drinks, juices, tea, and fresh coffee.</li> </ul>	<input type="checkbox"/> <b>UNITED ECONOMY</b> <ul style="list-style-type: none"> <li>Standard legroom and space</li> <li>Complimentary soft drinks, juices, tea, and fresh coffee</li> </ul>
---	---	---	---

Original kiosk experience

# Sketches & Ideation

I spent time sketching out ideas on what would work easily within our current design system. The challenge was to take the idea of paying with miles, which has traditionally been a frustrating process, and make it as user friendly and seamless as possible.

I led the Initial sketch & ideation session which consisted of me and one other manager. We sketched out the kiosk experience according to our research managers specifications and then I proceeded to tweak and adjust the designs as needed.



Sketch session to plan out our project

# The many iterations of MFOP

As we began iterating concepts for the new form of payment, I wanted to make sure that it would be a familiar experience to our customers, yet easy to understand.

I had a limitation that one form of payment could not take priority over another, so I leaned more towards an even dispersement of information. This led to increased usability vs the multi-page checkout process that the kiosk experience had prior.

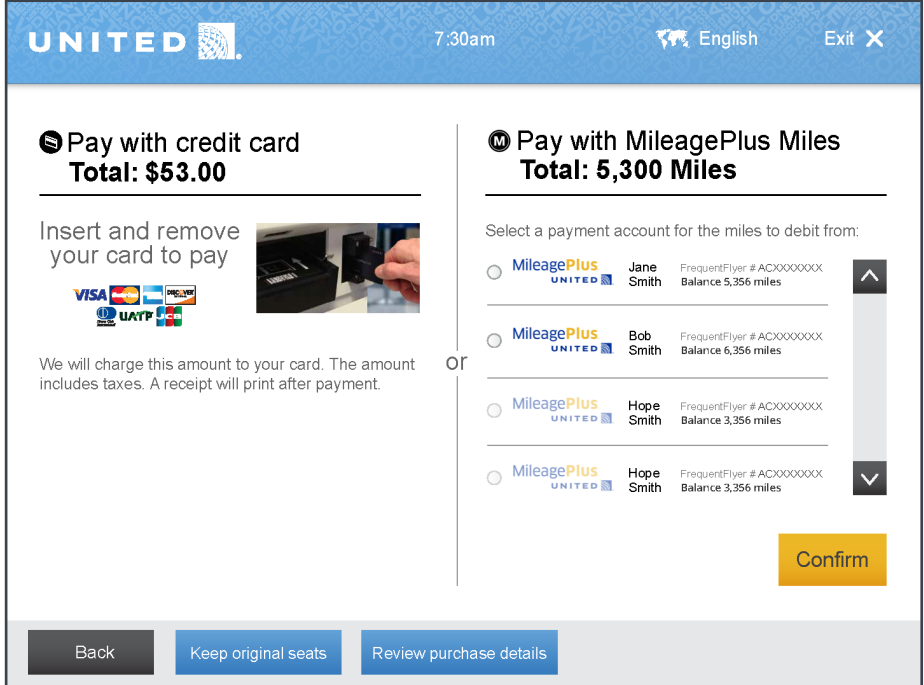
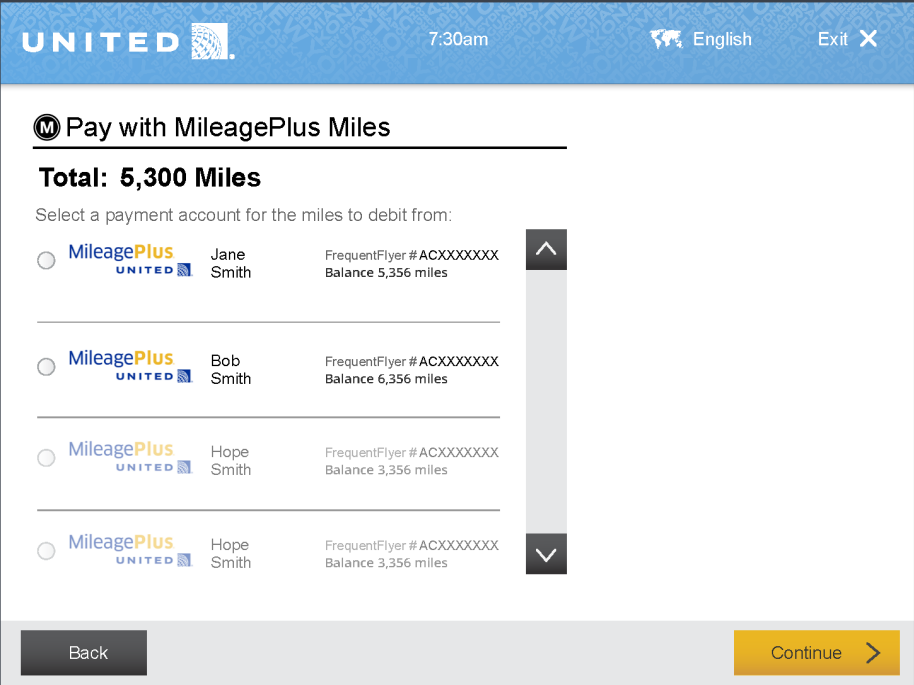
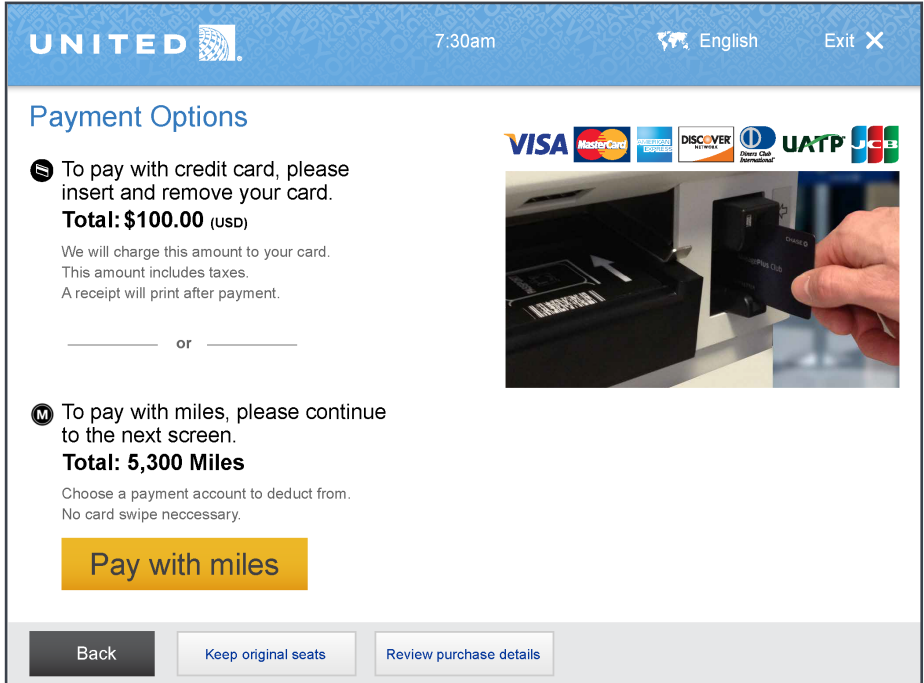
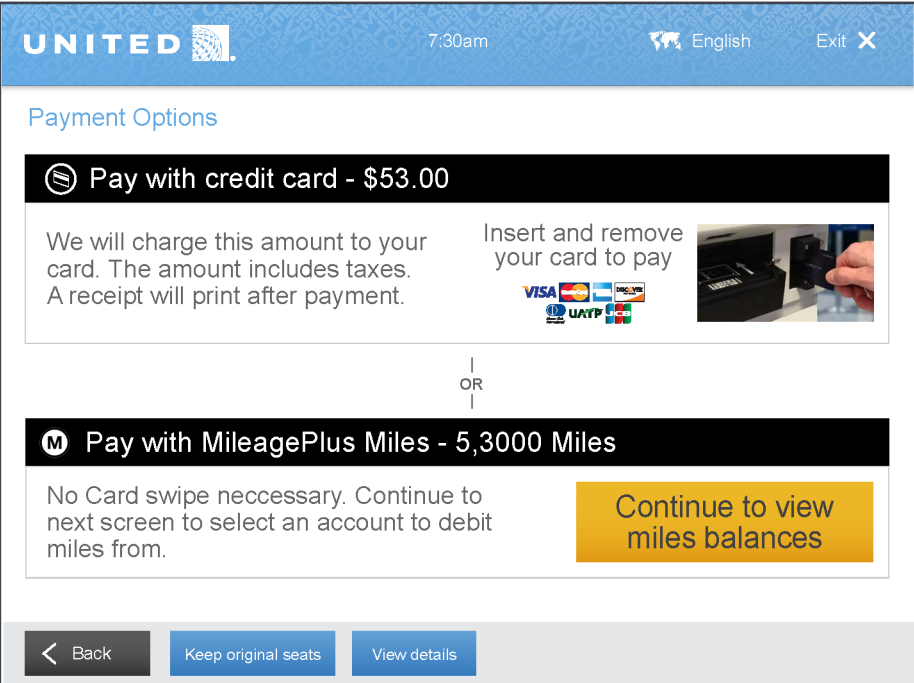
I expanded the mileage section to include all of the passengers flying on that ticket. This allowed customers to easily select who they wanted their miles to apply to, further decreasing checkout time by consolidating this information onto one screen.

# Visual Design

I guided the visual design throughout the process and made sure that what we implemented conformed to UNITED's established style.

Daily touchbases were held where I walked our stakeholders through the design process and explained my decision making.

I mocked multiple options to solve for single screen use



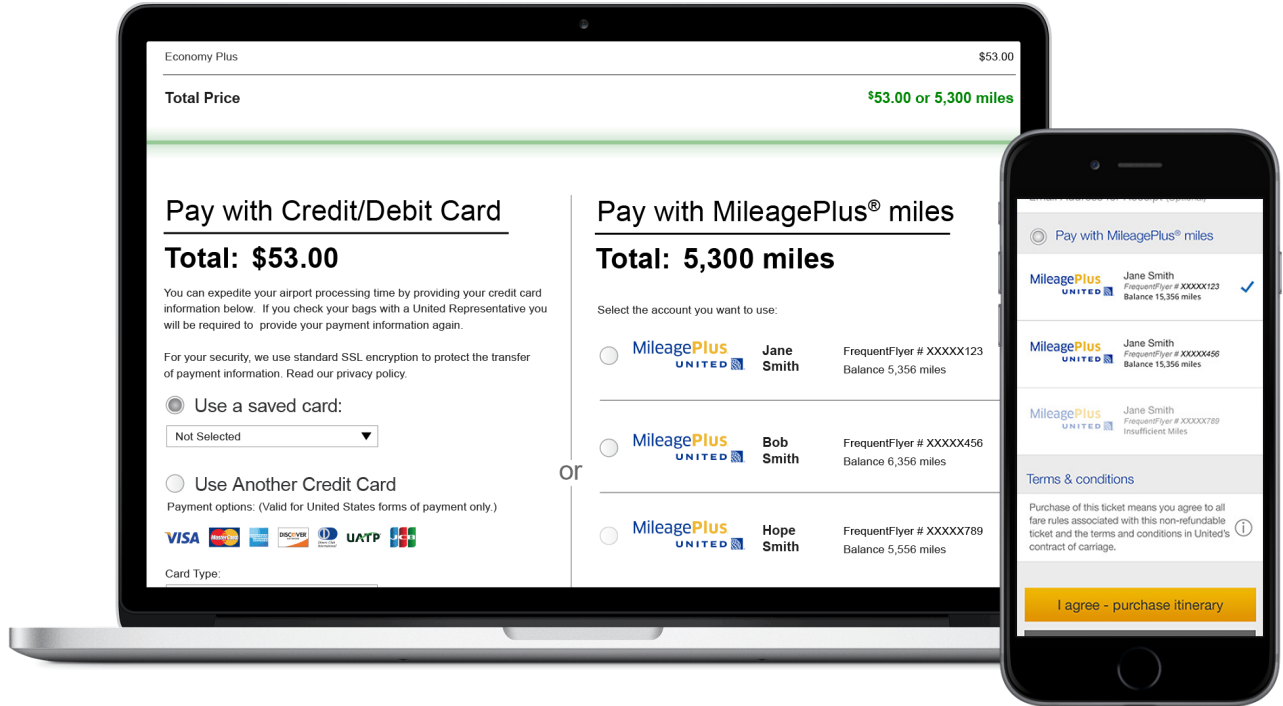
We decided to move forward with a solution that allowed customers to make their decision on one screen. This sped up user flow and provided an equal opportunity for users to choose miles or currency.

# Implementation

After our research and iteration phase, I landed on a simple and easy to use design for the kiosk. This final design allowed customers to choose their payment method quickly by displaying their choices in an understandable side by side manner. I then extrapolated this design throughout all of our payment channels.

# Cooperation

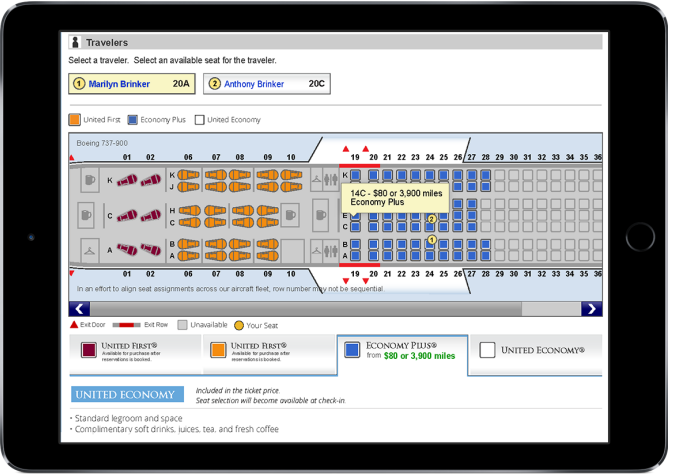
When the designs were completed for all associated channels, I collaborated with our developers to ensure our designs carried over correctly. I sat with our desktop developers to talk HTML best practices when implementing the new designs. I was the lead point of contact for the implementation into our app and I held daily touchbases with the developers. All of our designs released to QA early and are awaiting implementation into the live site.



## Channels

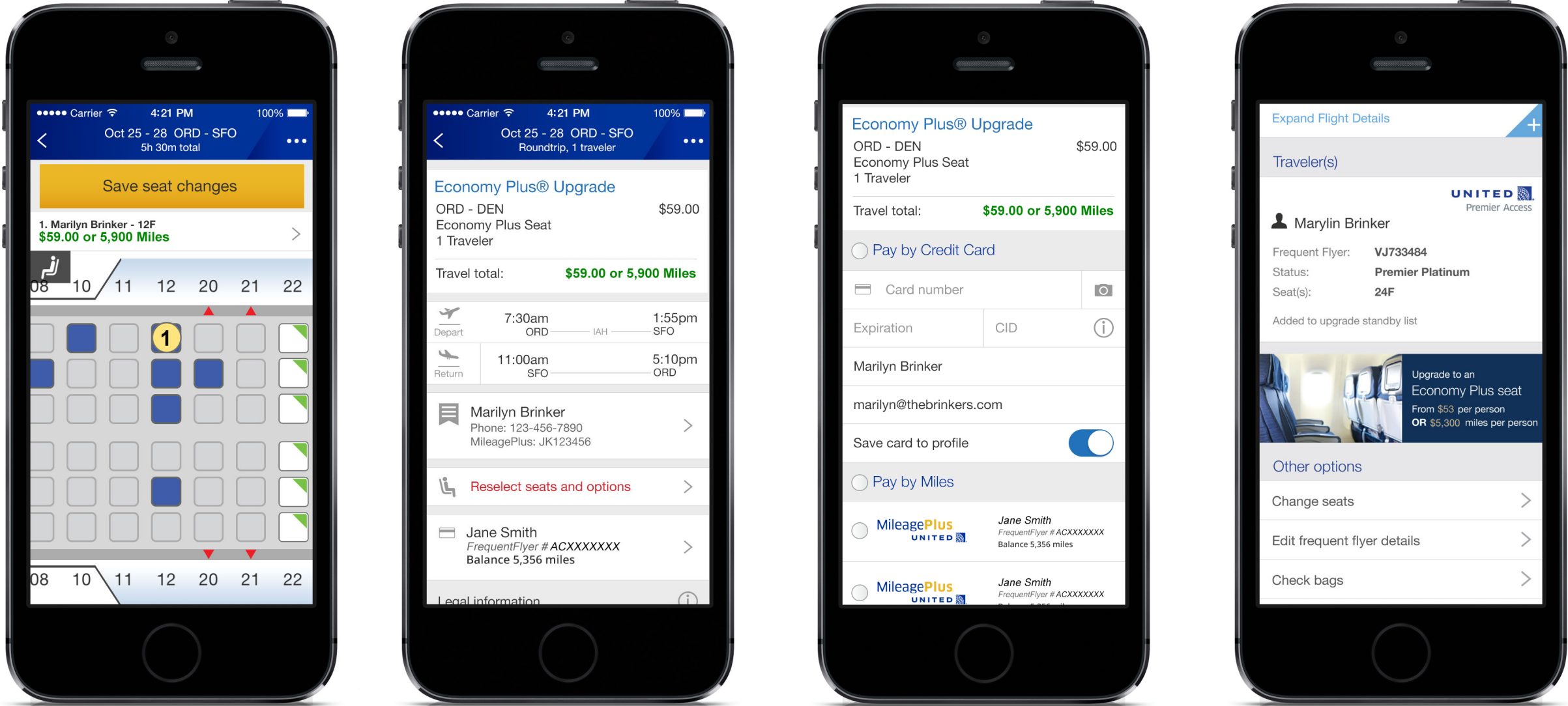
Mobile APP   Mobile Web   Kiosk   Desktop

\*Currently on the booking path, there is a mix of 2.0 style and 1.0 style. The 2.0 style is slowly being implemented on a page by page basis.



# The Mobile Path

The challenge was to fit our total range of booking options into a compact and user friendly mobile layout. Without re-inventing the design wheel of our app, I was able to cleanly implement the new designs into the mobile booking path. The user flow for mobile only increase by one screen as a result of the small real estate. The experience was still well received and has little to no impact on our checkout window time.



I expanded the Mileage messaging into our mobile and desktop banners to increase awareness of the new payment option

The Mobile path showing how customers can choose their seat and select the option to pay with miles.



## Wrapping Up

After our final round of designs I performed one last round of user testing. These designs performed very well in all of our testing scenarios. Our External testers remarked that the design was easy to comprehend and that they would have no problem spending their miles. The data that we gathered has placed UNITED in a great position to capitalize on this new payment method. Because of our success with this project, the next phase is to implement the ability to purchase ancillary products like in-flight wifi that our testers requested.

## Testing

For the initial testing runs, I led a few rounds of paper testing. I had impromptu test sessions with designers, UX and even project managers to gather feedback from all angles. I then created an HTML prototype that was white labeled for a final round of external testing.

## High Level Findings

Initial attempts with MFOP saw users respond negatively to the mile/cost ratio so I met with our product managers to come up with a better pricing model.

Majority of our initial test users remarked that they wanted to see both miles price and currency price at the same time so I eliminated all of the multipage options. This result coincided with our initial findings.

## Key Insights

### TRAVELER COMMENTS |

Some users responded that using these designs combined with the ability to purchase their travel tickets with their miles would make it easier and faster for them to book travel.

Customers are more likely to use their miles to pay for travel for family members.

Some customers commented that impulse travel will be easier because spending miles you have already earned will seem like you are not spending real money. I took this information, and added our designs to travel banners displayed throughout the site.

### TOOLS |

All external prototypes built with Axure RP 7 or hand coded by me with html/css/js. Internal paper prototypes wired out with Illustrator.

# UNITED 2.0 / Booking Path / Flight Reservation Bundles / Project Overview

## My Role:

UX, Design, Researcher, Prototyper

## Team:

- 1 Account manager
- 1 Senior Manager
- 1 User Researcher
- 1 Designer

## The Problem:

UNITED wanted to split their Economy Flexible package into two separate packages that would provide the customer with extra options when booking their tickets.

## The Ask:

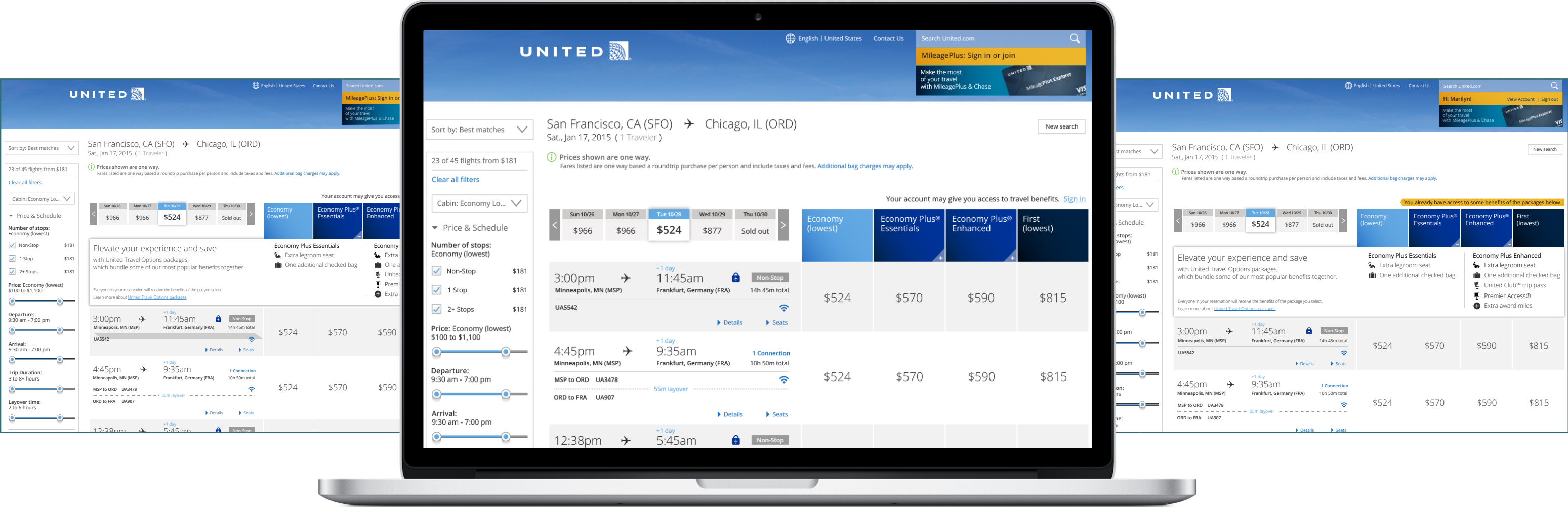
I needed to provide an intuitive way for customers to view each packages benefits while keeping them in the flight search path.

## Deliverables:

Sketches, Wireframes, User Research, Paper Testing, Prototype testing, Visual Designs, Axure.

## Project Duration:

4 weeks



# Research

My team and I spent a few days diving deep into competitor sites to see what kind of package representation was already out there. We looked at other airlines, and other technology companies, as well as stores that had nothing to do with technology so that our research dive was as deep as possible.

# Methods of Research

## UNITED SITE AUDIT |

My team and I analyzed the current package usage on the UNITED site. We analyzed the user flow of customers, and paid special attention to package purchases from customers who came to the site directly vs those who came through a third party company such as Orbitz.

## MARKET RESEARCH |

I worked collaboratively with our development team to conduct a site-modal user poll on UNITED.com. The voluntary poll asked a few questions on packages and how customers were interacting with various e-commerce sites and how they approached shopping.

## PROTOTYPES |

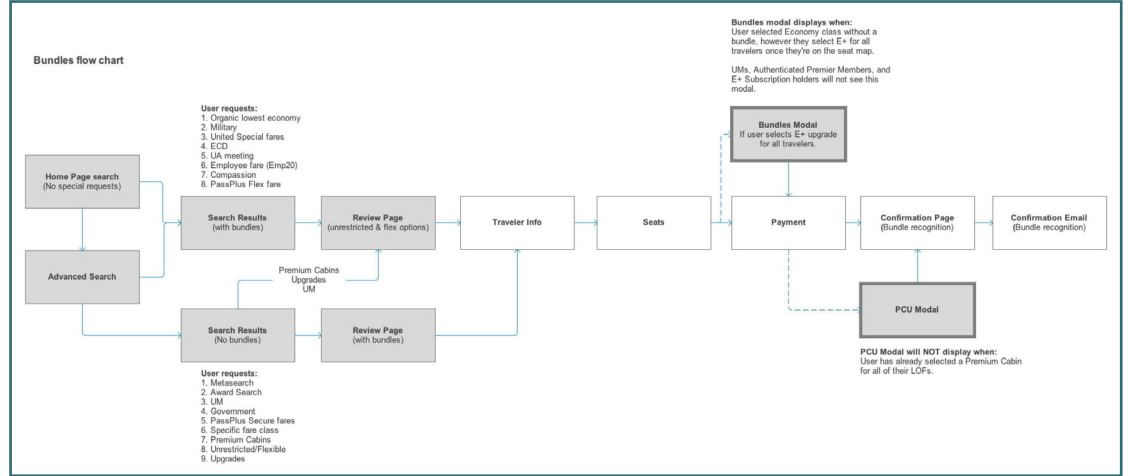
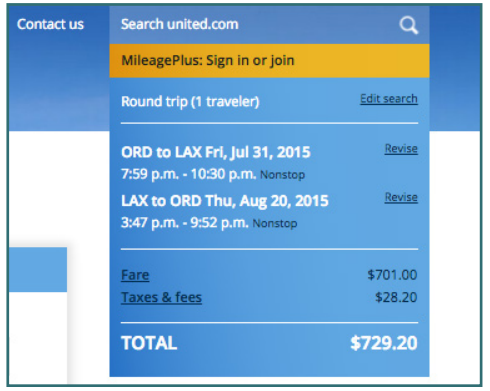
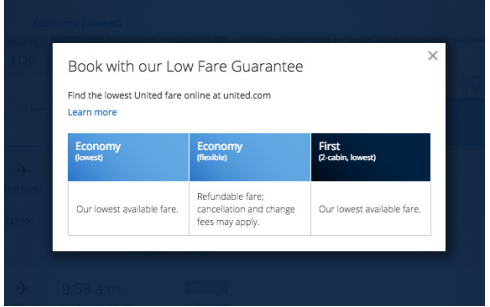
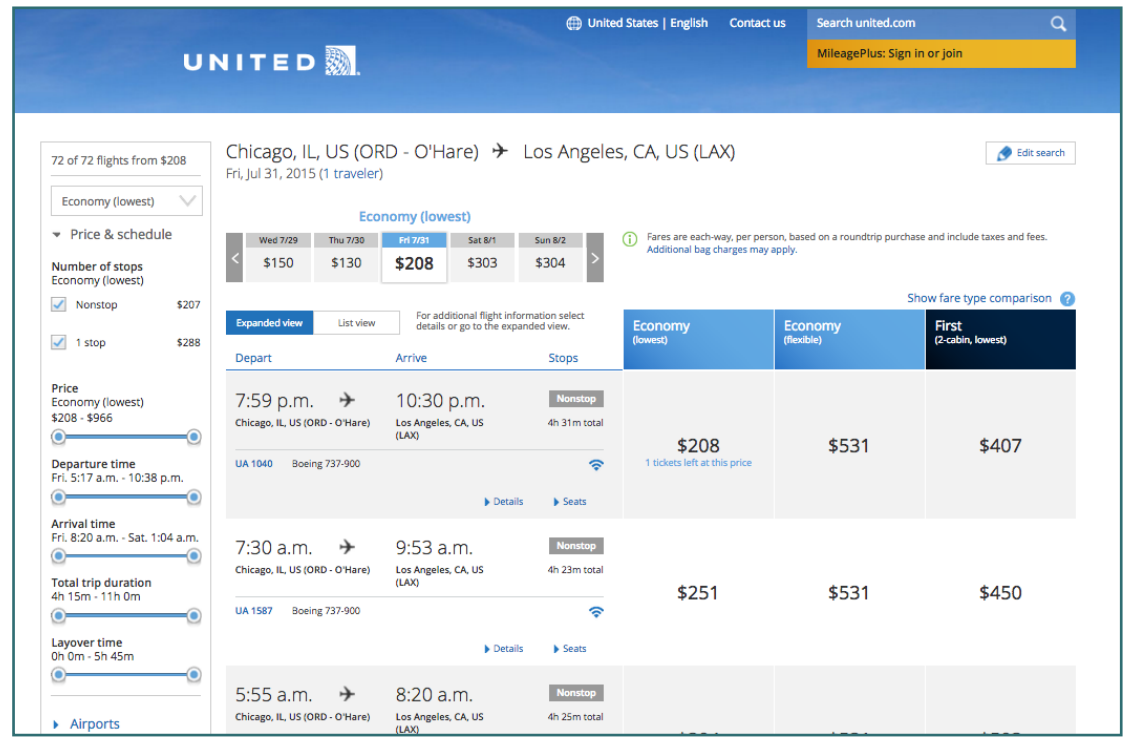
For this project, I created paper prototypes for internal testing. This helped solidify our ideas, and then I moved to functional click through prototypes for external.

# Insights

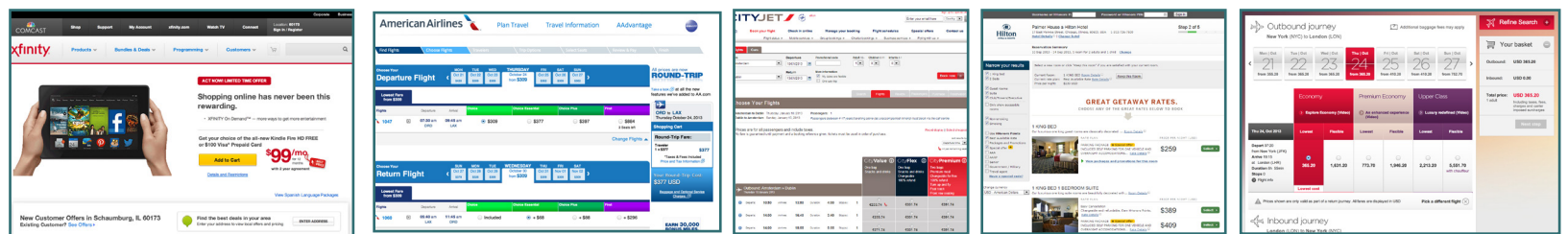
My dive into other bundle solutions provided me with lots of insight. We want to keep our bundle access on the same page as our flight search results for ease of access. We learned that when users have a choice, they want to see their options quickly and easily.

# Solution

We created an economy package solution that kept our customers in the flight search channel while giving them the information they needed to make a choice.



**Current State:**  
Desktop Bundles  
Package comparison modal  
Current Cart Overlay  
Customer booking path flow chart



# Competitor Bundle / Package Options

# Sketches

The Economy Flexible flight package was broken out into two separate package offerings, Economy Essentials, and Economy Enhanced. I began the design process with a white boarding session.

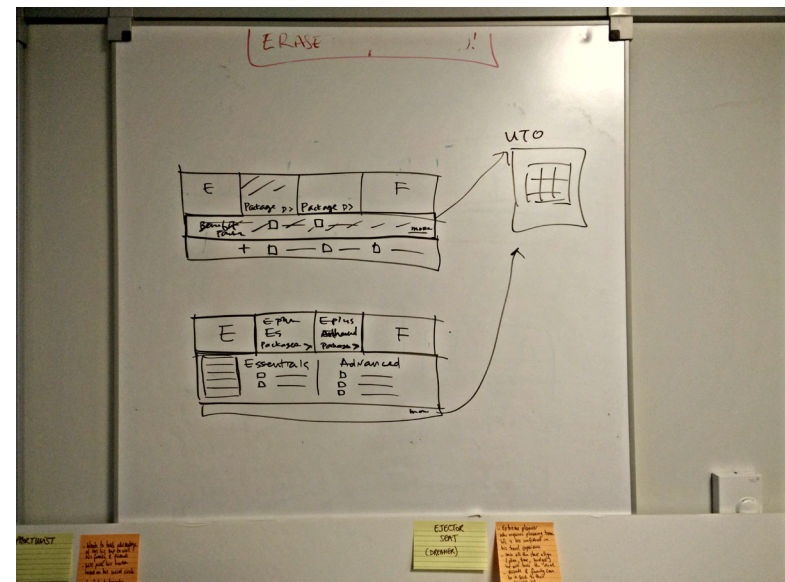
I lead the discussion on what would work best for the customer as they were selecting their flight. We went over a few options for selection mechanics, including radio buttons, pop up modals and dropdowns. I decided against radio buttons because they did not comply with the current style of the flight search results. We also went away from a modal mechanic because we learned that customers wanted more information quickly without having to search for it.

Before jumping into digital mockups, the other designer and I sketched out a few options on paper to see a user flow and weed out any unnecessary design options.

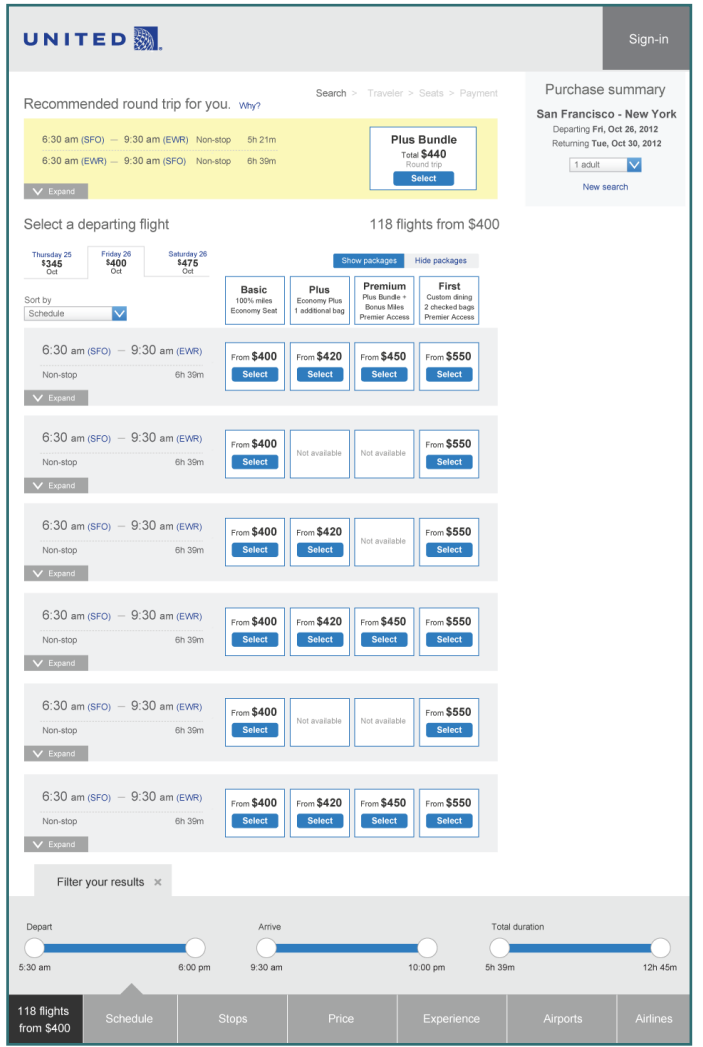
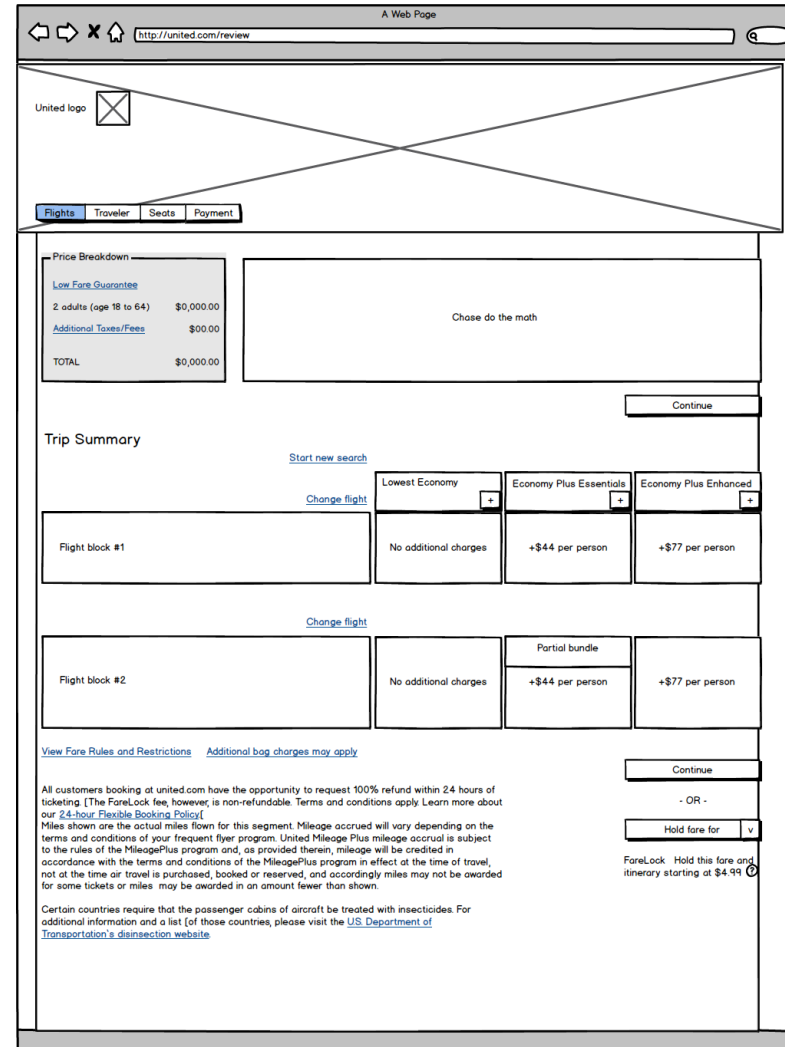
# Wires

I translated our paper sketches into wireframes using Balsamiq. We then presented our findings as well as these wireframes to our managing teams so that they could understand the design decisions behind our ideas.

Initial whiteboard of our package layout



Initial wires quickly sketched out for approval and then completed with higher fidelity



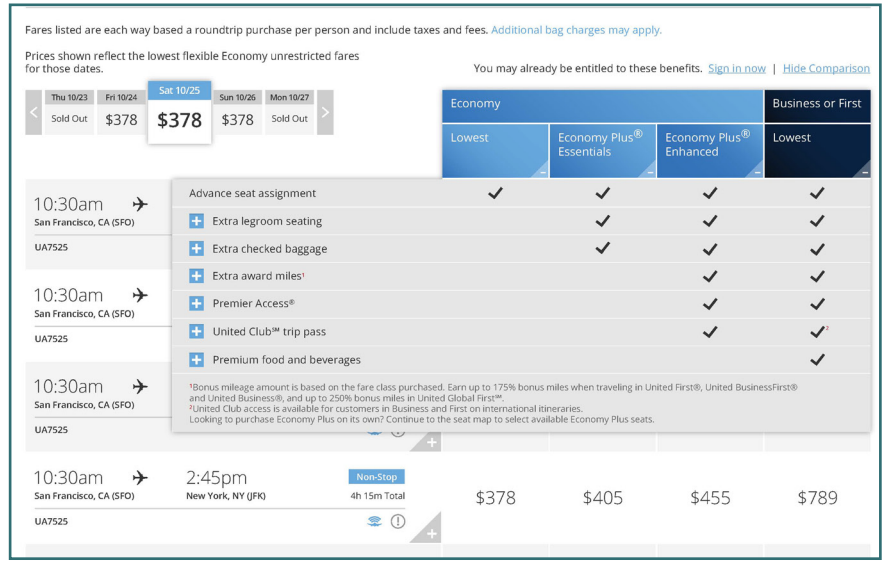
# The Single Page Solution

UNITED.com had an initial 'multi-page' approach to package descriptions. Customers would have to click a 'more info' button to see what the difference was between Economy Lowest, Economy Flexible and First Class.

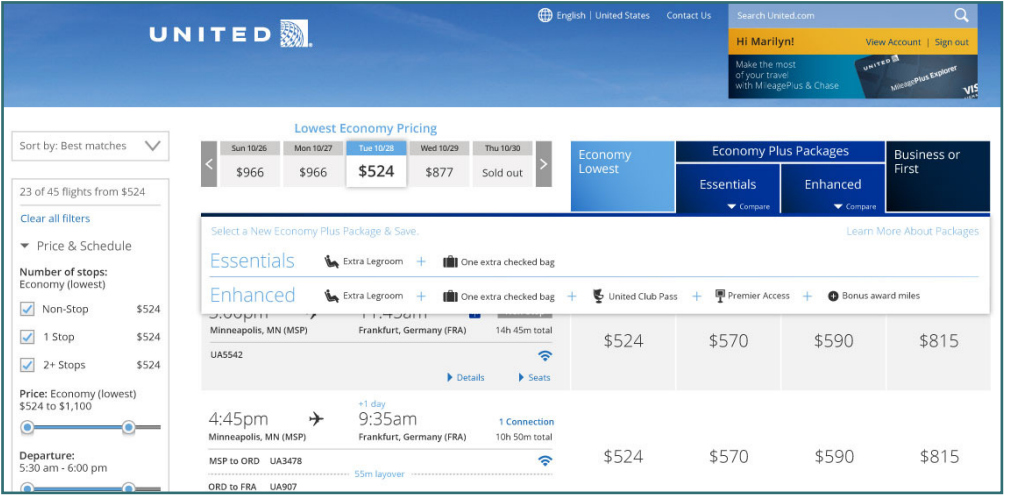
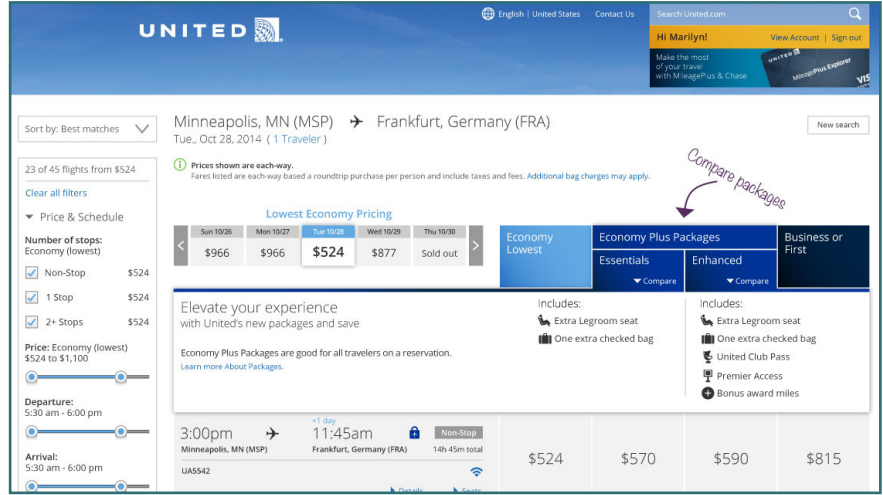
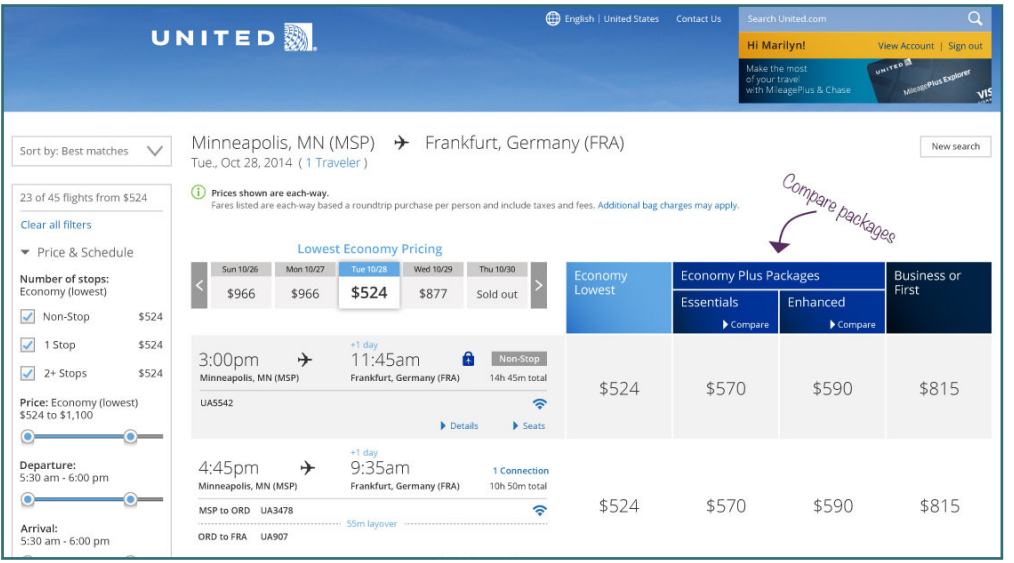
As I worked on a package solution, I was able to leverage our research findings to allow customers to see what perks they could get without leaving the page they were on. By keeping users on the booking page with extremely easy to navigate options, we hoped to cut down on abandoned shopping carts and direct them straight through the checkout process.

I collaborated with another designer to mockup multiple design options so we could tackle this problem from as many angles as possible. I then presented our designs and got approval for internal testing to gather user feedback.

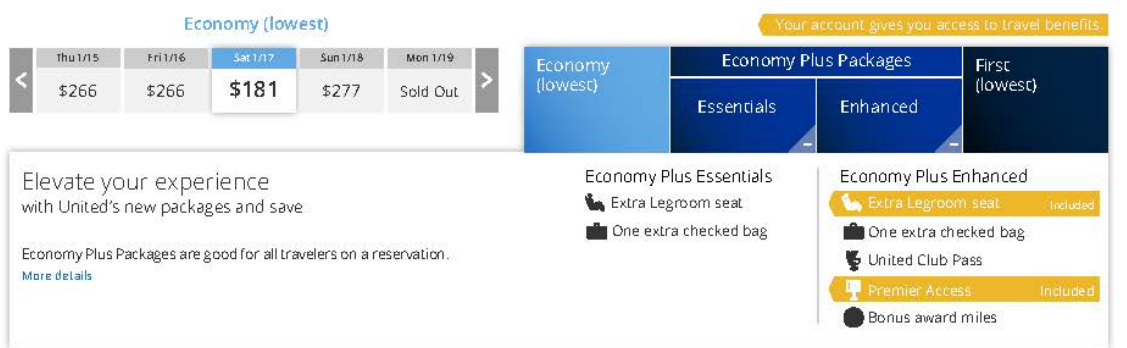
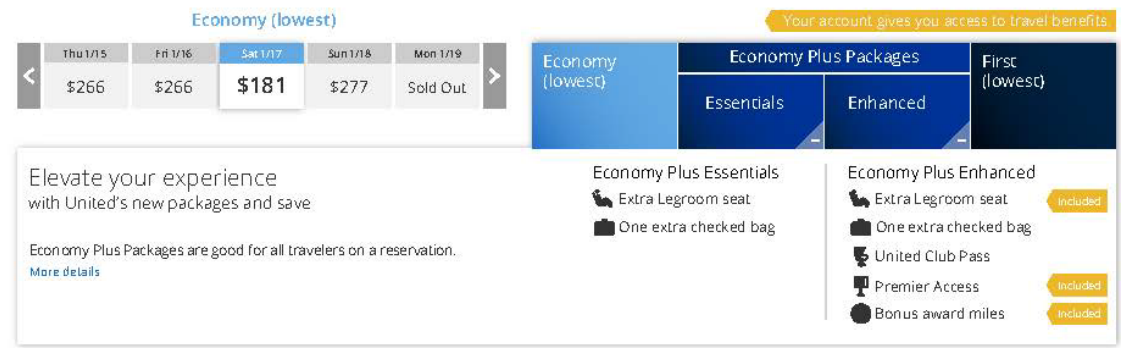
Initial option with grey dropdown and package columns



Option with an Economy Rider to condense space



Our solutions focused on a dropdown state that included easy to understand icons and descriptive text that would give customers glance-able nuggets of easy to react to information.



New Expanded states with easily glancible information

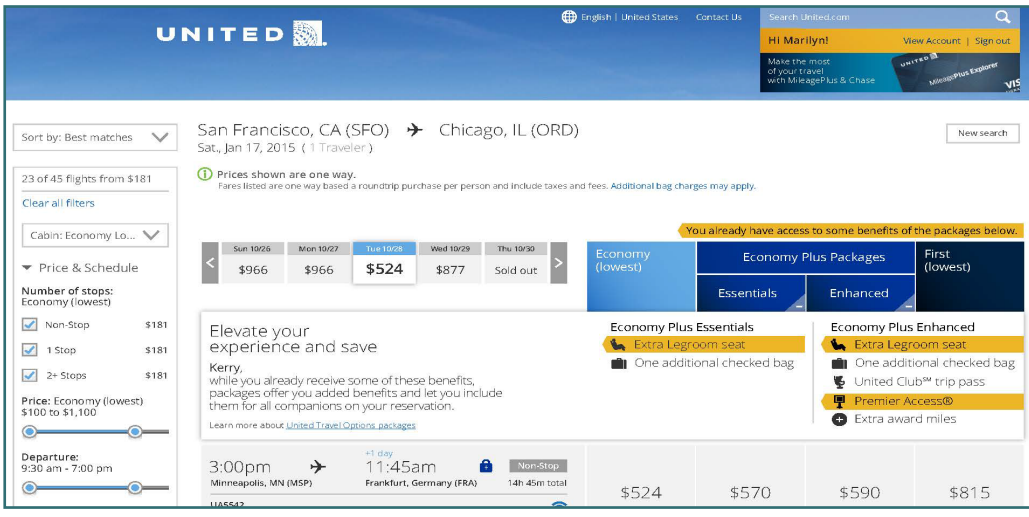
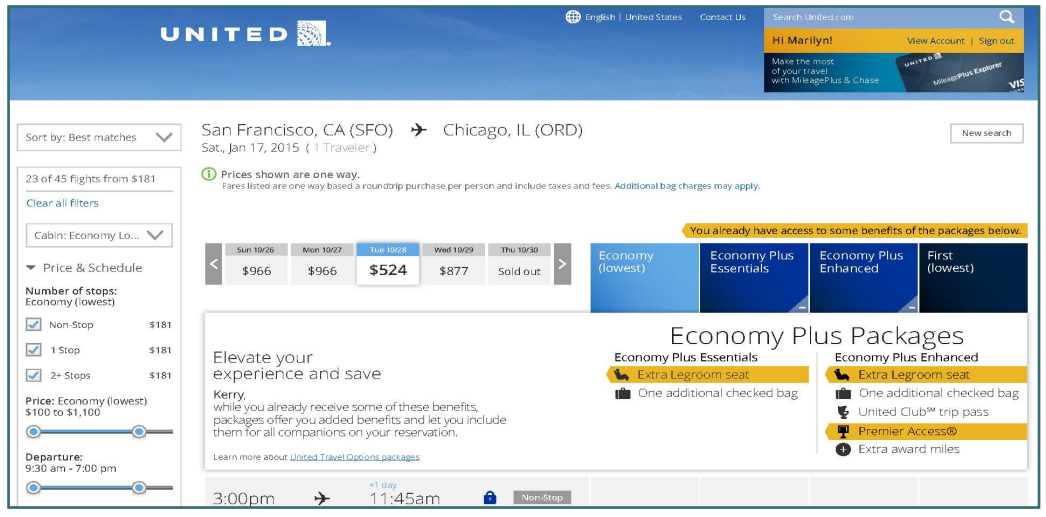
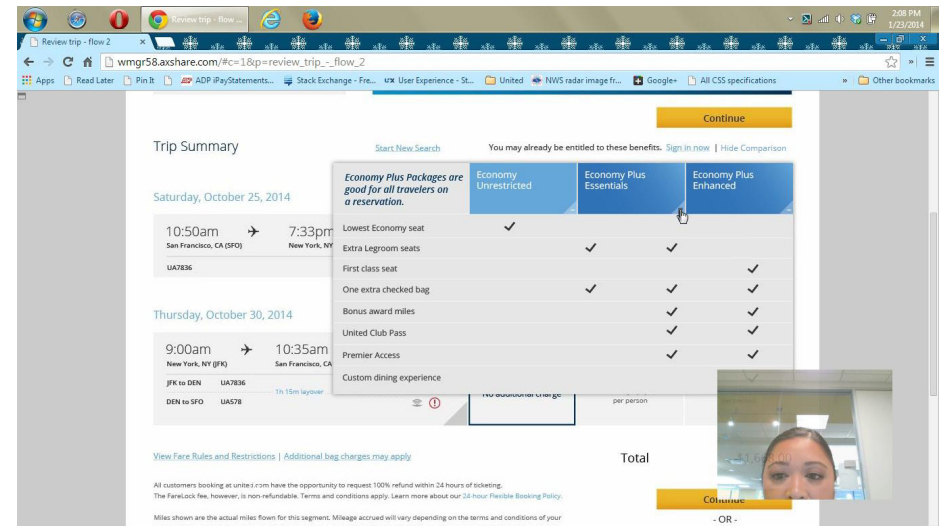
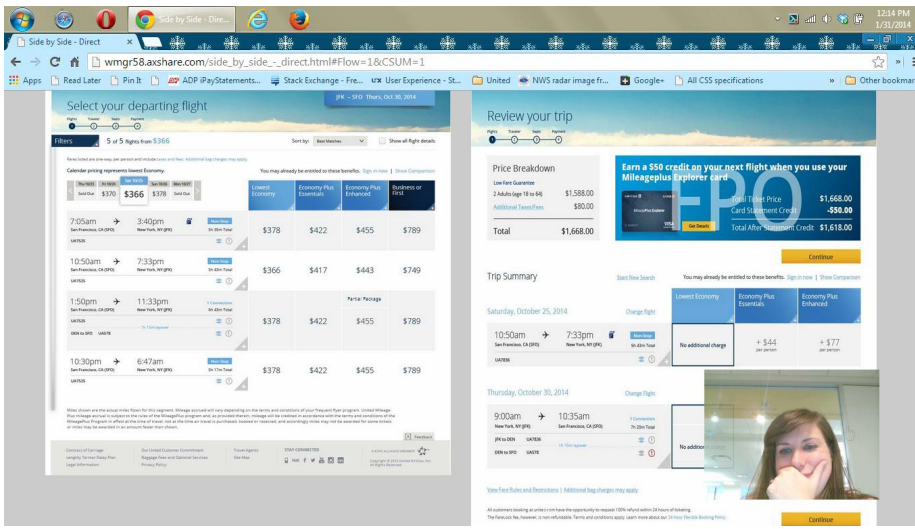
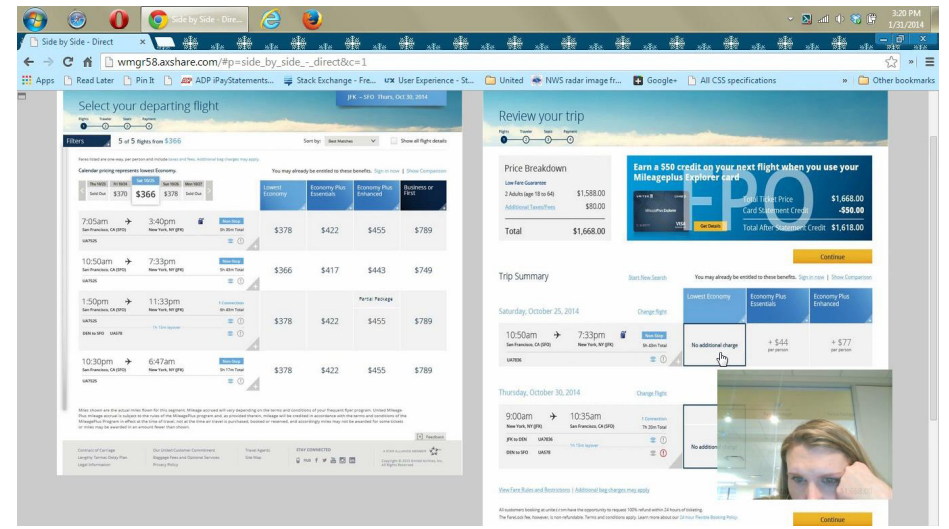
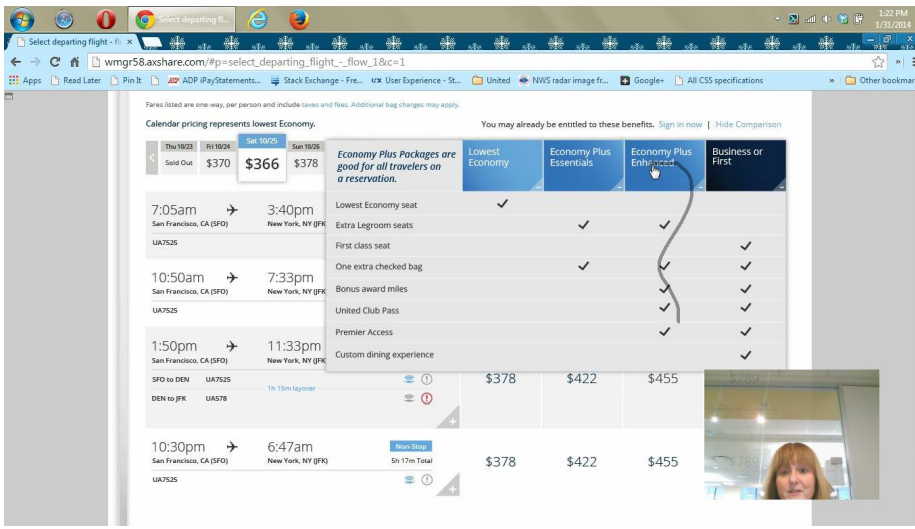
## Visual Design

Our team narrowed down the designs to a final few after receiving feedback from paper testing. I altered the design according to feedback to show a visual marker to the customer when they were logged in. This would help them understand what benefits they received as a priority member vs the benefits of the package, preventing priority members from buying a package for the benefits they already receive.

## Prototyping & Usability

I was responsible for creating the prototypes for our external testing. Each prototype was fully clickable with multiple interaction points to simulate the site experience and give an amount of authenticity. We hired an outside firm to source our test candidates and gathered their feedback on our designs. Our tests were held at an offsite testing facility MC'ed by our research specialist with a carefully curated script.

User testing



**In Practice:**  
You can view the final external prototype for this project here  
Bundles - <http://jyuk8t.axshare.com/>  
Password = 'thepassword'

## Wrapping Up

This project is expected to be a big value for UNITED.com based on the testing. Almost all of our test candidates were excited about more economy choices to choose from based on their budgets. Bundles is currently in QA and slated to be released in phase 2 of the new UNITED.com. As a traveler myself I understand the need for a quick and simple display of options when searching for flights.

## High Level Findings

We found that when looking to purchase higher ticketed items, all users conducted some type of due diligence prior to purchase. This means that UNITED is also competing with the likes of ORBITZ and other travel aggregators for the lowest price. Having a quick readable package system will help alleviate cart abandonment.

Key influencer's around purchases included looking at ratings, using reliable websites (those they had a history with) and using sites perceived as a trust source.

The package solution that I came up with fared much better in user testing vs some competitors that interrupt the booking path flow with a distracting modal advertising their packages. Customers do not like being interrupted when looking for flights and instead like having that information easily scannable.

For many, using travel related aggregators such as Kayak, Orbitz and Travelocity promoted efficiency since they aided in locating value and the best pricing.

## Key Insights

### UNITED TESTING CANDIDATES |

Customers comment that packages and add-ons are perceived as helpful, but they generally will not actively look for them.

A couple of users were willing to pay extra to ensure they were receiving a quality product or service. Some mentioned convenience as one factor when purchasing. e.g. Opting to purchase a bundle or package during the purchase path was considered advantageous since it meant they didn't have to bother with it later and it provided that incentive.

### My Role:

UX, Design, Researcher, Prototyper

### Team:

- 1 Account manager
- 1 Senior Manager
- 1 User Researcher

### The Problem:

UNITED was introducing a new seat reservation option to the public and needed a customer friendly interface to make sure it had the highest financial impact and user acquisition.

### The Ask:

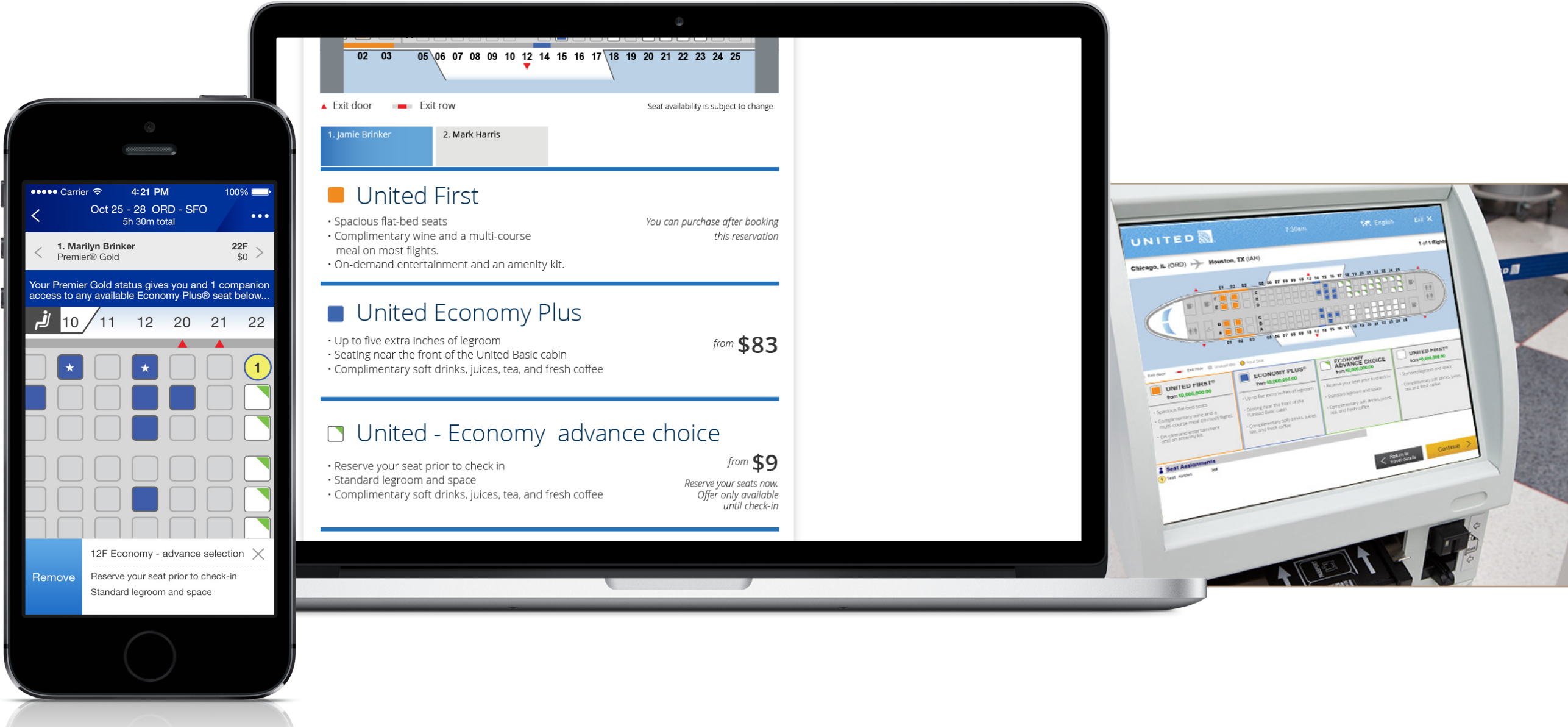
In the given expediated timeline, I was to create a booking system that would give travelers the option to select their seat before everyone else. Then, integrate this into all of our current check-in channels.

### Deliverables:

Sketches, Wireframes, User Research, Paper Testing, Prototype testing, Visual Designs, Axure.

### Project Duration:

3 weeks





# Research

As this project was on a tighter deadline than usual, a teammate completed the competitors deep dive, while I worked on sketching the initial wires. I devised a few ways to implement new designs into our already established check-in path. This cooperation helped us quickly arrive at multiple solutions so we could proceed with external testing as soon as possible.

# Methods of Research

## UNITED SITE AUDIT |

I mapped out the current check-in user flow and found that there were opportunities to simplify and unify our check-in options. Customers were being asked to pick a seat and then asked if they wanted to upgrade. I was able to simplify this info onto one screen.

## MARKET RESEARCH |

We performed a brief competitor audit to compare what options are already out there.

## PROTOTYPES |

This project was heavy on user testing. As the Designs for our booking path are already established, we didn't have to spend a lot of time reinventing the wheel. We wanted to make sure that we got it right the first time. We had a brief round of internal testing, paper and digital, before we had multiple rounds of external testing.

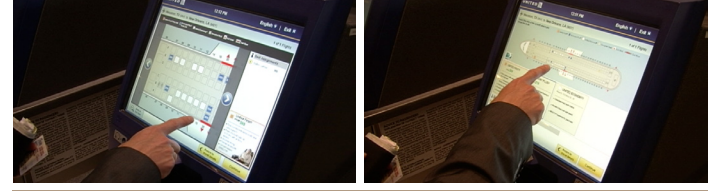
# Insights

The end goal of this option is to give customers the choice of letting UNITED choose their seats for them based on their preferences, or allow them to specifically pick where they want to sit.

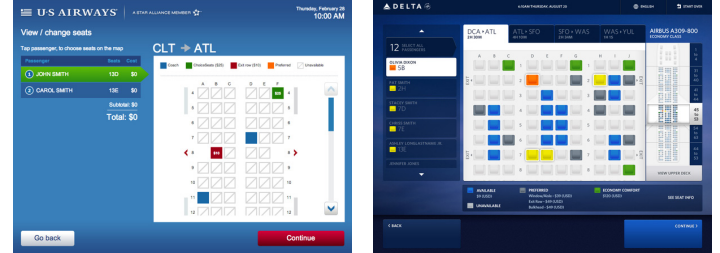
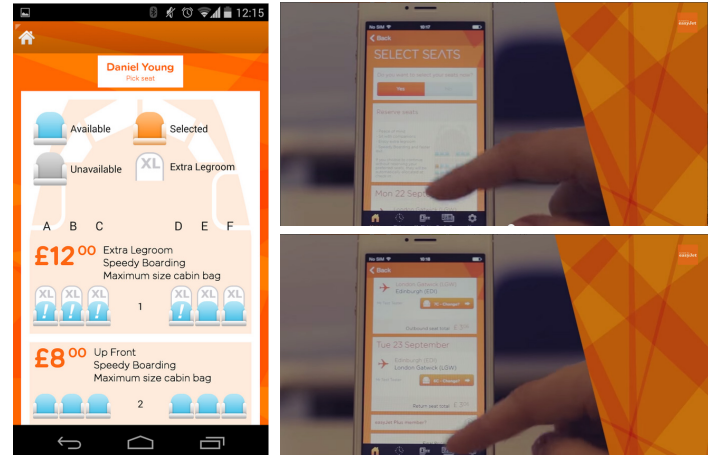
# Solution

With all of our data compiled, I was able to condense our check-in path while at the same time providing an easy to understand method for customers to pick seats.

Original check-in path screen



**Current State:**  
UNITED Desktop Booking  
United Kiosk Booking



**Brief competitor seat reservation audit**  
Mobile  
Desktop

# Wires & Papers

After our initial dive into competitor sites, I wired up the initial ASR integration ideas. My findings allowed me to compact our check-in process to one page. This allowed customers the ability to quickly scan the page for the information about each seat on the plane as well as it's price. With this information, they could then make quicker decisions about where they wanted to sit on the plane, decreasing cart abandonment. These were then tested internally over the next two days by having our employee test candidates evaluate paper print outs of the wireframes.

The purpose of this was to move and react quickly without being tied down in the design process. This allowed us to adapt our designs quicker resulting in a more efficient use of time.

Our seatmap was modified to allow customers to hover over each seat on that particular plane. This resulted in a quick pop-up of seat information that included the type of seat, seat pricing, and ability to reserve it in advance. Condensing our check-in process reduced the amount of time it took customers to get through the check-in window and onto their flight.

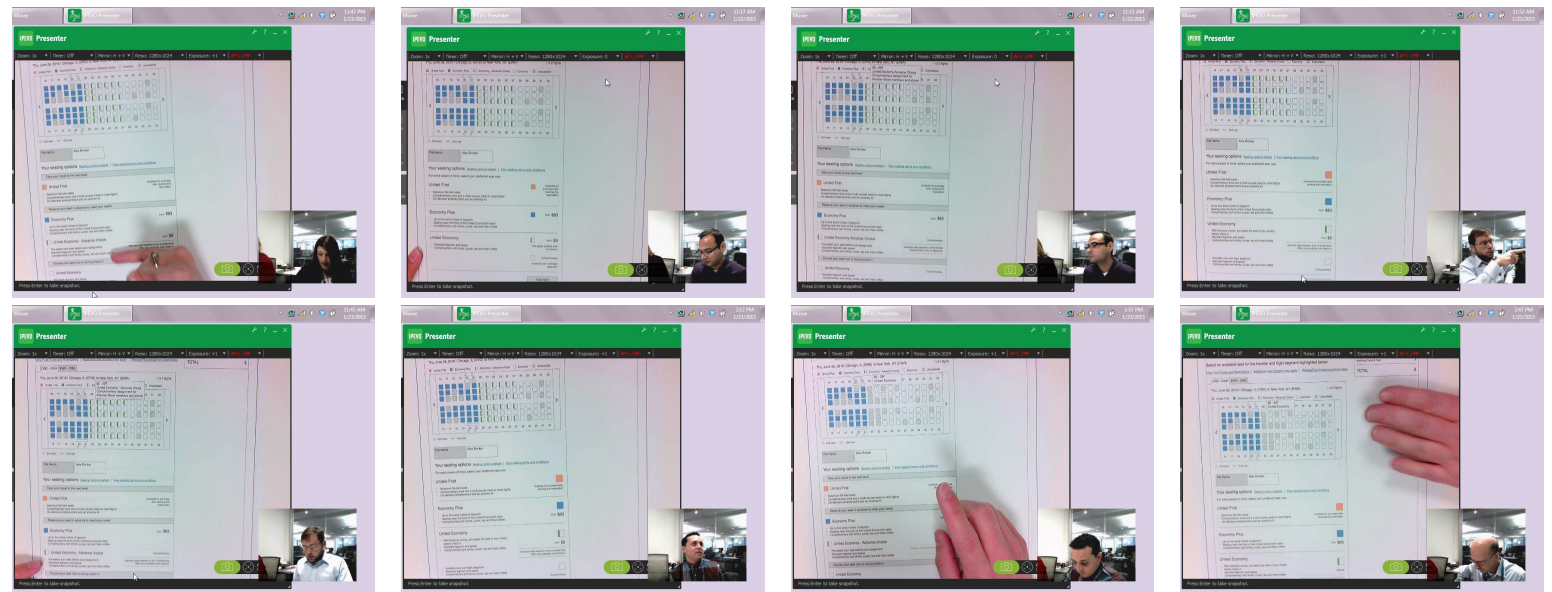
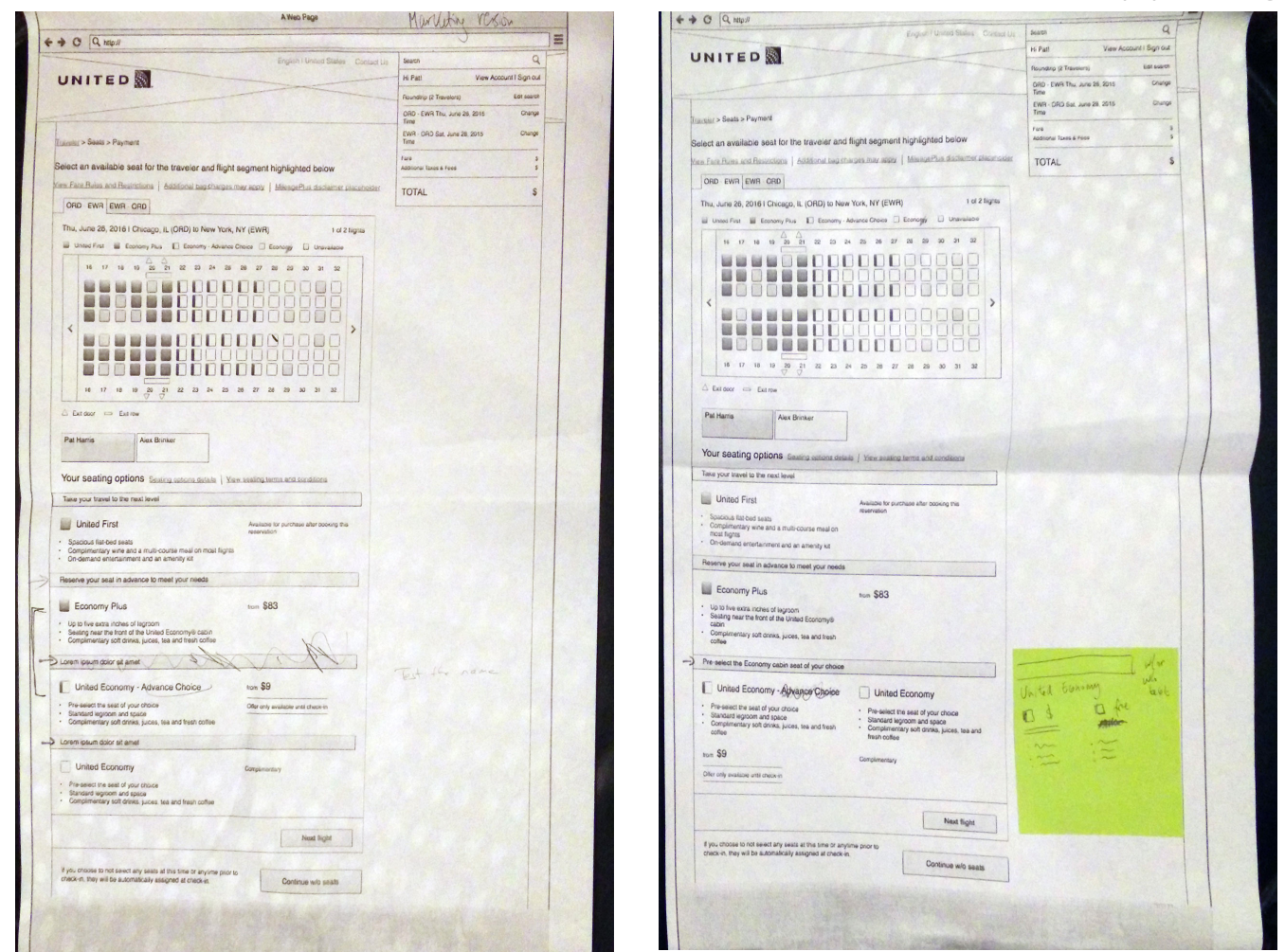
## INTERNAL TESTING POINTS OF INTEREST |

All internal participants thought the company providing a means of establishing seating preferences would be of value to consumers.

Though there was some nuance regarding the interpretation of the new seating color, once the testers understood the new color was associated with the new option, they noted that the coloring provided the clearest indication of what was preferred and what was not.

**Internal paper testing**  
These tests were recorded and examined for any details we could use in our decision making process

Wires for internal paper testing



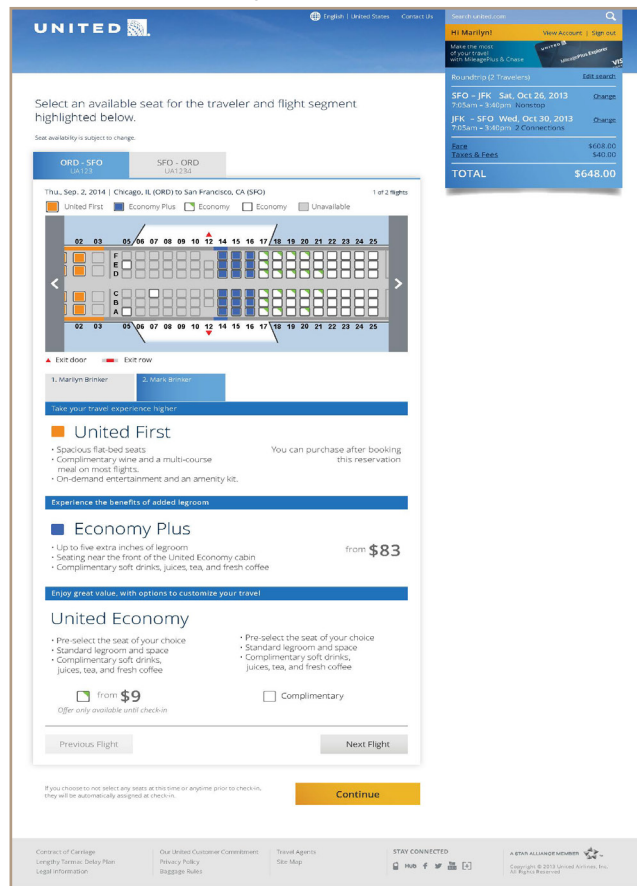
# External Testing

We moved quickly from our internal paper testing to external prototype testing. For this phase of the project I was responsible for converting our static designs into functional click through prototypes with AXURE that were white labeled to remove references to UNITED.

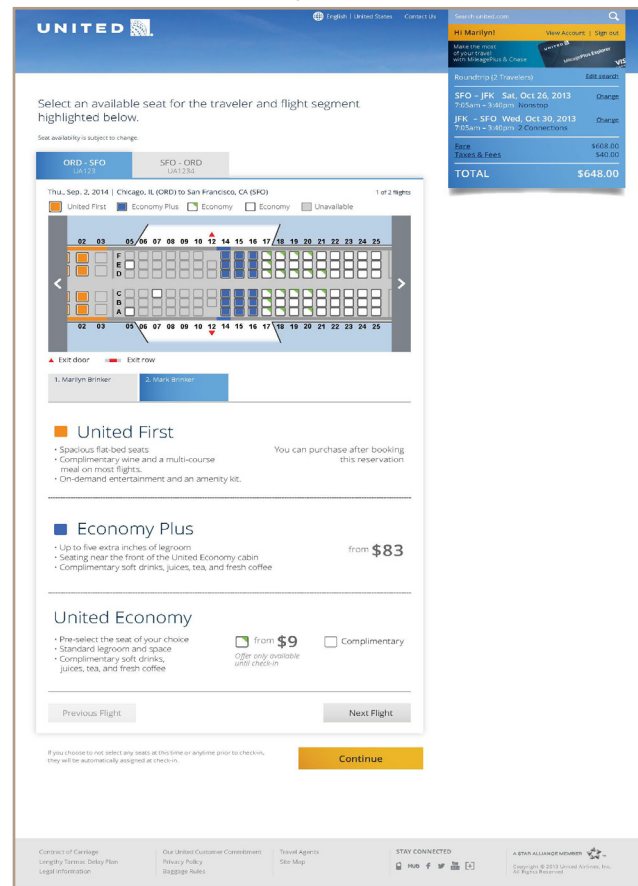
I then worked with our research manager to sculpt the script into an informative conversation that we could use to get key information.

I tweaked each prototype, changing the copy language, pricing display and whether or not the option to reserve your seat in advance is shown after the check-in window (< 24hrs before flight). I did this to see which user flow our test candidates preferred.

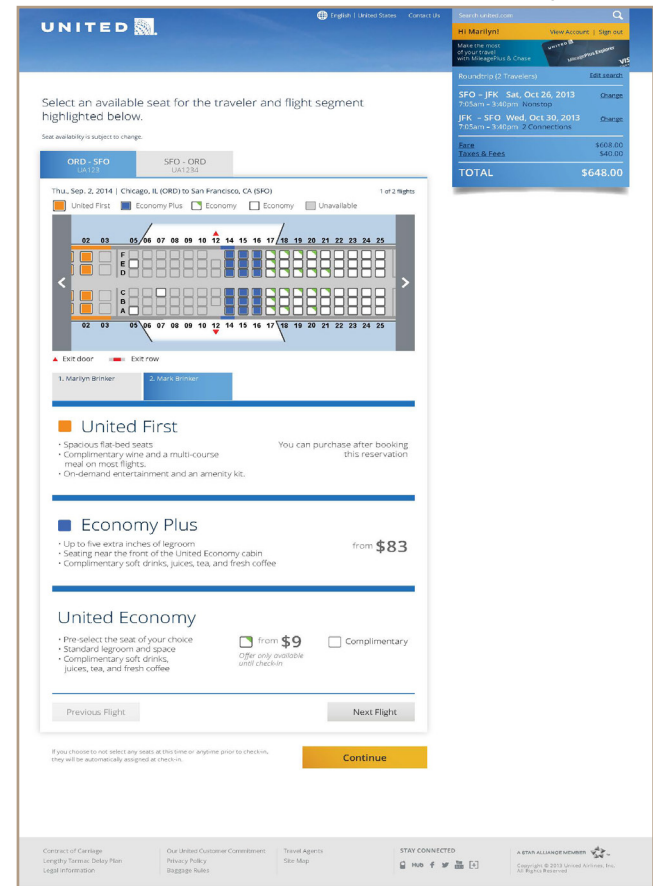
Option with color section headers



Option with no section header



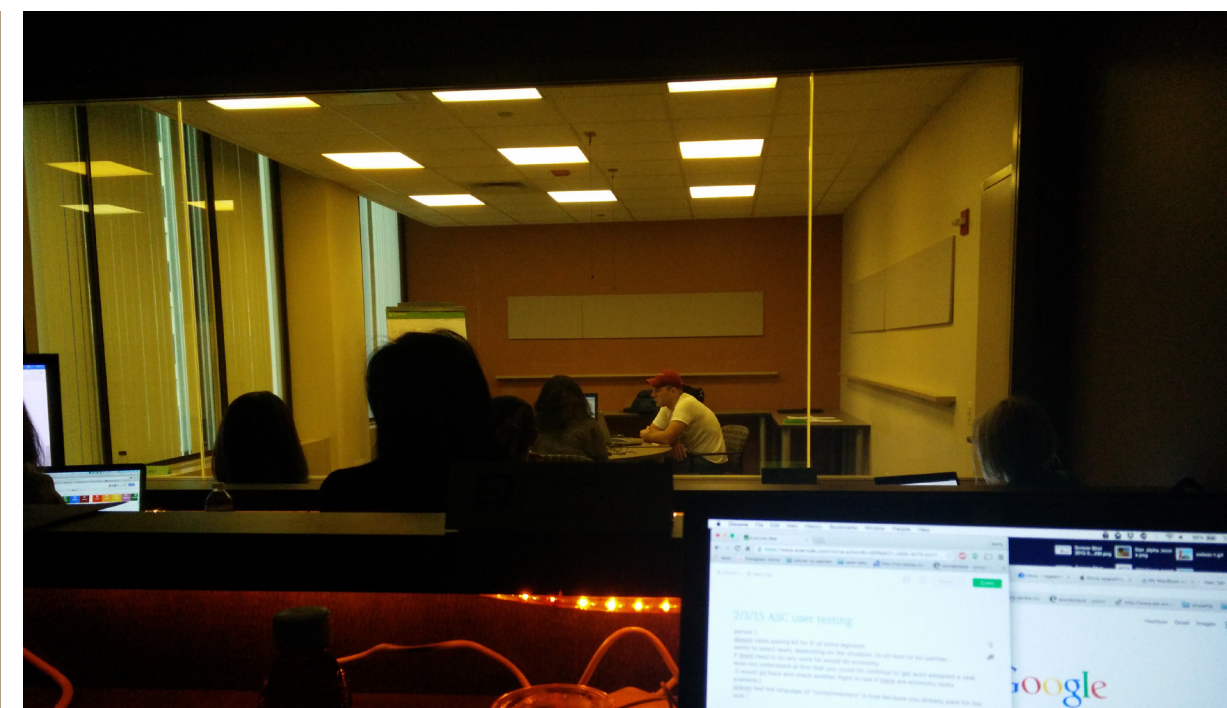
No section header & color bars for separation



## In Practice:

You can view the final white-labeled external prototype for this project here

Advanced Seat Reservation  
<http://6yaf0d.axshare.com/>  
Password = 'thepassword'



# Wrapping Up

This new compact check-in process was received very well with our testers. It is easy to navigate, and easy to scan all of the provided information to make informed decisions quickly. The ability for customers to prepurchase their seats is expected to do very well.

# High Level Findings

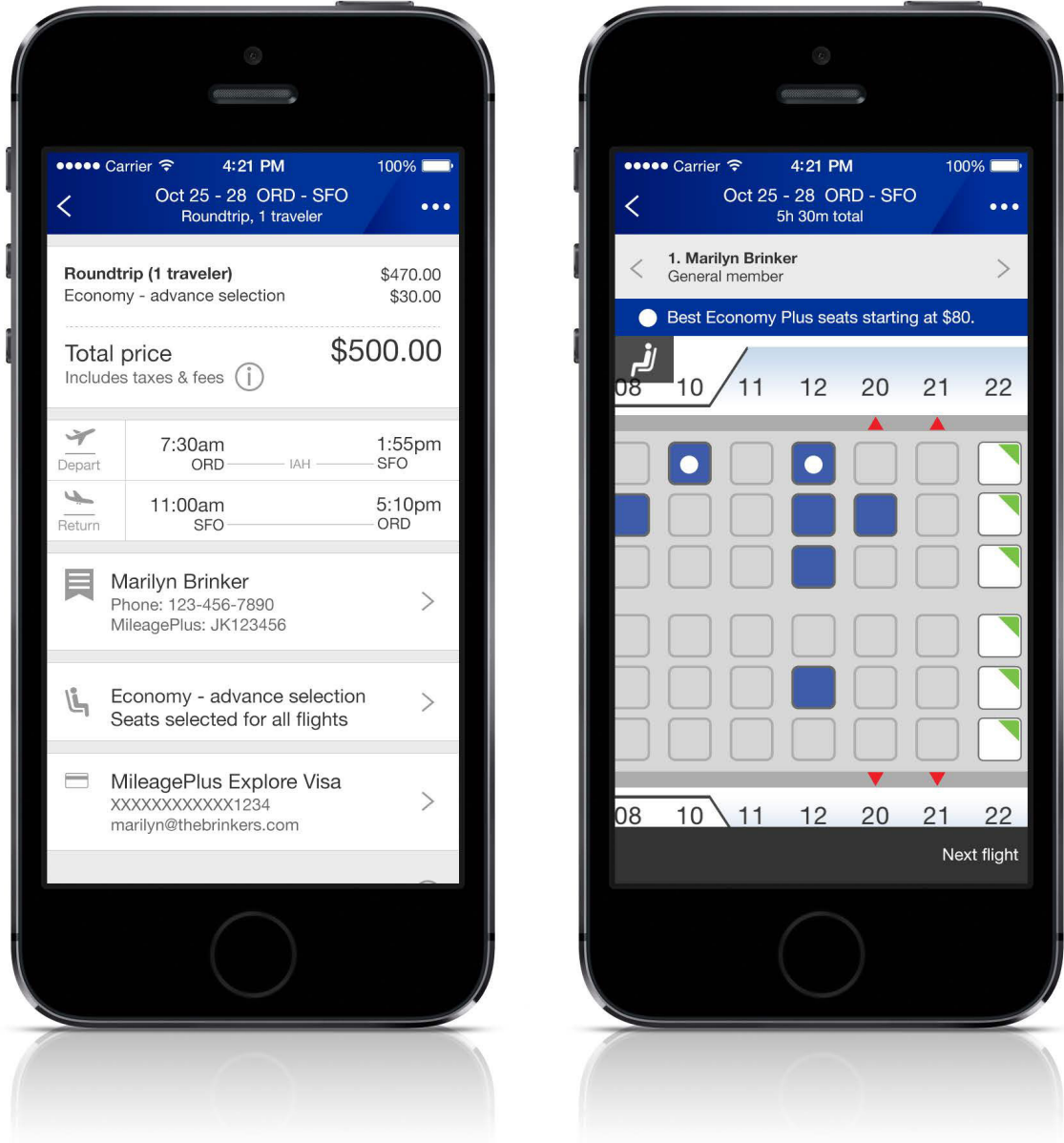
We learned a lot about customers seating preferences during testing. Many users commented that they would opt to go with the prepurchase option specifically to avoid sitting in the middle seat.

Drivers like flight duration, travel companions and seat preferences determined whether participants were willing to reserve their seats for a fee or opt for seat assignment at check in. When traveling alone, some participants were more willing to accept an automatic seat assignment.

Some users stated that wording of the offer would affect their decision. In one prototype, 'drinks were included' vs 'drinks were complimentary' in another, where complimentary would incite the most purchase.

Users associate the color white on a seat map as free.

The wording 'Advanced' resonated more with customers than 'Preferred'.



I was also able to extend the Advance Seat Reservation program to UNITED's mobile app channel as well as the in-airport Kiosk experience.

# ADDITIONAL PROJECTS

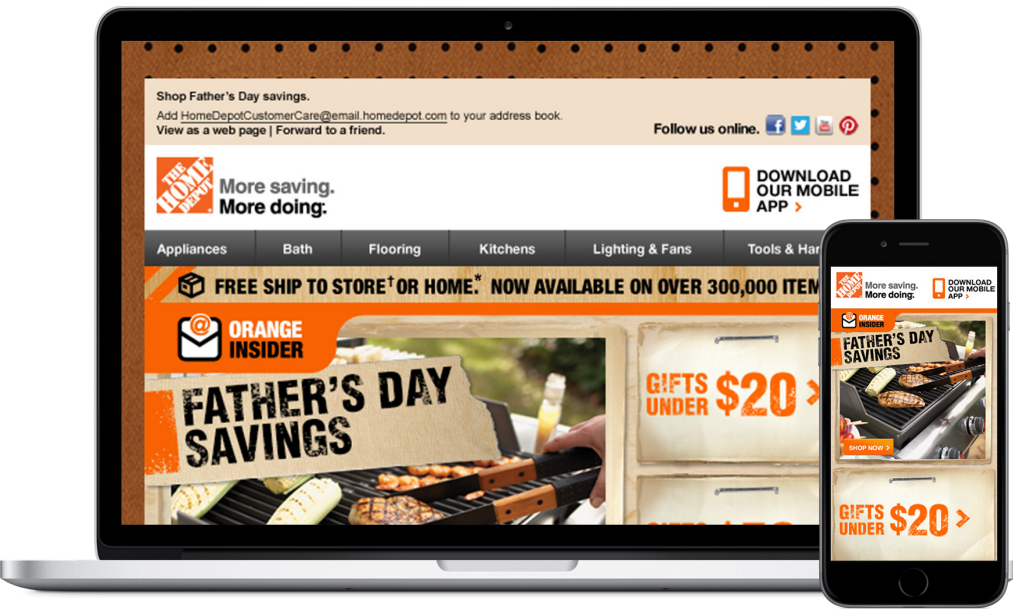


**Williams Interactive Website**  
[www.williamsinteractive.com](http://www.williamsinteractive.com)

**Client:** Reach Creative  
**My Role:** UX, Design

**Deliverables:** Sketches, Wireframes, and Visual Design

This website was designed for Williams Interactive's line of casino slot machines.

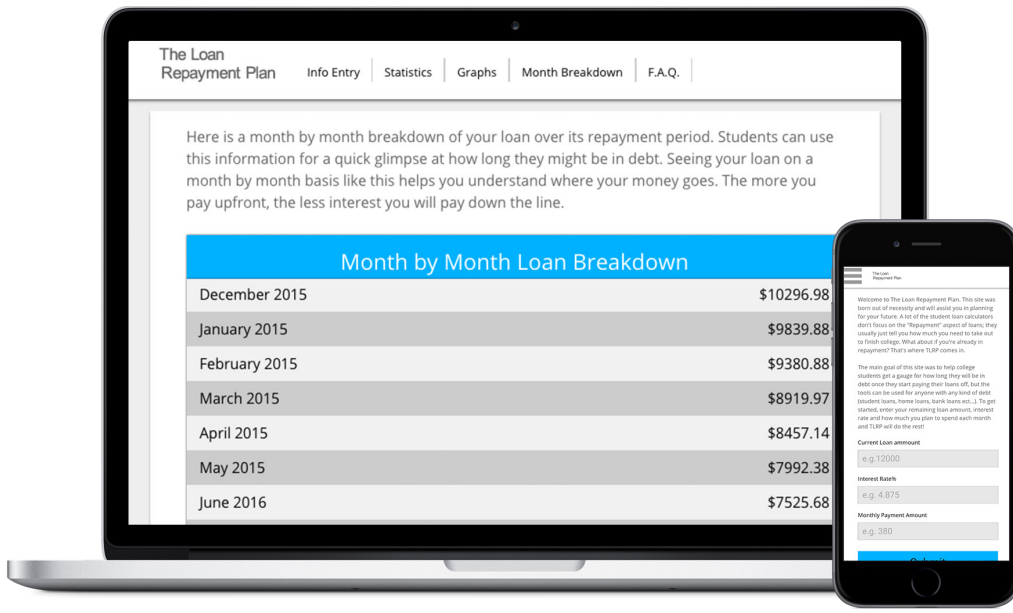


**Home Depot Responsive Emails**

**Client:** Ryan Partnership  
**My Role:** Design, HTML

**Deliverables:** Sketches, Wireframes, Visual Designs, and HTML.

I worked with other developers to design and code highly distributed responsive emails.



**The Loan Repayment Plan Website**  
[www.loanrepaymentplan.com](http://www.loanrepaymentplan.com)

**Client:** Self  
**My Role:** UX, Design, HTML/JS

**Deliverables:** Wireframes, User Research, Prototype Testing, Visual Designs, and HTML/JS

I created this calculator to help students understand how long they have until they are debt free.

## Current UNITED Projects

**UNITED.com Homepage Mega menu**  
**My Role:** UX, Design, Prototype

**UNITED.com Mobile App (Android)**  
**My Role:** Design, Style Guide Implementation

**UNITED.com Global Cart**  
**My Role:** Design, Prototyping

## Other Notable UNITED Responsibilities

- Rapid prototyper
- Produce quick HTML/CSS/JS mockups
- Ideation and white board lead
- Manage our IT code department on best practices
- Research new technologies to bring to the website