



IOE 536 Team 2

The Team

Alison Summerford

Hannah Weiss

Shuoyu Chen

Colin Schembri

Robert Thomas

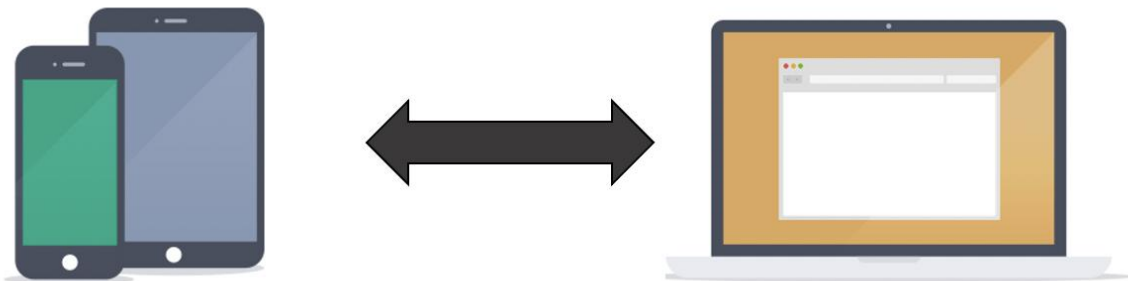
Shreyas Bhat

Background



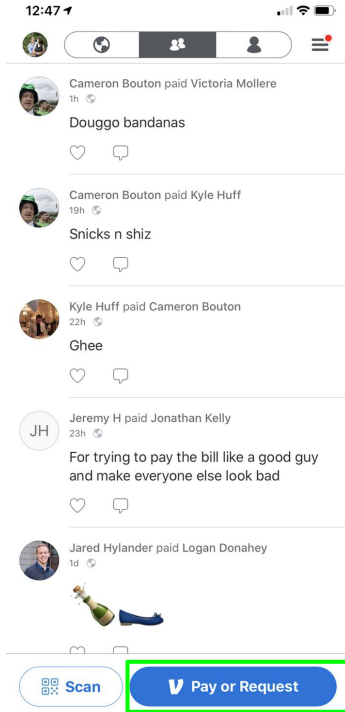
Venmo, which is owned by PayPal, allows users to send payments to each other using their smartphones.

Platforms:

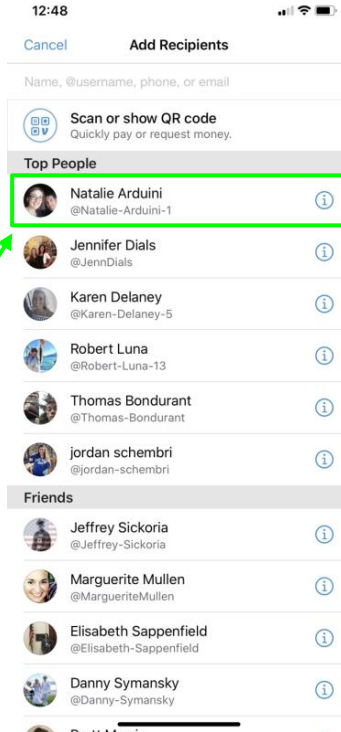


- Venmo's mobile app supports functionality of sending and receiving money
- IOS/Android Interfaces differ slightly
- Summer of 2018 - Venmo phased out support for web services
 - Venmo website is now used for admin purposes
 - cash out your balances, view your transactions, and change your settings

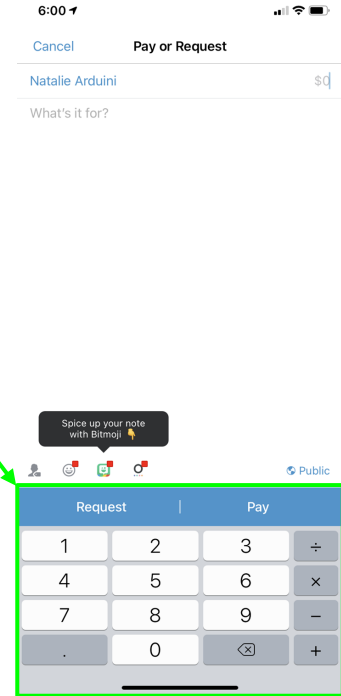
Using the app



Home page



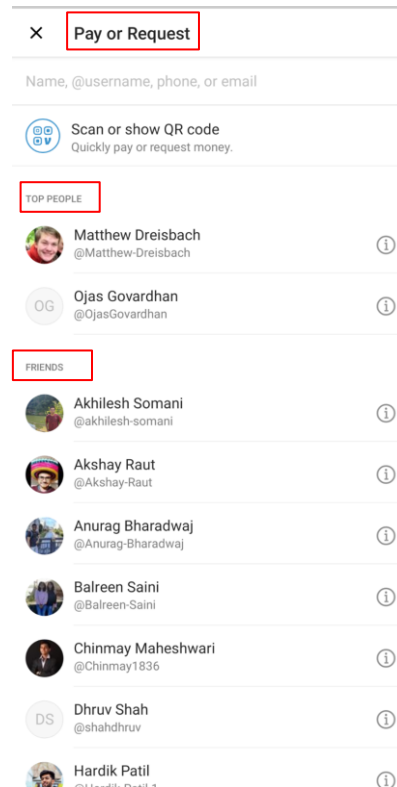
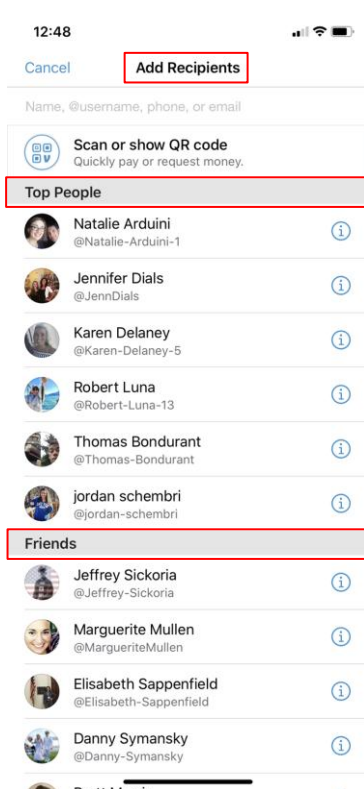
Add recipients page



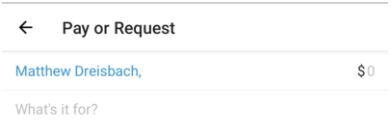
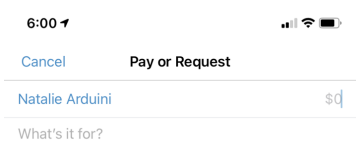
Payment page

Differences: iOS vs Android

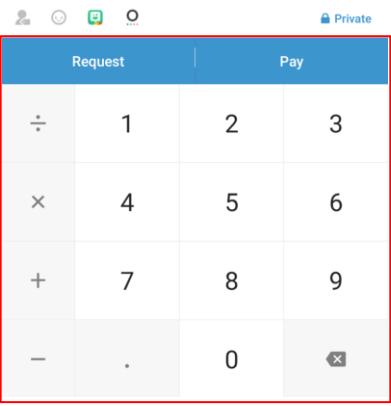
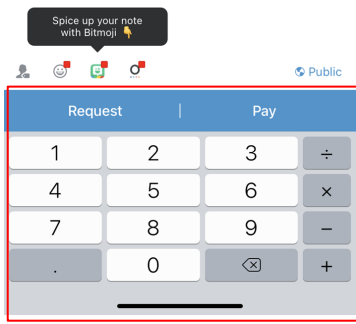
Add recipients page



Differences: iOS vs Android

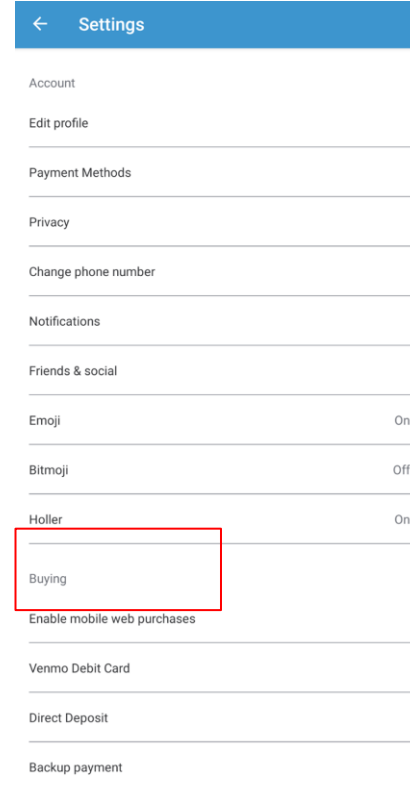
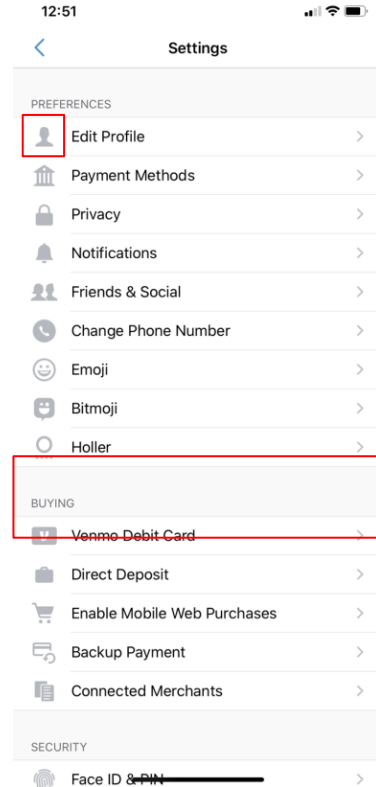


Payment page



Differences: iOS vs Android

Settings page



Website

venmo [Home](#) [Colin Schembri](#) [Statement](#) [Settings](#) [Help](#) [Log out](#)

Pay and Charge functionality is available in the Venmo app.

We're starting to discontinue the ability to pay and charge someone on [Venmo.com](#). If you want to use these features, get the Venmo app from the [App Store](#) or [Google Play](#).

PUBLIC

FRIENDS

MINE



Cameron Bouton paid Victoria Moliere
November 1, 2020, 11:24 AM 

Douggo bandanas

 Be the first to like this.





Cameron Bouton paid Kyle Huff
October 31, 2020, 6:19 PM 

Snicks n shiz

 Be the first to like this.





Kyle Huff paid Cameron Bouton
October 31, 2020, 2:50 PM 

Ghee

 Be the first to like this.





Colin Schembri
[Edit Profile](#)

\$40.00 [Transfer to Bank »](#)

Getting Started Checklist

60%

NEXT UP: [Invite some friends](#)

Friends (104)



Invite Friends

 Like 71K

 Share

 Tweet

Methods & Findings

Methods: Heuristic Evaluation

- 5 point Likert scale system usability survey (based on Nielsen, Wickens and Schneiderman principles)
 - Very poor, poor, moderate, good, excellent

Nielsen's 10 Usability Heuristics for User Interface Design	
1 Visibility of system status	Good
2 Match between system and the real world	Moderate
3 User control and freedom	Moderate
4 Consistency and standards	Excellent

Methods: Cognitive Task Analysis

Descriptive Analysis

- User interviews and observation of select tasks
 - Send money, transfer to bank, add friend etc.



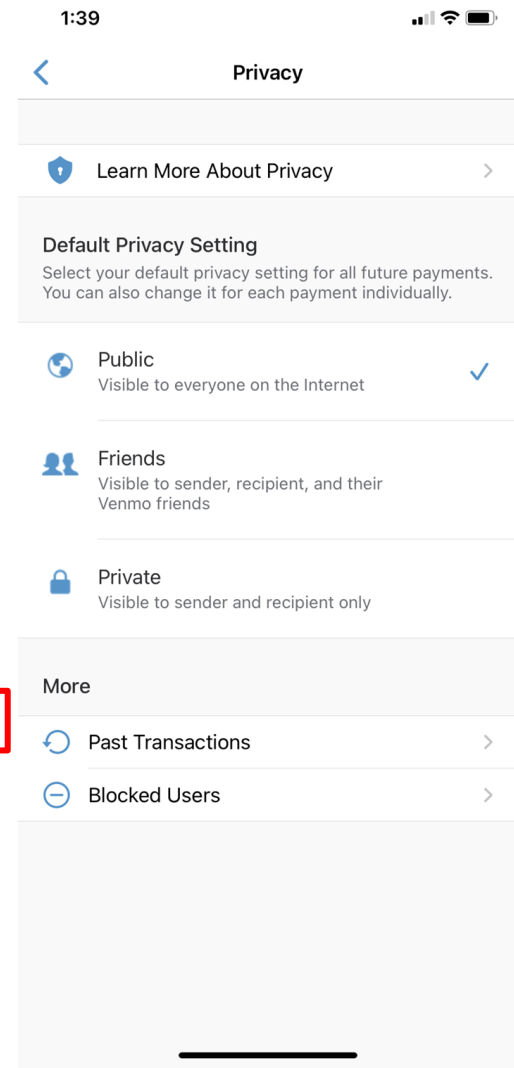
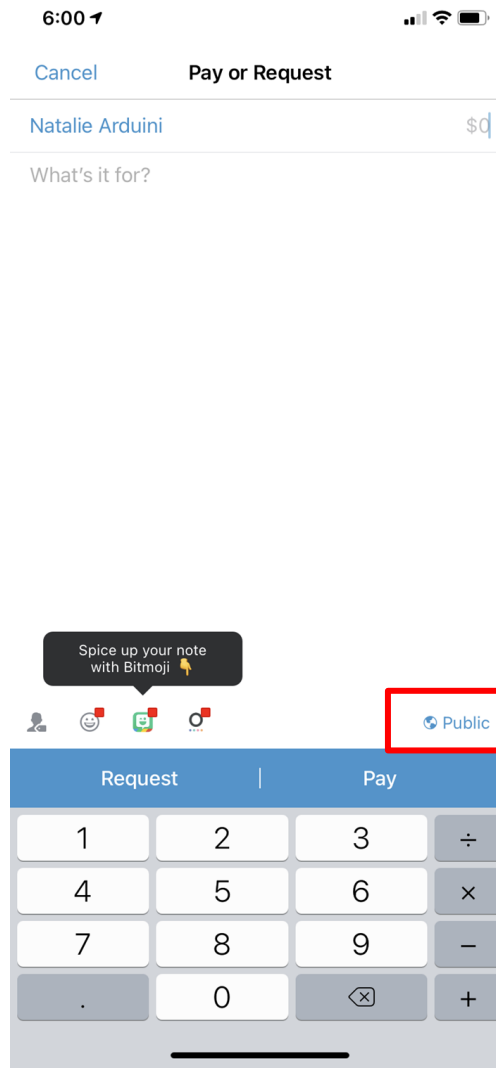
Findings/Problems: Functionality

- Balance required?
- Privacy setting
- No Transaction sorting

Functionality - Privacy

Default Privacy setting is Public

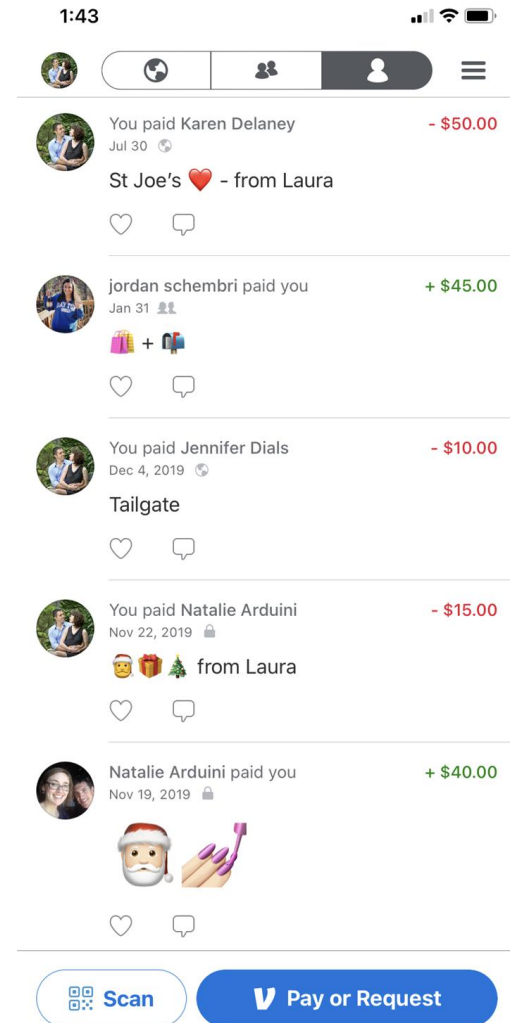
Option to change is unobtrusive



Functionality - Transactions

Chronological

No Sorting or Filtering

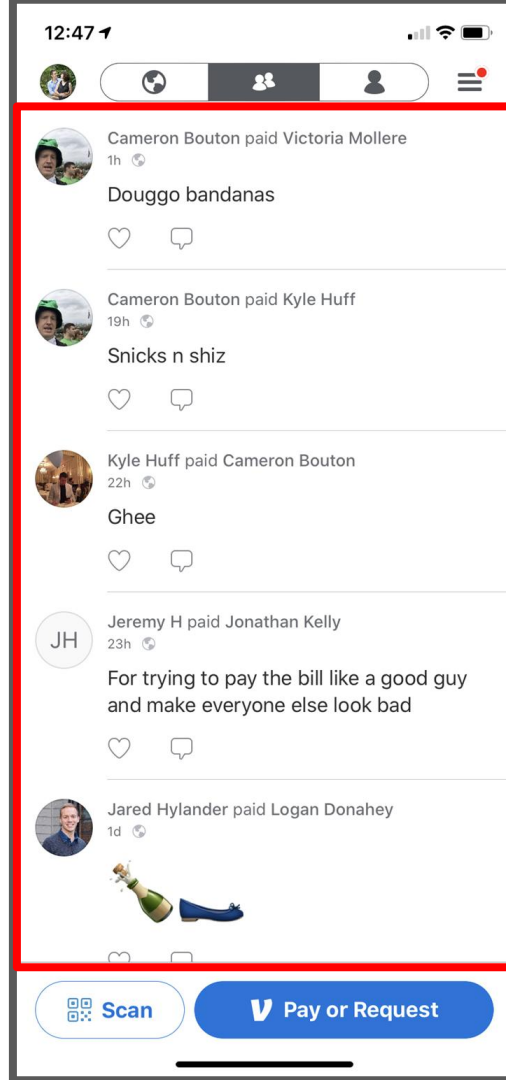


Findings/Problems: Interface

- Misallocation of space
- Unintuitive icons
- Small icons
- Small entry fields
- Loss of visual momentum in settings menu

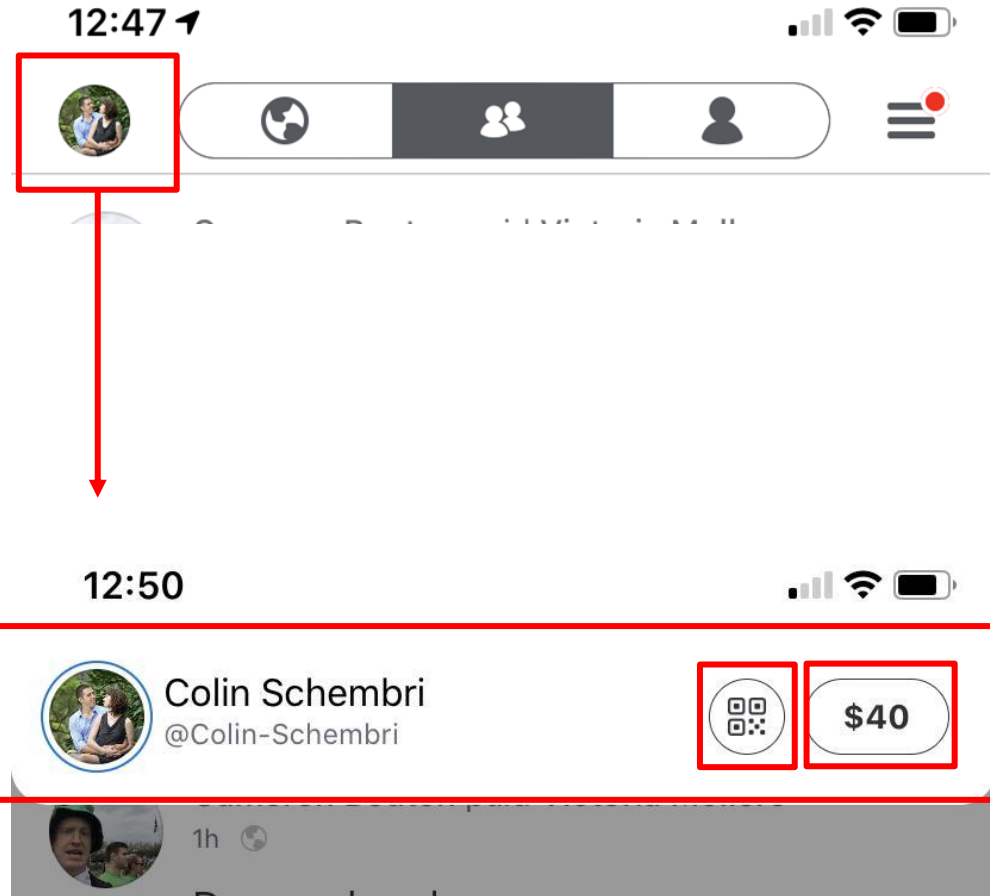
Misallocation of space

- 85% Social, 15% Function
- No balance info
- Widely separated functions

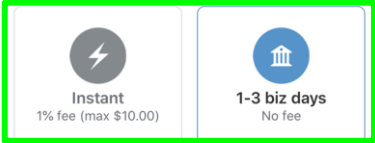
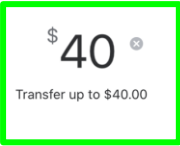
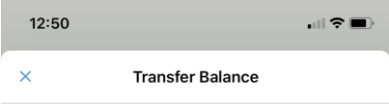


Unintuitive icons

- Profile picture
- Balance button
- Scan code

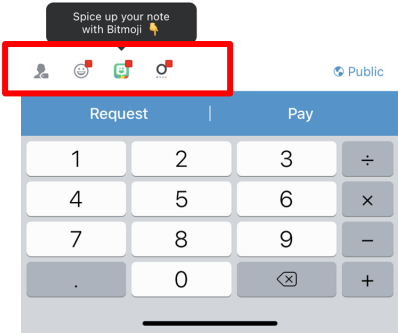
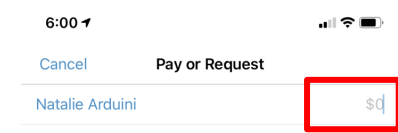
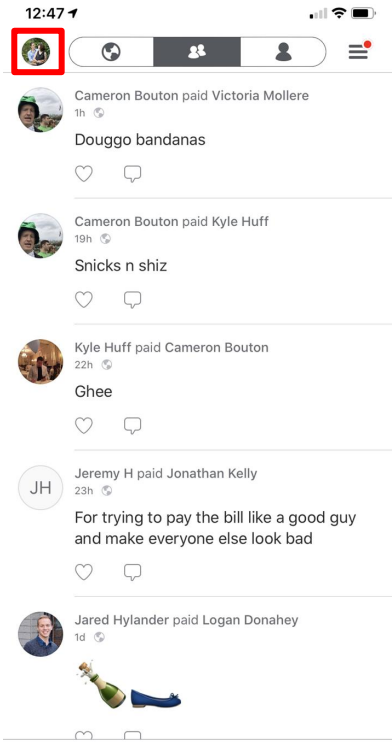


Small icons/entry fields

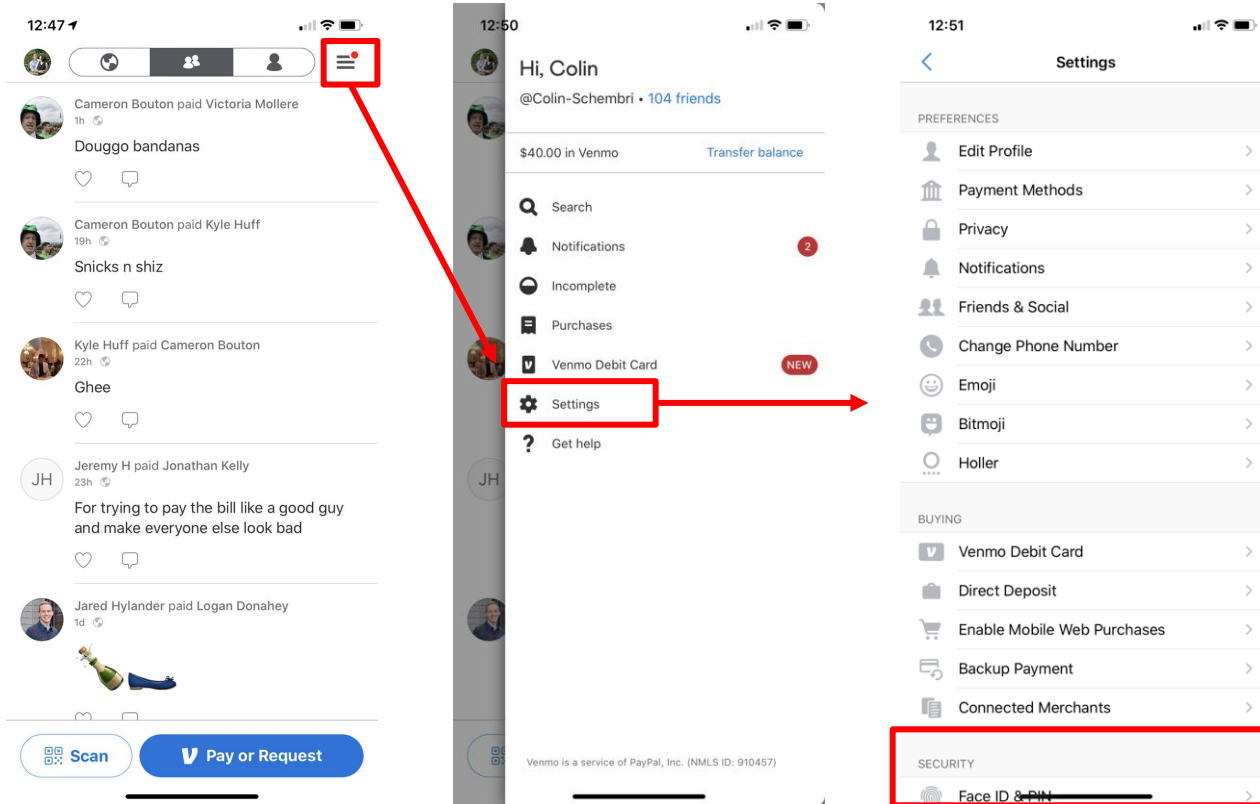


Transfer to  Usaa Federal Sa...gs Bank •• 8823 >

Transfer speeds vary and could take up to 3 business days to complete. Transfers are reviewed which may result in delays or funds being frozen or removed from your Venmo account. [Learn more...](#)



Visual Momentum and Data Observability



Evolutionary Redesign

Evolutionary Redesign

Training module for first time users - “How to use”

- Pay/ request money
- Transfer money to bank
- Link friends/contacts from Facebook
- Location of settings

Help and documentation

User Control freedom

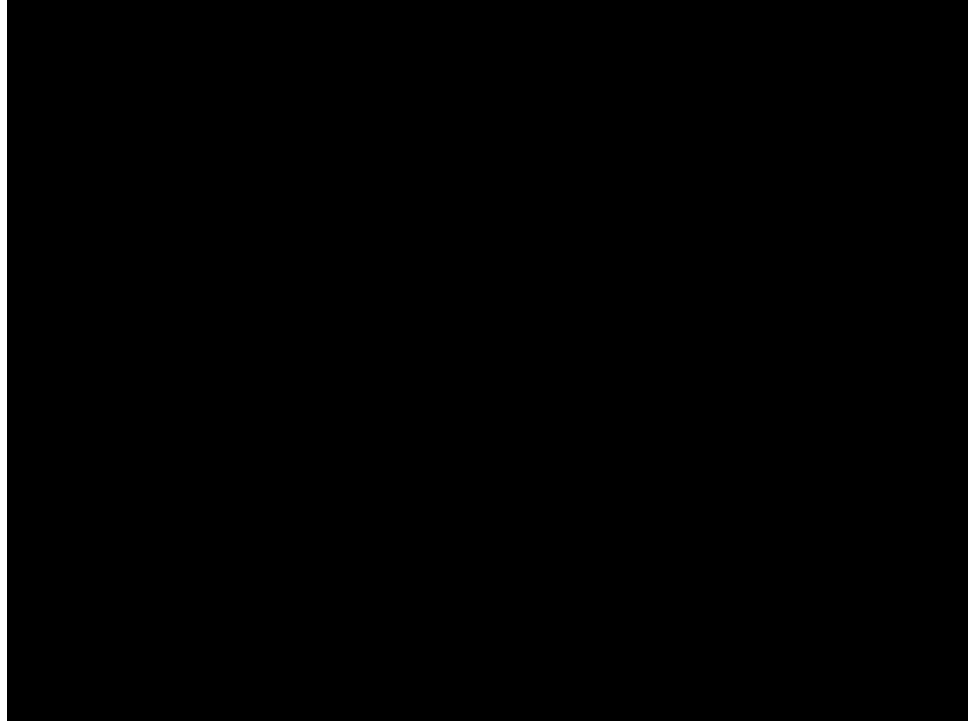
Evolutionary Redesign

Error prevention & management

Recognition rather than recall

Interface restructuring:

- Memory load
- Clutter
- Consistency and standards
- Redundancy gain



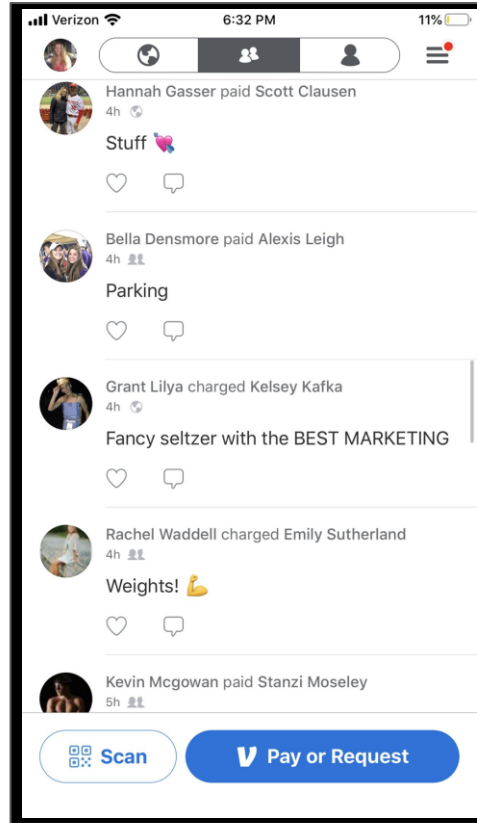
Evolutionary Redesign: Main Screen

Wicken Principles:

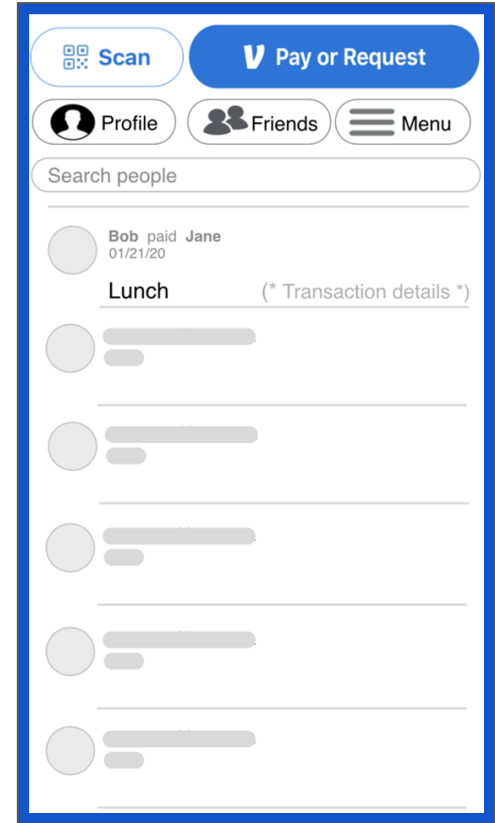
Use discriminable elements

Minimizing information access Cost

Knowledge in the world



Original



New

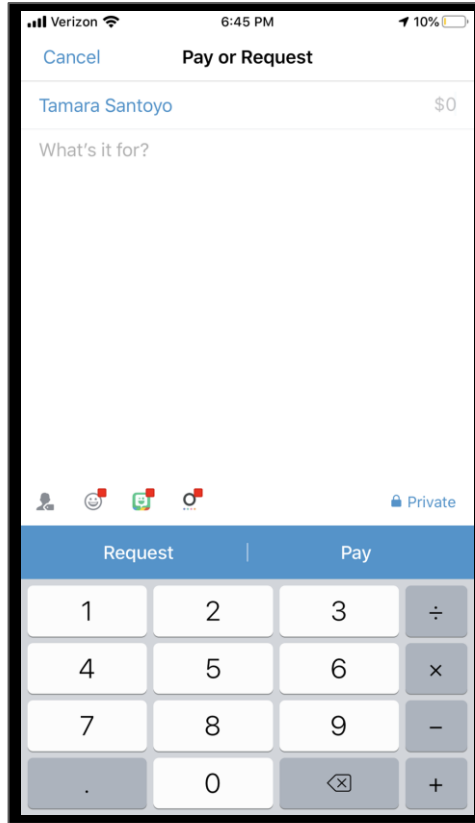
Evolutionary Redesign: Payment Screen

Salience

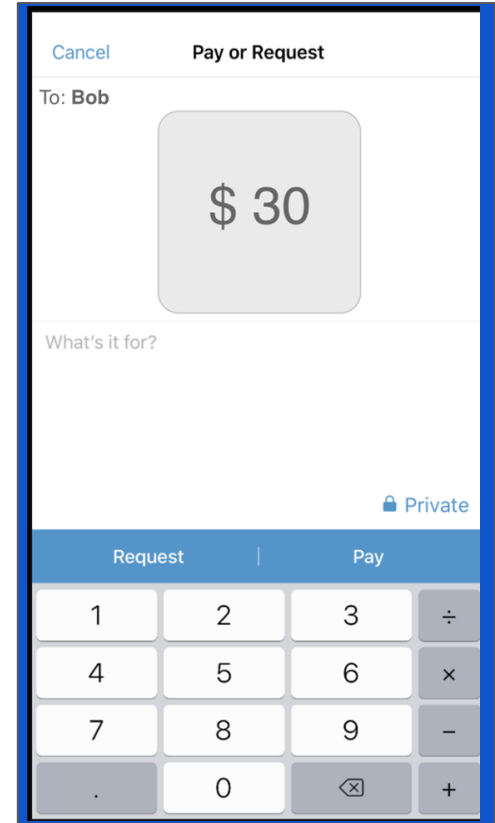
Error prevention

Defense in depth

Information feedback



Original



New

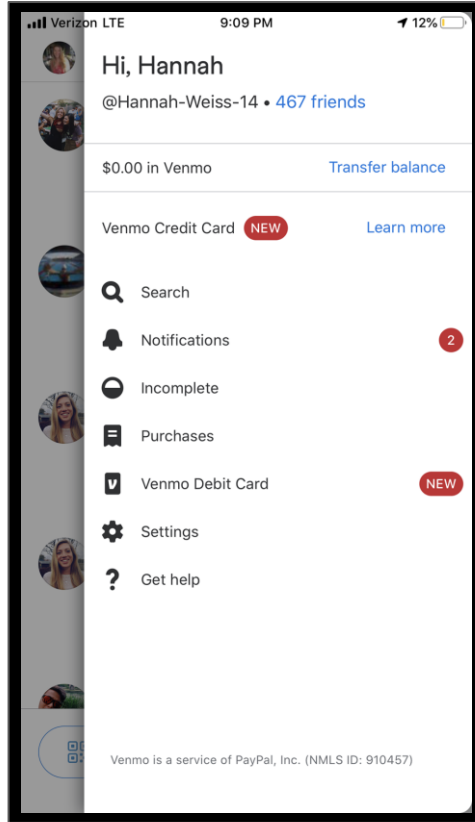
Evolutionary Redesign: Menu

User control freedom

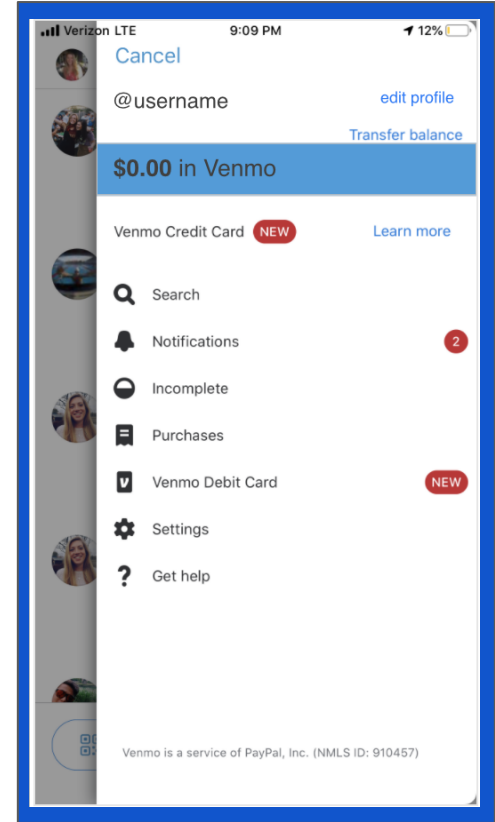
Easy reversal of actions

Redundancy Gain

Principle of consistency



Original



New

Revolutionary Redesign

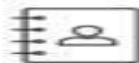
Revolutionary Redesign

- Overhaul Home page
- Reconfigure Payment Process

New Features

- Near Field (NFC) Transfers (Tap to Pay)
- Voice control through Siri/Google

10:10



My Balance

\$40

 Pay or Request



Transfer Balance



View Transaction



Scan

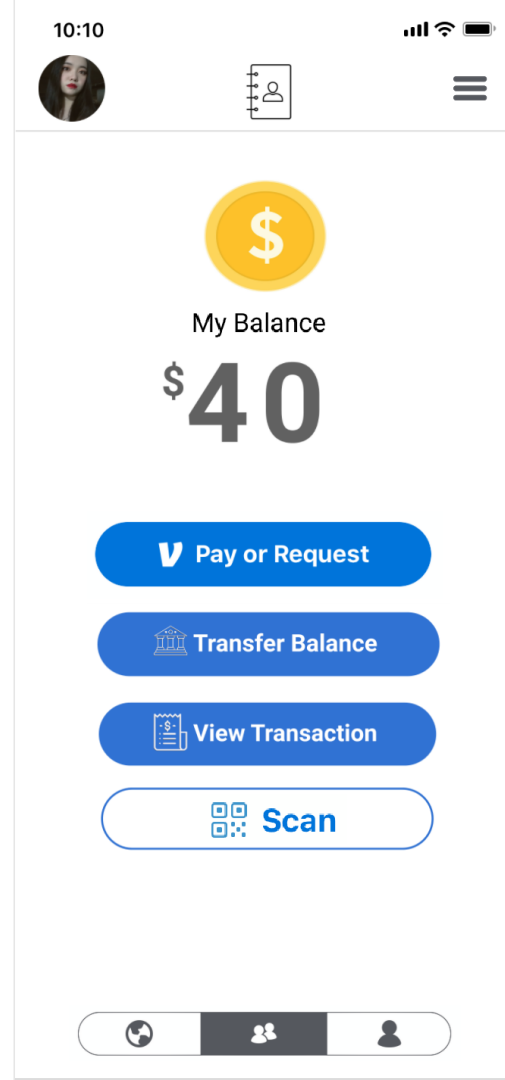


Revolutionary - Home Screen

Removed Social information

Added Balance Display

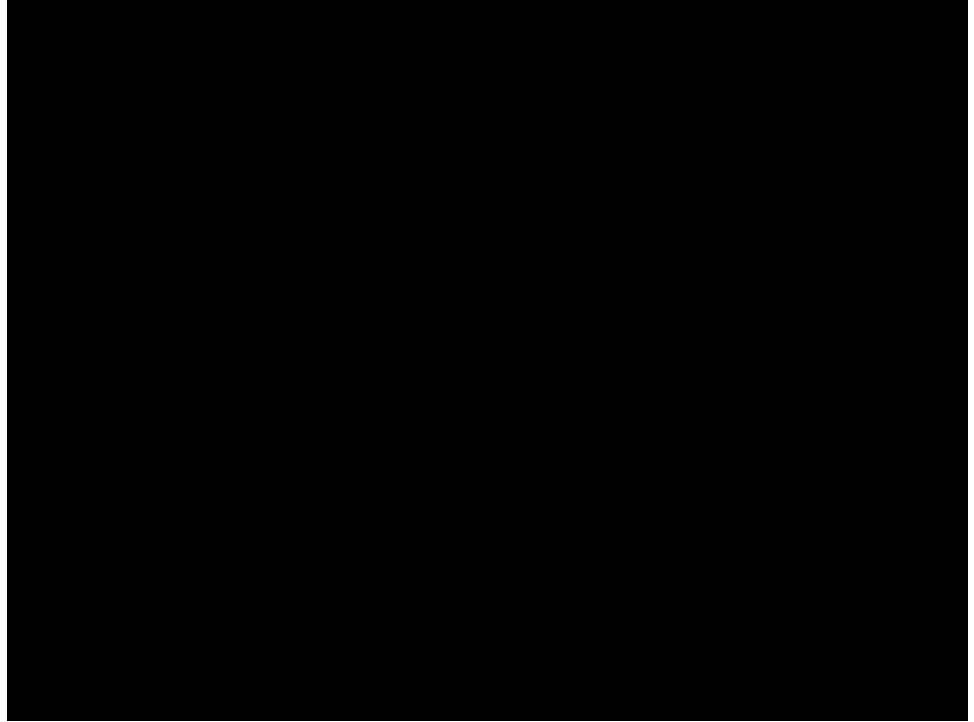
Enlarged Pay and Scan buttons



Revolutionary - Pay or Transfer

Reordered actions

1. Select Pay or Request
2. Select recipient
3. Input amount
4. Add personal message*
5. Select Source
6. Confirm



- Tap
- Audio functionality



Comparative Evaluation

Comparative Evaluation - Heuristic Evaluation

- Direct comparison to Heuristic evaluation completed before either redesign.
- 5 point Likert scale allows quantitative comparison

Schneiderman's 8 Golden Rules of Interface Design		
1 Strive for consistency	Excellent	green for incoming money, red for outgoing money, consistent colors and fonts
2 Seek universal usability	Poor	Blind/mute users, elderly users (increase font size), location accessibility (DOES NOT WORK internationally, must be in US with US bank)
3 Offer informative feedback	Excellent	good feedback
4 Design dialogs to yield closure	Good	
5 Prevent errors	Poor	
6 Permit easy reversal of actions	Poor	
7 Keep users in control	Excellent	

Nielsen's 10 Usability Heuristics for User Interface Design			Rating (0 - 5)	Out of
1 Visibility of system status	Enter score		0	5
2 Match between system and the real world	Enter score		0	5
3 User control and freedom	Enter score		0	5
4 Consistency and standards	Enter score		0	5
5 Error prevention	Enter score		0	5
6 Recognition rather than recall	Enter score		0	5
7 Flexibility and efficiency of use	Enter score		0	5
8 Aesthetic and minimalist design	Enter score		0	5

Comparative Evaluation - Focus Group

Participants:

- Novice Users
- Experienced Users
- Users suffering from Various Disabilities.

Goals:

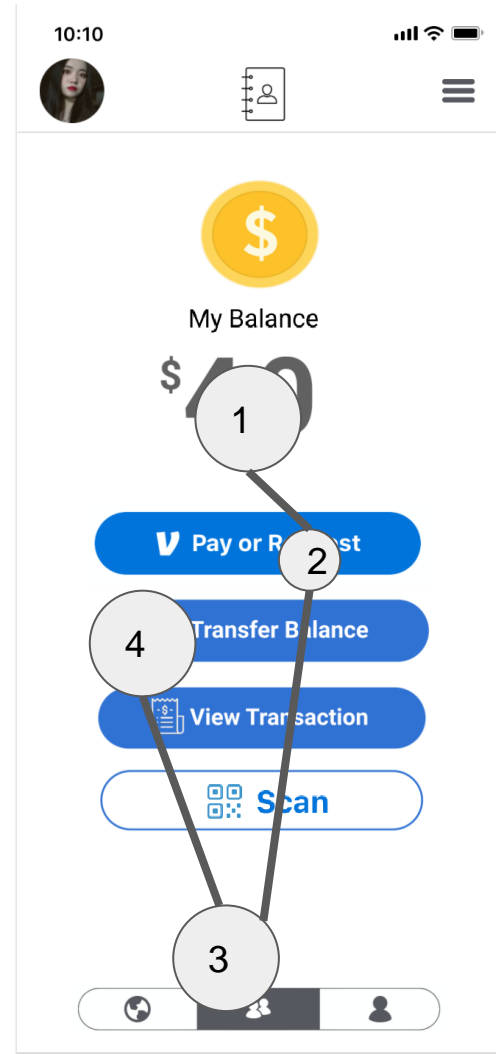
- Validate Tutorial as Support Tool for Novice Users
- Ensure No Functions were Lost in Redesign
- Identify New features Support, and Next Step for Blind and Motor Challenged Users.



Comparative Evaluation - Eye Tracking

Goals:

- Ensure New Sizes of Display support readability
- Ensure Design is Supported by Users Scanpath
- Ensure no elements are distracting



Questions