



Mining for Usability Insights

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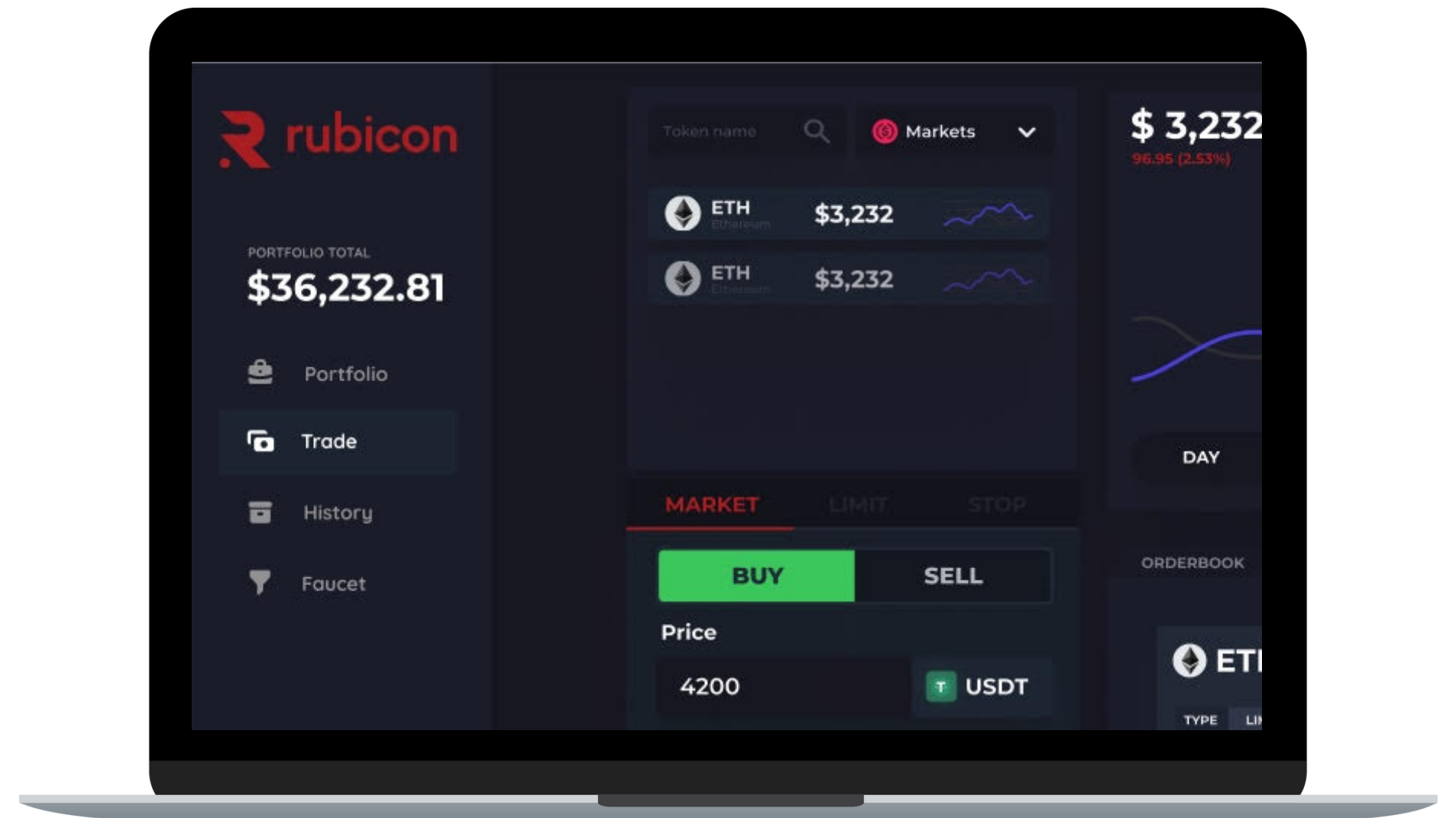




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Research Objectives

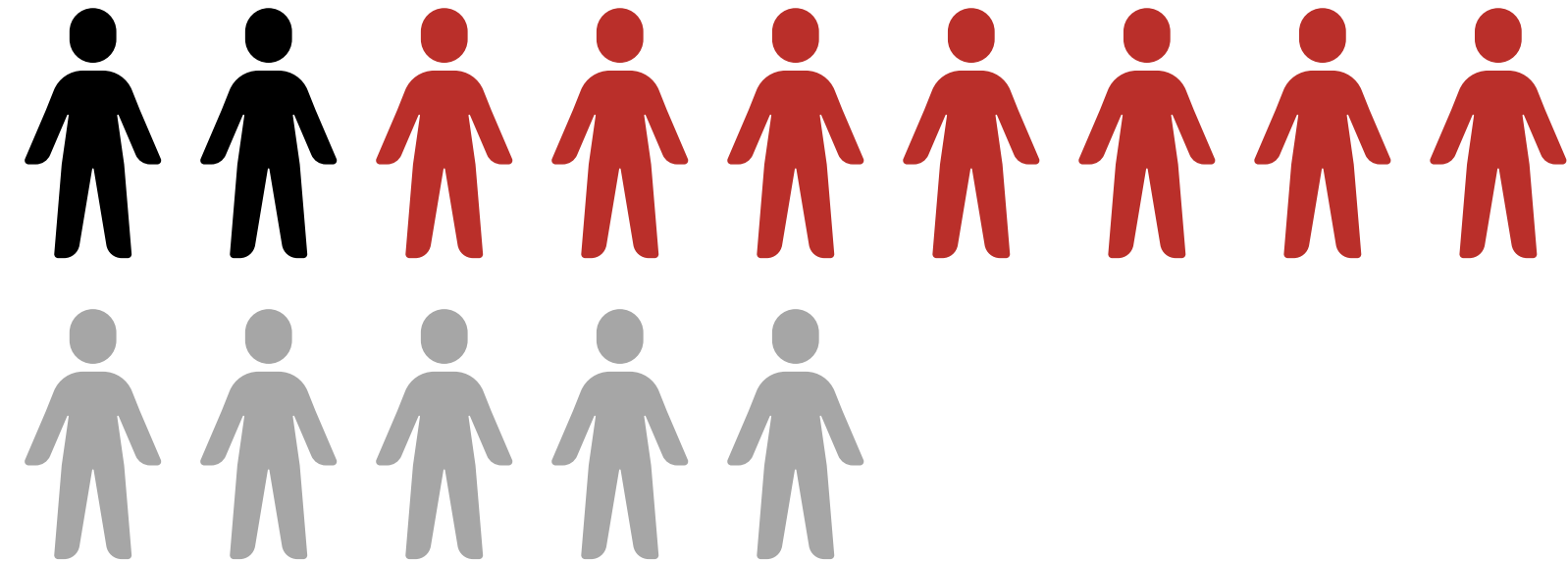
- 1 Are users able to clearly interpret a coin's current price and market trend over different time intervals using the graph?
- 2 Are users able to navigate the Token Menu to successfully change quote tokens and pairings between differing trading coins?
- 3 Are users able to navigate the Trade Menu to place both market and limit orders?
- 4 Can novice users understand the value of the Order Book and Open Orders?



Research Methodology

Participants

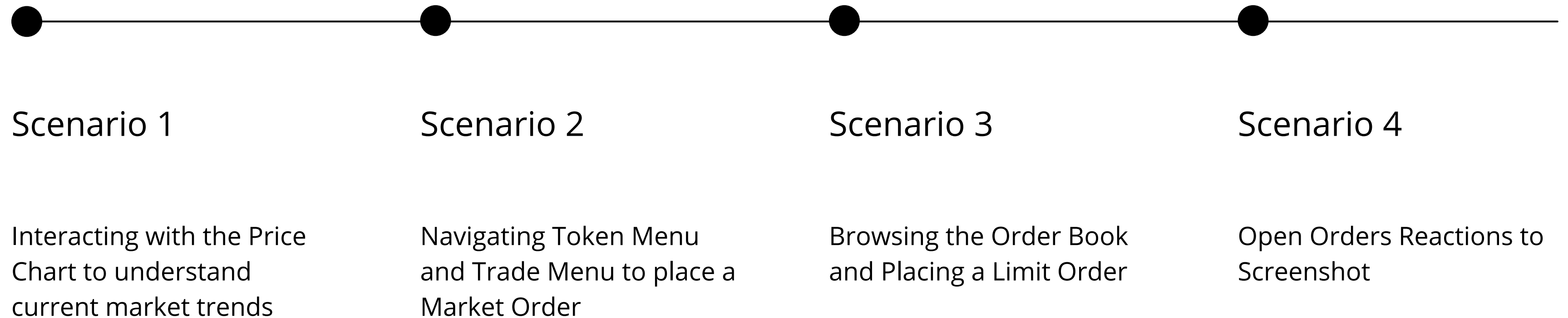
- Thirteen one-on-one remote interviews running between 25 – 40 minutes in duration
- 4 Novice users, 7 users with moderate familiarity, 2 expert users
- Participants used screensharing to vocalize and demonstrate how they'd accomplish tasks and their reactions to app features



Research Methodology

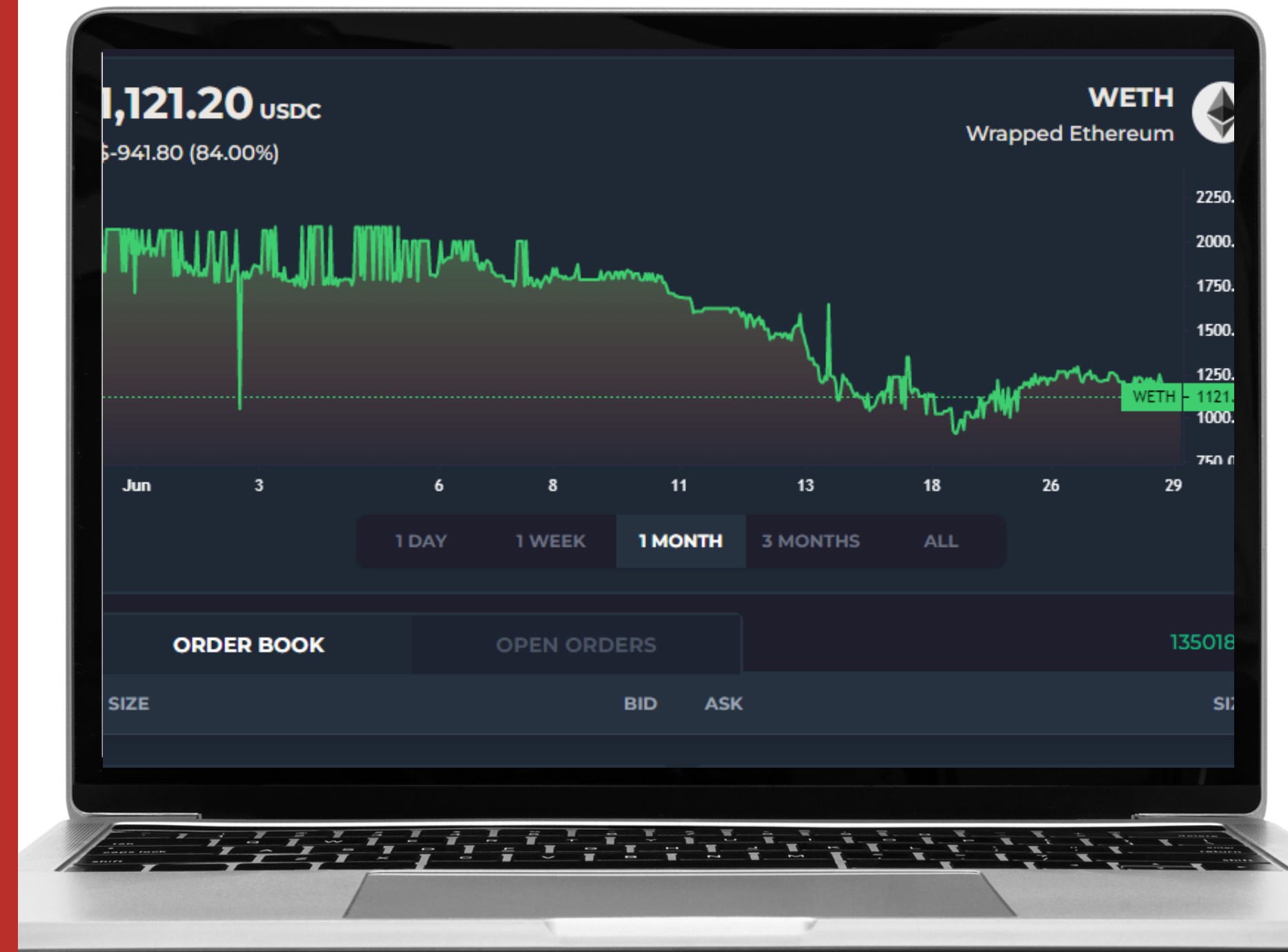


Four Scenarios



Objective 1

Are users able to clearly interpret a coin's current price and market trend over different time intervals using the graph?



Participants **lacked confidence** in interpreting particular market trends due to **unclear** and **missing graph features**

Participants were able to interpret the coin's market's trend over different time intervals, however, they struggled to:

- interpret the **significance of moving dashed** line
- discern what the time increment **"All"** included
- understand the relationship between selected **time increment** and **X-axis**
- understand why the chart **prices** did not change in real time
- avoid feeling **overwhelmed** by the granular data the chart displays

"You want me to compare two coins? I would just have **two charts** open, I guess. -P1

Recommendations

- Addition of help icon with modal for graph "key" so that participants can understand what each type of line on the chart signifies
- Include a help icon with explanation as to why the chart isn't updated in real time
- Inclusion of currency and time values on chart axes



Price Chart: Participants **desired** more **interactive** and **informative visual elements**.

Objective 2: Are users able to clearly interpret a coin's market trend over different time intervals?

“

I don't know if that's a good or bad thing, but **typically**, I look at graphs [...] and as you **zoom out, the precision tends to get less coarse**. -P1

”

- ✗ **expected** a less granular precision on line graph, preferring a **smoother line**
- ❓ found the **significance of moving dashed** line to be **confusing** and **unintuitive**
- ✗ **expected** to be able to scroll in order to **zoom in and out** of the chart
- ✗ **expected** to see **units** for all values on x and y axis of chart

Recommendations

- Alter line graph so that as timeframe broadens, precision decreases
- Inclusion of feature to scroll in and out
- Inclusion of currency and time values on chart axes
- Addition of help icon with modal for graph "key" so that participants can understand what each type of line on the chart signifies



Price Chart: Participants desired more options for **time intervals**.

Objective 2: Are users able to clearly interpret a coin's market trend over different time intervals?

- ✗ all expertise levels expected or desired to see time increments between **"3 months" and "All"**
- ✗ high expertise ppts desired **smaller increments** for short-term trading
- 🔍 uncertain about what timeframe **"All"** included
- ✗ moderate to high level expertise ppts desired the option to define a **specific range of time**



Recommendations

- "6 Months" and "1 Year" time interval option
- "Half day" and "Quarter day" time interval
- option to input a range of time (date/hourly increments) to view
- inclusion of help icon with modal that defines what time "All" encompasses

"I would like to see [...] one day, one week, one month, three months, **six months**, **one year** and then there's this option to click a range, like **a specific range**." -P7

"Have **half a day**, **quarter day** for short-term traders" -P8

Price Chart: Participants with *higher expertise* desired inclusion of more **technical elements**.

Objective 2: Are users able to clearly interpret a coin's market trend over different time intervals?

✕ desired to see more technical features in general

✕ desired to see **candlestick charts**

✕ desired to see **volume bars**

Recommendations

- Addition feature which allows user to opt in and out of including technical features on price chart
 - include candlesticks
 - include volume bars

If they want it to be like a very **active trading** platform [...] I feel like that feature would have to be **more advanced**. [...] I like to use **candlestick charts**. So, if that were an option, that would be cool. -P8

One thing I would appreciate here is having **volume bars**.
-P7

Objective 2

Are users able to navigate the Token Menu to successfully change quote tokens and pairings between differing trading coins?



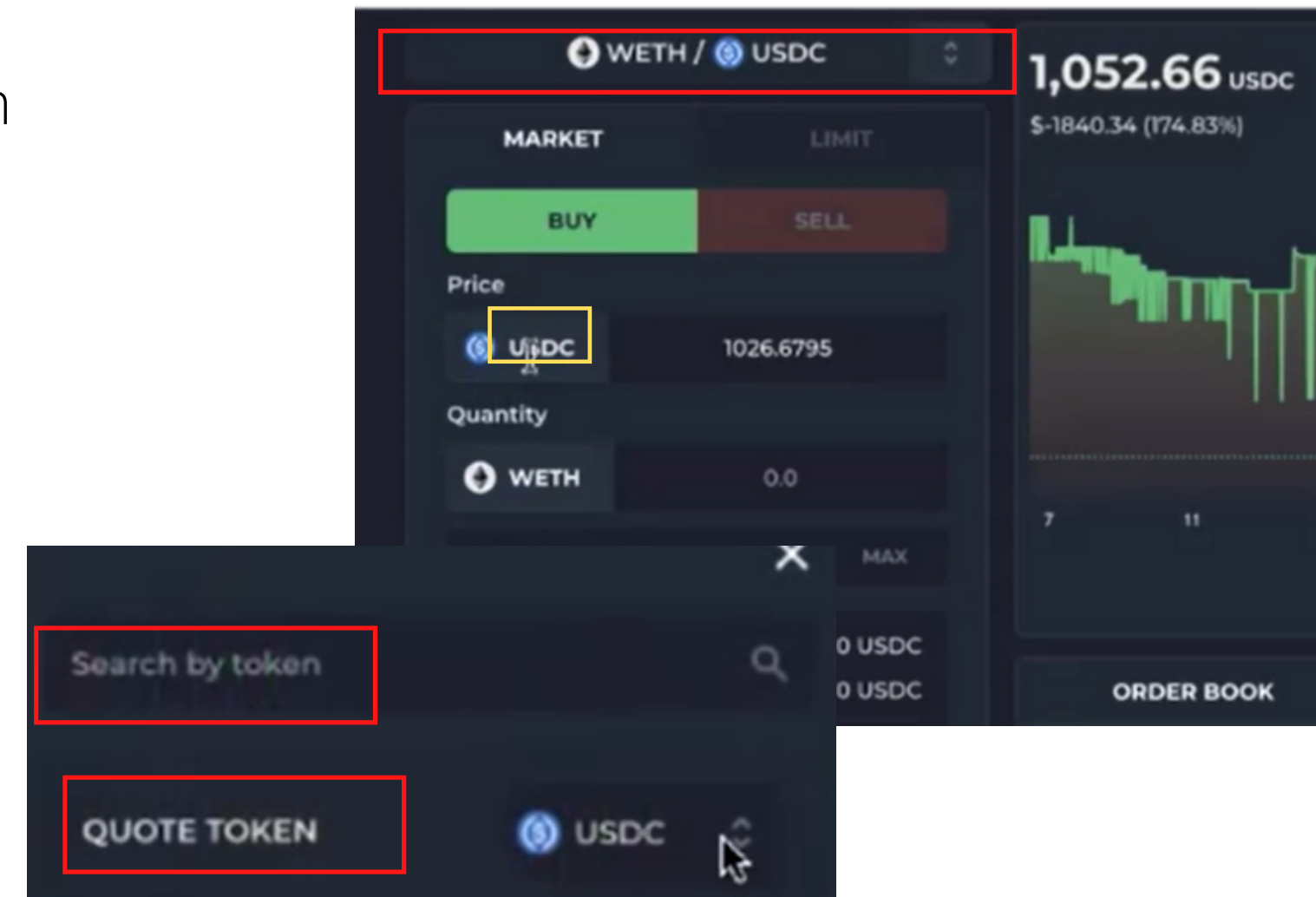
Participants **struggled** to find & were hesitant to interact with the **Token Menu**

Both experienced and novice participants **struggled** to find the Token Menu.

- Participants tried to click on token icons next to "price" in the Trade Menu to try and access Token Menu.

Some participants demonstrated hesitancy when inside the Token Menu

- The term "**Quote Token**" was an **unfamiliar** term to both experienced and novice participant
- Participants thought they could search for other non-listed coins using the "Search by Token"



Recommendations

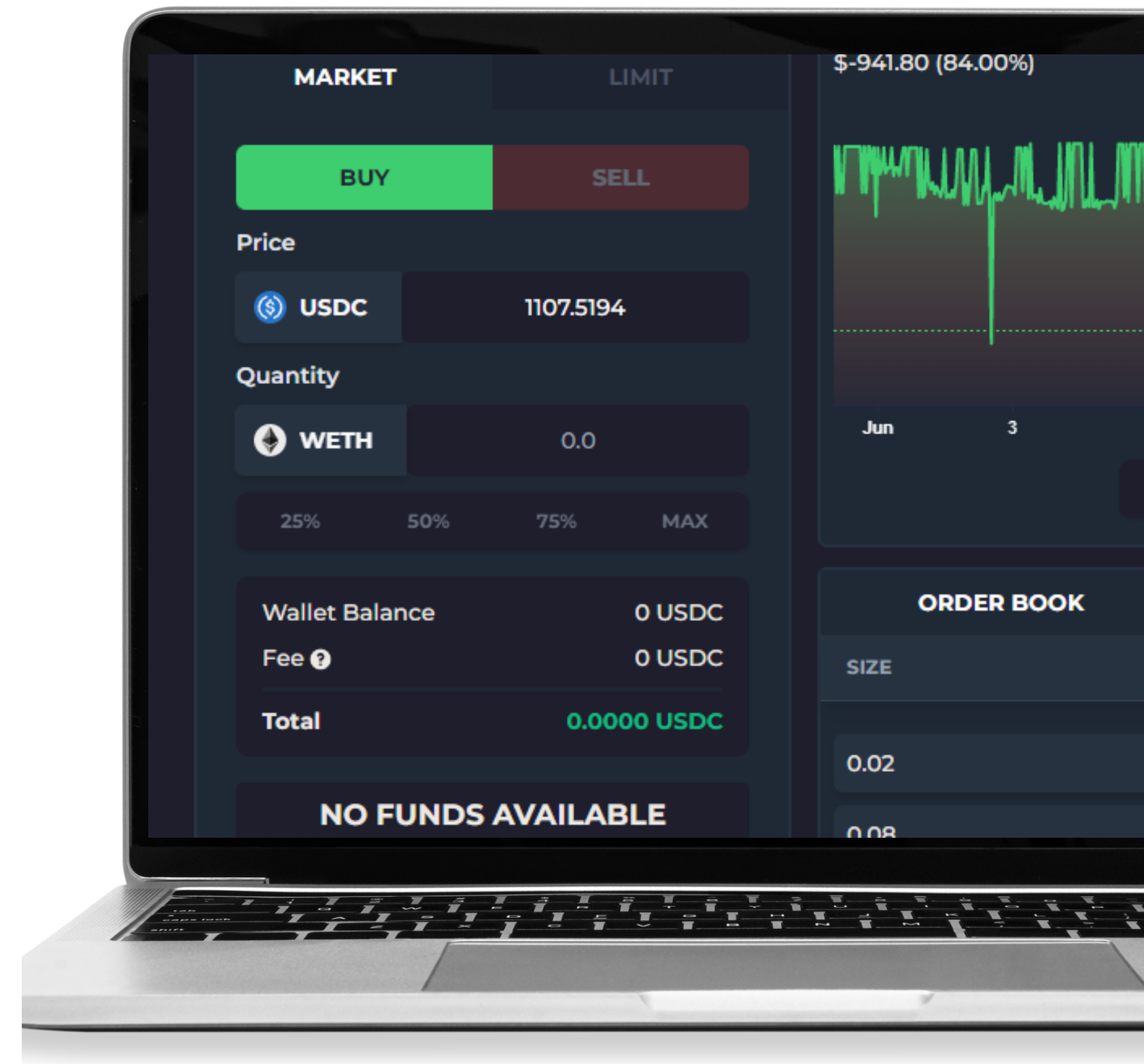
- Provide multiple option to access Token Menu
- Consider using more common terminology
- Consider removing "Search by Token" if only few tokens available

"Why do they even have a Search Option?!"
- Q13

"Quote token is not lexicon I am particularly familiar with as a professional trader" -
Q11

Objective 3

Are users able to
navigate the Trade
Menu to place both
market and limit orders?



During market buys many participants were **confused and frustrated** when unable to enter an amount into "**Price**" field

Participants tried to type in the amount of USDC they wanted to pay for Ethereum in the "price" field and were confused when unable to do so.

- Previous experience in other crypto trading platforms influenced this assumption
- Other participants assumed that the same visual design between "Price" and "Quantity" indicated the same interaction functionality

Participants expressed frustration and uncertainty when having to enter the "Quantity" since it forced them to do mental math or use an external calculator

MARKET LIMIT

BUY SELL

Price

USDC 1239.8894

Quantity

WETH 0.0

25% 50% 75% MAX

Wallet Balance 0 USDC

Fee ? 0 USDC

Total 0.0000 USDC

NO FUNDS AV

Recommendations

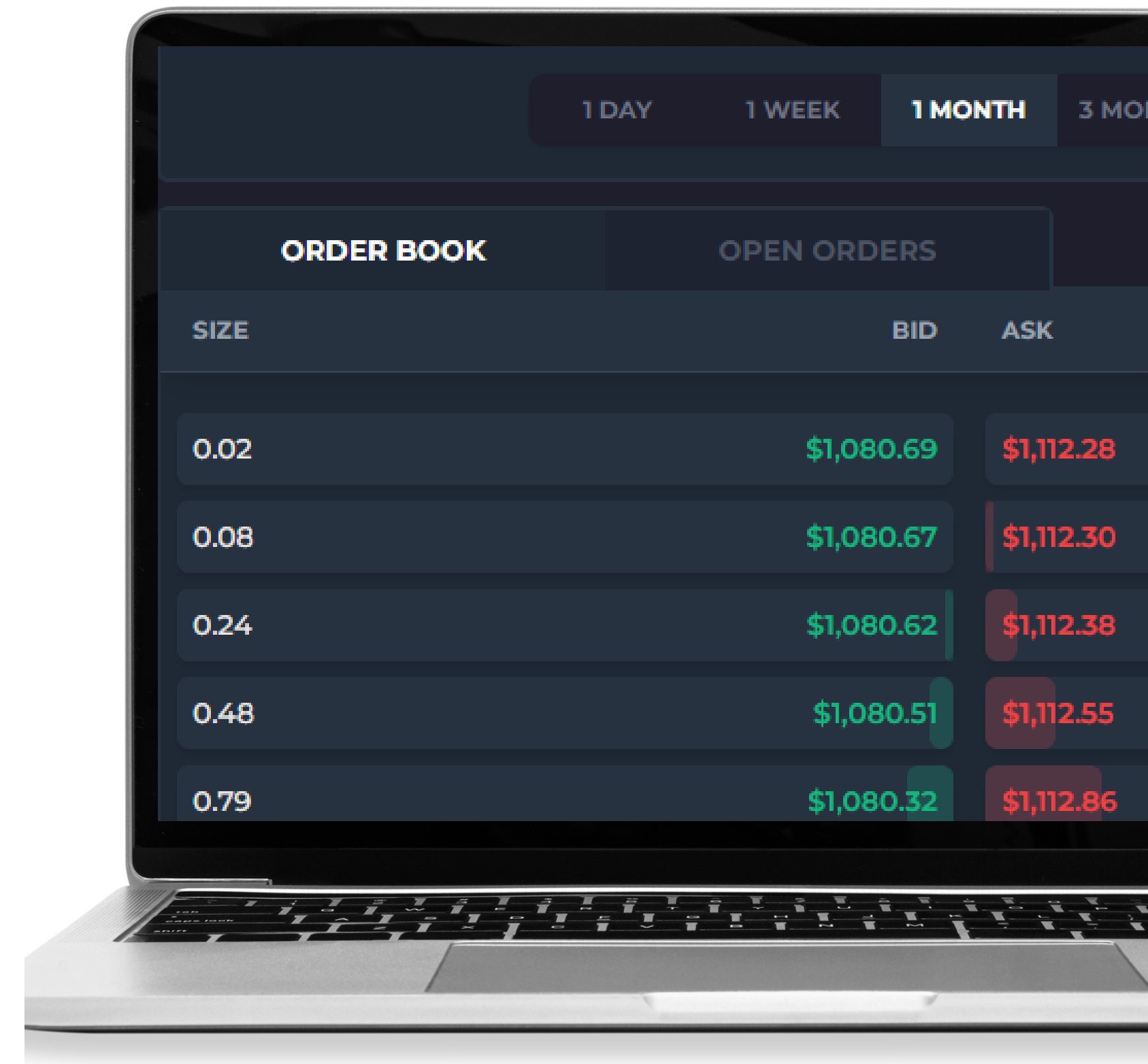
- Consider multiple points of entry for changing price and quantity
- Use visual cues to express difference in "Price" & "Quantity" functionality
- Incorporate labeling to assist novice users

"Feels like a burden to do the math" - Participant 8

"Because price and quantity visually look the same, I expected to be able to interact with them the same way" - Participant 11

Objective 4

Can novice users
understand the value of
the Order Book and
Open Orders?



The image shows a laptop screen displaying a financial trading interface. At the top, there are four tabs: "1 DAY", "1 WEEK", "1 MONTH" (which is selected), and "3 MO". Below these tabs, there are two main sections: "ORDER BOOK" and "OPEN ORDERS". The "ORDER BOOK" section is currently active and displays a table with three columns: "SIZE", "BID", and "ASK". The table lists five rows of data, showing the size of the order, the bid price, and the ask price. The bid prices are in green, and the ask prices are in red.

SIZE	BID	ASK
0.02	\$1,080.69	\$1,112.28
0.08	\$1,080.67	\$1,112.30
0.24	\$1,080.62	\$1,112.38
0.48	\$1,080.51	\$1,112.55
0.79	\$1,080.32	\$1,112.86

Most participants **lacked confidence** in interpreting the Order Book & Open Orders due to a lack of labeling & information

- Participants were **uncertain** of how the Order Book information was populated
- Participants could not identify value of green number and dot
- Participants **guessed** what each number represented and **wished** there were labels to assist them
- "Pair" **confusion** between what was traded
- Uncertainty of what cancelling would do, **is that a button?**

*Participants consistently called out desire to have numbers and quantities **labeled with units***

Recommendations

- Add unit labels and dates consistently
- Use consistent language for assets (Price, quantity, size)
- Clarify where information populates from and who's info it is

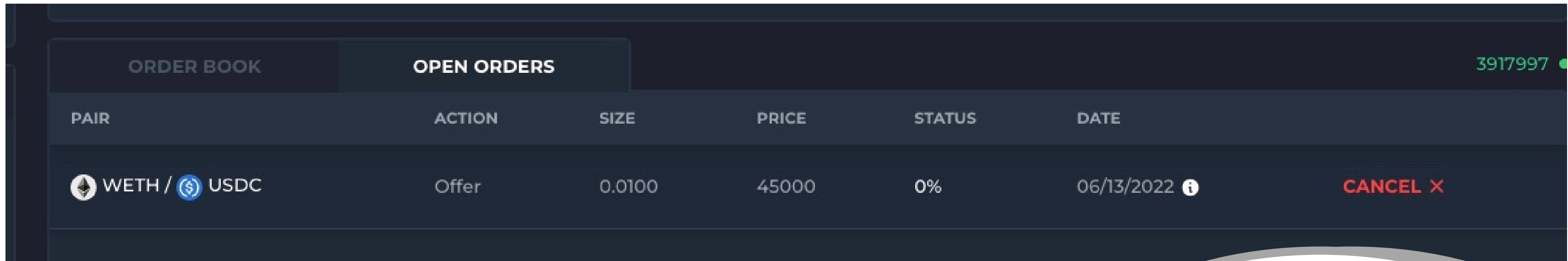
PAIR	ACTION	SIZE	PRICE	STATUS
WETH / USDC	Offer	0.0100	45000	0%

SIZE	BID	ASK	SIZE
0.02	\$1,187.26	\$1,221.98	0.06
0.08	\$1,187.25	\$1,222.04	0.33
0.24	\$1,187.21	\$1,222.17	0.65
0.48	\$1,187.11	\$1,222.40	1.09
0.80	\$1,186.95	\$1,222.97	3.25
2.41	\$1,186.55	\$1,640.00	0.17
0.90	\$1,186.55		0.15
2.69			0.01
1.00			0.11

"So the Order Book is probably all my past purchases? And size? I'm guessing that's Quantity? And, if it is, keeping those the same term..." - P3

"It's also very confusing what's going on. Like what is size? What the size of what? There's no units, there's no dollar signs anywhere. It's super unclear what anything means." - P4

Participants **misinterpreted** the Open Orders columns and questioned **functionality**



ORDER BOOK		OPEN ORDERS					3917997 •
PAIR	ACTION	SIZE	PRICE	STATUS	DATE		
WETH / USDC	Offer	0.0100	45000	0%	06/13/2022 ⓘ	CANCEL X	

- Participants could not **identify** value of green number and dot
- Questioned the value of the info link for date
- "Pair" confusion between what was traded
- Uncertainty of what **cancelling** would do, is that a button?

"It's also very confusing what's going on. Like what is size? What the size of what? There's no units, there's no dollar signs anywhere. It's super unclear what anything means." - P4

"I'm assuming if you hover on the cancel, you might get more information? Maybe an option to see the time left to cancel, or modify?" - P1







"Knowing that's a link, I really don't know what else I need to know about the date that that would link out to" P2

Recommendations

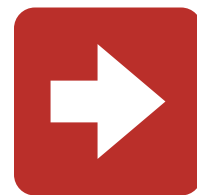
- Add units and keep labeling consistent
- Consider reframing or additional info for "Pair" column

Summary of Recommendations

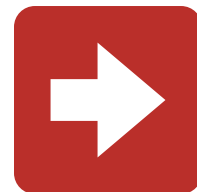


-  Repurpose help icon for assistive text and modals (graph "key", terminology definitions, source info) to avoid user error and unexpected navigation outside of platform
-  Consider additional icon for links out of platform interface to signify when a user will leave platform
-  Label units, currency, and components whenever possible to assist novice users
-  Consider multiple points of entry for input and access to drop down menus to avoid errors and frustration
-  Use consistent language for assets (Price, quantity, size) to increase understanding of expected behavior
-  Use additional visual cues to express differences in fields ("Price" vs. "Quantity") to help users unfamiliar with language

Future Research Opportunities



Test functionality of additional pages that were out of scope in this study, especially those that caught user attention of the current studies participants



Recruit users who actively trade with Rubicon to gain active user insights into what's working and pain points, and gain a better understanding of what users are seeking from a layer 2 cryptocurrency trading platform



Thank you!