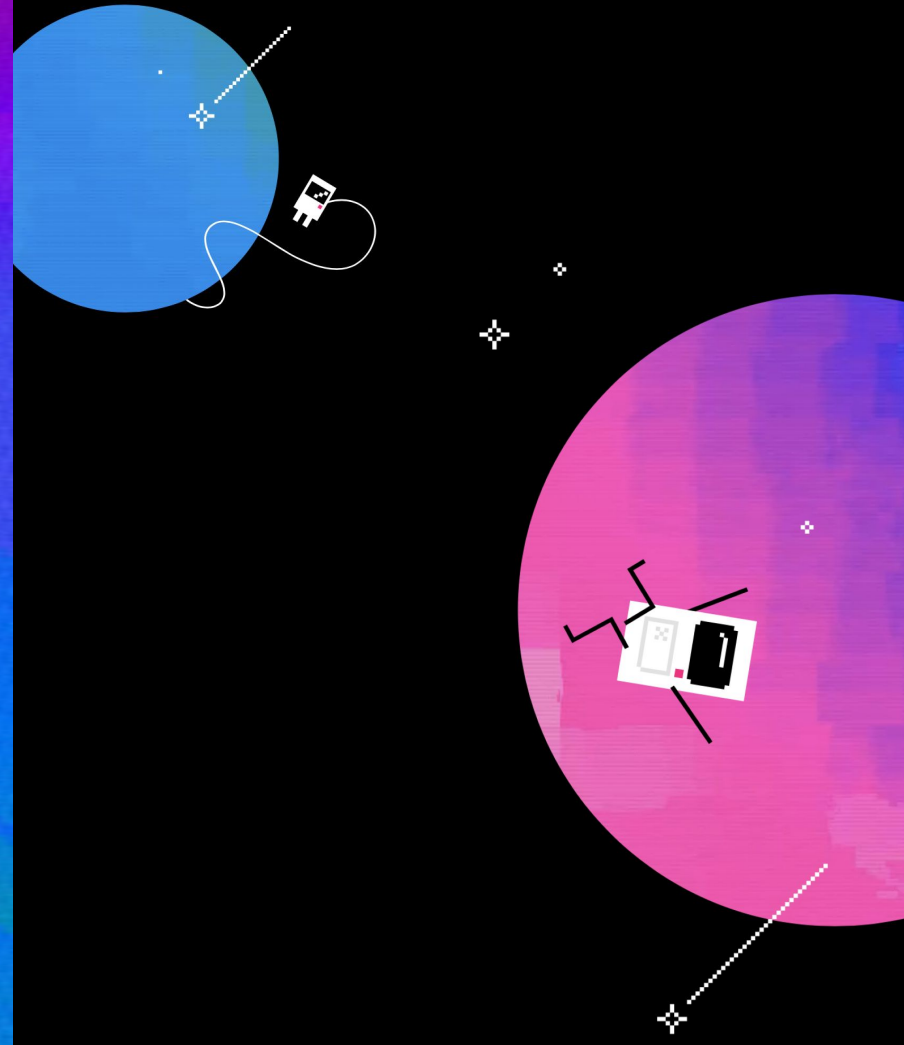


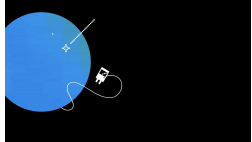
VEGA

Market Making on Vega Decentralized Markets.

Bogdan Vlad

 genezio 





I'm Bogdan Vlad

and I'm a Software Engineer.

/ ex-Clever Taxi.

/ ex-Vector Watch.

/ ex-Fitbit.

/ currently CTO @genez.io



The Challenge:

“Build a market maker that trades derivatives on Vega decentralised markets”

Requirements:

/ Don't go bankrupt for one week.

/ Maintain the reference price.

/ Provide orders on both side of the book order at all times.

“Build a **market maker** that
trades **derivatives** on
Vega decentralised markets”

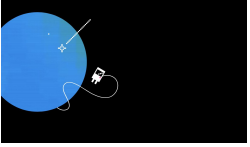
The Challenge:

“Build a market maker that trades derivatives on Vega decentralised markets”

Requirements:

- / Don't go bankrupt for one week.
- / Maintain the reference price.
- / Provide orders on both side of the book order at all times.
- / Limited time to develop.

“Build a market maker that trades derivatives on Vega decentralised markets”



What are derivatives?

/ a financial contract that derives its value from an underlying asset.

/ used to hedge risk.

/ example: crops.



BTCUSDT

Perpetual

27275.1

Mark 27,270.7 Index 27,277.1 Funding / Countdown 0.0100% 06:38:30 24h Change 674.1 +2.53% 24h High 27,763.4 24h Low 26,250.0 24h Volume(BTC) 952,660.978 24h Volume(USDT) 25,922,728,980.43

Time 15m 1H 4H 1D 1W Last Price

Original Trading View Depth

2023/03/18 Open: 27383.90 High: 27726.40 Low: 26555.50 Close: 27275.10 CHANGE: -0.40% AMPLITUDE: 4.28%

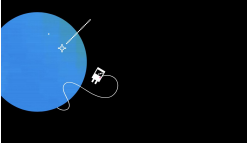


Order Book

Price(USDT)	Size(BTC)	Sum(BTC)
27272.2	4.315	14.704
27272.1	0.032	10.389
27272.0	0.050	10.357
27271.9	0.050	10.307
27271.8	0.050	10.257
27271.7	3.913	10.207
27271.5	0.136	6.294
27271.4	6.158	6.158
27275.1 ↑	27270.6	
27271.3	0.105	0.105
27271.0	0.001	0.106
27270.2	0.020	0.126
27269.8	0.001	0.127
27269.7	0.001	0.128
27269.6	0.036	0.164
27268.8	0.236	0.400
27268.7	0.070	0.470

Trades

Price(USDT)	Amount(BTC)	Time
27,275.1	4.593	19:21:29
27,274.8	19.278	19:21:28
27,266.9	1.755	19:21:28
27,267.1	2.323	19:21:28
27,268.3	0.673	19:21:27
27,268.3	0.137	19:21:26
27,268.2	1.871	19:21:26

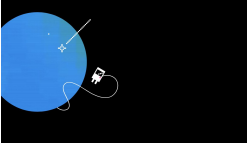


Market Maker.

/ Provides liquidity.

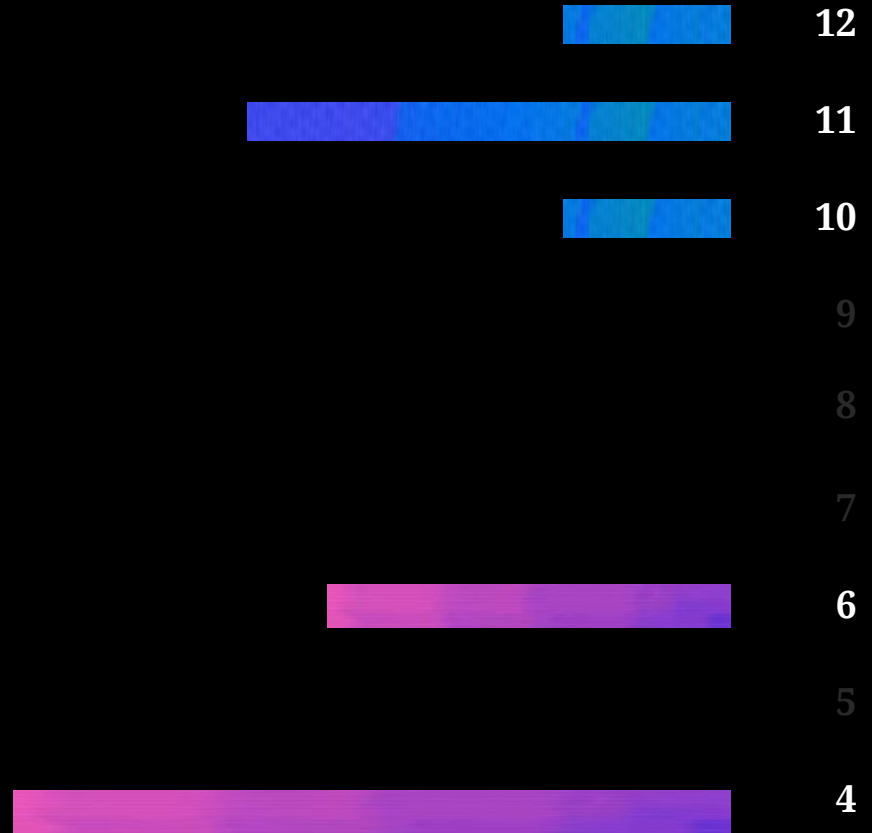
/ Price discovery.

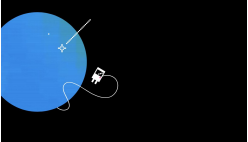
/ Narrow bid-ask spreads.



no Market Maker.

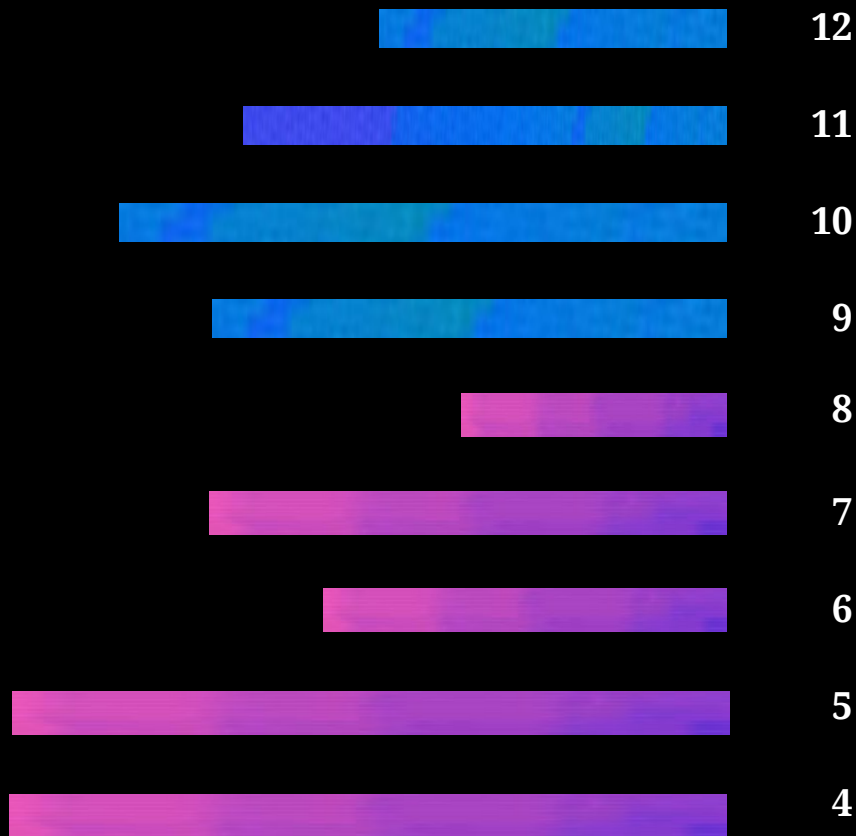
/ low liquidity.

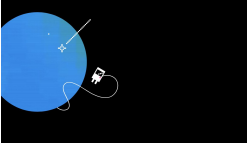




with Market Maker.

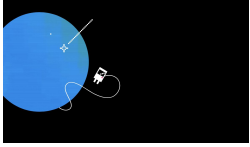
/ enough liquidity.





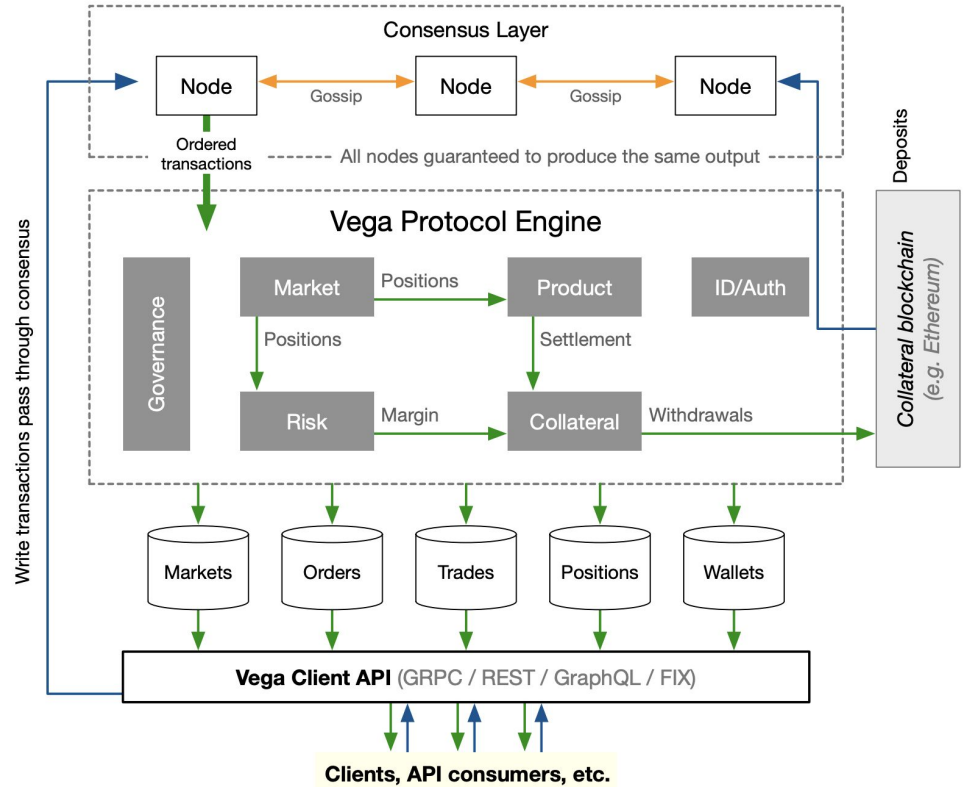
Vega.

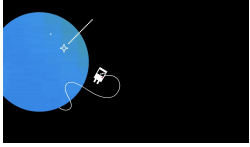
- / Decentralised platform for trading derivatives.
- / Governance using \$VEGA Token.
- / Permissionless.
- / Cross-chain settlements.



Vega architecture.

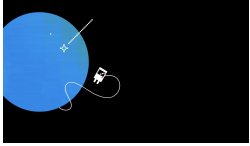
- / Vega blockchain for transactions.
- / Bridge to Ethereum.
- / Vega protocol.





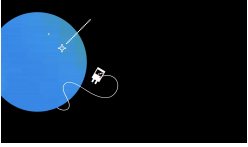
Vega first steps.

1. Create a wallet and fund it.
2. Download the Go SDK.
3. Write the code.
4. Run the code.



Vega first steps.

1. Create a wallet and fund it.
2. Download the Go SDK.
3. Write the code.
4. Run the code.
- 5. First problem.**

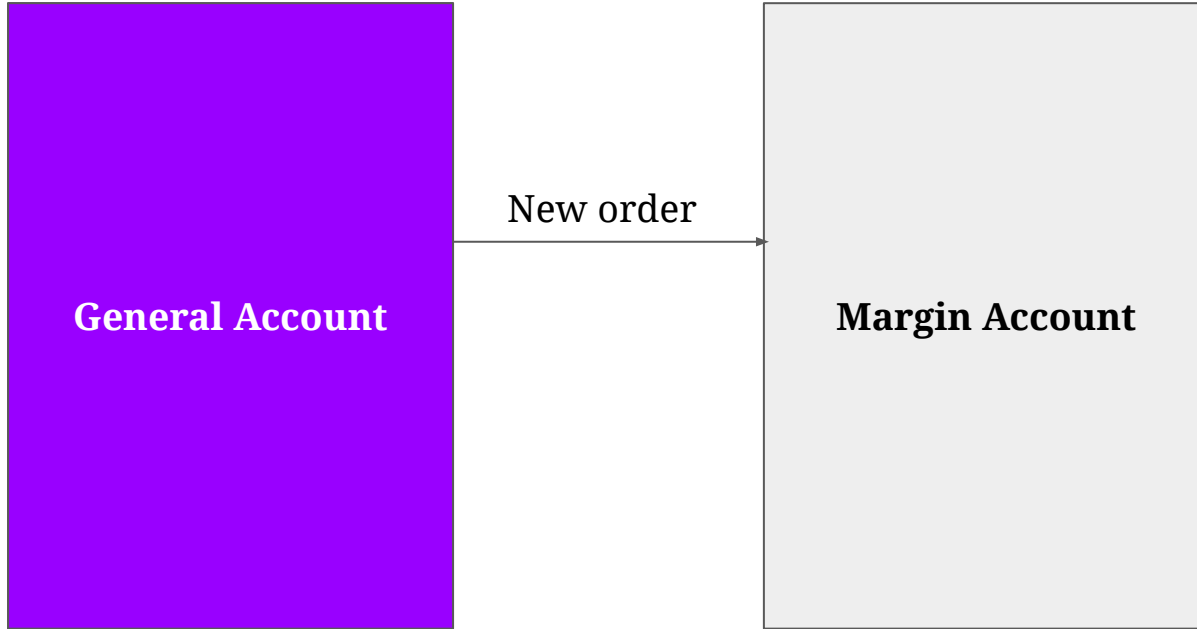


First problem.

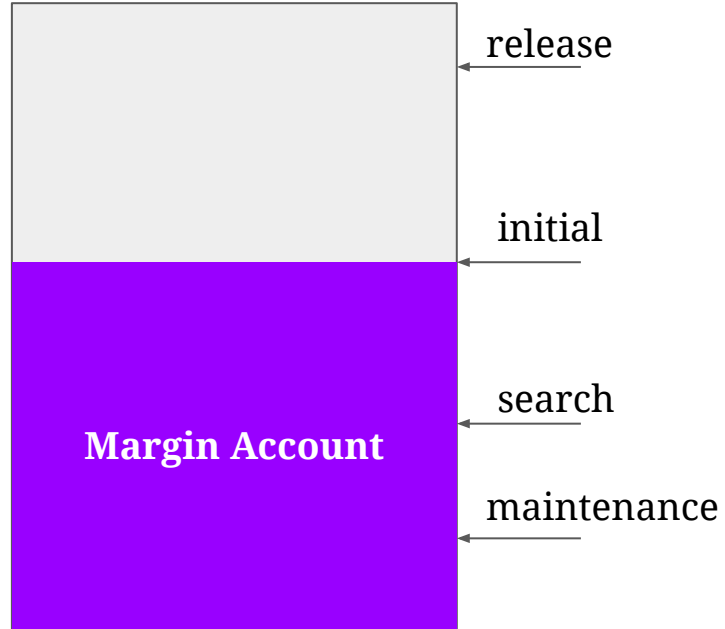
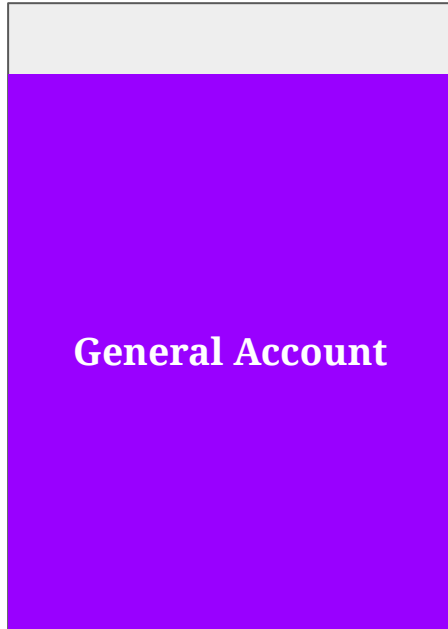
1. Market is in “Price monitoring” mode.
2. States in which a market can be:
 - a. Continuous trading.
 - b. Auction: Price monitoring, Liquidity monitoring.

 **How does leverage and margin work?**

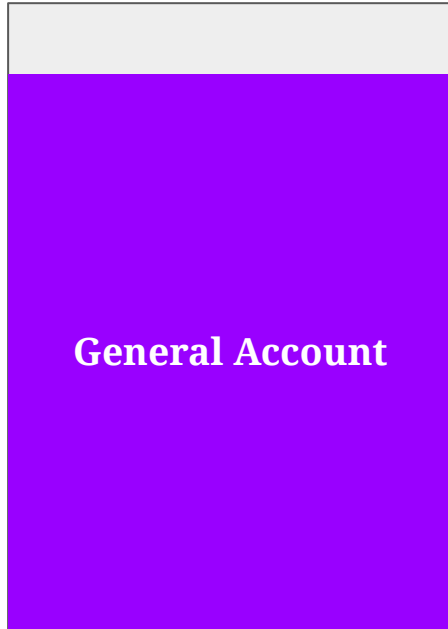
Vega Accounts



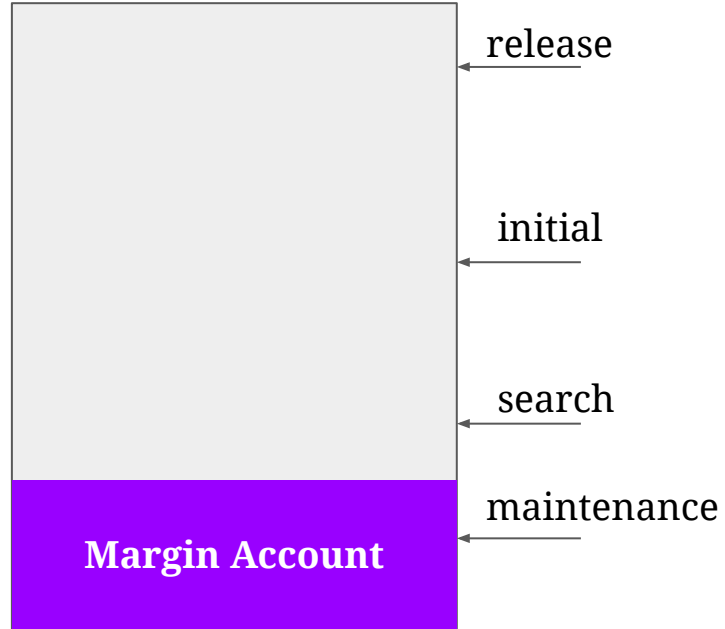
Vega Accounts



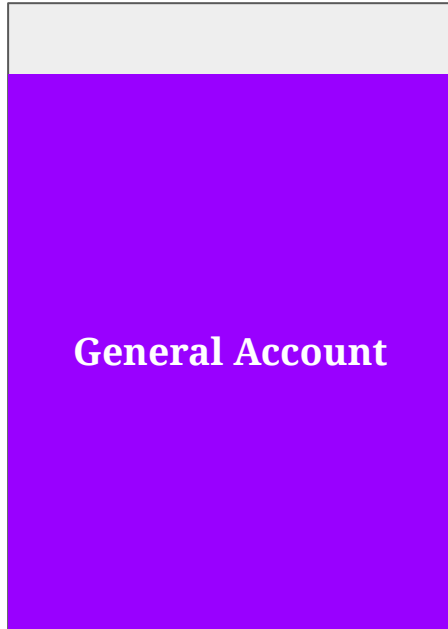
Vega Accounts



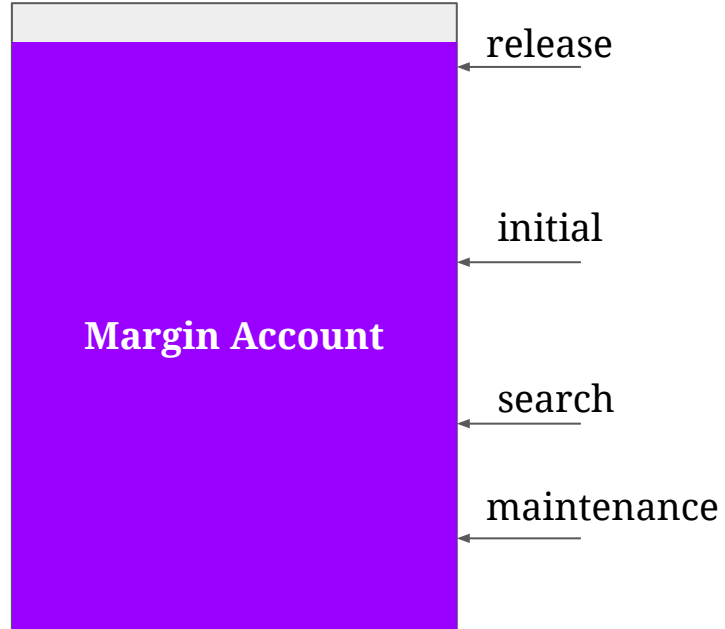
Market moves
against you



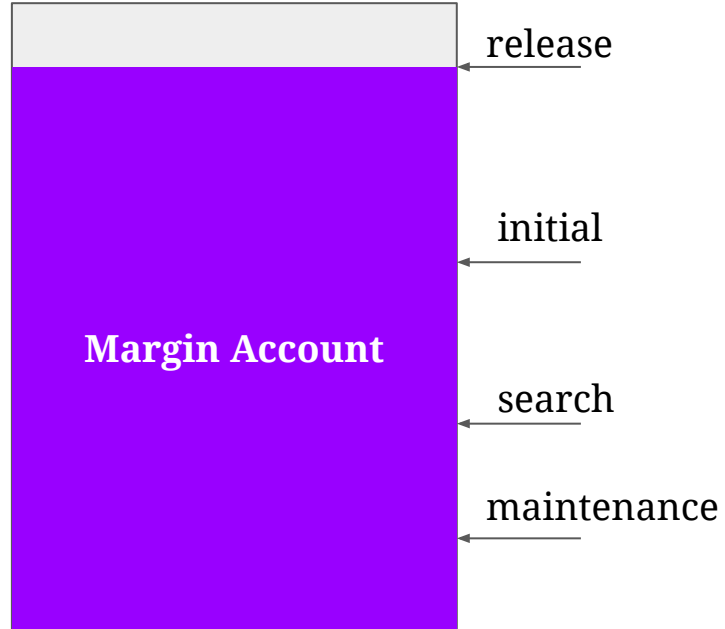
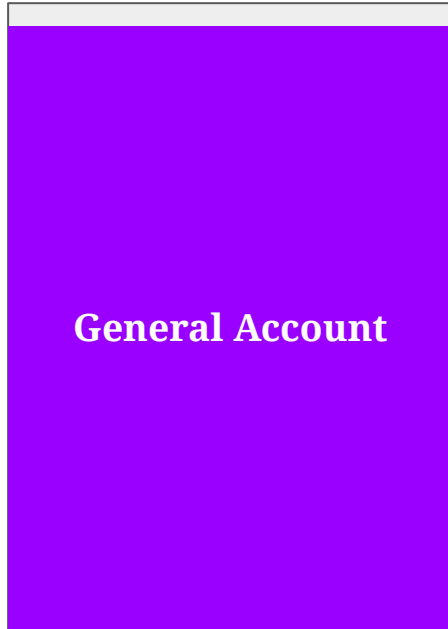
Vega Accounts

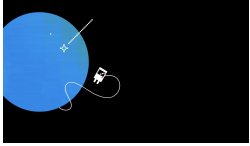


Market moves
in your favor



Vega Accounts





Second problem.

<u>Maker Fee</u>	0.02%
<u>Infrastructure Fee</u>	0.10%
<u>Liquidity Fee</u>	0.04%
Total Fees	0.16%

/ I don't collect enough fees

/ Takers pay fees, makers receive fees

/ Liquidity Providers receive a portion of all fees

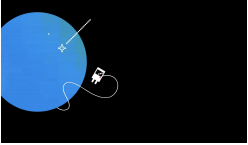
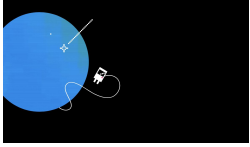
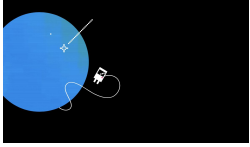


CHART		DEPTH		LIQUIDITY					
Party	Commitme...	Share	Proposed f...	Market valuation at e...	Obligation	Supplied	Status	Created	
dfff65816e...	48,463.901...	3.16%	0.10%	1,559,012.15169	48,463.901...	48,463.901...	Active	20/03/202...	
6817af32e...	384,133.52...	25.06%	0.04%	1,577,138.53371	384,133.52...	384,133.52...	Active	18/03/2023...	
0e6ecde42...	200.00	0.01%	0.01%	35,386.53204	200.00	200.00	Active	13/03/2023...	
758ac0606...	500,000.00	32.62%	0.05%	535,381.18965	500,000.00	500,000.00	Active	13/03/2023...	
42b152ddf...	600,000.00	39.14%	0.05%	1,135,403.31452	600,000.00	600,000.00	Active	13/03/2023...	



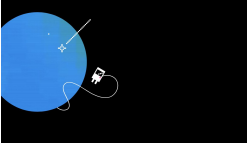
Vega.

- / Liquidity Providers commit an amount
- / Provide orders in the order book in a specific shape
- / Used to assure liquidity of markets in case of liquidations
- / Liquidity Providers receive fees



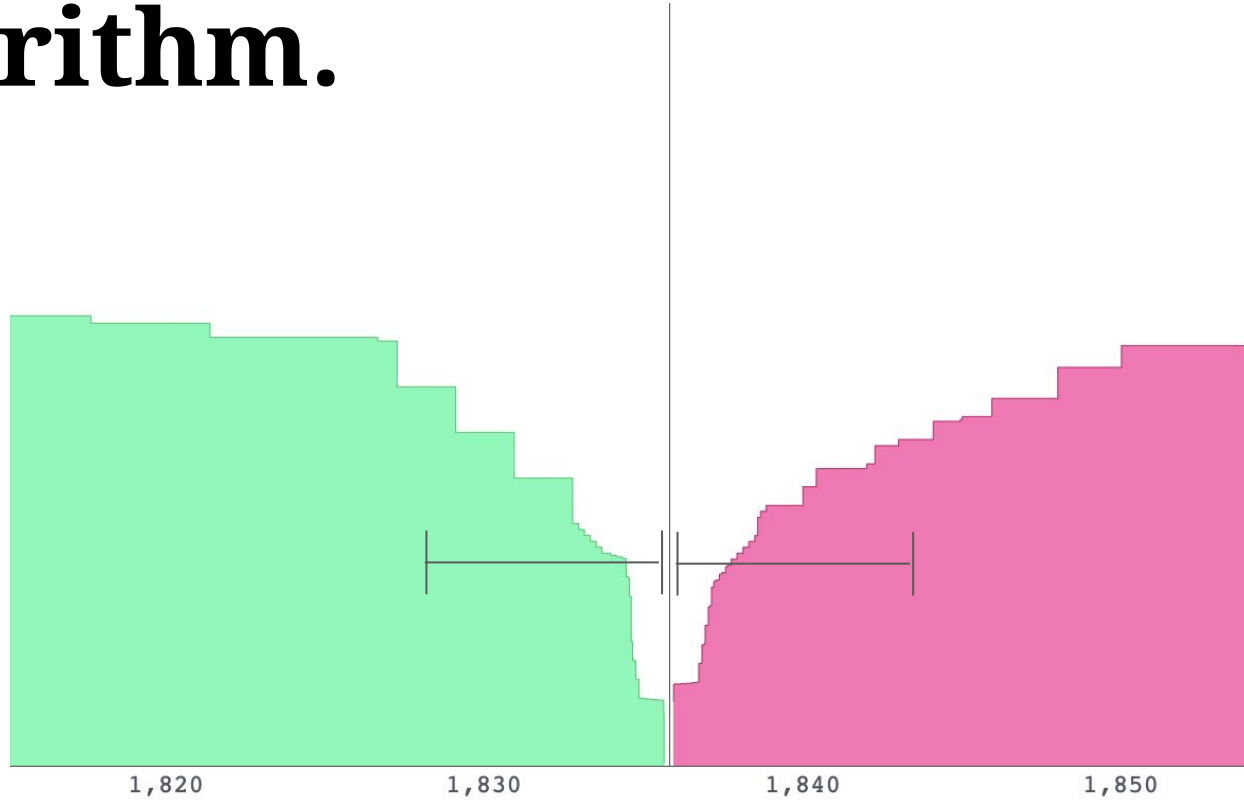
Algorithm.

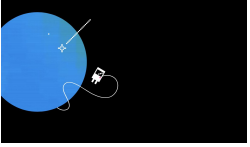
```
/ Subscribe to the reference price of the asset (Binance API).  
/ Provide Liquidity further away from the reference price.  
/ Get the current exposure.  
/ If ([SHORT_EXPOSURE < current < LONG_EXPOSURE])  
    >>> Place the orders balanced around the reference price with a narrow  
gap.  
/ Else if BIG_EXPOSURE_ON_SHORT  
    >>> place the SHORT orders further away from the reference price.  
/ Else if BIG_EXPOSURE_ON_LONG  
    >>> place the LONG orders further away from the reference price.
```



Algorithm.

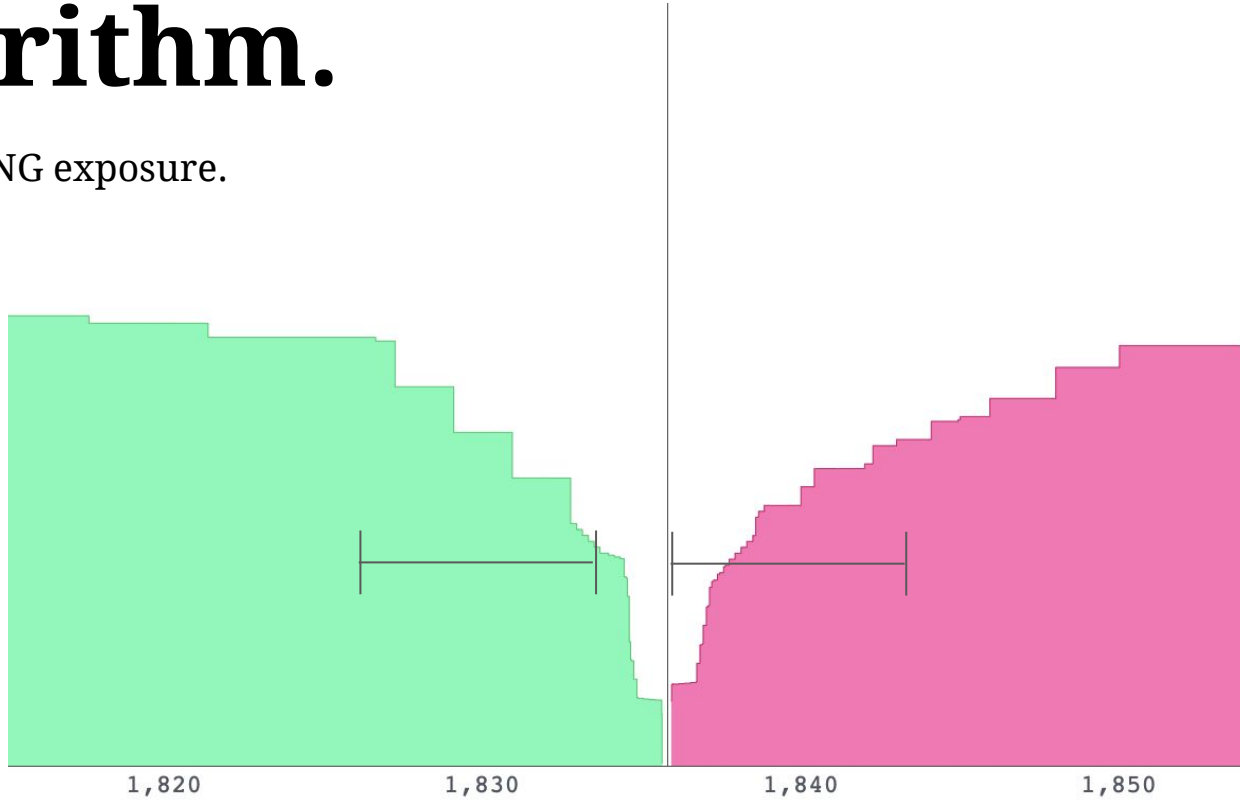
OK.

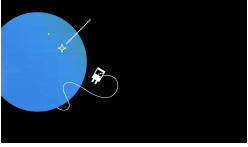




Algorithm.

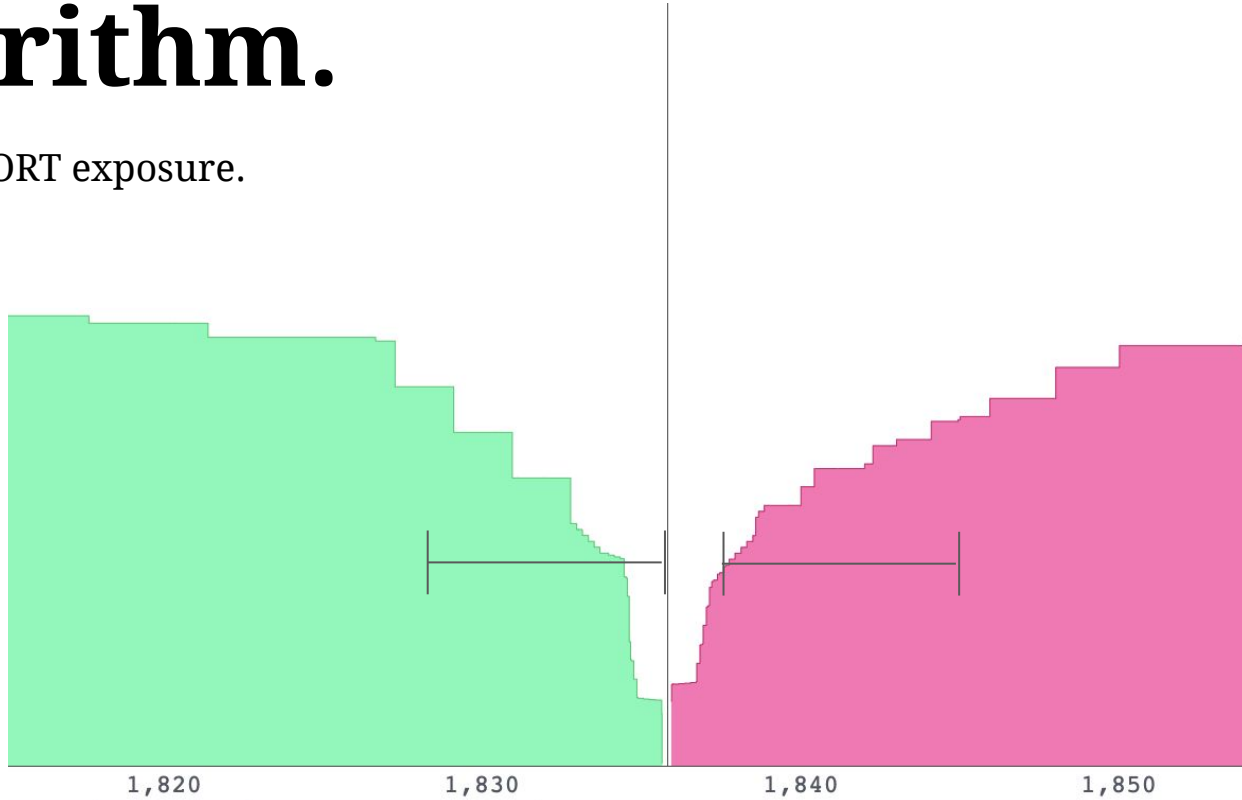
Too much LONG exposure.

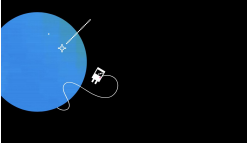




Algorithm.

Too much SHORT exposure.





Results.

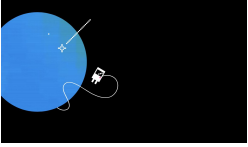
/ Participated in two official Simulations.

/ Initial Balance: 2.000.000 DAI

/ Sim II: ~ +200.000 DAI

/ Sim III: ~ +180.000 DAI

/ **Great success!**



Conclusions.

/ Trading derivatives can be fun.

/ Vega is a promising decentralised project.

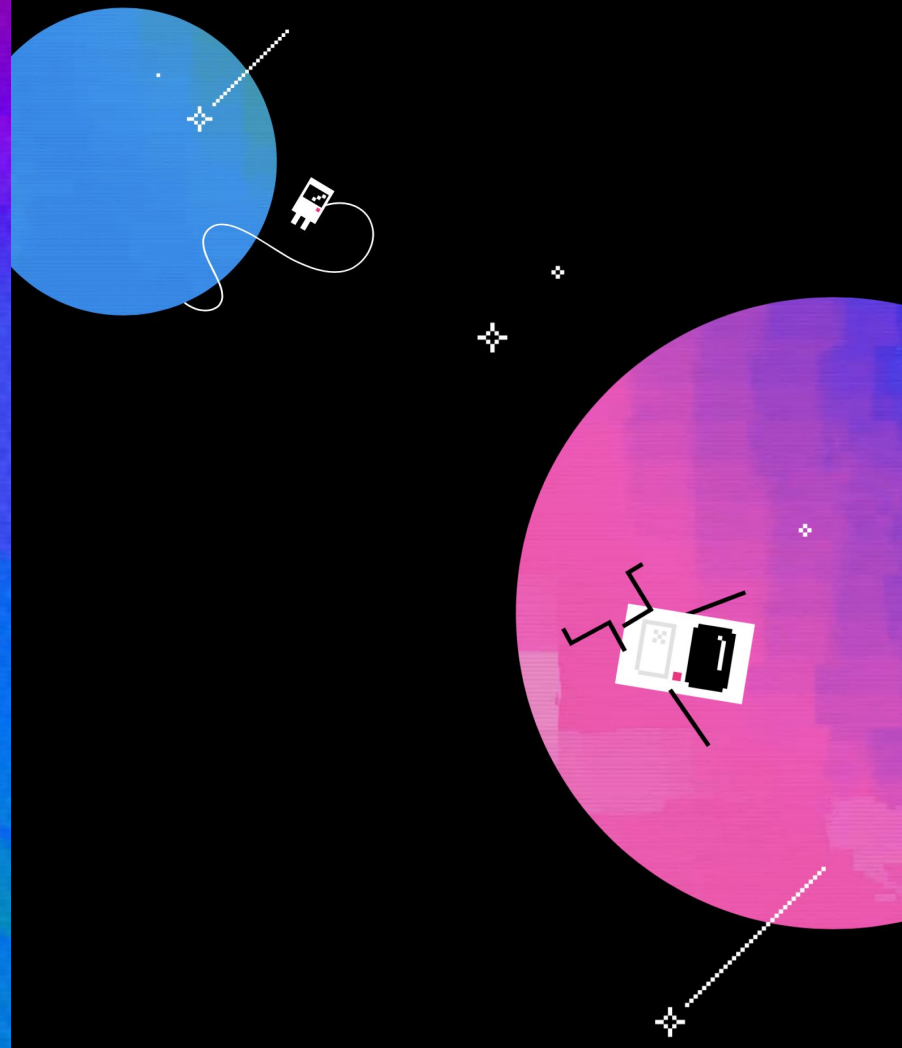
/ Low risk strategies and patience also pay off in crypto. 👍

VEGA

Thank You!

Bogdan Vlad

 genezio 



ETH/DAI
ETH DAI - SIM III

Expiry: 20/03/2023, 12:00:00
Price: 1,785.29
Change (24h): -0.23% -4.17
Volume (24h): 109,952.38
Trading mode: Continuous
Status: Active

Settlement asset: DAI
Liquidity supplied: 1,556,484.6836199823 (>100%)

CHART DEPTH LIQUIDITY

Interval: 15m
Overlays
Studies



TICKET INFO

Order type: **Market** Limit

Direction: **Long** Short

Size: 100 @ ~1,785.29 USD

Time in force: Immediate or Cancel (IOC)

PLACE ORDER

Notional: 178,529.00 DAI
Fees: ~285.6464 DAI
Margin required: ~41,319.79516900695 DAI
Projected margin: ~48,428.93537701909 DAI
Current margin allocation: ~7,109.140208012129 DAI

ORDERBOOK TRADES

Bid vol	Ask vol	Price	Cumulative vol
0.00	4.48	1,786.93	470.35
0.00	60.12	1,786.86	465.87
0.00	19.58	1,786.85	405.75
0.00	63.96	1,786.76	386.17
0.00	60.13	1,786.66	322.21
0.00	3.20	1,786.58	262.08
0.00	2.56	1,786.40	258.88
0.00	1.92	1,786.22	256.32
0.00	0.12	1,786.09	254.40
0.00	1.28	1,786.04	254.28
0.00	52.37	1,785.95	253.00
0.00	199.99	1,785.94	200.63
0.00	0.64	1,785.86	0.64
0.57	0.00	1,785.51	0.57
9.20	0.00	1,785.44	9.77
193.30	0.00	1,785.43	203.07
53.03	0.00	1,785.42	256.10
1.15	0.00	1,785.33	257.25
0.12	0.00	1,785.28	257.37
1.73	0.00	1,785.15	259.10
2.31	0.00	1,784.97	261.41
2.89	0.00	1,784.79	264.30
60.88	0.00	1,784.71	325.18
64.36	0.00	1,784.61	389.54
60.89	0.00	1,784.51	450.43
4.05	0.00	1,784.44	454.48
		0.00	

Show prices with no orders

POSITIONS ORDERS FILLS COLLATERAL

Asset	Used	Available	Total	Deposit	Withdraw
DAI	607,109.1402080121 27.87%	1,571,478.820910711	2,178,587.9611187233		