

SENTIENT CHAIN (E)





NIPOPOW SIDECHAIN DEVELOPED FOR BLOCKCHAIN **GAMING**

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CURRENT PROBLEMS WITH BLOCKCHAIN GAMING

- Currently There Is No GameFi Specific DEX & Blockchain For P2E That Incentives Game Developers and Gamers
- Two Major Obstacles In Blockchain Gaming:
 - 1) Running A Full Client Node On A Small Device
 - 2) Circumventing Companies Like Apple Who Actively Disparage/Ban Blockchain Games From Their App Store
- Centralized Game Companies Like Stream Take ~ 30% of Game Revenue
 - Sentient Chain Will Implement A Nominal 5% Game Revenue Fee For Game Client Development & Indie Game Support

P2E GAMING MARKET ANALYSIS

- Global P2E NFT game market size is projected to reach \$3.6 billion by 2028
 - Increased \$755 million in 2021, at a CAGR of 21.3% during 2022-2028
- Sky Mavis is the largest producers of P2E NFT games worldwide
 - Market share of roughly 35%
- North America holds about 35% of global market share
 - Followed by Europe with about 30%
- *RPG segment holds the main share at roughly 35%
 - The computer segment accounts for about 60% of the total global share

P2E GAMING MARKET ANALYSIS

Figure. 1: Worldwide Google searches for "NFT", "Play-to-earn" and "Metaverse". An index equal to 100 indicates the maximum popularity during the analysed period.

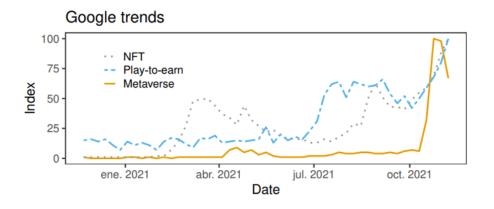


Figure. 2: Number of tokens created over time: a) Play-to-earn, b) Metaverse, c) Metaverse & Play-to-earn.

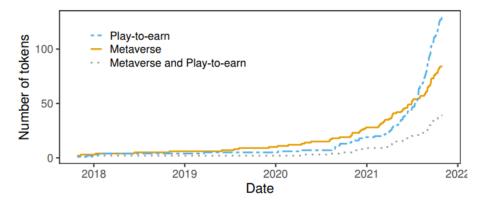
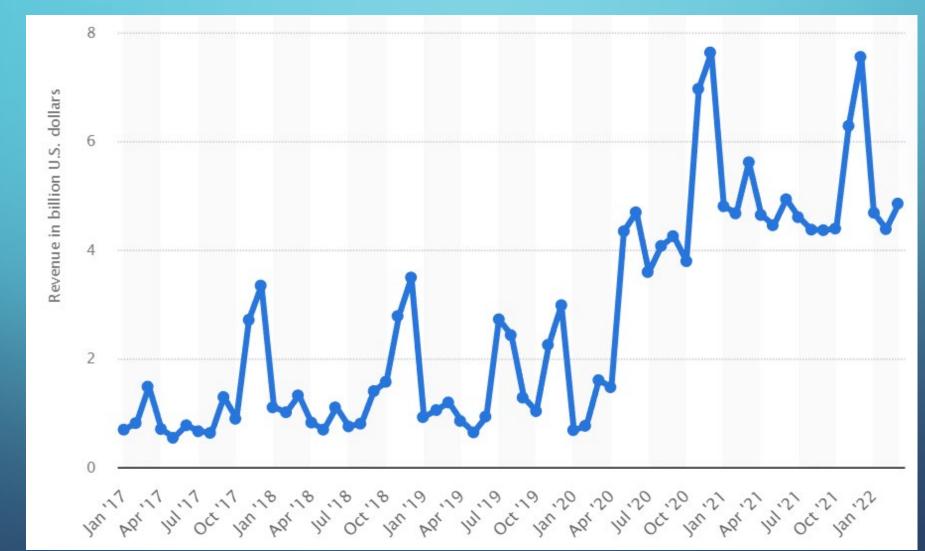


Figure 1, 2. These figures are from research conducted by David Vidal-Tomas, Department of Economics, Spain.

RETAIL REVENUE U.S. VIDEO GAME INDUSTRY JAN 2017 - MAR 2022



DEVELOPMENT OF A NIPOPOW P2E SIDECHAIN TO ERGO

- Utilize NIPoPoW To Reduce The DAG Size Requirement
- Optimize Difficulty Parameter Reducing Hardware Requirement
- Lower The Barrier of Entry By Implementing Full Clients On Raspberry
 Pi 4 Nodes
- Develop P2E Game Client That Runs As A Full Node
 - Incentive For Running Full Node
 - Increases Decentralization, Security & Scalability
 - Can Be Run By An Average Computer or Raspberry Pi 4B 4GB

PORTABLE GAMING CONSOLES/NODES PROTOTYPES







7" Prototype Blockchain Gaming
Portable Console & Node

Prototypes Were Comparable To The Nintendo Switch

DEVICE COMPARISON

Device (Release Date)	RPI 4 Model B (20190624)	Nintendo Switch (2017)	Steam Deck (20220225)
CPU	1.5 GHz Quad-Core	ARM4 1.02 GHz	Zen 2 4-core 8-thread 2.4-3.5 GHz
Memory	4GB-3200	4GB-1600 MHz	16GB 5500 MT/s
Storage	microSD 32GB	microSD 32GB-64GB	64GB-512GB
Display	7-inch	6.2-inch	7-inch @60Hz
Graphics	Broadcom Video Core V1 500MHz	256 Maxwell-base CUDA core @ 307.2- 768MHz	AMD RDNA 2 w/ 8CUs 1.0-1.6 GHz
OS	Raspberry Pi OS/ Linux	Nintendo Switch OS	Steam OS 3.0
Price	\$155	\$300	\$400-\$650









MAGNUM OPUS K-12 EDUCATIONAL GAMES

Journal of Educational Computing Research 0(0) Road Function Puzzle Crossing Card Game Game Game Game Tool Box View of Progress Data **Database** Mobile Application Therapist **Participants**

Figure 1. Conceptual design of the proposed gaming tool.



TOKENOMICS

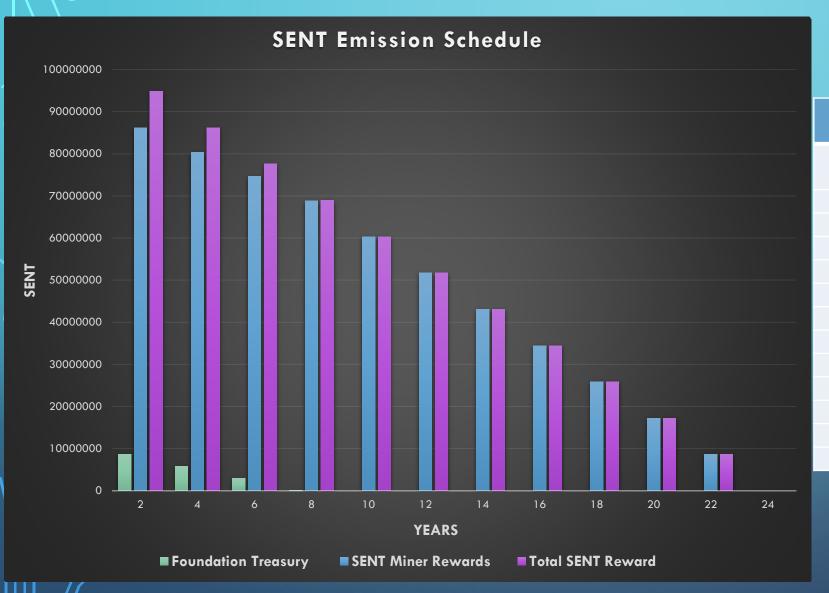
- Fair Launch No PreMine
- Max Supply = 568.9 Million \$SENT
- Two Blocks Produced Per Minute
- Dual Minable With \$ERG
- One Epoch (2 Years)
 - 4.1 \$SENT Block Reward Decrease Each Epoch
 - № 45.1 \$SENT Block Reward
 - 41 \$SENT to Miner Reward & 4.1 \$SENT to Foundation's Treasury
 - 90.01 \$SENT Fixed Transaction Fee







SENT MINING DISTRIBUTION



33% Decrease For 1st 4 Epochs	67% Decrease 1st 4 Epochs		
Decrease Foundation Treasury	Decrease Mining Rewards	Total	
1.353	2.747	4.10	
1.353	2.747	4.10	
1.353	2.747	4.10	
1.353	2.747	4.10	
0	4.1		
0	4.1		
0	4.1		
0	4.1		
0	4.1		
0	4.1		
0	4.1		
0	4.1		

INDEPTH MINING DISTRIBUTION

Years	Foundation Treasury	SENT Miner Rewards	Total SENT Reward	Total Blocks 2 years	SENT per Block Miners	SENT per Block Foundation	Total SENT per Bock	Decrease SENT per Epoch
2	8619840	86198400	94818240	2102400	41	4.1	45.1	4.1
4	5775292.8	80423107.2	86198400	2102400	38.253	2.747	41	4.1
6	2930745.6	74647814.4	77578560	2102400	35.506	1.394	36.9	4.1
8	86198.4	68872521.6	68958720	2102400	32.759	0.041	32.8	4.1
10	0	60338880	60338880	2102400	28.7	0	28.7	4.1
12	0	51719040	51719040	2102400	24.6	0	24.6	4.1
14	0	43099200	43099200	2102400	20.5	0	20.5	4.1
16	0	34479360	34479360	2102400	16.4	0	16.4	4.1
18	0	25859520	25859520	2102400	12.3	0	12.3	4.1
20	0	17239680	17239680	2102400	8.2	0	8.2	4.1
22	0	8619840	8619840	2102400	4.1	0	4.1	4.1
24	0	0	0	2102400	0	0	0	4.1
Total	17412076.8	551497363.2	568909440	25228800				

Total Supply 568.9M SENT Distributed Over 24 Years

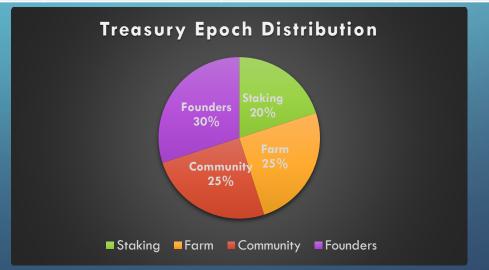
Foundation Treasury Receives 17.4M SENT Total All Within The First 8 Years (4 Epochs)

Miner Rewards Are Distributed Over 24 Years (12 Epochs) Totaling 551.5M SENT

FOUNDATION TREASURY BREAKDOWN

Foundation Treasury Receives 17.4M SENT Total All Within The First 8 Years (4 Epochs)

2 Year Per Epoch	Total (100%)	Staking (20%)	Farm (25%)	Community Fund (25%)	Founders (30%)
Epoch I	8619840	1723968	2154960	2154960	2844547.2
Epoch II	5775292.8	1155058.56	1443823.2	1443823.2	1905846.624
Epoch III	2930745.6	586149.12	732686.4	732686.4	967146.048
Epoch IV	86198.4	17239.68	21549.6	21549.6	28445.472



P2E GAMING DEX - SENTIENT SWAP

- GameFi Specific DEX With A Flat Rate 0.3% Transaction Fee
 - 0.2% Goes To Liquidity Pool (LP) Providers
 - 0.05% Goes To DEX Development
 - 0.05% Goes To A Community Fund Which Will Be Used To Launch Community Initiatives
 - Voted On By The Community
- Uniswap V2 Based AMM With The Focus On Development Of A Novel Approach
 - To Concentrated Deep Liquidity
- Liquidity Pools For Game Tokens
 - No Bot Facilitated Off Chain Arbitraging LP Rewards
 - Liquidity Locked For 24hrs In Order To Mitigate Volatility

P2E GAMING DEX - STAKING

- Sentient LP Farms
 - LP Tokens Generated With \$ERG, \$SENT or \$SigUSD Can Be Staked To Earn \$SENT In Addition To Their LP Rewards
- P2E Games Vetted & Voted By The Community Will Be Eligible For IDO
 - IDO Tokens Are Purchased With \$SENT & Will Have Exclusive LP Rewards
- 30 Day Fixed Rate Staking For \$sigUSD, \$ERG and \$SENT
 - Early Withdrawal Fee of 2.99% From The Deposited Amount Plus Any Acquired Rewards.
 - This Early Withdrawal Fee With Go To The Community Fund

ROAD MAP

- 1) Run Testnet Transaction On Sentient Chain With Established Master Node
- 2) Mine Testnet \$SENT Evaluate Compatibility With Ergo Wallets
- 3) Officially Launch Testnet
- 4) Test Dual Mining With \$ERG
- 5) Establish Mining Pool With Ergo Community
- 6) Launch Mainnet
- 7) Implement Game Client/Full Node For PC
- 8) Deploy DEX & Associated Contracts On Testnet

"Disclaimer: Road Map Is Subject To Change"



REFERENCES

- 2009. Nakamoto. Bitcoin: A Peer-to-Peer Electronic Cash System. Bitcoin.org
- 2019. Ergo Developers. A Resilient Platform For Contractual Money. Ergoplatform.org
- 2019. Ergo Developers. ErgoScript, a Cryptocurrency Scripting Language Supporting Noninteractive Zero-Knowledge Proofs
- 2021. Kiayias et al. Mining in Logarithmic Space. IOHK, University of Athens
- 2018. Kiayias et al. Proof-of-Work Sidechains. IOHK
- 2018. Kiayias et al. Non-Interactive Proof of Proof-of-Work. IOHK
- 2018. Zamyatin et al. A Wild Velvet Fork Appears! Inclusive Blockchain Protocol Changes in Practice. Imperial College London,
 UK
- 2022. Vidal-Tomas. The New Crypto Niche: NFTs, play-to-earn, and metaverse tokens. Department of Economics, Spain
- 2020. Wang. Proof of Less Work. Alephium.org
- 2018. Chepurnoy et al. A Systematic Approach To Crypto Fees. Ergoplatform, IOHK, Institute Jena, Germany
- 2022. Ultra. The Future of Digital Games Distribution. White Paper V1.7
- •/2021. Beattie, How the Video Game Industry Is Changing. Investopedia
- 2022. Statista. Video game industry
- 2022. Islam. IoT-Based Serious Gaming Platform for Improving Cognitive Skills of Children with Special Needs. Journal of Educational Computing Research