



**UNIARTS
HELSINKI**

UNIARTS HELSINKI = ACADEMY OF FINE ARTS + SIBELIUS ACADEMY + THEATRE ACADEMY

Metaverse and the New Digital Economy

Majella Clarke

Week #3 2024



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>

Lesson Plan

16:00 – 18:30 (3*45 minute segments)

Socialised learning – mid break 15 minutes

Time	Content
16:00 – 16:25	Announcements and Review of Assignment
16:25 – 16:50	Introduction to The Sandbox, Web3 and digital economy terminologies
16:50 – 17:25	Activity #1 Metaverse and its emergence
17:25 – 17:40	15 Minutes Break
17:40 – 17:50	Influence and power dynamics in virtual spaces
17:50 – 18:20	Activity #2 Social Impact of NFTs on the Metaverse article review
18:20 – 18:25	Inspirational Tour of New Collecting Culture
18:25 – 18:30	Reflection, Questions



Assignment

✘ **Students can choose either the essay or reflection essay of 1200 words:**

Assignment Option 1: Essay

Assignment Description: In the evolving Metaverse and new digital economy, research and discuss what roles and opportunities currently exist for artists and creative practitioners? Include examples of artists and creatives that are providing real world examples of innovative approaches to monetizing and/or contributing to shaping the new digital economy. You may like to consider how these roles and outcomes in the new digital economy and metaverse compare with traditional creative industries.

OR

Assignment Option 2: Reflection Essay

Assignment Description: For this assignment, reflect on your understanding of Metaverse and the new digital economy and what it could mean to your future creative / artistic practice.

Evaluation Scale: Pass-Fail



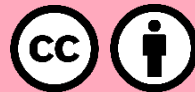
In Today's class we will...

- ✘ Definition and evolution of the Metaverse and Web 3.0**
- ✘ Understanding the various definitions and viewpoints surrounding the Metaverse**
- ✘ Analysis of trends shaping the Metaverse and its impacts on society – here we will look at the social impact of NFTs in the Metaverse economy**
- ✘ Overview of key players and influencers in the Metaverse ecosystem**





Terminologies: Metaverse, Web3 and beyond...



Evolution of the web from 1.0 to 3.0

[Missing a copyrighted image of The Evolution of the Web: From Web 1 to Web 3 | by POPaPOTEMUS | Medium]

Source:

<https://medium.com/@POPaPOTEMUS/the-evolution-of-the-web-b428c07c9ddd>



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>

What Is Web 3.0 & Why It Matters

[Missing a copyrighted image of What Is Web 3.0 & Why It Matters. Written by Max Mersch and Richard... | by Fabric Ventures | Fabric Ventures | Medium]
Source: <https://medium.com/fabric-ventures/what-is-web-3-0-why-it-matters-934eb07f3d2b>



Content is available under **CC BY 4.0** unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>



What is Web2 vs Web3?

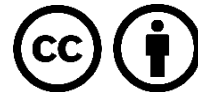
Key areas	Web2	Web3
Principles of organizational structure	Centralized platforms dominate. E.g. Google, Facebook, Amazon	Decentralization is the core principle. E.g. Ethereum blockchain technologies
Data and Privacy	Data collected and owned by centralized platforms. Users have limited control of data.	Stronger data privacy protocols, encryption technologies, user sovereignty and data ownership
Interoperability	Limited interoperability and interconnectivity. Users interact in closed ecosystems controlled by companies.	Promotes interoperability and interconnectivity across decentralized networks and protocols.
Monetization and business models	Selling user data, subscription fees, advertising	Smart Contracts, Tokenization, DeFi Protocols, NFTs
Trust	Trust in centralized platforms	Trust is distributed , cryptographic security



What is meant by Metaverse?

- ✘ **IMPORTANT** – it is an evolving definition
- ✘ **A digital universe consisting of interconnected 3D spaces that allow people to work, shop, and spend leisure time. This is usually done through avatars or by wearing VR headsets. The discussion whether or not we have such a metaverse, or whether we will have one in the future, is still ongoing.**
- ✘ **A metaverse would require **interoperability** between different "verses" and virtual worlds.**

[Missing a copyrighted image of The Metaverse Explained: Features, Examples, and Benefits]
Source: <https://www.spiceworks.com/tech/artificial-intelligence/articles/what-is-metaverse/>



Interoperability

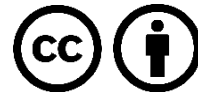
- ✘ **Interoperability is the ability of different virtual worlds, platforms, and digital assets to interact with each other. It enables users to move between various virtual environments, transfer digital assets, maintain consistent identities, and experience continuity across different Metaverse experiences. It includes:**
- ✘ **Move between virtual spaces regardless of platform or technology;**
- ✘ **Asset Portability: digital assets can be transferred between different metaverse environments;**
- ✘ **Identity persistence: avatar, profile information**
- ✘ **Cross Platform consistency: consistency in interactions and experiences**
- ✘ **Common standards and protocols to allow for asset exchange between different verses, cross chain communication → Metaverse Standards Forum**

- ✘ **Reference: <https://www.weforum.org/publications/interoperability-in-the-metaverse/>**



[Missing a copyrighted image of Metaverse Standards Forum.]

Source: <https://voicesofvr.com/1098-metaverse-standards-forum-unites-leading-standards-orgs-xr-companies-towards-open-metaverse-interoperability/>

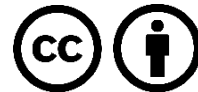


Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>

Architecture of the Blockchain

Source: Mohanty, D., Anand, D., Aljahdali, H. M., & Villar, S. G. (2022). Blockchain interoperability: Towards a sustainable payment system. *Sustainability*, 14(2), 913.

Blockchain Layer 3	Applications					Smart Contracts, User Interface
Blockchain Layer 2	Layer 2 Protocols	Name Services	Oracles	Channels	Wallets	Enhance Functionality of blockchain: Governance/DAOs, Wallets
Blockchain Layer 1	Blockchain Platform (Blockchains, Sidechains, Consensus Mechanisms)					Defines how nodes of blockchain come into agreement
Blockchain Layer 0	Network					Facilitates effective discovery of interaction among nodes
Blockchain Hardware Layer	Hardware					Provides physical Resources needed to host the blockchain – nodes, tokens mining, servers



Blockchain Layered Architecture

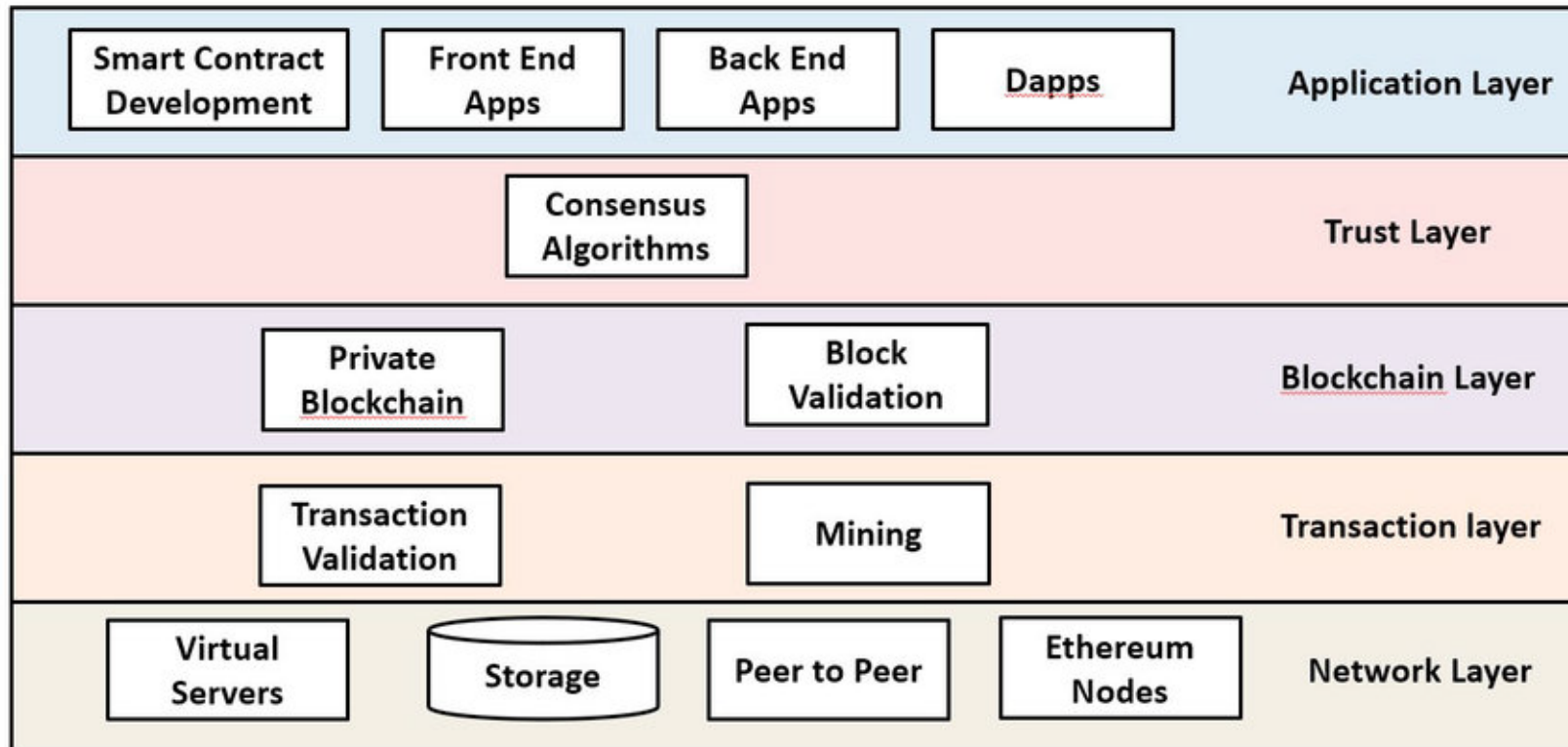


Figure by Praveen M Dhulavagol, Vijayakumar H Bhajantri, S G Totad, available under **CC-BY-NC-ND 4.0** (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Source: Dhulavagol, P. M., Bhajantri, V. H., & Totad, S. G. (2020). Blockchain ethereum clients performance analysis considering E-voting application. *Procedia Computer Science*, 167, 2506-2515.



Cryptowallet

- ✘ A digital wallet to store cryptocurrencies. The currency is secured through a private key.

[Missing a copyrighted image of The Complete Guide to Web3 Wallets: Which is Best?]

Source: <https://blog.thirdweb.com/web3-wallet/>



Mining

- ✘ A way to earn cryptocurrencies without having to buy them. Using the **Proof of Work method**, a computer needs to solve complex mathematical puzzles to verify a new ‘block’ on the blockchain.

[Missing a copyrighted image - Chinese GPU miners are now bulk buying GeForce RTX 30 laptops to mine Ethereum - VideoCardz.com]
Image: <https://www.edureka.co/blog/blockchain-mining/>

[Missing a copyrighted image of Best Bitcoin ETFs - Buy Side from WSJ]

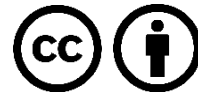
Bitcoin is the most famous POW Cryptocurrency



The process of mining

[Missing a copyrighted image of Blockchain Mining: Definition, Process, Pooling & Miners | Blockchain, Ethereum mining, Crypto mining]

Source: www.theengineeringProject.com



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>



Minting

- ✘ Similar to mining, but uses the Proof of Stake method. Crypto- or NFT owners stake (lock) their assets, after which they may be selected for a transaction validation process, creating new coins.

Ether is most well known
PoS Cryptocurrency

[Missing a copyrighted image of Minting Crypto - Definition, How to, POW vs POS]

Source: <https://corporatefinanceinstitute.com/resources/cryptocurrency/minting-crypto/>



The Sandbox:

- ✘ **The Sandbox combines creativity, blockchain technology, and NFTs to make a dynamic virtual world where players build, own, and monetize their gaming experiences using the Ethereum blockchain**
- ✘ **LAND parcels are the virtual real estate.**
- ✘ **LAND owners can host games, build multiplayer experiences, create social hubs, and interact with their community.**

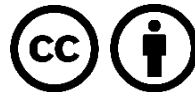
[Missing a copyrighted image of The Sandbox]

Image: <https://www.sandbox.game/en/map/>



The Sandbox Land <https://www.sandbox.game/en/>

- × LAND is the basic Sandbox unit. It is an ERC-721 NFT on the blockchain.**
- × The LAND owner or another player authorized by the owner can terraform and alter the pre-built, preset terrain.**
- × A LAND has a width of 96 meters and a length of 96 meters. It's a perfect square.**
- × The Sandbox has a total of 166,464 LANDs.**
- × Over 115,850 LANDs, representing 70% of total supply, have been minted by a community of more than 23,500 LAND owners, making The Sandbox one of the most decentralized communities based on asset ownership.**



<https://www.sandbox.game/en/about/sand/>

- ✘ **SAND is the utility token used throughout The Sandbox ecosystem as the basis for transactions and interactions.**
- ✘ **It is an ERC-20 utility token built on the Ethereum blockchain.**
- ✘ **There is a finite supply of 3,000,000,000 SAND.**
- ✘ **The SAND is used for value transfers as well as staking and governance. SAND.**
- ✘ **Players can create digital assets in the form of Non-Fungible Tokens (NFTs), upload them to the marketplace, and integrate them into games with Game Maker.**



The Sandbox Use Cases

- ✘ The primary purpose of the sandbox is to provide a platform and virtual world for user-generated content

Other Use cases for The sandbox:

- ✘ Virtual real estate
- ✘ Game Development
- ✘ Virtual art and NFTs
- ✘ Virtual events and performance
- ✘ Social interaction and communities
- ✘ Education and Training
- ✘ Branding and Marketing
- ✘ Play-to-Earn gaming

[Missing a copyrighted image of Custom NFT gallery in The Sandbox metaverse]

<https://www.metaverse-studio.fr/en/corporate-experiences-for-brands-metaverse-the-sandbox-agency/>



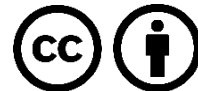


Activity #1 Metaverse and its Emergence



Discussion Group Questions

- ✘ Why does Metaverse have different definitions and viewpoints?
- ✘ What are the trends shaping the Metaverse? What are the trends shaping Web3? And what are the main differences between the driving trends?
- ✘ Discuss the potential impacts of the Metaverse on society, including social dynamics, privacy, identity, and inequality
- ✘ How might the widespread adoption of virtual environments reshape human interactions and relationships?
- ✘ Discuss the ethical and regulatory considerations associated with the Metaverse. What are some of the risks and challenges posed by its development, and how can they be addressed?



15 Minutes BREAK



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>



Influence and power dynamics in virtual spaces



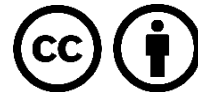
**Let's look at how
technology, metaverse,
online social movements
are reshaping power and
influence**



Understanding New Power

- ✘ **“Old power works like a currency. It is held by few. Once gained, it is jealously guarded, and the powerful have a substantial store of it to spend”.**
- ✘ **“New power operates differently, like a current. It is made by many. It is open, participatory, and peer-driven. It uploads, and it distributes.”**

[Missing a copyrighted image of the cover of Heimans, J., & Timms, H. (2014). Understanding “new power”.]



Which of the values do you recognise in Web3?

Old power values	New power values
Managerialism, institutionalism, representative governance	Informal, opt-in decision making; selforganization; networked governance
Exclusivity, competition, authority, resource consolidation	Open source collaboration, crowd wisdom, sharing
Discretion, confidentiality, separation between private and public spheres	Radical transparency
Professionalism, specialization	Do-it-ourselves, "maker culture"
Long-term affiliation and loyalty, less overall participation	Short-term, conditional affiliation; more overall participation

Source: Heimans, J., & Timms, H. (2014). Understanding “new power”. Harvard business review, 92(12), 48-56





Activity #2

NFTS and their Social Impact

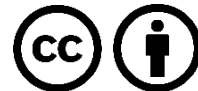
Article Discussion

Guidi, B., & Michienzi, A. (2023, September). The social impact of NFTs in the metaverse economy. In Proceedings of the 2023 ACM Conference on Information Technology for Social Good (pp. 428-436).



Let's quickly sum up the main points of the article

- × Guidi, B., & Michienzi, A. (2023, September). The social impact of NFTs in the metaverse economy. In *Proceedings of the 2023 ACM Conference on Information Technology for Social Good* (pp. 428-436).
- × What's happening to the price of Land?
- × What's happening to sales?
- × What are the social implications?
- × What's the difference in driving forces behind the sales between Decentraland and The Sandbox?
- × What are the implications for renting?
- × What might the future look like? Will The Sandbox have a different social dynamic and audience to Decentraland?
- × Is the Metaverse more equal than the physical world?



Maps of Decentraland and The Sandbox

[Missing copyrighted images of Decentraland and the Sandbox]

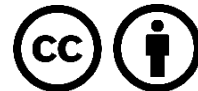
From: Guidi, B., & Michienzi, A. (2023, September). The Social Impact of NFTs in the Metaverse Economy. In *Proceedings of the 2023 ACM Conference on Information Technology for Social Good* (pp. 428-436)



Discussion

Activity#3:

- ✘ Discuss how is power and influence is concentrated in the Metaverse and the virtual world?
- ✘ How does it differ to the physical reality?
- ✘ Who are the main stakeholders and influencers shaping the direction of the Metaverse and Web3?



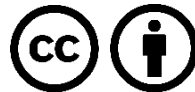
INSPIRATIONS Tour of New Collecting Culture



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>

https://zora.co

- ✘ **ZORA is a platform that combines creativity, blockchain technology, and decentralized principles.**
- ✘ **ZORA operates as a decentralized protocol where anyone can permissionlessly buy, sell, and create**
- ✘ **Their approach involves minting content on the blockchain, allowing creators to accrue value from their ideas**



Mirror <https://mirror.xyz>

Folklore <https://folklore.mirror.xyz>

- × Web3 platform for “minting ideas”
- × Turn readers, followers, fans into collectors --> NEW form of patronage



How can Web3 and art get society to “rethink”art? <https://terra0.org>

- ✘ A sculpture that suggests ways to rethink the economic and ecological relationships between viewers, the institution and the artwork.

[Missing a
copyrighted image of
Seed Capital at Art
Dubai 2022]



Seed Capital (2022)

The artistic work will be on display in 4 exhibitions in total, with only Art Dubai curated by Fingerprints DAO announced

Maximum of 1600 NFTs

[Missing a copyrighted image of Certificate of Growth]

Source: <https://terra0.medium.com/wen-growth-an-introduction-to-seed-capital-8d4a9df93789>

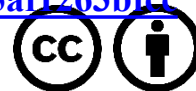


Two Degrees NFT By Terra0

- ✘ A conceptual and technical writeup of terra0's contribution for Sotheby's Native Digital: A Curated NFT Sale

[Missing a copyrighted image of Two Degrees NFT]

- ✘ Source: <https://terra0.medium.com/two-degrees-nft-5af1263bfec>



First Tokenized Film in History

<https://www.bullrunlapelicula.com/en/>

- ✘ Bull Run has made history by fully financing itself in less than 24 hours through the sale of \$BULL tokens.
- ✘ It is a documentary with a lot of comedy about the cryptocurrency craze, directed by Ana Ramón Rubio and produced by Cosabona Films.
- ✘ The \$BULL token is a security token. It represents the debt issued for the film and grants certain rights to the film's profits. 50% of the net proceeds from the film are distributed in the form of USDT payments every 3 months.
- ✘ The other 50% is included in a DeFi operation involving stablecoins

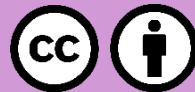




Discussion and Reflection: What lessons can we draw from today's class?



We made it!



Content is available under CC BY 4.0 unless otherwise stated
<https://creativecommons.org/licenses/by/4.0/deed.fi>