



Markets In The Metaverse

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Agenda

1. What is the Metaverse?
2. "The Metaverse", it is singular
3. Interoperability in the Metaverse
4. Markets & The Metaverse
5. Reference(s)
6. Q&A

Past & Present

1. [Emmanuel Goldberg](#): Statistical Machine
2. Vannevar Bush: Memex ([As we may think](#))
3. Jean Baudrillard: Hyperreality
4. Jean-Luc Godard: [Alphaville](#)
5. Neal Stephenson: Snow Crash (*Metaverse, Avatar*)
6. William Gibson: Neuromancer *The Matrix*
7. Games: Fortnite, Roblox, Minecraft, MFS ...
8. [Planet Labs](#) Public Benefit Corporation

Definition

Realism. To cause psychological and emotional immersion.

Ubiquity. Accessible through all existing digital devices do the user's **virtual identities** or collective persona remain intact throughout transitions?

Interoperability. (a) digital assets used in the reconstruction or rendering of virtual environments remain interchangeable across specific implementations and (b) users can move seamlessly between locations without interruption in their immersive experience?

Scalability. Does the server architecture deliver sufficient power to enable massive numbers of users to occupy the Metaverse without compromising the efficiency of the system and the experience of the users?

[Dionisio et. al](#)

Definition (Continued)

The metaverse is a future persistent and interconnected virtual environment where social and **economic** elements mirror reality. Users can interact with it and each other simultaneously across devices and immersive technologies while engaging with digital assets and property- [WEF](#)

The metaverse is an immersive and constant virtual 3D world where people interact by means of an avatar to carry out a wide range of activities. Such activities can range from leisure and gaming to professional and **commercial** interactions, financial transactions or even health interventions such as surgery. EU

A massively scaled and interoperable network of real-time rendered 3D virtual worlds that can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with a continuity of data, such as identity, history, entitlements, objects, communications and **payments**. [Matthew Ball](#)

It is Not... Neti, Neti

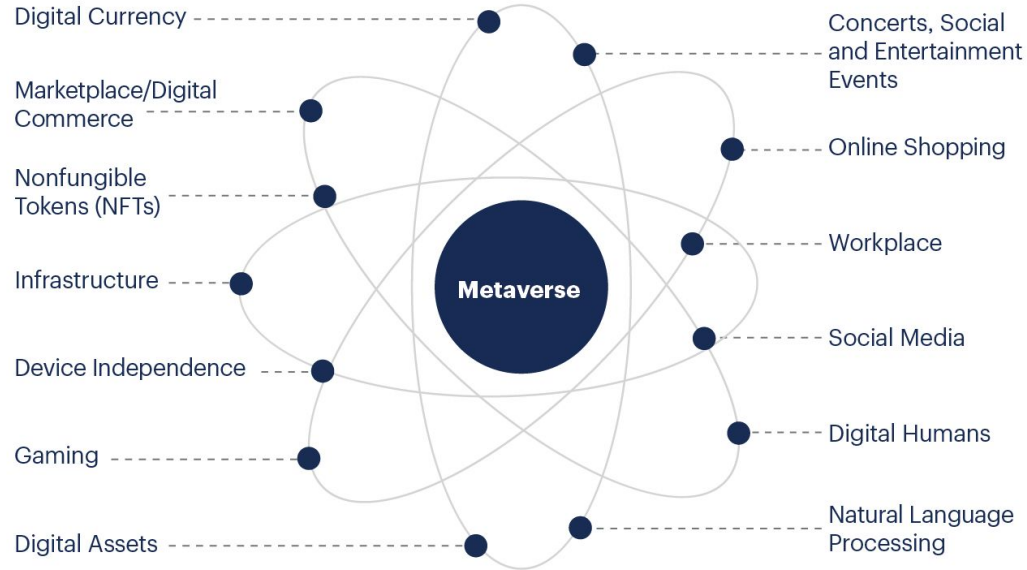
1. A "virtual world"
2. A "virtual space"
3. "Virtual reality"
4. A "digital and virtual economy"
5. A "game"
6. A "virtual theme park or Disneyland"
7. A "new app store"
8. A "new UGC platform"

Matthew Ball

Two Visions

- AR (Augmented Reality): Microsoft- HoloLens
- VR (Virtual Reality): Facebook - Oculus
- Hybrid

Elements of a Metaverse



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Where

- competition
- data protection
- liabilities
- financial transactions
- Cybersecurity
- Health
- accessibility and inclusiveness

Meta-Future

- Education
- AEC, Real Estate
- Industry
- Retail Lifestyle-Exercise, dating, weddings, sex-work
- Entertainment including sports, gambling and events
- Fashion
- Advertising
- Governance

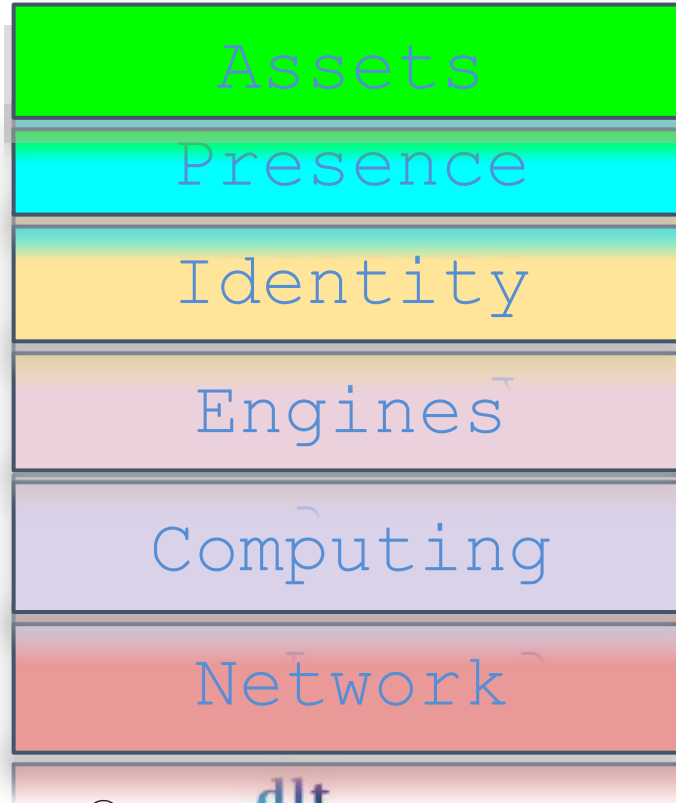
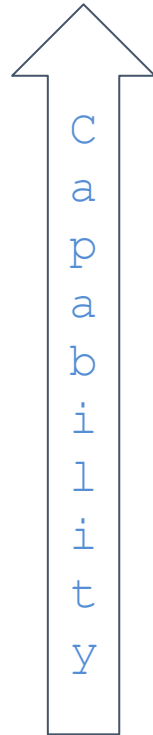
The Metaverse vs A Metaverse

- Similar to “The Internet”
- As if true interoperability has arrived
- Encompasses all possible virtual worlds with seamless transitions
- Lack of a Metaverse protocol
- Standards ([Universal Scene Description](#))

BUIDL The Metaverse

- Networks (Bandwidth and Latency)
- Devices (Primary, secondary, tertiary)
- Computing-Edge is better? Apps vs Browser
- Virtual world engines (Unreal, Unity, Helios, Steamworks, IVWP)
- Interoperability (shades of)
- Payment Rails (Blockchain) (*gatekeepers*)
- Identity (Blockchain)

Buidling Layers



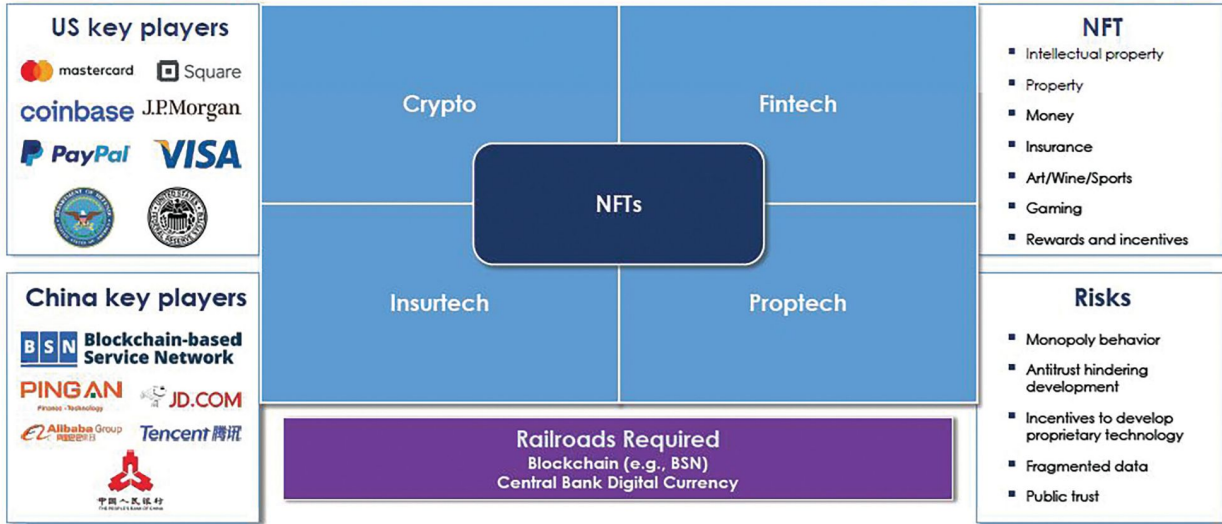
ABCD Of The Metaverse

- AI
- Blockchain
- CryptoCurrencies
- DeFi

Value In The Metaverse

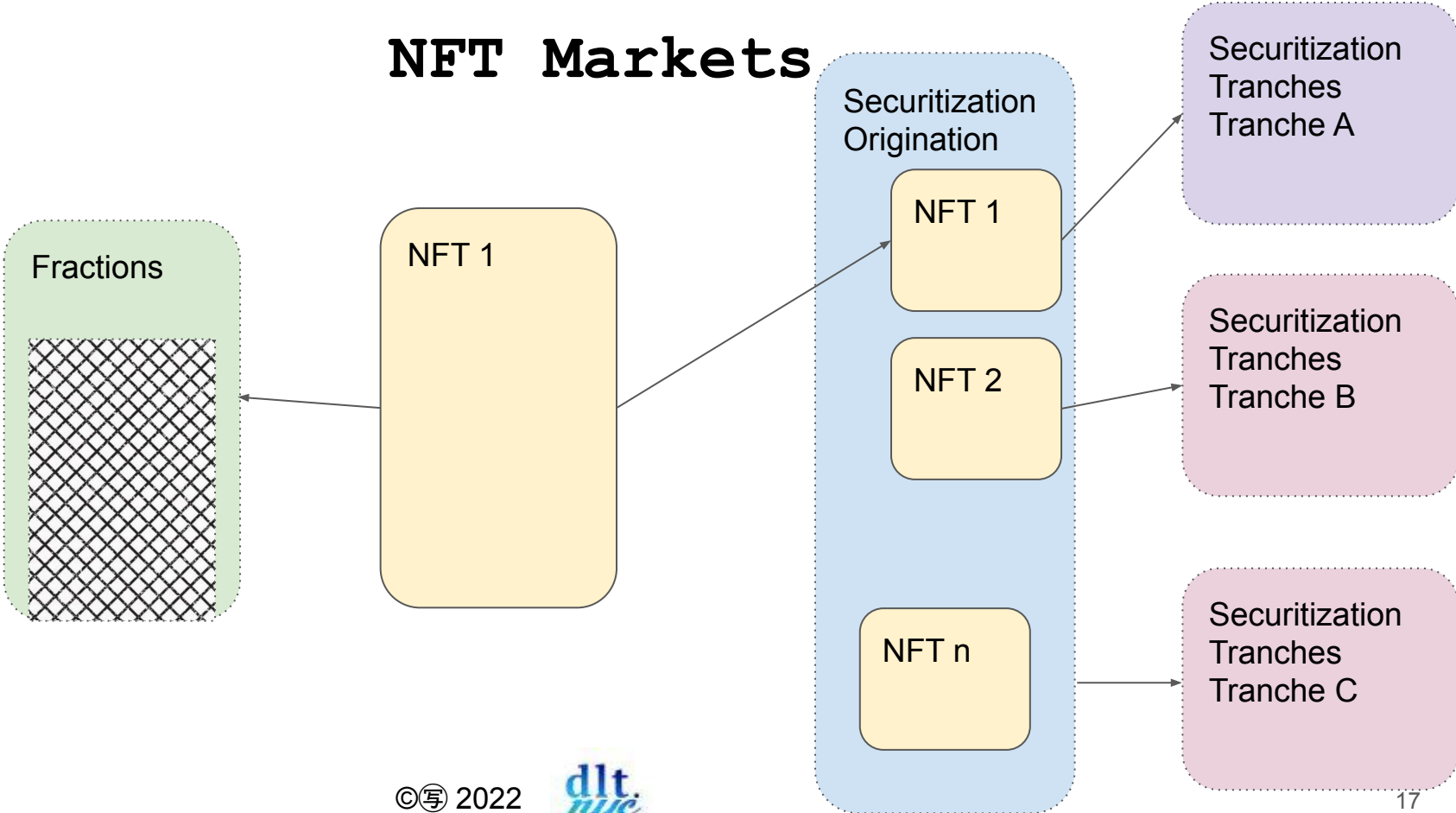
Global Summary: Blockchain as the railroad, Big Data as the cars

Fixing transparency, traceability, AML, KYC for future advancements in data analytics (e.g., edge/quantum computing)



Sources: Schulte Research

NFT Markets



References

Dionisio, J. D. N., Burns III, W. G., and Gilbert, R. 2013. 3D virtual worlds and the metaverse: Current status and future possibilities. ACM Comput. Surv. 45, 3, Article 34 (June 2013), 38 pages. DOI: <http://dx.doi.org/10.1145/2480741.2480751>

[Money Metaverse](#) Paul Schulte, William Dogger

Q & A