



What the NFT is the metaverse?

The touted 'embodied internet' might take a while to arrive and could overwhelm, even with Big Tech support.

Non-fungible tokens, or NFTs, are ownership proof on blockchain technology of the original version of something digital, be that art, characters, tweets, videos or something else. People are paying millions for an exclusive claim on unique digital items (even if they can be copied at no cost).[1] Dune Analytics in August tallied sales of more than US\$3 billion worth of non-fungible tokens on the largest platform, OpenSea,[2] as people sought claims on collectables such as Pudgy Penguins and the Bored Ape Yacht Club characters.[3] In September, a cryptocurrency chit tied to a set of 107 of these 10,000 cartoon apes sold at an online Sotheby's auction for US\$24.4 million, while one Bored Ape token went for 740 ether (about US\$2.4 million).[4]

The fever over non-fungible tokens puzzles many. One explanation is that people in time will own more digital than physical items because they will spend more time online than offline. When people's digital presence is more important for impressing others than how they come across in real life, the coolest people will be those who own the best internet art displays, snappiest memes and prized virtual memberships.[5]

Non-fungible tokens, so it goes, are an evolution of blockchain technology where digital money was the starting point. The second phase, taking shape now, is decentralised finance that heralds a reordered financial system. "NFTs are a glimpse into the third stage: a next generation of mainstream consumer apps built on crypto rails – the social networks, games, and more of the future," according to Coinbase co-founder Fred Ehrsam. "This is the true beginning of the metaverse."[6]

The what? The term was first used in Neal Stephenson's satirical dystopian science-fiction novel of 1992, *Snow Crash*. [7] The word's use beyond the book harks to hypothetical virtual-reality communal spaces on the yet-to-be-built internet where the virtual and non-virtual worlds meet in a three-dimensional way.

Mark Zuckerberg, CEO of Meta Platforms (formerly Facebook) describes the metaverse as the "embodied internet" where people will feel fully "present with other people" when sharing virtual experiences. "Instead of just viewing content, you are in it," Zuckerberg says.[8] Jensen Huang, the CEO of US chipmaker Nvidia, describes the metaverse as "a virtual world that is a digital twin" of the physical world.[9]

Hints of the metaverse's coming – even arrival, some say – can be seen on the narrow, shared spaces on today's internet. Perhaps the best glimpse of the future is the Fortnite multi-player battle-based video game that works across all entertainment platforms. Aside from the shooting, Fortnite operates as a social square for its users. Gamers use v-bucks to decorate their avatars that 'emote' or dance. Friends meet virtually via their avatars to attend digital concerts that have featured stars such as Ariana Grande. Users can relive historical events such as Martin Luther King's 'I have a dream' speech by being 'teleported' to a reimagined Washington in 1963.[10]

For an idea of how the metaverse might operate, seven likely attributes listed by venture capitalist Matthew Ball are a common place to start.[11] The metaverse will never pause or end, and will be live, Ball predicts. It will host an unlimited number of users, be a self-contained economy and span the digital and physical worlds. The metaverse will depend on unprecedented interoperability so people's avatars can shift across simulations. The metaverse will be crammed with experiences.

As with the internet, no one would likely control this decentralised, interactive, virtual-reality world that will come with a dollop of augmented reality (a technology that via computers on glasses places a virtual image over a genuine scene). But some companies will build the metaverse's infrastructure and the key spaces within it. To eventuate, the metaverse will require standards and protocols to enable people's single digital identities (or avatars) to experience the teleporting, holograms, simulations, file sharing, pop-up graphics and whatever across platforms, taking with them their virtual possessions and digital currencies. People will then need affordable head-mounted displays embedded with virtual (and augmented) reality technology to log onto the metaverse, even if it is accessible through gaming consoles, mobiles and PCs. On top of that, companies will create the content and experiences. Just like the internet, the more time people spend in the metaverse, the more money to be made from ads, shopping carts and subscriptions.



Zuckerberg stirred interest in the metaverse in July when he said the then-Facebook would invest billions of dollars each year to transform itself into a metaverse company. Signs of this intent include the launch in August of Horizon Workrooms, which allows people wearing headsets to meet remotely. In September, the company came out with Ray-Ban Stories 'smart glasses' that feature cameras, a microphone, speaker and voice assistant. October's move was the name change to Meta. Microsoft CEO Satya Nadella talks of the "enterprise metaverse" and how Accenture and Mars already use its software or "metaverse stack to digitise the supply chain and optimise production through complex digital simulation".[12] Epic Games in April raised US\$1 billion to invest in the metaverse.[13] Walt Disney CEO Bob Chapek in November said the entertainment company intends to "connect the physical and digital worlds" ... "in our own Disney metaverse".[14]

While no consensus exists on how the metaverse might develop, nor how it might operate, coders are planning for a virtual world where people might spend up to eight hours a day moving through spaces for work and leisure. That would be a big jump. Nowadays, the average US adult spends two hours eight minutes a day on social media, while the average Australian notches one hour 48 minutes.[15] It might take decades of incremental advances until the metaverse is discernible. It's likely to be a messy process as platforms and systems become interoperable.

If the metaverse were to suddenly materialise today, it would no doubt be haunted by the same ethical and social questions that dog the internet and, in particular, social media. Wealthy private companies would appear best placed to exert control over the new public square. Anti-competition concerns would intensify if Big Tech were to get bigger. A magnified ability to gather data might amplify privacy concerns. Content would be contentious and might silo people by nurturing their biases, much the same way algorithms do with content on social media.

Technology-wise, it's reasonable to assume the metaverse will happen. Big advances in the comfort and capabilities of the wearable technology around augmented and virtual reality will be among the signs the metaverse is forming. Perhaps by the time the metaverse eventuates, society will have largely resolved the controversies surrounding cyberspace. The biggest doubt about the metaverse's success thus might be whether or not billions of people will willingly don head- and eyewear devices to spend so much time in an immersive online world. The failure of virtual reality to break through to mainstream, despite improvements in the technology, suggests people might prefer reality. It's anyone's guess.

To be sure, the metaverse needs huge computational advancements to happen. If holograms were to eventuate to add to the wow of the metaverse they would require technology not yet here that simultaneously captured, transported and recreated an image of someone to somewhere else. The metaverse might be so many decades off as to be irrelevant now. The shift to protect the privacy of data might hamper its usefulness. Some cynics think the metaverse is spin about the 'next big thing' to overcome the handicap that smart phones are already passé. Others dismiss the metaverse as rebranded virtual reality.

The tech, entertainment and gaming industries are betting not. Be prepared to hear a lot about how the metaverse is coming and how it will change much. Perhaps the price of non-fungible tokens might prove a guide as to how the arrival of the metaverse is tracking.

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The then-Facebook in 2014 paid US\$2.3 billion for Oculus, a company that had been set up two years earlier to produce virtual-reality sets. The plan was to turn the company into a leader in virtual reality, a technology that gained attention in the 1980s due to the efforts of Jaron Lanier, who is considered the 'father of virtual reality'.[16]

In 2017, Zuckerberg attended the Oculus Connect conference and announced the company's ambitions for its virtual-reality business. "We want to get a billion people in virtual reality," he said.[17] Nowadays, the Facebook site attracts more than 2.8 billion users each month. The company's Instagram has one billion users. WhatsApp boasts 1.5 billion, the same number of users Messenger attracts. But the company won't divulge the number of Oculus sets sold. Industry media estimates only 10 million units have been purchased.[18]

Oculus headsets, often comprising a headpiece and two arm attachments, are marketed under the "Live the unbelievable" slogan and are among the industry's leading products in virtual reality. The price range, starting at A\$479 for the successful Oculus Quest 2 model (an estimated five million sold), is reasonable compared with the cost of the latest Apple iPhone. The apparatus allows people to take part in "games, entertainment, live events, fitness and more". Users can adopt identities, visit faraway places and chase friends virtually. Yet sales are slow as the technology offers limited experiences until the next upgrade.[19] Other companies have struggled to turn virtual and augmented reality into anything that excites people enough to take the technology mainstream. Sony took four years to sell five million PlayStation VR, after launching in 2016 what has turned out to be the most successful virtual-reality competitor to Oculus.[20]

One drawback of virtual reality is that weighty and awkward headsets only offer solitary experiences and wearing them can make people feel tired and nauseated from motion sickness. Few opportunities arise where people can interact with others likewise gadgeted up; hence the excitement of the possibilities of the metaverse. A second drawback is that virtual reality is an enclosed experience, whereas the internet and social media have wider practical, everyday applications that even make them essential services. A third weakness is that not all the senses are engaged, which means virtual reality never feels authentic. Nor does virtual reality require human qualities such as finding the courage to experience daredevil stunts.

A fourth disadvantage of virtual reality is accentuated by the metaverse. People seem reluctant to wear headsets to spend time in a make-believe world. There is no sign that the metaverse is being driven by demand from millions, even billions, of expectant users who can't wait to wear what no doubt would be lighter and better headsets so they can play, socialise and earn a living in a parallel virtual universe.

Could it be that people will stick with reality? The tech, entertainment and gaming industries are likely to make a multi-billion-dollar bet the metaverse will be so special the answer will be no. Perhaps the soaring prices of non-fungible tokens say likewise.

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[1] Bloomberg. QuickTake. 'What's an NFT? It's what makes GIFS worth big bucks.' 11 March 2021. [bloomberg.com/news/articles/2021-03-10/what-s-an-nft-it-s-what-makes-gifs-worth-big-bucks-quicktake](https://www.bloomberg.com/news/articles/2021-03-10/what-s-an-nft-it-s-what-makes-gifs-worth-big-bucks-quicktake)

[2] Bloomberg News. 'Day-trading arm goes all-in on NFTs as meme-stock mania ebbs.' 3 September 2021. [bloomberg.com/news/articles/2021-09-02/day-trading-arm-goes-all-in-on-nfts-as-meme-stock-mania-ebbs](https://www.bloomberg.com/news/articles/2021-09-02/day-trading-arm-goes-all-in-on-nfts-as-meme-stock-mania-ebbs)

[3] See 'Welcome to the Bored Ape Yacht Club.' boredapeyachtclub.com/#/

[4] Reuters. 'Set of 'Bored Apes' NFTS sells for \$24.4 mln in Sotheby's online auction.' 10 September 2021. [reuters.com/lifestyle/set-bored-ape-nfts-sell-244-mln-sothebys-online-auction-2021-09-09/](https://www.reuters.com/lifestyle/set-bored-ape-nfts-sell-244-mln-sothebys-online-auction-2021-09-09/). Three months earlier, Sotheby's sold a 'CryptoPunk' token, a 10,000-pixel art character of a masked male head made by Larva Labs in 2017, for US\$11.8 million. See Reuters. 'Crypto Punk' NFT sells for \$11.8 million at Sotheby's.' 11 June 2021. [reuters.com/technology/cryptopunk-nft-sells-118-million-sothebys-2021-06-10/](https://www.reuters.com/technology/cryptopunk-nft-sells-118-million-sothebys-2021-06-10/). Most NFT trading is based on the Ethereum blockchain.

[5] See 'Zed.' community.zed.run/

[6] See Vanity Fair. 'Imagine if the Mona Lisa was digital and then auctioned on the internet: The only NFT explainer you really need, from a true believer.' Interview with Coinbase cofounder Fred Ehrsam. 16 September 2021. [vanityfair.com/news/2021/09/the-only-nft-explainer-you-really-need-from-a-true-believer](https://www.vanityfair.com/news/2021/09/the-only-nft-explainer-you-really-need-from-a-true-believer)

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[8] 'Mark in the metaverse. Facebook's CEO on why the social network is becoming a 'metaverse company.' The Verge. 22 July 2021. [theverge.com/22588022/mark-zuckerberg-facebook-ceo-metaverse-interview](https://www.theverge.com/22588022/mark-zuckerberg-facebook-ceo-metaverse-interview)

[9] TIME. 'The metaverse is coming. Nvidia CEO Jensen Huang on the fusion of virtual and physical worlds.' 18 April 2021. [time.com/5955412/artificial-intelligence-nvidia-jensen-huang/](https://www.time.com/5955412/artificial-intelligence-nvidia-jensen-huang/)

[10] NPR. 'Fortnite is letting you relive MLK's 'I have a dream' speech.' 27 August 2021. [npr.org/2021/08/27/1031674883/fortnite-mlk-i-have-a-dream-speech-martin-luther-king](https://www.npr.org/2021/08/27/1031674883/fortnite-mlk-i-have-a-dream-speech-martin-luther-king)

[11] Matthew Ball. 'The metaverse: What it is, where to find it, who will build it and Fortnite.' 18 January 2020. [matthewball.vc/all/themetaverse](https://www.matthewball.vc/all/themetaverse)

[12] Satya Nadella, CEO Microsoft. Speech at Microsoft Inspire 2021 gathering. 14 to 15 July 2021. news.microsoft.com/wp-content/uploads/prod/2021/07/Microsoft-Inspire-2021-Satya-Nadella.pdf

[13] Epic Games. 'Announcing a \$1 billion funding round to support Epic's long-term vision for the metaverse.' 13 April 2021. [epicgames.com/site/en-US/news/announcing-a-1-billion-funding-round-to-support-epics-long-term-vision-for-the-metaverse](https://www.epicgames.com/site/en-US/news/announcing-a-1-billion-funding-round-to-support-epics-long-term-vision-for-the-metaverse). Epic Games says it is preparing for a metaverse where instead of interactions (and ads) based around 'likes', comments and posts in 'walled gardens' (or just one platform), users will take part in and share experiences across various platforms. In that sense, the Epic Games failed lawsuit against the Apple 'walled garden' is a setback to Epic's version of the metaverse. The Washington Post. 'Epic Games believes the internet is broken. This is their blueprint to fix it.' 28 September 2021. [washingtonpost.com/video-games/2021/09/28/epic-fortnite-metaverse-facebook/](https://www.washingtonpost.com/video-games/2021/09/28/epic-fortnite-metaverse-facebook/)

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[19] See 'One man's endless hunt for a dopamine rush in virtual reality.' 29 September 2021. [nytimes.com/2021/09/29/technology/virtual-reality-fascination.html](https://www.nytimes.com/2021/09/29/technology/virtual-reality-fascination.html)

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