

5G - Driver of Metaverse, the third generation of Internet (Web 3.0) 5G 網絡驅動第三代互聯網 (Web 3.0) —— 元宇宙

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The term Metaverse first appeared in the nineties, constituting two parts “Meta” and “verse” meaning “beyond” and “universe” respectively. The Metaverse means “beyond the universe”, which represents a continuous digital world and is being referred to as the third generation of the Internet or Web 3.0. Facebook founder Mark Zuckerberg has described the Metaverse as an internet world where humans can immerse in. And powering this virtual world as its infrastructure is the 5G network.

Huge potential of the Metaverse

The Metaverse has opened up a new virtual economy creating abundant business opportunities. Bloomberg Intelligence estimated that the Metaverse market could approach US\$800 billion in 2024, underlying the huge potential of the Metaverse. Technology giants Meta, Microsoft, Sony, Adobe and Qualcomm have joined hands to form the Metaverse Standards Forum (MSF) to foster the standards of the Metaverse. At the same time, popular sports brands have moved into the Metaverse to create their own avatars and launch limited NFTs. Celebrities and artists have also initiated their own NFT projects which are well received by the market. As evidenced by the above, the Metaverse is fast becoming a global trend.

元宇宙 (Metaverse) 概念於九十年代出現,「Meta」代表超越,而「verse」則代表宇宙 (universe)。因此, Metaverse 就是「超越宇宙」的意思,是一個永續的數碼世界,被喻為第三代互聯網 Web 3.0。Facebook 創辦人 Mark Zuckerberg 亦曾經表示,元宇宙是一個人類可以「置身其中」的互聯網世界。而讓這個元宇宙暢順運行的基建,就是 5G 網絡。

元宇宙發展潛力龐大

元宇宙開發了嶄新的經濟模式,衍生龐大商機。彭博研究報告預期,元宇宙的市場規模在 2024 年達到 \$8,000 億美元,可見元宇宙強大的發展潛力。早前,Meta、Microsoft、Sony、Adobe 和 Qualcomm 等多家科技巨頭,合組「元宇宙標準論壇」(Metaverse Standards Forum),共同開發元宇宙標準。多個著名運動品牌亦搶先投入元宇宙世界,製作虛擬角色,並推出限量 NFT;不少名人和藝術家更發行自家 NFT 項目,備受市場熱捧,可見元宇宙熱潮已席捲全球。



3 Hong Kong has set up a virtual 3Shop in Voxels metaverse platform.
3 香港在 Voxels 元宇宙平台建立虛擬門市。

Applications in the Metaverse require ultra-fast computing ability and support of advanced technologies such as artificial intelligence, blockchain, virtual reality (VR), augmented reality (AR) and Internet-of-Things. As a massive amount of data needs to be transmitted, stored and analysed, the demand for bandwidth is extremely high. As a result, the 5G network with its ultra-fast speed and super low latency, is a vital element for the Metaverse. 5G is capable of supporting various VR and AR wearables, enabling users to shuffle between the virtual and physical worlds anytime, anywhere.

Fast to launch NFT – a key element of Web 3.0

While various telecoms operators launched 5G services in 2020, 3 Hong Kong was quick to achieve a 99%[#] 5G coverage. The company was also the first operator to build over 1,000 3.5GHz spectrum band base stations and activate the base stations of the 700MHz 5G band spectrum in Hong Kong. The 700MHz band of spectrum offers a wide area of 5G coverage and this helps facilitate the development of Hong Kong as a smart city.

元宇宙的各種應用，需要極高速的演算能力，並依靠人工智能、區塊鏈、虛擬實境、擴增實境和物聯網等先進科技支援，需傳輸、儲存和分析大量數據，對頻寬有極高要求。因此，極高速和超低時延的 5G 網絡是元宇宙不可或缺的元素，5G 能支援各種虛擬實境和擴增實境裝置，隨時連接和穿插於元宇宙的虛擬世界和現實世界。

率先開展 NFT — Web 3.0 重要元素

本港電訊營辦商於 2020 年推出 5G 網絡，3 香港的 5G 全港覆蓋早已達到 99%[#]，更率先於 3.5 吉赫頻段建設超過 1,000 個基站，亦領先全港啟動 700MHz 5G 頻譜基站，提供穿透力特強的廣域覆蓋，引領香港智慧城市新發展。



3 Hong Kong launches the DIGiBox Solution Hub which exhibits state-of-the-art 5G corporate solutions, bringing unprecedented experiences to customers.

3 香港推出商業應用方案展覽館 DIGiBox，展示最具前瞻性的 5G 商業應用方案。

[#] Based on the test results in relation to 3 Hong Kong's 5G network and population distribution of Hong Kong conducted in January 2021.

[#] 根據 3 香港於 2021 年 1 月進行有關其網絡於本港人口分佈地所得的測試結果。

In addition to 5G, NFT is also one of the key elements of the Metaverse. 3 Hong Kong led the industry to launch an NFT-based project in 2021. The company partnered with a new media art collective to create "3.Orbstellar by XCEPT NFT Big Bang Immersive Experience Hall", enabling participants to create collective digital art creation with blockchain technology and opening up a new media immersive experience.

3 Hong Kong was the first in the telecoms industry in Hong Kong to embrace cryptocurrency payments by collaborating with FTX US, an international leading digital assets exchange. The new payment method is powered by FTX US's cryptocurrency exchange service "FTX Pay", which provides customers a new spending platform in the Metaverse to pay for phone bills and services online with cryptocurrencies.

除 5G 外，NFT 亦是元宇宙的一個重要元素。在 NFT 熱潮下，3 香港於 2021 年領先業界率先推出以 NFT 為本的項目，夥拍新媒體藝術團隊創作「3.Orbstellar by XCEPT 宇宙星空 NFT BIG BANG 體驗館」，讓參加者透過區塊鏈技術，集體創作 NFT 數碼藝術作品，開創新媒體沉浸式體驗。

3 香港亦敢於創新，於業界率先接受加密貨幣付款，與國際領先的數碼資產交換平台 FTX US 合作推出 FTX Pay 虛擬貨幣支付方式，讓客戶以加密貨幣支付月費和購物，為客戶進入元宇宙消費提供嶄新的平台。



**We are now
Crypto Friendly**
Explore the metaverse in the 5G era

Among the first in Hong Kong to accept cryptocurrency[^]
• Pay bills • Shop with us on 3Mall


Powered by **FTX US**

[^]On the first day of this advertisement, and in the case of local mobile network service providers. *You can now use FTX US's cryptocurrency exchange service "FTX Pay" to make payments to us using selected cryptocurrencies for monthly fees, purchases of mobile devices and value-added services. You will have to create an FTX US account to access and use the FTX Pay feature.

3 Hong Kong was the first in the telecoms industry in Hong Kong to embrace cryptocurrency payments by collaborating with FTX US.
3 香港領先業界，與 FTX US 合作推出加密貨幣付款服務。

3 Hong Kong understands that art tech is one of the important arenas in the Metaverse. The company has offered large-scale local and international art tech exhibitions such as Digital Art Fair Asia, ARTAVERSE outdoor NFT & local art outdoor exhibitions, Art Basel Hong Kong and the Grand Finale of JUMPSTARTER 2022 Global Pitch Competition with full support by providing ultra-fast 5G services at exhibition venues. By integrating with advanced technologies, art pieces can be presented in a new and innovative format. 3 Hong Kong has also helped promote art tech by launching a unique Bored Ape Gummy NFT in ARTAVERSE in a cross-over project with NFT marketplace BlueArk. 3 Hong Kong also offers full support to art tech charity events. As an exclusive 5G broadband provider of an event organised by UFO School earlier, the operator helped young people to understand more about new technologies and raise the public's interest in the Metaverse.

In addition, 3 Hong Kong opened its 5,000-square-foot DIGIBOX Solution Hub in 2022. The DIGIBOX exhibits state-of-the-art 5G corporate solutions that showcase integrated technologies - AI, blockchain, cloud, big data and edge computing - creating unlimited business opportunities for enterprises. 3 Hong Kong has also set up a virtual 3Shop in Voxels Metaverse platform to provide customers with a virtual service experience.

Boundless possibilities are created by the Metaverse which has birthed a new world by blending the real and virtual worlds. The new mode of virtual economy has also showered 3 Hong Kong with new business opportunities. On one hand, the company has empowered enterprises to enter the Metaverse by integrating 5G with other advanced technologies. It has also raised public awareness of the Metaverse on the other hand by offering innovative services, getting customers ready for living and spending money in the Metaverse. 



3 Hong Kong supports a UFO School charity event with the creation of "The Chill Panda" painting representing 3 Hong Kong. 3 香港支持 UFO School 的慈善活動，公司更創作了代表 3 香港的「無憂熊貓」畫作。

3 香港洞悉藝術科技是元宇宙其中一個重要的發展領域，近年大力支持多個本地及國際大型藝術科技展，包括 Digital Art Fair Asia、ARTAVERSE 戶外 NFT x 本地藝術展覽、Art Basel Hong Kong 和 JUMPSTARTER 環球創業比賽「創科盛典」等業界大型活動，為場地提供極速 5G 網絡，結合先進科技讓藝術以嶄新的方式呈現於觀眾眼前。3 香港亦首次聯乘 NFT 拍賣平台 BlueArk，於 ARTAVERSE 中推出獨家無聊猿 NFT，全力推動藝術科技的發展。此外，3 香港亦全力支援科技藝術創作慈善活動，早前亦獨家為 UFO School 的慈善活動場地提供 5G 流動寬頻，培育青少年認識嶄新科技及推動大眾投入元宇宙世界。

此外，3 香港亦於 2022 年推出佔地五千平方呎的商業應用方案展覽館 DIGIBOX，展示最具前瞻性的 5G 商業應用方案，有關方案糅合人工智能、區塊鏈、雲端運算、大數據及邊緣計算等先進科技，為企業客戶創造無限商機。而 3 香港亦已於 Voxels 元宇宙平台，建立虛擬門市，為客戶帶來嶄新的虛擬服務體驗。

元宇宙建構一個融合現實和虛擬環境的新世界，締造無限可能，其新經濟模式亦為 3 香港帶來新機遇。就企業發展而言，3 香港結合 5G 與先進科技，為企業「賦能」，加速企業進入元宇宙掌握新機遇；就大眾客戶而言，3 香港則透過提供嶄新的服務，加深公眾對元宇宙的認識，讓他們進入元宇宙消費及生活作好準備。 