

Metaverse :

Industries moving towards Metaverse Technology and IP Trends

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What is Metaverse?

Metaverse can be defined as a fusion of persistent, interconnected, 3D virtual space linked into a perceived virtual realm.

As we are heading forward, we are acquainted with several technological jargons such as Artificial Intelligence, Internet of Things, Augmented Reality, Virtual Reality, Blockchain, and so on.

The metaverse is a new emergent technology jargon that is just around the horizon. According to a Bloomberg Intelligence analysis, the Metaverse will be the next era of the internet, with good economic possibilities that are predicted to reach 800 billion dollars by the middle of this decade.

Neal Stephenson introduced the term "metaverse" in his science fiction novel Snow Crash. "Metaverse" is a term that combines the terms "meta," which means "beyond," and "verse," which comes from the word "universe."

The metaverse interface, as opposed to the standard Internet, allows individuals to connect socioeconomically by allowing users to engage with one another and software programs as virtual characters in three-dimensional (3D) virtual reality. The metaverse serves as a mirror for the real world, breaking down physical and economic constraints.



The metaverse realm, according to Dinis Guarda, creator of LynKey, a blockchain-powered prop-tech platform, is a fusion of numerous components in which users may "live" within a digital universe and interact with other users. Blockchain technology, virtual reality, augmented reality, and game theory are all components of the metaverse.

Despite the metaverse's rising popularity, the notion remains veiled in ambiguity for many. The metaverse is described by some as a virtual reality interaction environment, while others relate it to a video game. The truth is significantly more intriguing and complicated.

Let's find out what exactly is metaverse? How did it come into existence? What are its types? What technologies are involved in it? What are the challenges associated with it? Where is it heading in the IP industry? and many more things about metaverse.

Types of Metaverse

Metaverse is mainly categorized into two types:

Centralized and Decentralized Metaverses.

Centralized

Large corporations like as Facebook, Epic Games, and the Roblox organisation are all focused on the centralised metaverse.

Decentralized

The decentralised metaverse, on the other hand, is built on blockchain, and numerous companies, like Axie Infinity and SecondLife, have expressed interest in it.

Evolution of Metaverse

1992

Neal Stephenson introduced the term metaverse in his science fiction novel Snow Crash

2003

Philip Rosedale and his team at Linden Lab unveils Second life, an online virtual world

2006

Roblox introduced an online platform that allows users to create and share games with others

2009

Bitcoin was introduced

2011

Ready Player One- a novel by Ernest Cline introduced virtual reality to people

2014

Facebook acquired virtual reality hardware and platform Oculus.

1992

Decentraland's first iteration of an online virtual world was created

2003

Pokémon Go game was released which uses augmented reality technology

2006

The multiplayer game, Fortnite was released introducing virtual concerts and tours

2009

Axie Infinity, a game that runs on Ethereum was introduced. It is virtual reality game based on training and trading mythical creatures.

2011

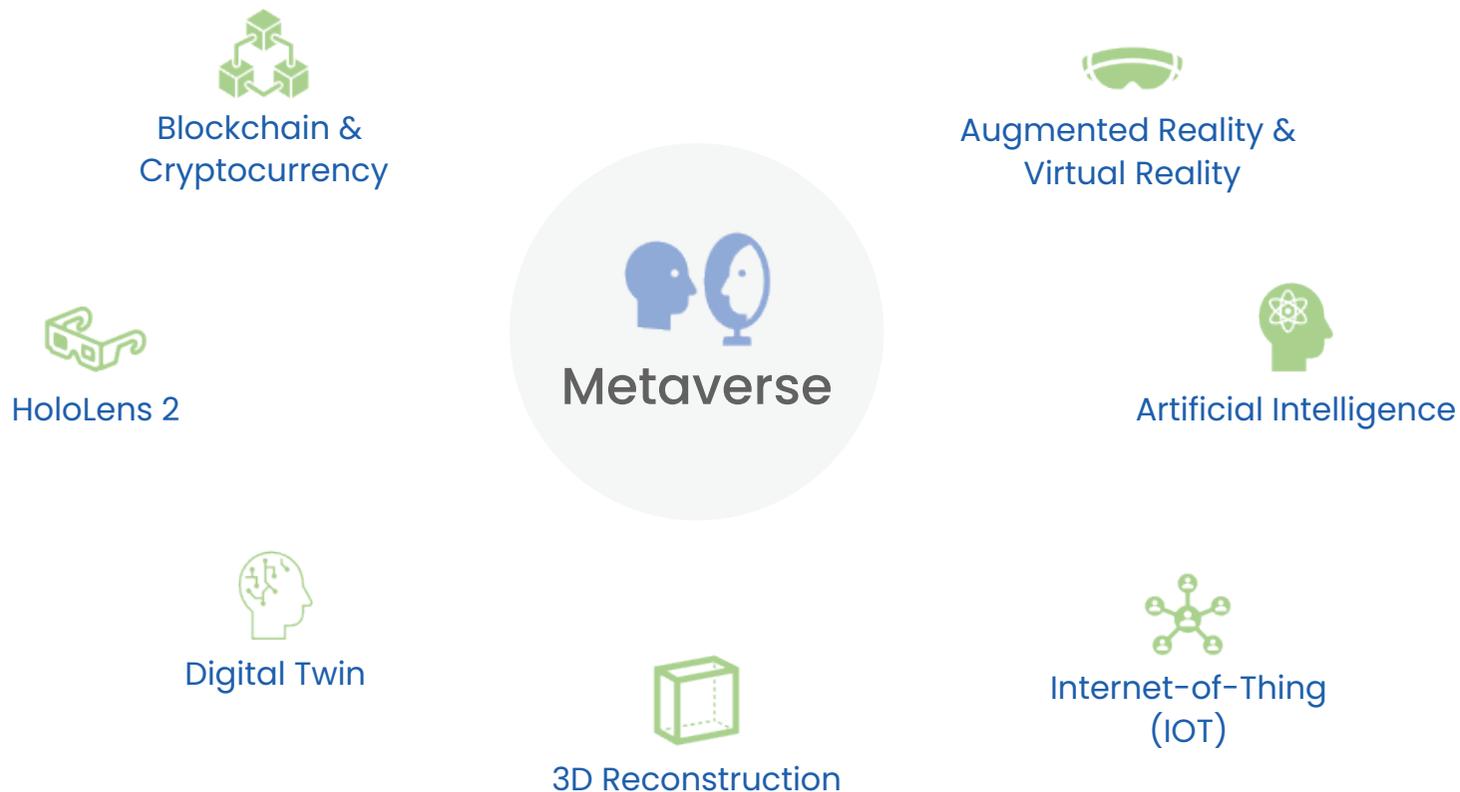
Microsoft unveiled Mesh a platform designed for virtual collaboration across multiple devices.

2021

With the acquisition of virtual shoe manufacturer RTFKT, Nike becomes "metaverse-ready" across multiple devices.

Technologies Behind Metaverse

The metaverse, as the "new internet," is still in its infancy phases of development, with new technology constantly improving the environment. To make the metaverse experience more interactive, organizations are integrating cutting-edge technology like blockchain, augmented reality (AR) and virtual reality (VR), 3D reconstruction, artificial intelligence (AI), and the Internet of things (IoT).



Metaverse Driving Different Industries

Metaverse is going to drive almost each industry. Some of industries which are driven are shown below:

Gaming

Corporate

Metaverse is going to be a major trend for corporates as people interact and attend meetings virtually by creating avatars.

Media
&
Entertainment

Healthcare

Companies like Intuitive Surgical, known for its robot-assisted surgery system, have incredible potential for shifting to virtual reality, and many other smaller firms are focusing in digital healthcare, to improve the telemedicine experience through augmented reality or to make other medical experiences more convenient and safe for patients.

Financial
Services

Automobile

NFTs may be used to purchase vehicles and other autos in the metaverse. They can also be obtained by exchanging bitcoins for them. In the automobile, one can view everything in 360 degrees.

Entertainment

Asset
Marketplace

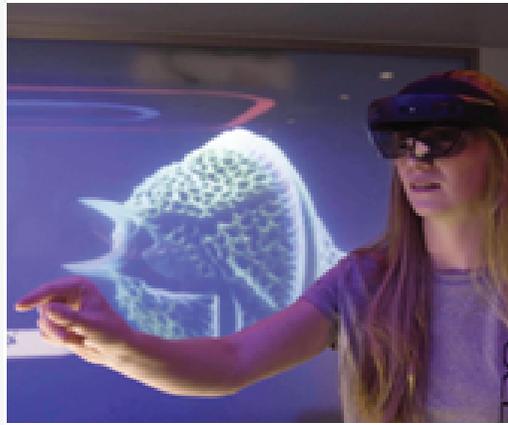
Asset markets are online marketplaces where users may purchase and trade digital assets. Many of these exchanges specialise on non-fungible tokens (NFTs).

Recent Developments in Metaverse



Holograktor – Metaverse on Wheels

The Holograktor is the first automobile built with True AR technology and a new ride-hailing business concept in mind. Enhanced security, convenience, resources, and entertainment will be provided through the seamless connectivity of the actual and virtual worlds. The three-seat Holograktor may be controlled either manually or via virtual reality.



Microsoft Mesh enables shared mixed reality experiences

Microsoft Mesh is a new mixed-reality technology driven by Azure that enables individuals in various physical places to share and collaborate on holographic experiences across a variety of platforms.



Facebook's Horizon

Recently, Facebook launched its beta version of Horizon World, a virtual world of avatars. Customers of Facebook's Oculus virtual reality headsets may design an avatar to stroll about in the animated virtual environment in Horizon Worlds. They may play games and engage with the avatars of other individuals there.

Start-ups Investing in Metaverse

Thousands of new firms are launched, with the potential to disrupt the metaverse sector. Some of the top startups and their new technologies that will have an influence on the metaverse industry in 2022 are listed below:

PolkaWar

The PolkaWar is a Singapore-based company that develops an NFT game platform. Decentralized finance (DeFi) and immersive gaming are combined on the platform. The game developed by the firm includes a marketplace where users can trade in-game objects and weaponry for cryptocurrency. PWAR, the startup's cryptocurrency, is earned through engaging in the game, borrowing in-game equipment, and staking previous tokens.



Zash

Zash, a UK-based business, has created a social investment network for crypto investors using Web3.0 technology. The startup's social platform is centred on creators, permitting retail investors to form groups and share knowledge. It provides a collection of tools for artists to come up with investment strategies and share them with their following. The startup's solution promotes retail investment by leveraging and merging metaverse and the creator economy to bring in new retail investors, particularly from younger populations.



JOURNEE – The Metaverse Company

JOURNEE – The Metaverse Company, started in 2021, is headquartered in Berlin. Its proprietary dynamic stream technology allows individuals to congregate, get inspired, and exchange ideas in lifelike 3D worlds.



Aldin

Aldin, located in Iceland, is creating a virtual reality fantasy series based on its best-selling game Waltz of the Wizards. Aldin's goal is to provide an entertainment environment that enables imagination to seem real. Waltz of the Wizards is noted for its unique characteristics that demonstrate the medium's capabilities.



MakeReal

MakeReal is a UK-based firm that builds and distributes immersive instructional software as well as a simulation training platform. It has created content for corporations such as Vodafone, McDonald's, and many others.



Fast Travel Games

Fast Travel Games, which was established by gaming veterans Oskar Burman, Kristoffer Bejaminsson, and Erik Odeldahl, has recently released extremely engaging material. The Fast Track team is appreciating the metaverse's interaction potential, and it will be fascinating to see how FTG progresses in the future.



NextMeet

NextMeet is an Indian firm that creates a virtual reality (VR) platform for working remotely, collaboration, and distant education. The platform includes 3D characters that allow users to engage digitally across the metaverse. When compared to video conversations, this makes scenarios like work from home (WFH) and online learning more dynamic and engaging. Custom 3D environments are also created by the company for virtual events including seminars, trade fairs, and promotional events.



Zepeto

Zepeto, a Naver Z product, enables users to play games, connect with others using 3D avatars, and make money by generating fashion goods and other content. Gucci, Dior, Nike, and Ralph Lauren are among the fashion houses that have previously collaborated with the business to provide virtual collections in the metaverse. Popular K-pop groups such as Blackpink, ITZY, and SF9 have hosted virtual events or published exclusive content for the platform.



Union

Union is a Spanish startup that offers metaverse virtual identification solutions. Selfies are turned into realistic-looking 3D characters for use in augmented reality (AR) and virtual reality (VR) games and experiences using the startup's expertise. These avatars are transferrable across standard and metaverse social networks. The startup's approach enables quick and low-cost production of non-player characters for enterprises constructing metaverse apps (NPC).



The Sandbox

The Sandbox is a startup established by Sebastien Borget and acquired by Animoca Brands - is pioneering one of the common metaverse ideas of socializing and participating in economies. The Sandbox is constructing a digital environment in which players from various games and ecosystems may come together and enjoy a shared digital place. It's intriguing to consider what could happen if diverse games, companies, and fan ecosystems were brought together under one roof.



IP Implications

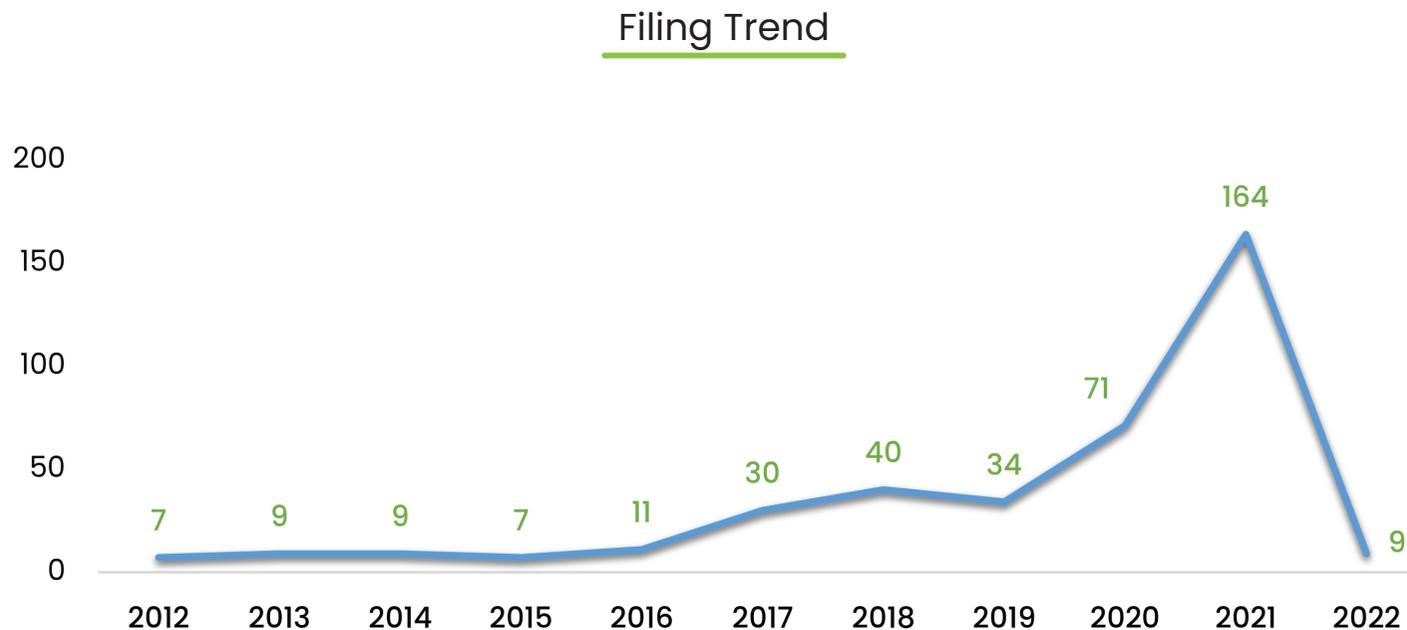
Regardless of the developments, everyone engaging in the metaverse will need to be aware of the intellectual property rights (IPRs) connected with the digital parts that make it up.

As a result, new IP rights possibilities in this industry will emerge, including new patents for device and software-related innovations. We will see the birth of new brands or product lines, and therefore new trademarks, as a result of new technology. These trademarks will be utilized in both the real and virtual worlds.

Patent infringement difficulties might arise as a result of the development process infringing on patents connected to the metaverse, and possible trade secret misappropriation issues could arise in virtual conference rooms where private information is discussed.

IP Trends

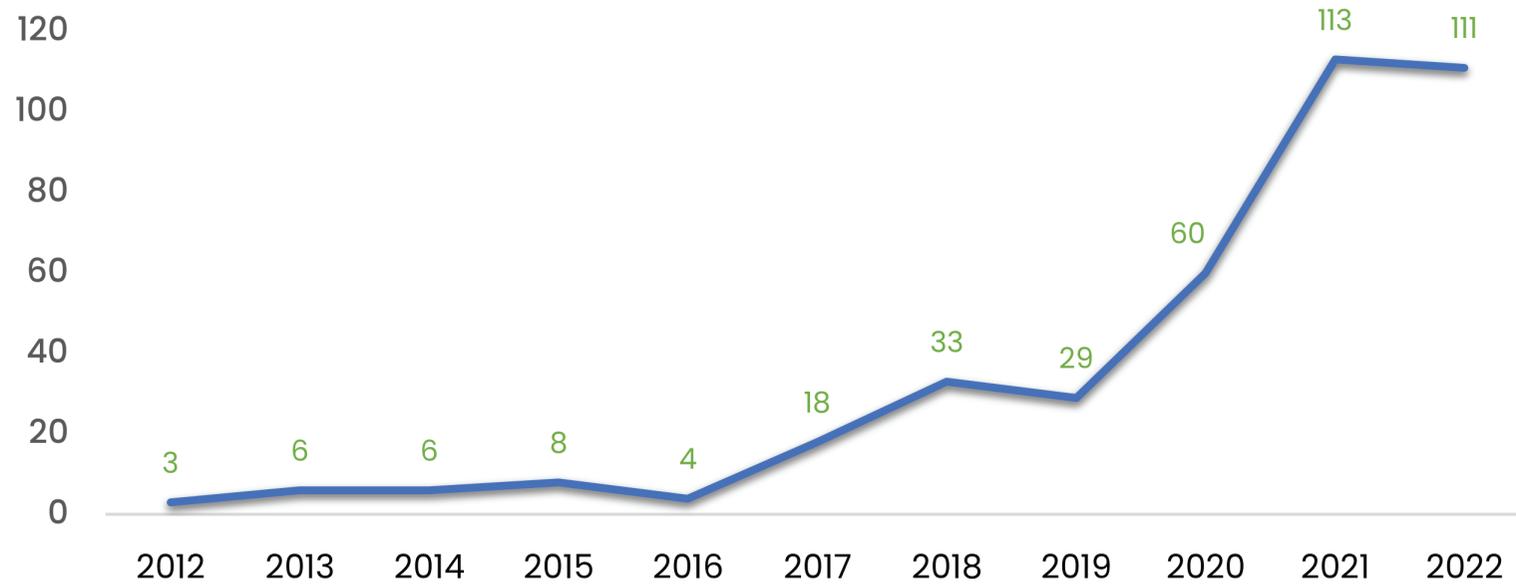
Public awareness of the environment and a sustainable world are considerable causes for an increase in demand for EVs, which can result in huge growth opportunities for the axial flux motor market for the period of 2022-2027.



As evident from the graph above patent filing of metaverse has increased from 2019 to 2021.

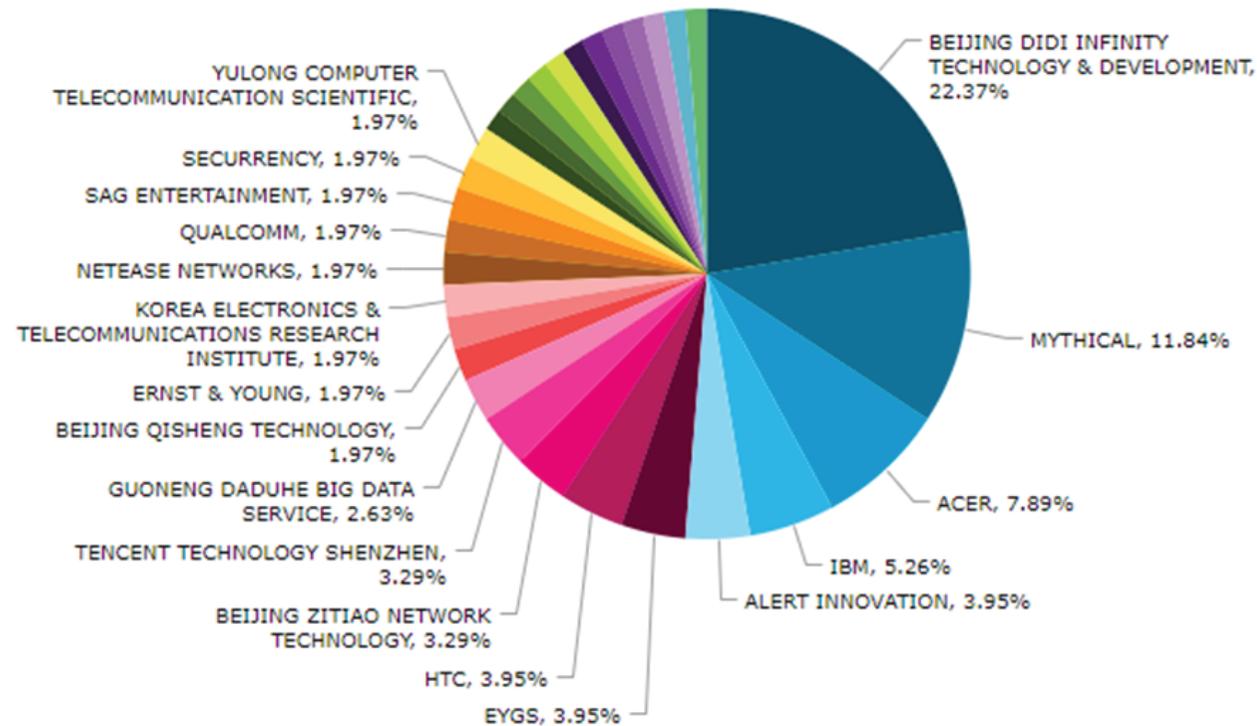
In the year 2021, most of the patent/applications were filed and 125 out of them discloses gaming applications, followed by 77 patents disclosing marketing applications.

Publication Trend



113 out of 391 patents were published during year 2021, out of which 20 are published in China, 42 in the US and 30 in WO disclosing Metaverse taxonomy, Components, and applications

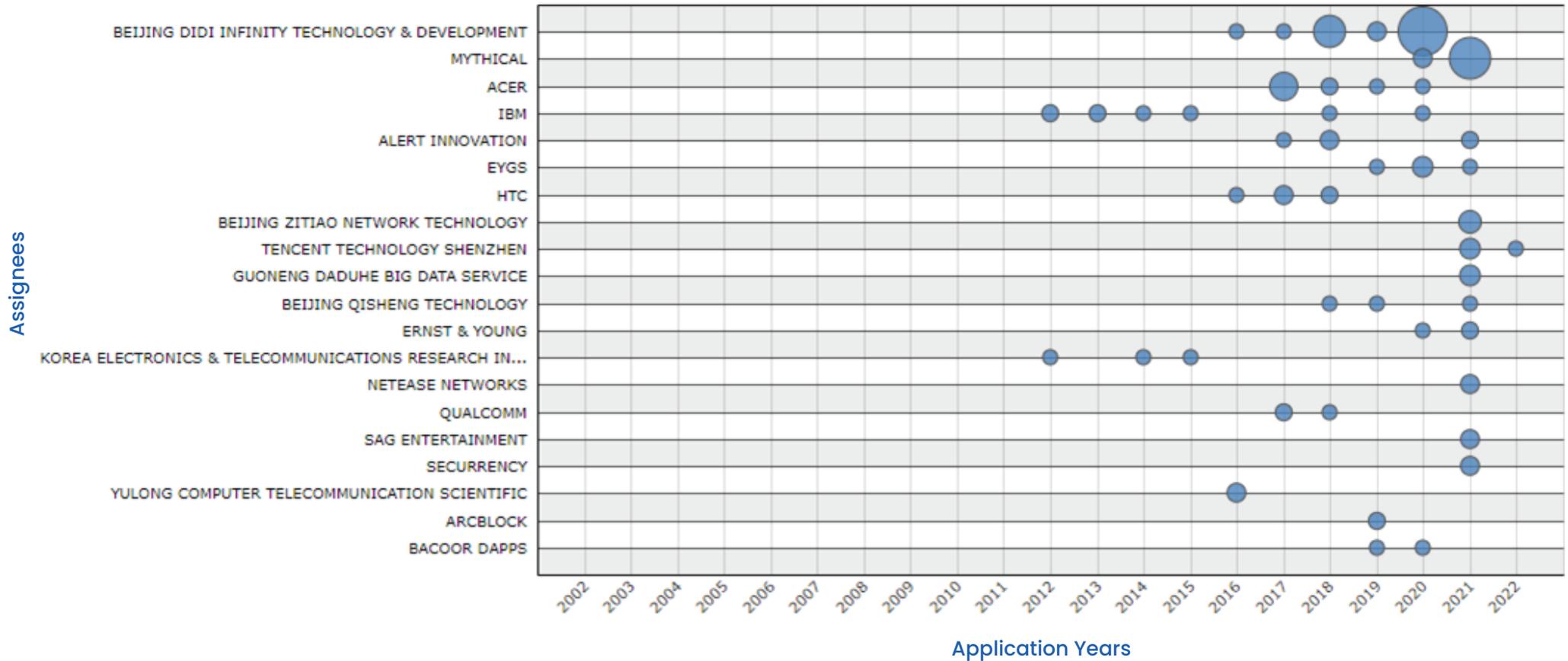
Top Assignee



Beijing Didi Infinity Technology & Development is the top assignee with 34 patents/patent applications filed in metaverse technology and its applications. The Beijing Didi Infinity Technology & Development has filed all the patents in China.

Most of the patents filed disclosed gaming and marketing metaverse applications along with 21 patents disclosing multimodal interface technology.

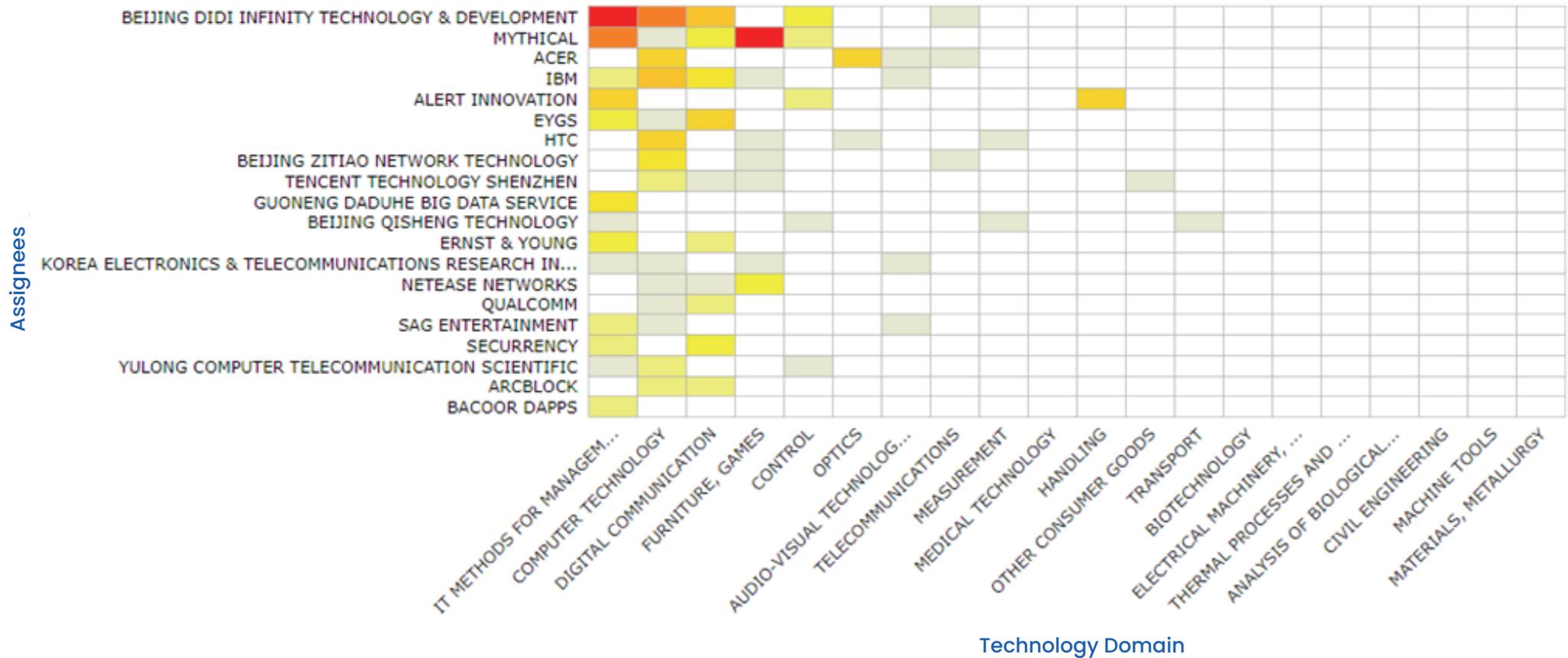
Assignee by Year



The year 2020 and 2021 shows the maximum filing. Maximum patent/applications (164) were filed in the year 2021 followed by 77 patents filed in the year 2020.

The topmost assignee Beijing Didi Infinity Technology & Development has filed maximum patents (19) in the year 2020.

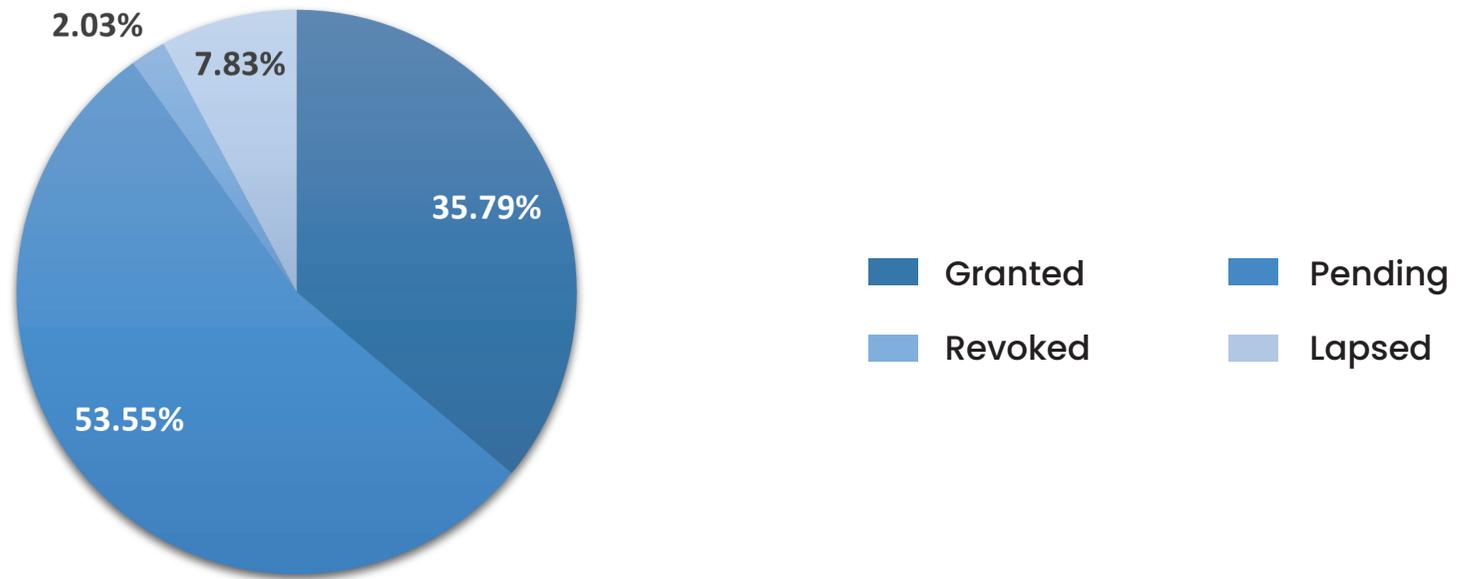
Assignee by technical domain



The topmost assignee Beijing Didi Infinity Technology & Development has filed maximum patents (16) disclosing technical domain IT methods for management followed by the second top assignee Mythical with 10 patents.

The topmost assignee second top assignee Mythical filed maximum patents (10) disclosing furniture, and games technology.

Legal Status

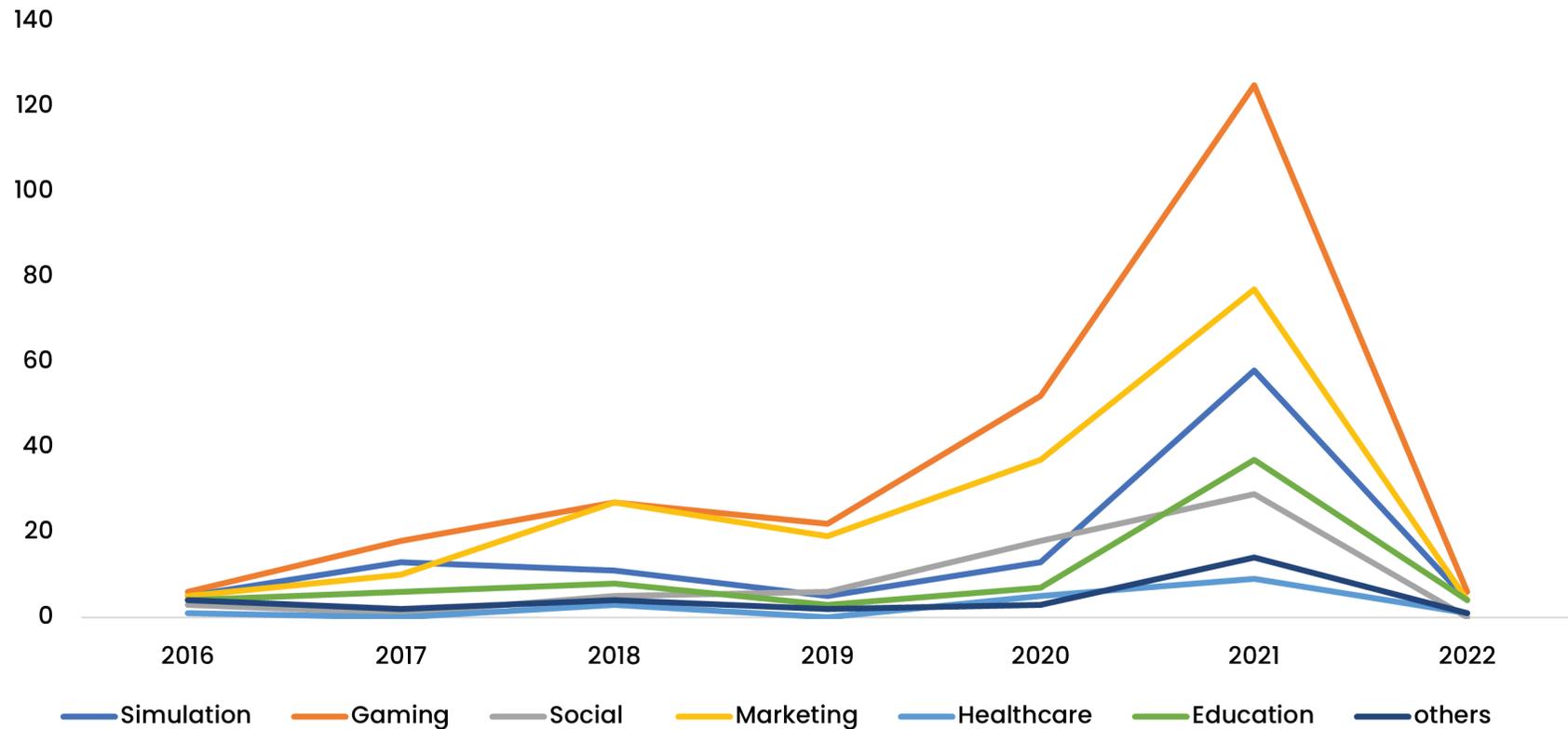


Out of 140 granted patents, 34 are filed in China, 71 in the US.

A total of 211 applications are pending and 154 of them discloses metaverse gaming application.

Technology Trends Year Wise

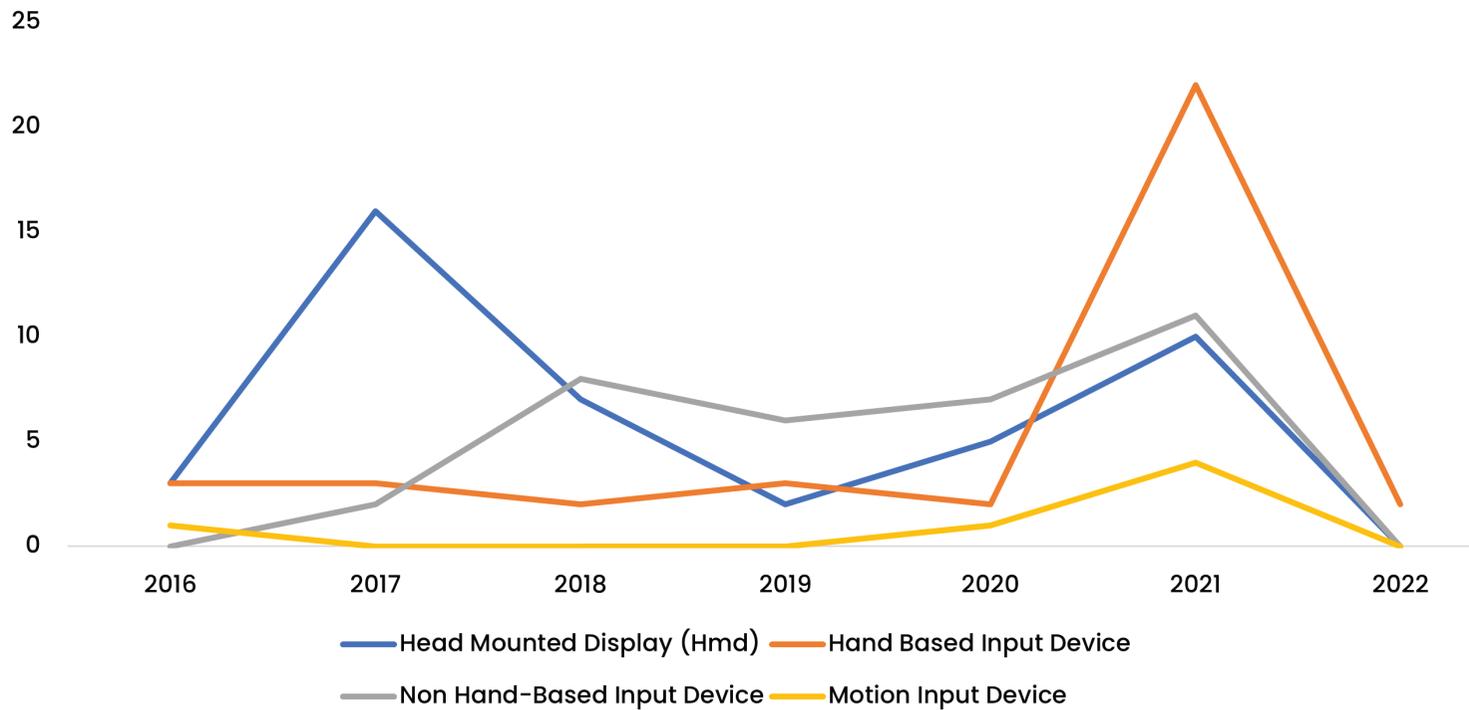
Metaverse Application



Among the 125 patents disclosing metaverse gaming applications filed in 2021, 44 are filed in China, 42 in the US, and 18 in WO.

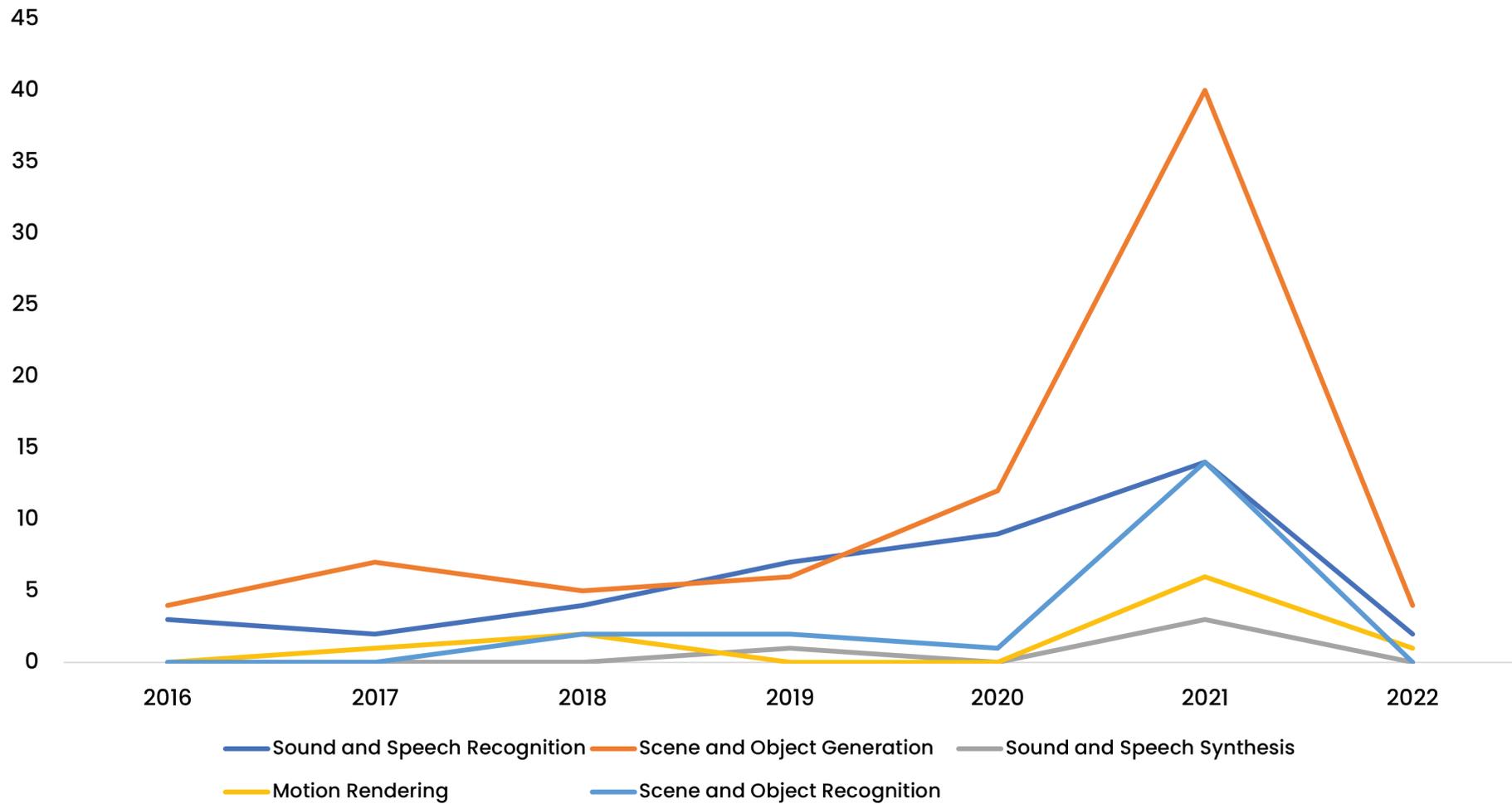
58 out of 164 patents have been filed in the year 2021 disclosing metaverse simulation applications, out of which 21 are granted. 17 out of the 21 granted patents are filed in the US and only one patent in China.

Physical Device and Sensors



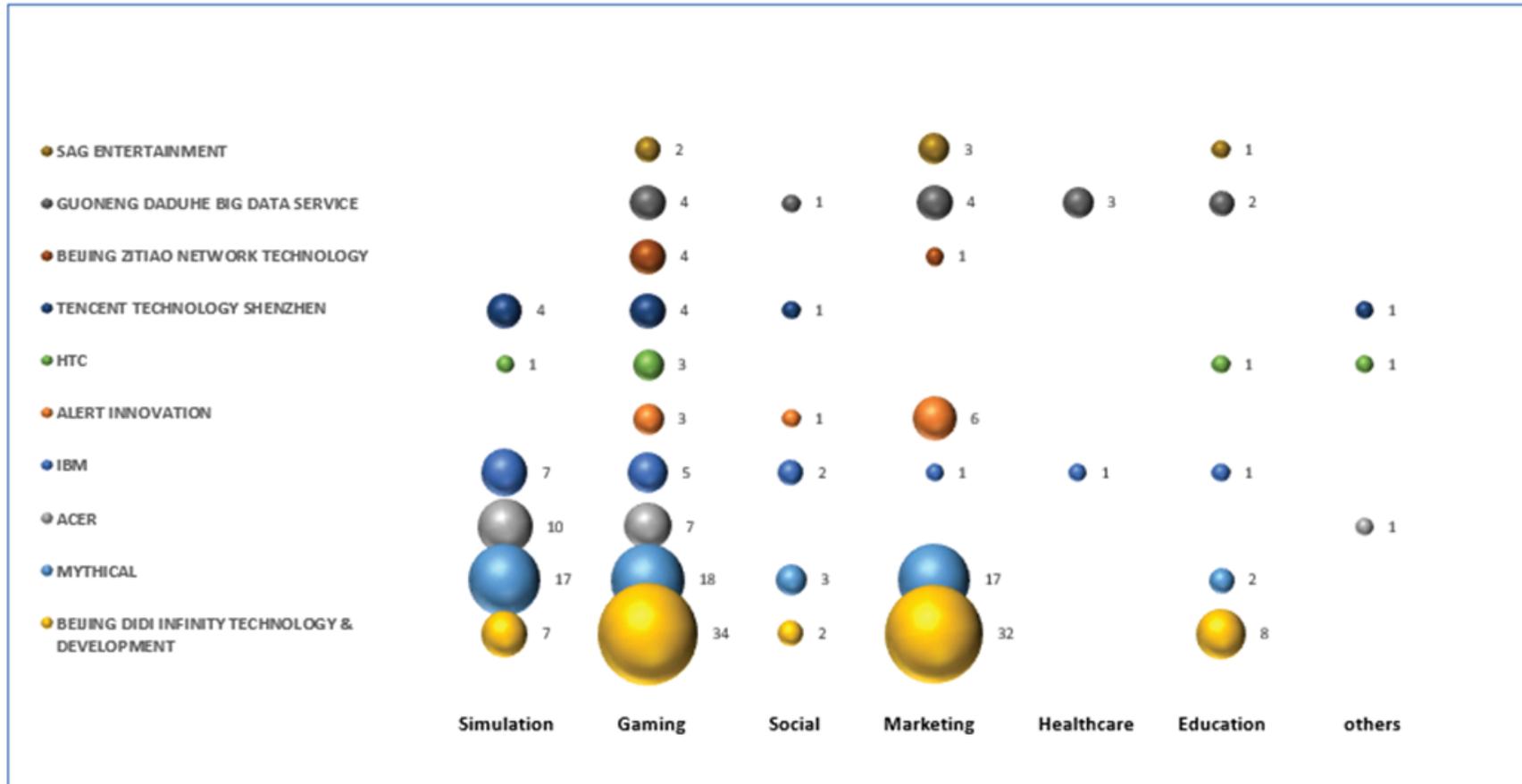
Among the 10 patents filed in 2021 disclosing head-mounted display HMD physical device in metaverse technology, one is filed in China, 6 in KR, 2 in the US, and one in WO.

Software Components (Recognition and Rendering)



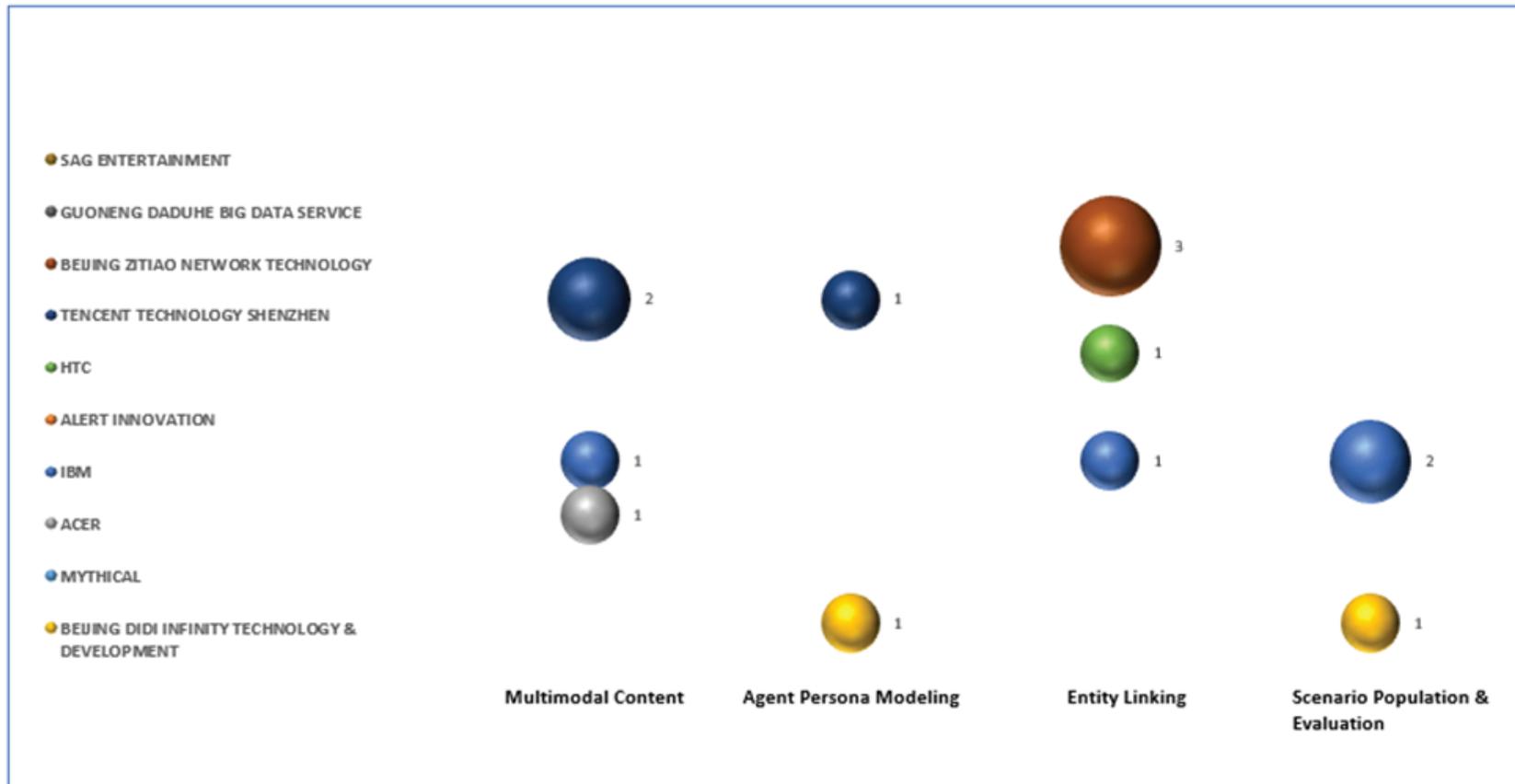
Among the 40 patents disclosing scene and object generation scheme in metaverse application filed in 2021, the 10 patents are filed in the US and only one of them is granted.

Assignee vs Metaverse Applications



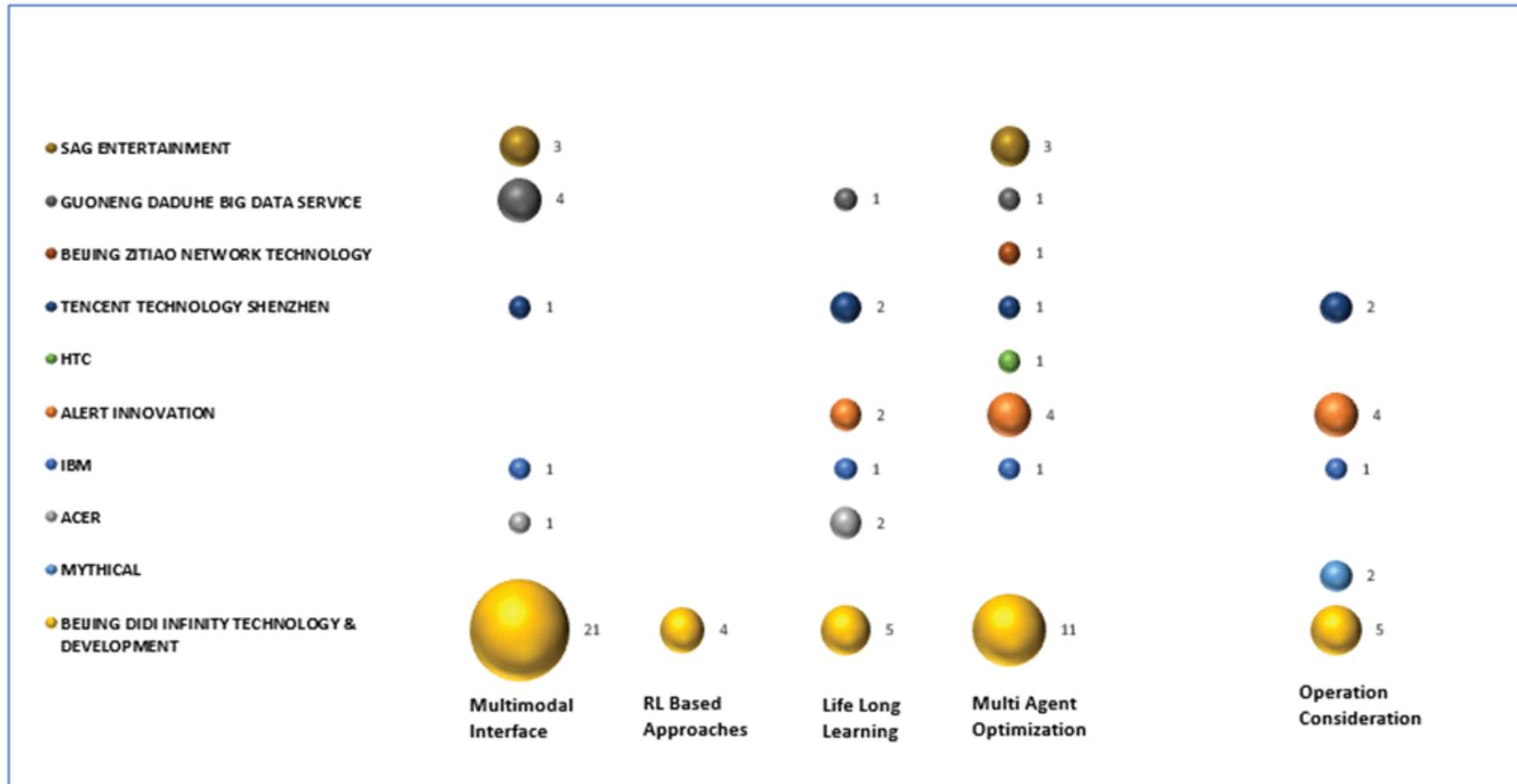
All 34 patents filed by the topmost assignee Beijing Didi Infinity Technology & Development disclosing Metaverse, Non-Fungible Token (NFT) technology and application are filed in CN.

Assignee vs Scenario Generation



The fourth top assignee IBM has 2 out of 10 patents disclosing about representing multimedia content, linking entity person with the scene, and generating scenario and validation.

Assignee vs Technical Methods



The topmost assignee Beijing Didi Infinity Technology & Development talked about technical methods such as Multimodal Interface, graphs and neural network representation RL based approach, and Imagination-Augmented Agents in its 34 patents filed in China.

Conclusion

In the metaverse, IP seems to have a bright future, with new sorts of unconventional trademarks, new goods and services embracing a variety of trademark categories, and patentable VR and AR-related technologies. The transition to virtual reality may also raise new concerns about safeguarding trade secret secrecy. Because one of the fundamental legal requirements for protecting trade secrets is the establishment of appropriate measures to maintain secrecy, the virtual landscape will necessitate new methods to maintain this secrecy beyond the traditional methods of signing confidentiality agreements or restricting access with biometric technology.

IP legislation and IPR owners will face obstacles in the metaverse, but there will also be significant potential for IP to adapt and become compatible with the metaverse environment. Taking use of new chances to adapt to the metaverse will be both beneficial and necessary for IP law to continue to adapt to new technological advances.

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