



# How metahuman in a metaverse environment are the answer to China's development

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**Abstract.** In order to explore the state of development and differences between domestic and international, this paper analyses the existing development of computer technology and the application of metahuman in the digital media industry through literature research and descriptive research methods, and concludes that: the current development of domestic metahuman has a strong social and industrial background, and the demand of the media industry is gradually tilts towards the development of metahuman along with the arrival of the metaverse hotspot. At the same time, the huge volume of users and the support of highly sophisticated computer technology also determine that the development of Chinese metahuman can become a complete and solid industrial chain to a certain extent.

**Keywords:** metaverse; metahuman; media development; social needs

## 1 Introduction

Metaverse is the integration of current technology digital assets grafted onto the internet. Advances in artificial intelligence and cloud computing data processing capabilities provide the technical basis for building metaverse-like environments where users can enter virtual environments to interact and create digital assets, driven by different needs. Despite technological interoperability, across the globe, there is a clear development preference for China in the development of the metaverse. <sup>[1]</sup>Through current literature research and market development, a model of metaverse development in China has been collated, which has important implications for the subsequent direction of industry development.

## 2 Differences in the development of the metaverse

Within the constraints of the current level of technology per capita, which needs to be widely used and relatively easy to master, the development of the metaverse in China around social media and related digital platforms is a choice that makes it easier to observe the effects of social investment in the short term.

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The metaverse is a collection of new technologies, including Blockchain, Interactivity, Game, Artificial Intelligence, Network and Digital Twin. Six technologies, commonly referred to as "BIGANT" (Big Ant). Through the integration and application of different technologies, there are two paths to the virtual world of the metaverse: one is a full-sensory immersive virtual environment, where interaction with the real world is achieved in a digital environment.<sup>[2]</sup> But this approach requires more equipment for the users themselves and is difficult to realize for a wider range of users. As a result, a different approach - overlay with reality - is being used in various media-related industries due to its lower barriers to technical implementation. Although the ultimate goal of most companies pursuing metaverse is to explore and commercialize new fields, from the perspective of development focus, compared to the extensive application in religion, culture, economy and other fields abroad, the domestic tends to promote metaverse in media and art.<sup>[3]</sup>

### **3 Domestic metaverse environment**

#### **3.1 Metaverse Development Model**

Most of the current metaverse-related product creation ideas at home and abroad focus on the interaction and integration of human-society information, where companies provide platforms and projects for users to create, socialize and communicate based on their own abilities, and the information created and exchanged by users independently affects the environment and subsequent development of the platform.

By integrating related concepts and development status, we propose a metaverse based socially connected environment architecture model, as shown in Figure 1.

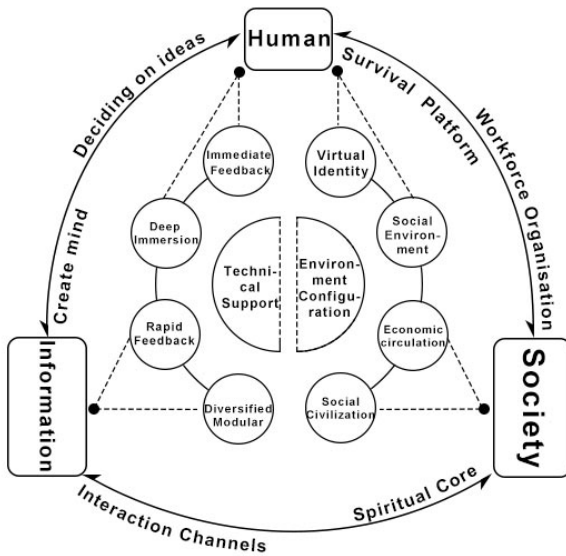


Fig. 1. Metaverse based socially connected environment architecture model

In this model, based on Roblox's definition of the eight conditions of the metaverse and classified according to their representation in the application of metaverse projects, immediate feedback, deep immersion, rapid feedback and diversified modular experience as part of the basic conditions of the metaverse belong to the actual experience feeling under the technology supply, and the existence of these experience factors is what enables metaverse-related projects to be distinguished from other digital products. Virtual identity, social environment, economic circulation and social civilization attributes are part of the actual environmental configuration that can be expressed and applied in practical applications, and these applications are not independent of each other, but intertwined and coexistent. Extended to the level of application objects, high-speed feedback and multiple modules refer to the response speed of information transmission and the diversity of information content. Economic circulation and social civilization attributes refer to the social relations and structural composition in the virtual society. Virtual identity and social experience are the means of interaction and the actual needs of people in the virtual environment. Deep immersion and interactive experiences that are not limited by time and space and can be participated in at any time are the basic experience requirements of people.

### 3.2 Metahuman industry development status

As the social sum of the virtual world, all kinds of interactions are based on people, and the existing complete social platforms and huge user demands in China provide a

suitable ground for the layout of the metaverse. However, each head software in the current Internet environment has its own different distribution of user groups, and the metaverse needs a unified and fair free platform that is not managed by any particular company, and it is still debatable whether this kind of utopian environment can be realized. [4]Realistic conditions have forced a shift in creative perspective, and avatars can be created not only from real characters, but also from certain needs.

## **4 Metahuman technical aids and developing needs**

### **4.1 Market demand and Socio-technical distribution**

Compared to the rapid innovation of previous years, the existing product model is not revolutionary, and it is therefore difficult to reprogrammed user resources on a large scale in today's constantly fluctuating market share. [5] Economist Joseph Alois Schumpeter describes innovation in industry as a state of repeated flux, where the sudden change of an industry is a constant transformation of the economic structure from within, constantly breaking down the old to create the new. [6]The new concept of the metaverse represents an overflowing gap in a saturated market, providing a new frontier for the innovation needs of users, the innovation needs of information carriers, and the development needs of companies. And as a new decentralized interactive environment for users to independently generate content, the metaverse has uniqueness and irreproducibility compared to its internally created digital assets and traditional digital products, and thus has a broader real economic value.

However, on the negative side, today's related technologies are still largely mastered by only a few giant companies, and the concept of decentralization is not well applied in the early stages. As mentioned above, the metaverse is a comprehensive Internet environment that relies on the user UGC model for production, life and ecological updates. The pros and cons of this environment depend on the user base and the number and activity of users, and in the process of development, users tend to converge on platforms that are relatively completer and more started earlier. [7][8]The strong social nature of the meta-universe also means that platforms with a certain customer base in the early stages will gain stronger user resources due to the convergence of users, resulting in the Matthew effect of competition in the digital age.

### **4.2 Technological humanities function and individual needs**

Technologically speaking, while the metaverse creates new communication scenarios and methods, it also influences the way people behave, and users take on a more productive role in the virtual world in terms of information production.[9] People constitute society and show themselves in society to realize the creation of a new self. Through new information-bearing terminals, digital socialization visualizes language and visual communication in the original offline face-to-face communication mode; language becomes text, visualization becomes image, and information circulating in real society is delivered and interpreted in the form of data.

From the perspective of individual mental needs, in the traditional social development process, socialization has been an information exchange activity that requires space and physical presence, but with the compression of the concept of space in the mobile Internet era, socialization has become flat. Socialization is the act of transmitting information to each other, so the virtual person is the satisfaction of the user's own display needs, giving the user a stronger link with the digital world object.<sup>[10]</sup> The existence of the virtual person enables the integration of "remote presence" and "body reproduction", breaking the distance of time and space and realizing the "real body" of the user's social life.

## 5 Conclusions

Almost all interactive experiences in the metaverse must revolve around people, and user participation can maximize the real value of internal information. The existence of metahumans is an important way of representing and shaping self-awareness in the metaverse. Although the image of avatars has not yet been fully popularized, the current application can provide feasible strategies and guidelines for the further development of the metaverse in the future. Immediate interaction in various scenarios can effectively enhance the efficiency of information communication and the sense of social experience, and such interaction ranges from abstract visual symbols to behaviors, eventually converging on the human object itself.

Of course, the development of the metaverse is not only focused on avatars, the level of technology in the country provides more opportunities for the realization of technology. But the widespread use of metahuman in China is a comprehensive phenomenon based on the needs of domestic society and the current state of technological development.

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