

# Chapter 11

## The Role of Blockchain Technology in the Metaverse Ecosystem

**Pooja Kulkarni**

*Vishwakarma University, Pune, India*

**Babasaheb Jadhav**

*Global Business School and Research Centre, Dr. D.Y. Patil Vidyapeeth, Pune, India*

**Ashish Kulkarni**

*Dr. D.Y. Patil B-School, Pune, India*

**Alex Khang**

*Global Research Institute of Technology and Engineering, USA*

**Sagar Kulkarni**

*MIT World Peace University, Pune, India*

### **ABSTRACT**

*Metaverse is a virtual world based on AR and VR. The word Metaverse comprises “meta,” which means beyond, and “verse,” which means universe, which combines world beyond imagination. Today’s Z generation wants everything over the tip of their fingers, even if they don’t want to step out for purchasing groceries or daily household items and hang out with buddies. The Metaverse can provide a solution to this problem. Without stepping out of their home, they can virtually cheat and chat with friends and have a party with food and drink by sitting at their own homes by purchasing through virtual currency, own virtual assets including house, jewelry, etc. by creating their avatar using AR and VR technology. The use of blockchain technology solves the decentralization issue, maintenance of cryptocurrency, and other applications. Hence, the use of blockchain in the Metaverse ecosystem can benefit financial, non-financial, and privacy issues that may occur due to the described framework of the Metaverse ecosystem.*

DOI: 10.4018/978-1-6684-8851-5.ch011

## INTRODUCTION

Today's era is the adoption of digital technologies for improving the efficiency of the fields such as education, entertainment, marketing, human resource, business management, etc. the main reason for increasing efficiency is centralized access to data, due to the centralized access data started collecting at the server level and increase in data generate the need of Data Centers and Cloud Storage which further require to manage to have the less loaded UI and UX Interface.

After digitization the next resolution is a smartphone, people are using smartphones with an internet connection and the application develops for ease of life and changes the angle of the word digitization. Many applications in the smartphone can provide you personalize view and which is not possible without capturing all the information and finding out the trend, further the computer professional starts providing all the daily needs to the figure tip from chit chat with a friend to buying or selling household items, connecting to the world to ordering glossary and food items to a home, all can be handled over figure tip, and pandemic added flavor on to increase in the use of same.

We can do everything with the internet, smartphone, or smart gadgets, only without having a personal touch and feel, obviously technology cannot give the personal touch but it can provide you a personal feel and this can be given by the use of Augmented Reality, Virtual Reality and Extended Reality and the platform created by using all these three called as Metaverses

Metaverse is a virtual ecosystem extended from the massive use of social media, excessive use of the internet for daily use, and depending on the internet for all the necessary things majorly food, cloth, and shelter, and providing all the routine to the service provider through the various apps installed in cell phone like daily travel, call history, financial transaction, etc. almost every human being left on the planet earth depend on the internet for various of purpose still they are many things which may require physical presence, this can be resolved by creating our own AVATAR and launching them on the internet in the world of the Metaverse, the Metaverse can allow almost everything which you can do physically like attending the meeting, attending a party, the ecosystem is completely based on the technical front where the Virtual Reality and Augmented reality plays a vital role. The ecosystem is currently used majorly in game development but very soon it will be used to perform other things as well.

In this ecosystem, a digital world is developed, and you can imagine the world by keeping virtual reality glasses in front of your eyes. Through this, you can do e-commerce stuff, hang out with friends, attend meetings with teammates, can take a trip around the world by seating at your home.

The entire ecosystem is built on data and data is the center point for all the stakeholders available in this ecosystem. Which talking about the forms of data inputted for this ecosystem is as follows

1. **Data Procurement:** The collection of data and keeping the data ready for interpretation.
2. **Data Storage:** Storing of data for further use.
3. **Data Sharing:** Data sharing with multiple stakeholders of the ecosystem
4. **Data Privacy:** Protecting data from tampering or threat.

The blockchain will help in all four phases of data required for the ecosystem. Mr. Nakamoto Satoshi 2008 (Name is Misty) introduce the concept of blockchain he introduced the concept of storing the data in different places rather than one place (database) with correlation in data with a chain, each block of data connected to the adjacent block with reference link (pointer) known as the blockchain, the concept

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