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Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Submit Manuscripts IKENGA

3 pesan

Harjono Padmono Putro <harjonopputro@unkris.ac.id> 12 Agustus 2023 21.13
Kepada: Prof. Chima J. Korieh <support@ikengojournal.com.ng>

Dear Mr. Prof. Chima J. Korieh
Editor IKENGA International Journal of the Institute of African Studies

I read and use scientific articles published in IKENGA International Journal of the Institute of African Studies, The performance of the IKENGA International Journal of the Institute of African Studies was excellent and the published article helped me conduct research and write scientific article.

I Am Harjono Padmono Putro, I have completed a scientific article entitled **"The Future of Communication in the Metaverse"**

I hope this article can be published in the IKENGA International Journal of the Institute of African Studies because there are interesting findings in the scientific article that can become new treasures in science, especially in management sciences. I am willing to go through the review process following IKENGA standards.

Best Regards,

Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

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753K

Prof. Chima J. Korieh <support@ikengojournal.com.ng> 14 September 2023 14.51
Kepada: Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Dear
Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

Thank you for submitting the manuscript, "The Future of Communication in the Metaverse" to IKENGA International Journal of the Institute of African Studies.

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Please be sure to check your email, and follow the review instructions.

Best Regards,

--
Prof. Chima J. Korieh
Editorial Board IKENGA
[Kutipan teks disembunyikan]

Prof. Chima J. Korieh <support@ikengojournal.com.ng> 11 Oktober 2023 09.18
Kepada: Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Dear
Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

Your manuscript entitled "The Future Of Communication In The Metaverse", which you submitted to IKENGA, has now been reviewed.

Please ensure that you clearly highlight changes made to your manuscript, as well as submitting a thorough response to reviewers.

Reviewer 1

The title remains clear and concise, providing a good indication of the article's focus.
The abstract already has a problem topic regarding the purpose of the method and the research results so the reader can easily understand.
The literature review includes some tantalizing references, but even after sorting through the language issues, the link are not made to the specific study.
While the results remain clear and well-structured the discussion section needs to provide a more profound analysis. This should include a thorough interpretation of the results, their implications, and a stronger connection to the research questions and literature.
References need to be reproduced with the latest journals relevant to the research theme.

Reviewer 2

The title is still concise and effectively summarizes the article's main topic, providing clarity to the readers.
The introduction provides a clear background and context for this research. This report outlines the importance of technological advances. However, this research does not have a specific research problem formulation.
Literature review needs to be strengthened to discuss problems.
Explore more the limitation of the research method employed and make recommendation for further research based on its limitation.
Conclusions have not focused on the research objectives. Briefly explain your conclusions to answer the research objectives so as to explain the novelty of this research.
The references are appropriately cited following a consistent citation style. However, there are some missing references, and it's essential to ensure all sources are properly credited.

I hope you can make improvements as soon as possible, and send the revised article again via this email.

Best Regards,

--
Prof. Chima J. Korieh
Editorial Board IKENGA
[Kutipan teks disembunyikan]

Gmail

Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Revision Article for IKENGA

3 pesan

Harjono Padmono Putro <harjonopputro@unkris.ac.id> 18 Oktober 2023 15.11
Kepada: Prof. Chima J. Korieh <support@ikengojournal.com.ng>

Dear Mr. Prof. Chima J. Korieh
Editor IKENGA International Journal of the Institute of African Studies.

Yours faithfully,

I have corrected the article according to the reviewer's suggestion. At the end of this letter, I

attach the article and list responses to reviewer comments that I have revised.

Best Regards,

Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

Revision1_ Harjono.doc
479K

Prof. Chima J. Korieh <support@ikengojournal.com.ng> 08 November 2023 16.32
Kepada: Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Dear
Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

Based on Reviewers' considerations, the article has, at some point, increased. However, you have to improve on a few more points. Hopefully, you are willing to do it.

Please follow the following revision instructions:

Reviewer 1

The abstract continues to offer a well-structured summary of the article's objectives, methods, and key findings.
The literature review continues to be thorough and logically organized. The inclusion of recent scholarly work strengthens the review's credibility.
The article still lacks sufficient detail in explaining the research method employed. It would greatly benefit from a more thorough description of the research design, data collection process, and analysis techniques.
The discussion is not in depth, so deepen the discussion with the findings of previous researchers.existing literature. More extensive interpretations and implications should be provided.
The conclusion maintains its conciseness but could be improved by summarizing the key findings and their practical implications. Additionally, it should reiterate the study's significance and offer directions for future research.

Reviewer 2

The abstract remains well structured and effectively summarizes the aim, methods and main findings of the article. To further refine the impact of service quality, trust, and satisfaction on customer loyalty, research will be useful for readers looking for context.
The introduction still effectively provides background information and research context, as well as highlighting the importance of customer satisfaction, However, it should include a specific research problem statement to guide the reader.
The description of the research method section should begin with definitions, data sources, samples and sampling techniques, data collection techniques and end with data analysis techniques.
The conclusion maintains its conciseness, but there's an opportunity to enhance it by highlighting practical implications of the study's results and suggesting clear directions for future research

Articles that have been revised and please send it back via this email.

Best Regards,

--
Prof. Chima J. Korieh
Editorial Board IKENGA

Harjono Padmono Putro <harjonopputro@unkris.ac.id> 13 November 2023 19.21
Kepada: Prof. Chima J. Korieh <support@ikengojournal.com.ng>

Dear Mr. Prof. Chima J. Korieh

Editor IKENGA International Journal of the Institute of African Studies

Yours faithfully,
Thank you for the patience of the Migration Letters Editor in Chief in waiting for the submission of my second article revision.
I have made improvements according to the instructions from reviewers. I am ready to wait for the next process.
Attached Revised Article.

Best Regards,

Harjono Padmono Putro
Universitas Krisnadwipayana, Jakarta, Indonesia

Revision2_ Harjono.doc
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Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Acceptance Letter IKENGA

1 pesan

Prof. Chima J. Korieh <support@ikengojournal.com.ng> 26 Desember 2023 10.32
Kepada: Harjono Padmono Putro <harjonopputro@unkris.ac.id>

Dear

Harjono Padmono Putro[1*]
(authors, you are copied into this email for information purposes only)

Ref: Article title: “The Future Of Communication In The Metaverse".

I am pleased to inform you that your article has been accepted for publication in IKENGA International Journal of the Institute of African Studies Journal Volume 25 Number 1, January 2024. You now need to upload the final revised version for this article and your author copyright agreement form.

Thank you! Your continuing cooperation is most appreciated.

Best Regards,

--
Prof. Chima J. Korieh
Editorial Board IKENGA

Accepted Letter_ Harjono Padmono Putro.pdf
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The Future of Communication in the Metaverse

Abstract

The Metaverse, as an ever-evolving virtual space, offers new potential in terms of communication involving virtual reality, artificial intelligence and the latest technologies. This research aims to investigate the evolution of communication in the metaverse and its impact on the way individuals and society interact. This research uses a qualitative approach with descriptive methods. The results of this research highlight that the metaverse is not just a combination of augmented reality (AR) and virtual reality (VR) technologies, but rather creates a 3D environment that allows interaction, collaboration and shared experiences. With a focus on understanding psychographics and audience demographics, metaverse not only creates immersive experiences through AR and VR, but also offers immersive emotional and sensory dimensions. Combining technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is key in creating a connected metaverse ecosystem. In a business context, metaverse transformation creates new experiences in communications, product launches, and interactions with customers. The exchange of digital wealth through NFTs opens up dynamic economic opportunities, while the global and inclusive concept of the metaverse eliminates geographic boundaries, creating opportunities for broader and more equitable participation at the global level. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction, unlocking the potential for a more inclusive and globally connected communication future.

Keywords: Communication, Metaverse, Virtual Reality (VR), Augmented Reality (AR), Non-Fungible Token (NFT).

A. INTRODUCTION

Entering the industrial era 4.0, the peak of advances in internet technology with the 5G network has had a significant impact on daily life (Wollschlaeger et al., 2017). Ease of access to communication technology opens up new opportunities, and one of the most striking innovations is the development of Virtual Reality (VR) technology. Initially, VR was known only in the context of game development, but has now penetrated various social industry sectors (Biocca, 1992). The fields of Arts, Education, Psychology, Medical Technology and Social Media are promising fields for VR exploration. The use of VR in the arts provides unparalleled immersive experiences, while in education, the technology creates more realistic learning simulations. Psychological aspects benefit from the use of VR in therapy and a deeper understanding of mental conditions (Pellas et al., 2021).

However, special attention needs to be paid to the most striking transformation, namely in the social media sector. Social media, which is now an integral part of everyday life, no longer limits itself to conventional spaces (Van Dijk & Poel, 2013). With the advancement of VR, humans are not only bound by the limitations of communication in physical space, but can provide a more immersive and embedded social experience. Mobility and flexibility factors are the main impetus for this change (Dwivedi et al., 2022). People tend to avoid face-to-face communication which is limited by time and place. With VR, they can engage in social interactions without being bound by geographic constraints or strict schedules (Carter, 2005). The development of VR technology in various aspects of social life creates a new basis for humans to build relationships and interact. While ethical challenges and considerations remain relevant, these developments bring great opportunities in creating a more open, inclusive and connected social world (Barnidge, 2017).

Metaverse, as a concept that combines Virtual Reality (VR) technology and social interaction, provides a new window for humans to meet face to face without being bound by

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physical distance limitations (Messinger et al., 2009). By leveraging VR technology, Metaverse opens up opportunities for deeper and more immersive interaction experiences (Dincelli & Yayla, 2022). This innovation is not just a dream, but rather the result of the collaborative efforts of two tech giants, Microsoft and Facebook, who combined their expertise and resources in 2021 (Applin & Flick, 2021). Experiments on VR technology laid the foundation for the development of the Metaverse which fundamentally changed the social landscape (Shin, 2022). The presence of the Metaverse has had a significant impact on the definition of social, where humans can socialize through their own digital representations, referred to as "avatars." These avatars allow individuals to interact in cyberspace in ways never before imagined (Teng et al., 2023).

The importance of the Metaverse lies not only in its technological aspects, but also in how this concept shifts social paradigms. Through the Metaverse, we can feel presence and interaction like in the real world, creating a more personal and connected social experience (Al-Emran, 2023). Physical distance is no longer an obstacle, and people can build relationships virtually without being limited by the limitations of space and time. While the Metaverse promises positive changes in the way we socialize, ethical challenges and considerations also need to be addressed (Han et al., 2022). Deep thinking about data security, privacy, and the psychological impact of using this technology is essential to maintaining the sustainability and acceptance of the Metaverse in society. Thus, the Metaverse opens a new chapter in technological evolution, preparing us for a new era of social interactions based on cyberspace (Bibri, 2022).

The application of metaverse technology in this era introduces new communication trends that utilize advanced tools, opening up new opportunities for deeper and more innovative interactions (Koohang et al., 2023). One aspect that has emerged from this trend is the significant use of augmented reality (AR) technology in enriching communication experiences. AR not only provides additional visual entertainment, but also provides a new dimension to communication, making it more dynamic and fun (Flavian et al., 2019).

The use of AR can have a positive impact on communication between business people and customers. Enhanced interaction through integrated visual elements can make the communication process more interesting, informative and engaging (Whang et al., 2021). Improved communications not only improve customer relationships but can also be a potential driver of greater revenue. Through new communication trends driven by the implementation of the metaverse, companies can optimize advanced technologies such as augmented reality to achieve their business goals (Yaqoob et al., 2023).

Communication through virtual reality (VR) opens the door to more immersive experiences, where individuals can explore artificial environments as if they were in the real world (Burbules, 2006). One VR platform that is increasingly popular is Zepeto, where users can engage in interactions that combine virtual and real world elements. Many believe that Zepeto represents a move towards the metaverse, as it gives users a more personalized communication experience through avatars (Zhao et al., 2020).

Zepeto allows users to interact through avatars that can be customized to match their physical appearance in the real world. The uniqueness of this platform lies in its ability to combine augmented reality (AR) elements to provide flexibility in designing and modifying avatars. Users can create unique self-representations, combining reality and imagination. In doing so, Zepeto creates an environment where individuals can socialize and communicate in more creative and innovative ways (Han et al., 2021).

Finally, Mirror world, a concept that realistically depicts the real world in digital form, has become a reality through applications such as Google Earth (Hudson-Smith et al., 2007). Google Earth, as one example of a popular mirror world, proves its prowess in collecting accurate data via satellite to provide a virtual representation that is close to reality. This

platform allows users to explore and check the conditions around where they live or even explore hard-to-reach locations. By using Google Earth, users can access highly detailed and accurate maps, creating an experience similar to real-world exploration (Sheppard & Cizek, 2009).

The ability to check locations, view geographic conditions, and observe changes over time provides significant added value. Mirror worlds, as reflected in Google Earth, are not just visual representations, but also practical tools that facilitate deep exploration and understanding of our physical world. The application of mirror worlds, especially through mapping technology such as Google Earth, brings great benefits in everyday life. From monitoring our surroundings to travel planning and virtual exploration, mirror worlds harness the potential of technology to bring us closer to physical reality, even when we interact with that world through digital screens (Belile, 2015).

Overall, the metaverse represents a phenomenon that not only creates a new dimension in technological development, but also indicates a cultural and social evolution that includes the way we communicate. More than mere technological advancement, the metaverse embraces a profound transformation in the paradigm of human interaction. By providing a platform for increasingly realistic and interactive virtual experiences, the metaverse impacts not only how we communicate, but also how we understand the world and engage in social environments.

B. LITERATURE REVIEW

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Many experts have defined what a metaverse is according to their understanding. According to Mystakidis (2022), argues that “Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (the metaverse) is a realistic three-dimensional environment where people can explore and interact with other people in real time.” Then according to Cheng et al. (2022), metaverse is "Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (metaverse) is a realistic three-dimensional environment where people can explore and interact with others in real time ”. Meanwhile, according to Kye et al. (2021), "Metaverse refers to an online 3D world that is accessed via computers, smart devices, augmented reality and virtual reality headsets. Based on the definition of what a metaverse is that has been put forward by several experts, it can be concluded that, Metaverse is a space concept where someone can be directly involved in it by using sophisticated devices in the virtual world. In this metaverse, we can socialize, play games, and shop, but only in the virtual world.

Many are still trying to clearly define and find out more about how the metaverse works. In the metaverse concept, each user will have an avatar as their digital identity, as explained by Chatham House (Moynihan et al., 2022). This avatar will be a unique representation for each individual, used during interactions within the digital ecosystem. Interestingly, the existence of an avatar is not just an option, but rather a prerequisite for entering the world of the metaverse; without avatars, users cannot access this vast digital ecosystem (Zimmermann et al., 2023). Additionally, the metaverse ecosystem will introduce elements such as currency, property, and ownership, similar to real-world structures. In this context, the metaverse creates a digital reality that reflects aspects of real life, enabling economic transactions and property interactions similar to the physical world (Chen & Cheng, 2022). The presence of this ecosystem can be based on the existing real world or completely inspired by the imagination of the designers.

The appeal of the metaverse lies not only in the replication of real-life elements, but also in the freedom of action it provides to its users. In the metaverse, each user has the freedom to carry out various activities, from playing games, using applications, opening websites, and much more (Sonmez, 2023). Thus, the metaverse is not just a digital representation of the real

world, but also provides a creative and interactive space for its users to explore and develop activities according to their individual desires and preferences (Zallio & Clarkson, 2022).

There are several types of metaverse based on the different systems and technologies they use. Some types and examples of metaverses are as follows. The first type of metaverse is traditional centralized. This type of metaverse does not integrate blockchain into their technological mechanisms and operates in a centralized system (Huang et al., 2022). This means that virtual space is controlled by a central organization that stores all user data. In this metaverse world, each user has an avatar that is used while in the virtual world. The avatar will save the progress that the user has made in the virtual world (Nevelsteen, 2018). The main advantage of this type of metaverse is the large number of users who want to join.

The next type of metaverse is centralized blockchain. This metaverse uses blockchain in its mechanism and the system is managed centrally by an organization. This metaverse gives birth to interactions in virtual space (Cheng, 2023). There are also what are called NFTs or Non-Fungible Tokens, which are currencies used in the virtual world (Yilmaz et al., 2022). The third type of metaverse is the decentralized blockchain metaverse. This type of metaverse usually uses a DAO (Decentralized Autonomous Organization) system. Reported on the Metav.RS page, DAO is a contract-based system whose job is to create rules in the metaverse. In a decentralized blockchain metaverse, there is no one organization that centrally manages the entire system (Goldberg & Schar, 2023). Decision making is the authority of the user. Each user can make administrative decisions in this virtual world.

C. METHOD

This research adopts a qualitative descriptive method with the aim of describing, analyzing and constructing meaning towards the phenomenon that is the focus of the research. This method, as explained by Seaman (2008), is used to investigate and understand a phenomenon in a real life context, with a focus on understanding what happened, why it happened, and how it happened. The descriptive approach, according to Kim et al., (2017), is a way of solving problems that displays a picture of the state of research subjects or objects, such as individuals, institutions, groups and society, based on visible facts and other aspects. Kim et al. (2017) states that the descriptive method is a research method for examining the status of a group of people, objects, conditions, systems of thought, or classes of events in the present. The main aim of this descriptive research is to prepare systematic, factual and accurate descriptions, images or paintings regarding the facts, properties and relationships between phenomena that are the focus of the investigation.

D. RESULTS AND DISCUSSION

Metaverse can be interpreted as the next evolution of the internet, representing the next iteration of the concept that promises a more immersive and interconnected internet experience. In its essence, metaverse presents a vision of augmented reality (AR) and virtual reality (VR) that allows us to explore and interact in 3D virtual worlds simultaneously. More than just VR and AR technology, the metaverse embraces the concept of combining the two to create a more holistic experience.

Although there is a misconception among people who think that the metaverse is only limited to VR and AR technology, in fact the metaverse is more than just a combination of these two technologies. Metaverse not only delivers virtual and augmented experiences, but also creates 3D spaces where users can interact, collaborate, and feel each other's presence. In other words, VR and AR are two elements that facilitate access into the metaverse, and they complement each other in creating a richer and more connected digital environment (Voinea et al., 2022).

With this concept, the metaverse provides a new dimension to the way we interact with the internet. It opens the door to a more immersive and engaging experience, allowing us to enter virtual worlds that seem real. As the next iteration of the internet, the metaverse creates a platform for exploration, collaboration, and development in the digital realm that we have never experienced before. As technology continues to develop, the metaverse is becoming a platform for innovation and change that has the potential to change the way we engage in cyberspace in the future (Yemenici, 2022).

Metaverse, as an integral part of the future evolution of communications, promises seamless and connected experiences that will change the way humans interact. In this virtual space, humans have the opportunity to create deeper and more personal connections. However, success in harnessing the potential of the metaverse requires a deep understanding of the psychographics and demographics of the target audience (Prisco, 2010).

Understanding psychographics, namely psychological characteristics, values, interests, and attitudes, as well as demographics, such as age, gender, and geographic location, is key to achieving resonance in the metaverse. By understanding audience profiles holistically, we can design more relevant and engaging communications experiences. Thus, the metaverse is not just about technology, but also about how we understand and respond to the needs and preferences of the people who participate in it (Dincelli & Yayla, 2022).

In this context, the metaverse becomes a platform that requires continuous adjustment and innovation according to the dynamics of society's psychological and demographic changes. A deep understanding of the target audience not only helps guide more focused experience design, but also optimizes the potential of the metaverse to create significant and meaningful connections. By combining technology and human insight, metaverses have the potential to shape a more inclusive and impactful future of communications.

Metaverse is the future form of communication that changes traditional paradigms and opens up new opportunities for interaction and connectivity. In contrast to conventional communication in cyberspace, metaverse creates a more immersive and connected digital space, bringing users into a more immersive interactive experience. There are several ways in which the metaverse is becoming the future of communication:

1. **Deeper Immersion**

Metaverse highlights the transformation of communication experiences to become more intense and real through the use of augmented reality (AR) and virtual reality (VR) technology. In the metaverse, interactive experiences are not limited to two-dimensional screens, but rather take users into virtual environments that resemble the physical world in more depth . In the metaverse, AR and VR provide the ability to respond to visual and auditory stimuli, creating more compelling multisensory experiences. Users not only read or view information, but they can also feel their presence and interaction in the virtual world. For example, users can communicate via 3D avatars that represent themselves or interact with the surrounding virtual environment.

This deep faith creates the opportunity to understand and experience information in a more emotional way. For example, in a business meeting in the metaverse, participants can feel as if they are physically present, creating a stronger and deeper connection. This also allows for the creation of more realistic virtual shopping experiences, where consumers can “feel” products before purchasing them . Additionally, deeper immersion in the metaverse opens up opportunities for the development of new content and experiences that would not be possible in conventional virtual worlds. For example, a concert or festival event can be presented virtually with a high level of realism, enabling user participation and engagement in previously unimaginable ways.

In other words, this point emphasizes that the metaverse not only creates a new communication space, but also presents a deeper emotional and sensory dimension, taking

communication to a more intimate and involved level. With AR and VR technology as its foundation, the metaverse opens the door to further exploration and innovation in the way we interact and communicate digitally.

2. **More Creative Social Interactions**

In contrast to conventional communication platforms, the metaverse provides greater freedom for users to design and express themselves through personal and creative social interactions . One aspect that differentiates social interactions in the metaverse is the use of avatars. Individuals can create and manage their avatars, which become digital representations of themselves. This allows for a high level of personalization, where users can express their personality and style through the avatar's appearance and behavior. In this way, the metaverse becomes a stage for creativity and unique visual identity.

In addition to avatars, virtual environments in the metaverse can be designed and customized according to the user's wishes. Users can create their own personal space, such as a virtual home, office, or place to hang out with friends. This creates a creative space where users can organize events, meetings or other activities according to their preferences and needs. The concept of creativity in the metaverse is also reflected in the ability to create content. Users can create and share their own creative content, including artwork, designs and other virtual experiences. This creates a dynamic ecosystem where users are not only consumers, but also active contributors in the communication and interaction processes within the metaverse.

In a business context, creative social interactions in the metaverse open up new opportunities for marketing and branding. Companies can innovate by interacting with consumers in interesting and unique virtual spaces. This includes organizing events, product launches or promotional campaigns that can attract attention and active participation from the audience. Thus , this point highlights that the metaverse is not just about communicating, but also provides a stage for creativity in social interactions. With personalized avatars and changeable virtual environments, the metaverse is a medium that enables freer and more innovative self-expression in human interactions, opening the door to more creative and engaged social experiences.

3. **Technology Merger**

In its development, the metaverse integrates elements such as blockchain, Web 3.0, cryptocurrencies, and NFTs to create a broader and more connected ecosystem. Blockchain technology, as an integral part of the metaverse, provides security and transparency in transactions and ownership of digital assets. The concept of decentralization in blockchain creates an environment where users have more control over their personal data, strengthening security and privacy in the metaverse.

Web 3.0, as an evolution of the current web, brings the principles of semantics, interconnection, and artificial intelligence to improve user experience in the metaverse. This allows content and information in the metaverse to be more structured, easily accessible, and better interpretable by users and applications. Cryptocurrencies are becoming the main medium of exchange in the metaverse ecosystem. Users can transact, purchase virtual goods, or even trade within the metaverse using cryptocurrencies. This creates a dynamic digital economy where asset value can be measured and traded without geographic restrictions.

NFT (Non-Fungible Token) is the basis for the concept of digital ownership that is unique and cannot be counterfeited. In the metaverse, NFTs allow users to own digital assets such as art, music, or other virtual goods exclusively. This creates unique and authentic value within the metaverse ecosystem. The merger of these technologies opens up new opportunities in various sectors. For example, in the arts and entertainment field, NFTs allow content creators to gain fair and direct rewards for their work. In the business sector, the use of cryptocurrencies can simplify international transactions and increase the speed and efficiency of trade.

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As a result, this point emphasizes that the metaverse is not just the product of a single technology, but rather a harmonious blend of various technologies working together to create a dynamic and connected ecosystem. This merger not only changes the way we communicate and interact, but also opens up new opportunities in various aspects of life, from economics to culture.

4. **New Business Experience**

Metaverse impacts the way companies communicate, interact, and transact with customers. This transformation creates new opportunities and changes the business landscape within the metaverse ecosystem. In the metaverse, companies can hold virtual meetings, conferences, or product presentations. This opens up the possibility to communicate with internal teams or customers without geographic restrictions. Companies can create virtual environments that support more efficient collaboration and communication, regardless of participants' physical locations.

Launching products in the metaverse is also a more interactive experience. Companies can present products virtually, allowing customers to “feel” or test the product before purchasing. This creates a more engaging and realistic way to interact with products, enriching the customer experience and driving greater engagement. The concept of virtual stores in the metaverse is also becoming relevant. Companies can have digital representations of their physical stores where customers can shop and interact with products virtually. This creates a more engaging and personalized shopping experience, regardless of the customer's geographic location.

Additionally, the metaverse provides the stage for innovative marketing events. Companies can host concerts, shows or product launches in an engaging virtual environment, reaching a larger audience without being limited by physical space. This allows companies to utilize visual and creative appeal in their marketing.

Metaverse also allows companies to expand their business models. They can create additional products or services exclusive to metaverse users, opening new sources of revenue and increasing customer engagement. Thus , this point shows that the metaverse is creating a fundamental transformation in the way companies communicate and do business. By leveraging creative and connected virtual environments, companies can design more engaging, efficient, and innovative experiences for their customers.

5. **Digital Wealth Exchange** l

The concept of digital ownership through NFTs provides a new dimension to communication in the metaverse. Users can own and exchange virtual goods for real value, creating a dynamic digital economy within the metaverse. NFTs allow content creators such as artists, musicians, or game developers to create and sell their digital works as unique assets. For example, an artist can create digital art represented by an NFT, giving exclusive ownership of the work to the buyer. This gives the work special value and status, while the buyer gets recognition of ownership recorded on the blockchain.

This concept of digital ownership also creates opportunities for metaverse users to own virtual goods in that environment. Virtual goods such as property, clothing for avatars, or in-game items can be represented as NFTs, conferring exclusive value and ownership on their owners. This exchange of virtual goods is not just limited to one platform or game. Along with the use of NFTs, users can exchange or sell their digital assets in various metaverse environments. This creates a dynamic and connected economy where digital wealth value can grow and be maintained across multiple platforms.

With the concept of digital ownership and exchange via NFTs, the metaverse is changing the way we view the value of virtual goods. It is no longer just about use in a particular game or environment, but is becoming a widely recognized form of digital wealth. This creates opportunities for individuals to become digital economic actors, exploiting the value of the

virtual goods they own. Thus, this point highlights how the metaverse not only creates an exchange of digital wealth, but also opens the door for users to own and derive value from their virtual goods in a vast and connected ecosystem.

6. **Global and Inclusive**

Metaverse opens the door to seamless global communication. People from different parts of the world can meet and interact in one virtual environment, eliminating geographic barriers to communication. By removing barriers of time and space, the metaverse creates an environment where people from all over the world can meet, interact and collaborate on one connected digital platform. In the metaverse, meetings and events can be attended by participants from various locations around the world without the need to physically travel. This creates the possibility for closer international collaboration, the global exchange of ideas, and shared experiences involving participants from different cultures and backgrounds.

The use of cryptocurrencies in the metaverse also contributes to global inclusivity. As the primary medium of exchange in the metaverse ecosystem, cryptocurrencies remove barriers to cross-border transactions and enable global payments with greater speed and lower fees. This expands accessibility and participation in the digital economy in the metaverse without being constrained by currency differences or country-specific regulations. Diversity and inclusivity in avatar representation is also a hallmark of the metaverse. Users can design their avatars to reflect their identity and diversity, creating a space where every individual feels recognized and able to participate without social or ethnic boundaries.

Metaverse also creates economic opportunities for individuals in various parts of the world. With the concept of digital ownership and exchange through NFTs, individuals can generate income from their creative works or virtual goods, providing equal economic opportunities without being affected by geographic location . Thus, this point emphasizes that the metaverse does not only bring changes in the way we communicate and interact, but also opens the door to greater and more inclusive global engagement. In the metaverse ecosystem, the digital world and the physical world are increasingly integrated, creating opportunities for cross-cultural collaboration and exchange that are not limited by physical or national boundaries.

E. CONCLUSION

Metaverse is not only limited to augmented reality (AR) and virtual reality (VR) technologies, but involves combining both technologies to create a holistic experience in a 3D virtual world. Metaverse not only creates virtual spaces, but also enables interaction, collaboration and shared experiences within them. The importance of understanding the psychographics and demographics of the target audience is a focus for achieving resonance in the metaverse. Through a holistic understanding of psychological and demographic characteristics, we can design more relevant and engaging communication experiences, making the metaverse not just about technology, but also about understanding the needs and preferences of the people who participate in it. Metaverse brings a new dimension to communication with deeper immersion through AR and VR technology. More creative social interactions emerge through personalization of avatars and virtual environments. The incorporation of technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is integral in creating a dynamic and connected metaverse ecosystem.

In a business context, the metaverse creates new experiences in communicating, launching products, and interacting with customers. This transformation opens up new opportunities and changes the way companies operate in the metaverse ecosystem. The exchange of digital wealth through the concept of NFT ownership creates a dynamic digital economy in the metaverse, where virtual goods have value that can be traded across platforms. Metaverse also promotes seamless global communication, eliminating geographic barriers and

creating inclusive opportunities for global participation. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction. By embracing technology and understanding audience needs, metaverses have the potential to shape a more inclusive, creative and globally connected communications future.

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The Future of Communication in the Metaverse

Abstract

The Metaverse, as an ever-evolving virtual space, offers new potential in terms of communication involving virtual reality, artificial intelligence and the latest technologies. This research aims to investigate the evolution of communication in the metaverse and its impact on the way individuals and society interact. This research uses a qualitative approach with descriptive methods. The results of this research highlight that the metaverse is not just a combination of augmented reality (AR) and virtual reality (VR) technologies, but rather creates a 3D environment that allows interaction, collaboration and shared experiences. With a focus on understanding psychographics and audience demographics, metaverse not only creates immersive experiences through AR and VR, but also offers immersive emotional and sensory dimensions. Combining technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is key in creating a connected metaverse ecosystem. In a business context, metaverse transformation creates new experiences in communications, product launches, and interactions with customers. The exchange of digital wealth through NFTs opens up dynamic economic opportunities, while the global and inclusive concept of the metaverse eliminates geographic boundaries, creating opportunities for broader and more equitable participation at the global level. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction, unlocking the potential for a more inclusive and globally connected communication future.

Keywords: Communication, Metaverse, Virtual Reality (VR), Augmented Reality (AR), Non-Fungible Token (NFT).

A. INTRODUCTION

Entering the industrial era 4.0, the peak of advances in internet technology with the 5G network has had a significant impact on daily life (Wollschlaeger et al., 2017). Ease of access to communication technology opens up new opportunities, and one of the most striking innovations is the development of Virtual Reality (VR) technology. Initially, VR was known only in the context of game development, but has now penetrated various social industry sectors (Biocca, 1992). The fields of Arts, Education, Psychology, Medical Technology and Social Media are promising fields for VR exploration. The use of VR in the arts provides unparalleled immersive experiences, while in education, the technology creates more realistic learning simulations. Psychological aspects benefit from the use of VR in therapy and a deeper understanding of mental conditions (Pellas et al., 2021).

However, special attention needs to be paid to the most striking transformation, namely in the social media sector. Social media, which is now an integral part of everyday life, no longer limits itself to conventional spaces (Van Dijk & Poel, 2013). With the advancement of VR, humans are not only bound by the limitations of communication in physical space, but can provide a more immersive and embedded social experience. Mobility and flexibility factors are the main impetus for this change (Dwivedi et al., 2022). People tend to avoid face-to-face communication which is limited by time and place. With VR, they can engage in social interactions without being bound by geographic constraints or strict schedules (Carter, 2005). The development of VR technology in various aspects of social life creates a new basis for humans to build relationships and interact. While ethical challenges and considerations remain relevant, these developments bring great opportunities in creating a more open, inclusive and connected social world (Barnidge, 2017).

Metaverse, as a concept that combines Virtual Reality (VR) technology and social interaction, provides a new window for humans to meet face to face without being bound by

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physical distance limitations (Messinger et al., 2009). By leveraging VR technology, Metaverse opens up opportunities for deeper and more immersive interaction experiences (Dincelli & Yayla, 2022). This innovation is not just a dream, but rather the result of the collaborative efforts of two tech giants, Microsoft and Facebook, who combined their expertise and resources in 2021 (Applin & Flick, 2021). Experiments on VR technology laid the foundation for the development of the Metaverse which fundamentally changed the social landscape (Shin, 2022). The presence of the Metaverse has had a significant impact on the definition of social, where humans can socialize through their own digital representations, referred to as "avatars." These avatars allow individuals to interact in cyberspace in ways never before imagined (Teng et al., 2023).

The importance of the Metaverse lies not only in its technological aspects, but also in how this concept shifts social paradigms. Through the Metaverse, we can feel presence and interaction like in the real world, creating a more personal and connected social experience (Al-Emran, 2023). Physical distance is no longer an obstacle, and people can build relationships virtually without being limited by the limitations of space and time. While the Metaverse promises positive changes in the way we socialize, ethical challenges and considerations also need to be addressed (Han et al., 2022). Deep thinking about data security, privacy, and the psychological impact of using this technology is essential to maintaining the sustainability and acceptance of the Metaverse in society. Thus, the Metaverse opens a new chapter in technological evolution, preparing us for a new era of social interactions based on cyberspace (Bibri, 2022).

The application of metaverse technology in this era introduces new communication trends that utilize advanced tools, opening up new opportunities for deeper and more innovative interactions (Koohang et al., 2023). One aspect that has emerged from this trend is the significant use of augmented reality (AR) technology in enriching communication experiences. AR not only provides additional visual entertainment, but also provides a new dimension to communication, making it more dynamic and fun (Flavian et al., 2019).

The use of AR can have a positive impact on communication between business people and customers. Enhanced interaction through integrated visual elements can make the communication process more interesting, informative and engaging (Whang et al., 2021). Improved communications not only improve customer relationships but can also be a potential driver of greater revenue. Through new communication trends driven by the implementation of the metaverse, companies can optimize advanced technologies such as augmented reality to achieve their business goals (Yaqoob et al., 2023).

Communication through virtual reality (VR) opens the door to more immersive experiences, where individuals can explore artificial environments as if they were in the real world (Burbules, 2006). One VR platform that is increasingly popular is Zepeto, where users can engage in interactions that combine virtual and real world elements. Many believe that Zepeto represents a move towards the metaverse, as it gives users a more personalized communication experience through avatars (Zhao et al., 2020).

Zepeto allows users to interact through avatars that can be customized to match their physical appearance in the real world. The uniqueness of this platform lies in its ability to combine augmented reality (AR) elements to provide flexibility in designing and modifying avatars. Users can create unique self-representations, combining reality and imagination. In doing so, Zepeto creates an environment where individuals can socialize and communicate in more creative and innovative ways (Han et al., 2021).

Finally, Mirror world, a concept that realistically depicts the real world in digital form, has become a reality through applications such as Google Earth (Hudson-Smith et al., 2007). Google Earth, as one example of a popular mirror world, proves its prowess in collecting accurate data via satellite to provide a virtual representation that is close to reality. This

platform allows users to explore and check the conditions around where they live or even explore hard-to-reach locations. By using Google Earth, users can access highly detailed and accurate maps, creating an experience similar to real-world exploration (Sheppard & Cizek, 2009).

The ability to check locations, view geographic conditions, and observe changes over time provides significant added value. Mirror worlds, as reflected in Google Earth, are not just visual representations, but also practical tools that facilitate deep exploration and understanding of our physical world. The application of mirror worlds, especially through mapping technology such as Google Earth, brings great benefits in everyday life. From monitoring our surroundings to travel planning and virtual exploration, mirror worlds harness the potential of technology to bring us closer to physical reality, even when we interact with that world through digital screens (Belile, 2015).

Overall, the metaverse represents a phenomenon that not only creates a new dimension in technological development, but also indicates a cultural and social evolution that includes the way we communicate. More than mere technological advancement, the metaverse embraces a profound transformation in the paradigm of human interaction. By providing a platform for increasingly realistic and interactive virtual experiences, the metaverse impacts not only how we communicate, but also how we understand the world and engage in social environments.

B. LITERATURE REVIEW

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Many experts have defined what a metaverse is according to their understanding. According to Mystakidis (2022), argues that “Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (the metaverse) is a realistic three-dimensional environment where people can explore and interact with other people in real time.” Then according to Cheng et al. (2022), metaverse is "Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (metaverse) is a realistic three-dimensional environment where people can explore and interact with others in real time ”. Meanwhile, according to Kye et al. (2021), "Metaverse refers to an online 3D world that is accessed via computers, smart devices, augmented reality and virtual reality headsets. Based on the definition of what a metaverse is that has been put forward by several experts, it can be concluded that, Metaverse is a space concept where someone can be directly involved in it by using sophisticated devices in the virtual world. In this metaverse, we can socialize, play games, and shop, but only in the virtual world.

Many are still trying to clearly define and find out more about how the metaverse works. In the metaverse concept, each user will have an avatar as their digital identity, as explained by Chatham House (Moynihan et al., 2022). This avatar will be a unique representation for each individual, used during interactions within the digital ecosystem. Interestingly, the existence of an avatar is not just an option, but rather a prerequisite for entering the world of the metaverse; without avatars, users cannot access this vast digital ecosystem (Zimmermann et al., 2023). Additionally, the metaverse ecosystem will introduce elements such as currency, property, and ownership, similar to real-world structures. In this context, the metaverse creates a digital reality that reflects aspects of real life, enabling economic transactions and property interactions similar to the physical world (Chen & Cheng, 2022). The presence of this ecosystem can be based on the existing real world or completely inspired by the imagination of the designers.

The appeal of the metaverse lies not only in the replication of real-life elements, but also in the freedom of action it provides to its users. In the metaverse, each user has the freedom to carry out various activities, from playing games, using applications, opening websites, and much more (Sonmez, 2023). Thus, the metaverse is not just a digital representation of the real

world, but also provides a creative and interactive space for its users to explore and develop activities according to their individual desires and preferences (Zallio & Clarkson, 2022).

There are several types of metaverse based on the different systems and technologies they use. Some types and examples of metaverses are as follows. The first type of metaverse is traditional centralized. This type of metaverse does not integrate blockchain into their technological mechanisms and operates in a centralized system (Huang et al., 2022). This means that virtual space is controlled by a central organization that stores all user data. In this metaverse world, each user has an avatar that is used while in the virtual world. The avatar will save the progress that the user has made in the virtual world (Nevelsteen, 2018). The main advantage of this type of metaverse is the large number of users who want to join.

The next type of metaverse is centralized blockchain. This metaverse uses blockchain in its mechanism and the system is managed centrally by an organization. This metaverse gives birth to interactions in virtual space (Cheng, 2023). There are also what are called NFTs or Non-Fungible Tokens, which are currencies used in the virtual world (Yilmaz et al., 2022). The third type of metaverse is the decentralized blockchain metaverse. This type of metaverse usually uses a DAO (Decentralized Autonomous Organization) system. Reported on the Metav.RS page, DAO is a contract-based system whose job is to create rules in the metaverse. In a decentralized blockchain metaverse, there is no one organization that centrally manages the entire system (Goldberg & Schar, 2023). Decision making is the authority of the user. Each user can make administrative decisions in this virtual world.

C. METHOD

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This research adopts a qualitative descriptive method with the aim of describing, analyzing and constructing meaning towards the phenomenon that is the focus of the research. This method, as explained by Seaman (2008), is used to investigate and understand a phenomenon in a real life context, with a focus on understanding what happened, why it happened, and how it happened. The descriptive approach, according to Kim et al., (2017), is a way of solving problems that displays a picture of the state of research subjects or objects, such as individuals, institutions, groups and society, based on visible facts and other aspects. Kim et al. (2017) states that the descriptive method is a research method for examining the status of a group of people, objects, conditions, systems of thought, or classes of events in the present. The main aim of this descriptive research is to prepare systematic, factual and accurate descriptions, images or paintings regarding the facts, properties and relationships between phenomena that are the focus of the investigation.

D. RESULTS AND DISCUSSION

Metaverse can be interpreted as the next evolution of the internet, representing the next iteration of the concept that promises a more immersive and interconnected internet experience. In its essence, metaverse presents a vision of augmented reality (AR) and virtual reality (VR) that allows us to explore and interact in 3D virtual worlds simultaneously. More than just VR and AR technology, the metaverse embraces the concept of combining the two to create a more holistic experience.

Although there is a misconception among people who think that the metaverse is only limited to VR and AR technology, in fact the metaverse is more than just a combination of these two technologies. Metaverse not only delivers virtual and augmented experiences, but also creates 3D spaces where users can interact, collaborate, and feel each other's presence. In other words, VR and AR are two elements that facilitate access into the metaverse, and they complement each other in creating a richer and more connected digital environment (Voinea et al., 2022).

With this concept, the metaverse provides a new dimension to the way we interact with the internet. It opens the door to a more immersive and engaging experience, allowing us to enter virtual worlds that seem real. As the next iteration of the internet, the metaverse creates a platform for exploration, collaboration, and development in the digital realm that we have never experienced before. As technology continues to develop, the metaverse is becoming a platform for innovation and change that has the potential to change the way we engage in cyberspace in the future (Yemenici, 2022).

Metaverse, as an integral part of the future evolution of communications, promises seamless and connected experiences that will change the way humans interact. In this virtual space, humans have the opportunity to create deeper and more personal connections. However, success in harnessing the potential of the metaverse requires a deep understanding of the psychographics and demographics of the target audience (Prisco, 2010).

Understanding psychographics, namely psychological characteristics, values, interests, and attitudes, as well as demographics, such as age, gender, and geographic location, is key to achieving resonance in the metaverse. By understanding audience profiles holistically, we can design more relevant and engaging communications experiences. Thus, the metaverse is not just about technology, but also about how we understand and respond to the needs and preferences of the people who participate in it (Dincelli & Yayla, 2022).

In this context, the metaverse becomes a platform that requires continuous adjustment and innovation according to the dynamics of society's psychological and demographic changes. A deep understanding of the target audience not only helps guide more focused experience design, but also optimizes the potential of the metaverse to create significant and meaningful connections. By combining technology and human insight, metaverses have the potential to shape a more inclusive and impactful future of communications.

Metaverse is the future form of communication that changes traditional paradigms and opens up new opportunities for interaction and connectivity. In contrast to conventional communication in cyberspace, metaverse creates a more immersive and connected digital space, bringing users into a more immersive interactive experience. There are several ways in which the metaverse is becoming the future of communication:

1. **Deeper Immersion**

Metaverse highlights the transformation of communication experiences to become more intense and real through the use of augmented reality (AR) and virtual reality (VR) technology. In the metaverse, interactive experiences are not limited to two-dimensional screens, but rather take users into virtual environments that resemble the physical world in more depth . In the metaverse, AR and VR provide the ability to respond to visual and auditory stimuli, creating more compelling multisensory experiences. Users not only read or view information, but they can also feel their presence and interaction in the virtual world. For example, users can communicate via 3D avatars that represent themselves or interact with the surrounding virtual environment.

This deep faith creates the opportunity to understand and experience information in a more emotional way. For example, in a business meeting in the metaverse, participants can feel as if they are physically present, creating a stronger and deeper connection. This also allows for the creation of more realistic virtual shopping experiences, where consumers can “feel” products before purchasing them . Additionally, deeper immersion in the metaverse opens up opportunities for the development of new content and experiences that would not be possible in conventional virtual worlds. For example, a concert or festival event can be presented virtually with a high level of realism, enabling user participation and engagement in previously unimaginable ways.

In other words, this point emphasizes that the metaverse not only creates a new communication space, but also presents a deeper emotional and sensory dimension, taking

communication to a more intimate and involved level. With AR and VR technology as its foundation, the metaverse opens the door to further exploration and innovation in the way we interact and communicate digitally.

2. **More Creative Social Interactions**

In contrast to conventional communication platforms, the metaverse provides greater freedom for users to design and express themselves through personal and creative social interactions . One aspect that differentiates social interactions in the metaverse is the use of avatars. Individuals can create and manage their avatars, which become digital representations of themselves. This allows for a high level of personalization, where users can express their personality and style through the avatar's appearance and behavior. In this way, the metaverse becomes a stage for creativity and unique visual identity.

In addition to avatars, virtual environments in the metaverse can be designed and customized according to the user's wishes. Users can create their own personal space, such as a virtual home, office, or place to hang out with friends. This creates a creative space where users can organize events, meetings or other activities according to their preferences and needs. The concept of creativity in the metaverse is also reflected in the ability to create content. Users can create and share their own creative content, including artwork, designs and other virtual experiences. This creates a dynamic ecosystem where users are not only consumers, but also active contributors in the communication and interaction processes within the metaverse.

In a business context, creative social interactions in the metaverse open up new opportunities for marketing and branding. Companies can innovate by interacting with consumers in interesting and unique virtual spaces. This includes organizing events, product launches or promotional campaigns that can attract attention and active participation from the audience. Thus , this point highlights that the metaverse is not just about communicating, but also provides a stage for creativity in social interactions. With personalized avatars and changeable virtual environments, the metaverse is a medium that enables freer and more innovative self-expression in human interactions, opening the door to more creative and engaged social experiences.

3. **Technology Merger**

In its development, the metaverse integrates elements such as blockchain, Web 3.0, cryptocurrencies, and NFTs to create a broader and more connected ecosystem. Blockchain technology, as an integral part of the metaverse, provides security and transparency in transactions and ownership of digital assets. The concept of decentralization in blockchain creates an environment where users have more control over their personal data, strengthening security and privacy in the metaverse.

Web 3.0, as an evolution of the current web, brings the principles of semantics, interconnection, and artificial intelligence to improve user experience in the metaverse. This allows content and information in the metaverse to be more structured, easily accessible, and better interpretable by users and applications. Cryptocurrencies are becoming the main medium of exchange in the metaverse ecosystem. Users can transact, purchase virtual goods, or even trade within the metaverse using cryptocurrencies. This creates a dynamic digital economy where asset value can be measured and traded without geographic restrictions.

NFT (Non-Fungible Token) is the basis for the concept of digital ownership that is unique and cannot be counterfeited. In the metaverse, NFTs allow users to own digital assets such as art, music, or other virtual goods exclusively. This creates unique and authentic value within the metaverse ecosystem. The merger of these technologies opens up new opportunities in various sectors. For example, in the arts and entertainment field, NFTs allow content creators to gain fair and direct rewards for their work. In the business sector, the use of cryptocurrencies can simplify international transactions and increase the speed and efficiency of trade.

As a result, this point emphasizes that the metaverse is not just the product of a single technology, but rather a harmonious blend of various technologies working together to create a dynamic and connected ecosystem. This merger not only changes the way we communicate and interact, but also opens up new opportunities in various aspects of life, from economics to culture.

4. **New Business Experience**

Metaverse impacts the way companies communicate, interact, and transact with customers. This transformation creates new opportunities and changes the business landscape within the metaverse ecosystem. In the metaverse, companies can hold virtual meetings, conferences, or product presentations. This opens up the possibility to communicate with internal teams or customers without geographic restrictions. Companies can create virtual environments that support more efficient collaboration and communication, regardless of participants' physical locations.

Launching products in the metaverse is also a more interactive experience. Companies can present products virtually, allowing customers to “feel” or test the product before purchasing. This creates a more engaging and realistic way to interact with products, enriching the customer experience and driving greater engagement. The concept of virtual stores in the metaverse is also becoming relevant. Companies can have digital representations of their physical stores where customers can shop and interact with products virtually. This creates a more engaging and personalized shopping experience, regardless of the customer's geographic location.

Additionally, the metaverse provides the stage for innovative marketing events. Companies can host concerts, shows or product launches in an engaging virtual environment, reaching a larger audience without being limited by physical space. This allows companies to utilize visual and creative appeal in their marketing.

Metaverse also allows companies to expand their business models. They can create additional products or services exclusive to metaverse users, opening new sources of revenue and increasing customer engagement. Thus , this point shows that the metaverse is creating a fundamental transformation in the way companies communicate and do business. By leveraging creative and connected virtual environments, companies can design more engaging, efficient, and innovative experiences for their customers.

5. **Digital Wealth Exchange** l

The concept of digital ownership through NFTs provides a new dimension to communication in the metaverse. Users can own and exchange virtual goods for real value, creating a dynamic digital economy within the metaverse. NFTs allow content creators such as artists, musicians, or game developers to create and sell their digital works as unique assets. For example, an artist can create digital art represented by an NFT, giving exclusive ownership of the work to the buyer. This gives the work special value and status, while the buyer gets recognition of ownership recorded on the blockchain.

This concept of digital ownership also creates opportunities for metaverse users to own virtual goods in that environment. Virtual goods such as property, clothing for avatars, or in-game items can be represented as NFTs, conferring exclusive value and ownership on their owners. This exchange of virtual goods is not just limited to one platform or game. Along with the use of NFTs, users can exchange or sell their digital assets in various metaverse environments. This creates a dynamic and connected economy where digital wealth value can grow and be maintained across multiple platforms.

With the concept of digital ownership and exchange via NFTs, the metaverse is changing the way we view the value of virtual goods. It is no longer just about use in a particular game or environment, but is becoming a widely recognized form of digital wealth. This creates opportunities for individuals to become digital economic actors, exploiting the value of the

virtual goods they own. Thus, this point highlights how the metaverse not only creates an exchange of digital wealth, but also opens the door for users to own and derive value from their virtual goods in a vast and connected ecosystem.

6. **Global and Inclusive**

Metaverse opens the door to seamless global communication. People from different parts of the world can meet and interact in one virtual environment, eliminating geographic barriers to communication. By removing barriers of time and space, the metaverse creates an environment where people from all over the world can meet, interact and collaborate on one connected digital platform. In the metaverse, meetings and events can be attended by participants from various locations around the world without the need to physically travel. This creates the possibility for closer international collaboration, the global exchange of ideas, and shared experiences involving participants from different cultures and backgrounds.

The use of cryptocurrencies in the metaverse also contributes to global inclusivity. As the primary medium of exchange in the metaverse ecosystem, cryptocurrencies remove barriers to cross-border transactions and enable global payments with greater speed and lower fees. This expands accessibility and participation in the digital economy in the metaverse without being constrained by currency differences or country-specific regulations. Diversity and inclusivity in avatar representation is also a hallmark of the metaverse. Users can design their avatars to reflect their identity and diversity, creating a space where every individual feels recognized and able to participate without social or ethnic boundaries.

Metaverse also creates economic opportunities for individuals in various parts of the world. With the concept of digital ownership and exchange through NFTs, individuals can generate income from their creative works or virtual goods, providing equal economic opportunities without being affected by geographic location . Thus, this point emphasizes that the metaverse does not only bring changes in the way we communicate and interact, but also opens the door to greater and more inclusive global engagement. In the metaverse ecosystem, the digital world and the physical world are increasingly integrated, creating opportunities for cross-cultural collaboration and exchange that are not limited by physical or national boundaries.

E. CONCLUSION

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Metaverse is not only limited to augmented reality (AR) and virtual reality (VR) technologies, but involves combining both technologies to create a holistic experience in a 3D virtual world. Metaverse not only creates virtual spaces, but also enables interaction, collaboration and shared experiences within them. The importance of understanding the psychographics and demographics of the target audience is a focus for achieving resonance in the metaverse. Through a holistic understanding of psychological and demographic characteristics, we can design more relevant and engaging communication experiences, making the metaverse not just about technology, but also about understanding the needs and preferences of the people who participate in it. Metaverse brings a new dimension to communication with deeper immersion through AR and VR technology. More creative social interactions emerge through personalization of avatars and virtual environments. The incorporation of technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is integral in creating a dynamic and connected metaverse ecosystem.

In a business context, the metaverse creates new experiences in communicating, launching products, and interacting with customers. This transformation opens up new opportunities and changes the way companies operate in the metaverse ecosystem. The exchange of digital wealth through the concept of NFT ownership creates a dynamic digital economy in the metaverse, where virtual goods have value that can be traded across platforms. Metaverse also promotes seamless global communication, eliminating geographic barriers and

creating inclusive opportunities for global participation. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction. By embracing technology and understanding audience needs, metaverses have the potential to shape a more inclusive, creative and globally connected communications future.

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The Future of Communication in the Metaverse

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Abstract

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The Metaverse, as an ever-evolving virtual space, offers new potential in terms of communication involving virtual reality, artificial intelligence and the latest technologies. This research aims to investigate the evolution of communication in the metaverse and its impact on the way individuals and society interact. This research uses a qualitative approach with descriptive methods. The results of this research highlight that the metaverse is not just a combination of augmented reality (AR) and virtual reality (VR) technologies, but rather creates a 3D environment that allows interaction, collaboration and shared experiences. With a focus on understanding psychographics and audience demographics, metaverse not only creates immersive experiences through AR and VR, but also offers immersive emotional and sensory dimensions. Combining technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is key in creating a connected metaverse ecosystem. In a business context, metaverse transformation creates new experiences in communications, product launches, and interactions with customers. The exchange of digital wealth through NFTs opens up dynamic economic opportunities, while the global and inclusive concept of the metaverse eliminates geographic boundaries, creating opportunities for broader and more equitable participation at the global level. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction, unlocking the potential for a more inclusive and globally connected communication future.

Keywords: Communication, Metaverse, Virtual Reality (VR), Augmented Reality (AR), Non-Fungible Token (NFT).

A. INTRODUCTION

Entering the industrial era 4.0, the peak of advances in internet technology with the 5G network has had a significant impact on daily life (Wollschlaeger et al., 2017). Ease of access to communication technology opens up new opportunities, and one of the most striking innovations is the development of Virtual Reality (VR) technology. Initially, VR was known only in the context of game development, but has now penetrated various social industry sectors (Biocca, 1992). The fields of Arts, Education, Psychology, Medical Technology and Social Media are promising fields for VR exploration. The use of VR in the arts provides unparalleled immersive experiences, while in education, the technology creates more realistic learning simulations. Psychological aspects benefit from the use of VR in therapy and a deeper understanding of mental conditions (Pellas et al., 2021).

However, special attention needs to be paid to the most striking transformation, namely in the social media sector. Social media, which is now an integral part of everyday life, no longer limits itself to conventional spaces (Van Dijk & Poel, 2013). With the advancement of VR, humans are not only bound by the limitations of communication in physical space, but can provide a more immersive and embedded social experience. Mobility and flexibility factors are the main impetus for this change (Dwivedi et al., 2022). People tend to avoid face-to-face communication which is limited by time and place. With VR, they can engage in social interactions without being bound by geographic constraints or strict schedules (Carter, 2005). The development of VR technology in various aspects of social life creates a new basis for humans to build relationships and interact. While ethical challenges and considerations remain relevant, these developments bring great opportunities in creating a more open, inclusive and connected social world (Barnidge, 2017).

Metaverse, as a concept that combines Virtual Reality (VR) technology and social interaction, provides a new window for humans to meet face to face without being bound by

physical distance limitations (Messinger et al., 2009). By leveraging VR technology, Metaverse opens up opportunities for deeper and more immersive interaction experiences (Dincelli & Yayla, 2022). This innovation is not just a dream, but rather the result of the collaborative efforts of two tech giants, Microsoft and Facebook, who combined their expertise and resources in 2021 (Applin & Flick, 2021). Experiments on VR technology laid the foundation for the development of the Metaverse which fundamentally changed the social landscape (Shin, 2022). The presence of the Metaverse has had a significant impact on the definition of social, where humans can socialize through their own digital representations, referred to as "avatars." These avatars allow individuals to interact in cyberspace in ways never before imagined (Teng et al., 2023).

The importance of the Metaverse lies not only in its technological aspects, but also in how this concept shifts social paradigms. Through the Metaverse, we can feel presence and interaction like in the real world, creating a more personal and connected social experience (Al-Emran, 2023). Physical distance is no longer an obstacle, and people can build relationships virtually without being limited by the limitations of space and time. While the Metaverse promises positive changes in the way we socialize, ethical challenges and considerations also need to be addressed (Han et al., 2022). Deep thinking about data security, privacy, and the psychological impact of using this technology is essential to maintaining the sustainability and acceptance of the Metaverse in society. Thus, the Metaverse opens a new chapter in technological evolution, preparing us for a new era of social interactions based on cyberspace (Bibri, 2022).

The application of metaverse technology in this era introduces new communication trends that utilize advanced tools, opening up new opportunities for deeper and more innovative interactions (Koohang et al., 2023). One aspect that has emerged from this trend is the significant use of augmented reality (AR) technology in enriching communication experiences. AR not only provides additional visual entertainment, but also provides a new dimension to communication, making it more dynamic and fun (Flavian et al., 2019).

The use of AR can have a positive impact on communication between business people and customers. Enhanced interaction through integrated visual elements can make the communication process more interesting, informative and engaging (Whang et al., 2021). Improved communications not only improve customer relationships but can also be a potential driver of greater revenue. Through new communication trends driven by the implementation of the metaverse, companies can optimize advanced technologies such as augmented reality to achieve their business goals (Yaqoob et al., 2023).

Communication through virtual reality (VR) opens the door to more immersive experiences, where individuals can explore artificial environments as if they were in the real world (Burbules, 2006). One VR platform that is increasingly popular is Zepeto, where users can engage in interactions that combine virtual and real world elements. Many believe that Zepeto represents a move towards the metaverse, as it gives users a more personalized communication experience through avatars (Zhao et al., 2020).

Zepeto allows users to interact through avatars that can be customized to match their physical appearance in the real world. The uniqueness of this platform lies in its ability to combine augmented reality (AR) elements to provide flexibility in designing and modifying avatars. Users can create unique self-representations, combining reality and imagination. In doing so, Zepeto creates an environment where individuals can socialize and communicate in more creative and innovative ways (Han et al., 2021).

Finally, Mirror world, a concept that realistically depicts the real world in digital form, has become a reality through applications such as Google Earth (Hudson-Smith et al., 2007). Google Earth, as one example of a popular mirror world, proves its prowess in collecting accurate data via satellite to provide a virtual representation that is close to reality. This

platform allows users to explore and check the conditions around where they live or even explore hard-to-reach locations. By using Google Earth, users can access highly detailed and accurate maps, creating an experience similar to real-world exploration (Sheppard & Cizek, 2009).

The ability to check locations, view geographic conditions, and observe changes over time provides significant added value. Mirror worlds, as reflected in Google Earth, are not just visual representations, but also practical tools that facilitate deep exploration and understanding of our physical world. The application of mirror worlds, especially through mapping technology such as Google Earth, brings great benefits in everyday life. From monitoring our surroundings to travel planning and virtual exploration, mirror worlds harness the potential of technology to bring us closer to physical reality, even when we interact with that world through digital screens (Belile, 2015).

Overall, the metaverse represents a phenomenon that not only creates a new dimension in technological development, but also indicates a cultural and social evolution that includes the way we communicate. More than mere technological advancement, the metaverse embraces a profound transformation in the paradigm of human interaction. By providing a platform for increasingly realistic and interactive virtual experiences, the metaverse impacts not only how we communicate, but also how we understand the world and engage in social environments.

B. LITERATURE REVIEW

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Many experts have defined what a metaverse is according to their understanding. According to Mystakidis (2022), argues that “Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (the metaverse) is a realistic three-dimensional environment where people can explore and interact with other people in real time.” Then according to Cheng et al. (2022), metaverse is "Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (metaverse) is a realistic three-dimensional environment where people can explore and interact with others in real time ”. Meanwhile, according to Kye et al. (2021), "Metaverse refers to an online 3D world that is accessed via computers, smart devices, augmented reality and virtual reality headsets. Based on the definition of what a metaverse is that has been put forward by several experts, it can be concluded that, Metaverse is a space concept where someone can be directly involved in it by using sophisticated devices in the virtual world. In this metaverse, we can socialize, play games, and shop, but only in the virtual world.

Many are still trying to clearly define and find out more about how the metaverse works. In the metaverse concept, each user will have an avatar as their digital identity, as explained by Chatham House (Moynihan et al., 2022). This avatar will be a unique representation for each individual, used during interactions within the digital ecosystem. Interestingly, the existence of an avatar is not just an option, but rather a prerequisite for entering the world of the metaverse; without avatars, users cannot access this vast digital ecosystem (Zimmermann et al., 2023). Additionally, the metaverse ecosystem will introduce elements such as currency, property, and ownership, similar to real-world structures. In this context, the metaverse creates a digital reality that reflects aspects of real life, enabling economic transactions and property interactions similar to the physical world (Chen & Cheng, 2022). The presence of this ecosystem can be based on the existing real world or completely inspired by the imagination of the designers.

The appeal of the metaverse lies not only in the replication of real-life elements, but also in the freedom of action it provides to its users. In the metaverse, each user has the freedom to carry out various activities, from playing games, using applications, opening websites, and much more (Sonmez, 2023). Thus, the metaverse is not just a digital representation of the real

world, but also provides a creative and interactive space for its users to explore and develop activities according to their individual desires and preferences (Zallio & Clarkson, 2022).

There are several types of metaverse based on the different systems and technologies they use. Some types and examples of metaverses are as follows. The first type of metaverse is traditional centralized. This type of metaverse does not integrate blockchain into their technological mechanisms and operates in a centralized system (Huang et al., 2022). This means that virtual space is controlled by a central organization that stores all user data. In this metaverse world, each user has an avatar that is used while in the virtual world. The avatar will save the progress that the user has made in the virtual world (Nevelsteen, 2018). The main advantage of this type of metaverse is the large number of users who want to join.

The next type of metaverse is centralized blockchain. This metaverse uses blockchain in its mechanism and the system is managed centrally by an organization. This metaverse gives birth to interactions in virtual space (Cheng, 2023). There are also what are called NFTs or Non-Fungible Tokens, which are currencies used in the virtual world (Yilmaz et al., 2022). The third type of metaverse is the decentralized blockchain metaverse. This type of metaverse usually uses a DAO (Decentralized Autonomous Organization) system. Reported on the Metav.RS page, DAO is a contract-based system whose job is to create rules in the metaverse. In a decentralized blockchain metaverse, there is no one organization that centrally manages the entire system (Goldberg & Schar, 2023). Decision making is the authority of the user. Each user can make administrative decisions in this virtual world.

C. METHOD

This research adopts a qualitative descriptive method with the aim of describing, analyzing and constructing meaning towards the phenomenon that is the focus of the research. This method, as explained by Seaman (2008), is used to investigate and understand a phenomenon in a real life context, with a focus on understanding what happened, why it happened, and how it happened. The descriptive approach, according to Kim et al., (2017), is a way of solving problems that displays a picture of the state of research subjects or objects, such as individuals, institutions, groups and society, based on visible facts and other aspects. Kim et al. (2017) states that the descriptive method is a research method for examining the status of a group of people, objects, conditions, systems of thought, or classes of events in the present. The main aim of this descriptive research is to prepare systematic, factual and accurate descriptions, images or paintings regarding the facts, properties and relationships between phenomena that are the focus of the investigation.

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D. RESULTS AND DISCUSSION

Metaverse can be interpreted as the next evolution of the internet, representing the next iteration of the concept that promises a more immersive and interconnected internet experience. In its essence, metaverse presents a vision of augmented reality (AR) and virtual reality (VR) that allows us to explore and interact in 3D virtual worlds simultaneously. More than just VR and AR technology, the metaverse embraces the concept of combining the two to create a more holistic experience.

Although there is a misconception among people who think that the metaverse is only limited to VR and AR technology, in fact the metaverse is more than just a combination of these two technologies. Metaverse not only delivers virtual and augmented experiences, but also creates 3D spaces where users can interact, collaborate, and feel each other's presence. In other words, VR and AR are two elements that facilitate access into the metaverse, and they complement each other in creating a richer and more connected digital environment (Voinea et al., 2022).

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With this concept, the metaverse provides a new dimension to the way we interact with the internet. It opens the door to a more immersive and engaging experience, allowing us to enter virtual worlds that seem real. As the next iteration of the internet, the metaverse creates a platform for exploration, collaboration, and development in the digital realm that we have never experienced before. As technology continues to develop, the metaverse is becoming a platform for innovation and change that has the potential to change the way we engage in cyberspace in the future (Yemenici, 2022).

Metaverse, as an integral part of the future evolution of communications, promises seamless and connected experiences that will change the way humans interact. In this virtual space, humans have the opportunity to create deeper and more personal connections. However, success in harnessing the potential of the metaverse requires a deep understanding of the psychographics and demographics of the target audience (Prisco, 2010).

Understanding psychographics, namely psychological characteristics, values, interests, and attitudes, as well as demographics, such as age, gender, and geographic location, is key to achieving resonance in the metaverse. By understanding audience profiles holistically, we can design more relevant and engaging communications experiences. Thus, the metaverse is not just about technology, but also about how we understand and respond to the needs and preferences of the people who participate in it (Dincelli & Yayla, 2022).

In this context, the metaverse becomes a platform that requires continuous adjustment and innovation according to the dynamics of society's psychological and demographic changes. A deep understanding of the target audience not only helps guide more focused experience design, but also optimizes the potential of the metaverse to create significant and meaningful connections. By combining technology and human insight, metaverses have the potential to shape a more inclusive and impactful future of communications.

Metaverse is the future form of communication that changes traditional paradigms and opens up new opportunities for interaction and connectivity. In contrast to conventional communication in cyberspace, metaverse creates a more immersive and connected digital space, bringing users into a more immersive interactive experience. There are several ways in which the metaverse is becoming the future of communication:

1. **Deeper Immersion**

Metaverse highlights the transformation of communication experiences to become more intense and real through the use of augmented reality (AR) and virtual reality (VR) technology. In the metaverse, interactive experiences are not limited to two-dimensional screens, but rather take users into virtual environments that resemble the physical world in more depth . In the metaverse, AR and VR provide the ability to respond to visual and auditory stimuli, creating more compelling multisensory experiences. Users not only read or view information, but they can also feel their presence and interaction in the virtual world. For example, users can communicate via 3D avatars that represent themselves or interact with the surrounding virtual environment.

This deep faith creates the opportunity to understand and experience information in a more emotional way. For example, in a business meeting in the metaverse, participants can feel as if they are physically present, creating a stronger and deeper connection. This also allows for the creation of more realistic virtual shopping experiences, where consumers can “feel” products before purchasing them . Additionally, deeper immersion in the metaverse opens up opportunities for the development of new content and experiences that would not be possible in conventional virtual worlds. For example, a concert or festival event can be presented virtually with a high level of realism, enabling user participation and engagement in previously unimaginable ways.

In other words, this point emphasizes that the metaverse not only creates a new communication space, but also presents a deeper emotional and sensory dimension, taking

communication to a more intimate and involved level. With AR and VR technology as its foundation, the metaverse opens the door to further exploration and innovation in the way we interact and communicate digitally.

2. **More Creative Social Interactions**

In contrast to conventional communication platforms, the metaverse provides greater freedom for users to design and express themselves through personal and creative social interactions . One aspect that differentiates social interactions in the metaverse is the use of avatars. Individuals can create and manage their avatars, which become digital representations of themselves. This allows for a high level of personalization, where users can express their personality and style through the avatar's appearance and behavior. In this way, the metaverse becomes a stage for creativity and unique visual identity.

In addition to avatars, virtual environments in the metaverse can be designed and customized according to the user's wishes. Users can create their own personal space, such as a virtual home, office, or place to hang out with friends. This creates a creative space where users can organize events, meetings or other activities according to their preferences and needs. The concept of creativity in the metaverse is also reflected in the ability to create content. Users can create and share their own creative content, including artwork, designs and other virtual experiences. This creates a dynamic ecosystem where users are not only consumers, but also active contributors in the communication and interaction processes within the metaverse.

In a business context, creative social interactions in the metaverse open up new opportunities for marketing and branding. Companies can innovate by interacting with consumers in interesting and unique virtual spaces. This includes organizing events, product launches or promotional campaigns that can attract attention and active participation from the audience. Thus , this point highlights that the metaverse is not just about communicating, but also provides a stage for creativity in social interactions. With personalized avatars and changeable virtual environments, the metaverse is a medium that enables freer and more innovative self-expression in human interactions, opening the door to more creative and engaged social experiences.

3. **Technology Merger**

In its development, the metaverse integrates elements such as blockchain, Web 3.0, cryptocurrencies, and NFTs to create a broader and more connected ecosystem. Blockchain technology, as an integral part of the metaverse, provides security and transparency in transactions and ownership of digital assets. The concept of decentralization in blockchain creates an environment where users have more control over their personal data, strengthening security and privacy in the metaverse.

Web 3.0, as an evolution of the current web, brings the principles of semantics, interconnection, and artificial intelligence to improve user experience in the metaverse. This allows content and information in the metaverse to be more structured, easily accessible, and better interpretable by users and applications. Cryptocurrencies are becoming the main medium of exchange in the metaverse ecosystem. Users can transact, purchase virtual goods, or even trade within the metaverse using cryptocurrencies. This creates a dynamic digital economy where asset value can be measured and traded without geographic restrictions.

NFT (Non-Fungible Token) is the basis for the concept of digital ownership that is unique and cannot be counterfeited. In the metaverse, NFTs allow users to own digital assets such as art, music, or other virtual goods exclusively. This creates unique and authentic value within the metaverse ecosystem. The merger of these technologies opens up new opportunities in various sectors. For example, in the arts and entertainment field, NFTs allow content creators to gain fair and direct rewards for their work. In the business sector, the use of cryptocurrencies can simplify international transactions and increase the speed and efficiency of trade.

As a result, this point emphasizes that the metaverse is not just the product of a single technology, but rather a harmonious blend of various technologies working together to create a dynamic and connected ecosystem. This merger not only changes the way we communicate and interact, but also opens up new opportunities in various aspects of life, from economics to culture.

4. **New Business Experience**

Metaverse impacts the way companies communicate, interact, and transact with customers. This transformation creates new opportunities and changes the business landscape within the metaverse ecosystem. In the metaverse, companies can hold virtual meetings, conferences, or product presentations. This opens up the possibility to communicate with internal teams or customers without geographic restrictions. Companies can create virtual environments that support more efficient collaboration and communication, regardless of participants' physical locations.

Launching products in the metaverse is also a more interactive experience. Companies can present products virtually, allowing customers to “feel” or test the product before purchasing. This creates a more engaging and realistic way to interact with products, enriching the customer experience and driving greater engagement. The concept of virtual stores in the metaverse is also becoming relevant. Companies can have digital representations of their physical stores where customers can shop and interact with products virtually. This creates a more engaging and personalized shopping experience, regardless of the customer's geographic location.

Additionally, the metaverse provides the stage for innovative marketing events. Companies can host concerts, shows or product launches in an engaging virtual environment, reaching a larger audience without being limited by physical space. This allows companies to utilize visual and creative appeal in their marketing.

Metaverse also allows companies to expand their business models. They can create additional products or services exclusive to metaverse users, opening new sources of revenue and increasing customer engagement. Thus , this point shows that the metaverse is creating a fundamental transformation in the way companies communicate and do business. By leveraging creative and connected virtual environments, companies can design more engaging, efficient, and innovative experiences for their customers.

5. **Digital Wealth Exchange** l

The concept of digital ownership through NFTs provides a new dimension to communication in the metaverse. Users can own and exchange virtual goods for real value, creating a dynamic digital economy within the metaverse. NFTs allow content creators such as artists, musicians, or game developers to create and sell their digital works as unique assets. For example, an artist can create digital art represented by an NFT, giving exclusive ownership of the work to the buyer. This gives the work special value and status, while the buyer gets recognition of ownership recorded on the blockchain.

This concept of digital ownership also creates opportunities for metaverse users to own virtual goods in that environment. Virtual goods such as property, clothing for avatars, or in-game items can be represented as NFTs, conferring exclusive value and ownership on their owners. This exchange of virtual goods is not just limited to one platform or game. Along with the use of NFTs, users can exchange or sell their digital assets in various metaverse environments. This creates a dynamic and connected economy where digital wealth value can grow and be maintained across multiple platforms.

With the concept of digital ownership and exchange via NFTs, the metaverse is changing the way we view the value of virtual goods. It is no longer just about use in a particular game or environment, but is becoming a widely recognized form of digital wealth. This creates opportunities for individuals to become digital economic actors, exploiting the value of the

virtual goods they own. Thus, this point highlights how the metaverse not only creates an exchange of digital wealth, but also opens the door for users to own and derive value from their virtual goods in a vast and connected ecosystem.

6. **Global and Inclusive**

Metaverse opens the door to seamless global communication. People from different parts of the world can meet and interact in one virtual environment, eliminating geographic barriers to communication. By removing barriers of time and space, the metaverse creates an environment where people from all over the world can meet, interact and collaborate on one connected digital platform. In the metaverse, meetings and events can be attended by participants from various locations around the world without the need to physically travel. This creates the possibility for closer international collaboration, the global exchange of ideas, and shared experiences involving participants from different cultures and backgrounds.

The use of cryptocurrencies in the metaverse also contributes to global inclusivity. As the primary medium of exchange in the metaverse ecosystem, cryptocurrencies remove barriers to cross-border transactions and enable global payments with greater speed and lower fees. This expands accessibility and participation in the digital economy in the metaverse without being constrained by currency differences or country-specific regulations. Diversity and inclusivity in avatar representation is also a hallmark of the metaverse. Users can design their avatars to reflect their identity and diversity, creating a space where every individual feels recognized and able to participate without social or ethnic boundaries.

Metaverse also creates economic opportunities for individuals in various parts of the world. With the concept of digital ownership and exchange through NFTs, individuals can generate income from their creative works or virtual goods, providing equal economic opportunities without being affected by geographic location . Thus, this point emphasizes that the metaverse does not only bring changes in the way we communicate and interact, but also opens the door to greater and more inclusive global engagement. In the metaverse ecosystem, the digital world and the physical world are increasingly integrated, creating opportunities for cross-cultural collaboration and exchange that are not limited by physical or national boundaries.

E. CONCLUSION

Metaverse is not only limited to augmented reality (AR) and virtual reality (VR) technologies, but involves combining both technologies to create a holistic experience in a 3D virtual world. Metaverse not only creates virtual spaces, but also enables interaction, collaboration and shared experiences within them. The importance of understanding the psychographics and demographics of the target audience is a focus for achieving resonance in the metaverse. Through a holistic understanding of psychological and demographic characteristics, we can design more relevant and engaging communication experiences, making the metaverse not just about technology, but also about understanding the needs and preferences of the people who participate in it. Metaverse brings a new dimension to communication with deeper immersion through AR and VR technology. More creative social interactions emerge through personalization of avatars and virtual environments. The incorporation of technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is integral in creating a dynamic and connected metaverse ecosystem.

In a business context, the metaverse creates new experiences in communicating, launching products, and interacting with customers. This transformation opens up new opportunities and changes the way companies operate in the metaverse ecosystem. The exchange of digital wealth through the concept of NFT ownership creates a dynamic digital economy in the metaverse, where virtual goods have value that can be traded across platforms. Metaverse also promotes seamless global communication, eliminating geographic barriers and

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creating inclusive opportunities for global participation. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction. By embracing technology and understanding audience needs, metaverses have the potential to shape a more inclusive, creative and globally connected communications future.

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The Future of Communication in the Metaverse

Abstract

The Metaverse, as an ever-evolving virtual space, offers new potential in terms of communication involving virtual reality, artificial intelligence and the latest technologies. This research aims to investigate the evolution of communication in the metaverse and its impact on the way individuals and society interact. This research uses a qualitative approach with descriptive methods. The results of this research highlight that the metaverse is not just a combination of augmented reality (AR) and virtual reality (VR) technologies, but rather creates a 3D environment that allows interaction, collaboration and shared experiences. With a focus on understanding psychographics and audience demographics, metaverse not only creates immersive experiences through AR and VR, but also offers immersive emotional and sensory dimensions. Combining technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is key in creating a connected metaverse ecosystem. In a business context, metaverse transformation creates new experiences in communications, product launches, and interactions with customers. The exchange of digital wealth through NFTs opens up dynamic economic opportunities, while the global and inclusive concept of the metaverse eliminates geographic boundaries, creating opportunities for broader and more equitable participation at the global level. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction, unlocking the potential for a more inclusive and globally connected communication future.

Keywords: Communication, Metaverse, Virtual Reality (VR), Augmented Reality (AR), Non-Fungible Token (NFT).

A. INTRODUCTION

Entering the industrial era 4.0, the peak of advances in internet technology with the 5G network has had a significant impact on daily life (Wollschlaeger et al., 2017). Ease of access to communication technology opens up new opportunities, and one of the most striking innovations is the development of Virtual Reality (VR) technology. Initially, VR was known only in the context of game development, but has now penetrated various social industry sectors (Biocca, 1992). The fields of Arts, Education, Psychology, Medical Technology and Social Media are promising fields for VR exploration. The use of VR in the arts provides unparalleled immersive experiences, while in education, the technology creates more realistic learning simulations. Psychological aspects benefit from the use of VR in therapy and a deeper understanding of mental conditions (Pellas et al., 2021).

However, special attention needs to be paid to the most striking transformation, namely in the social media sector. Social media, which is now an integral part of everyday life, no longer limits itself to conventional spaces (Van Dijk & Poel, 2013). With the advancement of VR, humans are not only bound by the limitations of communication in physical space, but can provide a more immersive and embedded social experience. Mobility and flexibility factors are the main impetus for this change (Dwivedi et al., 2022). People tend to avoid face-to-face communication which is limited by time and place. With VR, they can engage in social interactions without being bound by geographic constraints or strict schedules (Carter, 2005). The development of VR technology in various aspects of social life creates a new basis for humans to build relationships and interact. While ethical challenges and considerations remain relevant, these developments bring great opportunities in creating a more open, inclusive and connected social world (Barnidge, 2017).

Metaverse, as a concept that combines Virtual Reality (VR) technology and social interaction, provides a new window for humans to meet face to face without being bound by

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physical distance limitations (Messinger et al., 2009). By leveraging VR technology, Metaverse opens up opportunities for deeper and more immersive interaction experiences (Dincelli & Yayla, 2022). This innovation is not just a dream, but rather the result of the collaborative efforts of two tech giants, Microsoft and Facebook, who combined their expertise and resources in 2021 (Applin & Flick, 2021). Experiments on VR technology laid the foundation for the development of the Metaverse which fundamentally changed the social landscape (Shin, 2022). The presence of the Metaverse has had a significant impact on the definition of social, where humans can socialize through their own digital representations, referred to as "avatars." These avatars allow individuals to interact in cyberspace in ways never before imagined (Teng et al., 2023).

The importance of the Metaverse lies not only in its technological aspects, but also in how this concept shifts social paradigms. Through the Metaverse, we can feel presence and interaction like in the real world, creating a more personal and connected social experience (Al-Emran, 2023). Physical distance is no longer an obstacle, and people can build relationships virtually without being limited by the limitations of space and time. While the Metaverse promises positive changes in the way we socialize, ethical challenges and considerations also need to be addressed (Han et al., 2022). Deep thinking about data security, privacy, and the psychological impact of using this technology is essential to maintaining the sustainability and acceptance of the Metaverse in society. Thus, the Metaverse opens a new chapter in technological evolution, preparing us for a new era of social interactions based on cyberspace (Bibri, 2022).

The application of metaverse technology in this era introduces new communication trends that utilize advanced tools, opening up new opportunities for deeper and more innovative interactions (Koohang et al., 2023). One aspect that has emerged from this trend is the significant use of augmented reality (AR) technology in enriching communication experiences. AR not only provides additional visual entertainment, but also provides a new dimension to communication, making it more dynamic and fun (Flavian et al., 2019).

The use of AR can have a positive impact on communication between business people and customers. Enhanced interaction through integrated visual elements can make the communication process more interesting, informative and engaging (Whang et al., 2021). Improved communications not only improve customer relationships but can also be a potential driver of greater revenue. Through new communication trends driven by the implementation of the metaverse, companies can optimize advanced technologies such as augmented reality to achieve their business goals (Yaqoob et al., 2023).

Communication through virtual reality (VR) opens the door to more immersive experiences, where individuals can explore artificial environments as if they were in the real world (Burbules, 2006). One VR platform that is increasingly popular is Zepeto, where users can engage in interactions that combine virtual and real world elements. Many believe that Zepeto represents a move towards the metaverse, as it gives users a more personalized communication experience through avatars (Zhao et al., 2020).

Zepeto allows users to interact through avatars that can be customized to match their physical appearance in the real world. The uniqueness of this platform lies in its ability to combine augmented reality (AR) elements to provide flexibility in designing and modifying avatars. Users can create unique self-representations, combining reality and imagination. In doing so, Zepeto creates an environment where individuals can socialize and communicate in more creative and innovative ways (Han et al., 2021).

Finally, Mirror world, a concept that realistically depicts the real world in digital form, has become a reality through applications such as Google Earth (Hudson-Smith et al., 2007). Google Earth, as one example of a popular mirror world, proves its prowess in collecting accurate data via satellite to provide a virtual representation that is close to reality. This

platform allows users to explore and check the conditions around where they live or even explore hard-to-reach locations. By using Google Earth, users can access highly detailed and accurate maps, creating an experience similar to real-world exploration (Sheppard & Cizek, 2009).

The ability to check locations, view geographic conditions, and observe changes over time provides significant added value. Mirror worlds, as reflected in Google Earth, are not just visual representations, but also practical tools that facilitate deep exploration and understanding of our physical world. The application of mirror worlds, especially through mapping technology such as Google Earth, brings great benefits in everyday life. From monitoring our surroundings to travel planning and virtual exploration, mirror worlds harness the potential of technology to bring us closer to physical reality, even when we interact with that world through digital screens (Belile, 2015).

Overall, the metaverse represents a phenomenon that not only creates a new dimension in technological development, but also indicates a cultural and social evolution that includes the way we communicate. More than mere technological advancement, the metaverse embraces a profound transformation in the paradigm of human interaction. By providing a platform for increasingly realistic and interactive virtual experiences, the metaverse impacts not only how we communicate, but also how we understand the world and engage in social environments.

B. LITERATURE REVIEW

Many experts have defined what a metaverse is according to their understanding. According to Mystakidis (2022), argues that “Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (the metaverse) is a realistic three-dimensional environment where people can explore and interact with other people in real time.” Then according to Cheng et al. (2022), metaverse is "Metaverse refers to a shared online virtual world, similar to video games such as Second Life or Pokémon Go. It (metaverse) is a realistic three-dimensional environment where people can explore and interact with others in real time ”. Meanwhile, according to Kye et al. (2021), "Metaverse refers to an online 3D world that is accessed via computers, smart devices, augmented reality and virtual reality headsets. Based on the definition of what a metaverse is that has been put forward by several experts, it can be concluded that, Metaverse is a space concept where someone can be directly involved in it by using sophisticated devices in the virtual world. In this metaverse, we can socialize, play games, and shop, but only in the virtual world.

Many are still trying to clearly define and find out more about how the metaverse works. In the metaverse concept, each user will have an avatar as their digital identity, as explained by Chatham House (Moynihan et al., 2022). This avatar will be a unique representation for each individual, used during interactions within the digital ecosystem. Interestingly, the existence of an avatar is not just an option, but rather a prerequisite for entering the world of the metaverse; without avatars, users cannot access this vast digital ecosystem (Zimmermann et al., 2023). Additionally, the metaverse ecosystem will introduce elements such as currency, property, and ownership, similar to real-world structures. In this context, the metaverse creates a digital reality that reflects aspects of real life, enabling economic transactions and property interactions similar to the physical world (Chen & Cheng, 2022). The presence of this ecosystem can be based on the existing real world or completely inspired by the imagination of the designers.

The appeal of the metaverse lies not only in the replication of real-life elements, but also in the freedom of action it provides to its users. In the metaverse, each user has the freedom to carry out various activities, from playing games, using applications, opening websites, and much more (Sonmez, 2023). Thus, the metaverse is not just a digital representation of the real

world, but also provides a creative and interactive space for its users to explore and develop activities according to their individual desires and preferences (Zallio & Clarkson, 2022).

There are several types of metaverse based on the different systems and technologies they use. Some types and examples of metaverses are as follows. The first type of metaverse is traditional centralized. This type of metaverse does not integrate blockchain into their technological mechanisms and operates in a centralized system (Huang et al., 2022). This means that virtual space is controlled by a central organization that stores all user data. In this metaverse world, each user has an avatar that is used while in the virtual world. The avatar will save the progress that the user has made in the virtual world (Nevelsteen, 2018). The main advantage of this type of metaverse is the large number of users who want to join.

The next type of metaverse is centralized blockchain. This metaverse uses blockchain in its mechanism and the system is managed centrally by an organization. This metaverse gives birth to interactions in virtual space (Cheng, 2023). There are also what are called NFTs or Non-Fungible Tokens, which are currencies used in the virtual world (Yilmaz et al., 2022). The third type of metaverse is the decentralized blockchain metaverse. This type of metaverse usually uses a DAO (Decentralized Autonomous Organization) system. Reported on the Metav.RS page, DAO is a contract-based system whose job is to create rules in the metaverse. In a decentralized blockchain metaverse, there is no one organization that centrally manages the entire system (Goldberg & Schar, 2023). Decision making is the authority of the user. Each user can make administrative decisions in this virtual world.

C. METHOD

This research adopts a qualitative descriptive method with the aim of describing, analyzing and constructing meaning towards the phenomenon that is the focus of the research. This method, as explained by Seaman (2008), is used to investigate and understand a phenomenon in a real life context, with a focus on understanding what happened, why it happened, and how it happened. The descriptive approach, according to Kim et al., (2017), is a way of solving problems that displays a picture of the state of research subjects or objects, such as individuals, institutions, groups and society, based on visible facts and other aspects. Kim et al. (2017) states that the descriptive method is a research method for examining the status of a group of people, objects, conditions, systems of thought, or classes of events in the present. The main aim of this descriptive research is to prepare systematic, factual and accurate descriptions, images or paintings regarding the facts, properties and relationships between phenomena that are the focus of the investigation.

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D. RESULTS AND DISCUSSION

Metaverse can be interpreted as the next evolution of the internet, representing the next iteration of the concept that promises a more immersive and interconnected internet experience. In its essence, metaverse presents a vision of augmented reality (AR) and virtual reality (VR) that allows us to explore and interact in 3D virtual worlds simultaneously. More than just VR and AR technology, the metaverse embraces the concept of combining the two to create a more holistic experience.

Although there is a misconception among people who think that the metaverse is only limited to VR and AR technology, in fact the metaverse is more than just a combination of these two technologies. Metaverse not only delivers virtual and augmented experiences, but also creates 3D spaces where users can interact, collaborate, and feel each other's presence. In other words, VR and AR are two elements that facilitate access into the metaverse, and they complement each other in creating a richer and more connected digital environment (Voinea et al., 2022).

With this concept, the metaverse provides a new dimension to the way we interact with the internet. It opens the door to a more immersive and engaging experience, allowing us to enter virtual worlds that seem real. As the next iteration of the internet, the metaverse creates a platform for exploration, collaboration, and development in the digital realm that we have never experienced before. As technology continues to develop, the metaverse is becoming a platform for innovation and change that has the potential to change the way we engage in cyberspace in the future (Yemenici, 2022).

Metaverse, as an integral part of the future evolution of communications, promises seamless and connected experiences that will change the way humans interact. In this virtual space, humans have the opportunity to create deeper and more personal connections. However, success in harnessing the potential of the metaverse requires a deep understanding of the psychographics and demographics of the target audience (Prisco, 2010).

Understanding psychographics, namely psychological characteristics, values, interests, and attitudes, as well as demographics, such as age, gender, and geographic location, is key to achieving resonance in the metaverse. By understanding audience profiles holistically, we can design more relevant and engaging communications experiences. Thus, the metaverse is not just about technology, but also about how we understand and respond to the needs and preferences of the people who participate in it (Dincelli & Yayla, 2022).

In this context, the metaverse becomes a platform that requires continuous adjustment and innovation according to the dynamics of society's psychological and demographic changes. A deep understanding of the target audience not only helps guide more focused experience design, but also optimizes the potential of the metaverse to create significant and meaningful connections. By combining technology and human insight, metaverses have the potential to shape a more inclusive and impactful future of communications.

Metaverse is the future form of communication that changes traditional paradigms and opens up new opportunities for interaction and connectivity. In contrast to conventional communication in cyberspace, metaverse creates a more immersive and connected digital space, bringing users into a more immersive interactive experience. There are several ways in which the metaverse is becoming the future of communication:

1. **Deeper Immersion**

Metaverse highlights the transformation of communication experiences to become more intense and real through the use of augmented reality (AR) and virtual reality (VR) technology. In the metaverse, interactive experiences are not limited to two-dimensional screens, but rather take users into virtual environments that resemble the physical world in more depth . In the metaverse, AR and VR provide the ability to respond to visual and auditory stimuli, creating more compelling multisensory experiences. Users not only read or view information, but they can also feel their presence and interaction in the virtual world. For example, users can communicate via 3D avatars that represent themselves or interact with the surrounding virtual environment.

This deep faith creates the opportunity to understand and experience information in a more emotional way. For example, in a business meeting in the metaverse, participants can feel as if they are physically present, creating a stronger and deeper connection. This also allows for the creation of more realistic virtual shopping experiences, where consumers can “feel” products before purchasing them . Additionally, deeper immersion in the metaverse opens up opportunities for the development of new content and experiences that would not be possible in conventional virtual worlds. For example, a concert or festival event can be presented virtually with a high level of realism, enabling user participation and engagement in previously unimaginable ways.

In other words, this point emphasizes that the metaverse not only creates a new communication space, but also presents a deeper emotional and sensory dimension, taking

communication to a more intimate and involved level. With AR and VR technology as its foundation, the metaverse opens the door to further exploration and innovation in the way we interact and communicate digitally.

2. **More Creative Social Interactions**

In contrast to conventional communication platforms, the metaverse provides greater freedom for users to design and express themselves through personal and creative social interactions . One aspect that differentiates social interactions in the metaverse is the use of avatars. Individuals can create and manage their avatars, which become digital representations of themselves. This allows for a high level of personalization, where users can express their personality and style through the avatar's appearance and behavior. In this way, the metaverse becomes a stage for creativity and unique visual identity.

In addition to avatars, virtual environments in the metaverse can be designed and customized according to the user's wishes. Users can create their own personal space, such as a virtual home, office, or place to hang out with friends. This creates a creative space where users can organize events, meetings or other activities according to their preferences and needs. The concept of creativity in the metaverse is also reflected in the ability to create content. Users can create and share their own creative content, including artwork, designs and other virtual experiences. This creates a dynamic ecosystem where users are not only consumers, but also active contributors in the communication and interaction processes within the metaverse.

In a business context, creative social interactions in the metaverse open up new opportunities for marketing and branding. Companies can innovate by interacting with consumers in interesting and unique virtual spaces. This includes organizing events, product launches or promotional campaigns that can attract attention and active participation from the audience. Thus , this point highlights that the metaverse is not just about communicating, but also provides a stage for creativity in social interactions. With personalized avatars and changeable virtual environments, the metaverse is a medium that enables freer and more innovative self-expression in human interactions, opening the door to more creative and engaged social experiences.

3. **Technology Merger**

In its development, the metaverse integrates elements such as blockchain, Web 3.0, cryptocurrencies, and NFTs to create a broader and more connected ecosystem. Blockchain technology, as an integral part of the metaverse, provides security and transparency in transactions and ownership of digital assets. The concept of decentralization in blockchain creates an environment where users have more control over their personal data, strengthening security and privacy in the metaverse.

Web 3.0, as an evolution of the current web, brings the principles of semantics, interconnection, and artificial intelligence to improve user experience in the metaverse. This allows content and information in the metaverse to be more structured, easily accessible, and better interpretable by users and applications. Cryptocurrencies are becoming the main medium of exchange in the metaverse ecosystem. Users can transact, purchase virtual goods, or even trade within the metaverse using cryptocurrencies. This creates a dynamic digital economy where asset value can be measured and traded without geographic restrictions.

NFT (Non-Fungible Token) is the basis for the concept of digital ownership that is unique and cannot be counterfeited. In the metaverse, NFTs allow users to own digital assets such as art, music, or other virtual goods exclusively. This creates unique and authentic value within the metaverse ecosystem. The merger of these technologies opens up new opportunities in various sectors. For example, in the arts and entertainment field, NFTs allow content creators to gain fair and direct rewards for their work. In the business sector, the use of cryptocurrencies can simplify international transactions and increase the speed and efficiency of trade.

As a result, this point emphasizes that the metaverse is not just the product of a single technology, but rather a harmonious blend of various technologies working together to create a dynamic and connected ecosystem. This merger not only changes the way we communicate and interact, but also opens up new opportunities in various aspects of life, from economics to culture.

4. **New Business Experience**

Metaverse impacts the way companies communicate, interact, and transact with customers. This transformation creates new opportunities and changes the business landscape within the metaverse ecosystem. In the metaverse, companies can hold virtual meetings, conferences, or product presentations. This opens up the possibility to communicate with internal teams or customers without geographic restrictions. Companies can create virtual environments that support more efficient collaboration and communication, regardless of participants' physical locations.

Launching products in the metaverse is also a more interactive experience. Companies can present products virtually, allowing customers to “feel” or test the product before purchasing. This creates a more engaging and realistic way to interact with products, enriching the customer experience and driving greater engagement. The concept of virtual stores in the metaverse is also becoming relevant. Companies can have digital representations of their physical stores where customers can shop and interact with products virtually. This creates a more engaging and personalized shopping experience, regardless of the customer's geographic location.

Additionally, the metaverse provides the stage for innovative marketing events. Companies can host concerts, shows or product launches in an engaging virtual environment, reaching a larger audience without being limited by physical space. This allows companies to utilize visual and creative appeal in their marketing.

Metaverse also allows companies to expand their business models. They can create additional products or services exclusive to metaverse users, opening new sources of revenue and increasing customer engagement. Thus , this point shows that the metaverse is creating a fundamental transformation in the way companies communicate and do business. By leveraging creative and connected virtual environments, companies can design more engaging, efficient, and innovative experiences for their customers.

5. **Digital Wealth Exchange** l

The concept of digital ownership through NFTs provides a new dimension to communication in the metaverse. Users can own and exchange virtual goods for real value, creating a dynamic digital economy within the metaverse. NFTs allow content creators such as artists, musicians, or game developers to create and sell their digital works as unique assets. For example, an artist can create digital art represented by an NFT, giving exclusive ownership of the work to the buyer. This gives the work special value and status, while the buyer gets recognition of ownership recorded on the blockchain.

This concept of digital ownership also creates opportunities for metaverse users to own virtual goods in that environment. Virtual goods such as property, clothing for avatars, or in-game items can be represented as NFTs, conferring exclusive value and ownership on their owners. This exchange of virtual goods is not just limited to one platform or game. Along with the use of NFTs, users can exchange or sell their digital assets in various metaverse environments. This creates a dynamic and connected economy where digital wealth value can grow and be maintained across multiple platforms.

With the concept of digital ownership and exchange via NFTs, the metaverse is changing the way we view the value of virtual goods. It is no longer just about use in a particular game or environment, but is becoming a widely recognized form of digital wealth. This creates opportunities for individuals to become digital economic actors, exploiting the value of the

virtual goods they own. Thus, this point highlights how the metaverse not only creates an exchange of digital wealth, but also opens the door for users to own and derive value from their virtual goods in a vast and connected ecosystem.

6. **Global and Inclusive**

Metaverse opens the door to seamless global communication. People from different parts of the world can meet and interact in one virtual environment, eliminating geographic barriers to communication. By removing barriers of time and space, the metaverse creates an environment where people from all over the world can meet, interact and collaborate on one connected digital platform. In the metaverse, meetings and events can be attended by participants from various locations around the world without the need to physically travel. This creates the possibility for closer international collaboration, the global exchange of ideas, and shared experiences involving participants from different cultures and backgrounds.

The use of cryptocurrencies in the metaverse also contributes to global inclusivity. As the primary medium of exchange in the metaverse ecosystem, cryptocurrencies remove barriers to cross-border transactions and enable global payments with greater speed and lower fees. This expands accessibility and participation in the digital economy in the metaverse without being constrained by currency differences or country-specific regulations. Diversity and inclusivity in avatar representation is also a hallmark of the metaverse. Users can design their avatars to reflect their identity and diversity, creating a space where every individual feels recognized and able to participate without social or ethnic boundaries.

Metaverse also creates economic opportunities for individuals in various parts of the world. With the concept of digital ownership and exchange through NFTs, individuals can generate income from their creative works or virtual goods, providing equal economic opportunities without being affected by geographic location . Thus, this point emphasizes that the metaverse does not only bring changes in the way we communicate and interact, but also opens the door to greater and more inclusive global engagement. In the metaverse ecosystem, the digital world and the physical world are increasingly integrated, creating opportunities for cross-cultural collaboration and exchange that are not limited by physical or national boundaries.

E. CONCLUSION

Metaverse is not only limited to augmented reality (AR) and virtual reality (VR) technologies, but involves combining both technologies to create a holistic experience in a 3D virtual world. Metaverse not only creates virtual spaces, but also enables interaction, collaboration and shared experiences within them. The importance of understanding the psychographics and demographics of the target audience is a focus for achieving resonance in the metaverse. Through a holistic understanding of psychological and demographic characteristics, we can design more relevant and engaging communication experiences, making the metaverse not just about technology, but also about understanding the needs and preferences of the people who participate in it. Metaverse brings a new dimension to communication with deeper immersion through AR and VR technology. More creative social interactions emerge through personalization of avatars and virtual environments. The incorporation of technologies such as blockchain, Web 3.0, cryptocurrencies, and NFTs is integral in creating a dynamic and connected metaverse ecosystem.

In a business context, the metaverse creates new experiences in communicating, launching products, and interacting with customers. This transformation opens up new opportunities and changes the way companies operate in the metaverse ecosystem. The exchange of digital wealth through the concept of NFT ownership creates a dynamic digital economy in the metaverse, where virtual goods have value that can be traded across platforms. Metaverse also promotes seamless global communication, eliminating geographic barriers and

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creating inclusive opportunities for global participation. Overall, the metaverse brings about a fundamental shift in the paradigm of human communication and interaction. By embracing technology and understanding audience needs, metaverses have the potential to shape a more inclusive, creative and globally connected communications future.

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