

Research on the Concept and Application of 5G wireless Communication Technology

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Abstract: At present, our daily life is greatly influenced and shaped by the rapid development of social economy and various technologies. And we have benefited a lot from the application of communication technology, which has incrementally enriched our life. Specifically, it provides users with more stable and convenient communication services, and enhances the interactions and communications between people. The concept of 5G wireless communication technology includes the innovative development of 5G wireless communication technology and its application in various fields. However, it has not been widely used by various enterprises, and has not formally entered people's life. The development of 5G wireless communication technology will affect the way people live and work to a certain extent. This paper will briefly analyze the concept and application of 5G wireless communication technology in order to promote the further development of 5G wireless communication technology.

Keywords: 5G Wireless; Communication Technology; Concept; Application

1. Introduction

With the advancement of social and economic development, China has made great progress in the development of science and technology, and has realized the development of 2G, 3G and 4G. The development of science and technology at the present stage has brought new challenge to China's further innovative development on network technology on the basis of 4G. After improvement, it has developed to the stage of 5G wireless communication technology. The development of 5G wireless communication technology will certainly bring great changes to people's life and work. But 5G wireless communication technology has not been widely used in the market. In terms of the development of communication technology, the concept and application of 5G wireless communication technology has achieved a certain development breakthrough, increased the coverage function of wireless communication, improved the transmission speed, and made the communication more secure^[1].

2. Overview and analysis of 5G wireless communication technology

At present, with the increase of bandwidth and capacity of wireless communication system in China, the development rate of mobile network has also greatly improved. Due to the more and more mature development trend of Internet-related technologies and big data in China, 5G wireless communication technology will gradually enter people's life and work. The development of 5G wireless communication technology can improve the transmission speed of data and information, and realize a broader Internet network and promote the smooth advancement of multimedia. Moreover, the development of 5G wireless communication technology, as the basic mode of future social communication technology development and innovation, will make our life more intelligent and convenient. At the same time, 5G wireless communication technology, as an upgrade and development of 4G technology, is also an innovation

and development of 4G technology^[2]. In the near future, people will witness a more secure technical guarantee for data transmission provided by 5G wireless communication technology, which will effectively prevent data missing and loss in transmission, thus protecting the information system from damage and ensuring the stable operation of information system. The development of 5G wireless communication technology has been gradually recognized by people, and it is also gradually changing and shaping people's information concept. Making full use of 5G wireless communication technology and the emerging software will certainly create a better living environment for people.

3. Analysis of 5G wireless communication technology

3.1 New multi-antenna transmission technology

In practical work, with the structural transformation and upgrading of the communication industry, the spectrum resources will gradually reduce. In this case, the future development direction of the communication technology is to continuously improve the communication technology. The new multi-antenna transmission technology, which combines the LSAS technology development, can effectively improve the defense effect and array gain and promote the development of spectrum efficiency. LSAS technology realizes the division of spatial location, after division, which can effectively optimize its service. The development of new multi-antenna transmission technology can improve the effectiveness of communication technology, and lay a solid foundation for the development of later technology. In addition, it will provide a better technical guarantee for improving the problems existing in previous communication technology. Therefore, the new multi-antenna transmission technology, as one of the important components of such technologies, has attracted close attention from researchers^[3].

3.2 Dense network technology

With the development of communication technology, the volume of data business continues to increase and each deployment needs to be integrated with 5G wireless communication technology. In the actual application of network, by analyzing the application of low power nodes, the hot spots and coverage area ratio of the network can be improved, and the network system capacity can be expanded. For example, in real life, by giving full play to the advantages of dense network technology, network system capacity can be effectively expanded, and signal interference and other problems can be solved to a certain extent. In addition, it can intensify the power to research and develop network technology and strengthen the anti-interference and flexibility of the network, so as to meet the needs of all kinds of users. Therefore, the development of dense network technology is also a very important part of the development of 5G wireless communication technology^[4].

3.3 High-frequency transmission technology

In the process of communication technology development, the problem of limited low-frequency resources cannot meet the normal use needs of people for communication technology in many cases. In the application stage of 5G wireless communication technology, it has certain advantages. The development of high-frequency transmission technology can meet the needs of bandwidth and the application advantages of related software. Moreover, its application can effectively adjust the working frequency of communication technology so as to meet the development needs of high frequency band. On this basis, it can also enrich resources and play a positive role in achieving short-distance and high-speed transmission rate, but there are still some difficulties in actual application.

4. Applications of 5G wireless communication technology

As the fifth generation of mobile communication technology, 5G wireless communication technology was significantly different from the previous communication technologies. 5G wireless communication technology is a comprehensive and all-round network communication mode, which is not an independent network technology, but the

effective integration of other wireless information technologies. Integrating wireless technology into the communication technology will provide the staff with better operational experience due to its smart technology design. The development of 5G wireless communication technology has gradually become a hot topic in global mobile communication. In the process of development, many Internet companies are gradually improving their own communication technology equipment, aiming to accelerate the speed of technological innovation and enhance their competitiveness in the communication market. Therefore, the development and improvement of 5G wireless communication technology will bring unlimited opportunities for the development of Internet companies.

4.1 Effectively docking with the core layer of Android system

In practical work, 5G wireless communication technology can realize the docking with Android system. In the specific operation, through developing Android system source code, 5G wireless communication technology has been improved to ensure its good adaptability. The docking between 5G wireless communication technology and Android system can be divided into different levels of docking, among which, the application framework layer and the application layer are respectively docked to improve the basic intelligence of the storage space of the system, thus regulating the system equipment and ensuring the effectiveness of communication. Therefore, the effective docking of 5G wireless communication technology with the core layer of the Android system will provide technical support for promoting its stable development in the core layer of the Android system, and provide a better technical basis for the development and application of application programmes^[5].

4.2 Combining with photography technology

With the development of 5G wireless communication technology, it can be effectively combined with photography technology to acquire and capture dynamic images to a certain extent when photographing. At the same time, with the support of 5G wireless communication technology, the storage space of the optical field camera can be effectively increased, and the acquisition speed of the camera can be improved, thereby enhancing the service capability of the camera. With the support of the development of 5G wireless communication technology, the photography technology will be further improved, together with a more stable system space, which will bring a better application experience for people. Therefore, in the near future, the effective combination of 5G wireless communication technology and photography technology will provide people with a more convenient and efficient experience, so that people can take clearer and more perfect pictures.

4.3 Combination with cloud computing

In practice, the development of the 5G wireless communication technology bears great advantages. It can not only improve the efficiency and security of the communication, but also can be combined with cloud computing to realize the coordinated framework of distributed mobile and computing, thereby ensuring the cloud computing service quality, which is of great significance to the stable and sustainable development for cloud computing. In the future, the development of 5G wireless communication technology will continue to attract people's attention. The service capability of 5G wireless communication technology will continue to play its advantages in terms of high intelligence, low energy consumption and high capacity, to provide customers with good information services and improve customer satisfaction. Therefore, the combination of 5G wireless communication technology and cloud computing will bring people a better user experience in the future^[6].

5. Conclusion

To sum up, with continuous development of science and technology, the concept and application of 5G wireless communication technology is an inevitable trend of future communication development. Compared with the 4G technology, 5G wireless communication technology has achieved a great leap in time delay, frequency utilization

and transmission speed. 5G wireless communication technology is not only the key content of the current mobile communication, but also an important communication technology for the future. With such obvious advantages as supporting mobility and lower energy consumption, 5G wireless communication technology is one of the key technologies needed for the future development of our society. Therefore, in practical work, it is of great significance to emphasize on exploring the concept and application of 5G wireless communication technology, so as to make positive efforts for the development of social economy by effectively applying 5G wireless communication technology.

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