ISSN 2616-5775 Vol. 4, Issue 3: 65-67, DOI: 10.25236/AJCIS.2021.040310

Research on Application of Transmission Technology in Information and Communication Engineering

Liang Ligao[1], Feng Xiaochi[2]

[1]Author. Hebei Branch of China Communication System Co., Ltd. Shijiazhuang, Hebei, China 050200
[2]Translator. Shanxi Sub-Bureau of North China Regional Air Traffic Manament Bureau of Civil Aviation of China, Taiyuan, Shanxi, China, 030031

Abstract: *Under the influence of the era of informatization and big data, along with the rapid development of China's economy, the information channel project has also made considerable progress and development. At present, our country has strengthened the application of transmission technology in order to meet the needs of contemporary society. Our country has made certain achievements in continuous innovation and exploration, which has also promoted the effective application of information and communication engineering to a certain extent. However, from a realistic perspective, although our country has begun to vigorously apply this technology, it still has many problems that make its application effect not perfect, which hinders the development of information and communication engineering to a certain extent. Therefore, for information and communication engineering, the development of transmission technology is very important. The author intends to start from the transmission technology, elaborate the scientific connotation of information and communication engineering and use this to anticipate the application of transmission technology in the future, so as to help the application of transmission technology in information and communication engineering.*

Keywords: *transmission technology; information and communication engineering; application*

1. Introduction

Thanks to the rapid development of information and communication engineering, the information that humans can access has exploded in recent years. Nowadays, information and communication engineering is increasingly applied to more fields. In this context, deepening the research on all aspects of information and communication engineering is of great practical significance. Among them, the research on transmission technology is one of the links that cannot be ignored.

2. Application of transmission technology in information and communication engineering

Strengthen the use of optical fiber transmission technology to improve the quality of communication engineering. The transmission of optical fiber transmission technology relies on light. It has an absolute advantage in various transmission technologies, and it is also the main technology currently used in our country. It has a special advantage, that is, it can make users in remote areas also receive the signal, and through the optical fiber transmission can increase the signal transmission speed, which depends on its strong technical advantages. Through optical fiber transmission technology, it can not only match with more complex content, but also reduce the influence of the external environment on information transmission, and effectively expand the range of signal transmission to a certain extent. It can also enhance the stability of the signal, avoid the interruption of the signal, ensure the normal communication of the signal, and reduce the surrounding restrictions on the signal strength. At the same time, its signal transmission speed is faster than other technologies, the phenomenon of lag is even rarer, and it can effectively block the interference of other factors. Based on the above advantages, technical personnel in our country strengthen the use of optical fiber transmission technology to improve the work quality of communication engineering, improve the signal transmission of transmission information, reduce transmission interference, and maximize information transmission.

Wireless transmission improves the user experience. This technology promotes long-distance transmission and greatly facilitates the daily life of users. In addition to optical fiber transmission technology, there is also a commonly used construction communication engineering technology, namely wireless transmission technology, which relies on electromagnetic waves to transmit information. The

ISSN 2616-5775 Vol. 4, Issue 3: 65-67, DOI: 10.25236/AJCIS.2021.040310

advantage of wireless transmission technology lies in its low-cost and high-efficiency characteristics, which is mainly reflected in the low cost of the use and maintenance of wireless transmission technology. Since the use of this technology does not require line construction, the maintenance cost of line failures is avoided, so it can effectively reduce the cost of enterprise operations, and at the same time enhance the security and stability of information transmission, and optimize the quality of information transmission projects. Wireless transmission technology is also conducive to the economic protection of communication companies, so as to promote the sustainable development of enterprises. From the user's perspective, wireless transmission enhances the public's use experience, and the promotion of long-distance transmission by this technology also greatly facilitates the daily life of users. At the same time, wireless transmission technology upholds the concept of sustainable development of environmental protection, promotes our country's economic and social development, and is conducive to our country's sustainable development.

The application of local backbone network transmission technology can effectively improve the transmission quality of short-distance information. If wireless transmission technology can effectively promote long-distance information transmission, then local backbone network transmission technology can only be applied to small signal and small signal information transmission. It can effectively improve the quality of communication engineering, and this method can also reduce the cost of the enterprises and solve the problem of enterprises' construction. At the same time, the use of local backbone network transmission technology can effectively improve the quality of information transmission, enhance customers' experience, and reduce possible failures in communication engineering. Using this technology in short-distance transmission can optimize the working quality of short-distance transmission. However, its short-distance transportation also brings certain difficulties to the communication work. The small-capacity transmission of information limits the application breadth of local backbone network transmission, and taking the local backbone network as the cornerstone limits the application of this technology. By adjusting and improving the transmission technology of the local backbone network through smart light and digital technology, its defects can be effectively improved, and its functions can be fully exerted in communication engineering.

3. The future development trend of the application of transmission technology in information and communication engineering

The organic integration of various technologies is the focus of effective application of transmission technology in information and communication engineering. Automatically switched optical network technology has fast information transmission speed and high transmission quality. It is well-known in the transmission of metropolitan area networks and has a wide range of applications. The organic integration of various technologies is the key to the effective application of transmission technology in information and communication engineering. The organic integration of the automatic switching optical network and the multi-service transmission platform can give full play to the benefits of these two technologies in communication engineering, thereby promoting the sustainable development of information and communication engineering.

But what should be paid attention to is that the utility of the automatic switching optical network technology at the access layer level is immature compared with the multi-service transmission platform, which limits the application of automatic switching optical network to a certain extent. Therefore, the integration of automatic optical network technology and multi-service delivery platform can give full play to the advantages of the two technologies themselves, maximize the strengths and avoid weaknesses, thereby effectively improving the quality of communication engineering and providing users with higher-quality information transmission.

Make full use of intelligent optical network technology. Make full use of intelligent optical network technology to enhance the work quality of communication projects, and to obtain information in a timely and accurate manner. As mentioned above, intelligent optical networks can improve the shortcomings of local backbone network transmission technology. Intelligent optical network is based on wavelength division multiplexing technology, which plays a vital role in information and communication engineering. Making full use of intelligent optical network technology can reduce the participation of mechanical equipment to a certain extent, effectively reduce the resource cost of communication engineering, realize the maximization of economic cost savings, reduce the loss of human resources, and maximize the use of technology to achieve the greatest degree of economic and social benefits. Relevant staff need to fully realize the important role of intelligent optical network in communication engineering, which is an important link in the development of this technology. Strengthen the investment in intelligent optical

ISSN 2616-5775 Vol. 4, Issue 3: 65-67, DOI: 10.25236/AJCIS.2021.040310

network technology, integrate NNI and UNI and improve the cooperation of these two technologies, then to strengthen the work quality of communication engineering. It can also obtain information in a timely and accurate manner.

Toward the direction of miniaturization and multi-function. In order to improve the stability and sustainable development of enterprises, communication engineering should be developed towards miniaturization and multi-functionalization. Under the current situation of our country's increasing population, the public space continues to decrease. At this time, the miniaturization of our country's communication projects and the reduction of the volume of construction facilities can improve the rational planning of urban space. At the same time, under the trend of informatization, through the multi-functional construction of communication projects, the same equipment can be used to control multiple communication devices, reducing human and financial resources, effectively reducing the cost of communication, and also reducing the cost of laying communication facilities. It can ensure the benefits of communication engineering, enhance its stability and flexibility, promote the sustainable development of communication engineering, and ensure the stable operation of the enterprises.

4. Conclusion

In summary, transmission technology plays a vital role in information and communication engineering. It is the cornerstone of information and communication engineering and the key to promoting the development of information and communication engineering. At present, our country’s transmission technology is not mature enough. It also shows that this technology still has great potential. In the current society, the nation has begun to pay attention to and start to solve the problems in the information and communication engineering, conform to the social development in the era of information technology and big data, and continue to improve the communication work accordingly, so that the benefits of the transmission technology in the communication work can be improved. Furthermore, under the general trend of global economic integration, it will not be left behind and conform to the development of the times.

References

[1] Cao Yan. Research on the Application and Development Direction of Transmission Technology in Communication Engineering [J].Communication World, 2019(11):32.
[2] Zhang Xiqian. Application Analysis of Transmission Technology in Information and Communication Engineering [J]. Information and Communication, 2019(11):213.
[3] Lin Xiong. Application and Technology of Wired Transmission Technology in Communication Engineering [J].Information and Communication,2019(11):215.