

A Preliminary Study on the Comprehensive Integration of Communication Engineering and Information Management System

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Abstract

With the rapid development of social economy and the development and progress of Internet technology, the role of communication engineering is becoming more and more important. In the current era, the development of informatization and comprehensive integration of communication engineering is an inevitable trend to ensure the stable and sustainable development of communication engineering. This paper discusses the characteristics of communication engineering, combined with the necessity of comprehensive integration and management informatization of communication engineering, and looks for relevant solutions based on the problems existing in communication engineering project management in the current era, This paper discusses the realization of systematization and integration in communication engineering project management, so as to promote the high-quality development of communication engineering management.

Keywords

Communication engineering; Information management; Comprehensive integration; Detail management.

1. Introduction

The information age promotes the construction of information technology in various industries, and achieves the goal of better conforming to the development needs of the current era through self-reform and innovation. The communication engineering industry, which is in the pillar position in our country, not only plays an important role in improving people's quality of life and improving the convenience of life, but also has a direct and significant impact on the development of society and economy. At this stage, the project management of the project is developing in the direction of informationization and networking, and the communication engineering is more and more demanding for comprehensive integration and informationization. To achieve this goal, you need to choose the appropriate calculation method, with a server component as the core, according to the corresponding rules, the existing various types of applications, so that it can collect information and data from other systems. In addition, within the enterprise, there is a need to surround the platform, aggregate information on multiple aspects, so that communications engineering-related decisions and managers can obtain analysis and decision support services based on this.

2. Related Connotation of Informatization and Comprehensive Integration of Communication Engineering

2.1. Connotation of Informatization and Comprehensive Integration of Communication Engineering

Computer related software system, as an important part of communication engineering to realize informatization and comprehensive integration, its impact is decisive. Communication engineering is developing towards integration and integration. Based on the in-depth analysis of the characteristics of the engineering project, according to the relevant basic principles and the corresponding stage of the project, the existing connections and overall requirements should be comprehensively considered, and the multi factors associated in the process should be deeply analyzed, For the relevance of various aspects in the process of work development, in-depth research should be carried out to explore the existing relationship between various factors. In order to improve the coordination between the personnel involved in the project as much as possible and find a high-quality and efficient management mode.

2.2. Characteristics of Communication Engineering

First, because most communication projects have scattered areas and have no clear fixed location, multiple factors such as capacity and coverage should be considered at the same time. Its location is not fixed, so it needs to be determined jointly according to many factors such as coverage and capacity. If the traffic flow in the area is large, the project capacity is large, and more project points are needed to support to ensure that the demand for coverage can be met. Some project points need to be set in remote areas; Second, if the homestead is occupied for the setting of communication engineering base stations and the possible radiation problems will hinder the construction process; Third, communication lines are generally long, so there is a long laying length of optical cables. However, sometimes multiple optical cables are laid in the same section.

2.3. The Need for Integrated Communication Engineering

At present, communication engineering projects are becoming more and more complex, and the coordination between various links is poor. Because there are many uncertain factors in the process of project development, we should focus all our energy on the project management of communication engineering and adjust the possible emergencies scientifically and reasonably. If we continue to use the traditional management mode, the above management requirements can not be met, which will have a negative impact on the specific implementation level and efficiency of the project. In the specific development process of communication engineering, accidents are bound to occur due to the joint influence of technology, human, operation environment and other factors. It is necessary to effectively improve the comprehensive and integrated management of communication engineering, so as to promote the connection and coordination between various links and improve the effectiveness of management.

3. Basic ideas for the Realization of Informatization and Comprehensive Integration of Communication Engineering

3.1. Improve Project Management System

There are many sub projects and sub projects in communication engineering projects, which are included in the scope of project management. When managing the project, it is necessary to carry out prediction, decision-making, planning, control and feedback, as well as various management elements such as construction period, cost and quality. Since project management belongs to a multidimensional structure, it is necessary to focus on multiple perspectives to

ensure the reliability and integrity of the built management system. In the process of project management, all departments should give full cooperation to ensure the construction of an organic whole.

3.2. Effectively Ensure the Smooth Implementation of the Project

In the process of construction project development, it is necessary to carry out comprehensive integration and information processing of the project. In terms of project information concentration and integrated processing, it is necessary to consider all elements in the whole cycle, fully sort out relevant elements in the cycle, and ensure the relationship between suppliers, subcontractors, communication engineering and other parts. Establish a sound information exchange platform so that all participants can build an efficient communication organization through information technology to meet the needs of the owner.

3.3. Provide Scientific Decision Support

When managing communication engineering projects, one of the keys to decision-making and application is geographic information system. Through the information characteristics of communication engineering and the rational application of multimedia and other technologies, it automatically collects the information formed by the infrastructure related to communication engineering, effectively optimizes relevant resources, so that managers can better grasp the project management and establish accurate coordinates from the overall perspective. Through the rational application of geographic information system, the management and decision-making of communication engineering can be properly adjusted, the spatial framework system is established, the information foundation is consolidated, and a high-quality digital map is formed to ensure the integrity and accuracy of the obtained data. At the same time, the relevant geographic data is reasonably shared to better meet the data use needs of communication engineering.

4. Current Situation of Communication Project Management

4.1. Lack of Perfect System and Mechanism

In the development of communication engineering, the development of information system is slow and lacks a sound management mechanism. Because the relevant management systems can not be effectively implemented, there are many deficiencies in its comprehensive management. Due to the failure of standardized and comprehensive management standards, the revision, modification, improvement and specific implementation of relevant systems cannot be carried out in an orderly manner, resulting in the lack of necessary motivation and responsibility of personnel. In addition, there are many problems in the selection of communication equipment quality, the use of materials and the selection of construction technology, which have a negative impact on the overall quality of communication engineering.

4.2. Lack of Perfect Overall Management

The system construction of communication engineering can effectively ensure the quality. If there is no perfect overall quality control system, it will seriously hinder the information development of communication engineering, and then affect the smooth development of the whole project.

4.3. Defects in Detail Management

In the process of construction of communication engineering projects, it is necessary to systematically manage the details, whether it is the theoretical level of development, or practical application, we must attach great importance to the details. At present, communication engineering has made great progress in project decision-making, design and

construction, but the failure of communication engineering to achieve detailed management, resulting in the overall operation of communication engineering is relatively extensive, there are many defects in detail management.

5. Concrete Measures to Realize the Informationization and Integrated Development of Communication Engineering

5.1. Rational Application of Geographic Information Technology

In the process of project management of communication engineering, geographic information technology and management system should be reasonably integrated and applied to collect the operation information of communication engineering in this form, dynamically manage the whole process of data information collection, and operate and manage information resources in a visual way.

5.2. Establish Core Platform

Communication engineering should build a core computing network platform from many aspects, which is based on geographic information technology and has the function of electronic map. The Internet is the operation basis of geographic information. Through the Internet, we can promote the coordination between database server and browser, and then complete geographic information operation. Through the use of geographic information technology, we can build a communication engineering project management system website. Through this website, we can obtain all kinds of geographic information, query all kinds of information and express information interactively, so as to significantly improve the information processing efficiency. In addition, the system itself also has value-added services, which can meet the needs of users to mine the connotation of information. In addition, based on geographic information technology, electronic office platform and professional information integrated platform can also be established. With the help of geographic information system and related databases, the project management level of communication engineering can be significantly improved and its informatization and comprehensive integration development can be promoted.

5.3. Promote Infrastructure with Big Data-related Technologies

At present, there is no unified standard to measure big data. There are some groups that think that as a combination, it is composed of content data and complex type data. According to this classification standard, massive data that can use traditional algorithms and data processing methods should not be called big data; Some groups believe that big data can form relevant theories and take it as an advantage to ensure the smooth development of relevant intelligent activities in the form of data. Using big data related technology can determine the correlation factors contained in the data and make the prediction structure more comprehensive. Infrastructure construction based on big data is extremely necessary and important. Because big data is mainly obtained from multiple groups and information is scattered as a whole, data with unified problems are transmitted and summarized from various groups, relying on relevant software and hardware equipment and facilities, in terms of transmitting information, transferring information and receiving information, The requirements are also relatively clear. Moreover, because the data itself has a wide coverage and fast update speed, storing data is one of the important problems big data has been facing. For this, it is necessary to reasonably expand the data storage space and improve the efficiency and quality of data storage as much as possible through the timely update and effective integration of software and hardware equipment and facilities. In addition, in the process of information processing and transmission, it is also necessary to timely improve and innovate the infrastructure related to big data. Through this form, the purpose of strengthening the construction of infrastructure facilities is achieved, so as to ensure the smooth development of communication engineering project

management and promote the information and comprehensive integration development of communication engineering.

5.4. Provide Knowledge at the Decision-making Level

In the process of informationization and integrated development of communication engineering, it is necessary to be able to take geographic information technology as the core, through the rational use of multimedia technology, network software model technology and other technologies, implement the key points of detection communication engineering, and strengthen the collection and feedback of relevant data, so as to be more convenient and timely to solve all aspects of communication engineering information, take a visual way, the communication engineering information display, clear differences for decision-making levels, the use of reasonable icons or data. Allowing it to intuitively and accurately understand current communications engineering can facilitate the effective coordination of human resources and technologies, enabling them to play a more correct role. In addition, the visual data form results obtained by the monitoring of communication technology should be applied to the sharing of information, and after it is completed into subsequent processing, it can form the overall management center of communication engineering, which is of great significance in ensuring its future development. It should be determined that the whole process needs to be realized by geographic network communication technology, so the informationization and integrated development of communication engineering itself can also play a better role in promoting the development of geospatial positioning system.

5.5. Strengthen the In-depth Application of Various Comprehensive Technologies

In order to improve the application level of project management when carrying out management work, in the process of communication engineering project management, it is necessary to quickly strengthen the application ability of project management system, not only use geographic information technology, establish core network platform and speed up infrastructure construction, but also be able to reasonably apply such as storage technology Various advanced technologies such as spatial analysis technology, through the comprehensive application of such technologies, obtain different types of information through different channels, and adopt systematic management for the obtained types of information, so as to effectively improve the level of distributed information management. As a more advanced form of information processing, it can make the communication engineering have the functions of information query, information reading and information utilization, and realize the integrated mode to comprehensively manage the communication engineering.

6. Conclusion

Communication engineering plays an extremely important role in the development of national economy and the improvement of national comprehensive competitiveness. At present, what needs to be considered is how to improve the management strength, engineering efficiency and income of communication engineering. Therefore, relevant departments must fully understand the current situation of communication engineering project management and take reasonable and effective measures, Apply geographic information technology, establish a core platform, promote infrastructure construction in combination with big data related technologies, provide relevant knowledge from the decision-making level, and strengthen the in-depth application of various comprehensive technologies. In this way, accelerate the development steps of informatization and comprehensive integration such as communication engineering, improve efficiency and quality, and better promote social and economic development.

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