

# Analysis of Network Optimization Technology in Communication Engineering Project

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**Abstract:** This paper analyzes the implementation of network optimization technology in communication engineering projects. At present, the network optimization technology in communication engineering projects has certain uncertainty, complexity and timeliness, so relevant personnel can improve the quality of communication engineering projects through cost optimization, time optimization, design optimization, resource optimization and other ways, so as to lay a foundation for the development and progress of social economy.

**Keywords:** Communication engineering project; Network optimization; Technology

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## 1. Characteristics of communication engineering projects

### 1.1 The complexity

The work content of communication engineering project is relatively complex. The difference between communication engineering and other construction types is mainly due to the use of pipeline and aerial structure in communication engineering project construction, which can make the communication engineering work fully implemented. At this time, the staff need to improve their technical expertise to provide assistance for the stable construction of communication engineering projects. At the same time, the construction site of communication engineering projects is messy, which further increases the difficulty of construction. At this time, reasonable communication between staff and site management personnel is required to improve the smoothness of information transmission. Based on the actual construction situation of communication engineering, the current coverage of

communication engineering projects is wide, so it is not convenient for relevant managers to supervise projects.

### 1.2 Uncertainty

According to actual communication engineering project construction process, communication engineering project throughout the construction period is more influencing factors, these factors will be hidden in different construction link, therefore the communication engineering companies want to avoid the unknown factors appear to influence project, it should enhance communication project coordination. The staff should refine each construction link, take into account the effect of communication engineering equipment, find out which stage the influencing factors appear in, and then formulate corresponding solutions to further reduce the uncertainties in the construction of communication engineering projects. It is difficult for communication engineering staff to avoid project construction risks. In order to promote the successful completion of project construction, it is necessary

to master the arrival time and site location of equipment in each construction stage, so as to meet the actual needs of communication engineering.

### 1.3 The urgency

Combined with the analysis of the current development of communication engineering, the change of social environment has a certain impact on communication engineering, then it needs to keep pace with the development of The Times to meet the needs of The Times. If communication engineering can not meet the current social demand, it will directly affect the future of the whole industry. In the initial stage of communication engineering project construction, attention should be paid to the urgency of communication engineering, and the enterprise environment should be improved according to market changes. At present, the development of information technology has also improved the speed of technological update in communication engineering. Communication engineering enterprises need to combine with the strategic development goals of enterprises to achieve efficient enterprise cooperation. If the urgency of the enterprise is insufficient, the subsequent development of the enterprise will be affected and the investment risk will be increased.

## 2. Network optimization techniques in communication engineering projects

### 2.1 Cost optimization technology

Different communication projects are closely related to resource allocation in the actual construction process, so the relevant management personnel in communication projects can take reasonable ways to control the cost and fully display the actual economic benefits of the project. In the vast majority of cases, there are many ways to optimize the cost of communication engineering, but in the process of practical application, the staff needs to find the optimal way suitable for this communication engineering project to improve the actual optimization effect. Before the construction of communication engineering project, the staff should study the network diagram laying, calculate the overall laying cost, analyze the cost at each stage, find out the cost optimization measures, and ensure the actual construction quality of communication engineering project. The rational allocation of internal resources

in communication engineering can improve the actual income of the enterprise, so the staff should make reasonable allocation of resources based on the project situation to improve the utilization rate of resources. After the calculation of basic input resources is completed, each stage should be divided accordingly, accurate input of resources.

### 2.2 Design optimization techniques

In the implementation of communication engineering projects, project design and planning is an important stage, especially the network diagram drawing of the current communication engineering projects. Because of the complexity of communication engineering project construction, relevant technical personnel need to fully grasp the actual situation of the project and understand the project criteria and process before network diagram drawing. If designers do not optimize communication engineering projects, it will hinder the implementation of subsequent projects and reduce the actual earnings of enterprises. Therefore, designers can optimize the project design from different aspects. The network diagram drawing stage should be carried out according to the actual situation to avoid being affected by other factors. In addition, the gap and cyclic network phenomenon should be avoided in the drawing stage of network diagram, which will make it unable to match reasonably and affect the work progress. Personnel involved in the design of communication engineering projects should always comply with the design requirements and follow the design logic<sup>[2]</sup>.

### 2.3 Resource optimization technology

In the construction process of communication engineering projects, enterprises can take the way of resource optimization to fully display the benefits and improve the scientific allocation of internal resources. When carrying out network optimization, communication engineering enterprises should master each construction link and integrate resource allocation into construction practice. Communication engineering staff need to make the project network diagram more accurate, facilitate the investment of communication engineering construction resources, so that each resource can play a maximum role. If there are some obstacles in the process of resource optimization, it is necessary to timely reflect this problem and solve it with other departments as soon as possible<sup>[3]</sup>.

### 3. Conclusion

With the development and progress of society, the public has gradually increased their attention to communication engineering. In the construction process of communication engineering projects, it is necessary to combine network optimization technology to improve their optimization quality and give full play to their role. Better supervision and management of communication engineering projects, so that they can meet the development expectations, to ensure the progress of communication engineering industry.

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