

Research on Cost Management of Construction Projects Based on BIM of Building Decoration

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Abstract

The BIM technology of building decoration management in the construction phase has modern information characteristics. In the structural design, the advantages of BIM technology are used to build a digital model based on data collection. Therefore, the information content in the model is very large. The model exists in the form of an engineering information database and its main function is to store various types of information in the process of construction and supervision and to establish connections between various data. Under this technical background, if you want to know a certain location information of building decoration management in the construction stage, you only need to click on the department to obtain it, so as to avoid poor communication and lack of understanding of working conditions, which is largely avoided. Errors make the design of building decoration management in the construction stage more practical. With the help of BIM technology, all kinds of information in the construction project are integrated to control the construction quality. In the process of structural design, various issues such as comfort and safety can also be considered and the design conditions such as energy saving and lighting can be evaluated to create a good construction stage. The building decoration management space. Relying on BIM technology, it can render the structure of a building project in the form of a three-dimensional diagram, simulate the building model after completion, give full play to the advantages of computer software, perform simulation analysis and model processing and truly integrate the work of drawing, rendering and calculation. The overall form exists.

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1. Introduction

Different building decoration materials have different characteristics and they are very different in shape, texture, color, texture and pattern. Different building decoration materials can reflect different decoration styles. The random combination and matching of decoration materials can form a different aesthetic. Experience. The decorative function of building decoration materials is its basic function. At the beginning of the invention,

decorative materials were designed to beautify buildings and form different decorative styles, giving people a beautiful enjoyment and a better sensory experience. Decorating a building is not only to provide yourself with a more comfortable and enjoyable living space and to reflect the personality and aesthetic appeal of the owner. Decorating the appearance of the building can also beautify the environment and give outsiders a beautiful enjoyment. Color and decorative style can also have different effects on people's psychology.

The function of decoration and beautification is the most fundamental requirement for building decoration materials. Building decoration materials are like adding a protective film to the surface of the building, which can prevent the building from being directly exposed to the air, being affected by wind, sun, rain, or corrosion from harmful gases^[1]. Effectively protect the building from external environmental factors, on the one hand, it can extend the service life of the building as much as possible; on the other hand, it can reduce direct damage to the building, reduce the number of maintenance, reduce maintenance costs and form a good economy benefit. The Bim design system is in the figure below.



Figure1.Bim design system.

2. BIM technology

Throughout the whole process of building decoration engineering, the role and effect of its design phase cannot be ignored. If the work in the design phase of building decoration engineering is implemented well, the control of the progress and quality of the project will also become easier. Lay a solid foundation for the future process of the project. Under the traditional design method, there is no direct communication between the designers of various professions. They are a separate whole with each other and the work is carried out in a decentralized mode, which directly affects the coordination of various professional projects. If improper handling is likely to lead to serious contradictions, if the work in the design phase is not properly handled, causing the problem to extend to

the construction process, then the design of the building decoration project will face changes and costs Will rise. With the support of BIM technology, what we advocate is collaborative work. Designers carry out information sharing and communication based on the same platform. This is a huge improvement to the traditional design model and has achieved good results^[2]. Under the self-collision check of the software, the efficiency of work has been significantly improved and it is also convenient for us to find the conflict problem in the design stage and solve the problem in time before the formal construction. From a long-term perspective, this is also to help relevant units. One of the important ways to save project cost. Many scholars have deeply analyzed the value of BIM in visualization and parametric design when applied to architectural decoration design. It shows that with the application of BIM technology in architectural decoration engineering design work, on the one hand, the design effect and quality of the project are obviously guaranteed, on the other hand, it can optimize and rebuild the process of architectural decoration design and full life cycle management. These two aspects The improvement of work quality has undoubtedly become an important way to promote the continuous improvement of the construction and management of architectural decoration projects. All in all, the three-dimensional model established by BIM technology according to the actual information of the project is a huge boost to the quality and construction of the building decoration project, which promotes the continuous improvement of the visualization level of the whole building decoration project and can also be used in models, animations, roaming and other methods. Under the promotion, people can let the owners have a more comprehensive grasp of the design concept in a more intuitive way, which will help the owners understand the construction unit and make more accurate decisions^[3]. The Bim display system is in the figure below.



Figure2.Bim display system.

3. Preparation of BIM project for architectural decoration

3.1. Make preparations before construction

The pre-construction preparations include the preparation of construction personnel, the preparation of construction technology and the control of construction technology. The first is the preparation work of construction personnel, including construction management personnel and construction operators. Construction management

personnel include project managers, technical leaders, materials personnel, budget personnel, etc., mainly according to the purpose and difficulty of the project, do a good job in the overall planning of the project; construction operators mainly complete the construction of each project and work in the project. The construction quality of front-line employees and operators will directly affect the final quality of the project^[4]. The Bim design system is in the figure below.

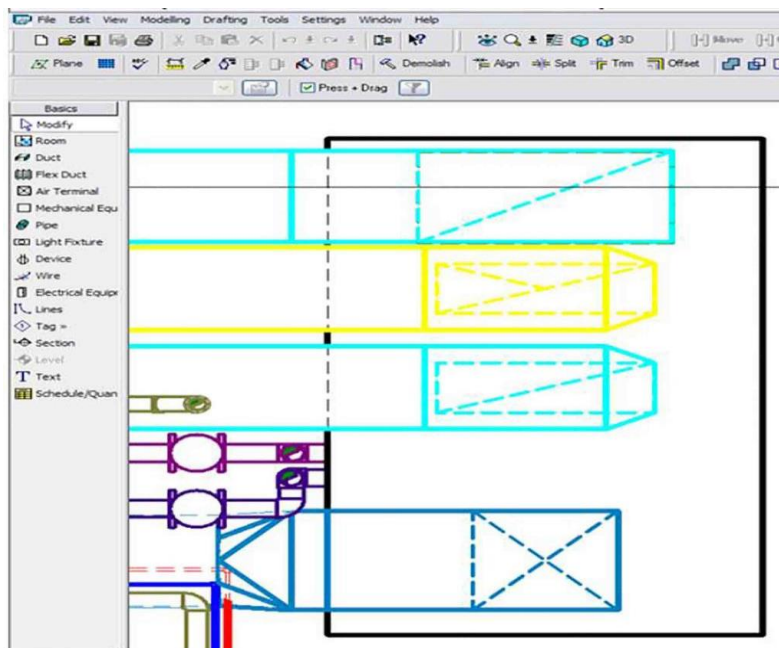


Figure3.Bim design system.

3.2. Make preparations for construction technology

After completing various pre-construction preparations, relevant technical personnel should summarize the technical problems that may exist in the construction project according to the construction drawings, such as which can be solved, which need help, which can reduce requirements, etc., be sure to ensure the construction drawings All the technical problems involved in this can be satisfactorily resolved before the start of construction. Then, the person in charge of the project prepares a scientific and reasonable construction organization plan according to the specific characteristics of the project, including participating construction personnel, construction characteristics, construction plan, material preparation, construction sequence, construction methods, safety measures, etc., to ensure that possible occurrences in the construction process The problem can be solved in the first time^[5]. The Bim structure system is in the figure below.



Figure4.Bim structure system.

3.3. Preparation of construction materials

The preparation of construction materials can fundamentally guarantee the construction progress and construction quality. Before construction begins, relevant personnel should prepare construction materials according to the requirements of the construction drawings, determine the types and sizes of materials required through the construction drawings and arrange for personnel to formulate the material list and use it as the basis for material procurement. Before purchasing materials, personnel should be sent to carry out strict inspections on the

material suppliers and the materials they supply, including the supplier's business license and material certification. If necessary, the relevant performance of the materials should be tested to ensure that the materials Quality. During the construction process, it is necessary to do a good job in the storage and maintenance of materials, according to the construction progress, constantly modify the amount of materials and timely feedback the data to the materials department. The Bim design system is in the figure below.

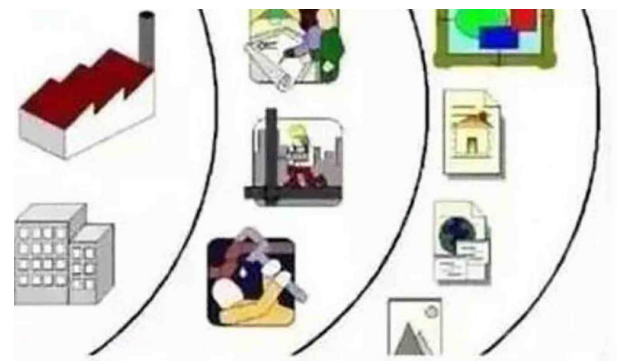


Figure5.Bim design system.

4. Project construction cost management

4.1. Control and manage the cost of the project

In the building decoration, the construction cost should be counted in advance. Only by accounting the construction cost can the construction party's maximum profit be guaranteed. The actual construction plan needs to be designed in advance to ensure that each stage of the construction is detailed The materials are referenced and the price of materials in the market is investigated, so that the cost of materials is budgeted in the price fluctuations of the market to control the construction expenditure of building decoration^[6]. The Bim management system is in the figure below.

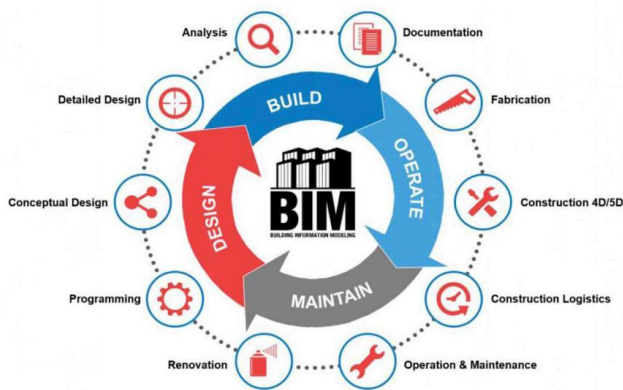


Figure6.Bim management system.

4.2. Control construction changes

The control and management of the project quality of building decoration must not only protect the environment and safety, but also prevent harmful gases and fires and better control project changes. If the structure of the building changes, the force must be verified. When replacing decorative materials, we must insist on using standard decorative materials and techniques to ensure the continuity, integrity and durability of the decorative style.

4.3. Strengthen the supervision of decoration quality

There are complicated procedures and construction links in the decoration construction. From the perspective of construction skills, quality control in the decoration process of construction can be divided into construction skills control and decoration material quality control, as well as control of the overall construction team level. The quality control of the project in construction can be divided into the following aspects: First, strengthen the function of controlling the use of the building. The requirements for the use of functions in the project should be evaluated in combination with the functions of the specific building. Secondly, the control of the reliability of the building should be strengthened. In building decoration, attention should be paid to the safety and durability of the connecting part and the degree of firmness in the structure and decoration of the building to ensure the

quality of the building and the stability of the project. Finally, in order to improve the ornamental value of the building, the quality of the building should be strictly inspected during the decoration process to ensure the beautiful appearance on the basis of the quality of the project.

4.4. Pay attention to the training of construction technical management personnel

For talents, they are the core of career development. Therefore, for decoration construction companies, they need to pay more attention to the cultivation of construction technology management talents, technical management personnel who formulate scientific career development plans and management methods, implement special training for rules or irregularities and strengthen the technical ability and management level of enterprise employees and improve the overall competitiveness of decoration construction enterprises. In order to ensure the timeliness of management, the management system and project management system must be improved to ensure the effective implementation of technical management. In the process of improving the system, it is necessary to restrict the behavior of professionals in accordance with the responsibilities of staff in various departments to ensure the smooth progress of work. In addition, improve the decoration concept of building decoration workers, so they always have this string and keep their faith in building decoration construction anytime and anywhere, so during the building decoration process, strictly follow the construction process and resolutely prevent all possible damage to the decoration construction. The content of the building project is finally completed.

4.5. Improve the concept of building decoration construction staff

If there is no advanced concept, it will hinder the development of the entire building decoration. Therefore, it is imperative to improve the concept of building decoration construction personnel. In this

regard, the relevant departments of our country should strengthen the publicity and promotion of my country's building decoration construction personnel, hold more relevant building decoration exchange meetings and use communication methods to expand the horizons of my country's building decoration construction personnel so that they can better Seeing the development of exterior architectural decoration, finding out the lack of architectural decoration of oneself, in order to comprehensively improve the level of architectural decoration, the advanced concepts of decoration constructors provide the greatest help for the development of architectural decoration construction in my country.

5. Conclusion

Through scientific management of design and construction technology and give full play to the potential of design and construction technicians and equipment, can we ensure the normal progress of design and construction of decoration engineering projects and can continuously improve the level of design and construction technology, so as to effectively reduce the construction Project cost and the goal of ensuring project quality. Through technical management, the design and construction level of decoration construction units can be gradually changed and the competitiveness of enterprises can be improved. Therefore, the managers of decoration enterprises must pay enough attention to technical management.

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