Research on the Application of Computer In Real Estate Engineering Audit

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Abstract. The real estate audit work is an important link to promote the real estate project. However, there are many problems to be solved in the process of real estate project audit. For example, the main existing problems involve many examination and approval departments, complex examination and approval process and uncertain examination and approval boundaries. Based on this, this paper first studies the problems and countermeasures in the approval of real estate construction projects, and the practical application of computer in the audit of real estate projects to discuss for the reader's reference.

Keywords: Real Estate Engineering, Auditing Work, Informatization, Professional

1. Introduction
With the continuous development of computer technology, the application of computer technology in various fields, to the work of various industries has provided great convenience. As the core industry of Our country, the real estate audit can be greatly facilitated by the application of computer technology in the process of project audit. Therefore, the construction project department should strengthen the use of computer technology.

2. Problems existing in the approval of real estate construction projects

2.1. The approval process is too complex
In the process of project approval, real estate enterprises need to prepare a series of procedures such as relevant licenses, approval reports and application reports after getting the approval documents, and at the same time formulate feasibility reports for each stage of the construction project, which makes the project approval work time-consuming. In addition, the oil field enterprises need to submit and accept the relevant data of investment plan, scheme design, engineering construction and other aspects in the project construction, thus it can be seen that the project approval process is too complex.

2.2. Low degree of coordination and cooperation among various departments
In order to ensure the smoothness of project approval, it is necessary for each department of oilfield enterprises to cooperate with each other. However, due to the low degree of coordination among
various departments when preparing relevant examination and approval materials in some oilfield enterprises in China, it is difficult to give full play to the functions of each department, thus seriously affecting the progress of the construction of oilfield enterprises [1-3].

2.3. The administrative management system is imperfect
In the actual project approval of oil field construction project, there exists the problem of imperfect administrative management system, which makes the work of each department lack of clear guidance, and then causes the non-standard examination and approval work, and often makes the examination and approval work become formalized [4-6]. Moreover, the imperfection of the system is more likely to cause the relevant staff to be slack in their work and unclear about their job responsibilities, so that many problems often arise in the later construction engineering link.

2.4. The informatization degree of project approval is not high
Nowadays, it is the age of information technology, which has exerted great influence on all walks of life and promoted the reform and innovation of its working mode. However, due to the low intensity of information construction for the approval of oilfield construction projects in some regions of China, and the time-consuming approval work itself, the approval is seriously delayed. At the same time, relevant engineering information is not conveyed timely in the process of approval by all departments, thus reducing the efficiency of approval (FIG. 1 paper audit is not highly informationized).

![Figure 1. Paper audit informatization degree is not high.](image)

2.5. The professional quality of project approving personnel needs to be improved
In the examination and approval work of projects, there is often a problem that some examination and approval personnel have low professional quality, which leads to low efficiency of examination and approval. In addition, they have a low sense of responsibility in their work, and even reduce the requirements of examination and approval within the scope of their work.

3. Research on solutions to problems in the approval and acceptance of real estate development projects

3.1. Optimize the approval process
Relevant departments of governments at all levels may adopt the method of related examination and approval, vigorously promote the work mode of related examination and approval according to the specific conditions of real estate development projects, and draw up good operation flow charts. For administrative service departments at all levels, they should give full play to their leading role, build a more perfect and scientific operation and management mechanism, and constantly improve the related approval rate and service level. For each pre-approval department, it is necessary to take the initiative to deal with the problems in the examination and approval process and do a joint examination to ensure that the examination and approval time of real estate development projects is improved comprehensively.

In addition, relevant departments at all levels should constantly innovate the original examination
and approval mode, constantly optimize the examination and approval process according to the implementation of joint examination and approval of real estate development projects, and constantly reduce the time limit of project examination and approval while improving the efficiency of project examination and approval. Vigorously carry out the evaluation work, formulate the "multiple evaluation and one table" in combination with the contents of the evaluation report, and adopt the "multiple first examination and approval" mode for the construction drawings in real estate development projects.

Actively carry out network handling, to ensure that all documents and documents can be delivered quickly, chang people can be handled directly online. For the examination and approval departments at all levels, the principle of unification should be strictly observed. Only after the examination and approval of The State Council can they exercise the corresponding examination and approval functions to ensure that the examination and approval of real estate development projects can be carried out smoothly.

3.2. Strengthen examination and approval supervision
The relevant government departments at all levels should enhance supervision of examination and approval of real estate development project, promote the coordination between departments, really, to achieve a coordinated regulatory approval will advance gradually turned to make examination and approval and after approval, and combined with the actual construction of a project, the implementation of the whole process of supervision, to ensure real estate development project construction is more normative and orderly. In the construction process, the housing and construction planning department should regularly go to the construction site for supervision, effectively ensure the construction quality of the project, reduce the amount of tofu projects.

For the mortgage projects under construction, the real estate department needs to formulate a more reasonable management system based on the construction situation, so as to avoid the construction unit selling a house to multiple consumers. The rational application of the online approval and supervision system of the project ensures the real estate development project approval and supervision information is truly shared. Combined with the unified code of investment projects, it supervises the various associate approval and construction processes of the project to ensure that the investment project can be completed as scheduled.

3.3. Completion acceptance
In order to ensure the successful completion and acceptance of real estate development projects, relevant departments need to continuously simplify the acceptance process and strengthen the acceptance in combination with relevant laws and regulations. For example, for the acceptance of the main part of real estate construction projects, the relevant departments can carry out a comprehensive acceptance of environmental protection facilities. When the occupancy rate of residents exceeds 75%, the environmental protection facilities can be carried out a comprehensive acceptance. In the actual acceptance process, the relevant departments should understand the environmental protection responsibilities undertaken by real estate developers and property management departments.

4. The practical application of computer in real estate engineering audit
In a large number of work practices feel that the computer in the engineering audit of practical applications have the following.

4.1. Can simplify the same drawing
Calculation of project cost at different construction sites. This is in industrial and mining enterprises. Public utilities, residential construction should be
It is very widely used. Residential buildings can use the same drawing in different places: in enterprises, the same drawing can be used in different places due to the transformation of production lines, the construction of lathes and kilns; in public utilities, the construction of similar houses in
different places can be found everywhere. Some of these same drawings can be calculated separately and input into the computer for later use. Due to different construction sites, foundation treatment and preliminary works are different, the quantities of these different parts can be calculated separately. In application, the quantities of the same part can be added to the quantities of the different parts. It becomes the engineering quantity of the project, which reduces the double calculation of the same part of the engineering quantity and can save a lot of time, manpower and material resources. For similar drawings, basically similar projects. The method of price comparison can also be used to see the height of the project quotation. For those with large discrepancy, the calculation can be reviewed in detail, and for those with small discrepancy, the main items can be randomly checked to simplify the audit operation (the simplified design drawing in FIG. 2).

4.2. It can solve the complicated fee collection problem
There are only 4 types of projects, 6 levels of qualification of construction units, and 6 charging coefficients divided according to different categories of projects and qualifications of construction teams. In addition, new projects and repair projects are not included in the contract. Individual contracting their fees files, such as different material price also change, the construction of the adjustment of the labor, mechanical adjustment of fee charging work quite tedious, error will be affected by any carelessness, the application of computer storage retrieval functions can be nearly one thousand kinds of charging condition and design one by one, in the computer, as long as the input construction team, project categories, construction period and charges directly, Labour that can quickly calculate the all expenses, except advocate material controlled accurately but not easy to get wrong, still can save the time of going through a lot of documents and looking up so much data.

4.3. It can solve the tedious double-counting problem
In project quantity computation, there are a large number of computation items that are repeated but the original data is different, the application computer program is small, the most complicated and difficult content in project computation is "cramp" namely. The building now uses reinforced concrete structure mostly, the column in a project, beam, floor is waited a moment, all involve the calculation of rebar dosage. The steel structure of each project is different, and its workload can be imagined, so in the general working paper, the most content is the extraction of steel. However, the reinforcement automatic calculation software is adopted. Auditors only need to input the reinforcement type, root number and structure size according to the drawing design on the reinforcement structure diagram of various structures provided by the computer, or fill in these contents in the reinforcement structure table provided by the computer, and the computer will be able to calculate the reinforcement structure Finish this complicated calculation quickly for the staff.

Most people who have used engineering software have one thing in common. That's the most successful piece of software that completely simplifies the auditors' work, and that's the engineering package software. The user only needs to input the quantity of the fixed number and select the material, unit price and rate to be converted. The computer will do it: calculate the subitem's valence, manual and pooled valence. Manually extract the amount of all kinds of materials, conduct price difference analysis, collect the selected rate, calculate the total cost and other work, and then print the above

![Figure 2. Simplified design drawing.](image-url)
results in a certain form according to the requirements of the auditors. This is much more efficient than manually calculating an auditor who, despite a lot of time, can only roughly calculate the amount of several major materials used and adjust the price difference. It can be seen that the use of engineering cost software can not only reduce the workload of auditors, improve work efficiency, but also improve the accuracy and accuracy of calculation results, improve the quality of audit work. However, in the actual operation process of using computers to conduct infrastructure audit, some problems need to be paid attention to. The first is about the use of infrastructure software. A good tool needs to be used properly to really work, and the same is true of software. If auditors do not master the application methods of engineering software correctly and skillfully, they will not only fail to achieve the purpose of improving work efficiency, but also may get wrong data results. Therefore, training before software use is very important (FIG. 3 Computer technology optimization calculation).

Figure 3. Computer technology optimization calculation.

5. Conclusion
To sum up, in the process of real estate project approval, the application of information technology can simplify the construction drawings, solve the complex fee collection problem, optimize the complex project calculation, improve the efficiency of real estate project approval, and promote the progress of real estate project.

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References
[1] Lu ruiruirui. Informatization accelerates the reform of project approval system [J]. China construction informatization, 2019 (16): 10-12.
[2] Lu ruiruirui. Reform of examination and approval system for information support engineering construction projects [n]. China Construction News, June 28, 2019 (008).
[3] Li Xiaolan. Study on approval and acceptance of real estate development projects [J]. Chinese and foreign entrepreneurs, 2019 (08): 101.
[4] Li Yunpeng. Informatization platform construction under the requirements of engineering construction project approval system reform [J]. China construction informatization, 2018 (16): 73-75.
[5] Liang Chenyi. Analysis on Optimization of approval process of real estate development projects [J]. Enterprise reform and management, 2018 (02): 206-207.
[6] Cao Haiqin. Research on Problems and Countermeasures of administrative approval of real estate projects [J]. China market, 2017 (24): 60-61.