Application of GIS Technology in Land Resources Management

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Abstract: In recent years, with the rapid development of China's economy and the continuous expansion of the size of the city, the previous land resources management model and methods have long been outdated, so it is more important to build a new method of land management, make full use of the information in China's land resources database and the information of the network platform database, and rationally use the advanced network technology. And GIS technology is the new direction of land resource management development in China.

There are two difficult contradictions in land resources in China, that is, the shortage of arable land in rural areas and the shortage of land for urban construction. In the face of these two main contradictions, land management is very important. In the case of outdated traditional management methods, the emergence of GIS technology is to solve the main contradictions faced by our country. This paper discusses the 7vs 6 role of GIS in land resource management in China based on the basic knowledge of Gino, lS technoliujuogy.

1. Summary of Basic Functions of GIS Technology

The technology of GIS is the latest technology of collecting, storing, managing, analyzing, displaying and applying. It is called the computer system of geographic information, and it is used to analyze and process a large number of geographic information.

1) Main functions of GIS technology.

Data editing: In data editing technology, spatial data editing is the most workload and the most important part. It can be divided into vector data editing and raster data editing. The two editing methods are different.

2) Data acquisition: This is another main function of GIS. Its main core idea is to ensure the authenticity and scientificity of data information in the database. Spatial data in GIS is mainly used to describe spatial entities.

3) Data storage and management: In the data integration project, it is also the main step to establish the geographic information system database. There are many technologies involved, including spatial data and attribute data organization technology. Because of the importance of spatial technology, spatial data structure largely determines the functions of the system.

2. The Important Role of GIS Technology in Land Resources Management in China

Because of the vast land area in our country, there are great complications and difficulties in land management, which is the reason why GIS technology will be used in land resource management in our country. Land management is the same as the management of our land area. There are many engineering links and complicated processes, and they are in the process of investigation. Planning and detection are also very difficult, and traditional technology can not meet the needs of actual work, so in order to better manage land work, we need a more perfect and advanced technology to guide, and precisely GIS technology is fully in line with our needs, so GIS technology is naturally applied to the management of land resources in China. At work.

Land resources are related to the survival and development of a country and even the people, so the rational development and application of land resources is directly related to the development

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prospects of the country, while our land is vast and wide, and the terrain is also very complex. Traditional land management has long been unable to achieve the rational management of land resources in China, so the use of GIS technology to manage. It is necessary to manage our land resources. At present, the GIS system is not very developed, but compared with the traditional technology, the GIS technology has more exploitable nature, which is in line with the changeable nature and actual nature of land management in China. GIS can use the mode of secondary development to realize the change and increase of function and performance. It can greatly improve the operation ability of GIS technology. Therefore, the development of GIS technology in China is much smoother than that of traditional technology.

3. Application of GIS Technology in Land Resources Management in China

GIS plays a very important role in land management, especially in the application of land resources management in recent years, the relevant staff have explored the relevant technical application and key points of GIS technology, so we can summarize the important role and practical application of GIS in land resources management in China.

1) In the practical application of GIS technology in land resource management in China, there are many tasks in Cadastral management, among which the first is a series of tasks, such as land survey, land use status and land condition survey, which are extremely important and provide necessary information for the management work.

At the same time, we can also use GIS technology to work on maps, establish a relatively comprehensive data cadastral database, analyze and manage the basic information of cadastral elements, and update important data such as cadastral information every moment. These works are very easy for GIS technology, so GIS is widely used.

2) In the application of GIS technology in land survey: the important purpose of land survey is to look at a series of land survey problems such as land quality, distribution and quantity. In the work of land survey, GIS technology is mainly used to complete the tasks of the industry, such as input of basic information, summary of basic information, editing, etc. These data are used for land use. The survey provides basic information help and powerful information for land use.

3) In the practical application of GIS technology in land consolidation related work: GIS technology can use relevant data to produce information-based maps according to its mapping function, which makes reasonable analysis and research for potential distribution map, current situation map and planning map in land consolidation work, defines cartographic elements with digital quantification mode, and can carry out graphics. Traceless modification, etc.

4. Suggestions on the Future Prospect of GIS Technology

Using GIS technology to manage land resources in China is a very difficult task, which involves a series of data must be analyzed in detail, and summarize its object relationship. The system must be realistically modularized, and then guided by the latest technologies promulgated by the state, to improve the system and realize the standardization and standardization of the system, which lays a solid foundation for the future land resources management in China while gradually improving the GIS technology.

The best way to develop GIS technology is to use the management of relational database, which can make full use of the data management function of relational database, and is an important prerequisite for the integration of spatial data and non-spatial data. At present, the integrated software in GIS software takes up a great deal of weight, while the relative component-based GIS software is very scarce. However, component GIS technology itself has the unique advantages of modularization and distributed system building, so the rapid development of component GIS and its fast market leader are irresistible trends.

5. Conclusion

The work of GIS technology is not only a simple task to process geographic information in our country, but also closely related to land management. The continuous development and improvement of GIS technology in land management makes our country more proficient in land resource management, in order to improve the level of land resource management in our country and maintain the development of land resource management. It is essential to maximize the application value of GIS technology. For this reason, practitioners in relevant fields should provide reasonable development opportunities for GIS technology, give it a developmental perspective, so as to make the practical application and practice continue to strengthen and improve, and then solve a major problem for China's future land resources management.

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