

Application Research of Information Technology in Land Engineering

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Abstract: With the rapid development of human society, the contradiction between man and land becomes more and more prominent. In order to relieve the pressure of land bearing, the subject of land engineering emerges as the times require. How to use all kinds of information as a virtual material to promote the innovation and development of land engineering is one of the important directions of land engineering informatization research. This paper mainly discusses the application and development of information in land engineering from the role that information technology can play in land engineering: (1) land information system focuses on dynamic monitoring; (2) improve land engineering large data aided decision-making support land engineering, promote the development of disciplines; (3) data labeling to increase the number of. According to the quality. The purpose is to provide reference and direction for the research and development of land engineering informatization.

Keywords: Information technology; land engineering; data processing.

1. INTRODUCTION

Land is the basis of human survival and development [1]. Land desertification, soil erosion, serious soil pollution and other issues are prominent in China. The quality of cultivated land is generally low, and the destruction of land resources is serious, showing the situation of insufficient land reserve resources. The quality and quantity of land are facing a huge threat. However, China's population is growing and food demand continues to increase. At one time, the relationship between man and land was tense, the contradiction between resources and environment was intensified rapidly, the situation of sustainable utilization and management of land resources was grim, and the problems of food security and ecological security were becoming increasingly serious [2]. Human beings in land use, development, protection and other activities reflect a large number of complex information, throughout the entire process of land engineering and resource management, recording the entire

process of human activities and land change [3]. With the development of computer science and technology, scientific and technological innovation is closely related to the development of information technology. Information mining not only records the whole process of land use, development, protection and other land changes since human existence. Information technology is also an important means to break through innovation. Therefore, information technology plays a vital role in the sustainable development of land [4].

2. LAND AND INFORMATION

As the basis of human activities, land is an important natural resource. It reflects a lot of complicated information in the activities of land use, development and protection. It runs through the whole process of land engineering and resource management, and records the whole process of human activities and land change. At the same time, the development and utilization of land resources by human beings will change the additional information of land, and the two complement each other. To study and master land information and resources is an important foundation and basis for carrying out land engineering construction and improving land quality, utilization rate and output.

Land information is a variety of meaningful land-related data obtained and processed through research, investigation or other means on land resources, assets and social attributes. The present stage mainly includes: land resources information, land facilities information, cadastral information and socio-economic information. These information form the basis of the current land classification, land planning, land registration, land evaluation, land valuation, cadastral survey, land consolidation, land use, arable land protection and other major work. Land resources refer to the land that can be directly used for human production and living under certain technical conditions and within a certain period of time. Land resources are a complex of information, including natural endowment information and economic information of human utilization and transformation [5].

3. CONDITION TESTS OF ROUGHER FLOTATION

Information refers to the object of transmission and processing of audio, message and communication systems, and generally refers to all the contents of human society. Man can understand and transform the world by acquiring and recognizing different information from nature and society to distinguish different things. In all communication and control systems, information is a form of universal connection. In 1948, the mathematician Shannon pointed out in his paper entitled "Mathematical Theory of Communication" that "Information is something used to eliminate random uncertainty" [11]. The most basic universal unit for creating all things in the universe is information. The world is made up of matter. Matter changes in motion. Things that change objectively and continuously show different kinds of information. People need to process and make use of the information they have acquired. Information must be attached to objective things. The acquired information usually exists in the form of words, graphics, images, sounds, movies and animations.

Information technology (IT) is a general term for all kinds of technologies used to manage and process information. All technologies related to information acquisition, processing, expression, communication, management and evaluation can be called information technology. It mainly uses computer science and communication technology to design, develop, install and implement information systems and application software. It is also known as information and communication

technology (ICT). It mainly includes sensing technology, computer technology and communication technology.

4. RESULTS AND ANALYSIS

Information is a virtual material, grasping land information can make better use of land, with the help of information means to build a better landscape, forests, fields and lakes as a community of life for comprehensive renovation. Our earth homestead can be more beautiful and harmonious. Promoting land information system, land information archives, land engineering large data, digital labels for land science and technology innovation has an important role.

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