

GIS and Remote Sensing: Major opening aspects of Information Technology

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Abstract

The last three decades have seen rapid progress in IT. The IT (Information technology) industry is the largest and fastest growing industry in the world. Computers and telecommunications form large parts of the industry. Modern computers have become part of our daily routine that we can have on the outside. We use a computer with internet for several purposes in our busy lives. The Internet is a great resource for the efficient operation of the IT industry. So, without a doubt IT has become a major transformation agent in the world that places many opportunities in various fields in succession. Some of them should support the business such as the transaction processing system (TPS), management information system (MIS), geographical information system (GIS) etc. Among them is GIS is the latest development in IT technology. It unlocks new landmarks in the IT network. This paper briefly emphasizes GIS and remote sensing such as the development of information technology and efforts to raise awareness of the rapidly growing IT sector to empower another person to participate as a digital citizen, which is why they end digital divisions.

Keywords: GIS and remote sensing, IT industry, digital divide.

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Introduction

As a result of the internet, the network of networks is building the false foundation of the future world community by providing new opportunities in the IT sector and trying to elevate someone else to the status of digital citizenship. As an introduction to these new approaches it was adopted to overcome digital divisions such as increased access to technology by creating linux based open source softwares and increasing broadband connectivity in rural areas. So, access to technology opens up new avenues for business financing and more. Once between GIS (Geographical Information System) and remote sensing.

GIS and Remote sensing

GIS is a computer-based tool for organizing and analyzing world events. Includes standard data processing and maps. In other words, it provides ways to compile and analyze digital map based on location information. Controls local data such as human characteristics, vegetation. types etc. by using their display tools and allowing the linking of information. It is a development over traditional distribution sheet. It is considered a milestone in the development of the IT industry as it is used by public and private enterprises in a variety of applications such as event descriptions, outcome predictions and planning strategies.

Farsightedness is the art and science of measuring the earth by using sensors in aircraft or satellites, which collect data in the form of images for easy use. Its images are integrated with GIS. It uses aerial sensor technology using broadcast signals. It can be a remote sensing that operates using aircrafts signal or a passive sensing remote that uses reflected natural radiation. Remote sensing includes film footage, radiometer, charging partner devices and active remote sensing include RADAR and LiDAR. Remote sensors are used to collect data in hazardous areas as sensors do not communicate directly with the object.

Pros and Cons of GIS

GIS enhances organizational integration by integrating hardware, software and capture data, analyzing and displaying all types of geographically displayed information. It helps us to solve problems easily by looking at the details as they are easily understood even by mere people. This technology can be integrated into any business information system framework. It creates more job opportunities. It simplifies the keeping of place records. Made with vector and raster data entry. It assists in the management of natural resources and the efficient allocation of resources and the improved planning and transparency of citizen administration. Save money and time by providing an extra product.

Like a coin it also has two sides. It is very expensive and prone to geographical errors on a large scale. It requires more data input to perform any task. It can lead to costly errors for local staff to translate the GIS map. It shows a failure in finalizing efforts to make full use of GIS. It causes excessive damage when there is an internal error. It makes integration difficult with traditional maps.

Benefits of Remote sensing

Remote hearing uses seven main features for your benefit as given below:

1. Objectivity enables the image of a place to act as a text representing a landscape during the study.
2. Real demonstration that space exploration materials can be obtained on various dates.
3. Size makes the current space survey to take pictures simultaneously with high technology.
4. Exterritorially confirms that there is no requirement for testing permission.
5. Natural Discovery ensures efficient use of space images of previous years.
6. A parallel view helps to study the features of the world and helps to define what is needed.
7. Time is saved as big data is collected quickly.

Applications of GIS

GIS derives its use in various fields. So, its use can be divided into five basic categories as below:

1. Natural resource management for environmental impact analysis, disaster risk management and mitigation. GIS is also used for forestry and wildlife issues, minerals and hydrology
2. Urban and regional management of town planning, regional planning, public spatial development, land use planning, travel planning, and land acquisition. GIS is used for public works, emergency response and legal records.
3. Commercial field of market location analysis, site selection, route.
4. Facilities for the management of underground pipelines and cables, planning for the maintenance of services and network services.

5. Agricultural Management by making field records, conducting animal management and detecting climate change or human impact.

GIS is used as a public testing tool to understand health issues at the grassroots level .It is used in transportation engineering in transport planning, navigation in the name of the road network .GIS has also received its application for fisheries by in terms of habitat and temporary changes in fish production and consumption.

Applications of Remote sensing

Remote hearing received application mainly in following four fields:

1. Urban relocation and rehabilitation of road maps, tarmac conditions and wetland definitions.
2. Agriculture for crop health analysis, agriculture accuracy, map layout and yield estimates.
3. Natural resource management for residential analysis, environmental exploration, pest infestation, inaccessible land formation, pond and land use, land surveillance, mineral province, hydrology (regular water resource management), geomorphology and geology.
4. National security identification, disaster mapping and surveillance, damage assessment, weapons monitoring, national security and navigation.
5. Fisheries to acquire a variety of resources, to monitor water pollution, to obtain information on fisheries monitoring, marine characteristics and storm jacket operations, to identify potential fisheries, to monitor sea level rise, sewage disposal.

The internet, the blockchain of building information technology is always like a newborn baby who just opened his eyes to see the wonders of the world. The Internet makes us wonder about its advances in various fields and ultimately makes man a tool of his own tools.

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