Application of Modern Survey Technique like GIS, GPS, Remote Sensing for Better Precision: A Survey

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***Abstract*: The GPS concept is based on time. Satellite is a very stable harmony atomic clock Watch each other and earth. Fix the original day you keep on the ground every day. Then, Satellite position is monitored correctly. GPS receivers are also watches, but they are not synchronized and stable with real time. GPS synthetic current time and transfer Location. The GPS receiver monitors several artificial comparisons and equality to determine their precise location. Real-time recipient and its deviation must be at the field of viewing at least four artificial refrigerators. Count four unknown (three position quarters and watch squad for planet time). Global storage system it provides a targeted satellite signal that can be operated on the GPS recipient to enable the recipient of the position, speed and time**

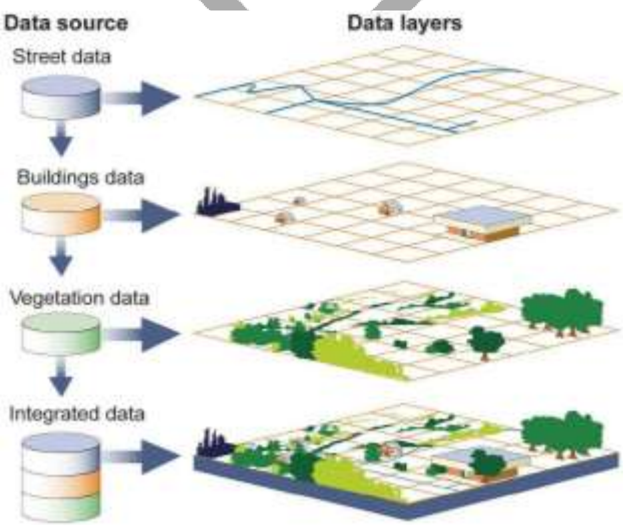
***Keywords*: GPS, Satellite position, Global Storage System, Speed, Time**

1. Introduction

Many people using GIS data do not fully understand the way (last) collection of products. At the same time, the need for geospatial information requires data to meet the needs of multiple lists. New technologies, such as Earth observation, GPS, and improved software for geospatial information, make data collection easier and faster, but there are many problems and misleading without proper treatment. The GIS power can be done using many different types of data associated with the same location, integrating different data sets into a single system. But when a new set of new data is moved to GIS, the software does not include importing data, but also incorporates data errors. The first step to dealing with the wrong problem is to understand and understand the data limitations used. The presentation of data from new technologies often results in the desired data accuracy and precision. In most cases, many small islands lack the human resources and capabilities in the Caribbean that fail to challenge the contractors and consultants' tasks properly, it is not possible to assess the accuracy and accuracy of geospatial data.

1.1 Geographical Information System (GIS)

Rapid development of computer technology, information systems and the visual world makes data access to the physical and cultural world, and its use of study or problem solving. The introduction of modern technology has increased the use of computers and information technology in all aspects of local data processing compared to work methods. This information system keeps data in real-world or digital representation in the world and can quickly create fast and fast local data in traditional ways. As we move from data to information, information, and information, data is very important and generates value. Software technology used in this area is the Geographic Information System (GIS). With GIS, you can store various types of data in digital form. Next, perform planning work using the GIS spatial analysis function. This is a speed process and allows for easy conversion of analytics. GIS can be defined as an integrated computer hardware and software system combined with program and human analysts that collectively supports spatial reference data capture, storage management, manipulation, analysis, modeling, and display.



Source: GAO
Figure 1. GIS in planning process

1.2 Global Positioning System (GPS)

The Global Positioning System (GPS) is a new technology that provides extraordinary precision and accuracy to collect mobility, measurement and GIS data. GPS offers 24-hour continuous 3D positioning one day a day. Three-dimensional nature of GPS measurement also allows for determining horizontal and vertical randomization in the same time and place (clip, 1996; Segall and Davis, 1997). This technology is likely to be useful for the GPS user community to obtain accurate navigation data, mapping meter levels, and geodetic milli-metric levels. GPS technology has great application value in GIS data acquisition, measurement and mapping.

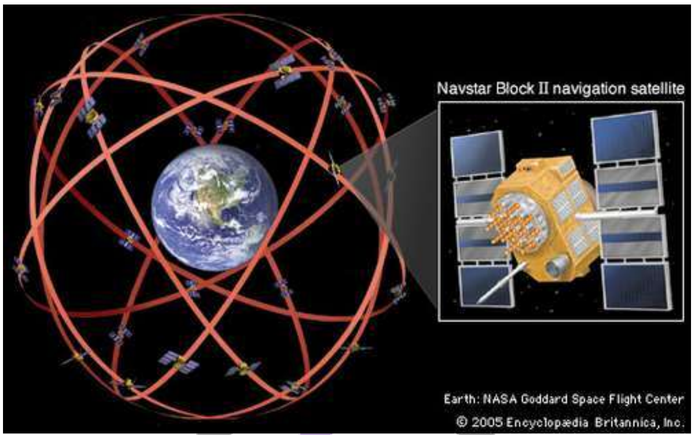


Figure 2. Constellation of NAVSTAR satellites orbiting earth

1.3 Remote Sensing

Remote sensing is artistic and science to obtain information about opposition or feature without physical contact. People use far more insight into their everyday work through vision, hearing and smell. The collected data can take many forms, such as changes in the distribution of sound waves (e.g., sonar), changes in the distribution of force (e.g., gravimeter), changes in the distribution of electromagnetic energy (e.g., the eye), etc. These figures are stored far from various sensors or can be analyzed to get information about it. This course uses only the electromagnetic energy sensor to operate on remote sensing. Therefore, the far-reaching sensation is a method of testing the borders of the earth by measuring electromagnetic rays (EMR) on the surface of the ground. The EMR can be seen or placed on the ground. In other words, the departure is a different source of energy (EM) that is associated with energy, or features far away from different objects. It is identified by type or type of item, matter and local divide and it can be rated as 1975.

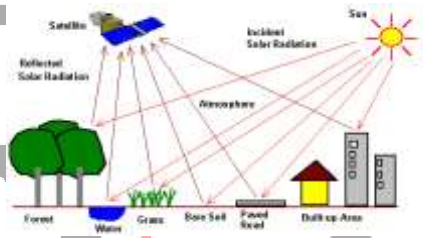


Figure 3. Schematic representation of remote sensing technique

Remote sensing is widely viewed with large local and temporary frequencies. It is widely used widely on water survey, hydraulic conditions and flow signals, hydraulic signals, flood and dry warning and monitoring, loss of natural disaster conditions, environmental monitoring and urban planning. Goes away. The basic concept of Remote Sensing is introduced below.

1.4 Numerical Method of GPS Tracking Signal

The idea behind GPS is easy. If you know the distance from a point on the earth (GPS receiver) to the three GPS satellites and the position of the satellite, just apply the well-known ablation concept and then the point (or receiver) they can determine the location of did they have questions about how to get satellite distance and satellite position now. As mentioned above, each satellite transmits a microwave radio signal containing two carriers, two codes and a transit message. When the GPS receiver is turned on, it gets GPS signals with the receiver's PIN. When the recipient receives a GPS signal, it is used using built-in software. One of the search results of the signal includes a GPS reference point with a digital code (called pseudo range) and satellite links for a mobile message. According to the teaching, only three thirds of three satellite tracks are followed at the same time. In this case, the recipient is in three parts of the ball. Each satellite has a distance of 1-satellite radius and focuses on that satellite (Fig: 3.1). However, from a practical perspective, the fourth satellite needs to consider the clock offset of the recipient.

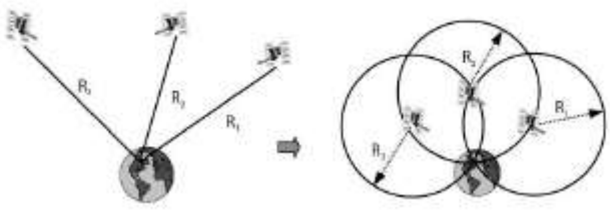


Figure 4. Basic idea of GPS positioning

2. Background

Matikainen *et al.* (2016) Monitoring and efficiency of the power lines is required to ensure the uninterrupted distribution of energy. This book review article aims to provide a holistic view of opportunities to provide a recent sensitivity to the Monitor Line Corridor Surveillance sensitivity and discuss the opportunities and boundaries of different ways. This includes monitoring of gas gases and surrounding plants. This review is discussed in detail from the radar data detection (KB) photo, satellite optical and app images, hot photos, laser radio (ALS), underground data map, non-flight aircraft (UAV) Contains combined data. The analysis shows that many of the history of the research focuses on the definitions and analysis of network components. Especially, automatic withdrawal of electricity line conditioners has given a lot of attention and the results of promise are reported. For example, it has been suggested that the accuracy of extracting the ACS data or aerial photography is greater than 90%.

However, in many studies, data set is small and the digital mass spectrum is removed. The fig around the transmission line is a less common research than planting drawings but mapping assembly, but with regard to the optical antennas and satellite imagery in this field, there has been a number of studies. According to the analysis, we conclude that future researchers have to pay more attention to the combined use of different data sources in order to benefit from different technologies. Improve use of ALS plants monitoring, SAR and optical image data and other related fields for the development of useful monitoring methods. Special senses like Remote Sensing Technology should be given special attention, such as drone and laser scanning aerial and strategic platforms. Large-scale testing is required under various environments and actual monitoring conditions to demonstrate and verify the capabilities of automated monitoring methods. These should include careful quality analysis and comparison between different data sources, methods and alternatives.

Toth & Jozkow (2016) The purpose of this white paper is to outline the most advanced remote sensing technologies, such as platforms and sensors, which are the main research themes of ISPRS Technical Committee I. Due to the constant development of technology, the field of remote sensing is now undergoing unprecedented development, thanks to the advances in sensors and the ever-increasing information infrastructure. The range and performance capabilities of sensors with respect to space, spectrum and time sensing capabilities are far beyond the limits of traditional remote sensing, and observation capabilities are greatly improved. First, we will focus on the emergence of new remote sensing satellites and the UAS (UAV) platform to confirm platform development. Next, we will discuss sensor dereferencing and support the remote sensing technology navigation infrastructure. Finally, sensors are stored according to their local, implementation, and temporary features, and the sensors are ranked according to their platform deployment capabilities. In addition, it revealed current trends such as the fusion of remote sensing and navigation, the emergence of joint awareness, and the possibility of crowd recognition.

Hejmanowska *et al.* (2015, July) The fastest growing part of geodesy today is undoubtedly remote sensing. Its recent importance to the effectiveness of global research has determined its great success. Identifying certain aspects of things without direct communication is an important feature that opens the way to new and interesting sites of modern research. From this perspective, modern remote detection techniques that are widely used by science and technology need to be used for curricula to educate students who are familiar with current levels of hearing and independence. It can be said that there is. Today's sense of urgency meets expectations and provides a variety of scientific ways. This article explains how universities are working to meet this need.

The extensive scientific research conducted at our university gives us the opportunity to involve students in the process of 'scientific creation'. Based on the basic assumption of balance between application and basic science, this paper is able to co-exist two types of research in academic life, and co-existence brings many benefits to the student's educational process.

Sahu *et al.* (2015) Timely and reliable information on the nature, extent and spatial distribution of the soil is important to continuously optimize the use of existing natural resources. The development of technology at Remote Sensing, System Positioning System (GPS) and the Geographical Information System (GIS) has increased soil expansion. Sustainable resource management emphasizes regional development without harming the environment. The combination of modern computer technology and databases can help decision makers make future plans. However, to date, most of the research has been done on a small scale, but very few are being done in the area or larger maps. In spite of the first development, current methods and current trends will continue to explore the full area, space and time satellites of high-resolution solutions for land acquisition and quarantine.

New technologies like high satellite data can be effectively used to achieve the latest local agricultural knowledge at a low level. In order to promote sustainable development in specific areas, remote sensing, global positioning systems, and spatial and global observation and non-spatial attribute data from satellite organizations in a GIS environment are highly desirable. The emergence of high-resolution satellite data in recent years has greatly contributed to the improvement of resource management, as it provides only real-time information and justification for repetition. This is important for monitoring. In particular, land and land resources need not only protection and regeneration but also scientific grounds for sustainable management in order to propose changes that meet development needs without reducing the potential for future use. It Agriculture based on detailed information to alternative information-Based on the applicability of ecological zones, socio-economic conditions and political will of the agricultural community can be considered, and the best approach is recommended. Combined with GPS and GIS, high-resolution remote sensing data shows that the mapping of soil resources and the cost of its features and its durable and efficient management time is effective.

Hasmadi *et al.* (2017) There are several ways to separate image separation. They include both surveillance and unwanted methods. The measurement of remote production is the most important step for sensory sensitivity. Without accurate testing, the quality of the map or output is not a small price for the last user.However, after accuracy assessment, supervisory techniques and techniques not monitored show different degrees of accuracy. This document explains the research aimed at understanding the uncertainties in long-term conflicts arising from the isolation of land cover and the evaluation of the two classification techniques. Land cover categories in the study area can be divided into five themes: vegetation, urban areas, waters, grasslands and wastelands. Ground validation has been validated to verify and evaluate the accuracy of the rating. Total 72 samples were collected using random samples. Sample points are calculated by 25% in the overall study area.

Hasmadi *et al.* (2017) Remote sensing is one of the most common ways to provide information about land and nature. Remote purchases can be made with active (radar opening, LiDAR) and passive (optical and range, multiple hyper spectral instruments). According to this experience, various information around the world can be found. The data collected by these sensors should provide information about something (ideological, artificial opening, artificial opening), height (lead) and objects (millispal and hyperspiral). In short, their termination helps in the use of land (urbanization, agricultural cleanliness), damage (such as floods, storms, earthquakes, exports of foreign oil, etc.). In addition, output services (oil fields, minerals), natural resources and natural change (phenology, snow), star results (urbanization, cleaning), climate change (desert), sea use etc. This article outlines the current opportunities and challenges associated with developing Earth observation multimodal data. It was done using IEEE Earth Sciences and Remote Sensing Society results from the sponsor database fusion competition from 2006. They report the results of these campaigns and present many new annual data available to the public, targeted applications, analysis of routes and outcomes.

Sonti, S. H. (2015) The general objective of this white paper is to test the potential of the geographical system (GIS) technology in general management and forest management in three African countries. The use of GIS has inspired almost every aspect of engineering, natural science and social science to provide accurate, effective and repetitive methods for collecting, displaying and analyzing location data. Forests are a dynamic resource that is affected by many life programs and direct management. In order to make better decisions, to increase productivity, and to save time, money, and human resources in the performance of forestry activities, you need data and explanations described rather than access to information. The GIS development, the Global Positioning System (GPS), and Remote Sensing technology (RS) have been able to collect and analyze road data through impossible computers.

Srivastava *et al.* (2019) Soil moisture is an important part of the ecosystem and supports microscopic and large-scale life support activities. This is a very necessary parameter and is very dependent on space and time. Because of this fact, its estimation is difficult, and often difficult to obtain, particularly on large heterogeneous surfaces. This study aimed to compare the performance of four widely used interpolation methods in soil moisture estimation using GPS assistance information and remote sensing. Soil moisture was estimated using distance-weighted (IDW), splined curves, Kinging method with conventional Kinging model and external drift (KED) interpolation method using 82 soil moisture field measurements. For these measurements, data from 54 soil moisture locations were used for calibration and the remaining data for verification purposes. The selected study area is Varanasi, India, and the area is 1,535 square kilometers. Soil water distribution results show the minimum RMSE of KED (root mean square error, 8.69%) compared to other methods. In KED, soil organic carbon information is included as a secondary variable. The results of the study help to overcome the lack of soil moisture information on a regional and regional scale. It provides a viable way to generate and generate reliable locally consistent data for this parameter, and demonstrates additional cost of geospatial analysis technology for this purpose.

Li *et al.* (2019) Delta is widely located in the arena and according to the quality of the water of the river, it is important to clarify the relation between quantities of quantity usage patterns. As a case study, they choose Shanghai King District in Yangsi River Delta. There is very little change in the water flow in this area, so using adjacent land may result in poor water quality. They count local patterns in urban, agricultural and forestry related to the quality of local water. On our way, understanding far away from the big data at the beginning is registered in the same area of decision and level of work. Data has been completed by checking district boundaries. Use a controlled algorithm (Support for the Vector Machine) to accurately determine land use classes and calculate land use metrics. Include the water policy principles and the model indicator. The results show that the value of land use is close to the distribution of urban, agricultural and forestry areas and water. A suitable land use plan in such a region should be an unusual area, a city or a common building area, on a large farm with deep farms and adjacent areas.

Seelan *et al.* (2003) Farmers around the world are always looking for ways to maximize their earnings. Remote sensing, geographic information system (GIS) and global positioning system (GPS) provide farmers with the technology that needs to maximize precision agriculture and environmental benefits. However, most of the farmers do not have the skills to effectively use these technologies. Scientists, farmers, and data providers share information through the community-based approach led by the Middlewire Airports Association (UMAC). The focus is that basic data provided to provide additional products to the farmers from the data collection, to develop practical applications of data, and to understand the interpretation of consumer information. To do in the farmers and rural areas, its fibers connect with the central division center of North Dakota University through Broadband Satellite Lines. Farmers are actively involved in assessing the usefulness of remote sensing data entry, sometimes applying experiments, and assessing the economic benefits of fertilizers and fungicides. Final application is under control area division, verification of effectiveness of variable fertilizer application, verification of effectiveness of biocide application, quantification of loss due to accidental spray drift damage, physical payment plan Selection of land area in the beet field of insects, damage by insects, floods, winds and hail. Several high resolution images were also reviewed on how to manage early on several other sites.

El Nahry *et al.* (2011) The current project aims to achieve land efficiency and the use of water and to promote agricultural and agricultural benefits accurately. The study area is shown by a survey field constructed of a cultivated alley in Ismailia corn in Egypt. Two field service practices are carried out during the period of continuous summer growth (2008 and 2009) to study a single hybrid 10 (SH10) response to maize plants in traditional and background sectors. Traditional Agriculture (TF) farmworkers were carefully maintained and documented. On the other hand, they include agricultural value systems (PF), site inspection, grid soil samples, standard variations, and their applications. After using the PF, they identified significant changes in the control area, and the three (four) control areas were compiled into the same, counting 84.3% of the pivot irrigation area. P-PF technology far beyond GIS's expertise plays an important role in the functioning of variable variables defined by management requirements. Since fertilizer was added to various levels, the fertilization of fertilizer has been stored at 23.566 tons / area of the laboratory.

Blaschke (2010) Remote sensing images need to be converted to specific information and other data sets. This is commonly used in the use of global information (GIS). As long as the pixel size is of interest or better, the size is similar, and as the localization of the area, it focuses on the pixel analysis and the pixel analysis under Pixel in Focus. It will continue to export more than one pixel item. This article develops an objectionable approach that uses easy-to-use things and connects them to integrate various and miscellaneous information with image processing and GSI functionality. . The most common way to build items is the image distribution, which returns back to the 1970s. Using around 2000, using GIS and image processing rapidly, object-based image analysis (using OBIA or GEOBIA for bio-special objects based on image accessories). Normal image images support multiple scales in a picture than the normal landing resolution. Through a comprehensive literature review, thousands of abstract scrubs were conducted, and 820 subjects were analyzed in detail. They include 145 journal articles, 84 book books and 600 conference papers. Although the first few years of the development of OBIA / GEOBIA is clearly a "gray" civil benefit, we have dramatically increased the number of journal articles we reviewed in the last four to five years. Pixel paragraph begins to break, and the OBA approach has made significant progress in the flow of work-specific information, such as local planning and workflow for many surveillance programs.

3. Conclusion

The value of integrating and fieldwork GPS with remote sensing and GIS is the greatest in applications that require comprehensive, geo-referenced, real-time or almost real-time data. These applications include mobile mapping, disaster mitigation, and emergency response. The future prospects for integrating GPS with remote sensing and GIS are in the development of enhanced location-aware multi-media PDA systems and distributed DMGIS. Many new applications will become possible if the obstacles to integration and mobile communications are successfully tackled.

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