



## IMPROVEMENT IN GPS AND GIS SYSTEM

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### Abstract

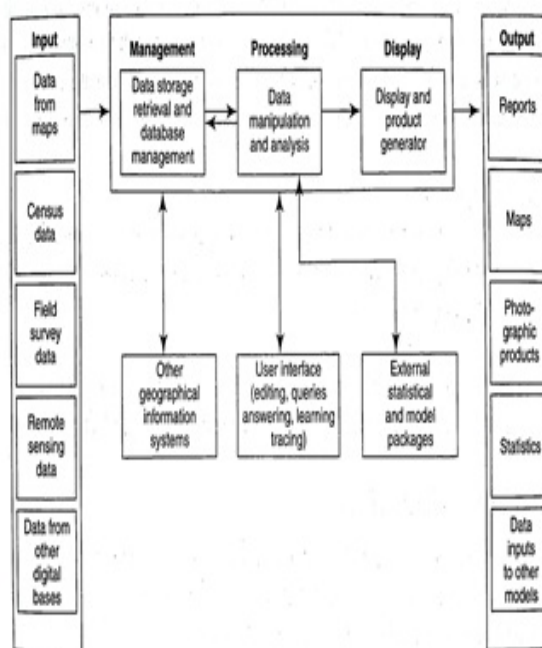
This paper describes the result and differences between students and professional who used a GPS based GIS as collaborative tools in an experimental emergency response study. and Global Positioning System (GPS) Technology offers positional to improve the measurement of physical activity this Paper (1) : reviews the extent literature on the application of GPS to monitors movement, with a particular emphasis on free living physical activity (2): Discusses issues associated with gps use (3): Provides recommendations for future research(4): Application GIS in tourism, management. overall findings show that GPS is a useful tool to Augment our understanding of physical activity by providing the context (location ) of the activity and used together with geographical information systems can provide some insight into how people interact with the environment however no studies have shown that GPS along a reliable and valid major of physical activity .

**Keywords:** Experiment, collaboration support, Global Positioning System, geographic information System and Application.

### I. INTRODUCTION

Noise Location awareness (object tracking) and navigation are becoming one of the most important requirements of the people. Personal navigation and location based service are provided by the GPS and GIS. GIS is a Computer based information system which attempts to capture, store, manipulate, analyze and display spadinally referenced and associated attributed data for solving complex research, planning and

measurement problem. GIS is a System of hardware, software, data and people organizing, collecting, storing, analyzing and disseminating information about the areas of the earth GISs are specialized data bases that preserve locational identities of the information that they records'. GPS instrument and GPS models are radio navigational devices that provides accurate position information about objects on earth, based on information from orbiting satellites. The GPS System does not require the user to transmit any data, and it operates independently of any telephonic or internet reception, though these technologies can enhance the use fullness of the GPS positioning information.



### II. APPLICATIONS

Applications of GIS: the Concept of Geographic information infrastructure as brought about a

dramatic philosophical and technological revolution in the development of GIS. GIS has popularized the use of geographic information by empowering individuals and organizations to use such information in areas that earlier generation of GIS user could never have thought of even with their wildest imagination.

it is now common palace for ordinary people to use GIS to check the weather and traffic condition before they leave home for work and find information about a country or city they are about to visit

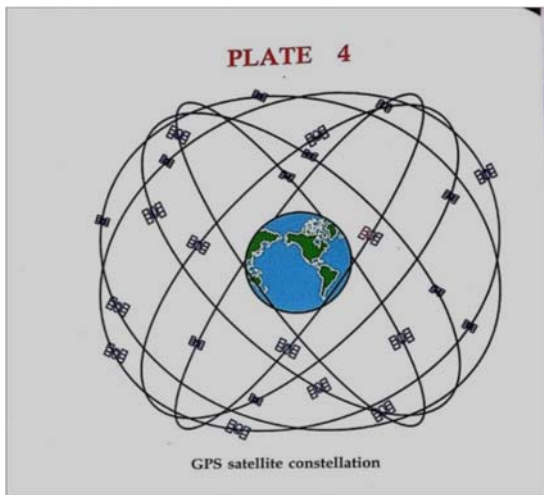


Figure 2 Plate 4

III. MAJOR APPLICATION AREA OF GIS

Earth Science	Hazard vulnerability and risk analysis
Applied geomorphology	Flood hazards analysis using multitemporal satellite
natural hazard	Modelling cyclone hazard
Engineering Geology	Seismic land slide hazard zonation
	Irrigation water requirement
Surface hydrology	Irrigation area characteristics
	Determination of peak run-off
	Geological data integration

GPS is a complex system that can be used in many

ways for basic point positioning using geodetic receivers with a computer and post processing software accuracy at the centimeter level is achievable although the accuracy is important, some surveyors fill at the main advantage of GPS is that it can be used in any weather condition day or night some of the uses and application global, regional and local are as follow

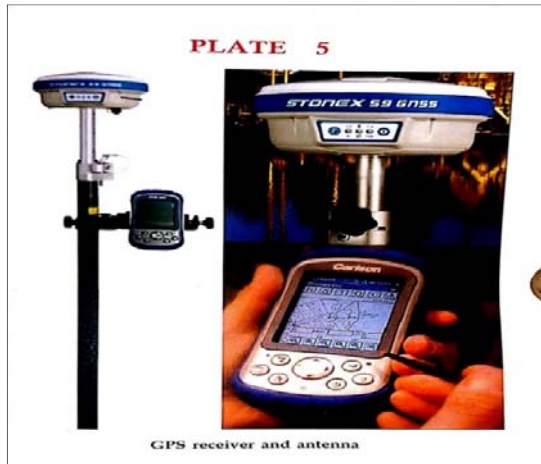
1. Navigation
2. Surveying
3. Mapping
4. Remote sensing
5. Geographic information system
6. Military and Space
7. Agriculture

Sectors	Application Areas
Academic	Research in engineering, science and humanities. Primary and secondary schools—school district delineation, facilities, management, bus routing, spatial digital libraries.
Industry	Engineering—surveying and mapping, site and landscape development, pavement management. Transportation—route selection for goods delivery, public transit, vehicle tracking. Utilities and communications—electricity and gas distribution, pipelines, telecommunication networks. Forestry—forest resource inventory, harvest planning, wildlife management and conservation. Mining and mineral exploration. Systems consulting and integration.
Business	Banking and insurance. Real estate—development project planning and management, sales and renting services, building management. Retail and market analysis. Delivery of goods and services.
Government	Central government—national topographic mapping, resource and environmental management, weather services, public land management, population census, election, and voting. State government—surveying and mapping, land and resources management, highway planning and management. Local/municipal government—social and community development, land registration and property assessment, water and wastewater services. Public safety and law enforcement—crime analysis, deployment of human resources, community policing, emergency planning and management. Health care. International development and humanitarian relief.
Military	Training. Command and control. Intelligence gathering.

IV. INSTRUMENTS

Instrument which are generally used in GPS system:

- GPS Revivers
- GPS Transmitters
- GPS Antennas
- GPS Data loggers



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#### V. SPECIFICATIONS OF THIS EQUIPMENT

- No. of Channels
- Frequency Range
- Sensitivity
- Position Accuracy
- Time to First Fix
- Instruments generally uses in GIS System
- Trimble jono (it is generally used for mapping grade and it's accuracy for upto 3m)
- Geoploter 6000, Geoploter 2008 (Used for Surveying grade and it records data within few centimetre of accuracy)
- Total Station (Nikon NIVO 5.M) (Total Station is a highly accurate Surveying Instrument used to measure slope distance across of land Space.)

#### VI. CONCLUSION

From all this literature review we have got some problem like single multipath, receiver and orbital clock error, environmental problem like Ionospheres delay, troposphere delay, because of the distance and delay in time, low accuracy in result

So we conclude we want to solve the increase in accuracy of actual location of object and resulting location

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