

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Digital mapping also known as digital cartography is the process by which collection of data is complied and formulated into a virtual image, the primary function of this technology is to produce maps that gives accurate representation of a particular area, detailing major roads, building and other points of interest.

Digital mapping refers to the use of digital technologies for creating, managing and analyzing spatial data. It incorporates geographic information system (GIS), remote sensing (RS), and various surveying technologies to produce accurate dynamics and easily accessible maps.

Digital mapping is a cross disciplinary methodology with strong relevance to anyone whose research method is to investigate data and to answer research questions or as a publication output on both, many of the software tools and methods of digital mapping comes from geography are related to discipline but they are now used across in many different discipline in both. Hass and stem, map making is been part of Hass research from well before the advent of computational methods.

They have been petty common research and visualization tools in discipline like archaeology but in recent years, new tools and softwares have made it for more researcher to try their hands.

Mapping is use as research methods for some reasons which imclude:

□ To create a visualization of data connected to a place. All maps are abstract data visualization whether they show location, natural resources points of interest for tourists e.t.c. many of this would not be just from the experience of using goggle maps on our phone that a visualization of the area, we are in a different to follow than a series of water direction. The same is true for research data, often patterns and relations

□ The process of practice of the method encourage, close looking, pattern and prompt interdisciplinary.

Digital mapping by definition is performed through some kind of digital interface, typically a computer system with a geographical user interface (GUI) which has been available for some consideration time.

It is also essential for all work to be performed within a geographical information system (GIS) in order to ensure that input imagery and interpreted data set maintain the same geographical coordinate system.



This allows data export in geographical products and facilitates accurate map production into geographical and quantitative analysis and interpretes needs to be familiar with the operation and use of a GIS and familiarity with the text described. Remote sensing and image processing include long leg et al, (2006).

Primary input data sets used for digital geomorphologic mapping include satellites imagery, DEMS and Aerial photograph, this are typically raster data and just like ordinary digital photo to be comprised of unit of information defined by a real world area on the ground (termed spatial resolution). All recently collected data sets from these source will be digital and usually supplied in a projected coordinate system. Only in the case of historical or legacy data will be required to convert from paper based on analogue format into a digital format. This may include the scanning. For example, Aerial photography or the digitalization of controls from topographic maps. This also allows data export into other geographic project and facilitates accurate production and use of GIS with the advancement in geographical technology, digital mapping has become a critical tools for the surveying and geo-informatics disciplines. Traditional method of map creation are often labor intensive and prone too inaccurate while digital mapping ensure real data updates, higher precision and a variety of analytical capability. The application of digital mapping is crucial in management, resources exploration and environmental studies.

1.2 Statement of the problem

The federal staff school Adewole, Ilorin, faces challenges. The lack of accurate up to date digital maps hinders effective planning, assets management. The manual out data leads to difficulties in locating facilities and ensuring timing maintenance of school infrastructure. The need of digital mapping is critical to address the challenges and also the school operations with modern technologies and advancement in educational facility management.

1.3 Aims of the project

The aim of the project is co carryout the digital mapping of federal staff school Adewole, kano road, Ilorin, Kwara State.

1.4 Objective of the project

- i. To determine the perimeter and area of the project area/site.
- ii. To show the position of the artificial features.
- iii. To perform spatial analysis on the generated spatial data base to ensure it can answer generic questions.

1.5 Scope of the project



i. Planning

ii. Data processing

iii. Data collection, gathering of spatial data through total station.

iv. GIS mapping: development of interactive maps and spatial data layer using GIS software.

v. Analysis: using geo-spatial analysis tools to extract valuable insight from the data such as land use pattern environmental changes and infrastructure development.

vi. System implementation: developing a digital mapping platform accessible by relevant stakeholders within.

vii. Information presentation

viii. Report writing.

1.6 Specification of the project

Corner beacon will be buried at corner points:

i. A closed traverse will be carried out for field work.

ii. The area should not less than 5 hectares.

iii. The scale should not be more than 1:2,500.

iv. Linear accuracy should not be less than 1:5,000

v. Area computation will be done using latitude and longitude single departure.

vi. The distance between the pillars should not be more than 250m.

1.7 Project Location

The project area is federal staff school Adewole, Kano road, Ilorin, Kwara state while covered the primary and secondary school on the geographical co-ordinate of Easting and Northing.

LAT: 4°, 51'3"E.

LONG: 8°.47770N

LAT: 4°, 30" 47"

LONG: 8°, 28" 40"



PARTICIPANT OF THE PROJECT

Showing the lists of the students involved:

S/N	NAME	MATRIC NUMBER	ROLE PLAYED
1	OSUNLEKE HABEES OLAIDE	HND/22/SGI/FT/052	AUTHOR
2	OJO ADEBISI MOTUNRAYO	HND/23/SGI/FT/0041	MEMBER
3	ADEBAYO BLESSING MARY	HND/23/SGI/FT/0042	MEMBER
4	DADA ELIZABETH OLUWAPELUMI	HND/23/SGI/FT/0043	MEMBER
5	OLADIMEJI RAPHAEL OLUWASEGUN	HND/23/SGI/FT/0045	MEMBER
6	IBITOYE JOSHUA AYOKUNLE	HND/23/SGI/FT/0047	MEMBER
7	AKINYEJO EZEKIEL DAMILOLA	HND/23/SGI/FT/0051	MEMBER



