

Editorial

The study of surveyors

Anna Paola Micheli*

Department of Marketing Analytics, University of Cassino and Southern Lazio, Italy.

Accepted 27 September, 2021

EDITORIAL

The technique, profession, art, and science of identifying the terrestrial or three-dimensional positions of points, as well as the distances and angles between them, is known as surveying or land surveying. A land surveyor is a person who works in the field of land surveying. These points are usually found on the Earth's surface and are frequently used to create maps and boundaries for ownership, locations, such as the designed positions of structural components for construction or the surface location of subsurface features, or other government or civil law-mandated purposes, such as property sales.

Overview

Geometry, trigonometry, regression analysis, physics, engineering, metrology, programming languages, and the law are all used by surveyors. Total stations, robotic total stations, theodolites, GNSS receivers, retro reflectors, 3D scanners, radios, inclinometers, handheld tablets, optical and digital levels, subsurface locators, GIS, and surveying software are some of the tools they employ [1]. Since the beginning of recorded history, surveying has been an important part of the development of the human environment. Most types of building require it for planning and implementation. It's also utilised in transportation, communications, mapping, and defining legal boundaries for property ownership, and it's a key research tool in a variety of other fields. GPS/GNSS, level, and rod are the most common surveying tools used around the world. When not in use, most instruments screw onto a tripod. When not in use, most instruments screw onto a tripod. Smaller distances are frequently measured with tape measures.

In addition, 3D scanners and various types of aerial images are used. The theodolite is a tool that is used to measure angles [2]. It measures angles in the horizontal and vertical planes using two distinct circles, protractors, or alidades. The target object is oriented vertically with a telescope mounted on trunnions. For horizontal alignment, the entire upper section rotates. The zenith angle, which is measured by the vertical circle, is the angle that the telescope makes with the vertical. An upper and lower plate is used in the horizontal circular. The surveyor starts the survey by bearing the instrument in a specified direction and clamping the lower plate in place. After that, the device can rotate to determine the bearing to other objects. The instrument can be adjusted to zero at the initial sight if no bearing is known or if direct angle measurement is desired. The angle between the starting object, the theodolite, and the item with which the telescope aligns will then be calculated. The gyro theodolite is a type of theodolite that orients itself without reference markings by using a gyroscope. It's a substance that's employed in underground applications [3].

The total station combines a theodolite with an Electronic Distance Measuring instrument (EDM). When positioned to the horizontal plane, a total station can be used for levelling. Total stations have evolved from optical-mechanical to entirely electronic systems since their introduction. The tools and methods utilised in GPS surveying differ from those used in other GPS applications. Static GPS employs two receivers that are fixed in place for an extended period of time. The receiver can compare measurements as the satellites orbit due to the lengthy time period [4]. The variations in satellite orbit also offer well-conditioned geometry to the measurement network.

*Corresponding author Anna Paola Micheli, E-mail: ananapaolamicheli@virgilio.it.

Astronomical observations are the primary method of ascertaining one's position on the earth's surface when no known placements are nearby. Navigational techniques could be used to make observations of the sun, moon, and stars. The bearing can be transferred to a reference point on the earth once the instrument's position and bearing to a star have been calculated. Because survey-accurate astronomical positions

were difficult to see and calculate, they tended to be used as a starting point for many other observations. Astronomical observations have become rare with the invention of the GPS system, which allows accurate position determination over the majority of the earth's surface [5].

REFERENCES

1. Fan L, Ho C, Ng V (2001) A study of quantity surveyors' ethical behaviour. *Constr Manag Econ.* 19: 19-36.
2. Bowen P, Cattell K, Distiller G, Edwards PJ (2008) Job satisfaction of South African quantity surveyors: An empirical study. *Constr Manag Econ.* 26: 765-80.
3. Greed C (2013) The professional and the personal: a study of women quantity surveyors. In *Feminist praxis.* 145-155.
4. Dada JO, Jagboro GO (2012) Core skills requirement and competencies expected of quantity surveyors: perspectives from quantity surveyors, allied professionals and clients in Nigeria. *Aus J Constr Econ Build.* 12: 78-90.
5. Onukwube HN (2012) Correlates of job satisfaction amongst quantity surveyors in consulting firms in Lagos, Nigeria. *Aus J Constr Econ Build.* 12: 43-54.