

Global navigation satellites system (GNSS): A guide for geomatics professionals and other GNSS operators

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Key words: GNSS/GPS; Positioning; Navigation System

SUMMARY

Throughout the course of time, our livelihood has been directly impacted by a series of innovative creations and discoveries made by mankind. The Satellites Navigation System (SATNAV) as a whole and Global Navigation Satellites System (GNSS) in particular, are part of those innovative creations which became indispensable to us.

From providing accurate navigation and transportation solutions to enhancing the monetary system with the use of advanced financial transaction systems, GNSS became an important tool in our society.

GNSS made it easy for professionals such as Geomatics Professionals to complete tasks in a record time whilst producing very accurate results; hence, it is the topic of this article.

This article explores the Global Navigation Satellites System (GNSS) by:

Providing a detailed explanation on the fundamentals of GNSS,

Highlighting the use of GNSS and some of its applications,

Providing historical background and highlighting particularities of each of the four existing GNSS.

Examining major GNSS methods of measurements used in Geomatics and related fields.

Emphasizing the importance of understanding the process of Geo-positioning using GNSS operating

devices.

Adding to the above-mentioned elements, this article emphasizes the role of the GNSS device operators, in being knowledgeable of the level of precision and accuracy required for any specific task that they deal with.