Gps and its use in modern surveying

Engineering

GPS And Its Use In Modern Surveying

The Global Positioning System (GPS) is a system of satellite navigation that is space-based, and provides information about time and location of a region in all kinds of weathers provided that an unobstructed line of sight is present to at least four GPS satellites. “ The technology operates on the principle of triangulation—if the difference from an observer to three known points can be measured, the position of the observer can be calculated” (“ Global Positioning System”). The US government maintains the GPS and the system can be accessed by anyone who has a GPS receiver. President Reagan opened access to the GPS for the civilian aircraft navigational purposes for the first time in 1983 (Leick 5). GPS has immense application in modern surveying. GPS enables the surveyors to measure the points or features of any location across the globe from space. Data collected with the help of GPS can be used to provide information for navigation systems or to monitor the infrastructure projects. Surveyors commonly use the GPS to derive elevation with the help of sophisticated satellite receivers as an alternate to the traditional precise leveling. However, the accuracy of the former is lesser as compared to the latter, but when the traditional leveling has to be carried out over a long distance, the accuracies of both methods becomes similar. GPS helps reduce the time consumed in surveying. “ Project surveys scheduled to take weeks can often take just a few days or hours with GPS” (Transportation Research Board). Modern surveying has benefited a lot from the use of GPS.

Works Cited:

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