

Overview Of Terrestrial Laser Scanner Technology, Applications And Limitations

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Abstract

Terrestrial laser scanner (TLS), is a powerful tool to collect a large amount of data in short time and has the ability to extract information with high accuracy. Because of the high accuracy, high data acquisition rate, good spatial density of data that TLS has, This technique has become widely used in many applications, the applications where a large amount of data able to be captured rapidly which makes it practices and cost efficient. These applications include building modeling, mining, long term monitoring measurement, and safety acquiring data which cannot be accessed easily such as: highway information, bridge beams, and rock faces...etc. This paper provides an overview of describing the technology and summarizes the actual systems of TLS , applications and the technique limitations. It is vital to understand laser scanner technology, applications, limitations and data processing workflow. Otherwise, it will be difficult to realize the difference between the uncertain data or noisy and the minor construction defect. In addition When the limitations are understood, the errors could be avoided and the suitable instrument can be used depending on the required accuracy of work