



Topographical surveys: Classical method versus 3D laser scanning. Case study - An application in civil engineering

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The paper describes an experiment which took place in Iasi town, Romania, consisted in two different topographical survey techniques applied for one and the same objective placed in a block within the city (western part) – a thermal power station. The purpose was to compare those methods and to determine which one is proper to be used in this domain in terms of fastness, optimization and speed of data processing. First technique applied for our survey was the classical one, with a total station. Using the CAD technique, we obtained a final product (a dwg file) and a list of coordinates (a text file). The second method, which we focused our attention more, was the measurement with a very precise 3D laser scanstation, also very suitable in archeology. The data obtained were processed with special software. Result was a 3D model of the thermal power plant composed of measurable cloud point data. Finally, analyzing the advantages and disadvantages of each method, we came to the conclusion that the 3D laser scanning which we used matches well the application, in this case civil engineering, but the future of accepting and implementing this technique is in the hands of Romanian authorities.