

Mobile Mapping System: Suitability for Building Information Modeling of Railway

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SUMMARY

The BIM (Building information modeling) technology has become interesting to scientists, engineers and designers at the beginning of 21st century. In traditional design, there are two-dimensional elements, while BIM implies a third dimension. This method allows achievement of sustainability in the design process, gather relevant information, and group them into a single coordinated model that enables different assessments in the early stages of design. There is no process that can be successfully implemented without the basis of spatial data, which must be collected accurately and efficiently. Such high standards require efficient and economically viable data collection. The one of such technologies is laser scanning - aero, mobile or terrestrial, depending on the type of project. The mobile mapping system opens up new possibilities so that huge amount of highly accurate, georeferenced spatial data are quickly collected and transformed into 3D infrastructure models.

This paper provides an overview of a project in which mobile laser scanning was applied. A 12 km scanning process of the railway in the Germany was carried out. The obtained point cloud was used as an input data, and using the Revit Autodesk software package, a BIM model was created.

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