

# Information Exchange Using the Open IFC Format from a Surveyor's Perspective

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**Key words:** Geoinformation/GI; BIM; GeoEIR, GIS, Construction Surveyor

## SUMMARY

BIM technology is becoming an increasingly significant element in the construction investment projects. In some countries, it is even becoming mandatory. BIM is used for a better and more efficient exchange of information between different stakeholders of the investment process. The main element of BIM is a 3D model together with metadata and standards which regulate the exchange of information or the objects modeling methods. BIM therefore generates new challenges also for the surveyor. The existing work model has to be adapted to the sub-processes carried out during the works conducted in the BIM technology.

The process of information exchange is most often performed using the open data format IFC (Industry Foundation Classes) developed by the buildingSMART organisation and standardised by the ISO 16739-1:2018 standard. Therefore, it was also focused on during the analysis of data exchange from the surveyor's perspective. As a result of the research, prototypes of tools, that can support the surveyor during the execution of works using BIM technology and the IFC format, were created and described. Among the proposed tools is a Model View Definition (MVD) adapted to surveying tasks. This type of model can also be used by appointing parties as part of the Information Requirements as well as IDS (Information Delivery Specification) or IDM (Information Delivery Manual). This activity is aimed at more efficient work of a surveyor with the new technology.

The idea of using BIM technology is often also associated with the implementation of surveying work using modern surveying technologies, such as drones with various types of sensors. It also requires surveyors to acquire new skills to operate in three-dimensional space with 3D models of objects and data processing to, for example, compare models. This paper performs a review of available surveying tools in terms of their use with BIM technology.