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Multi-Dimensional Information Modelling Method for Underground Tunnel Spaces

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A study of Multi-Dimensional information modelling of underground tunnel spaces is introduced. As a reference model an international standard of Building Information Modelling (BIM) supported by Building Smart is used. Specific Finnish guidelines for infrastructures including tunnels are used. As experimental case underground Pyhäsalmi Mine on North Finland was used. Three selected tunnel at level of 660 meter were used. The tunnels were measured using advanced 3D laser scanning technologies as well as photogrammetric imaging. Different examples of tunnel information models were created and analysed. Recommendations for future work how to develop tunnel information modelling towards more and more information rich Multi-Dimensional information models are suggested.