

The Concepts of Level of Detail in 3D Indoor Models

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SUMMARY

Demands for indoor services are increasing as people spend more time in indoor environment. IndoorGML for indoor spatial information has been established to satisfy these demands, yet LOD(Level of Detail) of spatial data needed for services using indoor spatial information is not defined. LOD proposed by CityGML is defined by details and size of geometric features as it focuses on geometric feature. Also, indoor space is only illustrated by LOD 4. However, representation of indoor space is required more detailed than outdoor space. Furthermore, LOD for indoor space should be defined diversely according to indoor services. For example, detailed representation of geometry for all of features in indoor space is required like LOD 4 of CityGML in case of indoor facility management. On the other hand, only simple representation of geometry for representative indoor space can help services like indoor navigation. For these reasons, Not only details but only the number of spatial features in indoor space can be different according to type of indoor services. Therefore, indoor LOD model based on applicable services for indoor spatial information is need. In this research, we propose criteria for representation of features according to detail and size of geometric features based on indoor applicable services and suggest indoor LOD model appropriate for indoor services.