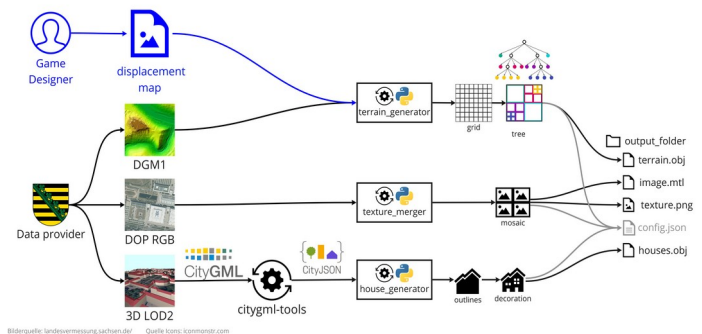
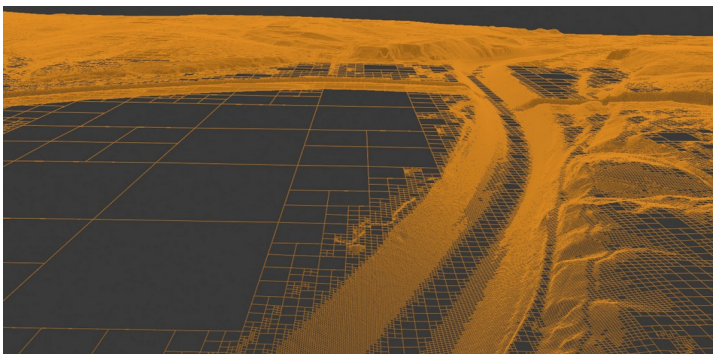
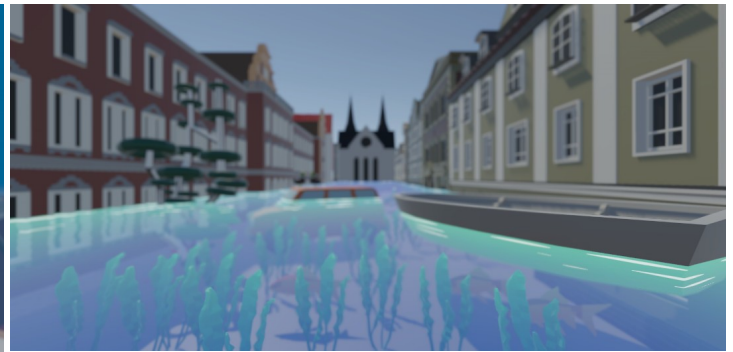


Nykus Exploration – Open Geodata in a Survival Game

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Abstract - The use of open geospatial data in games enables the creation of large game worlds in a very short time. This project shows how landscape models and buildings can be imported into game engines more easily and impressively using a newly developed pipeline.

The game Nykus puts the player in a dramatically changed situation of the city of Grimma due to flooding. In search of survivors, resources have to be found, tools have to be made and obstacles have to be overcome. A Quadtree-based optimization of the existing terrain model allows the use of larger map sections with high resolution. Manual corrections are possible via a displacement map. Automatically generated windows extend the rudimentary LOD2 buildings in the dataset. The integration of the geodata in Unity is done via specially developed scripts.

Keywords – Open Geodata; GIS Data; Survival Game; Game Engines; Serious Games;

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References - Höhl, Wolfgang (2020). Official Survey Data and Virtual Worlds - Designing an Integrative and Economical Open Source Production Pipeline for xR-Applications in Small and Medium-Sized Enterprises. Big Data and Cognitive Computing 4(4). MDPI AG: 26. <https://doi.org/10.3390/bdcc4040026>

Geodata Source: Staatsbetrieb Geobasisinformation und Vermessung Sachsen (GeoSN), Datenlizenz Deutschland – Namensnennung – Version 2.0 (DL-DE/BY-2.0)

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