INVESTIGATING INTEGRATION CAPABILITIES BETWEEN IFC AND CITYGML LOD3 FOR 3D CITY MODELLING

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Structure

Methodological Approach

Implemented tools

Case Study

Results & Conclusions
Implemented Tools

Utilize ETL technology via FME

- Unsuccessful conversions so far
- Semantic Preservation
- Flexibility of the procedure
- Ground for bidirectional approaches
Case Study

Software & Tools

- AutoCAD Civil 3D 2017
- Autodesk Revit 2018
- Feature Manipulation Engine (FME) 2017
- FZK Viewer
- qGIS 2.14
- Val3dity
Extraction of Walls & Slabs
Extraction of Openings
Semantic Mapping
Visualization & Validation
Results & Conclusions

- Successful conversion from IFC to CityGML LoD 3 Generic Building
- Successful semantic mapping
- Limitations of the process in terms of handling geometry
- Enrichment of the model
- Topology of common surfaces
- Investigation of an automatic process
Future Research Work

- Semantic Preservation & Transfer
- Extension of the Model with additional LoD 3 features
- Conversion to CityGML LoD 4 Models
- Generation of lower LoDs from higher LoDs
- Implementation of additional 3D modelling softwares
Thank you for your attention!!!