LoDs in IndoorGML

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IndoorGML

Supports

- Cellular Space Model
  - In IndoorGML, an indoor space is considered as a set of non-overlapping cells (e.g. rooms, corridors, stairways, etc..)
- 2D or 3D representation of space (but not both in a data set)
- Multi-Layered Space Models

Does Not support

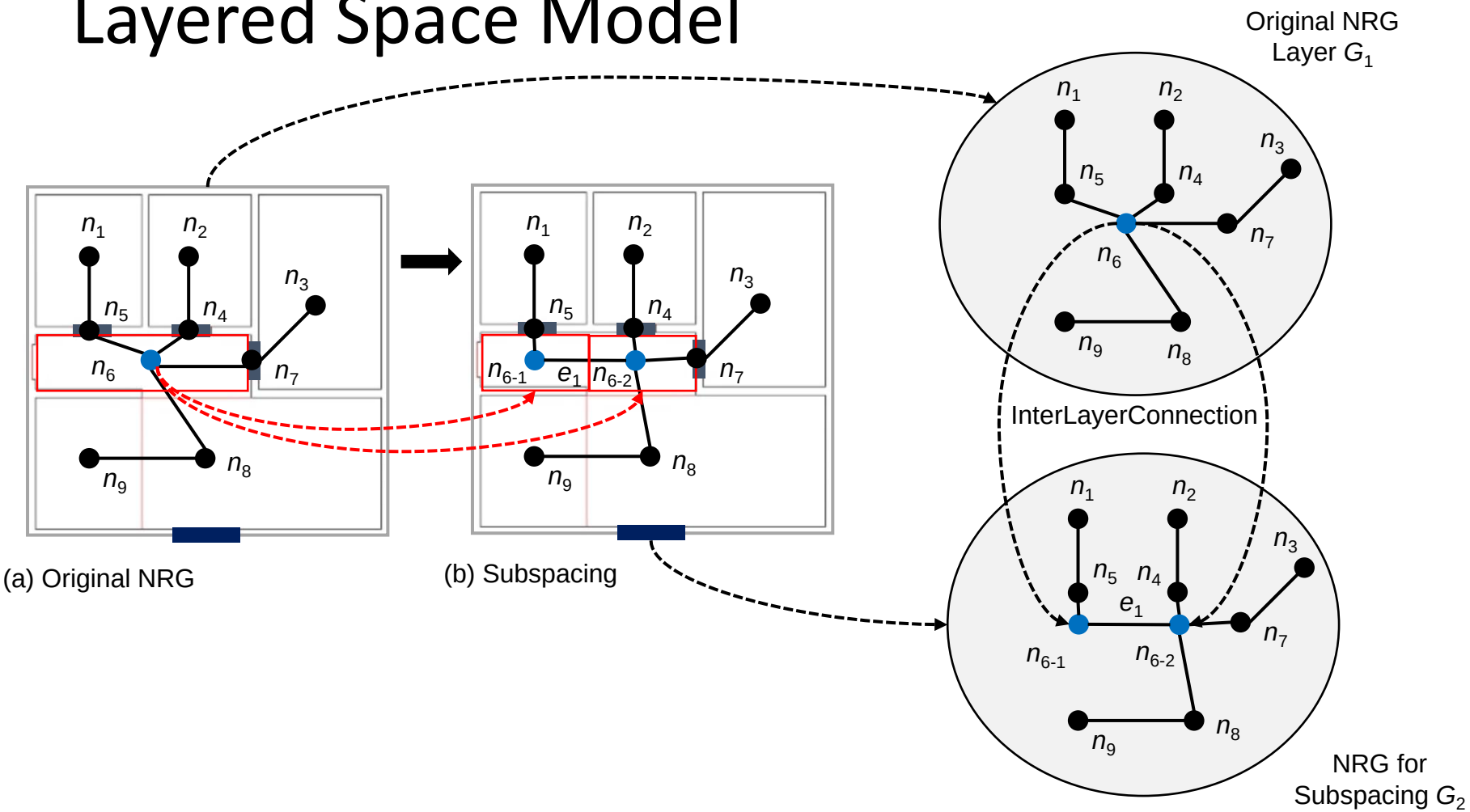
- LoD
- Visualization (Appearance)

LoDs in Indoor Space

- LoD in terms of
  - Geometry: Geometry Simplification and Dimensionality (2D or 3D)
  - Topology: e.g. Some topologies in high LoD may not be found in low LoD
  - Semantics: e.g. Fine classification (Code List) in High LoD and Coarse classification in low LoD
  - Appearance: IndoorGML does not care the appearance.

- Subspacing Issues
  - Subspacing Hierarchy
    - How to define the granularity of rooms
    - IndoorGML supports hierarchical representation of space

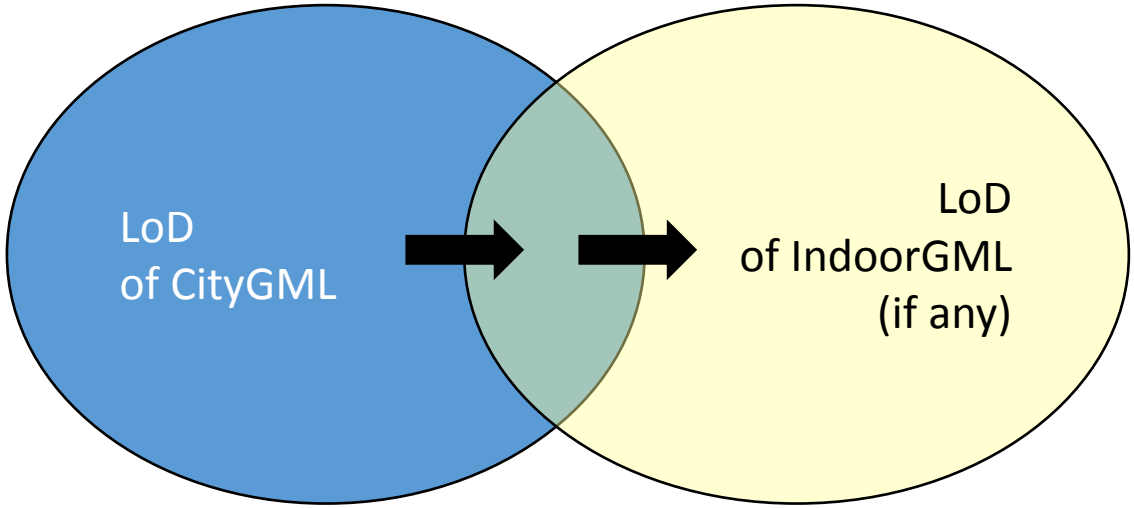
Hierarchical Subspacing and Multi-Layered Space Model



{($G_1.n_k$, $G_2.n_k$,equal) | $k \neq 6$} : Defalut *InterLayerConnection*
{($G_1.n_6$, $G_2.n_{6\text{-}1}$,contains), ($G_1.n_k$, $G_2.n_k$, contains)} : *InterLayerConnection* for subspacing

LoD Policy in IndoorGML SWG

- Not yet any specific idea
- To be harmonized with CityGML LoD guideline
  - But Not like LoD 4-1, LoD 4-2, etc.



A question

- Could we consider LoD as a Level of Map Generalization?
  - Map Generalization provides
    Simplification,
    Collapse (reduction of dimension),
    Different levels of Elimination/Inclusion,
    Different levels of Classification,
    which are also useful in LoD definition.