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# Templates and bSDD

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# Background

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- Current activities related to bSDD:
  - Map structures of German standard VDI 3805 to bSDD
  - Map ECLASS advance structures to bSDD
  - Map ISO 23387 templates to bSDD

- Idea:
  - Use UML profiles as the basis for defining what a template is

# Outline

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- What is a template (ISO 23387)?
- How has it been modelled?
- How can it be mapped to the model of bSDD
- How can we implement it in bSDD?

# Templates in ISO 23387

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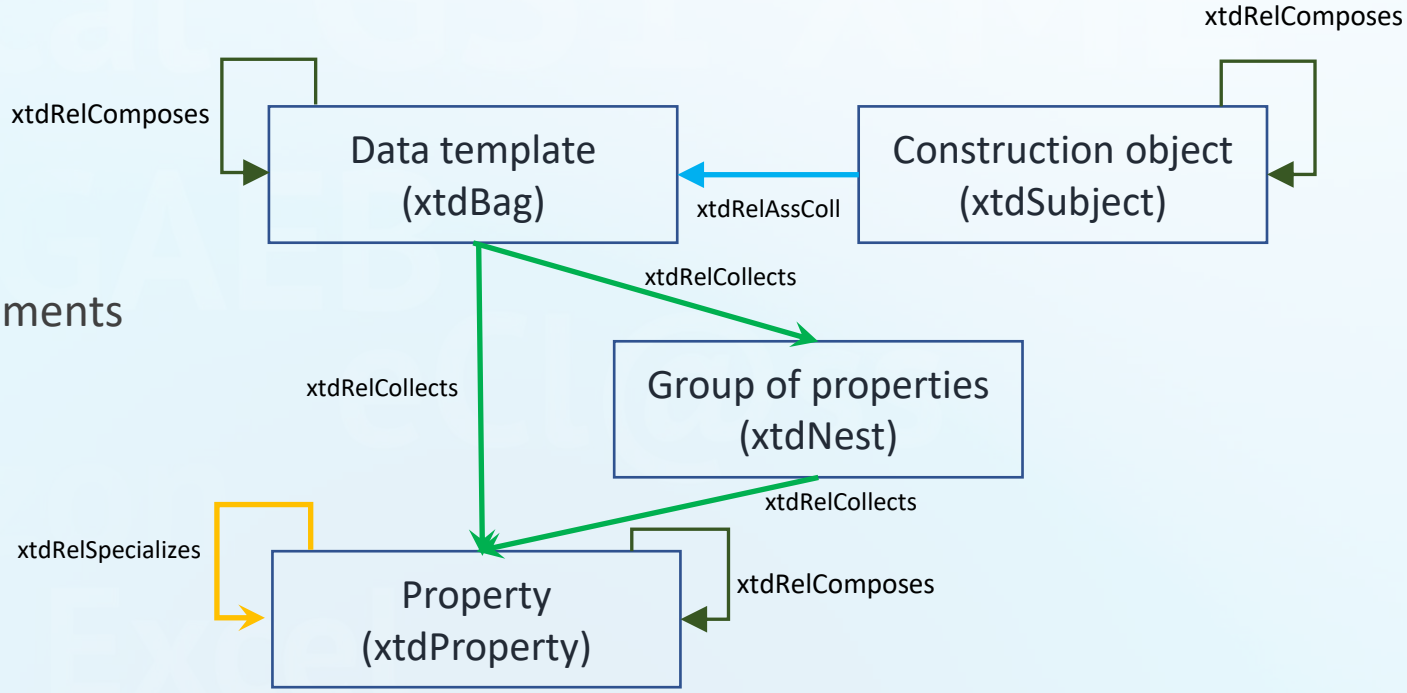
- bSDD and ISO 12006-3 provide meta models for defining dictionaries
- But: Meta models (like the bSDD model) are quite generic
- Goal: Have a common structure for describing products in dictionaries
- ISO 23387 describes such a structure (called template) for exchange of asset (product) data

- Template defines roles for some basic model elements
- These roles are related by specific relationships



# Templates mapped to bSDD model

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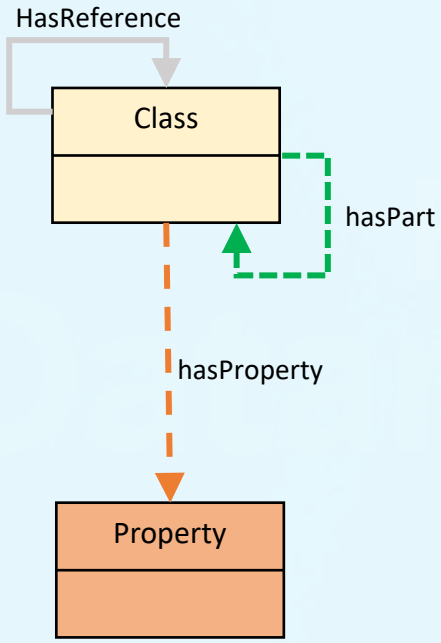
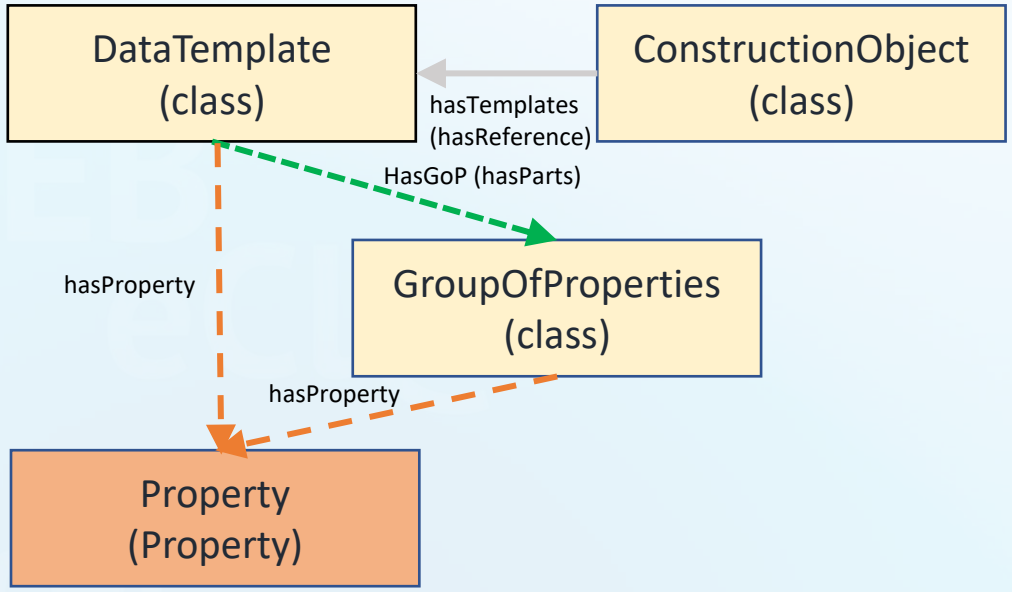
Model of bSDD (meta model)




Template modelled by the bSDD meta model



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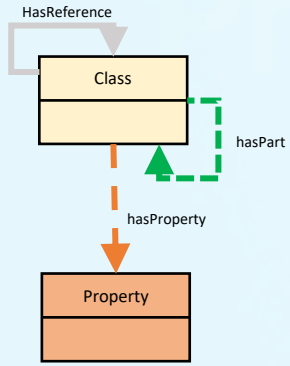
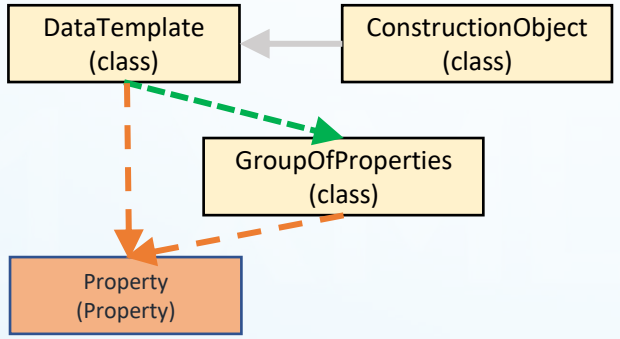
## Model of bSDD




## Template mapped to model of bSDD



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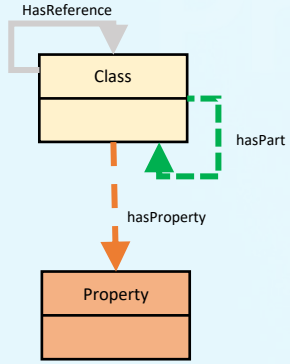


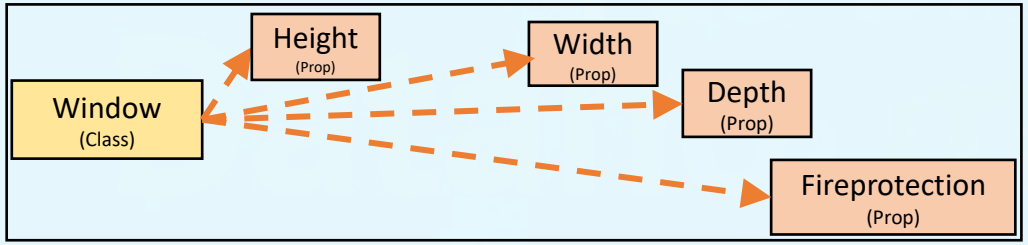


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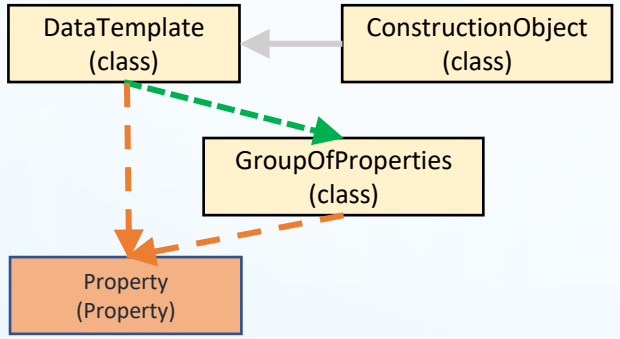

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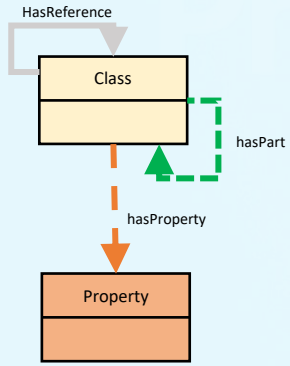
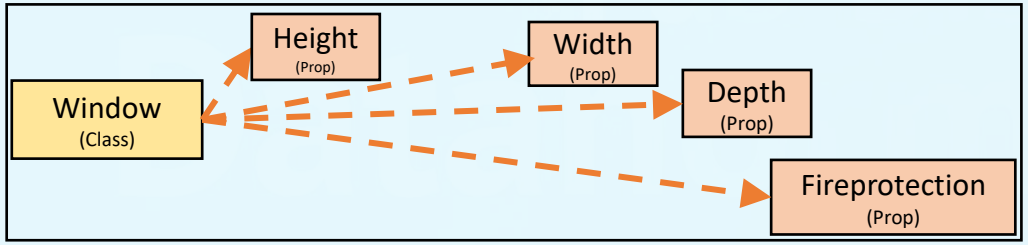
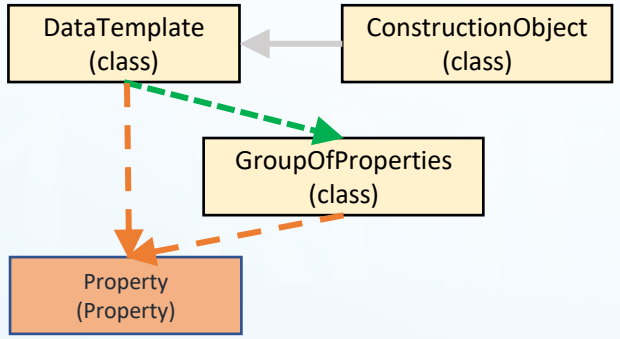



| ProductID | height | width | depth | fireprotection |
|---|---|---|---|---|
| | | | | |
| ID1 | 800 | 800 | 100 | A |
| ID2 | 1200 | 800 | 100 | A |
| ID3 | 1200 | 900 | 100 | C |

## Template mapped to model of bSDD



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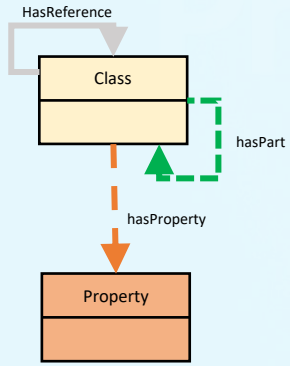


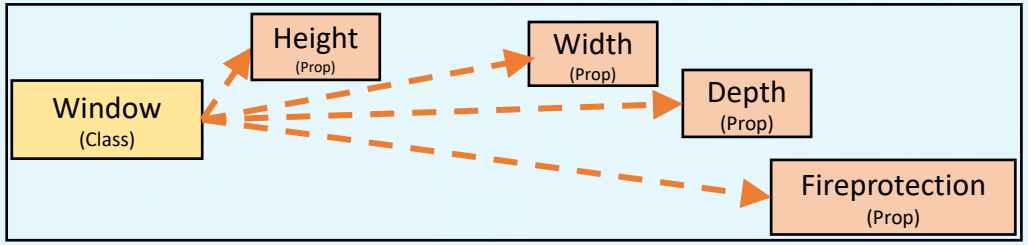


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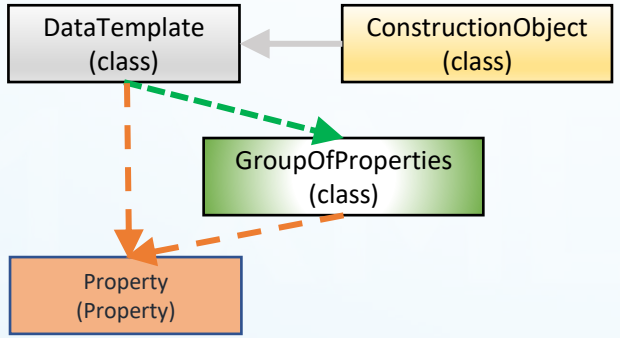


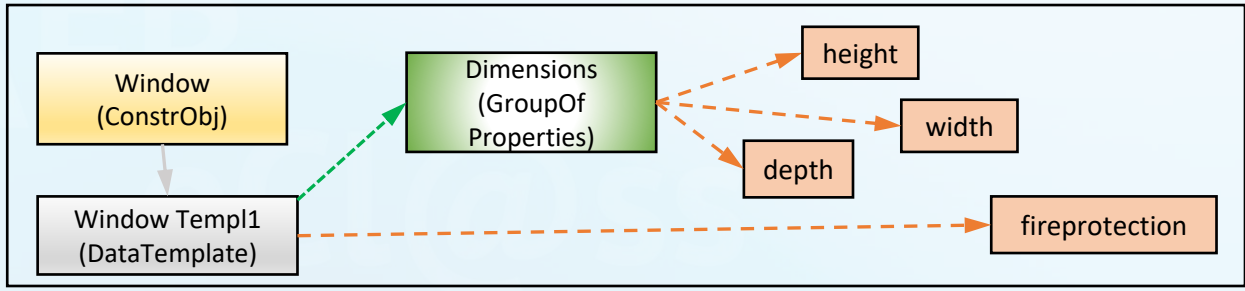


| ProductID | Dimensions | | | fireprotection |
|---|---|---|---|---|
| | height | width | depth | |
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# Templates mapped to bSDD model

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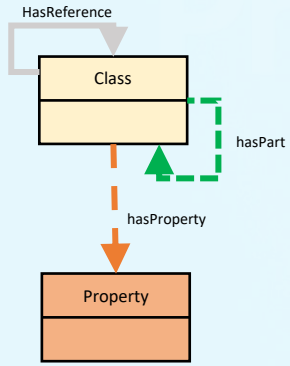
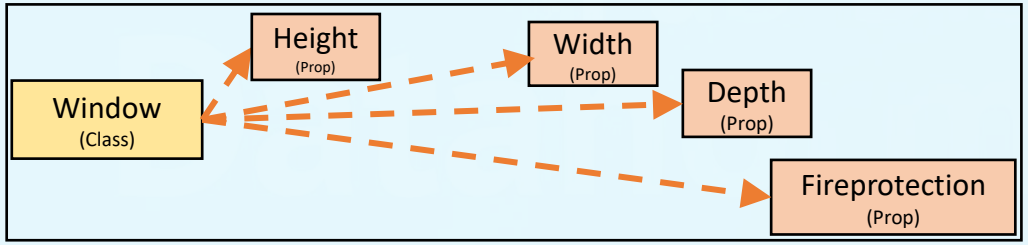
## Model of bSDD

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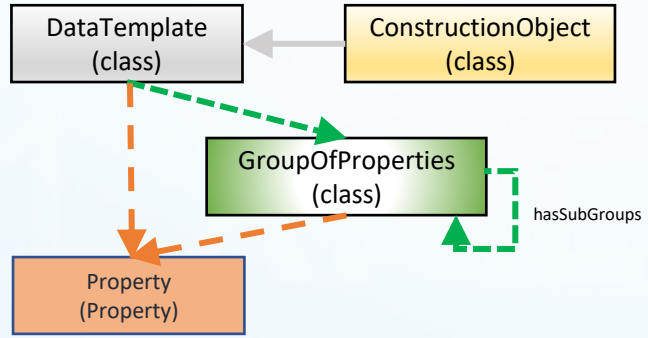


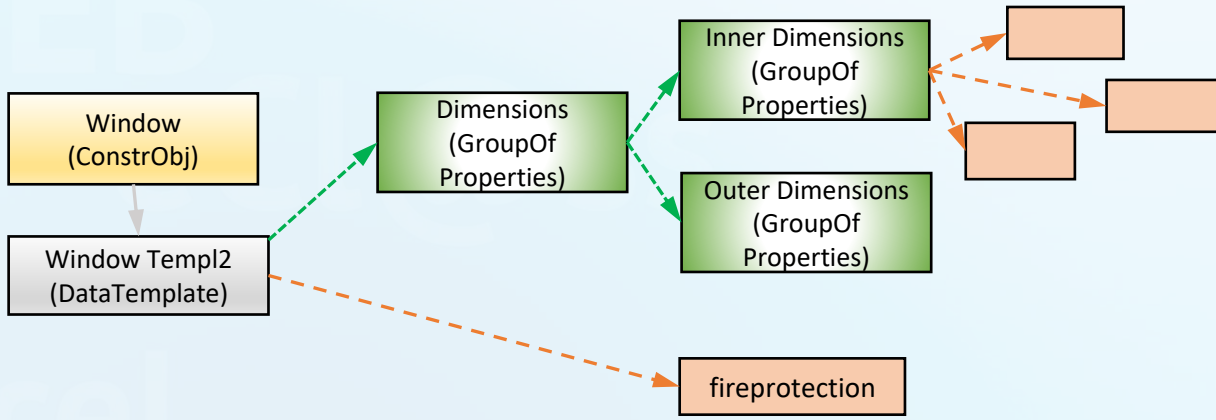

# What has been done?

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- Create a „Role model“
  - Created roles as named building blocks of the underlying model
  - Create relationships between the roles (with specific types of relationships provided by the underlying model)
- Assume  the roles and their connections to be „types“
- Create dictionaries / subdictionaries as instance models with the defined roles and their connections

Question:
How can we do something like that in bSDD?
How can we implement templates in bSDD?

# How to model in bSDD (no profiles available)

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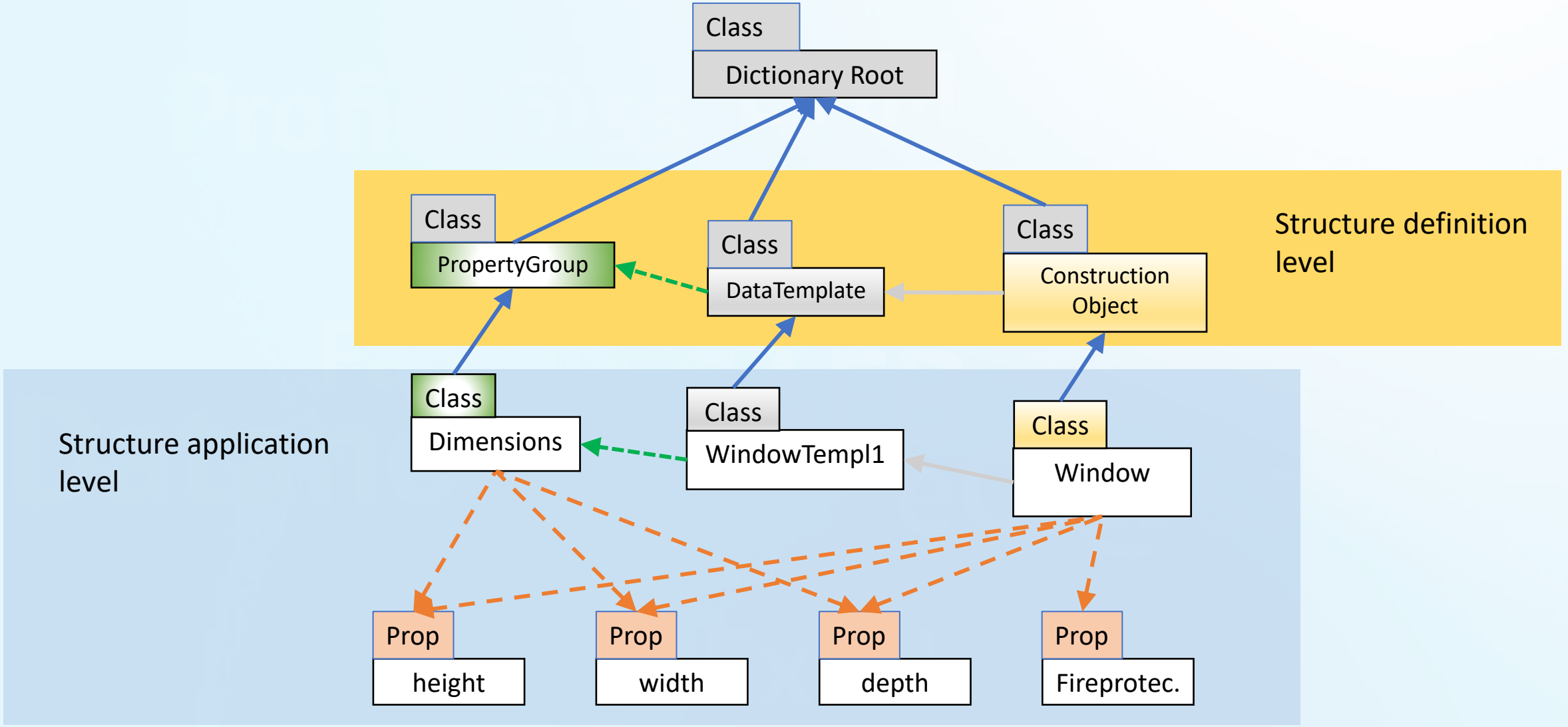

# Discussion

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- Basic idea:
  - Define templates as a kind of „pattern“ for using meaningful structures in dictionaries
- ISO 23387 has used a mechanism similar to UML profiles to define a specific template for product data exchange
- There might be variations or completely other templates
- bSDD does not yet support directly the definition of templates
- Possible ways:
  - Use templates informally (similar as design patterns are often used in software engineering)
  - Create high level classes for the basic roles
    - Allows to „type“ the classes
  - Introduce „typing“ of classes and properties and relationships as bSDD mechanism
    - similar to relationship types in ISO 12006-3
  - … maybe more …

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Thank you for your attention!

Any questions or comments?