

Create and import new types of relationships with knowledgeMANAGER

User manual

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1 WHAT IS THE NEED

A new type of relationship among concepts is needed in the ontology. Furthermore, it's important to be able to import this kind of relationships from an external source.

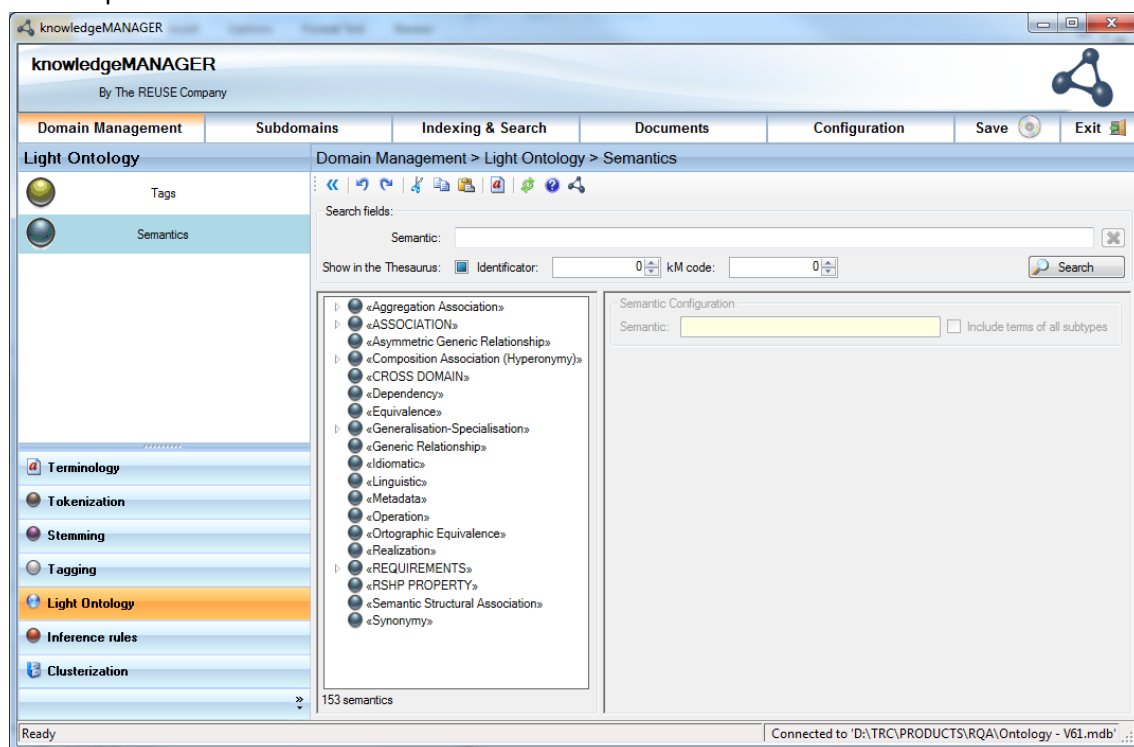
2 SOLUTION

2.1 Step #1: Add the new relationship type in the Semantics tree

First of all, we must check whether the type of relationship to be imported is already part of the ontology. Initially, KM comes with some common types of relationships such as:

- Hierarchy (Parent-Child concepts)
- Association (Related concepts)

Nevertheless, new types of relationships can be added when needed. To do that, open the *Semantics* screen, and create a new *Semantics*. The set of *semantics* is not a plain list, but a tree, so first select the proper parent of the new type, or right-click on the white space of the tree to create a new type without parent.



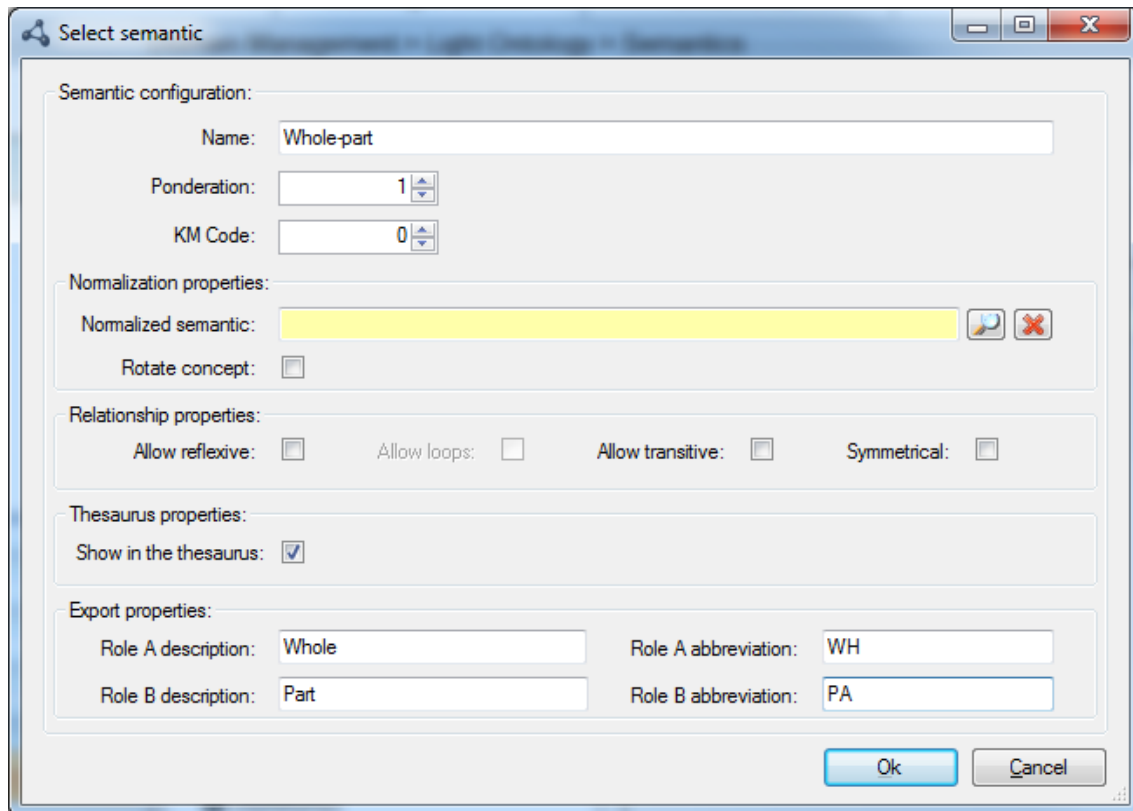
2.2 Step #2: Add the mandatory information

In the screen for the new *Semantics*, the following information is mandatory:

- Name of the semantics: e.g. Whole-part
- Relationships properties:
 - o Allow reflexive, Allow loops and Allow transitive will be taken into account by the thesaurus editor when you instantiate this type of relationship
 - o Symmetrical is marked when both sides of a binary relationship play the same role (e.g. in the association relationship). Nevertheless, in the example of *whole-part* the role in both sides is rather different, so in this case this is not a symmetrical relationship
- Show in thesaurus: check this box if you want to manage this type of relationship in the thesaurus editor. Not marking this box mean that you can gather this relationships (between concepts) after an indexing process, but the end-user will not be able add this relationships

using the thesaurus editor. Since most of the thesaurus editors support *whole-part* relationship, this box should be checked for that example

- Export properties: only available if *show in thesaurus* is marked: in this case the user must provide the name to be shown in kM for both sides (both roles) of the relationship (*Role A* and *Role B descriptions*). Furthermore, for import/export using the *Alphabetical* report in kM, the abbreviation is used instead of the full name of the role



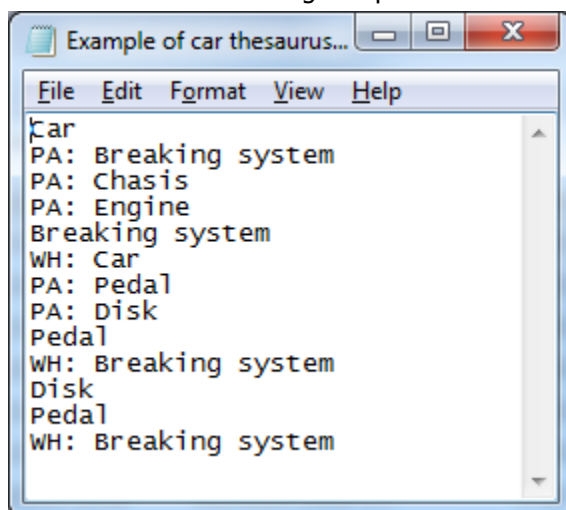
The 'Select semantic' dialog box contains the following sections:

- Semantic configuration:**
 - Name: Whole-part
 - Ponderation: 1
 - KM Code: 0
- Normalization properties:**
 - Normalized semantic: (empty field with icons)
 - Rotate concept: ☐
- Relationship properties:**
 - Allow reflexive: ☐
 - Allow loops: ☐
 - Allow transitive: ☐
 - Symmetrical: ☐
- Thesaurus properties:**
 - Show in the thesaurus: ☒
- Export properties:**
 - Role A description: Whole
 - Role A abbreviation: WH
 - Role B description: Part
 - Role B abbreviation: PA

Buttons: Ok, Cancel

2.3 Step #3: Create the input document for the import process

Create a text file following this pattern:



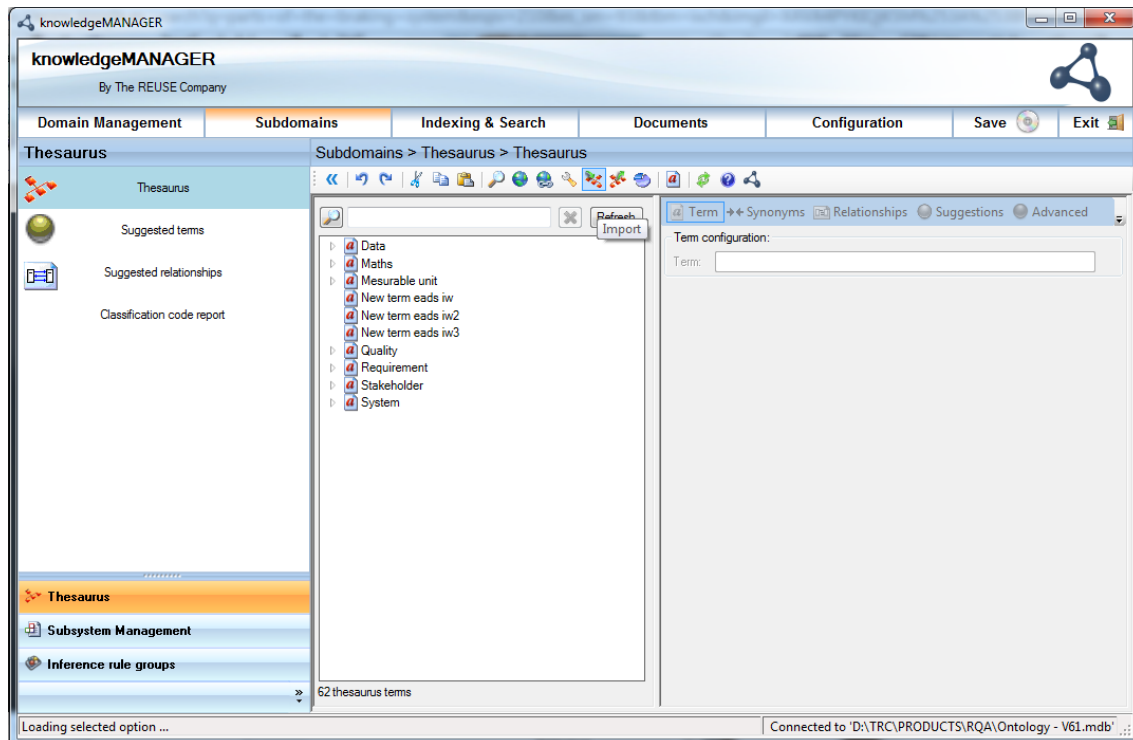
The text file contains the following content:

```

File Edit Format View Help
Car
PA: Breaking system
PA: Chasis
PA: Engine
Breaking system
WH: Car
PA: Pedal
PA: Disk
Pedal
WH: Breaking system
Disk
Pedal
WH: Breaking system
  
```

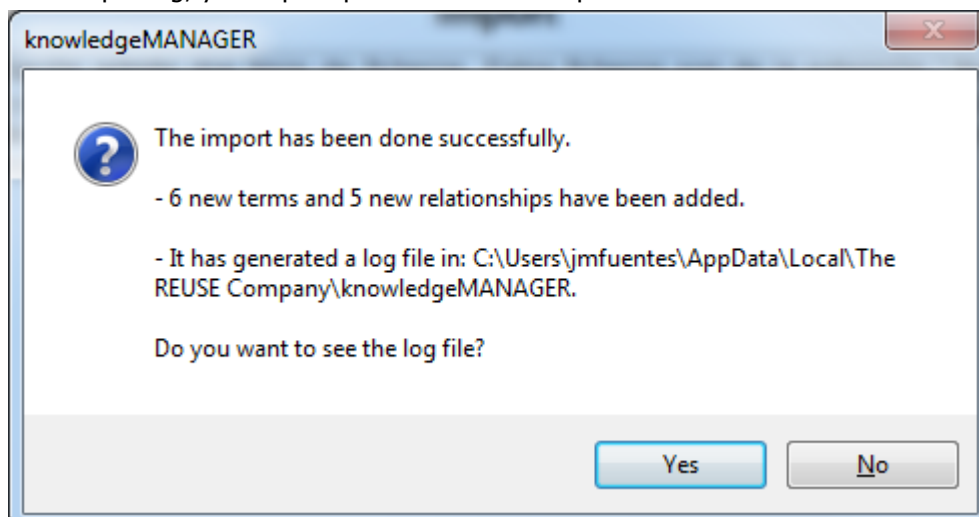
Where the Abbreviations are used to represent all the related concepts.

Use the *Import* button in the Thesaurus editor screen. Then click on *Import*, select the *Alphabetic file (*.the)* option and finally select the file to be imported.



2.4 Step #4: Check everything was right

After importing, you're prompted with a small report:



Including the possibility to open a more detailed log file including all the steps and the decisions automatically taken during the import process.

After refreshing the thesaurus editor screen, you can find your new concepts and, once you click, on the *Relationship* tab, you can find all the relationships for a given concept.

knowledgeMANAGER

By The REUSE Company

Domain Management Subdomains Indexing & Search Documents Configuration Save Exit

Subdomains > Thesaurus > Thesaurus

Thesaurus

Suggested terms

Suggested relationships

Classification code report

Thesaurus

Subsystem Management

Inference rule groups

65 thesaurus terms

car

Breaking system

Car

Chassis

Data

Disk

Engine

Maths

Mesurable unit

Pedal

Quality

Requirement

Stakeholder

System

Term configuration:

Term: Breaking system

Relationships:

All relationships By category Graphical Suggestions for relationships Indexe

Type	Related term
Part	Pedal
Part	Disk
Whole	Car

Thesaurus loaded

Connected to 'D:\TRC\PRODUCTS\RQA\Ontology - V61.mdb'

