

# RML - „Refurbished Modeling Language“ (Entity Model)

## lookup-references

(visualized by an arrow pointing to the primary entity)



## principal-references

(visualized by an diamond pointing to the primary entity)



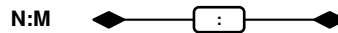
A connector always visualizes the pointing direction outgoing from the foreign key:

On Primary Entity side we have a **ARROW** or a **DIAMOND!**

On Foreign Entity side we have a **CIRCLE** or a **UNDECORATED end** (or a **DIAMOND**, if we have a reverse-addressed principal)

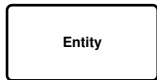
**N:M relations requiring a junction!**  
Usually we want this to be expatiated!

**But you can use a simplification:**  
If a junction-entity has no attributes, then this notation can be used:



- 1** a filled line-end indicates, that the entity on this end has the multiplicity 1
- 0/1** a not filled line-end indicates, that the entity on this end has the multiplicity 0/1 (foreign keys need to be „Nullable“)
- \*** a undecorated line-end indicates, that the entity on this end has the multiplicity \*

Entity w details
Field
Field
Field
Field



picture navigability: ◀ Title Title ▶

## XOR – References

for picturing advanced relations like:

- supporting competing targets
- supporting the TPC inheritance pattern
- supporting „Complex Types“(structures used by multiple adaptors)

Outgoing from the foreign entity (where FK is located) there is **ALWAYS** a **regular connector!**

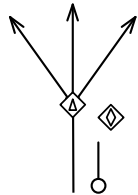
The XOR node symbol represents a virtual connector-end for all targeted primary entities.

Incoming to each possible targeted primary entity there is **ALWAYS** a XOR Target-end connector (which is a **elongation!** the 1st end decoration has no semantical statement about the relations multiplicity or role – this is represented by the symbol within the center of the XOR node)

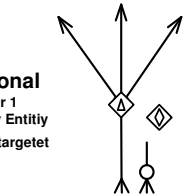
XOR Target-end connectors can only point **AWAY** from the XOR node symbol

XOR node symbols are only valid when they have:  
(exact 1 incoming regular connector AND >1 outgoing XOR end connector)  
OR  
(>1 incoming regular connector AND exact 1 outgoing XOR end connector)

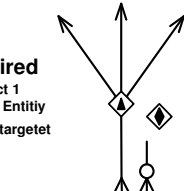
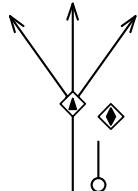
multi targeted weak FK-Field  
+ discriminator field or disjunct PK ranges



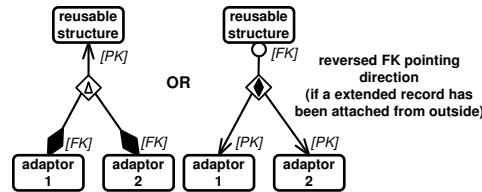
optional  
0 or 1  
primary Entity  
can be targetet



required  
exact 1  
primary Entity  
must be targetet

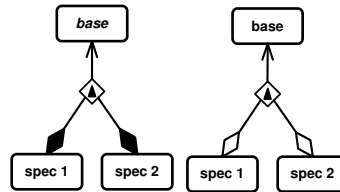


reusable extended record („complex type“)

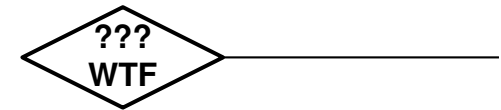


## Inheritance (TPC)

„required“ stand-alone „base“-records are not possible  
„optional“ stand-alone „base“-records are possible



can be used representing a **abstract baseclass**



NOTE THAT:

Everyone knows about the meaning of this symbol:

**BUT:** the all-around differences about the exact meaning of the symbol ruined its interpretability!

**WHAT WE DID:** We kept the diamond shape to indicate a "Principal"-relation anyway!

If the symbol is filled up or not does not make any statement about the role of a relation!

It just follows the global rule for visualisation of multiplicities.

(and we know that a optional principal is very seldom!)

The following **must not** be part of the chart:

- markers for „weak“-references
- markers for integrity automatisms (like „CascadeDelete“)

## BACAUSE:

During the modelling phase we want to specify the relationship between entities as exact as possible in order to **describe the reality**. This could be regardless concerning the possibilities and features of any technology! Integrity needs to be **consistent each time**. This Job must be done anyway! Which technical component or layer carries this responsibility (SQL-Server or BL-Code) **does no matter for a model definition!**