

ISO 15926 Modelling Workshop: Experiences and Challenges

2010-09-09

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Overview

- **Modelling workshop and it`s background**
- **The modelling process**
- **Important concepts and roles in modelling**
- **The standardisation process**
- **Workshop outcome**

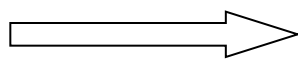
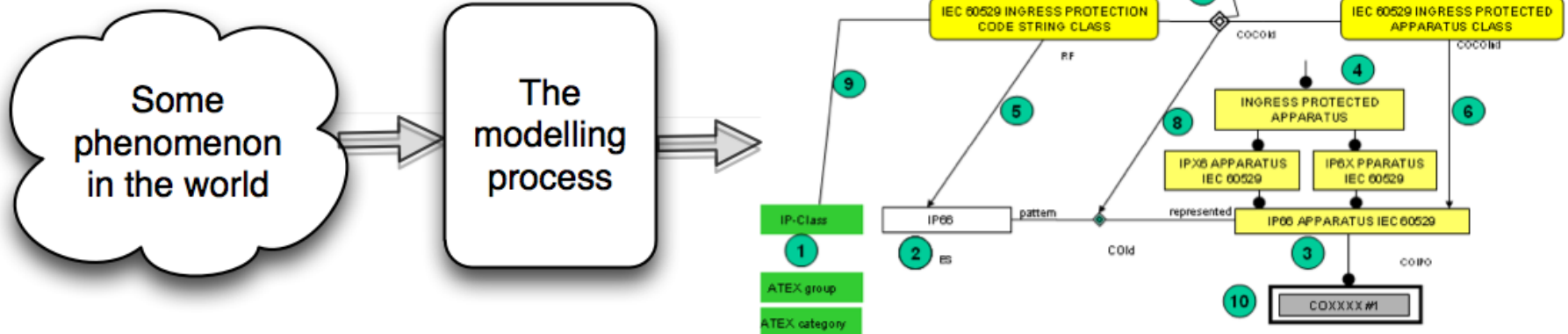
Modelling workshop

- **ISO 15926 Modelling workshop**
- **EPCs, suppliers, software vendors, owner/operators, consultants and researchers**
- **2 weeks august 2010**
- **Hosted by Bechtel**
- **Ca 18 participants with different background and experience**
- **Main goal: consensus on modelling methodology**

Organization of the workshop

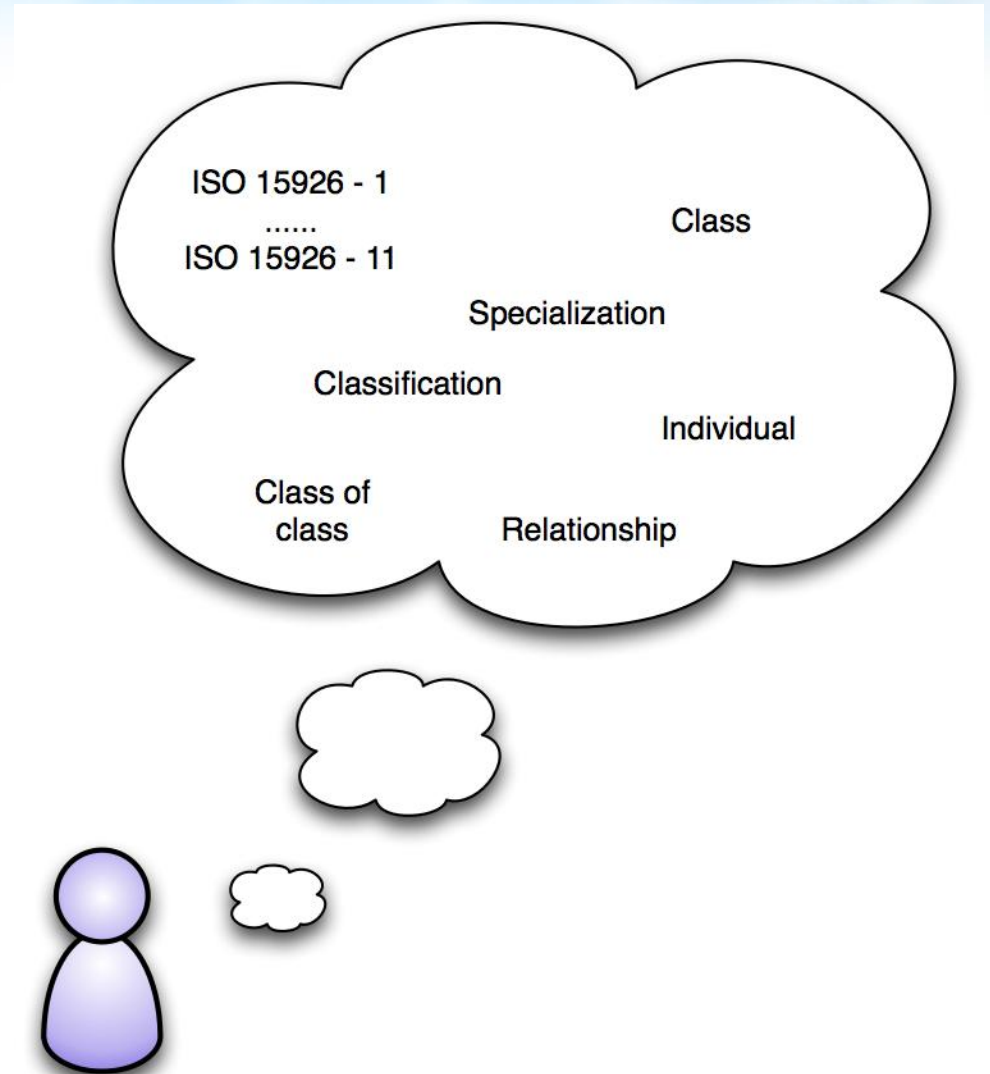
- Located in a class room
- Also some participants attending Live Meetings
- Phone, projector, white board and flip over
- Presentations of modeling methodologies that were currently in use by EqHub, Emerson, Bechtel, Bentley and planned in Tecgraf
- Discussions on the fly whenever needed

Modelling

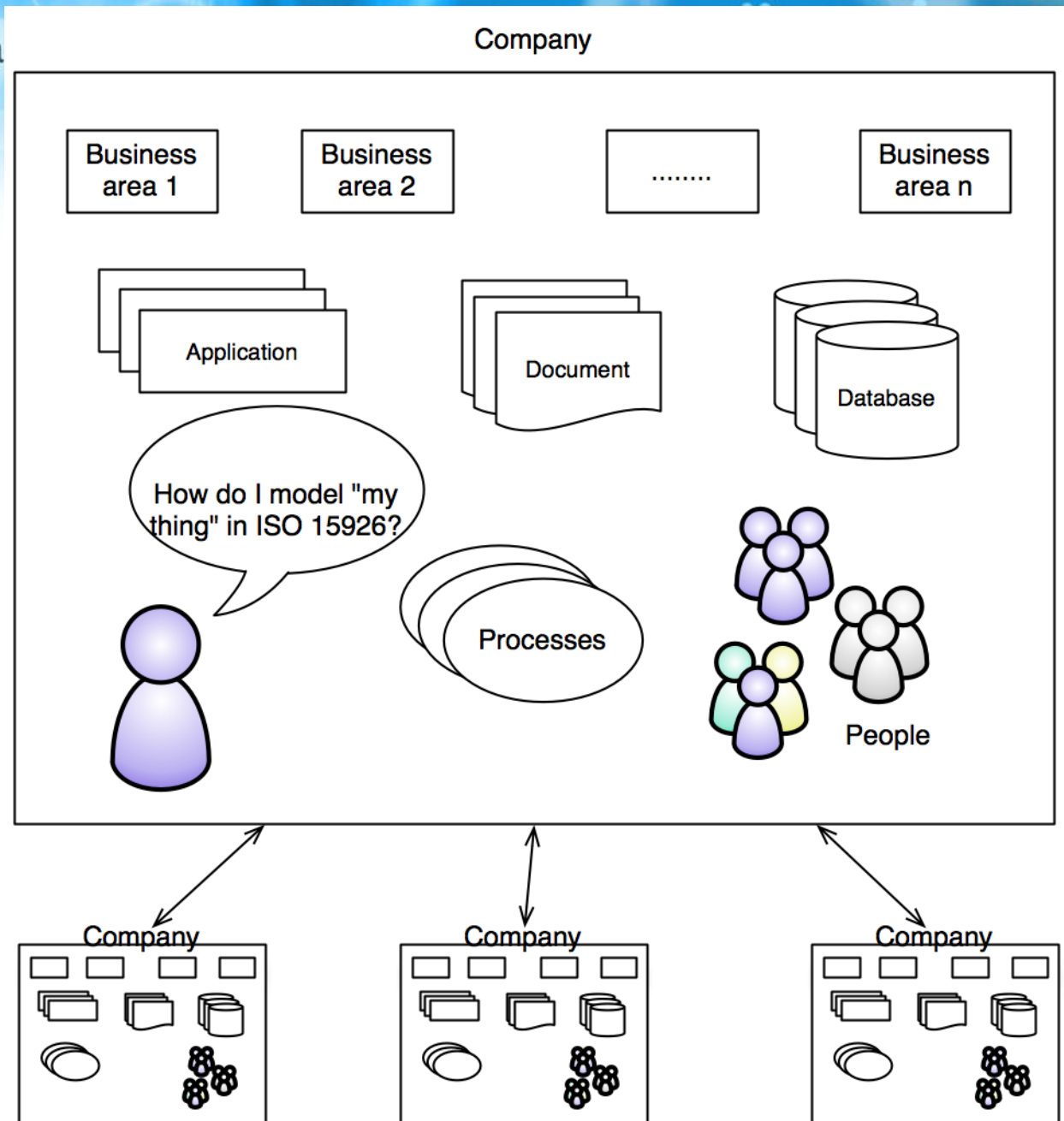


The creation of high quality reference data

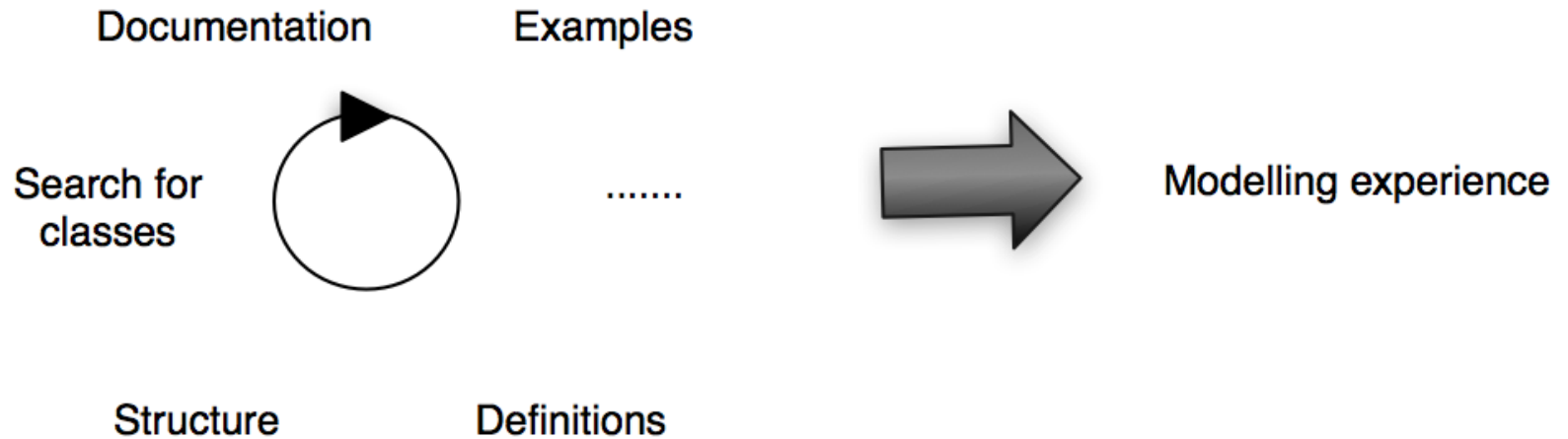
Some important concepts



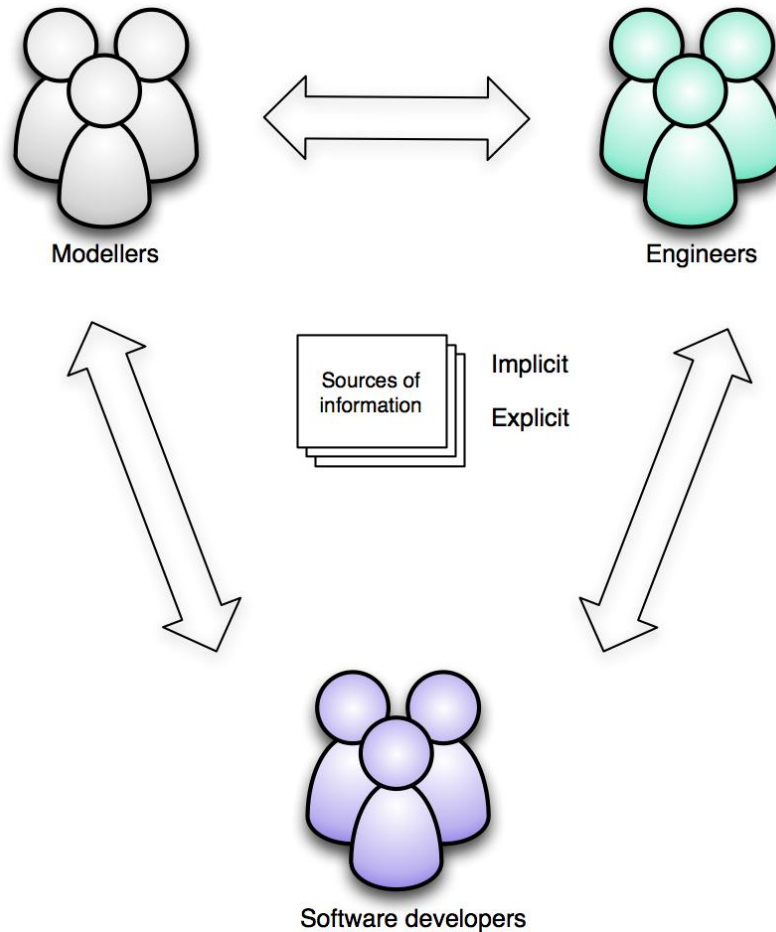
Where
do I
start?



How to get there?



Cooperation between different roles



Classes and individuals

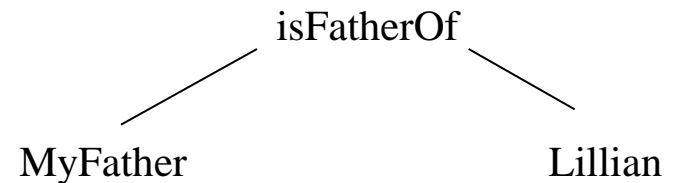
- An ISO 15926 Class is defined by its membership
- Each class has a unique id (PCA ID) and a definition
- A class is a category or type of things with one or several criteria for inclusion and exclusion
- -> a class is collection of individuals that corresponds the characteristics of that class
- **Examples:**
 - Pump –The collection of all pumps
 - Bicycle–The collection of all bicycles
- Whether an individual is a member of a class or not is based on its characteristics

Is it a class or is it an individual?

- **Depends on what we are talking about**
- **An actual physical thing and things that have a life cycle in time and space**
- **Does not have definition unless it is a reference individual (e.g. Paris, London, DNV)**

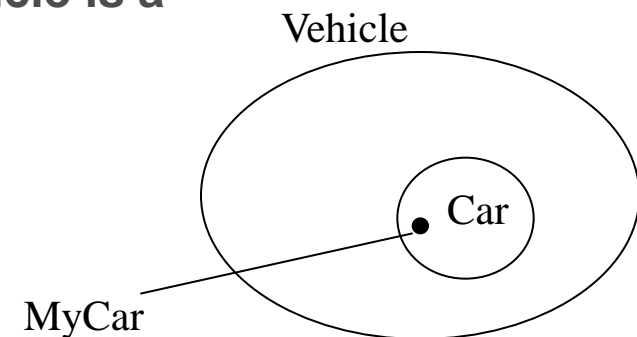
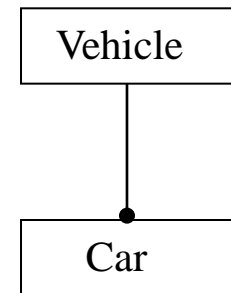
Relationship

- In general: something which holds of, or between, two objects
- Examples: is father of, is part of, is resident of
- In 15926, "relationship" means a particular relationship between two particular objects (things that can be members in classes)

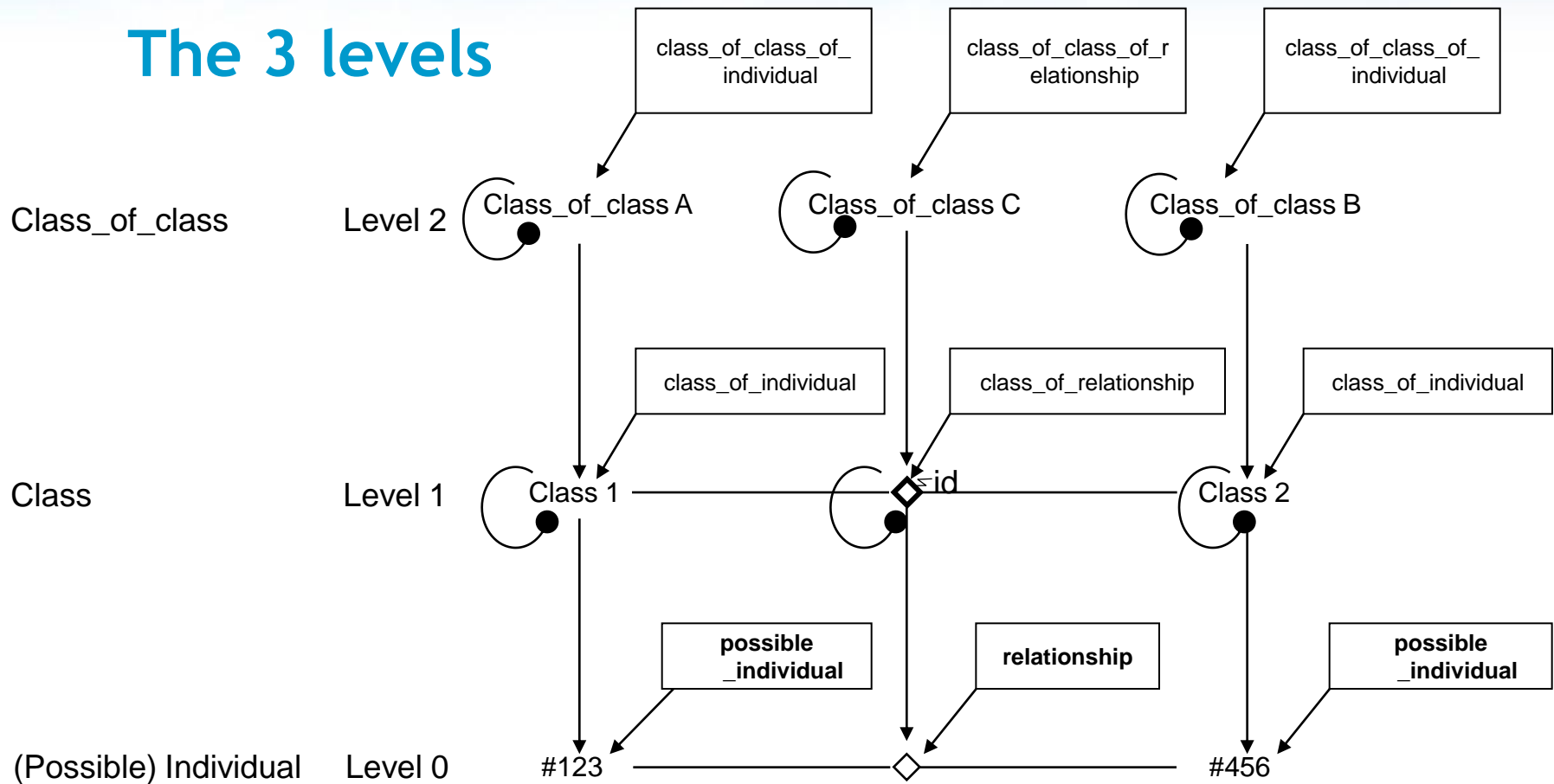


Specialization and generalization

- In a generalization-specialization relationship, the specialization by definition has the same properties, behaviours, and constraints as the generalization plus one or more additional properties, behaviours, or constraints
- Any car is also a vehicle, but not every vehicle is a car – ALWAYS
- A car is a specialization of vehicle, and vehicle is a generalization of car
- Should not be confused with inheritance in programming



The 3 levels

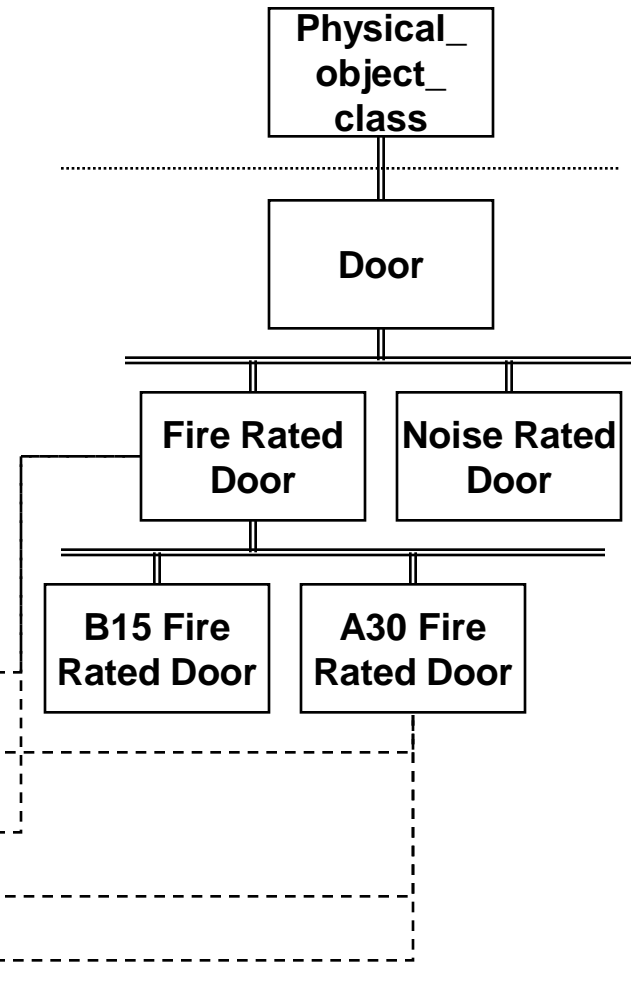
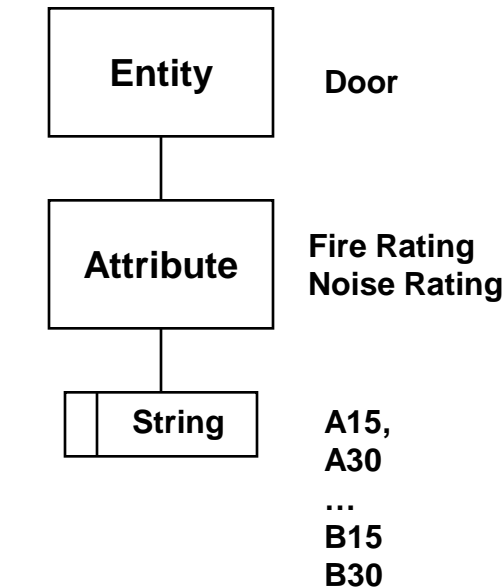
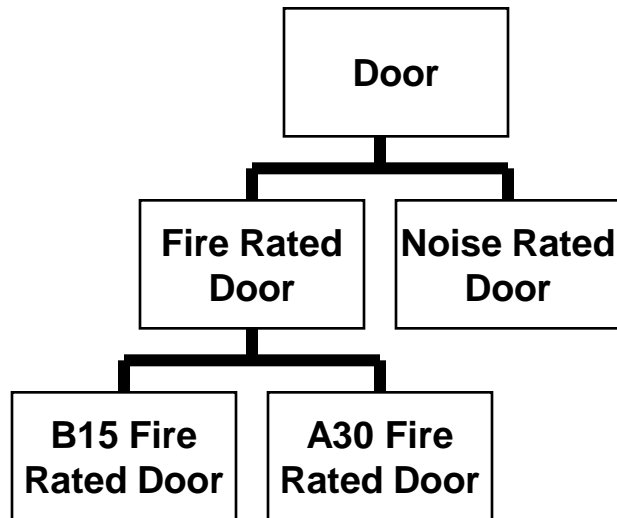


Fire Rated Door Class A30

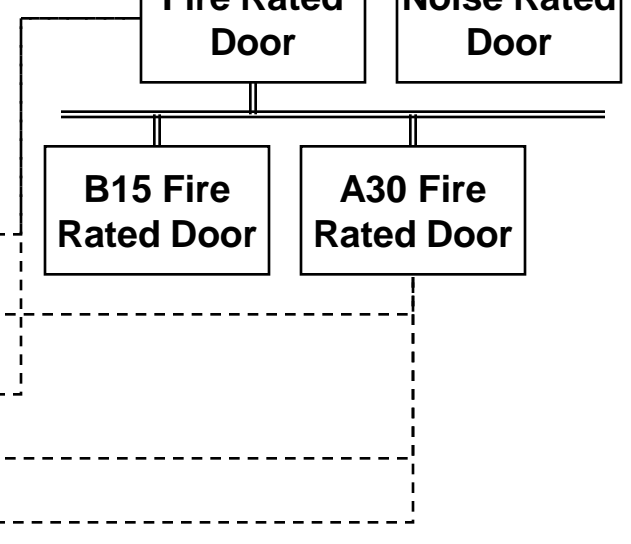
Schema

Attributes

RDL



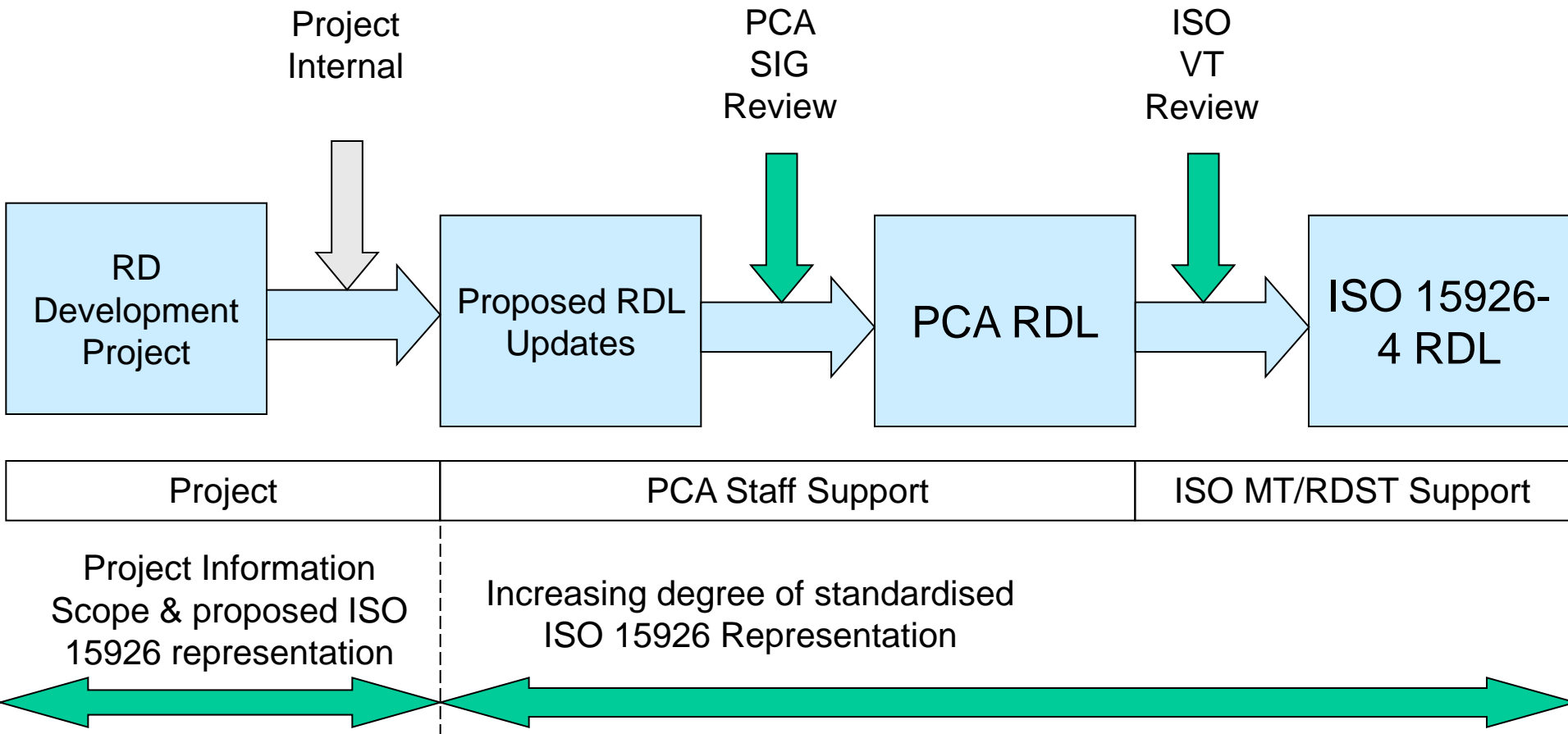
- Burn through time
- Burn through time > 30 min
- Inflammable material
- Metal Door Frame
- Metal hinges



How to deal with attributes?

- **Attributes should be defined as entities referred to by relationships**
- **Otherwise they cannot be referred to and are very inflexible to change**
 - attributes do not allow history
 - information about attributes cannot be held
 - e.g. Units of a number
 - e.g. language of a description
 - attributes do not allow different values
 - many descriptions
 - many names
 - changing values
 - attribution cannot be described

PCA Standardisation Process



Workshop outcome

- **Good perspective on concepts and issues involved**
- **Identify issues for improvement**
- **Time for coverage of details and discussions**
- **There is a need for guidance for how to do it right**
- **After some processing, the result should be a more complete methodology**

Questions?

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