



An ontology

... is a specific artefact designed with the purpose of expressing intended meaning of a shared vocabulary.

„An ontology is a specification of a conceptualisation“ [Gruber 1995]

CoCoViLa Ontology

...defines a set of system-specific concepts of the CoCoViLa system and their relationships.

It was not developed from scratch; a number of reusable documents and system interfaces were used for this interesting exercise.

The Goal

The goal of this exercise was to create a shared vocabulary of terms related to CoCoViLa and corresponding system of concepts and relationships (ontology) these terms refer to.

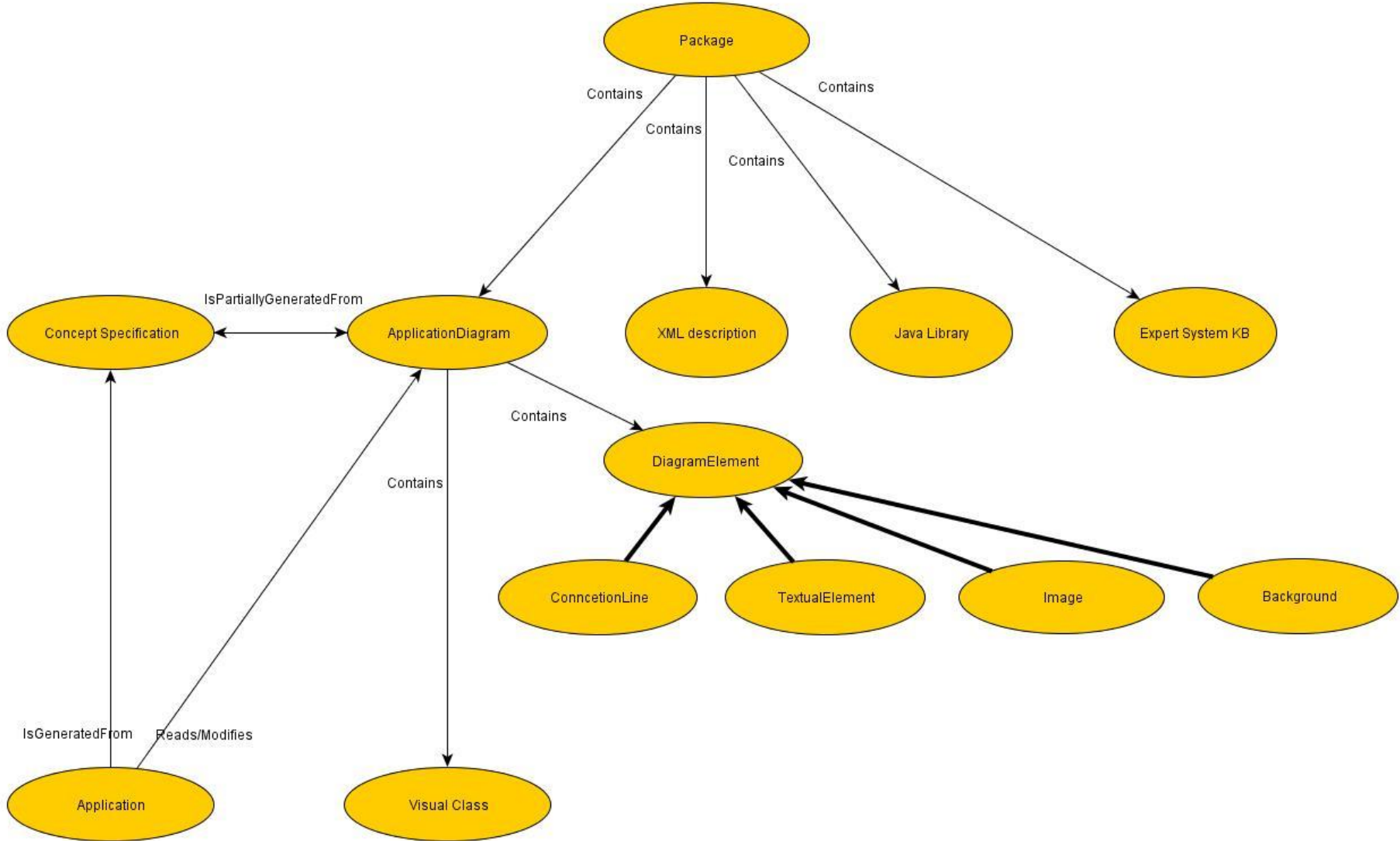
The aim was not to specify the CoCoViLa ontology in any formal language, but rather use a diagrammatic language to facilitate human understanding.

Motivations

- Different people have developed the CoCoViLa system during different time periods using different terms for talking about it.
- System documentation does not include a vocabulary of terms.
- There was a need for a shared vocabulary and common understanding of it.

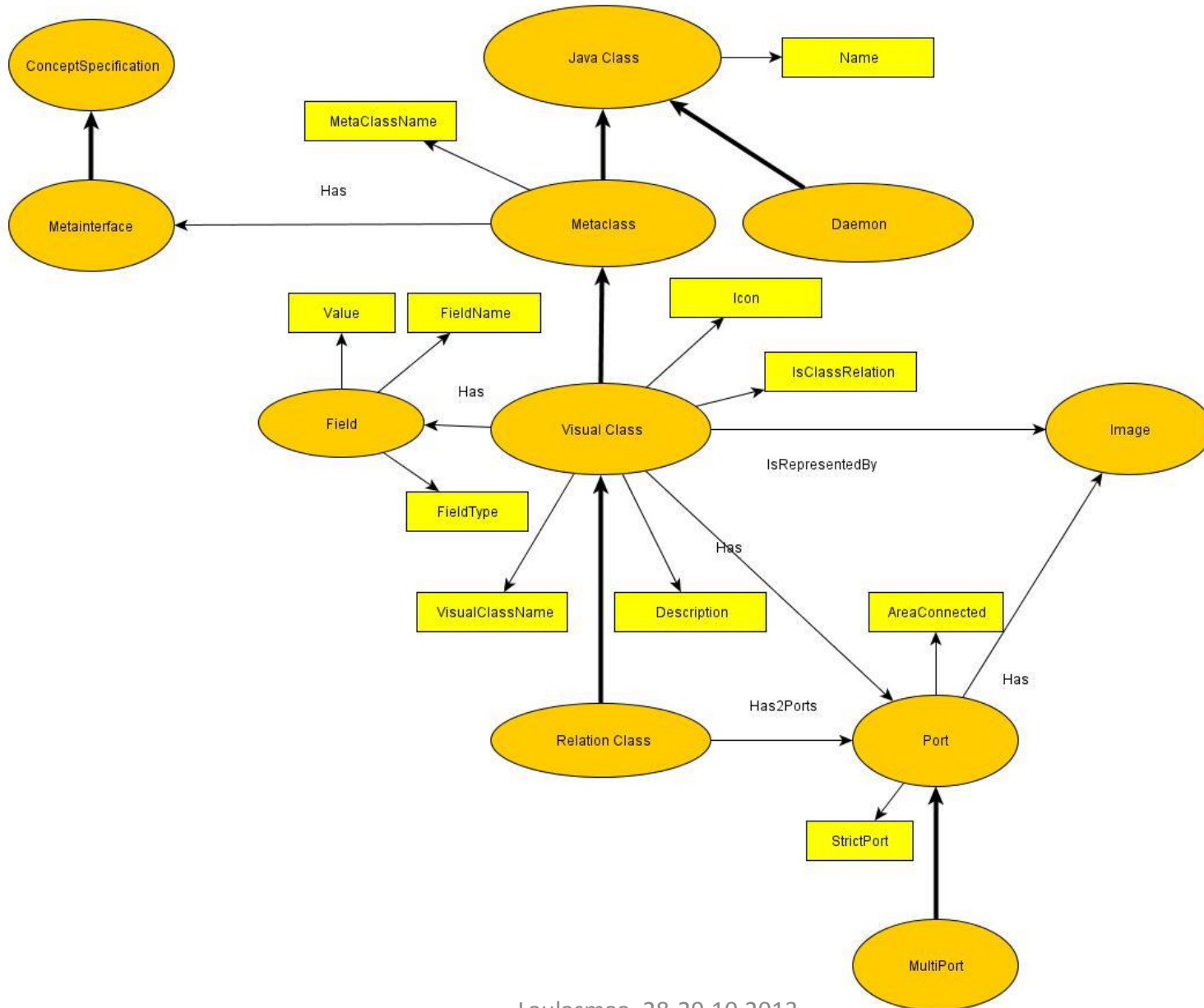
The Key Concepts

- **A package** is a domain model represented as a collection of instances of visual classes and application diagrams, expert system knowledge bases, XML descriptions, Java Libraries prepared for solving problems of a particular domain.
- **An application diagram** (previously scheme) is a graphic representation of an application model. An application diagram contains diagram elements and depicts the connections between images of visual classes used in an application. The application diagram can always be partially translated into the concept specification.



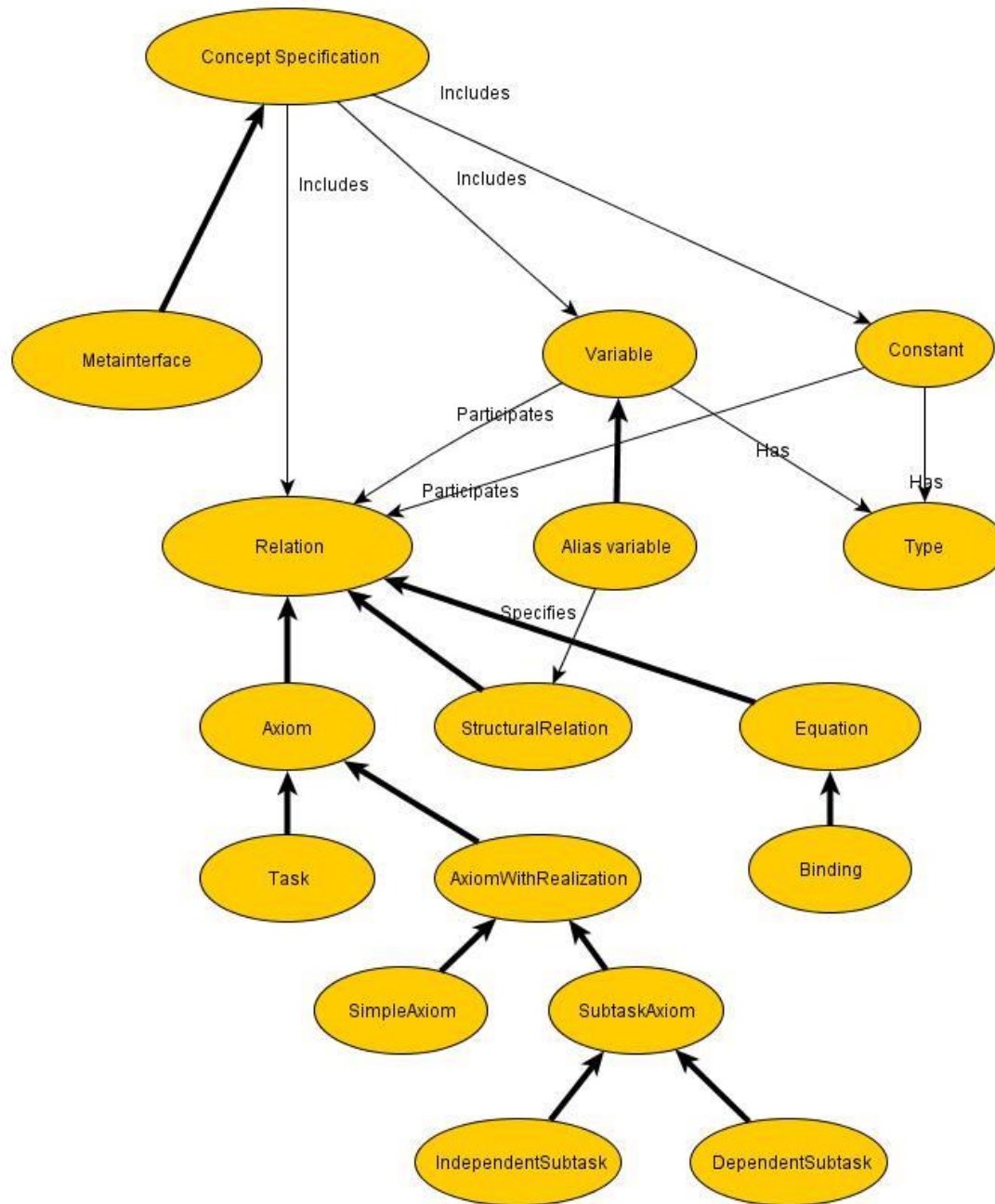
The Key Concepts

- **A visual class** is a metaclass extended with image, ports and fields. It has attributes like VisualClassName, Description, IsClassRelation and Icon.
- **A metaclass** is a Java class that includes a metainterface as a comment.
- **A metainterface** is a concept specification that is used only to facilitate automatic composition of an application.



The Key Concepts

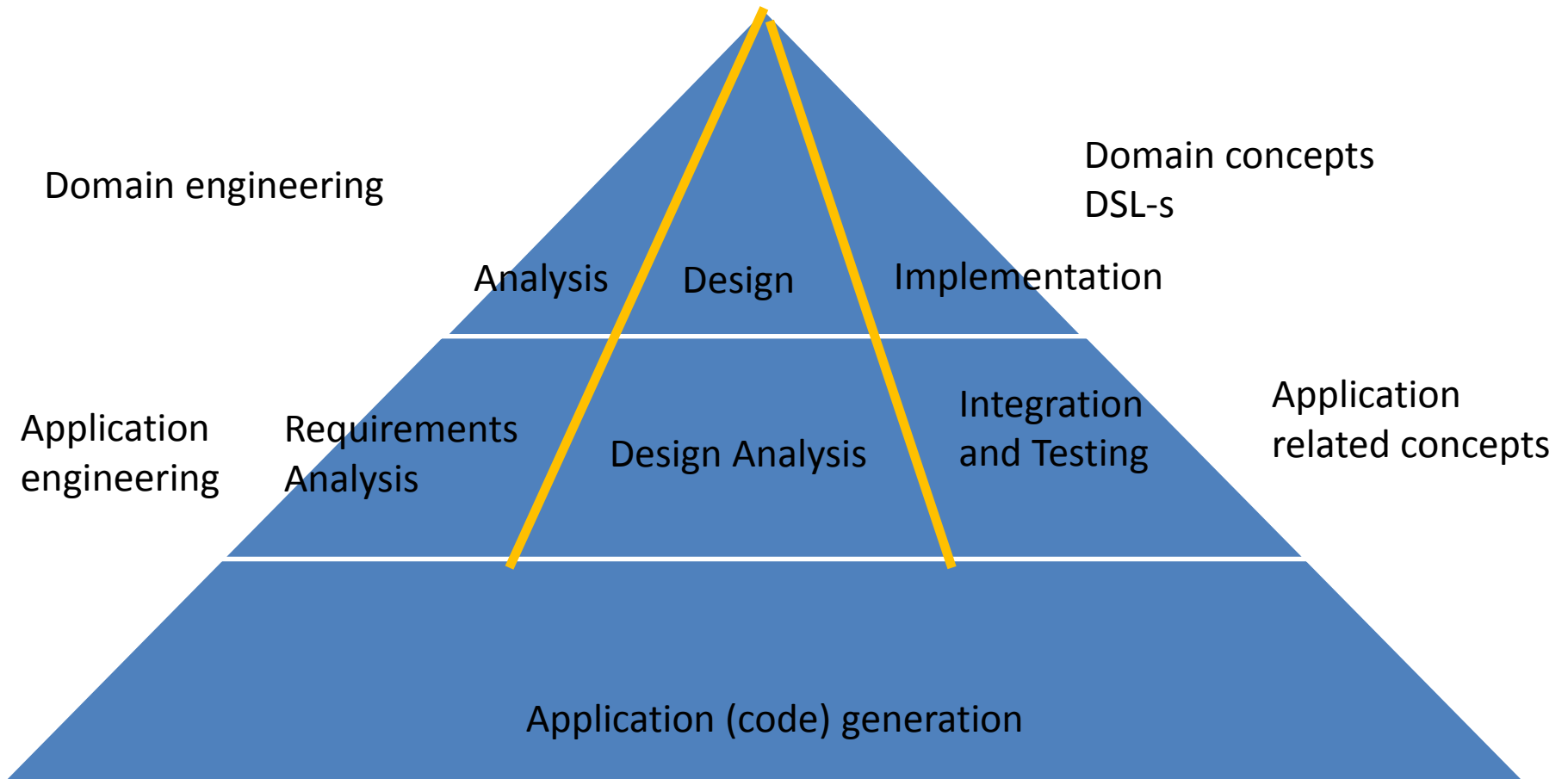
- **A concept specification** is a specification of domain/application concepts and their relationships in the textual specification language. The specification can be partially automatically generated from the given application diagram.
- **An application** is an automatically constructed program from concept specification for performing tasks of a software system. It may read and modify values related to application diagram.

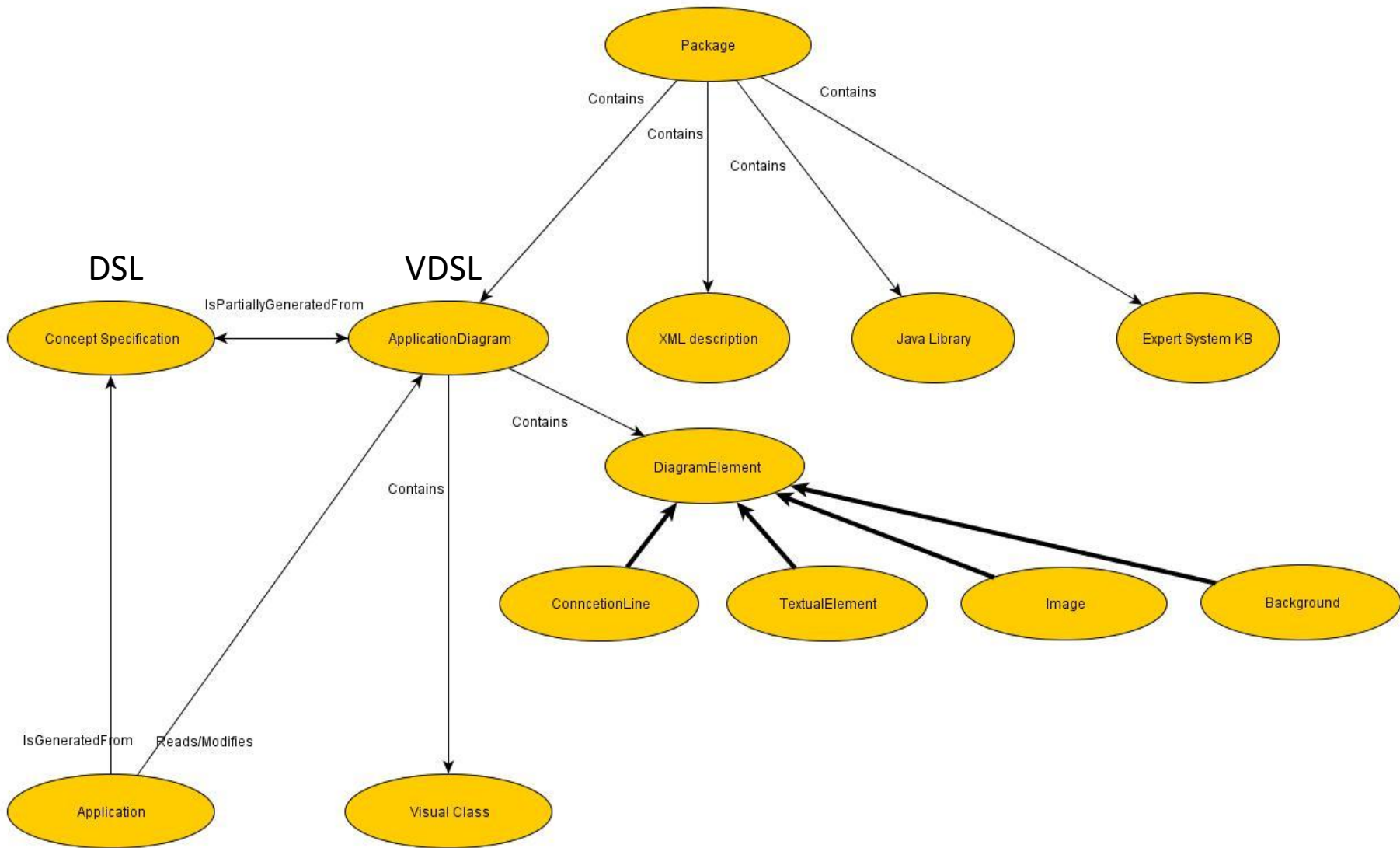


Discussion

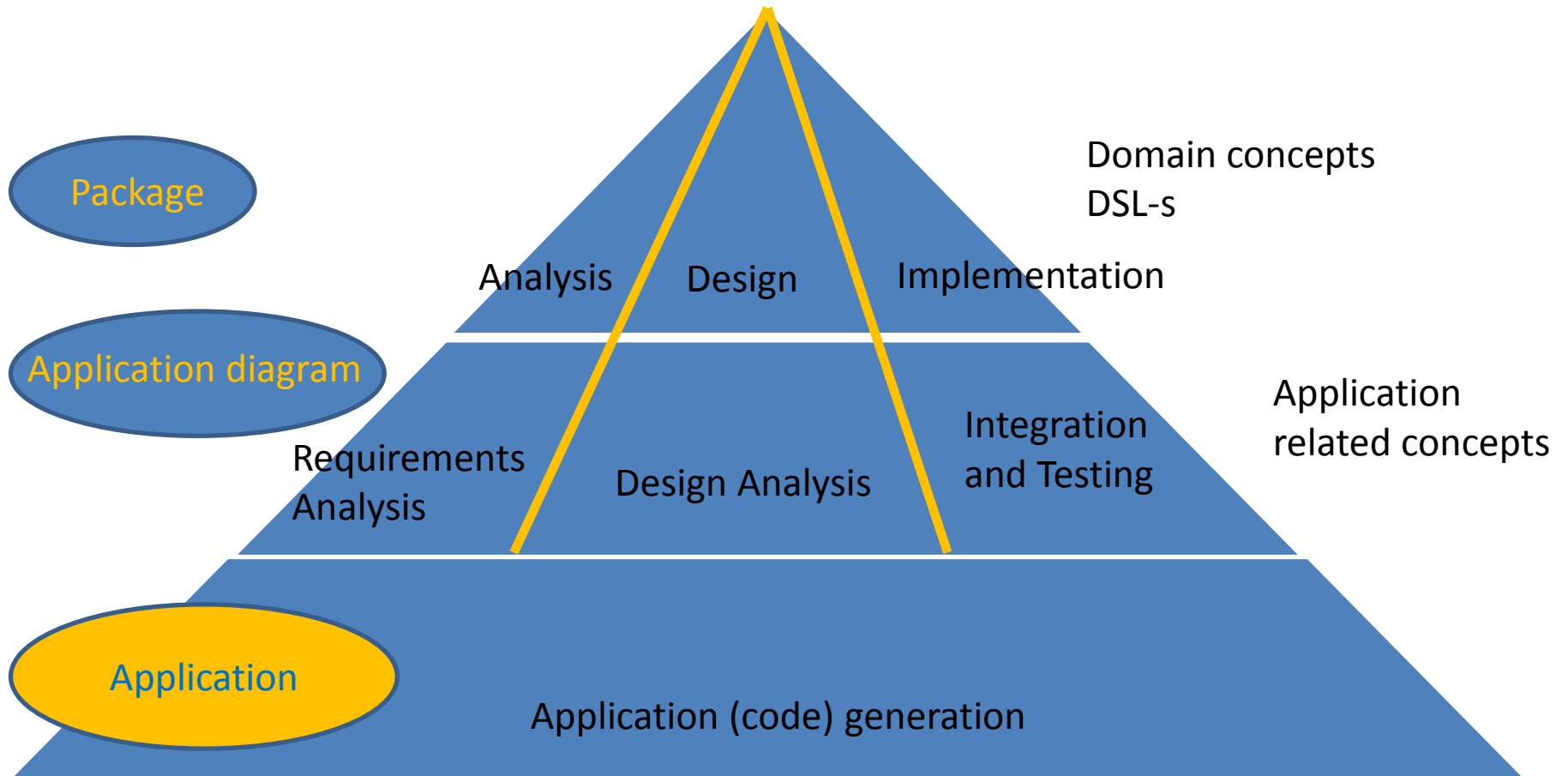


Levels of Abstraction of Concepts of Model-based Software Development





Levels of Abstraction of Concepts of Model-based Software Development and CoCoVila



Thank you very much!