

“Advancing Traffic Efficiency and Safety
through Software Technology phase 2 (ATESST2)”

EAST-ADL Analysis Level

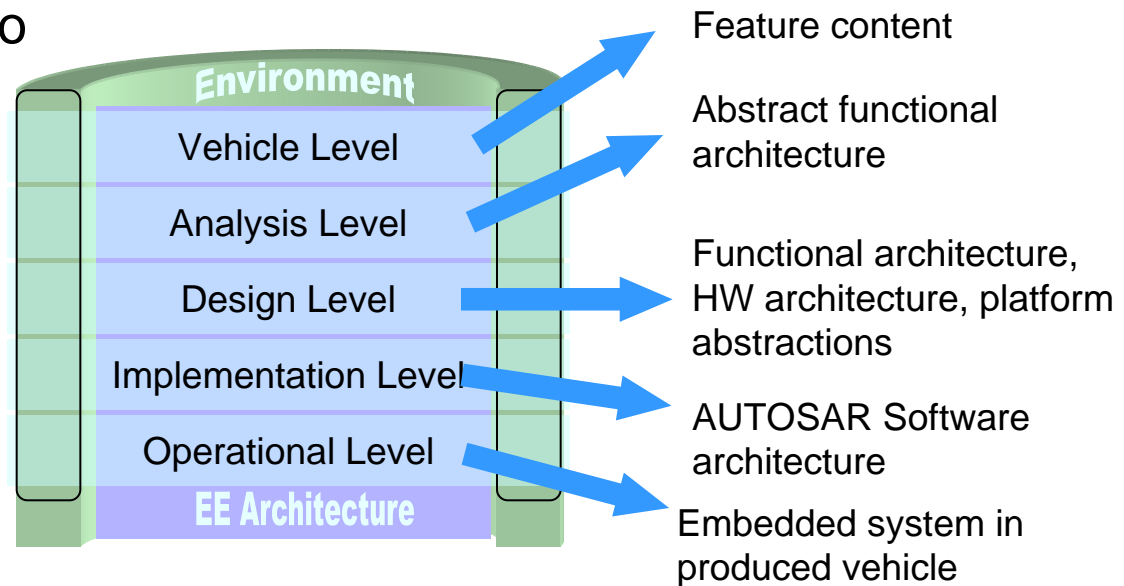
ATESST2 Concept presentation 2010 Q2



EAST-ADL

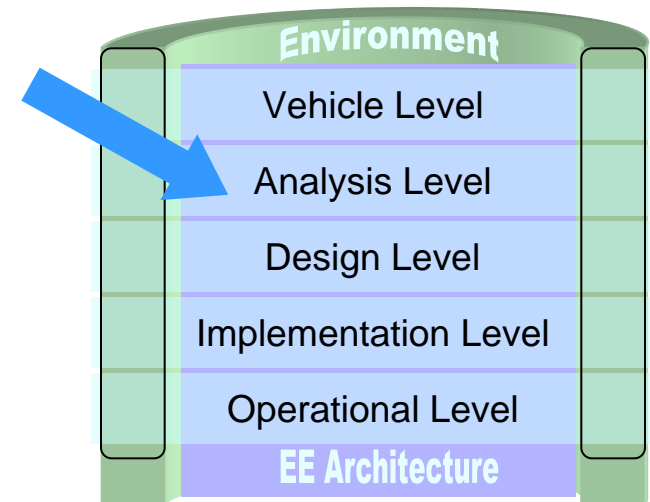
A System Modeling Approach that

- Is a template for how engineering information is organized and represented
- Provides separation of concerns
- Embrace the de-facto representation of automotive software – AUTOSAR



Analysis Level

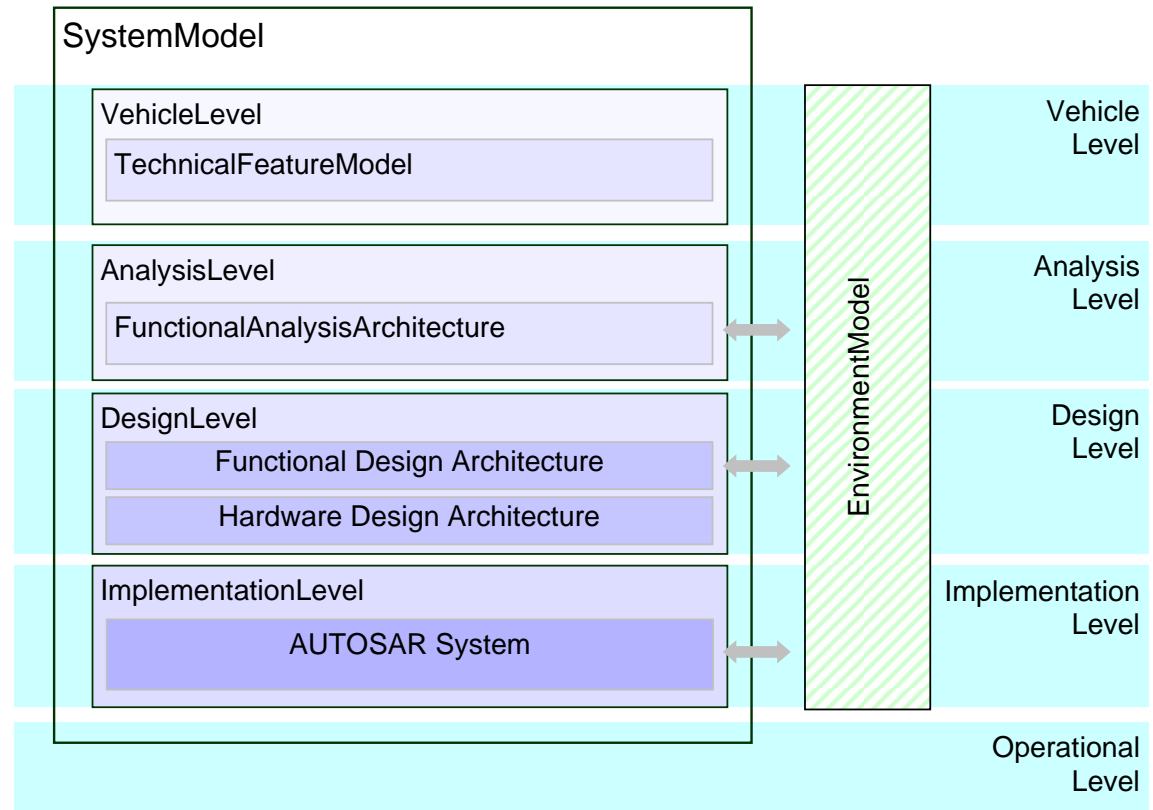
- Describes functions realizing the Features
- Reflects top level functional decomposition
- Allows analysis from a functional/
control engineering point of view
- Most implementation details are hidden
- Interaction with other functions and
environment
- Understanding of the function w.r.t
algorithmic behavior
- Detection of contradicting requirements
- Communication with other departments/stakeholders



Analysis Architecture

Main building blocks:

- AnalysisFunctions
 - Hierarchical decomposition of functionality
- Functional Devices
 - Abstract sensors and actuators



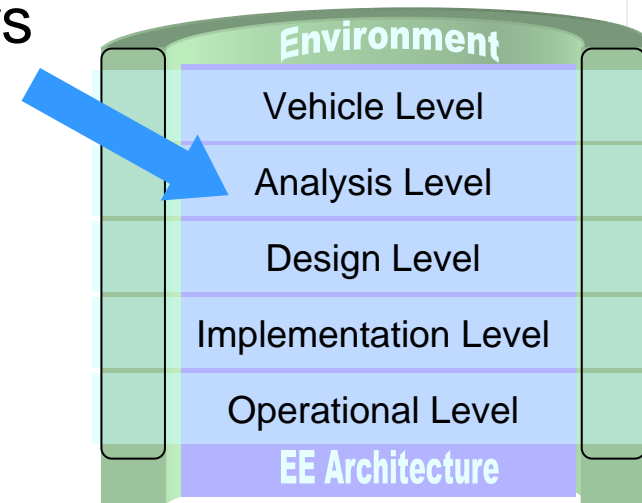
Validation on Analysis Level

Are the requirements consistent?

- Does the system execute at all
- Does it execute “meaningfully”

Identification of critical system parameters

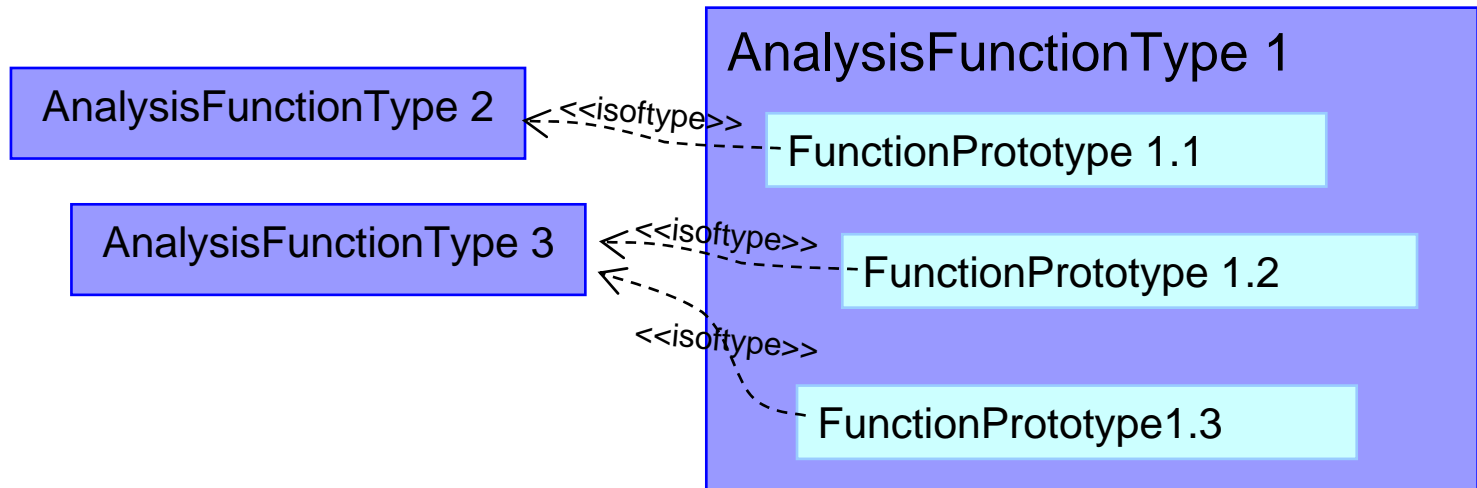
Are the requirements complete?



Function Hierarchy

AnalysisFunctions are defined hierarchically using

- Type definitions define the AnalysisFunction and its content
- Prototypes that represent occurrences of AnalysisFunctions



Function Hierarchy, contd.

A deep hierarchy can be defined by letting a hierarchical Functiontype be the type of a prototype.

