



Reference Architecture Overview and Benefits

THALES

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Thales Alenia Space considers that the simulation activities at sub-system and system levels:

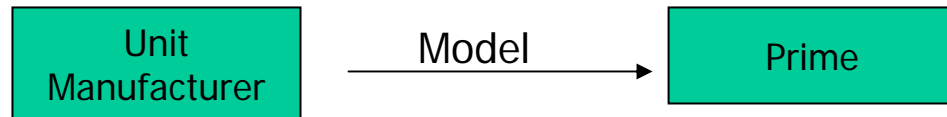
- Are a key part of space projects for:
 - Design
 - Performance
 - Verification and Validation
 - Training and Maintenance
- Development and Exploitation must be performed at Prime level

Thales Alenia Space has a simulation product line

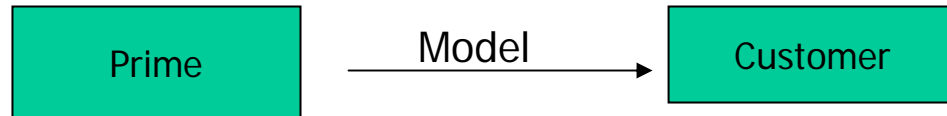
- Based on internal products (infrastructure and libraries)
- Based on hierarchic architecture (simulation layers)
- To improve the reusability of model
 - Phase to phase
 - Project to project

Thales Alenia Space identifies 2 use cases of external models reusing :

- Import of model



- Export of model



SMP2 is an answer to the portability/exchange problem (≠ reuse problem)

**The SMP2 standard is not enough to ensure the model reuse.
A reference architecture shall be defined to facilitate and to promote reuse and exchange**

SMP2 is a complex computer science solution developed by SW engineers with few consideration of the final user needs.

The SSRA is the missing link between SMP2 and ETM-10-21.

The SSRA shall be the result of global thinking carried out by the model designers and final users with SW engineer support.

The SSRA shall at least defines:

- Use cases
- Model interface requirements (not the mechanisms but the semantics/goals)
- Model roles/responsibilities
- Model behaviour (including timing aspects)

Based on a preliminary study, a dedicated working group shall be organised to define SSRA