

Systemerel Smart Solver Forum Méthodes Formelles

- S3
- S3 for C
- S3 for Scade
- cS3 for Scade

Systemerel Smart Solver

Systemrel Smart Solver

- Family of « Model Checking » solutions
- SAT based – largely automatic
- Large application spectrum:
 - Property proofs – Certification
 - Absence of unspecified code behavior
 - Automatic test case generation (functional/structural)
 - Failure Mode and Effect Analysis (FMEA) – Fault Tree Analysis (FTA)
 - Equivalence proofs
 - Extended debugging – simulation
 - Constraints satisfaction, optimizations, routing, planning, ...
- Languages to express models and properties (HLL, sHLL)
- Generic toolset proven in use on industrial size systems
- Specialized translators (C, Ada, Scade, ...)
- Team of experts (support, consulting, specific solutions, ...)

S3

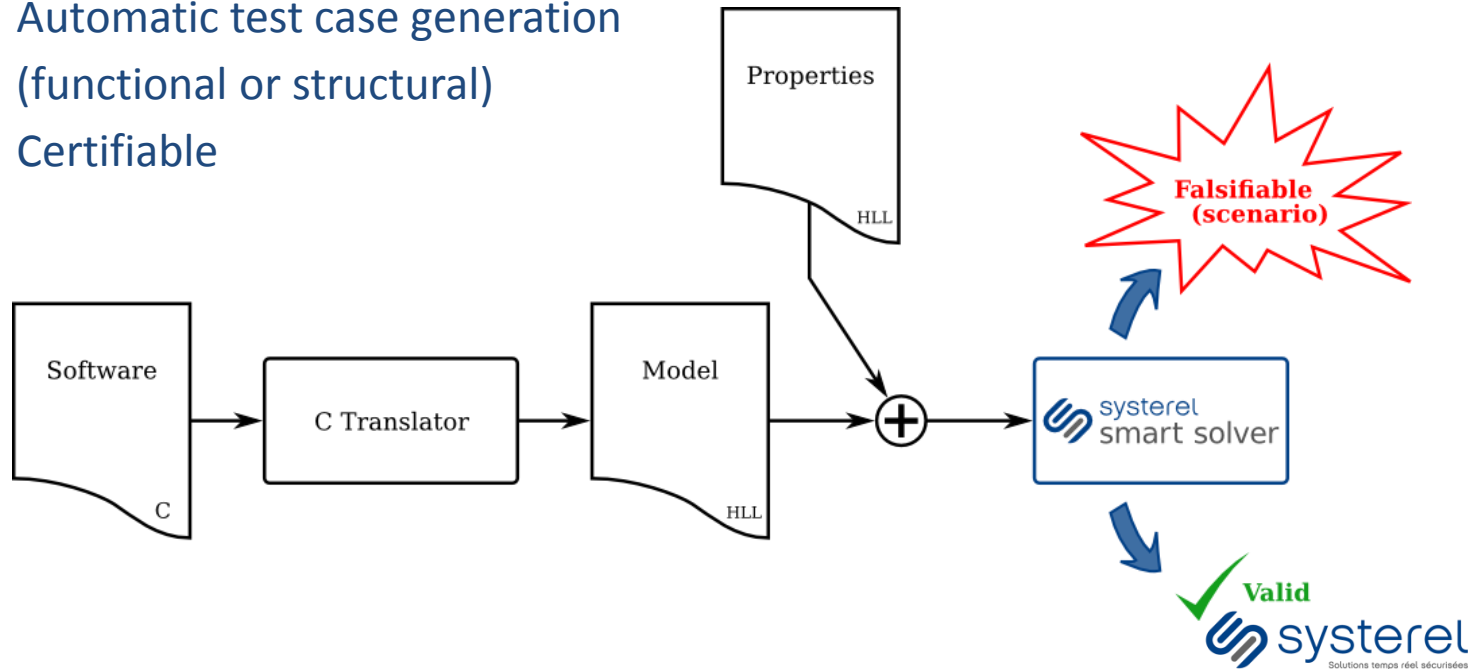
S3 for C

S3 for Scade

cS3 for Scade

Systemel Smart Solver for C

- Static analysis of C code (C99 with some restrictions)
- Exact modeling (no abstractions)
- Analysis of user-defined properties
- Analysis of unspecified behaviors (out of bond accesses, overflows, uninitialized variables, unreachable code, dead code, ...)
- Automatic test case generation (functional or structural)
- Certifiable



S3

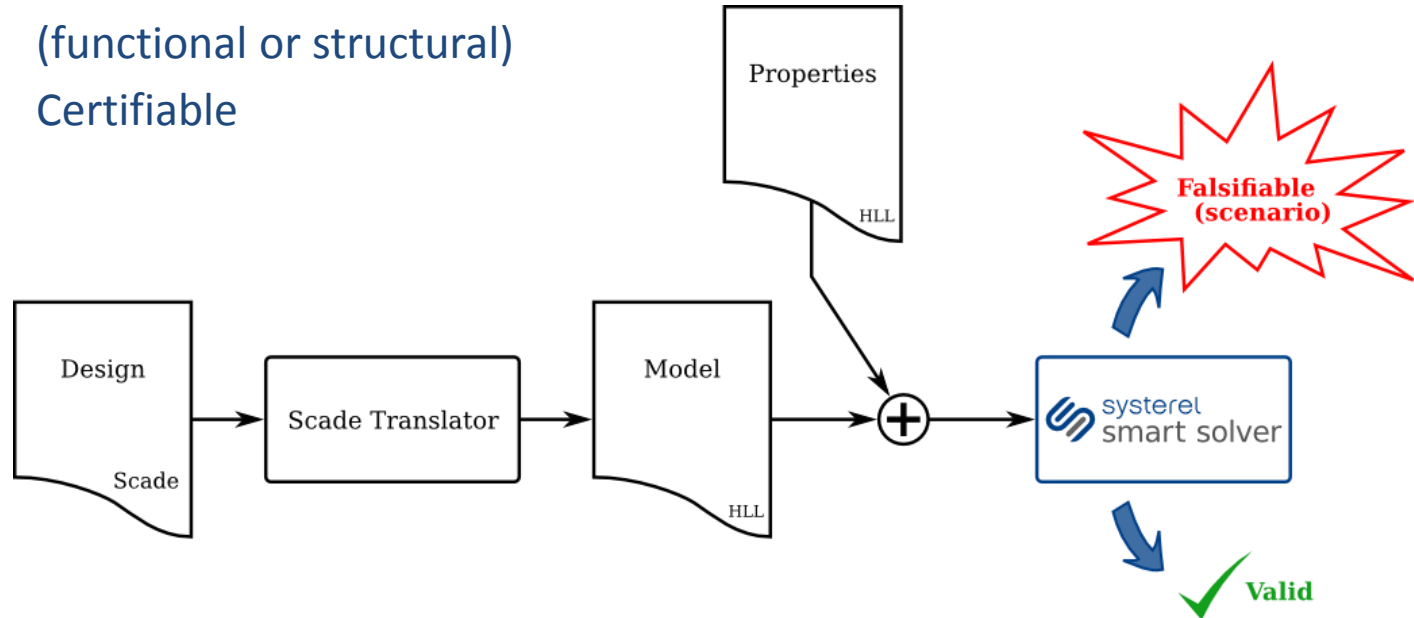
S3 for C

S3 for Scade

cS3 for Scade

Systemel Smart Solver for Scade

- Static analysis of Scade designs (v5 and v6)
- Exact modeling (no abstractions)
- Analysis of user-defined properties
- Analysis of unspecified behaviors (overflows, uninitialized variables, ...)
- Automatic test case generation (functional or structural)
- Certifiable



S3

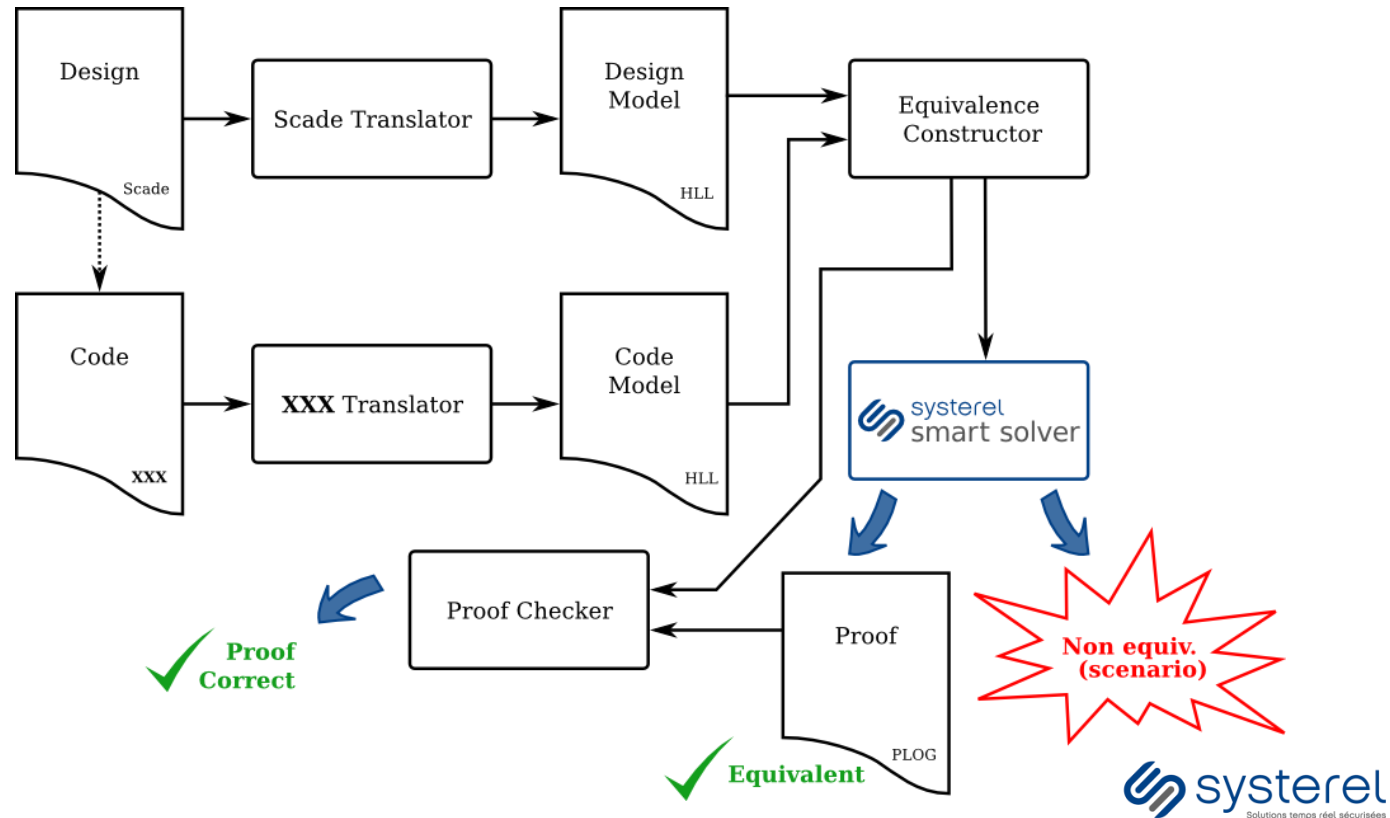
S3 for C

S3 for Scade

cS3 for Scade

Systemrel Certifiable Smart Solver for Scade

- Certifiable analysis of Scade designs (v5 and v6)
- T2 SIL-4 EN 50128:2011, on-going for DO178
- Diversification, sequential equivalence checking, proof verifications



S3

S3 for C

S3 for Scade

cs3 for Scade