Systerel Smart Solver
Systerel 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, ...)
Systerel 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
Systerel 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
Systerel 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