ATLAS

Advanced Test Lab with Automated Simulators

ATLAS, which is developed by Simsoft Information Technologies, provides simulator and test automation tool structure for all systems including the real-time systems.

The main purpose of ATLAS is to enable the simulators of different systems to be modeled in a flexible & fast way while simulating and executing the tests for the systems through automatically generated user-interface structure.

In ATLAS, the test steps are defined and run automatically without the need of any code knowledge. The synchronous and asynchronous test steps defined by the user can be reported in formats such as MS Word, HTML, IBM Doors etc..

ATLAS enables flexible work sessions during development by offering a wide-range of communiction options including avionics, automative, ethernet and serial channel protocols. Thanks to ATLAS's real-time operating system structure, it is possible to run time-critical simulators and to run expandable simulators simultaneously with its distributed structure.

simsoft

ATLAS

ALL IN ONE
SIMULATOR
&
TESTING SUITE

SIMULATION
COMPLETE AND EFFECTIVE TEST MANAGEMENT

TEST AUTOMATION

ATLAS provides solutions with its automated testing structure in the verification process which is one of the most important processes of development phases. The model-based test steps allow the definition of tests without any need for coding. The test steps defined as synchronous and asynchronous can be documented by exporting them in formats such as MS Word, HTML, IBM Doors etc. Tests can run on Windows and Real-Time operating systems.

After the test execution, the issues and bugs can be assigned to the users as an output through issue tracking programs such as Redmine, Jira etc.

WHY CHOOSE ATLAS?

- User-friendly UI
- Productive Test Management
- Easy Tracking The Status of Tests
- Real-time Synchronisation
- Integration with Test Automation Tools
- Reporting and Visualization Options
- Fast Professional Support

SIMULATOR ENGINE

The simulators created by ATLAS Modeling Tool can be run on an auto generated interface. Communication is provided by automatic encoding / decoding process through defined periods and data types on the simulator. The capability of communicating through different communication protocols provides high flexibility. Simulator engine provides the following features:

- Supporting different measuring units
- Transmitting the data out of range
- Aperiodical communication between the messages
- Communication restrictions
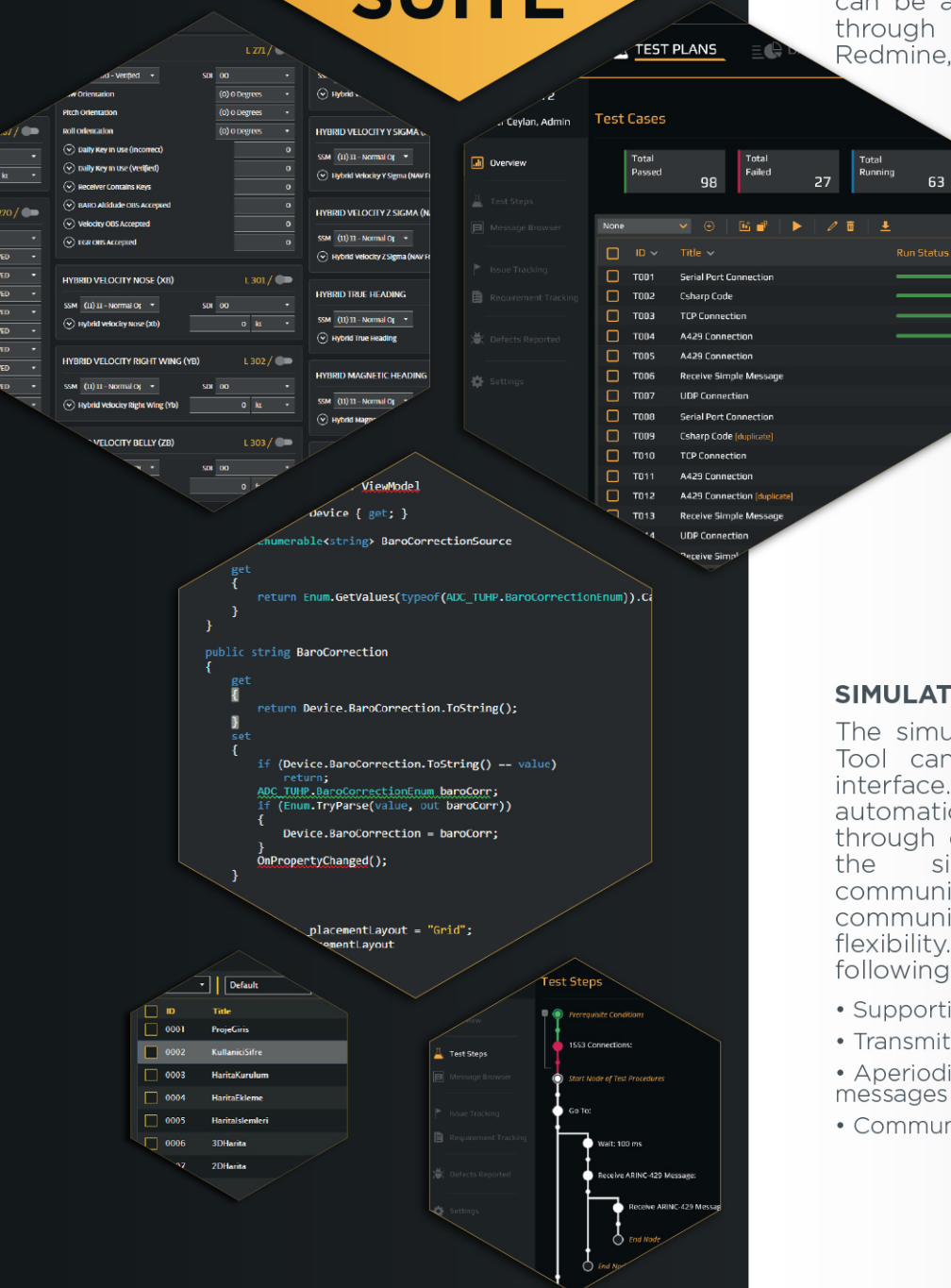
MODELING TOOL
INTEGRATION AND COLLABORATION

MODELING TOOL

Model-based simulators can be created with ATLAS modeling tool. Thanks to the modern user interface, models are created fastly without any code development. Not only the interface control documents committed by the system engineers can be modeled, but also these documents can be exported with the modeling tool.

The modeling tool, which provides a script development structure for non-modelable objects, supports some features such as code completion and decoding provided by its development environment.
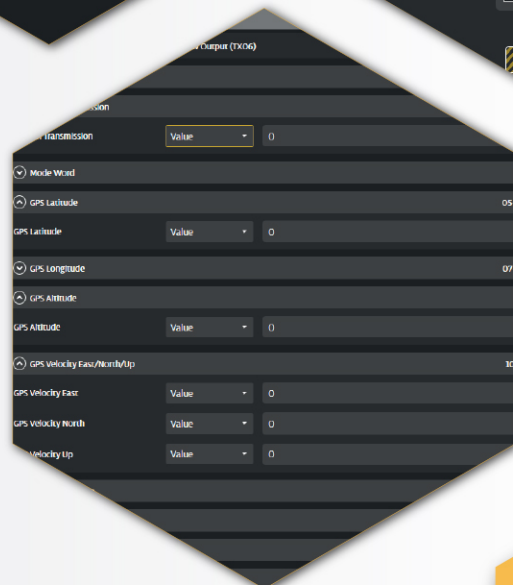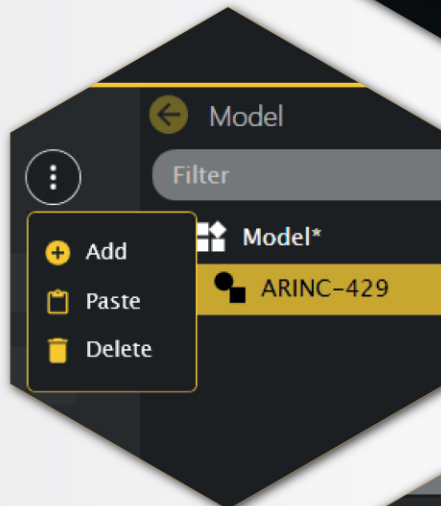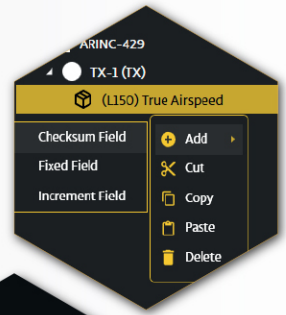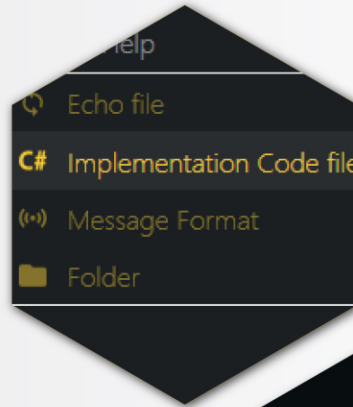
SUPPORTED PROTOCOLS

- ARINC-429 (Avionics)
- ARINC-664 (Avionics)
- ARINC-825 (Avionics)
- ARINC-818 (Avionics)
- MIL-STD-1553 (Avionics)
- MIL-STD-1760 (Avionics)
- CAN (Automative)
- TCP
- UDP
- DDS
- RS-170
- RS-232
- RS-485
- RS-422

REAL-TIME DISTRIBUTED ARCHITECTURE

ATLAS provides real-time structure for critical system simulators like avionics. Time-critical situations of simulators and tests are provided in this architecture.

By using a distributed structure, different processors can communicate with each other in case a single real-time processor is not enough. Simulators and test engines running on these processors display the test reports by communicating with the software.

MANAGE
&
ORGANIZE
with
MODELING TOOL
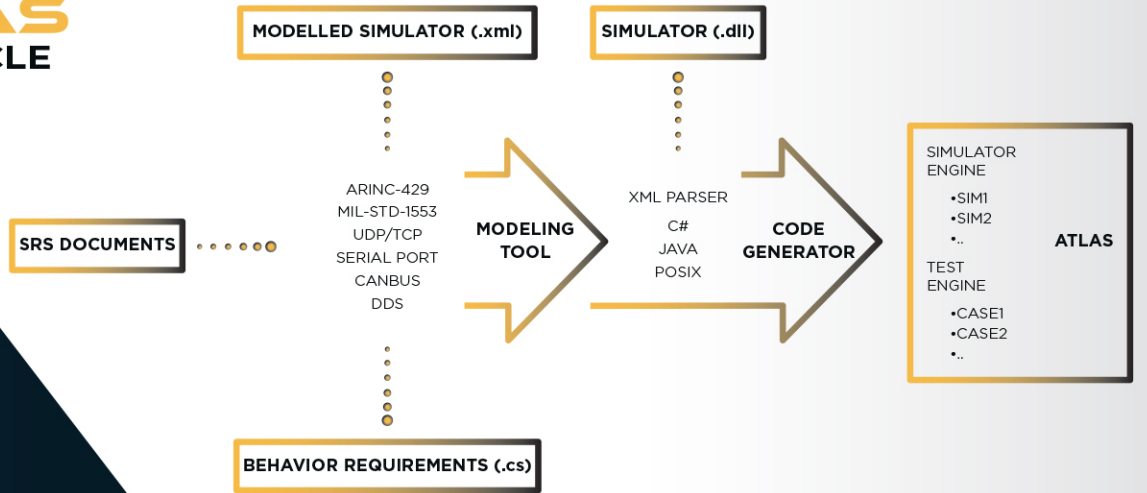
2021

ATLAS

ONE SIMULATOR FOR ALL SYSTEMS

FEATURE HIGHLIGHTS

- Advanced Test Automation
- Simple Simulator Modeling
- Modern Simulator UI
- Test Debugging and Automatic Reporting
- Supporting Various Communication Protocols
- Real-Time Operating System Support
- Distributed Architecture
- Wide variety of hardware support including PCs, SBCs, Embedded Devices
- Automatic Interface Control Document Generation
- Measurement Unit Conversions
- Easy to Create Test Steps
- Writing Script Tests
- Exporting Test Definitions
- Integration with Issue/Bug Tracking
- Integration with System Specifications

BENEFITS

- Adjustable features accelerate development and test processes.
- Once the model is defined, test cases and test steps can be generated automatically from the model.
- Test definition documents are generated automatically from the model-based test steps.
- The software can be used in CI/CD phases with automatic test running.
- With the various of tool integrations (specifications, issue tracking), auto-tracking progress is provided.
- Thanks to the different communication protocols, the flexible development execution is provided.
- Real-time support provides the capability for the developers to simulate time-critical systems.

ATLAS LIFE CYCLE

MODELLED SIMULATOR (.xml)

SIMULATOR (.dll)

SRS DOCUMENTS

ARINC-429
MIL-STD-1553
UDP/TCP
SERIAL PORT
CANBUS
DDS

MODELING TOOL

XML PARSER
C#
JAVA
POSIX

CODE GENERATOR

SIMULATOR ENGINE
- SIM1
- SIM2
- ..

TEST ENGINE
- CASE1
- CASE2
- ..

ATLAS

BEHAVIOR REQUIREMENTS (.cs)

CMMIDEV/3 SM
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ISO 27001

K - Q TSE-ISO-EN 9000

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