

TRAINING CATALOG

2019



AVSIMULATION

www.avsimulation.fr



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SCANeR™ studio

Introduction

Based on the feedback of its customers, AVSimulation has extended its training offer and is now providing a standard set of training modules to cover the large range of applications of SCANeR™ studio.

This catalog lists all the available programs sorted by categories and modules.

These training modules are oriented toward a good user experience through exercises and real world samples.

Training options

There are different ways to attend a training:

- at AVSimulation office in Paris
- at your office
- online

Training at AVSimulation office in Paris

Regular training sessions will be organized as follows:

- One computer and one SCANeR™ studio full license per trainee
- Access to AVSimulation integration workshop for the practice sessions with SCANeR™ studio approved hardware
- Opportunity to meet the SCANeR™ studio support and development team

Training sessions will be arranged for 2 to 6 students. Please consult the agenda on our website www.avsimulation.com (coming soon, for now use sales@avsimulation.fr)

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Online trainings

These courses are made remotely by an expert engineer. The content is identical to the courses organized at AVS office. However, online training should be reserved to basic modules.

On-site trainings

An AVS trainer comes to your office. The training content can be adapted to your needs.

More details

The price is available on request to AVS sales team: sales@avsimulation.fr

You can register with AVS customer services: support-scaner@avsimulation.fr

Vincent HONNET
Training Manager

SCANeR™ studio

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SCANeR™ studio

BASIC

B1: SCANeR™ studio essentials (basic level, 2 days)

- Understand SCANeR™ studio modular structure
- Create and manage a configuration
- Start and stop a simulation
- Create a basic experiment
- Record, analyze and export data
- Create a basic road network
- Understand vehicle modeling
- Know where to find help

SCANeR™ studio

INTERMEDIATE

I1: Standard simulation modules (intermediate level, 2 days)

- Overview of new features of SCANeR™ studio
- Design a dashboard
- Bookmark simulation times with time markers
- Setup a radio communication with Intercom
- Tune sound samples
- Record the screen content with Screen Recorder
- Manage cameras and cockpits



SCANeR™ studio

I2: Advanced experiments (intermediate level, 2 days)

- Tune the environment and initial conditions
- Control autonomous vehicles and pedestrians behavior
- React to events, script the simulation
- Manage the traffic (traffic lights, swarm, sources & sinks)
- Monitor the interactive vehicle (position on the road, relationship with other vehicles)
- Manag infrastructure objects and physics collisions
- Interact with the driver (display text and images, play sound, cabin acquisition)
- Choose data to record for debriefing
- Advanced scripting (tasks, Python)
- Advices for experiment creation

```
Main
├── Step 2 : change afety time
│   ├── IF getScenarioClock () > 20 BECOMES TRUE
│   │   └── getScenarioClock ()
│   └── THEN setSafetyTime ([1] Ford_Kuga_White_UK, 0.5)
└── Step 3 : change max speed of slow vehicle
    ├── IF getScenarioClock () > 30 BECOMES TRUE
    │   └── getScenarioClock ()
    └── THEN setMaximumSpeed ([0] Citroen_C2, 50)
```

I3: Road networks (intermediate level, 2 days)

- Create a road network (axis, profiles, lanes, intersections)
- Add traffic signs, traffic lights and decoration objects
- Edit altitude and banking
- Generate a 3D terrain and a rolling surface
- Convert a 3dsMax object using OSG exporter
- Import Shapefile data
- License needed: Academic Plus or more



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14: SCANeR™ studio module development (intermediate level, 2 days)

- Overview of all the existing API
 - Build and use the SDK samples
- Understand SCANeR™ studio messages
- Develop a module using C++
 - Develop a module using Matlab/Simulink Communicate using the VEN protocol
 - Use Controlpad to spy messages
 - Prerequisite: C++ and/or Simulink software programming knowledge



15: Acquisition and instrument panel development (intermediate level, 2 days)

- Understand UDPCabin protocol
- Develop an acquisition module using LabVIEW
- Configure HumanDriver acquisitions
- Exchange SCANeR™ studio messages
- Develop an instrument panel module
- Prerequisite: LabVIEW and software programming knowledge

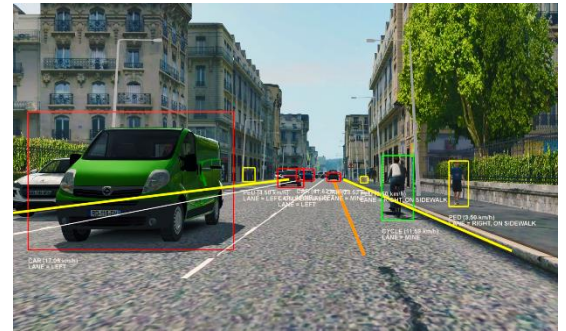


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ADVANCED

A1: ADAS (advanced level, 2 days)

- Create and manage a sensor configuration
- Start a simulation with sensor modules
- Analyze sensors network messages
- Develop a basic ADAS system
- Prerequisite: software programming knowledge
- License needed: sensors add-on



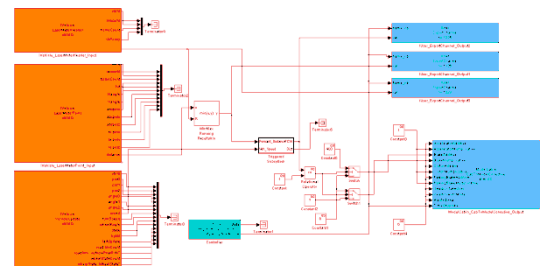
A2: Headlight / AFS (advanced level, 2 days)

- Understand SCANeR™ studio headlight solution
- Create and manage a headlight configuration
- Configure the visual module for displaying headlight
- Start a simulation with NightTestManager module
- Know headlight requirements for 3D databases
- Develop a basic AFS strategy
- Prerequisite: software programming knowledge
- Licenses needed: headlight



A3: Vehicle dynamics (advanced level, 3 days)

- Understand Callas vehicle model
- Launch predefined tests
- Create a test track
- Co-simulate with Matlab/Simulink
- Create an automatic test using Virtual Driver
- Analyze data
- Prerequisite: vehicle dynamics knowledge
- License needed: Callas model edition add-on



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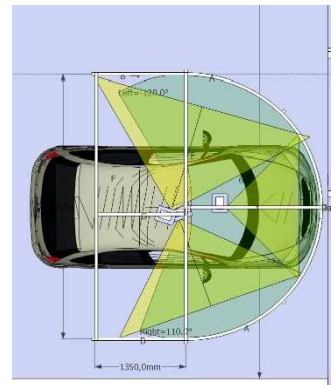
A4: Testing (advanced level, 2 days)

- Create an automatic test using Virtual Driver
- Start an offline simulation
- Start a non-real time simulation
- Batch play and batch export
- Replay a recorded simulation (VehiclePlayer)
- Useful for: vehicle dynamics, ADAS development



A5: Visual display configuration (advanced level, 1 day)

- Understand visual screens computation
- Workshop: configure screens for a CDS
- Workshop: configure a cylindrical screen
- Understand blending issues
- Prerequisite: trigonometry basic



A6: Driver tracking applications (advanced level, 1 day)

- Understand SCANeR™ studio trackers solution
- Configure an eye tracker and a head tracker system
- React to tracker events during the simulation (object detection)
- Analyse and export eye tracker raw data
- Workshop: connect an eye tracker system to SCANeR™ studio
- Prerequisite: know how to use a tracker system
- License needed: trac



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A7: Advanced applications (advanced level, 1 day EACH)

- Develop a lane keeping system (steering wheel vibration when out of lane)
- Improve haptic feedback (road surface edition and impacts on sound, steering wheel and motion)
- Motion effects and motion cueing
- Reduce transport delay to prevent simulator sickness

Scheduled sessions

We propose the following scheduled 4 days sessions in our office in Paris:

B1 + I2	4 days	First week of each month
B1 + I4 + A1	4 days	Second week of each month
B1 + I3	4 days	Third week of each month

The sessions are not dedicated to a single customer.
A session with too few attendees might be postponed.

Pricing

# attendees	On-site Training	Off-site Training
1 to 2	600€* / person / day	Contact us for a quotation.
3 to 6	1 500€* / day	Contact us for a quotation.

*the price is for one training day and includes lunch for the trainee(s).

Contact us



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