

WaveBee Creator

V2X test scenario editor software

Now part of Keysight's V2X product portfolio, the WaveBee Creator is a powerful software for creating scenario-based V2X test environments for laboratory and field tests. It is installed on Windows®- based Tablet PCs and is ready to run without further configuration, currently only supporting Windows 10 and Windows 11 for maximum flexibility.

Scenarios with multiple, simulated V2X participants can be created on an interactive map and their behavior can be controlled. This includes, for example, typical I2V messages from an RSU at a traffic signal or dynamic vehicles with corresponding trajectories and waypoints (V2X messages) as well as messages triggered by special events.

This enables reliable and replicable test environments with identical parameters for functional testing of the system to be validated.

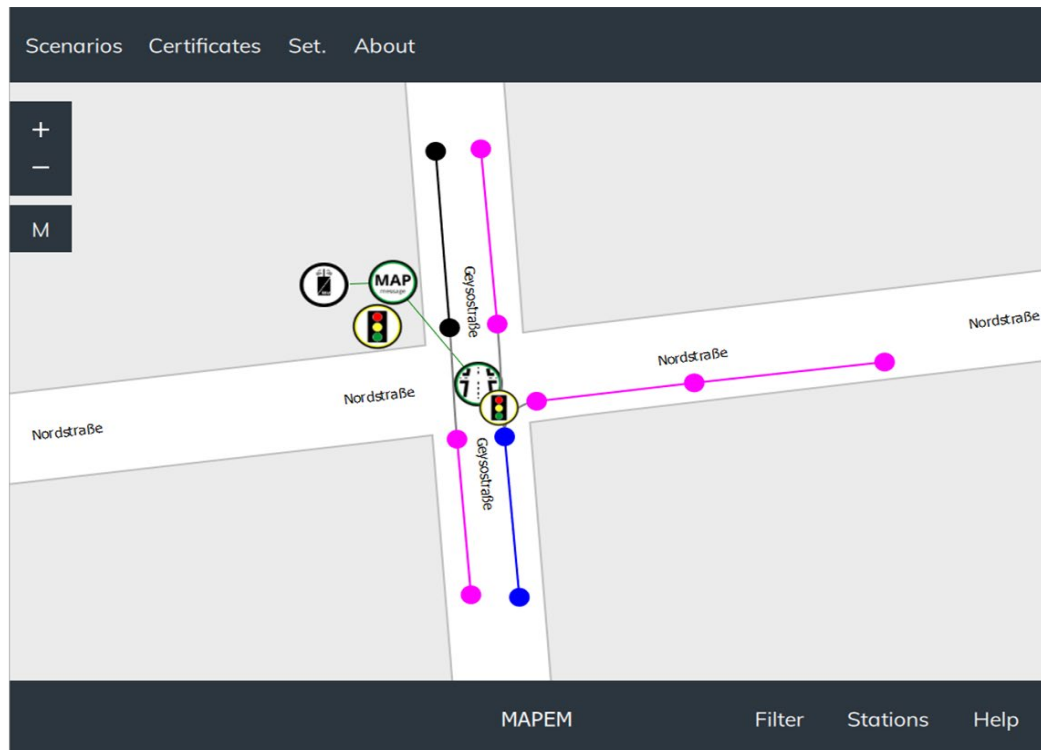


Figure 1. WaveBee Creator

Five features

- Replicable V2X test environments for laboratory and field testing
- Functional testing of vehicle or traffic infrastructure
- Scenario-based test case creation without programming knowledge
- Multi V2X standard support (EU, USA, China)
- Hybrid communication DSRC and C-V2X

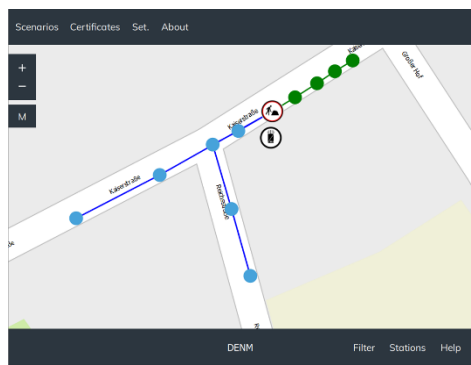
For example, it could be a V2X-based driver assistance function of a vehicle or a function on the side of traffic engineering systems such as public transport prioritization or traffic flow optimization.

The test scenarios of the WaveBee Creator can be set up for compatibility with almost any complexity, whether sending a single V2X message or addressing highly complex dynamic driving environments with several simulated vehicles, traffic signals, and events.

Typical areas of application

- Research and development
- V2X field tests and trials
- Safeguarding of series systems (e.g., V2X series control units in automobiles)
- Simulation of vehicles and traffic signals for smart city applications
- Integration into test frameworks in vehicle development and simulation (HiL, ViL)
- Day 1/Day X V2X use case application validation

Technical Details



These test environments can be created without programming knowledge and without dependencies on other systems and transferred to suitable WaveBee V2X environment generators (e.g., WaveBee Togo) and generated directly under laboratory or field test conditions.

The V2X messages of all simulated participants involved in the test scenario are sent out by the WaveBee environment generator via the air interface, making real end-to-end tests using the desired transmission technology possible.

Communication standard	ETSI, SAE, CSAE	
Communication technology	DSRC (IEEE802.11p) C-V2X (PC-5 sidelink) hybrid*	*Depending on WaveBee system used for broadcasting
Add-ons	Regional-specific Day 1 use case add-ons Regional-specific Day X use case add-ons	

Specifications are subject to change without notice due to product updates and future developments.