

WISE®: VIRTUAL INTEGRATION & SIMULATION ENVIRONMENT



**REDUCE TIME AND RISK WITH HIGH-FIDELITY VIRTUAL
SIMULATIONS TO TRAIN AND TEST AUTONOMOUS SOLUTIONS**



- **ROBUST VIRTUAL ENVIRONMENTS FOR STRESS TESTING AUTONOMOUS SYSTEMS**
- **BUILT ON THE UNREAL ENGINE**
- **FULLY INTEGRATED WITH ROS AND JAUS COMMUNICATION PATHS**
- **PROVIDES ACCURATE PHYSICS RESPONSES**
- **SUPPORTS BROAD RANGE OF SENSORS**
- **SUPPORTS ANY TYPE OF VEHICLE IN ANY ENVIRONMENT**

DIGITAL VEHICLE REPLICATION

WISE delivers sophisticated physics modeling to accurately replicate vehicle behavior by simulating vehicle-specific hardware. This includes hardware like NSD's B-kit, but also provides the same interface for external software systems, mirroring the real-world vehicle interactions.

CONFIGURABLE LANDSCAPES

Contains digital recreations (digital twins) of real-world locations as well as configurable representative environments. ARA can rapidly create new highly detailed & realistic virtual environments.

EXPANDABLE & CUSTOMIZABLE

WISE is built on the Epic Games Unreal Engine, which allows for rapid development of new features and can be extended to work with any Unreal Engine based plugin. This flexibility helps future-proof projects against evolving technological needs.

INTEGRATED AUTONOMY TESTING

Fully integrates with our N-Drive™ autonomy stack and multi-asset Mission Planning and Management System (MPMS) for testing and validating autonomous systems before deploying in the real world.

FULL SENSOR SUITE

Supports a broad range of sensors such as LiDAR, Stereo Camera, GPS, IMU and RADAR. Every sensor in WISE is fully customizable and can be configured to fit the requirements of the project.

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