

AUTO City

Vertechs' proprietary solution based on Unreal Engine 4 for virtual verification of ADAS, automated driving AI, and vehicle behavior.

C1 virtual environment to be released in mid-November 2021 !

The C1 virtual environment is designed to verify ADAS, automated driving AI, and vehicle behavior.

Functional features :

- 3DCG Database can be used immediately after purchase.
- The roads in C1 are based on actual point cloud data.
- Provided in OpenDRIVE format (can be linked to other tools)
- Reproduce exits, junctions, and backgrounds as seen while driving.
- For the background around C1, we used PLATEAU, which was created by the Ministry of Land, Infrastructure, Transport and Tourism.
- In the future, the C1 virtual environment will support plug-ins to extend the 3DCG Database, which will be sold separately.



AUTOCity: 3DCG Database

The 3DCG Database is an asset data product necessary for building virtual environments, such as intersections, cars, traffic lights, and signs.

Functional features :

- OpenDRIVE is included in the package and can be integrated with other tools.
- CG models supports Segmentation and Depth of Plugin.
- CG models can be adjusted by parameters such as color and size.
- The situation you want to test can be reproduced repeatedly.
- Layered structure based on the PEGASUS method.



AUTOCity: Euro NCAP Asset

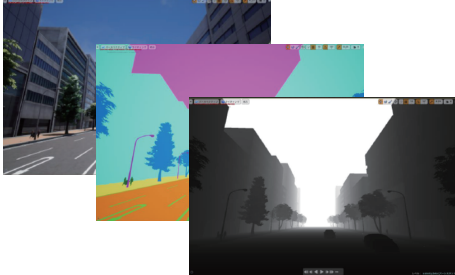
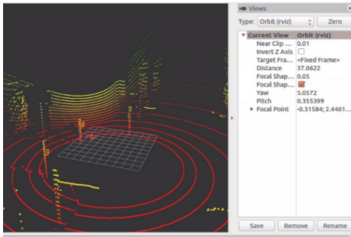
This asset data allows you to perform European automotive safety tests in a virtual environment based on Unreal Engine 4.

Functional features :

- Accurate target model with actual dimensions that can reproduce the scenario used in driving tests.
- Evaluate without risk of injury to people or damage to property.



Plugins to extend the AUTOCity: 3DCG Database



AUTOCity: Sensor Models

This is a package of camera, LiDAR, RADAR, and IMU sensors modeled in Unreal Engine4.

Functional features :

- The sensor model can be communicated externally as ROS messages.
- All sensor models can be configured via parameters for detailed functions.

AUTOCity: Deep Learning Dataset

This is a plug-in package of useful functions to efficiently improve object detection and recognition for automated driving AI.

Functional features :

- Segmentation images can be output without complicate processing.
- Parameters, output format, etc. can be set according to the usage and verification environment.
- Simultaneous output of camera, segmentation, depth, and other images in the same environment is possible.
- Simultaneous output from a single scenario avoids gaps in reproducibility.
- Playback recording simplifies the scenario creation process.

Build-to-order service

We provide custom-made services through proposals. We can create a virtual space that meets your needs, whether it is a "real place" or a "space with ideal conditions". Whether you need a city, a test course, a factory, a farm that exists in the real world, or a virtual town, we can create the environment you need. We can also help you connect your virtual environment to the framework.

- SiL framework construction
- Virtual environment construction
- Training data set creation
- Virtual sensor creation
- OpenDRIVE creation



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