

Coordinate Systems

When working with Voxel Farm projects, it is possible to encounter up to three different coordinate systems. These systems are:

1. Project's native coordinate system. These are the real-world coordinates, typically involving an Earth ellipsoid model (WSG84, etc.) a projection system (UTM, Mercator, etc.) and other additional parameters. In most cases, these are right-hand systems with Z coordinate going up.
2. Voxel Farm's internal coordinate system. This is a coordinate system that is used by all Voxel Farm components. It is equivalent to OpenGL's system (right-handed, Y-up) but it does not contain negative coordinates.
3. Rendering engines impose their own coordinate system, for instance, Unity is left-handed, Y-up.

Whenever necessary, it is possible to convert from project coordinates to Voxel Farm coordinates, and vice versa, by using the `VoxelFarmAffineTransform` class.

The class must be initialized with the project's coordinate system and the voxel size. Once initialized, the `"VF_TO_WC()"` and `"WC_TO_VF()"` functions provide coordinate conversions from one system to another.

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