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Global Tree Properties

These global tree properties are located on the Tree Generator. Access them in the Property Editor.

Tree Generator

The 'Tree Generator' houses various global properties. To access it, click on the 'Tree Generator' in the 'Generation Editor' (or select nothing in the 'Tree Window' when the 'Property Editor' is in "Complete mode"). The global properties will appear in the 'Property Editor'.

Generation

Properties - Tree

Generation
?

Shared

Size scalar
0.382

Geometry

Branches/Caps
Triangles

Leaves/Frond...
Triangles

Subdivision
Triangles

Shape
?

Radius
0

Sink
1.148

Roll
1.122

Level of Detail
?

Enabled
☒

Preview style
Manual

Count
3

Near
306

Far
612

Billboard start
765

Billboard end
841.5

Leaf Collision
?

Enabled
☒

Style
Accelerated

Automatic
Cull

Spread factor
0

Spread out

Restore spread

Cull tolerance
0.65

Cull

Restore culled

Proxy Collision
?

Automatic
☐

Scale
1

Cull

Restore culled

File
?

Use compression
☒

Embed geometry
☒

Fix leaf winding
☐

Custom
?

User data 1

User data 2

User data 3

User data 4

User data 5

The generation properties include the tree's global

Size scalar and the controls for specifying “Triangles” or “Quads” as the geometry type used (in versions where this feature is available). When “Quads” is selected for “Leaves/Fronds/Meshes” geometry imported into SpeedTree as triangles will be converted to quads; however, a complete conversion may not be possible and some triangles may be left in the model.

When scaling the entire scene drastically, it is better to use one of the two “scene scalars” available under the “Tools” menu. Otherwise, forces, collision objects, wind, and LOD will not be scaled along with the tree model.

More Info: Scale Dialogs

Shape

These properties govern the size, position, and rotation of the entire tree. See the contextual help for more info on 'Sink' and 'Roll' ('Radius' is described below).

Radius



The radius property determines the eligible area that trunks can grow from. The ring displayed in the Tree Window can be toggled via the “Extras” pulldown on the main Tree Window toolbar.

Level of Detail

These properties govern the transitions for and aggressiveness of the level of detail (LOD) system.

Automatic Level of Detail is a feature of SpeedTree For Games only. SpeedTree Cinema and SpeedTree Studio only have LOD controls for degrading the tree's individual generators at a single level of detail state. However, it is still easy to change the detail of the tree in Cinema and Studio by changing generator LOD values, but multiple resolutions will need be configured manually in separate SPM files.

More Info: Level of Detail

Leaf Collision

These properties govern the global collision of leaves across all leaf generators.

More Info: Leaf Collision

Proxy Collision

These properties govern the global collision of proxies on shared zones.

More Info: Proxy Collision

File

These options govern how SPM files are saved. The SpeedTree Modeler's native file format has the extension SPM, which stands for "SpeedTree Procedural Model". In it is stored all of the data necessary to compute a tree from scratch (including all node edits) and, optionally, the tree geometry at each LOD. Use the options in this group to control how they are written.

- **Use compression** - Use this option to compress SPM files when they are saved (they are automatically uncompressed when loaded). This option should remain on unless the ASCII version is required (e.g., SpeedTree support has requested an uncompressed tree model to help debug a problem).
- **Embed geometry** - When this option is enabled, the geometry of the tree model is stored in the file alongside the procedural parameters used to generate it. If you are using the SpeedTree SDK, you must have this option enabled. The SpeedTree compiler extracts the geometry directly from the SPM when it creates the SRT files used by the SDK (SRT files are compact, optimized, run-time versions of the tree model).
- **Match leaf winding** - This parameter is analogous to the "match winding" parameter on the mesh asset bar. When enabled, leaf mesh vertex winding is adjust to match the average of the normals at each vertex so that two-sided lighting works correctly. This step is necessary because the normals on each leaf mesh are modified by the leaf generator as part of the leaf lighting control and can cause the winding to become invalid for some external applications (e.g., Epic Games' Unreal Engine 3).

Custom

Each tree can be assigned five custom strings for use by the SpeedTree SDK. These could be anything from rendering or streaming cues to custom shader attributes.

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