

- [skip to content](#)



User Tools

- [Log In](#)

Site Tools

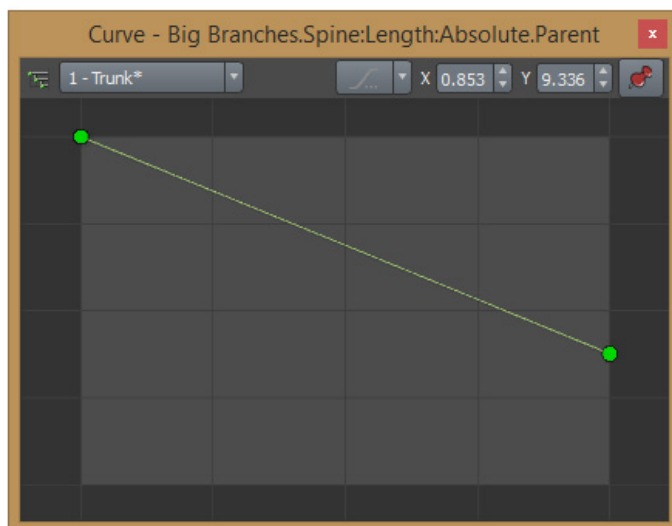
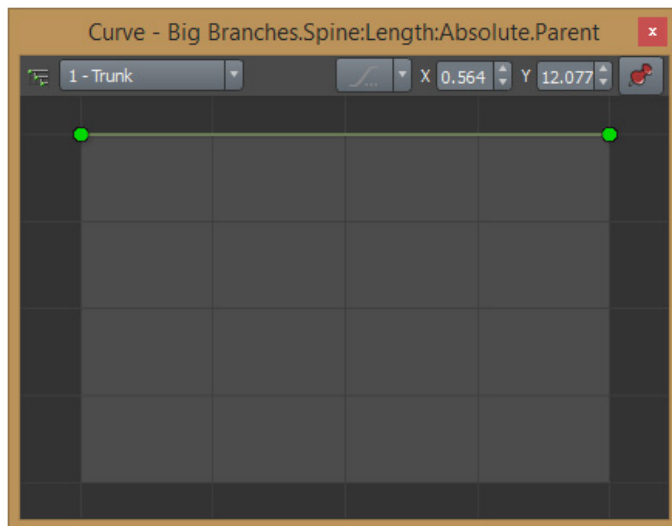
 Search
Tools ▼ >

Trace: • [parent_curves](#)

Parent Curves

'Parent curves' are the green curves associated with many of the tree properties. They distribute values based on how far along the parent each child node occurs. This lets the user make parts of the tree behave or appear differently based upon where on they are growing on the tree. This is a simple and powerful mechanism for modeling realistic foliage behavior, as no two branches are ever exactly alike on a real tree.

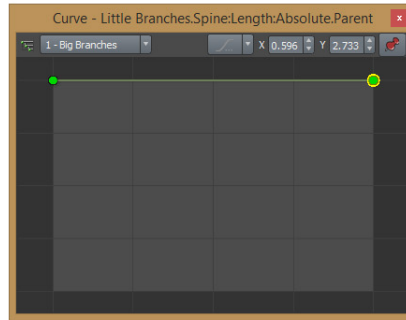
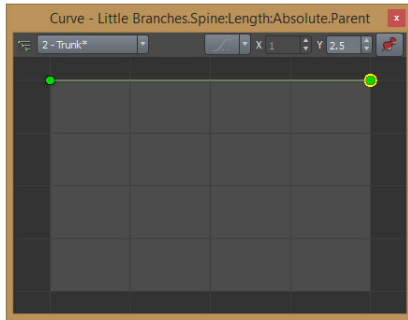
Green curves are special in that they have a setting to fine tune their results: "Parent level". This setting is located on the Curve Editor toolbar. While grasping the concept and importance of "Parent level" might be hard initially, once it is figured out the process of tree modeling will seem much more intuitive overall. Note: The "Cascade" setting available in previous versions of SpeedTree has been abandoned in favor of a more robust calculation of the "Parent Level".



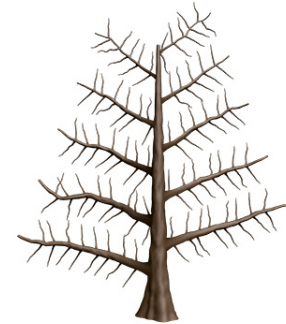
The effect of editing the parent curve for “length”. Branches near the bottom of the tree are longer than those near the top.

Parent Level

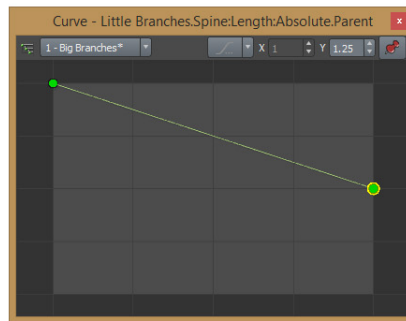
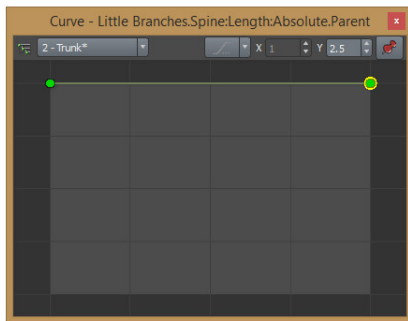
Supposing you had a tree with four levels of generators: Tree, Trunk, Big Branches, and Little Branches? (**Tree #1**) What if you wanted to adjust the length of the little branches so that they are smaller at the ends of the big branches than they are at the base. Then you would merely edit the length curve without changing the parent level, as the automatic behavior of curves is to select the direct parent of the current generator. (**Tree #2**) But supposing you wanted the branches to get smaller toward the top of the tree rather than toward the end of the branches? You need to change the parent level of the curve to the Trunk rather than the Big Branches, which you do in the combobox in the upper left corner of the curve window. (**Tree #3**) What if you wanted the Little Branches to get smaller both toward the top of the tree and toward the end of the bigger branches? New in SpeedTree 8 is the ability to compute compound curves. So in the curve editor, you can adjust the curve for multiple parent levels. (**Tree #4**)



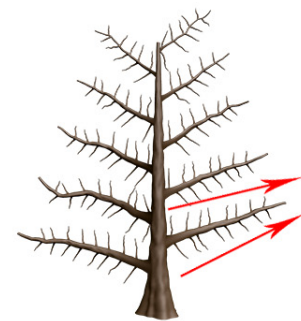
No length curve applied



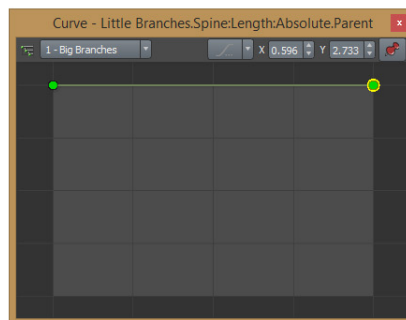
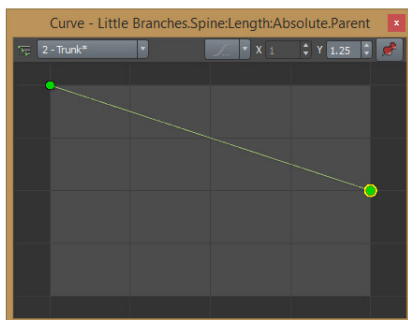
#1



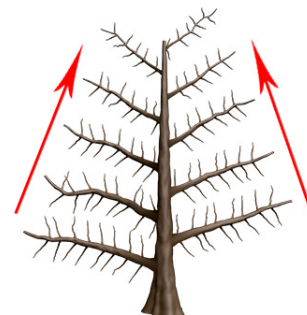
Parent level: 1 – Big Branches



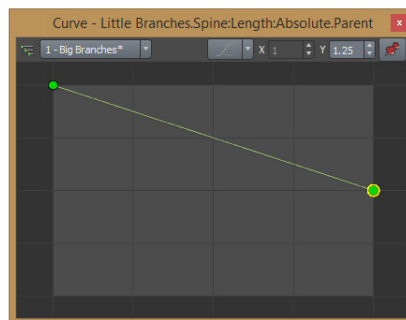
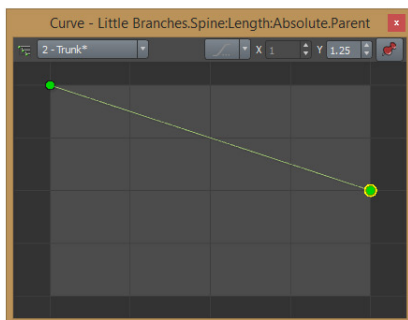
#2



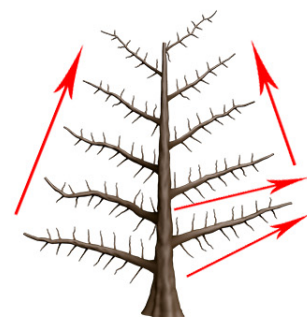
Parent level: 2 – Trunk



#3



Parent level: 1 – Big Branches
& 2 – Trunk



#4

Setting the parent level

To set the parent level, change the first combobox value on the 'Curve Editor' to a value greater than "1" ("1" translates to the direct parent of each node). Setting the parent level to "2" will evaluate the parent curve based on the position of each node's parent's parent, and so on. If your tree has a trunk,

level 1, and level 2 branches, you'll have to set the parent level to "3" for anything growing off of the level 2 branches if you want them to be evaluated based on the height of the total tree, since the trunk best represents the tree height.

Parent level indicator



If more than one 'parent curve' is set to any value other than the default level (Max), an indicator is shown on the curve's thumbnail. It is represented by an uppercase 'C' overlaid on the bottom right corner of the curve's thumbnail. In the 'Curve Editor' itself, the parent curve is shown as the parent curve combobox value.

[Read our blog >>](#)

- [Home](#)
- [Company](#)
- [3D Animation Software](#)
- [3D Tree/Plant Library](#)
- [Accolades](#)
- [Documentation](#)
- [Contact](#)
- [Privacy Policy](#)
- [Terms & Conditions](#)
- [Site Map](#)

- ©2017 IDV, Inc. All Rights Reserved.
- [Questions?](#)



-