TreeSketch: Interactive Procedural Modeling of Trees on a Tablet
Steven Longay, Frédéric Boudon, and Przemyslaw Prusinkiewicz
Supplementary table: System parameters

System Parameters[1]				
Name	Text Reference	Symbol	Range[2]	Default
Tree architecture				
Internode length	Fig. 8A	l		0.6
Phylotactic angle	Fig. 8A	ϕ		137.5°
Branching angle	Fig. 8A	ψ	$[10, 120]$	35°
Deflection angle	Fig. 8A	δ	$[0, 45]$	12°
Brushing and sketching				
Brush radius			$[0,10]$	5
Max marker age[3]			$[0,100]$	15
Competition for space				
Occupancy zone	Fig. 8B	r	$[0.6, 20]$	1.1
Radius of perception	Fig. 8B	d	$[0.6, 20]$	1.9
Angle of perception	Fig. 8B	ζ	$[1, 180]$	90°
Marker density[4]			$[0, 15]$	3.0
Shoot growth				
Apical dominance		λ	$[0.4, 0.6]$	0.47
Bud light sensitivity		κ	$[0, 5]$	2.6
Max shoot length		n_{max}	$[1.05, 20]$	7
Branch self pruning		Th	$[0, 1]$	0.05
Light model				
Voxel edge length				0.83
Shadow depth [voxels]				6
Number of voxels				100^3
Gravimorphism				
Ellipse's translation	Fig. 10B	e_v	$[-1, 1]$	0
Ellipse's horizontal axis	Fig. 10B	s_p	$[0, 1]$	1
Ellipse's vertical axis	Fig. 10B	s_v	$[0, 1]$	1
Gravitropism[5]				
Branch straightness	Eq. 2	α	$[0, 1]$	0.7
Tropism strength	Eq. 2	β	$[0, 1]$	0.12
Environment strength	Eq. 2	γ	$[0, 1]$	0.18
Pipe model				
Width exponent	Eq. 3	n	$[1.2, 3.5]$	2.7
Tip width	Eq. 3	d_e	$[0.01, 0.2]$	0.02

Notes:

[1] All lengths are specified consistently in the same units.

[2] Parameters listed without specified range are not exposed to the user.

[3] Measured in number of iterations.

[4] Measured in number of generated markers per unit volume per simulation step.

[5] The sum $\alpha + \beta + \gamma$ is constrained to 1.