

ARECACEAE

**DIGR
SIMULATION
EXPLORATION**



Zoom



XPLO & DIGR

AMAPstudio Suite



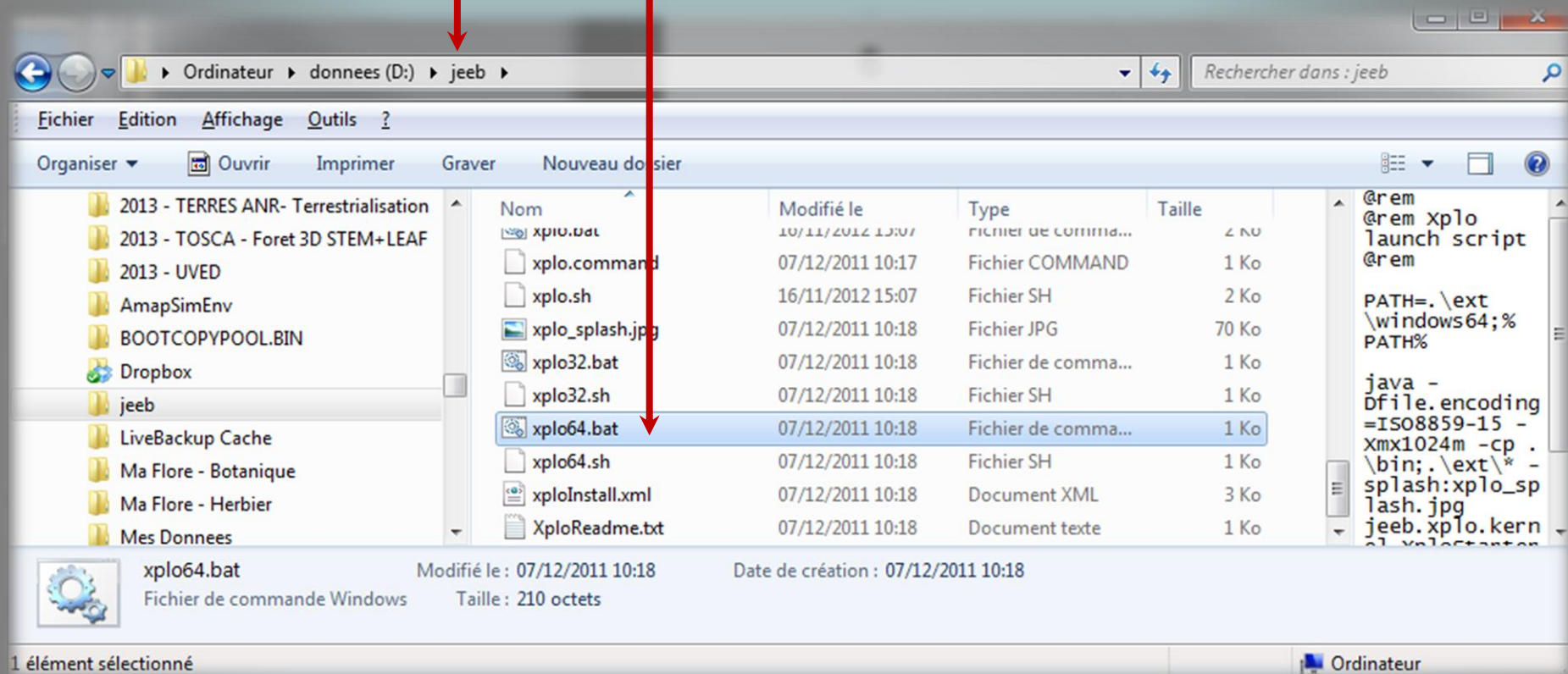
-X01-

NEW
PROJECT

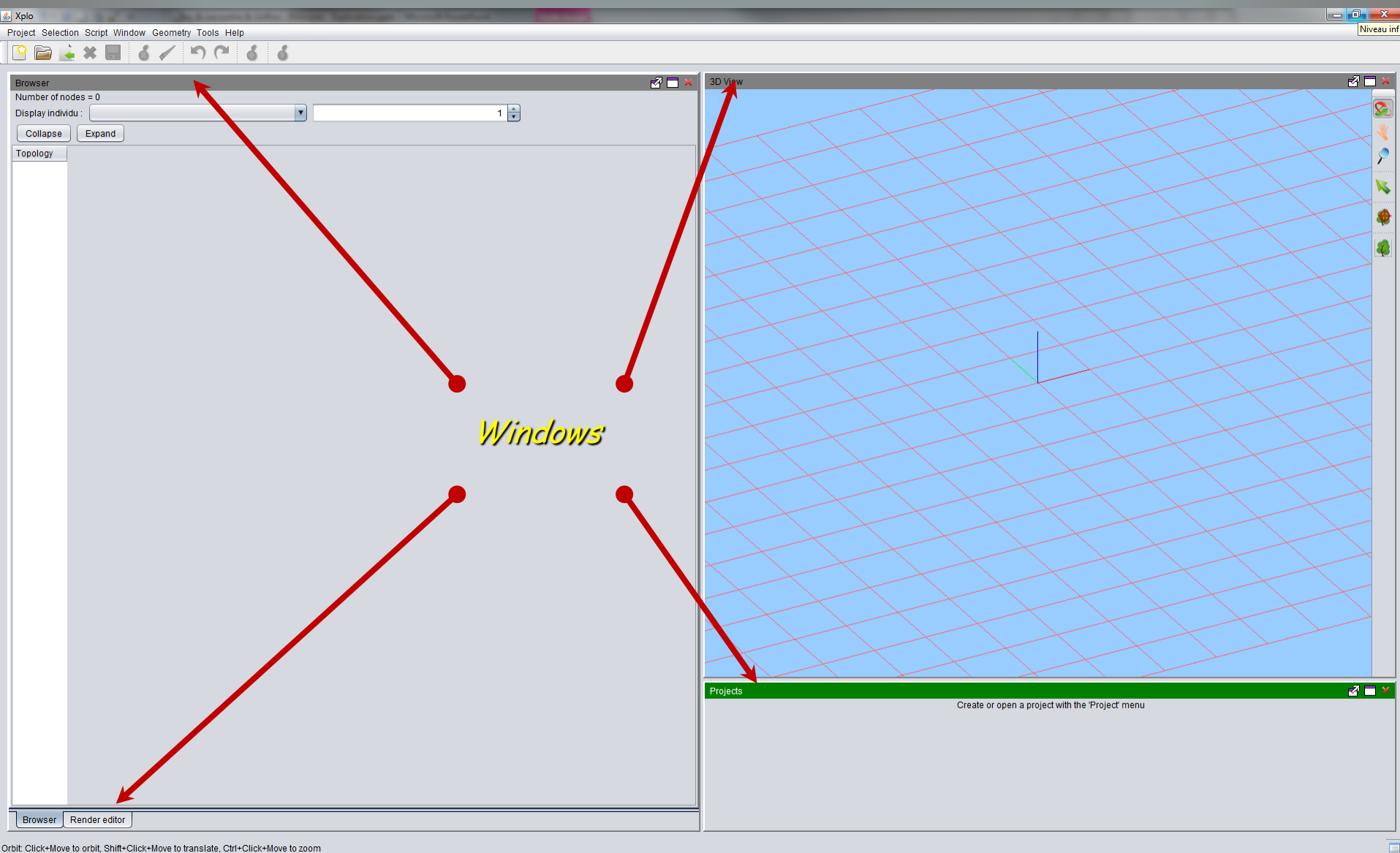
Training X01: Xplo Software

AMAPstudio Directory

Xplo Software

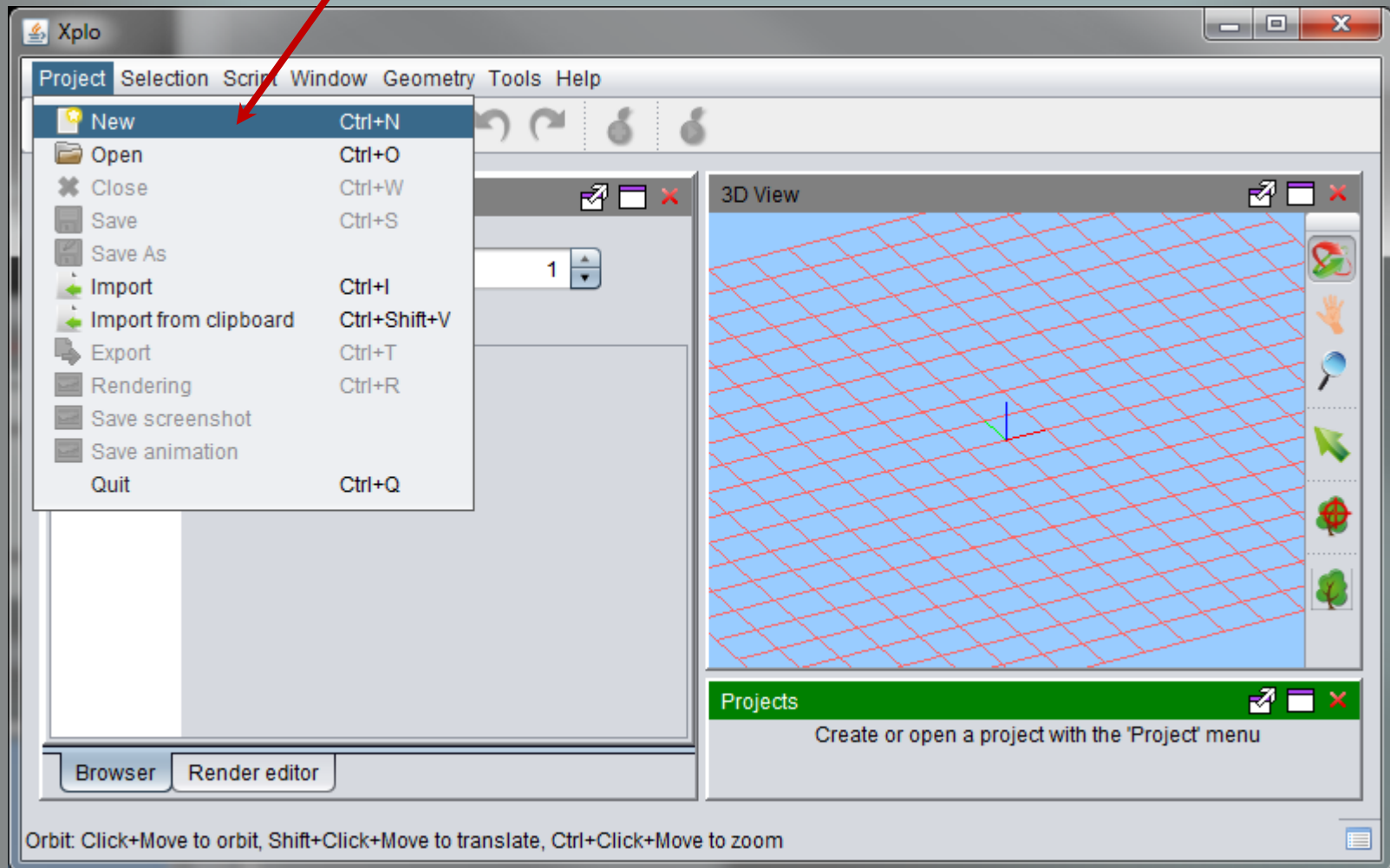


Training X01: Xplo Windows



Training X01: New Project

New



Training X01: DigR Project

DigR model

DigR Window

New Project

Name :

Type :

- Coffee
- DRAFT
- DigR**
- GL 5
- Gloups
- Palms
- Principes (Palm)
- Profs

Description :

DigR
Author(s) : JF. Barczi
Root system simulator

Ok Cancel Help

DigR.parameters

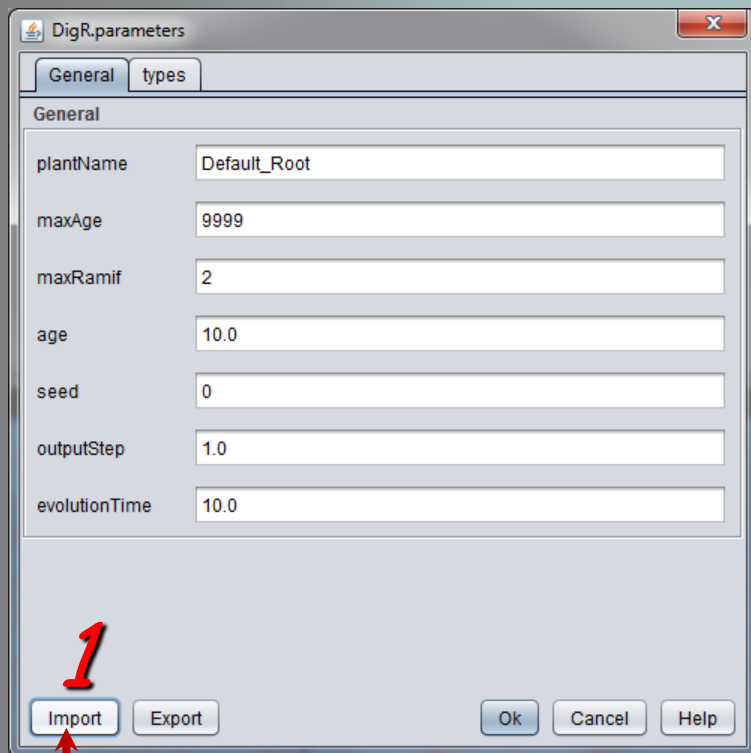
General types

General

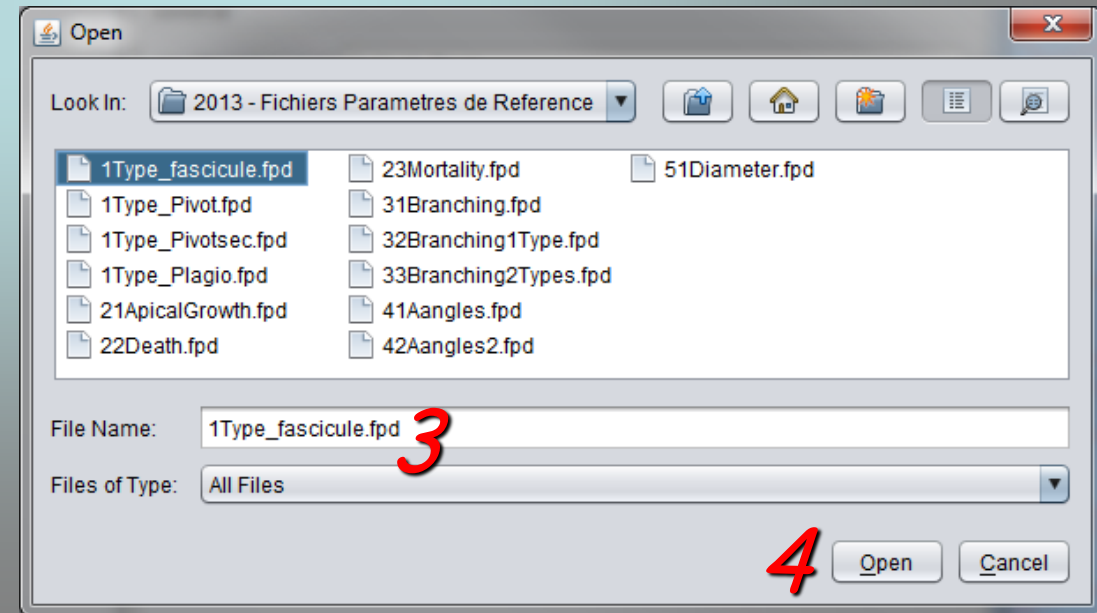
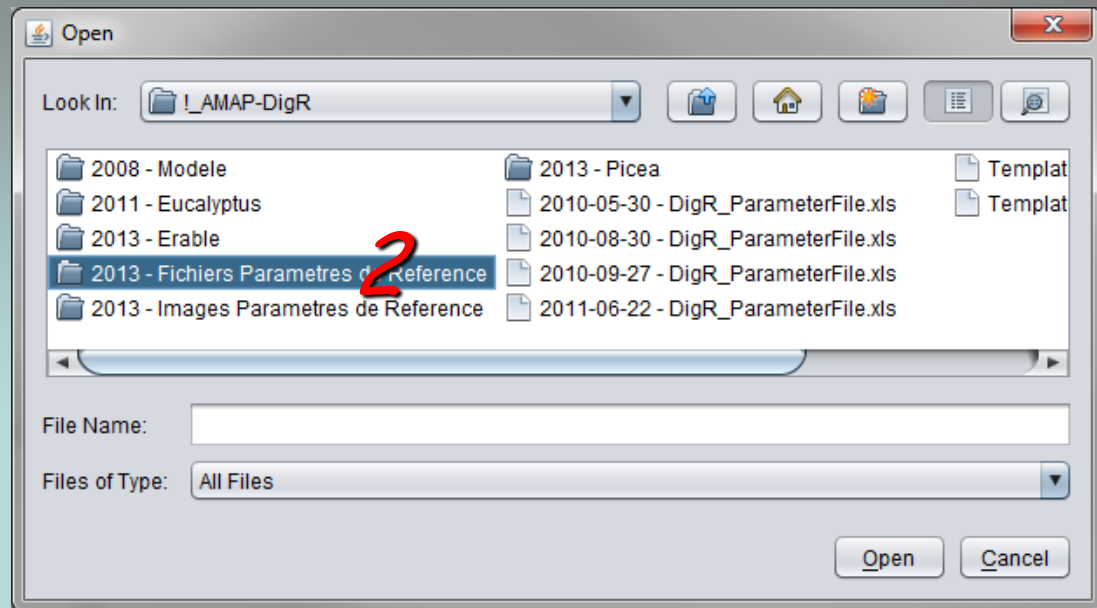
plantName	<input type="text" value="Default_Root"/>
maxAge	<input type="text" value="9999"/>
maxRamif	<input type="text" value="2"/>
age	<input type="text" value="10.0"/>
seed	<input type="text" value="0"/>
outputStep	<input type="text" value="1.0"/>
evolutionTime	<input type="text" value="10.0"/>

Import Export Ok Cancel Help

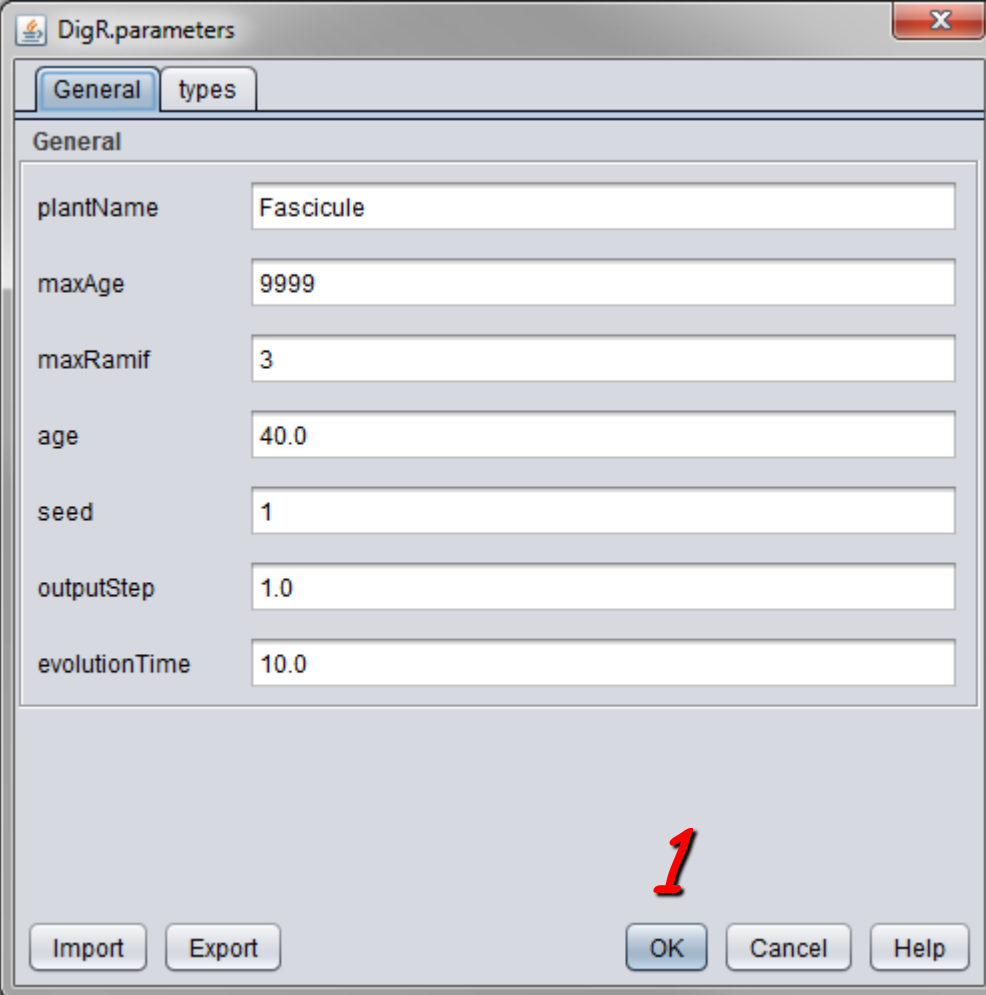
Training X01: Parameter File Choice



Left Click



Training X01: Fascicule Parameter File



The image shows a software window titled "DigR.parameters" with a close button (X) in the top right corner. It has two tabs: "General" (selected) and "types". The "General" tab contains a list of parameters and their values:

Parameter	Value
plantName	Fascicule
maxAge	9999
maxRamif	3
age	40.0
seed	1
outputStep	1.0
evolutionTime	10.0

At the bottom of the window, there are four buttons: "Import", "Export", "OK", and "Cancel". A red number "1" is written above the "OK" button.

Training X01: XPlo Browser & 3D View

XPlo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Browser

Number of nodes = 7078

Display individu: Scene 1

Topology

Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
Scene 1								
Individual 1	ArchiTree	40						
First Type 1	First Type		0	0	45	0	0	0
sFirst Type 1							114.809	
sFirst Type 2				-2.734			133.946	
sFirst Type 3				-4.108			109.43	
sFirst Type 4				-2.986			104.852	
sFirst Type 5				3.121			135.937	
sFirst Type 6				-2.626			77.274	
sFirst Type 7				2.669			134.035	
sFirst Type 8				2.915			0	
sFirst Type 9				6.063			124.296	
sFirst Type 10				-5.073			156.781	
sFirst Type 11				-2.302			169.54	
sFirst Type 12				-3.324			146.267	
sFirst Type 13				3.29			96.246	
sFirst Type 14				1.836			160.764	
sFirst Type 15				-3.358			0	
sFirst Type 16				2.945			120.248	
sFirst Type 17				-3.377			152.965	
sFirst Type 18				-4.238			0	
sFirst Type 19				3.694			164.762	
sFirst Type 20				3.621			0	
sFirst Type 21				3.279			142.095	
sFirst Type 22				-3.088			0	
sFirst Type 23				-2.634			0	
sFirst Type 24				-3.946			105.728	
sFirst Type 25				1.406				
second Type 1	second Ty...		0	10	1		6.985	
ssecond Type 1							0	
ssecond Type 2				-1.992			0	
ssecond Type 3				-2.737			159.006	
ssecond Type 4				-1.016			0	
ssecond Type 5				5.291			154.529	
ssecond Type 6				-5.056			153.53	
ssecond Type 7				-1.103			0	
ssecond Type 8				-2.871			164.416	
ssecond Type 9				0.056			139.03	
ssecond Type 10				5.31			0	
ssecond Type 11				2.096			128.308	
ssecond Type 12				-3.154			124.892	
ssecond Type 13				3.18			146.12	
ssecond Type 14				1.43				

3D View

Projects

26a - 27a - 28a - 29a - 30a - 31a - 32a - 33a - 34a - 35a - 36a - 37a - 38a - 39a - 40a

Project

Training X01: Simulation & Parameter File

DigR.parameters

General types

Plant

First Type
second Type
courte

rootTypes

+

-

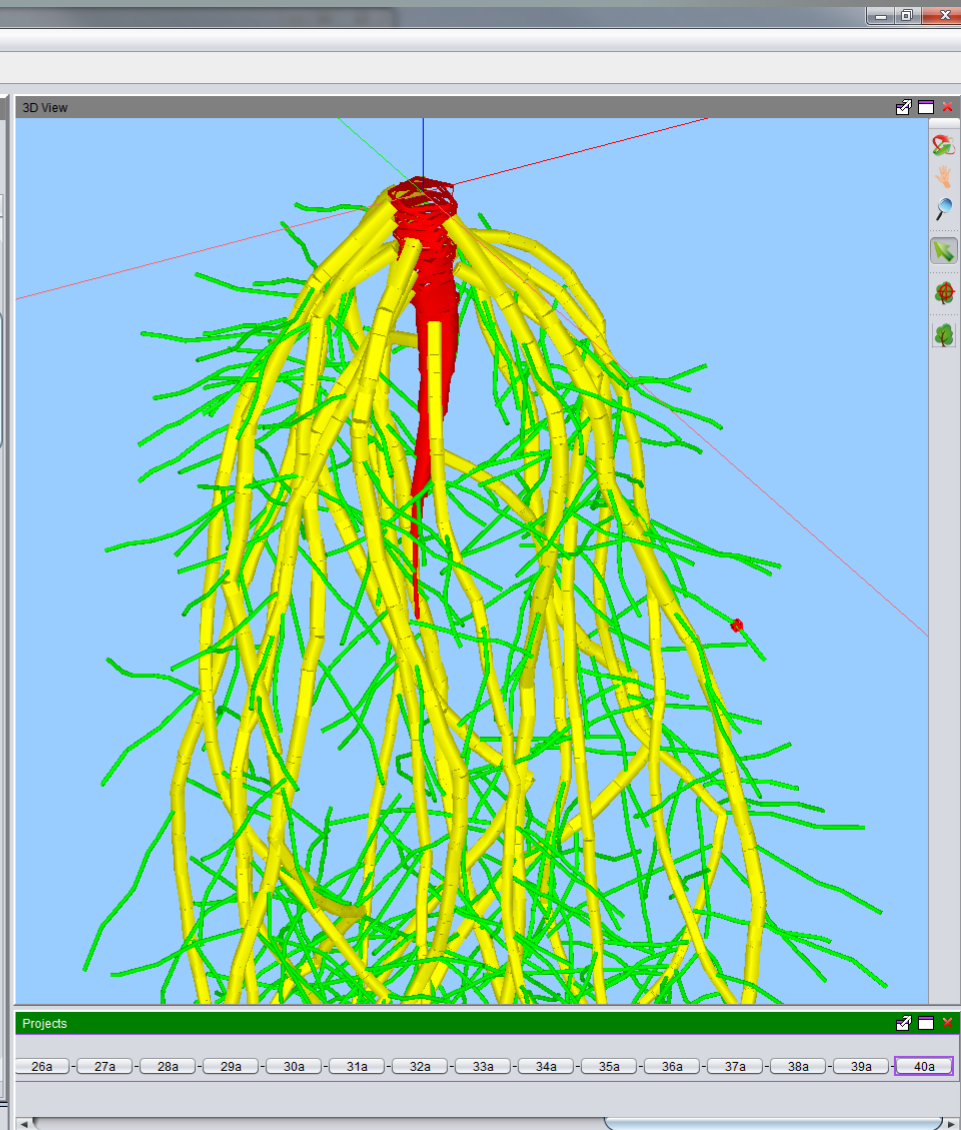
↑

↓

Import Export OK Cancel Help

ssecond Type 24	-5.126		
ssecond Type 25	-4.123	176.384	
ssecond Type 26	4.34	119.419	
ssecond Type 27	-5.579	95.715	
ssecond Type 28	-2.186	0	
ssecond Type 29	-1.725	107.816	
ssecond Type 30	-5.088	134.003	
ssecond Type 31	5.583	142.845	
ssecond Type 32	-7.992	141.534	
ssecond Type 33	-0.372	121.952	
▼ courte 1	0	2	16.649
scurte 1			
scurte 2	10	0	
scurte 3	10	0	
scurte 4	10	0	
scurte 5	10	0	
scurte 6	-10	0	
scurte 7	10	0	
ssecond Type 34	-2.925	0	
ssecond Type 35	-1.605	185.126	
ssecond Type 36	2.264	0	
ssecond Type 37	0.904	129.12	
ssecond Type 38	6.77	0	
ssecond Type 39	4.784	156.953	
ssecond Type 40	-7.408	119.782	
ssecond Type 41	-1.705	139.55	
ssecond Type 42	0.862	111.144	

Browser Render editor



Training X01: Reinit Project

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Browser

Number of nodes = 7078

Display individu: Scene 1

Topology

Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...	V
Individual 1	ArchiTree	40							
First Type			0	0	45	0	0	0	
sFirst Type 1									
sFirst Type 2				-2.734			114.809		
sFirst Type 3				-4.108			133.946		
sFirst Type 4				-2.986			109.43		
sFirst Type 5				3.121			104.852		
sFirst Type 6				-2.626			135.937		
sFirst Type 7				2.669			77.274		
sFirst Type 8				2.915			134.035		
sFirst Type 9				6.063			0		
sFirst Type 10				-5.073			124.296		
sFirst Type 11				-2.302			156.781		
sFirst Type 12				-3.324			169.54		
sFirst Type 13				3.29			146.267		
sFirst Type 14				1.836			96.246		
sFirst Type 15				-3.358			160.764		
sFirst Type 16									
sFirst Type 17									
sFirst Type 18									
sFirst Type 19									
sFirst Type 20									
sFirst Type 21									
sFirst Type 22									
sFirst Type 23									
sFirst Type 24									
sFirst Type 25									
second Type 1	second Ty...								
ssecond Type 1				-1.992			0		
ssecond Type 2				-2.737			0		
ssecond Type 3				-1.016			159.006		
ssecond Type 4				5.291			0		
ssecond Type 5				-5.056			154.529		
ssecond Type 6				-1.103			153.53		
ssecond Type 7				-2.871			0		
ssecond Type 8				0.056			164.416		
ssecond Type 9				5.31			139.03		
ssecond Type 10				2.096			0		
ssecond Type 11				-3.154			128.308		
ssecond Type 12				3.18			124.892		
ssecond Type 13				1.43			146.12		
ssecond Type 14									

3D View

Project reinitialisation

The current project will be deleted without being saved and will be replaced by a new one, please confirm ?

Yes No

Projects

26a 27a 28a 29a 30a 31a 32a 33a 34a 35a 36a

Evolution Ctrl+E
Intervention Ctrl+I
Delete Step Ctrl+D
Duplicate Step
Reinitialise Project
All
5

1 2

The screenshot shows the XploR software interface. The 'Scene' configuration window is open, displaying parameters for a 'Fascicule'. The 'Browser' on the left shows a hierarchical tree structure. The main area lists parameters: maxAge (9999), maxRamif (3), age (40.0), seed (1), outputStep (1.0), and evolutionTime (10.0). A red arrow points to the 'OK' button, and the word 'Changes' is written in yellow next to the 'seed' parameter.

Parameter	Value
maxAge	9999
maxRamif	3
age	40.0
seed	1
outputStep	1.0
evolutionTime	10.0

Training X01: Save Parameter File

DigR.parameters

General types

General

plantName Fascicule

maxAge 9999

maxRamif 3

age 40.0

seed 872 *Changed*

outputStep 1.0

evolutionTime 10.0

1

Import Export OK Cancel Help

Save

Look In: 2013 - Fichiers Parametres de Reference

1Type_fascicule.fpd 23Mortality.fpd 51Diameter.fpd

1Type_Pivot.fpd 31Branching.fpd

1Type_Pivotsec.fpd 32Branching1Type.fpd

1Type_Plagio.fpd 33Branching2Types.fpd

21ApicalGrowth.fpd 41Angles.fpd

22Death.fpd 42Angles2.fpd

File Name: 1Type_fascicule.fpd

Files of Type: All Files

3 Save Cancel

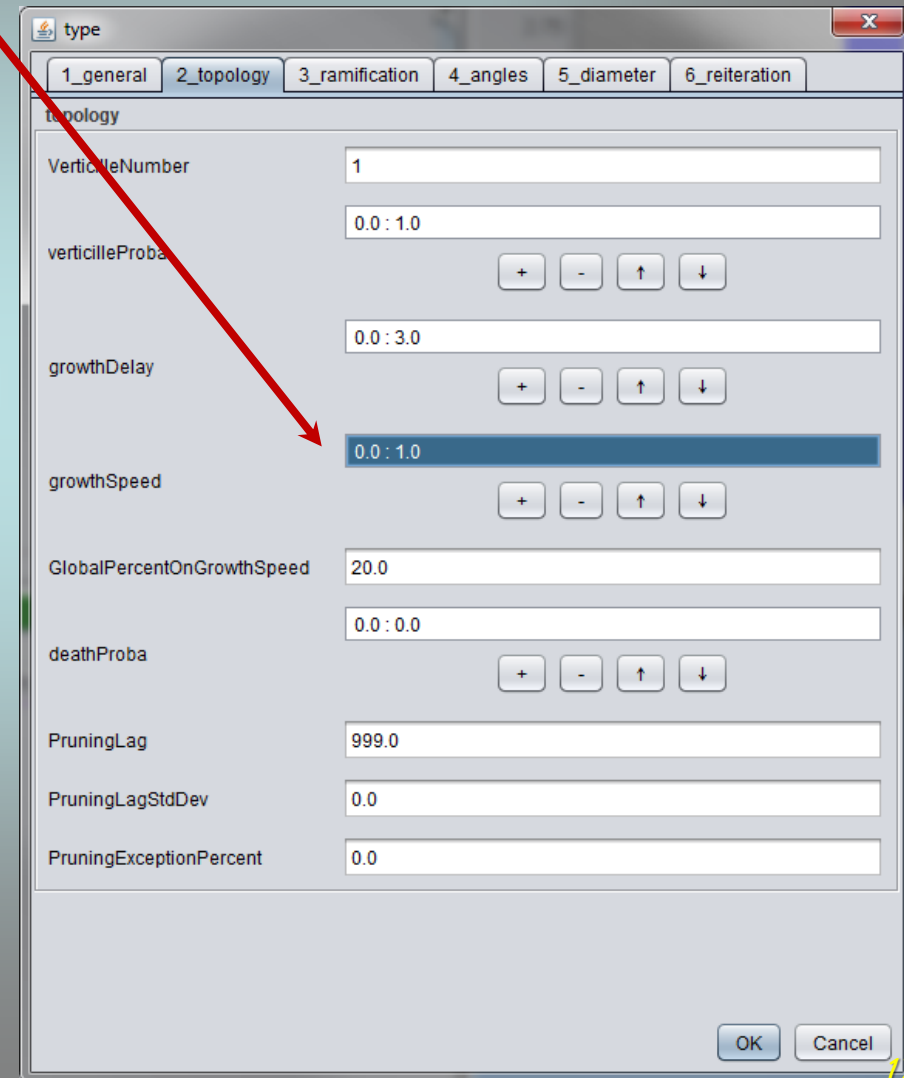
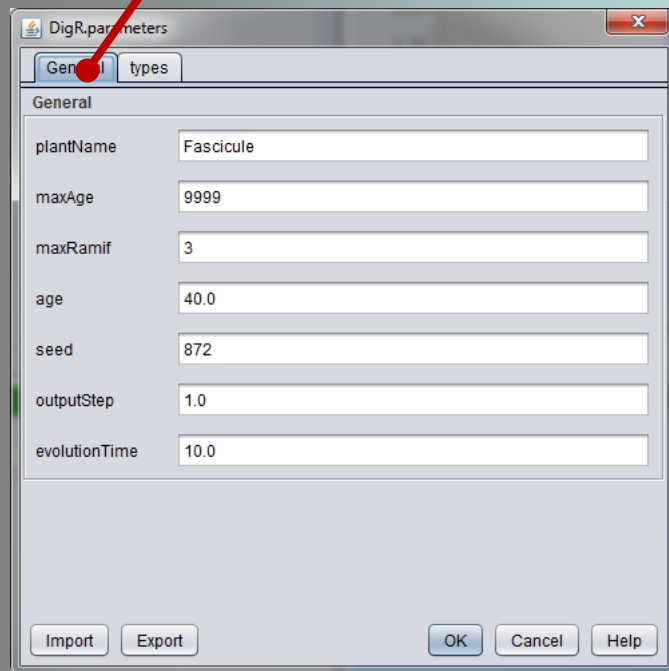
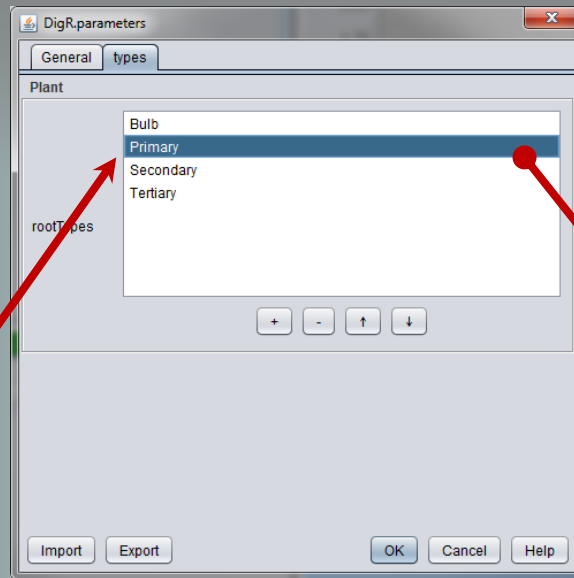


-X02-

PRIMARY
LENGTHS

Training X02: Parameter File Data

*Primary Lengthes
Come from
Growth Speed!*



Training X02: Extraction Layout

1

2

Xplo - [Dig_40a]

Project Selection Script Window Geometry Tools Help

Display
Look & Feel
Theme
Preference
Edition Layout
Extraction Layout

Browser
Number of nodes = 707
Display individu: Scen
Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...	V
▶ ssecond Type 8					-3.683			146.117		
▶ ssecond Type 9					-2.66			142.415		
▶ ssecond Type 10					3.093			0		
▶ ssecond Type 11					-2.649			134.014		
▶ ssecond Type 12					8.094			133.862		
▶ ssecond Type 13					2.53			0		
▶ ssecond Type 14					5.446			130.79		
▶ ssecond Type 15					-5.42			150.339		
▶ ssecond Type 16					-4.466			0		
▶ ssecond Type 17					4.156			150.387		
▶ ssecond Type 18					1.168			0		
▶ ssecond Type 19					3.16			132.072		
▶ ssecond Type 20					2.779			0		
▶ ssecond Type 21					5.555			185.513		
▶ ssecond Type 22					3.983			0		
▶ ssecond Type 23					-1.752			156.277		
▶ ssecond Type 24					-5.126			0		
▶ ssecond Type 25					-4.123			176.384		
▶ ssecond Type 26					4.34			119.419		
▶ ssecond Type 27					-5.579			95.715		
▶ ssecond Type 28					-2.186			0		
▶ ssecond Type 29					-1.725			107.816		
▶ ssecond Type 30					-5.088			134.003		
▶ ssecond Type 31					5.583			142.845		
▶ ssecond Type 32					-7.992			141.534		
▶ ssecond Type 33					-0.372			121.952		
▶ courte 1	courte			0			2		16.649	
▶ scourte 1										
▶ scourte 2					10			0		
▶ scourte 3					10			0		
▶ scourte 4					10			0		
▶ scourte 5					10			0		
▶ scourte 6					-10			0		
▶ scourte 7					10			0		
▶ ssecond Type 34					-2.925			0		
▶ ssecond Type 35					-1.605			185.126		
▶ ssecond Type 36					2.264			0		
▶ ssecond Type 37					0.904			129.12		
▶ ssecond Type 38					6.77			0		
▶ ssecond Type 39					4.784			156.953		
▶ ssecond Type 40					-7.408			119.782		
▶ ssecond Type 41					-1.705			139.55		
▶ ssecond Type 42					0.862			111.144		

3D View

Projects

26a - 27a - 28a - 29a - 30a - 31a - 32a - 33a - 34a - 35a - 36a - 37a - 38a - 39a - 40a

Browser Render editor

Training X02: Extraction Layout

Extraction Window

The screenshot displays the Xplo software interface with the following components:

- Extraction Window:** Located at the top left, it contains a tab labeled "Extraction 1", a dropdown menu set to "All scene", and buttons for "Input", "Selection", "Output", "Save", and "Load".
- Browser:** Located at the bottom left, it shows a tree structure of the model. The "Number of nodes" is 7651. The "Display Individu" is set to "Scene". The tree includes a "Secondary 1" node with a sub-tree of "sSecondary" nodes, and "sPrimary" nodes.
- Plots:** A large empty panel on the top right.
- 3D View:** A panel on the bottom right showing a 3D visualization of the model. It features a dense network of yellow and green lines representing the structure, with a red line indicating a specific path or feature.

Topology	Name	FileName	age	XInsertion...	ZEuler	HA	type	XEuler	currentTL...
Secondary 1	Secondary			0			2		18.30
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					-10			0	
sSecondary 4					10			0	
sSecondary 5					10			0	
sSecondary 6					10			0	
sSecondary 7					10			0	
sPrimary 47					-0.904			161.667	
sPrimary 48					3.749			136.426	
Secondary 1	Secondary			0			2		18.58
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					10			0	
sSecondary 6					-10			0	

Training X02: Type Selection

1 2

The screenshot displays the Xplo software interface. The 'Type' menu is open, showing options: Type, Attribute, Topology, Traverse, and Extrusion. The 'Browser' panel on the left shows a list of nodes with columns: Topology, Name, FileName, age, Xinsertion..., ZEuler, HA, type, XEuler, and currentTI... The '3D View' window on the right shows a 3D visualization of a complex structure with yellow and green lines.

Project Selection Script Window Geometry Tools Help

Extrac

All scene Input Selection Output Save Load

Browser

Number of nodes = 7651

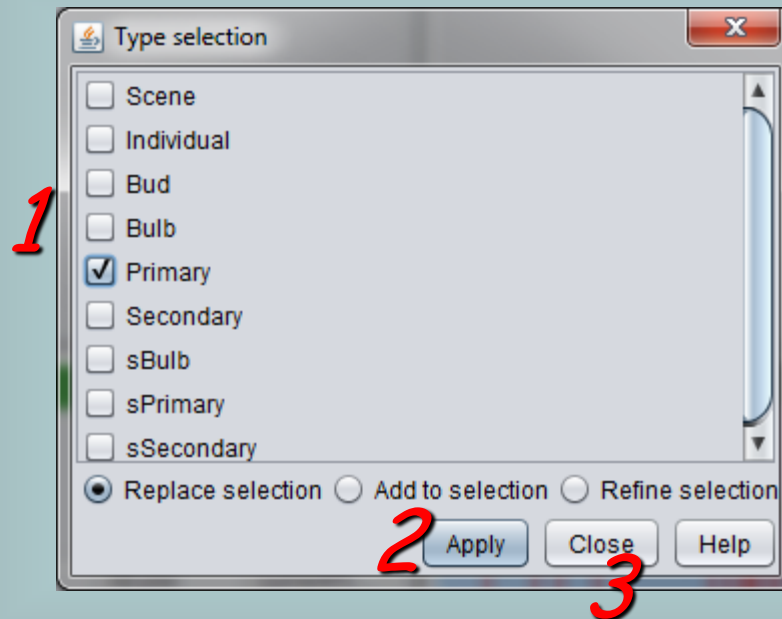
Display individuo: Scene 1

Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
sPrimary 107					-1.18			0	
sPrimary 108					2.783			0	
sPrimary 109					4.668			111.363	
sPrimary 110					-2.118			145.191	
sPrimary 111					2.831			125.633	
sPrimary 112					-7.076			0	
sPrimary 113					-5.002			137.456	
sPrimary 114					1.431			0	
sPrimary 115					-2.069			125.262	
sPrimary 116					-2.421			0	
sBulb 12					-1.213			199.565	
sBulb 13					0.998			157.618	
sBulb 14					-3.111			88.87	
sBulb 15					-2.688			130.648	
sBulb 16					-3.236			0	
sBulb 17					-2.899			71.188	
Primary 1	Primary				0	10	1	2.15	

3D View

Training X02: Primary Type Selection



Training X02: Selection Input

2 Choose
1 Press
Press 3

The screenshot displays the Xplo software interface with the following components:

- Extraction Panel:** Shows a dropdown menu for 'Selection' with options: All scene, All scenario, Selection (highlighted), and File. Below it are buttons for 'Input', 'Selection', 'Output', 'Save', and 'Load'.
- Browser Panel:** Displays a list of nodes and a table of data.
- 3D View Panel:** Shows a 3D visualization of a complex structure with yellow and green lines.

Browser Panel Data Table:

Topology	Name	FileName	age	XInserion...	ZEuler	HA	type	XEuler	currentTI...
sPrimary 107					-1.18			0	
sPrimary 108					2.783			0	
sPrimary 109					4.668			111.363	
sPrimary 110					-2.118			145.191	
sPrimary 111					2.831			125.633	
sPrimary 112					-7.076			0	
sPrimary 113					-5.002			137.456	
sPrimary 114					1.431			0	
sPrimary 115					-2.069			125.262	
sPrimary 116					-2.421			0	
sBulb 12					-1.213			199.565	
sBulb 13					0.998			157.618	
sBulb 14					-3.111			88.87	
sBulb 15					-2.688			130.648	
sBulb 16					-3.236			0	
sBulb 17					-2.899			71.188	
Primary 1	Primary				0	10	1	2.153	

Training X02: Add a Column for Primary

Right click to open dialog box

The screenshot displays the Xplo software interface with the following components:

- Extraction Panel:** Shows a list of items under 'Extraction 1'. The 'Primary' item is highlighted in green. A red arrow points to the 'Primary' item in the list.
- Browser Panel:** Displays a table of data for 'Primary' items. The table has columns: Topology, Name, FileName, age, Xinsertion..., ZEuler, HA, type, XEuler, and currentTI... The table lists items sPrimary 107 through sPrimary 116, sBulb 12 through sBulb 17, and Primary 1.
- 3D View Panel:** Shows a 3D visualization of the data, with a dense cluster of yellow and green lines representing the primary data.

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
sPrimary 107					-1.18			0	
sPrimary 108					2.783			0	
sPrimary 109					4.668			111.363	
sPrimary 110					-2.118			145.191	
sPrimary 111					2.831			125.633	
sPrimary 112					-7.076			0	
sPrimary 113					-5.002			137.456	
sPrimary 114					1.431			0	
sPrimary 115					-2.069			125.262	
sPrimary 116					-2.421			0	
sBulb 12					-1.213			199.565	
sBulb 13					0.998			157.618	
sBulb 14					-3.111			88.87	
sBulb 15					-2.688			130.648	
sBulb 16					-3.236			0	
sBulb 17					-2.899			71.188	
Primary 1	Primary				0	10	1	2.15	

Dialog Box : left click to choose item

*Training X02:
Add a Column for Primary*

The screenshot displays the Xplo software interface with the following components:

- Extraction Dialog Box:** Located at the top left, it features a list of items, all labeled "Primary 1". A red arrow points to the "Item : Add a column" option in the context menu.
- Browser Panel:** Located at the bottom left, it shows a tree structure of nodes. The "Secondary 1" node is expanded, revealing a list of secondary nodes (sSecondary 1 to sSecondary 5) and primary nodes (sPrimary 104 to sPrimary 114).
- 3D View:** Located at the bottom right, it displays a 3D visualization of a complex, branching structure, likely representing a biological or geological model.

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▼ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary				0		2	34.94	
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

The screenshot displays the Xplo3 software interface. The top menu bar includes Project, Selection, Script, Window, Geometry, Tools, and Help. The main workspace is divided into several panels:

- Extraction Panel:** Located at the top left, it shows a list of items (Primary 1) and a table of data. The table has columns for Name, FileName, age, XInsertion, ZEuler, HA, and type. The data is organized into a hierarchy starting with 'Secondary 1'.
- Dialog Box:** A small window titled 'Add a column' is open, showing options for Column type (Attribute) and Width (Attribute).
- 3D Plot:** A 3D visualization of a root system is shown in the bottom right corner, with a red line indicating a specific path or feature.

A red arrow points from the text 'Dialog Box' to the 'Add a column' dialog box.

Training X02: Add a Column for Primary

Choose Navigation

The screenshot shows a dialog box titled "Add a column". It has a "Column type" dropdown menu set to "Navigation" (annotated with a red "1" and an arrow from the text "Choose Navigation"). Below this is an "Options" section containing a "Topology" dropdown menu set to "Bearer" (annotated with a red "2" and an arrow from the text "To get Bearer of Primary Roots"), a "Use order" checkbox which is unchecked, and an "Order" text field containing the number "1". At the bottom of the dialog are two buttons: "Close" (annotated with a red "4") and "Add" (annotated with a red "3" and an arrow from the text "Press").

*To get Bearer
of Primary Roots*

Press

Training X02: Column Bearer of Primary Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 *

Selection Input Selection Output Save Load

Item	Bearer
Primary 1	sBulb 17
Primary 1	sBulb 10
Primary 1	sBulb 13
Primary 1	sBulb 15
Primary 1	sBulb 7
Primary 1	sBulb 4
Primary 1	sBulb 18
Primary 1	sBulb 8
Primary 1	sBulb 20
Primary 1	sBulb 5
Primary 1	sBulb 14
Primary 1	sBulb 25
Primary 1	sBulb 22
Primary 1	sBulb 6
Primary 1	sBulb 11
Primary 1	sBulb 12
Primary 1	sBulb 2
Primary 1	sBulb 3

Number of lines : 19

Browser

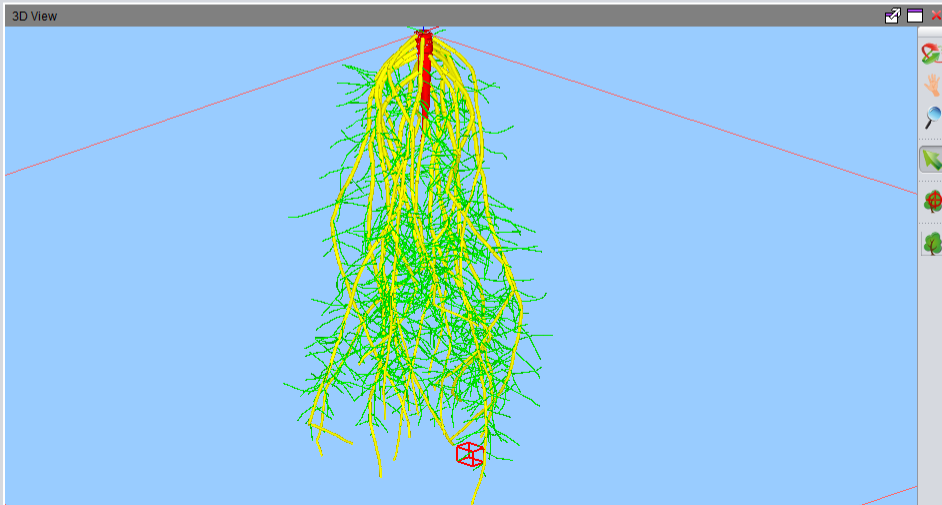
Number of nodes = 7651

Display individ: Scene 1

Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▶ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary			0			2	34.94	
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

3D View



Training X02: Add a Column for Bearer

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 *

Selection Input Selection Output Save Load

Item	Bearer
Primary 1	sBulb 17
Primary 1	sBulb 10
Primary 1	sBulb 13
Primary 1	sBulb 15
Primary 1	sBulb 7
Primary 1	sBulb 4
Primary 1	sBulb 18
Primary 1	sBulb 8
Primary 1	sBulb 20
Primary 1	sBulb 5
Primary 1	sBulb 14
Primary 1	sBulb 25
Primary 1	sBulb 22
Primary 1	sBulb 6
Primary 1	sBulb 11
Primary 1	sBulb 12
Primary 1	sBulb 2
Primary 1	sBulb 3

Number of lines : 19

Hide column : Bearer
Bearer : Add a column

Browser

Number of nodes = 7651

Display individ : Scene 1

Collapse Expand

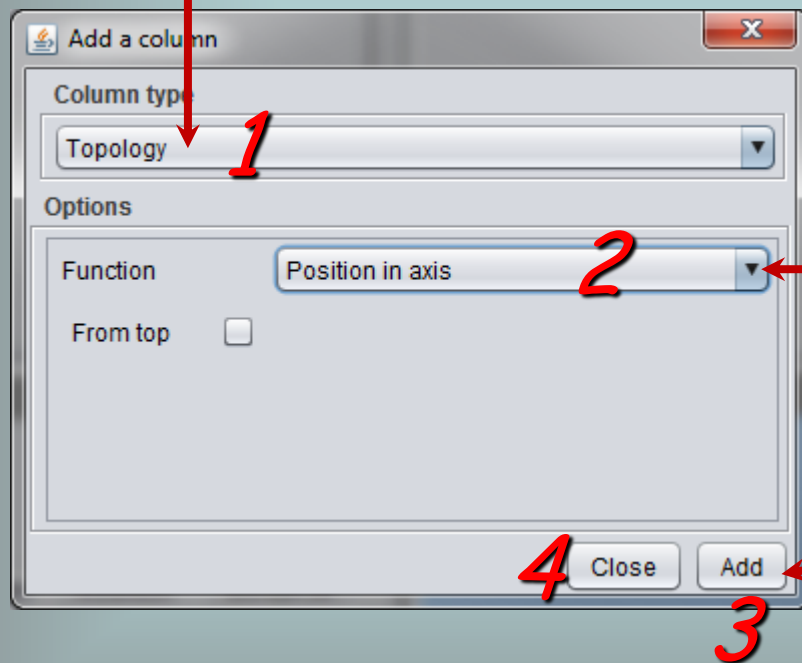
Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▼ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary			0			2		34.94
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

3D View

Select: Click ou Click+Move to select, Ctrl+Click adds to the selection or removes from the selection

Training X02: Add Position

Choose Topology



*Function choosen to get
Position of each Bulb segment*

Press

Training X02: Column Bearer_Position in axis Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1

Selection Input Selection Output Save Load

Item	Bearer	Bearer_Position in axis
Primary 1	sBulb 17	17
Primary 1	sBulb 10	10
Primary 1	sBulb 13	13
Primary 1	sBulb 15	15
Primary 1	sBulb 7	7
Primary 1	sBulb 4	4
Primary 1	sBulb 18	18
Primary 1	sBulb 8	8
Primary 1	sBulb 20	20
Primary 1	sBulb 5	5
Primary 1	sBulb 14	14
Primary 1	sBulb 25	25
Primary 1	sBulb 22	22
Primary 1	sBulb 6	6
Primary 1	sBulb 11	11
Primary 1	sBulb 12	12
Primary 1	sBulb 2	2
Primary 1	sBulb 3	3

Number of lines : 19

Browser

Number of nodes = 7651

Display individ: Scene 1

Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▼ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary			0			2	34.94	
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

Browser Projects

Plots

3D View

Training X02: Add a Column for Primary

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1

Selection Input Selection Output Save Load

Item	Bearer	Bearer_Position in axis
Primary 1	sBulb 17	17
Primary 1	sBulb 10	10
Primary 1	sBulb 13	13
Primary 1	sBulb 15	15
Primary 1	sBulb 7	7
Primary 1	sBulb 4	4
Primary 1	sBulb 18	18
Primary 1	sBulb 8	8
Primary 1	sBulb 20	20
Primary 1	sBulb 5	5
Primary 1	sBulb 14	14
Primary 1	sBulb 25	25
Primary 1	sBulb 22	22
Primary 1	sBulb 6	6
Primary 1	sBulb 11	11
Primary 1	sBulb 12	12
Primary 1	sBulb 2	2
Primary 1	sBulb 3	3

Number of lines : 19

Browser

Number of nodes = 7651

Display individ: Scene 1

Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▼ sPrimary 111					1.96			104.02	
▶ Secondary 1	Secondary				0		2	34.94	
▶ sSecondary 1									
▶ sSecondary 2					-10			0	
▶ sSecondary 3					10			0	
▶ sSecondary 4					-10			0	
▶ sSecondary 5					-10			0	
▶ sPrimary 112					4.003			0	
▶ sPrimary 113					-1.274			133.121	
▶ sPrimary 114					5.51			161.914	

Browser Projects

Plots

3D View

Add Sum of Segments : Primary Length

1 Add a column

This screenshot shows the 'Add a column' dialog box. The 'Column type' dropdown is set to 'Attribute'. The 'Options' section has 'Attribute' selected in the first dropdown and 'Length' in the second. The 'Close' and 'Add' buttons are at the bottom right.

2

This screenshot shows the 'Add a column' dialog box. The 'Column type' dropdown is set to 'Statistics'. The 'Options' section has 'Function' set to 'Sum', 'Attribute' is empty, and 'Traversal function' is set to 'COMPONENTS'. The 'Close' and 'Add' buttons are at the bottom right.

3

This screenshot shows the 'Add a column' dialog box. The 'Column type' dropdown is set to 'Statistics'. The 'Options' section has 'Function' set to 'Sum', 'Attribute' set to 'Length', and 'Traversal function' set to 'COMPONENTS'. The 'Close' and 'Add' buttons are at the bottom right.

4

5

6

8

7

Training X02: Primary Lengths Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1

Selection Input Selection Output Save Load

Item	Bearer	Bearer _Position i...	Sum_Length_COMP...
Primary 1	sBulb 17	17	37.854
Primary 1	sBulb 10	10	34.131
Primary 1	sBulb 13	13	40.87
Primary 1	sBulb 15	15	35.04
Primary 1	sBulb 7	7	40.313
Primary 1	sBulb 4	4	43.22
Primary 1	sBulb 18	18	34.495
Primary 1	sBulb 8	8	31.827
Primary 1	sBulb 20	20	36.98
Primary 1	sBulb 5	5	30.969
Primary 1	sBulb 14	14	28.96
Primary 1	sBulb 25	25	28.746
Primary 1	sBulb 22	22	28.944
Primary 1	sBulb 6	6	37.999
Primary 1	sBulb 11	11	41.009
Primary 1	sBulb 12	12	29.003
Primary 1	sBulb 2	2	43.233
Primary 1	sBulb 3	3	30.918

Number of lines : 19

Browser

Number of nodes = 7651

Display individu : Scene 1

Collapse Expand

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▼ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary				0		2	34.94	
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

3D View

Training X02: Order by Position

Click on Column Header

The screenshot displays the Xplo software interface with the following components:

- Extraction Panel:** Shows a table with 19 lines of data. A red arrow points to the 'Bearer_Position in axis' column header.
- Browser Panel:** Displays a tree structure of nodes. The 'Secondary 1' node is expanded, showing its sub-nodes.
- 3D View:** Shows a 3D visualization of the data, with a red line indicating the position of the selected node.

Extraction Table Data:

Item	Bearer	Bearer_Position in axis	Sum_Length_COMPONENTS
Primary 1	sBulb 1	1	36.9
Primary 1	sBulb 2	2	43.233
Primary 1	sBulb 3	3	30.918
Primary 1	sBulb 4	4	43.22
Primary 1	sBulb 5	5	30.969
Primary 1	sBulb 6	6	37.999
Primary 1	sBulb 7	7	40.313
Primary 1	sBulb 8	8	31.827
Primary 1	sBulb 10	10	34.131
Primary 1	sBulb 11	11	41.009
Primary 1	sBulb 12	12	29.003
Primary 1	sBulb 13	13	40.87
Primary 1	sBulb 14	14	28.96
Primary 1	sBulb 15	15	35.04
Primary 1	sBulb 17	17	37.854
Primary 1	sBulb 18	18	34.495
Primary 1	sBulb 20	20	36.98
Primary 1	sBulb 22	22	28.944

Browser Table Data:

Topology	Name	FileName	age	Xinsertion...	ZEuler	HA	type	XEuler	currentTI...
▶ sPrimary 104					-6.667			124.294	
▶ sPrimary 105					-2.988			122.679	
▶ sPrimary 106					4.478			157.775	
▶ sPrimary 107					3.376			116.544	
▶ sPrimary 108					2.47			130.723	
▶ sPrimary 109					2.575			0	
▶ sPrimary 110					1.24			148.686	
▶ sPrimary 111					1.96			104.02	
▼ Secondary 1	Secondary				0		2	34.94	
sSecondary 1									
sSecondary 2					-10			0	
sSecondary 3					10			0	
sSecondary 4					-10			0	
sSecondary 5					-10			0	
sPrimary 112					4.003			0	
sPrimary 113					-1.274			133.121	
sPrimary 114					5.51			161.914	

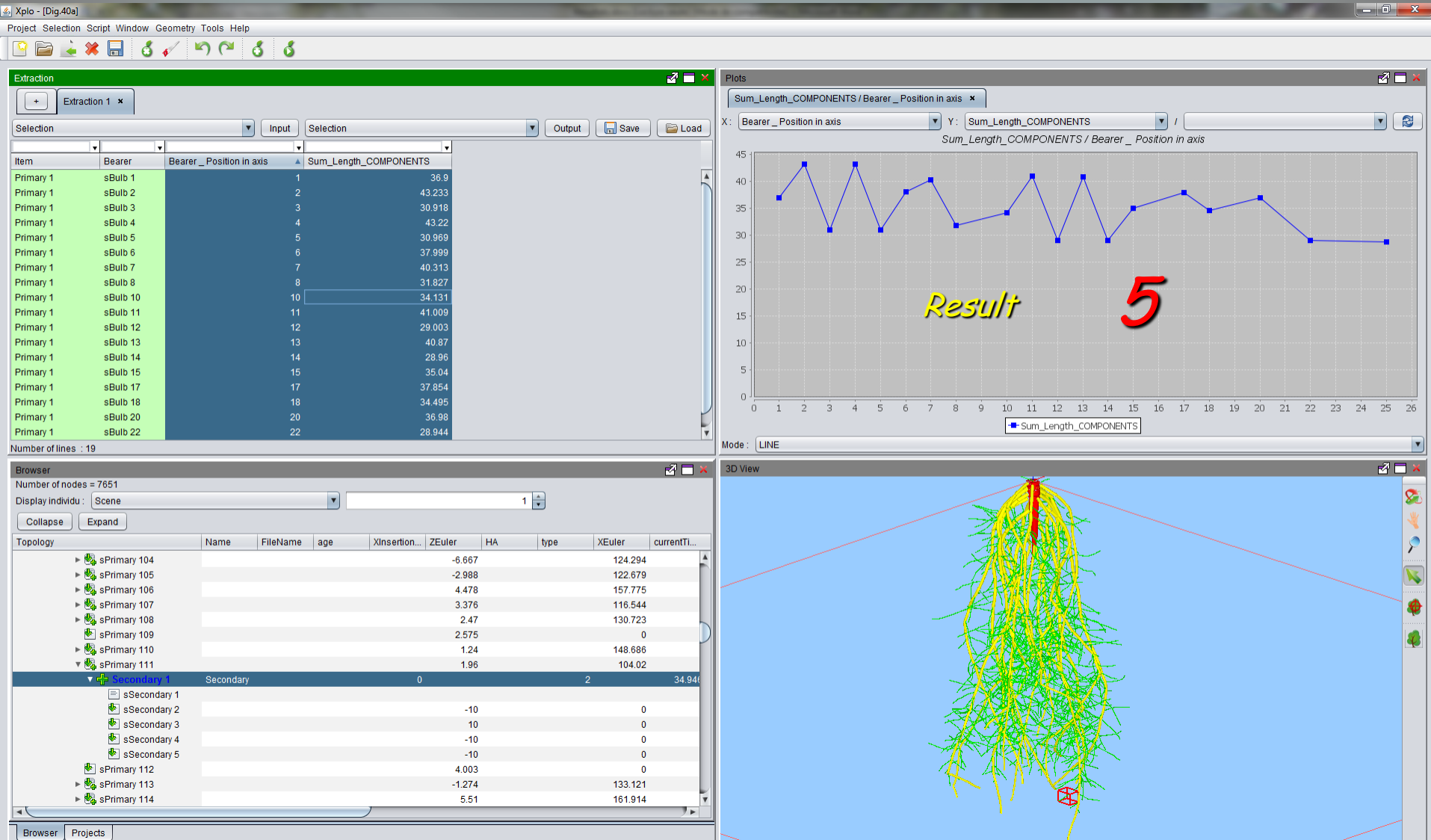
Drag Left Click or
CTRL+Left Click
to select

Training X02:
Plot Primary Lengthes

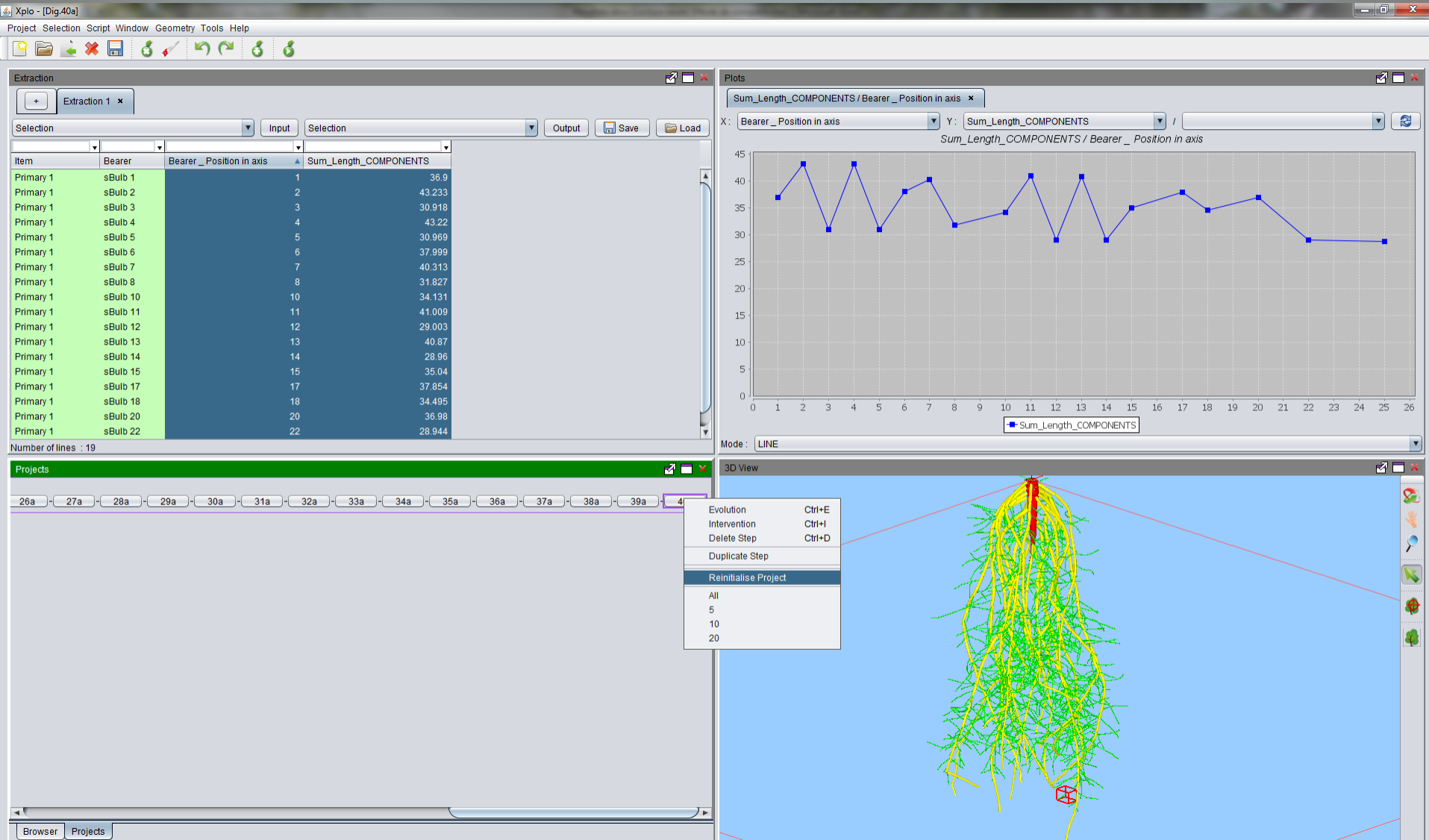
The screenshot displays the Xplo software interface with the following components:

- Extraction Table:** A table with columns: Item, Bearer, Bearer_Position, n axis, and Sum_Length_COMPONENTS. It lists 22 primary items (Primary 1 to Primary 22) with their respective bearers (sBulb 1 to sBulb 22) and sum lengths. A red arrow points to the 'n axis' column (labeled '1') and another to the 'Sum_Length_COMPONENTS' column (labeled '2'). A right-click context menu is open over the table, showing options: 'Hide column : Sum_Length_COMPONENTS', 'Copy as attribute', and 'Plot' (labeled '3'). A left-click action is indicated by a red arrow and the number '4' (labeled 'Left click').
- Browser:** A panel showing the project hierarchy. It includes a 'Number of nodes = 7651' and a 'Display individuo' dropdown set to 'Scene'. A table lists topology items (sPrimary 104 to sPrimary 114) with their Z Euler, HA, type, X Euler, and current TI values. A 'Secondary 1' group is expanded, showing sSecondary 1 to sSecondary 5.
- 3D View:** A 3D visualization of the primary lengths, showing a dense cluster of yellow and green lines representing the primary lengths, with a red line indicating the primary length of the selected item.

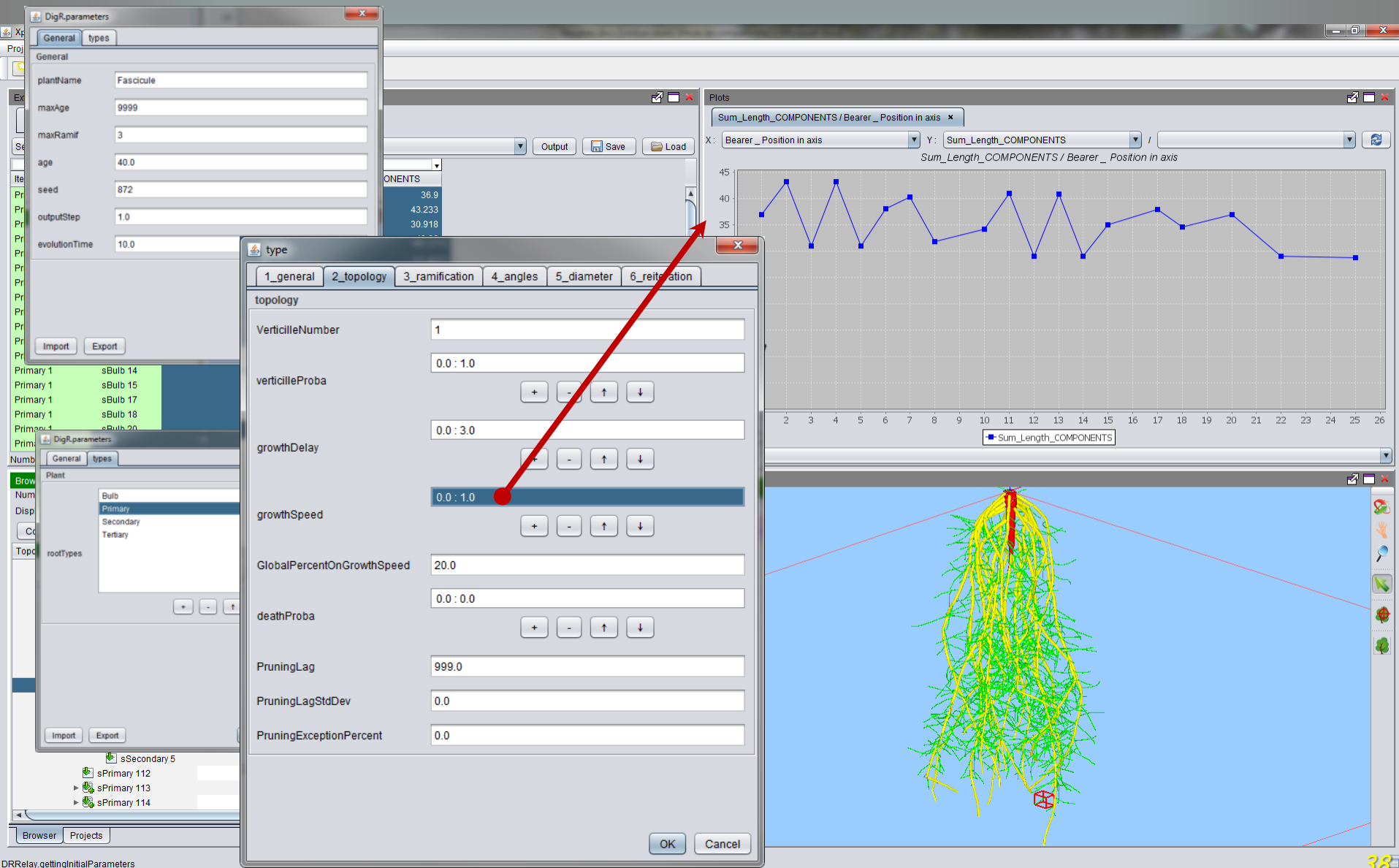
Training X02: Plot Primary Lengthes



Training X02: Reinit Project

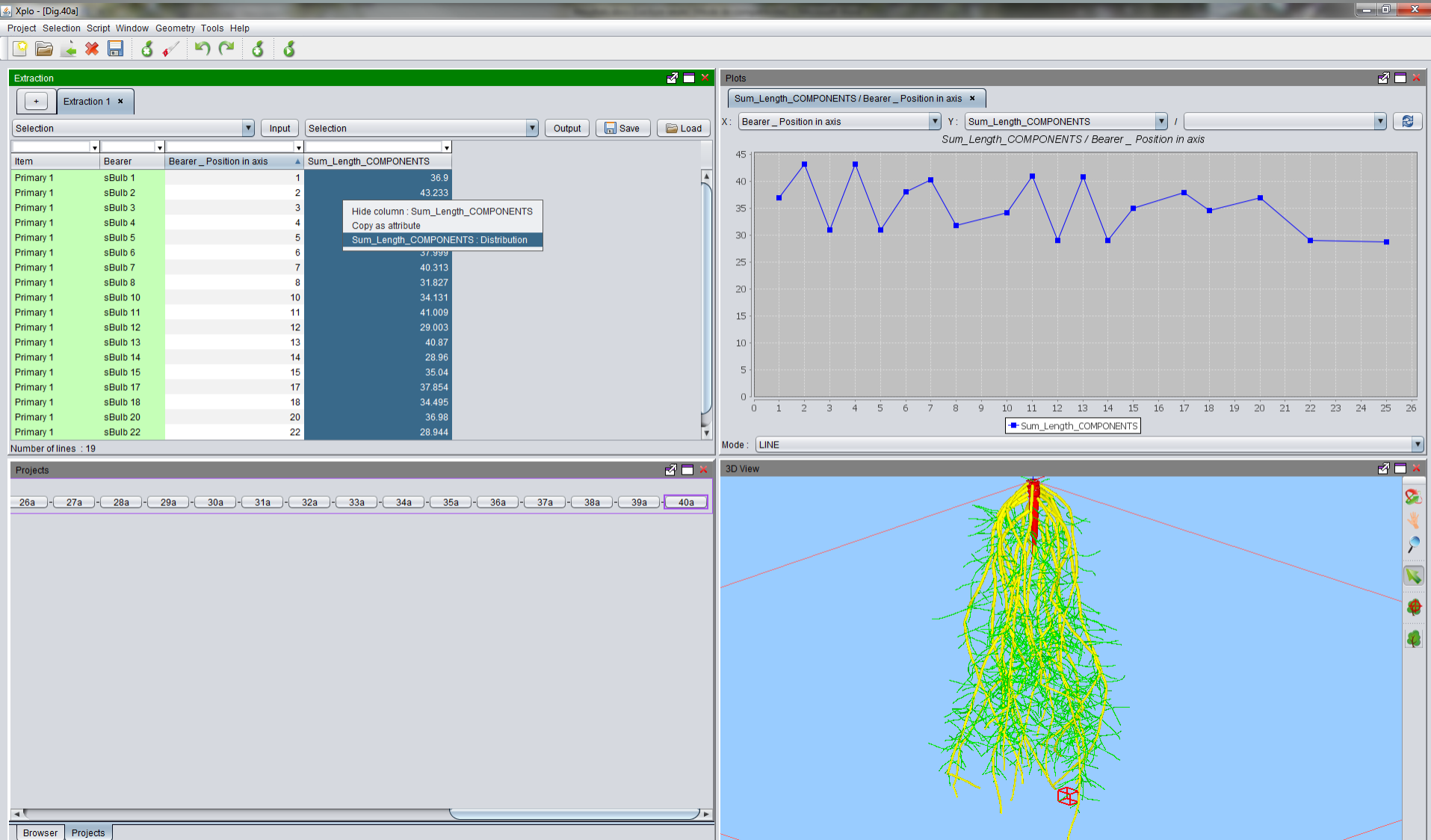


Training X02: Data Control : Compare Simulated Values vs Parameter File Values

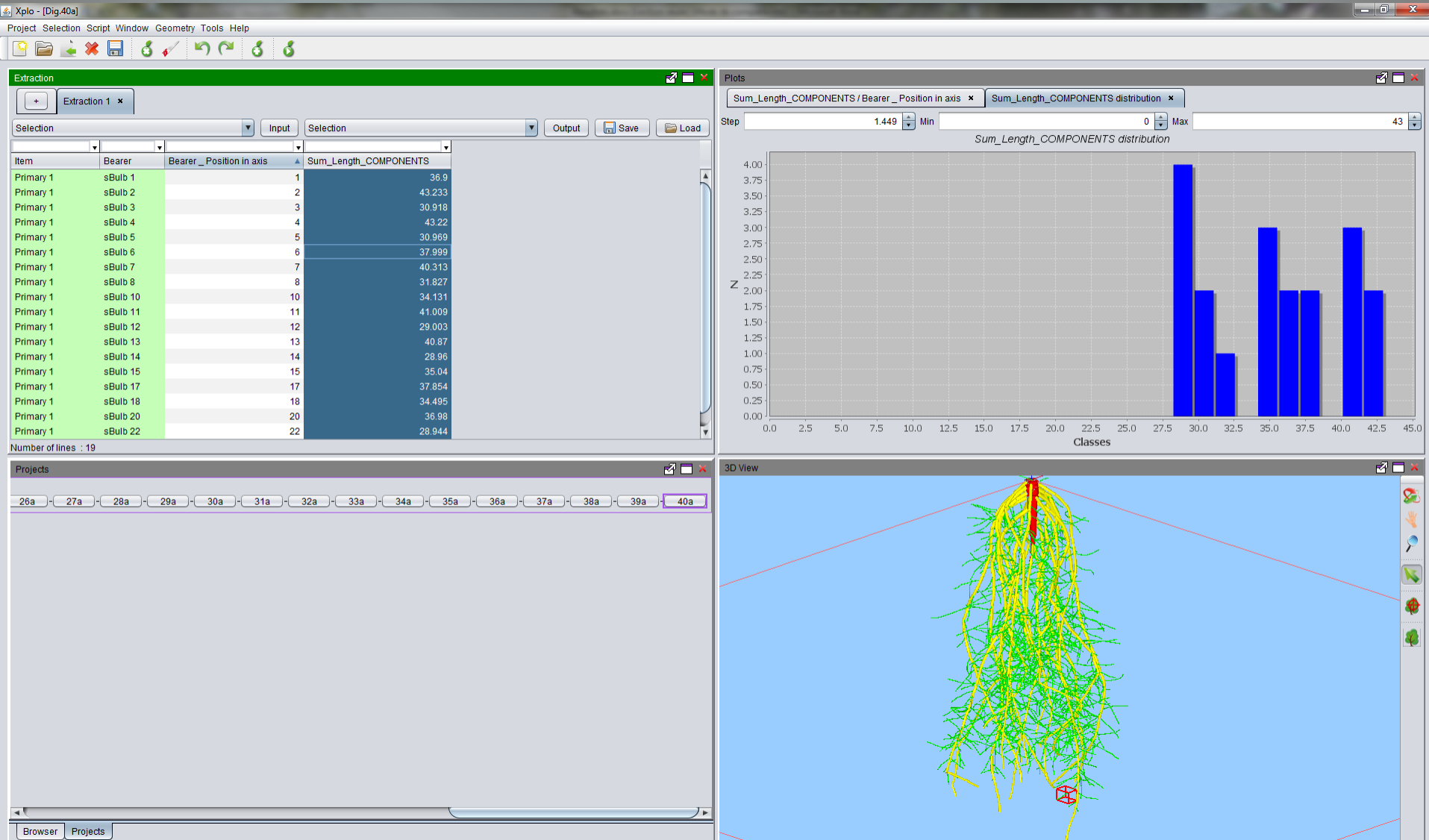


Choose « Length » column with left click,
Then right click
Then left click on « Length : Distribution »

Training X02: Plot Lengthes Distribution

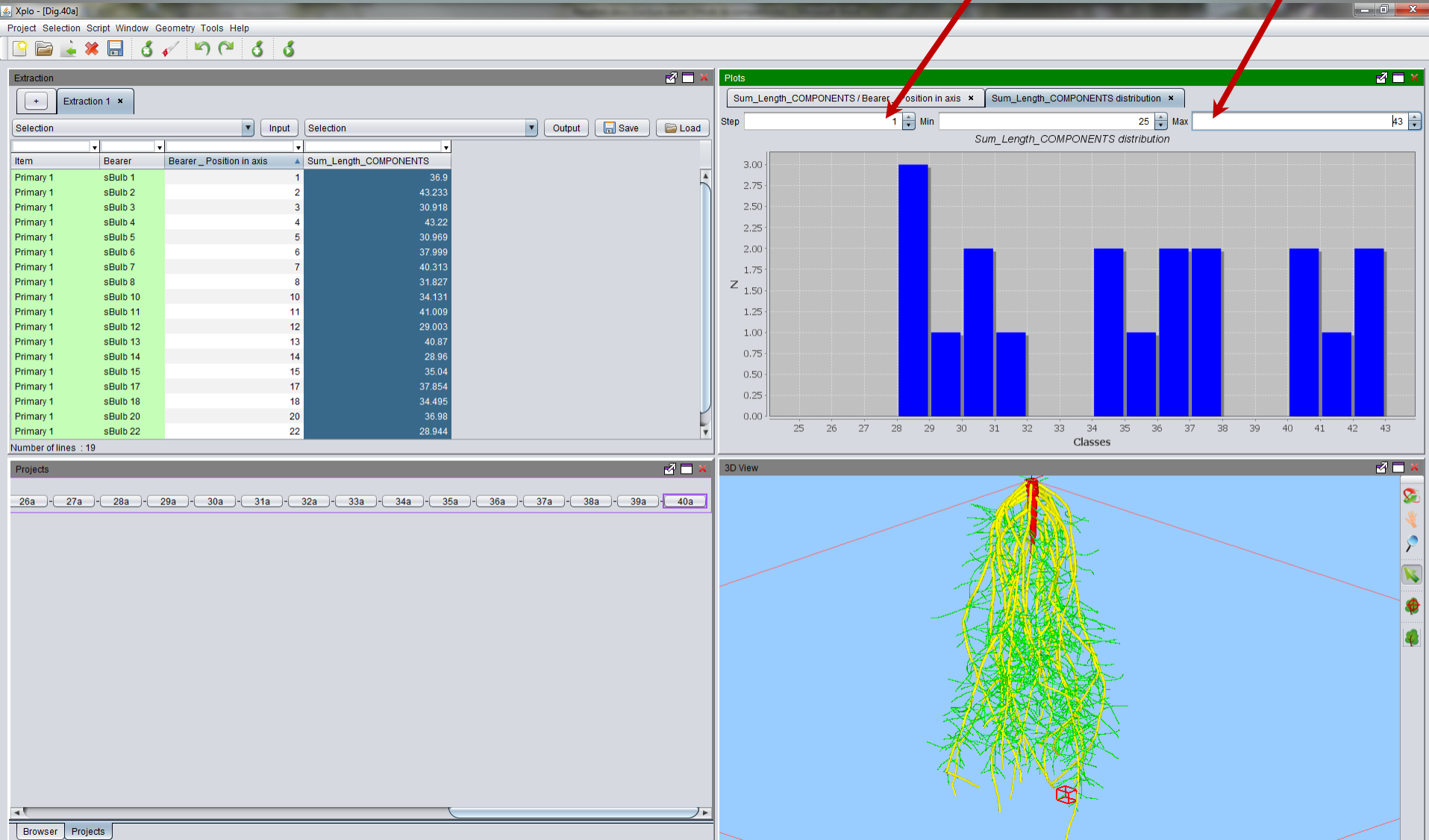


Training X02: Lengthes Distribution



Training X02: Optimize Plot Values

Step, Min & Max



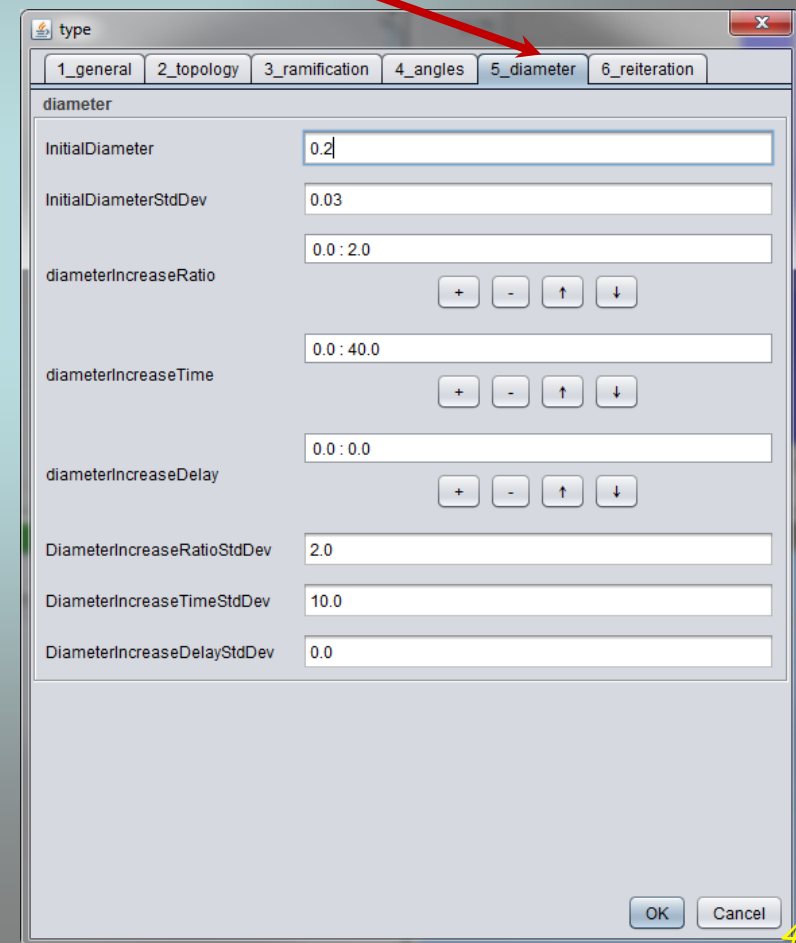
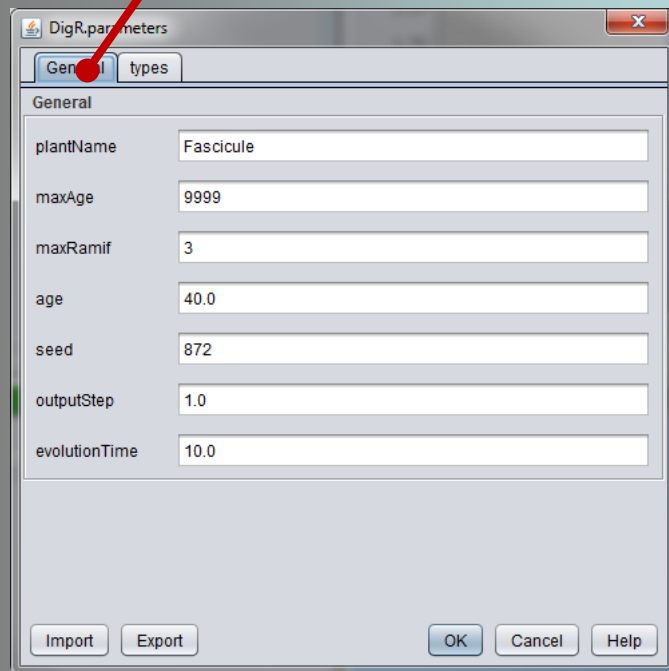
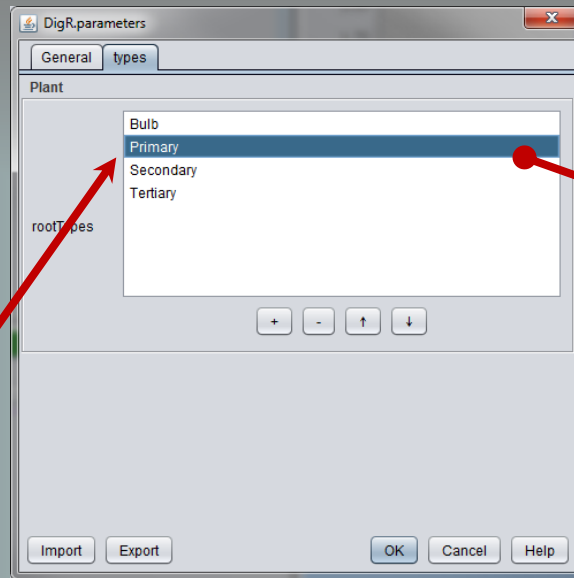


-X03-

FIRST
PRIMARY
DIAMETER

Training X03: Parameter File Data

*Primary Diameters
Come from
Diameter Folder !*



Training X03: Type Selection

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Type
Attribute
Topology
Traverse

Extraction 2

All scene Input Selection Output Export Import

Plots

Type selection

- ☐ Scene
- ☐ Individual
- ☐ Bud
- ☐ Bulb
- ☒ Primary
- ☐ Secondary
- ☐ sBulb
- ☒ sPrimary
- ☐ sSecondary

☒ Replace selection ☐ Add to selection ☐ Refine selection

Apply Close Help

Browser

Number of nodes = 7651

Display individu : Scene

Collapse Expand

Topology	ZEuler	XEuler	currentTi...	YEuler	Yinsertion...
▶ sPrimary 115	-2.069	125.262	-2.34		
▶ sPrimary 116	-2.421	0	1.638		
▶ sBulb 12	-1.213	199.565	3.021	1.421	0.163
▶ sBulb 13	0.998	157.618	-4.126	1.592	0.171
▶ sBulb 14	-3.111	88.87	-5.782	1.771	0.18
▶ sBulb 15	-2.688	130.648	-2.599	1.96	0.189
▶ sBulb 16	-3.236	0	-2.798	2	0.04
▶ sBulb 17	-2.899	71.188	-1.899	2.158	0.158
▶ sBulb 18	-1.612	127.432	-4.165	2.505	0.347
▼ Primary 1		2.505	67.744	5.505	0
▶ sPrimary 1			6	0.495	0.401
▶ sPrimary 2	4.019	0	-5.105	7	0.396
▶ sPrimary 3	-3.285	111.9	0.569	7.926	0.926
▶ sPrimary 4	-6.324	130.454	2.968	7.927	0.001
▶ sPrimary 5	1.914	0	8.055	8	0.073
▶ sPrimary 6	0.233	137.691	1.851	8.663	0.663
▶ sPrimary 7	2.504	0	1.461	9	0.337
▶ sPrimary 8	-0.001	152.061	3.258	9.154	0.154

Browser Projects

Translate: Click+Move to translate

44

Training X03: Type Selection

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

All scene Input Selection Output Export Import

Plots

Browser

Number of nodes = 7651

Display individu : Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTi...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907			20	0.009	0.33	jeeb.lib.st...
sPrimary 44	1.899	131.654	-1.69			20.269	0.311	0.328	jeeb.lib.st...
sPrimary 45	3.045	90.631	7.085			20.27	0.001	0.328	jeeb.lib.st...
sPrimary 46	4.553	148.317	3.305			20.636	0.423	0.326	jeeb.lib.st...
sPrimary 47	-0.59	0	-4.744			21	0.42	0.324	jeeb.lib.st...
sPrimary 48	-3.512	168.38	-3.746			21.738	0.852	0.32	jeeb.lib.st...
sPrimary 49	-5.923	133.659	-1.411			21.943	0.237	0.319	jeeb.lib.st...
sPrimary 50	-5.212	0	-0.695			22	0.065	0.319	jeeb.lib.st...
sPrimary 51	2.731	99.262	-7.535			22.837	0.966	0.314	jeeb.lib.st...
sPrimary 52	-2.763	0	-0.94			23	0.188	0.313	jeeb.lib.st...
sPrimary 53	-4.587	179.45	-4.913			23.166	0.192	0.312	jeeb.lib.st...
sPrimary 54	5.465	121.229	4.953			23.323	0.181	0.312	jeeb.lib.st...
sPrimary 55	-2.388	143.128	-4.825			23.922	0.692	0.308	jeeb.lib.st...
sPrimary 56	1.887	0	2.114			24	0.09	0.308	jeeb.lib.st...
sPrimary 57	6.071	105.721	1.057			24.182	0.21	0.307	jeeb.lib.st...
sPrimary 58	-4.383	140.527	-3.791			24.668	0.561	0.304	jeeb.lib.st...
sPrimary 59	-4.124	0	-3.727			25	0.383	0.302	jeeb.lib.st...
sPrimary 60	4.544	163.564	-2.579			25.246	0.284	0.301	jeeb.lib.st...

3D View

Translate: Click+Move to translate

Training X03: Input Selection

2 Choose **1 Press** **Press 3**

The screenshot shows the Xplo software interface with three red arrows indicating a sequence of actions: '2 Choose' points to the 'Extraction' menu, '1 Press' points to the 'Input' button, and 'Press 3' points to the 'Selection' dropdown. The 'Extraction' menu is open, showing options: 'All scene', 'All scene', 'All scenario', 'Selection', and 'File'. The 'Browser' panel displays a table of data with columns: Topology, ZEuler, XEuler, currentTI..., YEuler, Yinsertion..., birthTime, Length, Width, and Geometri... The '3D View' panel shows a 3D model of a plant structure with red and green lines.

Extraction

Extraction 1 x Extraction 2 x

All scene
All scene
All scenario
Selection
File

Input Selection Output Export Import

Browser

Number of nodes = 7651

Display individu : Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907	-1.69	20.269	0.009	0.33	jeeb.lib st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib st...		

Browser Projects

3D View

Training X03: Add a Column for Primary

Right click to open dialog box

Xplo - [Fig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item

- sPrimary 60
- sPrimary 89
- sPrimary 84
- sPrimary 110
- sPrimary 28
- sPrimary 38
- sPrimary 117
- sPrimary 61
- sPrimary 40
- sPrimary 41
- sPrimary 38
- sPrimary 63
- sPrimary 101
- sPrimary 86
- sPrimary 69
- sPrimary 12
- sPrimary 39
- sPrimary 53
- sPrimary 5

Browser

Number of nodes = 7651

Display individ: Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTi...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907			20	0.009	0.33	jeeb.lib st...
sPrimary 44	1.899	131.654	-1.69			20.269	0.311	0.328	jeeb.lib st...
sPrimary 45	3.045	90.631	7.085			20.27	0.001	0.328	jeeb.lib st...
sPrimary 46	4.553	148.317	3.305			20.636	0.423	0.326	jeeb.lib st...
sPrimary 47	-0.59	0	-4.744			21	0.42	0.324	jeeb.lib st...
sPrimary 48	-3.512	168.38	-3.746			21.738	0.852	0.32	jeeb.lib st...
sPrimary 49	-5.923	133.659	-1.411			21.943	0.237	0.319	jeeb.lib st...
sPrimary 50	-5.212	0	-0.695			22	0.065	0.319	jeeb.lib st...
sPrimary 51	2.731	99.262	-7.535			22.837	0.966	0.314	jeeb.lib st...
sPrimary 52	-2.763	0	-0.94			23	0.188	0.313	jeeb.lib st...
sPrimary 53	-4.587	179.45	-4.913			23.166	0.192	0.312	jeeb.lib st...
sPrimary 54	5.465	121.229	4.953			23.323	0.181	0.312	jeeb.lib st...
sPrimary 55	-2.388	143.128	-4.825			23.922	0.692	0.308	jeeb.lib st...
sPrimary 56	1.887	0	2.114			24	0.09	0.308	jeeb.lib st...
sPrimary 57	6.071	105.721	1.057			24.182	0.21	0.307	jeeb.lib st...
sPrimary 58	-4.383	140.527	-3.791			24.668	0.561	0.304	jeeb.lib st...
sPrimary 59	-4.124	0	-3.727			25	0.383	0.302	jeeb.lib st...
sPrimary 60	4.544	163.564	-2.579			25.246	0.284	0.301	jeeb.lib st...

3D View

Translate: Click+Move to translate

Training X03: Add a Column for Primary

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item

- sPrimary 60
- sPrimary 89
- sPrimary 84
- sPrimary 110
- sPrimary 28
- sPrimary 38
- sPrimary 117
- sPrimary 61
- sPrimary 40
- sPrimary 41
- sPrimary 38
- sPrimary 63
- sPrimary 101
- sPrimary 86
- sPrimary 69
- sPrimary 12
- sPrimary 39
- sPrimary 53
- sPrimary 5

Edit label

Item : Add a column

Dialog Box

Add a column

Column type

Attribute

Options

Attribute

Close Add

Browser

Number of nodes = 7651

Display individu : Scene

Collapse Expand

Topology	sPrimary 43	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	W	0.33	jeeb.lib st...
	sPrimary 44	1.899	131.654	0	4.907	-1.69	20.269	0.311	0.328	jeeb.lib st...	
	sPrimary 45	3.045	90.631		7.085		20.27	0.001	0.328	jeeb.lib st...	
	sPrimary 46	4.553	148.317		3.305		20.636	0.423	0.326	jeeb.lib st...	
	sPrimary 47	-0.59	0		-4.744		21	0.42	0.324	jeeb.lib st...	
	sPrimary 48	-3.512	168.38		-3.746		21.738	0.852	0.32	jeeb.lib st...	
	sPrimary 49	-5.923	133.659		-1.411		21.943	0.237	0.319	jeeb.lib st...	
	sPrimary 50	-5.212	0		-0.695		22	0.065	0.319	jeeb.lib st...	
	sPrimary 51	2.731	99.262		-7.535		22.837	0.966	0.314	jeeb.lib st...	
	sPrimary 52	-2.763	0		-0.94		23	0.188	0.313	jeeb.lib st...	
	sPrimary 53	-4.587	179.45		-4.913		23.166	0.192	0.312	jeeb.lib st...	
	sPrimary 54	5.465	121.229		4.953		23.323	0.181	0.312	jeeb.lib st...	
	sPrimary 55	-2.388	143.128		-4.825		23.922	0.692	0.308	jeeb.lib st...	
	sPrimary 56	1.887	0		2.114		24	0.09	0.308	jeeb.lib st...	
	sPrimary 57	6.071	105.721		1.057		24.182	0.21	0.307	jeeb.lib st...	
	sPrimary 58	-4.383	140.527		-3.791		24.668	0.561	0.304	jeeb.lib st...	
	sPrimary 59	-4.124	0		-3.727		25	0.383	0.302	jeeb.lib st...	
	sPrimary 60	4.544	163.564		-2.579		25.246	0.284	0.301	jeeb.lib st...	

Translate: Click+Move to translate

Training X03: Add a Column for Primary

Choose Navigation

The screenshot shows a dialog box titled "Add a column". It has a "Column type" dropdown menu set to "Navigation" (annotated with a red "1" and an arrow from the text "Choose Navigation"). Below this is an "Options" section containing a "Topology" dropdown menu set to "Bearer" (annotated with a red "2" and an arrow from the text "To get Bearer of Primary Roots"), a "Use order" checkbox which is unchecked, and an "Order" text field containing the number "1". At the bottom of the dialog are two buttons: "Close" (annotated with a red "4") and "Add" (annotated with a red "3" and an arrow from the text "Press").

*To get Bearer
of Primary Roots*

Press

Training X03: Column Bearer of Primary Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer
sPrimary 60	sBulb 13
sPrimary 89	sBulb 1
sPrimary 84	sBulb 13
sPrimary 110	sBulb 2
sPrimary 28	sBulb 8
sPrimary 38	sBulb 11
sPrimary 117	sBulb 2
sPrimary 61	sBulb 10
sPrimary 40	sBulb 17
sPrimary 41	sBulb 7
sPrimary 38	sBulb 1
sPrimary 63	sBulb 6
sPrimary 101	sBulb 1
sPrimary 86	sBulb 13
sPrimary 69	sBulb 6
sPrimary 12	sBulb 4
sPrimary 39	sBulb 17
sPrimary 53	sBulb 12

Number of lines : 1916

Browser

Number of nodes = 7651

Display individ : Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907	-1.69	20.269	0.311	0.328	jeeb.lib.st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib.st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib.st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib.st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib.st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib.st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib.st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib.st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib.st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib.st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib.st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib.st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib.st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib.st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib.st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib.st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib.st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib.st...		

Browser Projects

3D View

Training X03: Add a Column for Bearer

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer
sPrimary 60	sBulb 13
sPrimary 89	sBulb 1
sPrimary 84	sBulb 13
sPrimary 110	sBulb 2
sPrimary 28	sBulb 8
sPrimary 38	sBulb 11
sPrimary 117	sBulb 2
sPrimary 61	sBulb 10
sPrimary 40	sBulb 17
sPrimary 41	sBulb 7
sPrimary 38	sBulb 1
sPrimary 63	sBulb 6
sPrimary 101	sBulb 1
sPrimary 86	sBulb 13
sPrimary 69	sBulb 6
sPrimary 12	sBulb 4
sPrimary 39	sBulb 17
sPrimary 53	sBulb 12

Number of lines : 1916

Hide column : Bearer
Bearer : Add a column

Browser

Number of nodes = 7651

Display individu : Scene 1

Collapse Expand

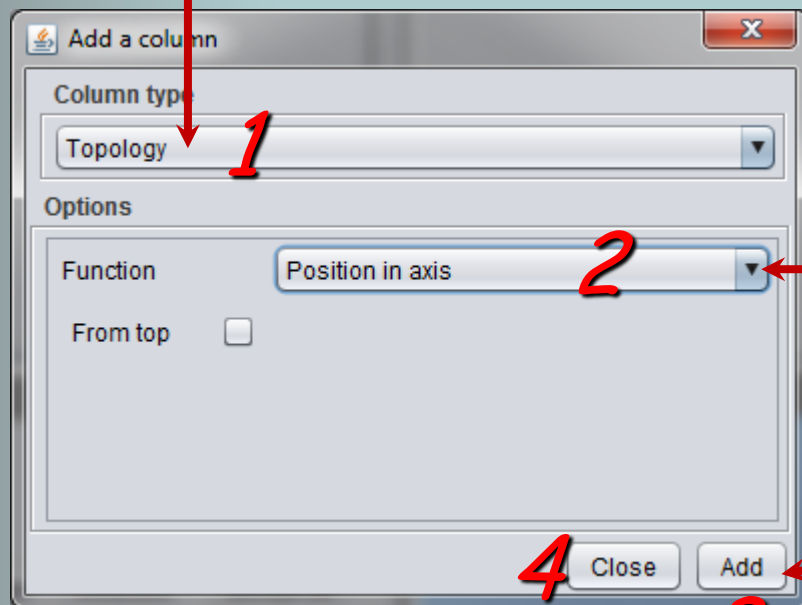
Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907	-1.69	20.269	0.311	0.328	jeeb.lib.st...	
sPrimary 44	1.899	131.654	-1.69	7.085	20.27	0.001	0.328	jeeb.lib.st...	
sPrimary 45	3.045	90.631	7.085	3.305	20.636	0.423	0.326	jeeb.lib.st...	
sPrimary 46	4.553	148.317	3.305	-4.744	21	0.42	0.324	jeeb.lib.st...	
sPrimary 47	-0.59	0	-4.744	-3.746	21.738	0.852	0.32	jeeb.lib.st...	
sPrimary 48	-3.512	168.38	-3.746	-1.411	21.943	0.237	0.319	jeeb.lib.st...	
sPrimary 49	-5.923	133.659	-1.411	-0.695	22	0.065	0.319	jeeb.lib.st...	
sPrimary 50	-5.212	0	-0.695	-7.535	22.837	0.966	0.314	jeeb.lib.st...	
sPrimary 51	2.731	99.262	-7.535	-0.94	23	0.188	0.313	jeeb.lib.st...	
sPrimary 52	-2.763	0	-0.94	-4.913	23.166	0.192	0.312	jeeb.lib.st...	
sPrimary 53	-4.587	179.45	-4.913	4.953	23.323	0.181	0.312	jeeb.lib.st...	
sPrimary 54	5.465	121.229	4.953	-4.825	23.922	0.692	0.308	jeeb.lib.st...	
sPrimary 55	-2.388	143.128	-4.825	2.114	24	0.09	0.308	jeeb.lib.st...	
sPrimary 56	1.887	0	2.114	1.057	24.182	0.21	0.307	jeeb.lib.st...	
sPrimary 57	6.071	105.721	1.057	-3.791	24.668	0.561	0.304	jeeb.lib.st...	
sPrimary 58	-4.383	140.527	-3.791	-3.727	25	0.383	0.302	jeeb.lib.st...	
sPrimary 59	-4.124	0	-3.727	-2.579	25.246	0.284	0.301	jeeb.lib.st...	
sPrimary 60	4.544	163.564	-2.579						

3D View

Translate: Click+Move to translate

Training X03: Add Position

Choose Topology



*Function chosen to get
Position of each Bulb segment*

Press

Training X03

Column Bearer_Position in axis Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer_Position in axis
sPrimary 60	sBulb 13	13
sPrimary 89	sBulb 1	1
sPrimary 84	sBulb 13	13
sPrimary 110	sBulb 2	2
sPrimary 28	sBulb 8	8
sPrimary 38	sBulb 11	11
sPrimary 117	sBulb 2	2
sPrimary 61	sBulb 10	10
sPrimary 40	sBulb 17	17
sPrimary 41	sBulb 7	7
sPrimary 38	sBulb 1	1
sPrimary 63	sBulb 6	6
sPrimary 101	sBulb 1	1
sPrimary 86	sBulb 13	13
sPrimary 69	sBulb 6	6
sPrimary 12	sBulb 4	4
sPrimary 39	sBulb 17	17
sPrimary 53	sBulb 12	12

Number of lines : 1916

Browser

Number of nodes = 7651

Display individu : Scene

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.807	-1.69	20.269	0.311	0.328	jeeb.lib st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib st...		

3D View

Translate: Click+Move to translate

Training X03

Filter on Bearer_Position in axis

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer_Position in axis
sPrimary 89	sBulb 1	1
sPrimary 38	sBulb 1	1
sPrimary 101	sBulb 1	1
sPrimary 99	sBulb 1	1
sPrimary 37	sBulb 1	1
sPrimary 86	sBulb 1	1
sPrimary 49	sBulb 1	1
sPrimary 47	sBulb 1	1
sPrimary 73	sBulb 1	1
sPrimary 93	sBulb 1	1
sPrimary 27	sBulb 1	1
sPrimary 70	sBulb 1	1
sPrimary 1	sBulb 1	1
sPrimary 42	sBulb 1	1
sPrimary 67	sBulb 1	1
sPrimary 56	sBulb 1	1
sPrimary 11	sBulb 1	1
sPrimary 102	sBulb 1	1

Number of lines : 102

Browser

Number of nodes = 7651

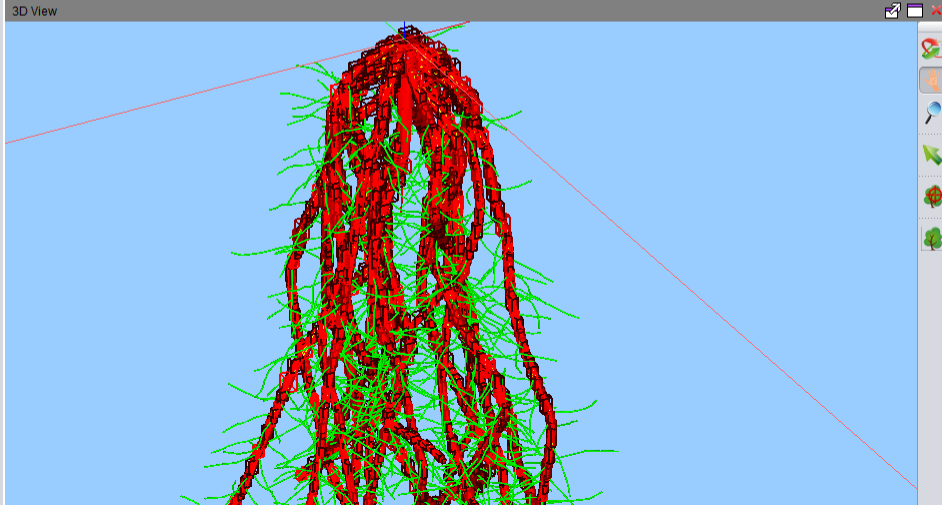
Display individu : Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.807	-1.69	20.269	0.311	0.328	jeeb.lib.st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib.st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib.st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib.st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib.st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib.st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib.st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib.st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib.st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib.st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib.st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib.st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib.st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib.st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib.st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib.st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib.st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib.st...		

Browser Projects

3D View



Translate: Click+Move to translate

Training X03: Add a Column for Primary

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer_ Position in axis
sPrimary 89	sBulb 1	1
sPrimary 38	sBulb 1	1
sPrimary 101	sBulb 1	1
sPrimary 99	sBulb 1	1
sPrimary 37	sBulb 1	1
sPrimary 86	sBulb 1	1
sPrimary 49	sBulb 1	1
sPrimary 47	sBulb 1	1
sPrimary 73	sBulb 1	1
sPrimary 93	sBulb 1	1
sPrimary 27	sBulb 1	1
sPrimary 70	sBulb 1	1
sPrimary 1	sBulb 1	1
sPrimary 42	sBulb 1	1
sPrimary 67	sBulb 1	1
sPrimary 56	sBulb 1	1
sPrimary 11	sBulb 1	1
sPrimary 102	sBulb 1	1

Number of lines : 102

Browser

Number of nodes = 7651

Display individ: Scene

Collapse Expand

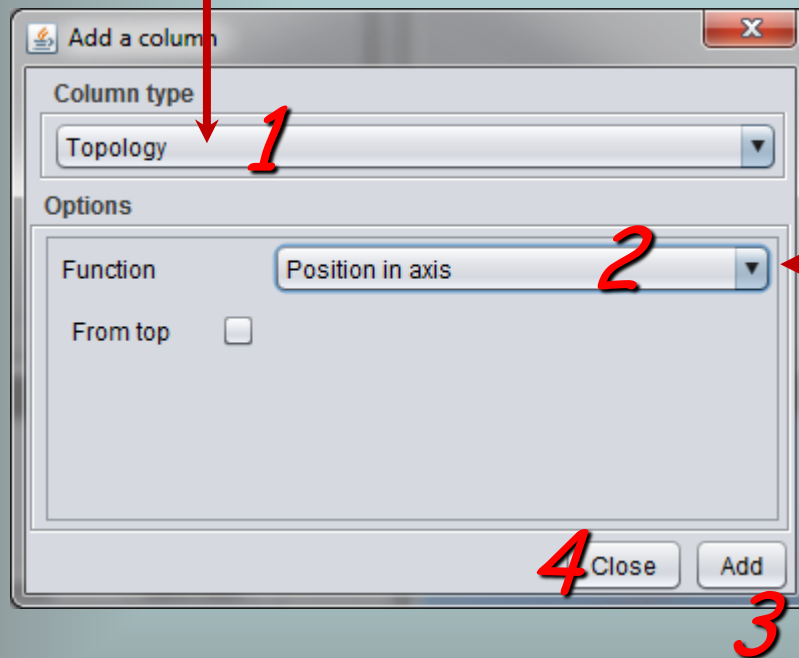
Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.807	-1.69	20.269	0.311	0.328	jeeb.lib.st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib.st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib.st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib.st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib.st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib.st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib.st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib.st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib.st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib.st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib.st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib.st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib.st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib.st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib.st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib.st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib.st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib.st...		

3D View

Translate: Click+Move to translate

Training X03: Add Position in Axis For Primary

Choose Topology



*Function chosen to get
Position of each
Primary segment*

Press

Training X03: Order by Position

Click on Column Header

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer _ Position in axis	Position in axis
sPrimary 89	sBulb 1	1	89
sPrimary 38	sBulb 1	1	38
sPrimary 101	sBulb 1	1	101
sPrimary 99	sBulb 1	1	99
sPrimary 37	sBulb 1	1	37
sPrimary 86	sBulb 1	1	86
sPrimary 49	sBulb 1	1	49
sPrimary 47	sBulb 1	1	47
sPrimary 73	sBulb 1	1	73
sPrimary 93	sBulb 1	1	93
sPrimary 27	sBulb 1	1	27
sPrimary 70	sBulb 1	1	70
sPrimary 1	sBulb 1	1	1
sPrimary 42	sBulb 1	1	42
sPrimary 67	sBulb 1	1	67
sPrimary 56	sBulb 1	1	56
sPrimary 11	sBulb 1	1	11
sPrimary 102	sBulb 1	1	102

Number of lines : 102

Browser

Number of nodes = 7651

Display individu : Scene 1

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.807	-1.69	20.269	0.311	0.328	jeeb.lib.st...	
sPrimary 44	1.899	131.654	7.085	20.27	0.001	0.328	jeeb.lib.st...		
sPrimary 45	3.045	90.631	3.305	20.636	0.423	0.326	jeeb.lib.st...		
sPrimary 46	4.553	148.317	-0.59	0	-4.744	21	0.42	jeeb.lib.st...	
sPrimary 47	-0.59	0	-3.512	168.38	-3.746	21.738	0.852	jeeb.lib.st...	
sPrimary 48	-3.512	168.38	-5.923	133.659	-1.411	21.943	0.237	jeeb.lib.st...	
sPrimary 49	-5.923	133.659	-5.212	0	-0.695	22	0.065	jeeb.lib.st...	
sPrimary 50	-5.212	0	2.731	99.262	-7.535	22.837	0.966	jeeb.lib.st...	
sPrimary 51	2.731	99.262	-2.763	0	-0.94	23	0.188	jeeb.lib.st...	
sPrimary 52	-2.763	0	-4.587	179.45	-4.913	23.166	0.192	jeeb.lib.st...	
sPrimary 53	-4.587	179.45	5.465	121.229	4.953	23.323	0.181	jeeb.lib.st...	
sPrimary 54	5.465	121.229	-2.388	143.128	-4.825	23.922	0.692	jeeb.lib.st...	
sPrimary 55	-2.388	143.128	1.887	0	2.114	24	0.09	jeeb.lib.st...	
sPrimary 56	1.887	0	6.071	105.721	1.057	24.182	0.21	jeeb.lib.st...	
sPrimary 57	6.071	105.721	-4.383	140.527	-3.791	24.668	0.561	jeeb.lib.st...	
sPrimary 58	-4.383	140.527	-4.124	0	-3.727	25	0.383	jeeb.lib.st...	
sPrimary 59	-4.124	0	4.544	163.564	-2.579	25.246	0.284	jeeb.lib.st...	
sPrimary 60	4.544	163.564							

3D View

Translate: Click+Move to translate

Training X03: Add Primary Widthes

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection

Item	Bearer	Bearer _ Position in axis	Position in axis
sPrimary 1	sBulb 1	1	1
sPrimary 2	sBulb 1	1	2
sPrimary 3	sBulb 1	1	3
sPrimary 4	sBulb 1	1	4
sPrimary 5	sBulb 1	1	5
sPrimary 6	sBulb 1	1	6
sPrimary 7	sBulb 1	1	7
sPrimary 8	sBulb 1	1	8
sPrimary 9	sBulb 1	1	9
sPrimary 10	sBulb 1	1	10
sPrimary 11	sBulb 1	1	11
sPrimary 12	sBulb 1	1	12
sPrimary 13	sBulb 1	1	13
sPrimary 14	sBulb 1	1	14
sPrimary 15	sBulb 1	1	15
sPrimary 16	sBulb 1	1	16
sPrimary 17	sBulb 1	1	17
sPrimary 18	sBulb 1	1	18

Number of lines : 102

Browser

Number of nodes = 7651

Display individ : Scene

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinser
sPrimary 43	-0.495	0	4.907		
sPrimary 44	1.899	131.654	-1.69		
sPrimary 45	3.045	90.631	7.085		
sPrimary 46	4.553	148.317	3.305		
sPrimary 47	-0.59	0	-4.744		
sPrimary 48	-3.512	168.38	-3.746		
sPrimary 49	-5.923	133.659	-1.411		
sPrimary 50	-5.212	0	-0.695		
sPrimary 51	2.731	99.262	-7.535		
sPrimary 52	-2.763	0	-0.94		
sPrimary 53	-4.587	179.45	-4.913		
sPrimary 54	5.465	121.229	4.953		
sPrimary 55	-2.388	143.128	-4.825		
sPrimary 56	1.887	0	2.114		
sPrimary 57	6.071	105.721	1.057		
sPrimary 58	-4.383	140.527	-3.791		
sPrimary 59	-4.124	0	-3.727		
sPrimary 60	4.544	163.564	-2.579		

Add a column

Column type

Attribute

Options

Attribute

Width

VA

Width

XEuler

XInsertionAngle

YEuler

YInsertionAngle

ZEuler

ZInsertionAngle

Translate: Click+Move to translate

58

Training X03: Primary Widths Added

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer _ Position in axis	Position in axis	Width
sPrimary 1	sBulb 1	1	1	0.352
sPrimary 2	sBulb 1	1	2	0.347
sPrimary 3	sBulb 1	1	3	0.347
sPrimary 4	sBulb 1	1	4	0.347
sPrimary 5	sBulb 1	1	5	0.347
sPrimary 6	sBulb 1	1	6	0.343
sPrimary 7	sBulb 1	1	7	0.34
sPrimary 8	sBulb 1	1	8	0.339
sPrimary 9	sBulb 1	1	9	0.338
sPrimary 10	sBulb 1	1	10	0.338
sPrimary 11	sBulb 1	1	11	0.336
sPrimary 12	sBulb 1	1	12	0.333
sPrimary 13	sBulb 1	1	13	0.33
sPrimary 14	sBulb 1	1	14	0.329
sPrimary 15	sBulb 1	1	15	0.328
sPrimary 16	sBulb 1	1	16	0.326
sPrimary 17	sBulb 1	1	17	0.324
sPrimary 18	sBulb 1	1	18	0.323

Number of lines : 102

Browser

Number of nodes = 7651

Display individ: Scene

Collapse Expand

Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495	0	4.907	-1.69	20.269	0.009	0.33	jeeb.lib st...	
sPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328	jeeb.lib st...		
sPrimary 45	3.045	90.631	7.085	20.27	0.001	0.328	jeeb.lib st...		
sPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326	jeeb.lib st...		
sPrimary 47	-0.59	0	-4.744	21	0.42	0.324	jeeb.lib st...		
sPrimary 48	-3.512	168.38	-3.746	21.738	0.852	0.32	jeeb.lib st...		
sPrimary 49	-5.923	133.659	-1.411	21.943	0.237	0.319	jeeb.lib st...		
sPrimary 50	-5.212	0	-0.695	22	0.065	0.319	jeeb.lib st...		
sPrimary 51	2.731	99.262	-7.535	22.837	0.966	0.314	jeeb.lib st...		
sPrimary 52	-2.763	0	-0.94	23	0.188	0.313	jeeb.lib st...		
sPrimary 53	-4.587	179.45	-4.913	23.166	0.192	0.312	jeeb.lib st...		
sPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312	jeeb.lib st...		
sPrimary 55	-2.388	143.128	-4.825	23.922	0.692	0.308	jeeb.lib st...		
sPrimary 56	1.887	0	2.114	24	0.09	0.308	jeeb.lib st...		
sPrimary 57	6.071	105.721	1.057	24.182	0.21	0.307	jeeb.lib st...		
sPrimary 58	-4.383	140.527	-3.791	24.668	0.561	0.304	jeeb.lib st...		
sPrimary 59	-4.124	0	-3.727	25	0.383	0.302	jeeb.lib st...		
sPrimary 60	4.544	163.564	-2.579	25.246	0.284	0.301	jeeb.lib st...		

3D View

Translate: Click+Move to translate

Drag Left Click or
CTRL+Left Click
to select

Training X03:
Plot Primary Widths

Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Extraction

Extraction 1 x Extraction 2 x

Selection Input Selection Output Export Import

Item	Bearer	Bearer_ Position in axis	Position in axis	Width
sPrimary 1	sBulb 1	1	1	0.352
sPrimary 2	sBulb 1	1	2	0.347
sPrimary 3	sBulb 1	1	3	0.347
sPrimary 4	sBulb 1	1	4	0.347
sPrimary 5	sBulb 1	1	5	
sPrimary 6	sBulb 1	1	6	
sPrimary 7	sBulb 1	1	7	
sPrimary 8	sBulb 1	1	8	0.339
sPrimary 9	sBulb 1	1	9	0.338
sPrimary 10	sBulb 1	1	10	0.338
sPrimary 11	sBulb 1	1	11	0.336
sPrimary 12	sBulb 1	1	12	0.333
sPrimary 13	sBulb 1	1	13	0.33
sPrimary 14	sBulb 1	1	14	0.329
sPrimary 15	sBulb 1	1	15	0.328
sPrimary 16	sBulb 1	1	16	0.326
sPrimary 17	sBulb 1	1	17	0.324
sPrimary 18	sBulb 1	1	18	0.323

Number of lines : 102

Browser

Number of nodes = 7651

Display individu : Scene

Collapse Expand

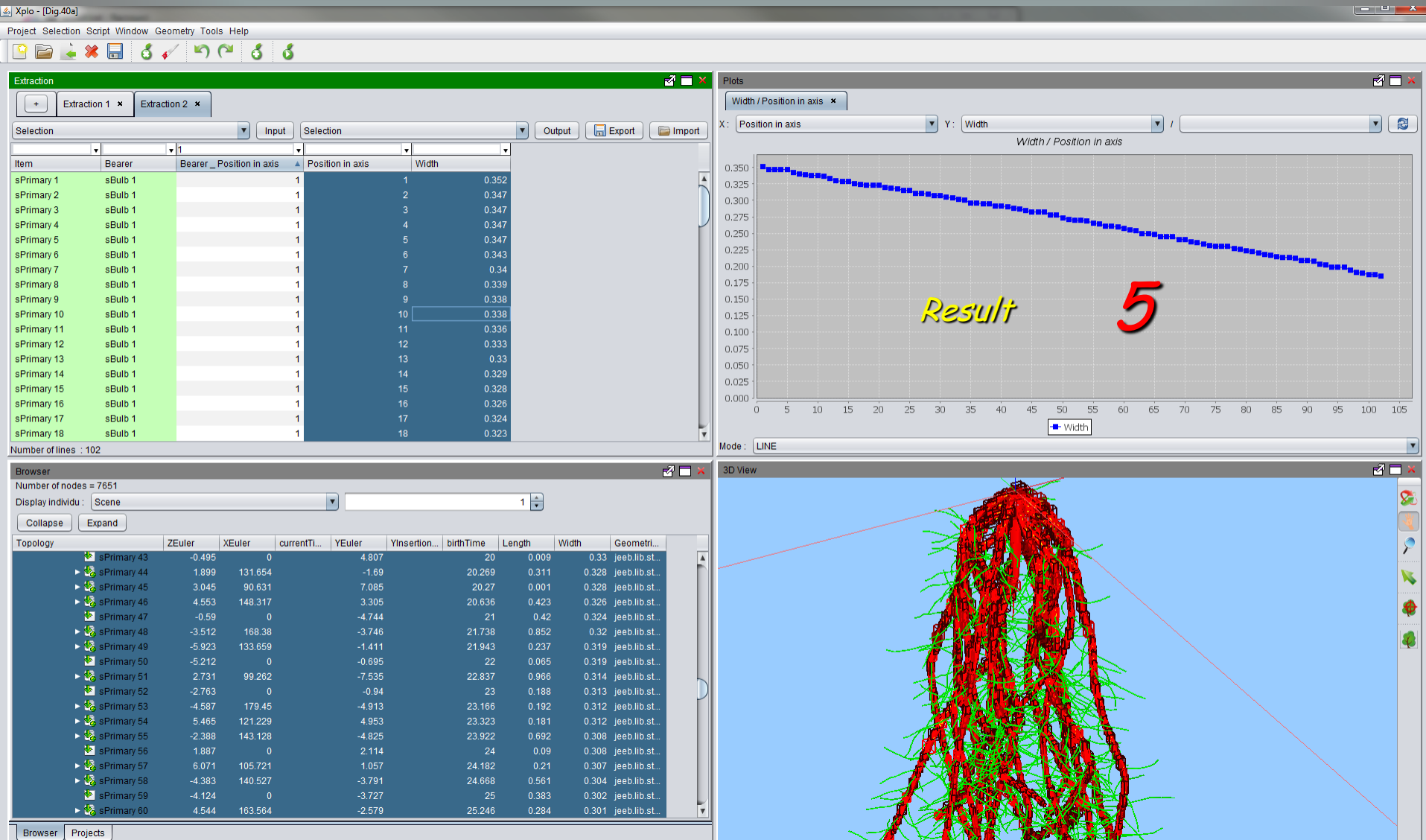
Topology	ZEuler	XEuler	currentTI...	YEuler	Yinsertion...	birthTime	Length	Width	Geometri...
sPrimary 43	-0.495		0	4.807		20	0.009	0.33	jeeb.lib.st...
sPrimary 44	1.899	131.654		-1.69		20.269	0.311	0.328	jeeb.lib.st...
sPrimary 45	3.045	90.631		7.085		20.27	0.001	0.328	jeeb.lib.st...
sPrimary 46	4.553	148.317		3.305		20.636	0.423	0.326	jeeb.lib.st...
sPrimary 47	-0.59	0		-4.744		21	0.42	0.324	jeeb.lib.st...
sPrimary 48	-3.512	168.38		-3.746		21.738	0.852	0.32	jeeb.lib.st...
sPrimary 49	-5.923	133.659		-1.411		21.943	0.237	0.319	jeeb.lib.st...
sPrimary 50	-5.212	0		-0.695		22	0.065	0.319	jeeb.lib.st...
sPrimary 51	2.731	99.262		-7.535		22.837	0.966	0.314	jeeb.lib.st...
sPrimary 52	-2.763	0		-0.94		23	0.188	0.313	jeeb.lib.st...
sPrimary 53	-4.587	179.45		-4.913		23.166	0.192	0.312	jeeb.lib.st...
sPrimary 54	5.465	121.229		4.953		23.323	0.181	0.312	jeeb.lib.st...
sPrimary 55	-2.388	143.128		-4.825		23.922	0.692	0.308	jeeb.lib.st...
sPrimary 56	1.887	0		2.114		24	0.09	0.308	jeeb.lib.st...
sPrimary 57	6.071	105.721		1.057		24.182	0.21	0.307	jeeb.lib.st...
sPrimary 58	-4.383	140.527		-3.791		24.668	0.561	0.304	jeeb.lib.st...
sPrimary 59	-4.124	0		-3.727		25	0.383	0.302	jeeb.lib.st...
sPrimary 60	4.544	163.564		-2.579		25.246	0.284	0.301	jeeb.lib.st...

3D View

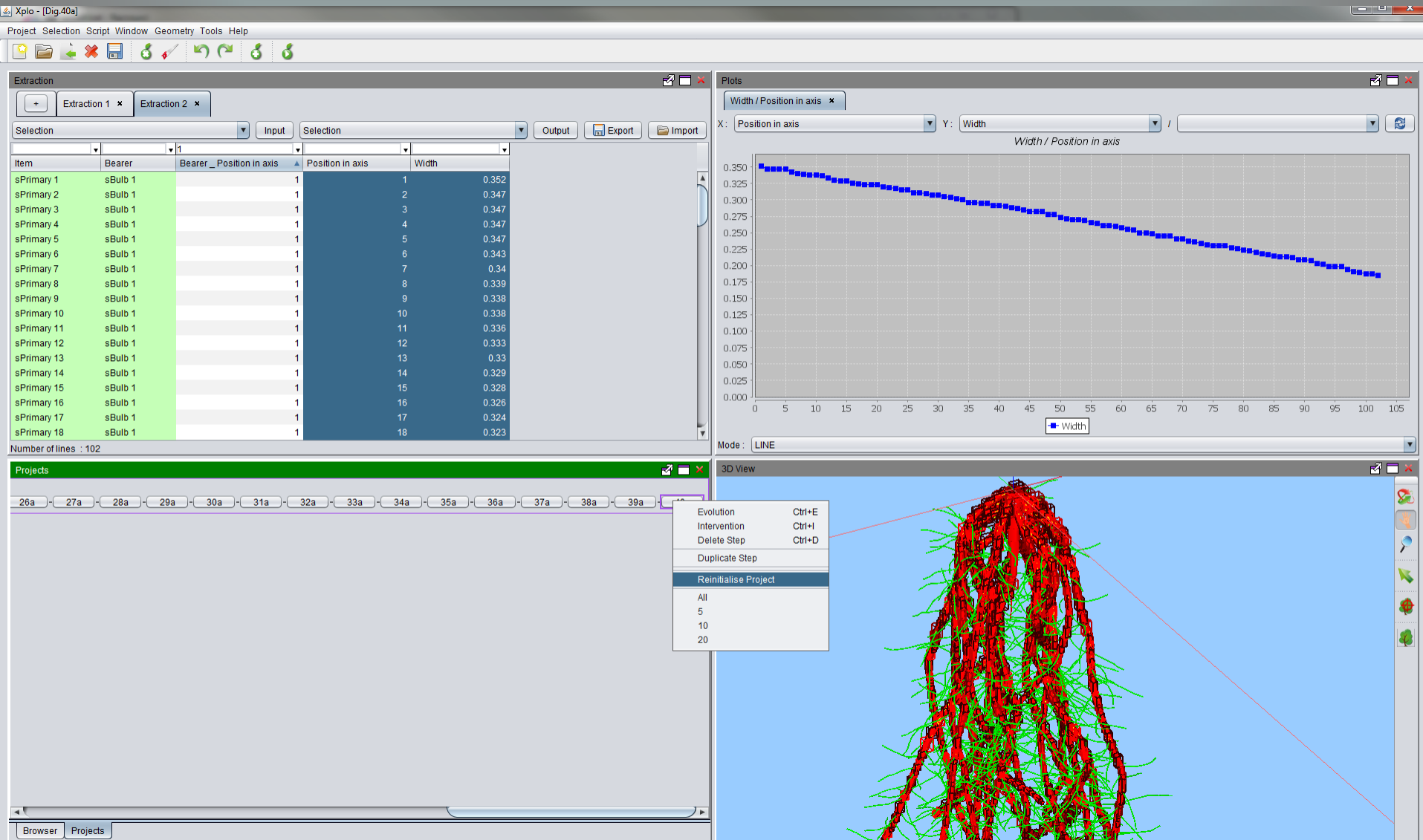
Translate: Click+Move to translate

60

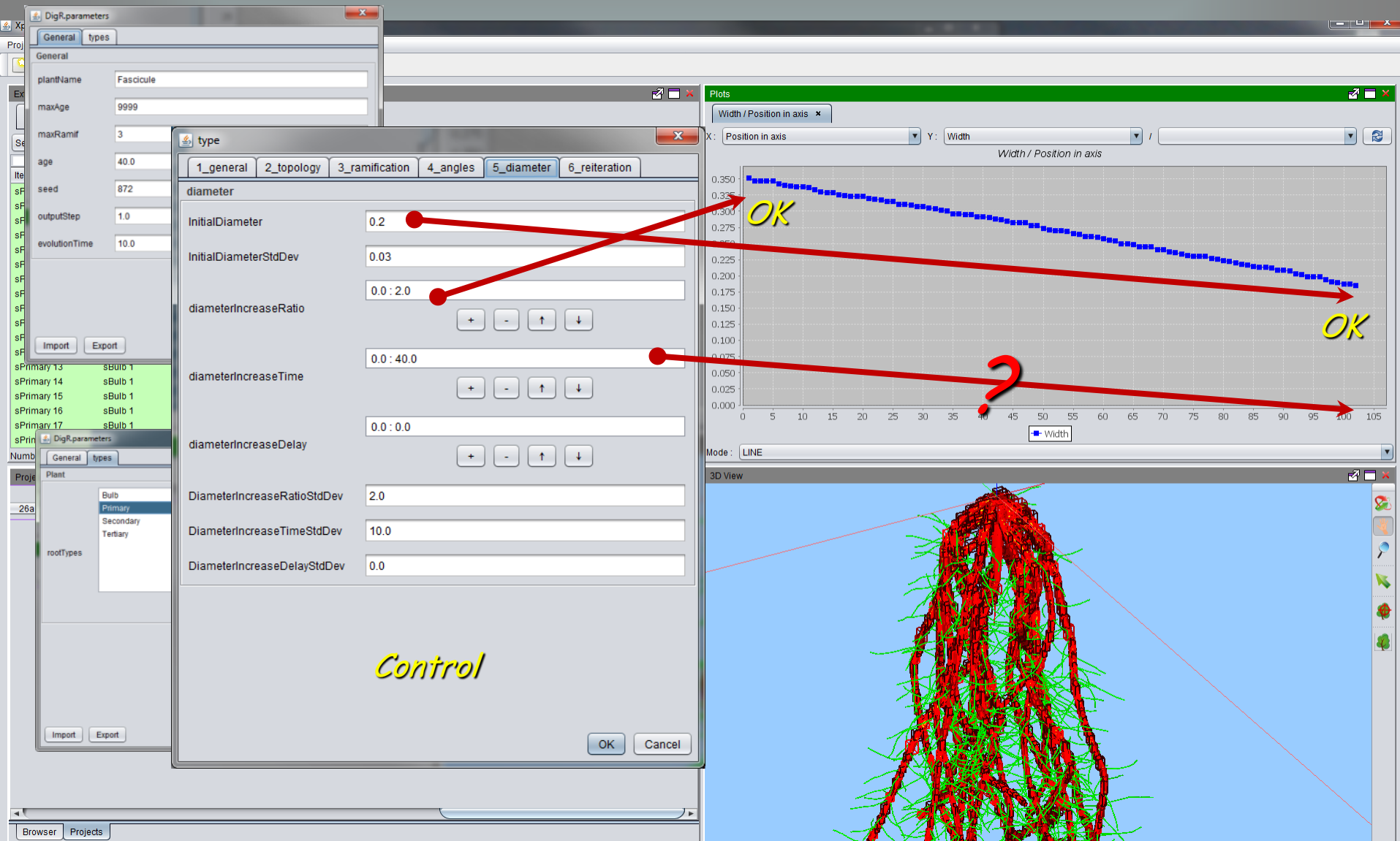
Training X03: Plot Primary Widths



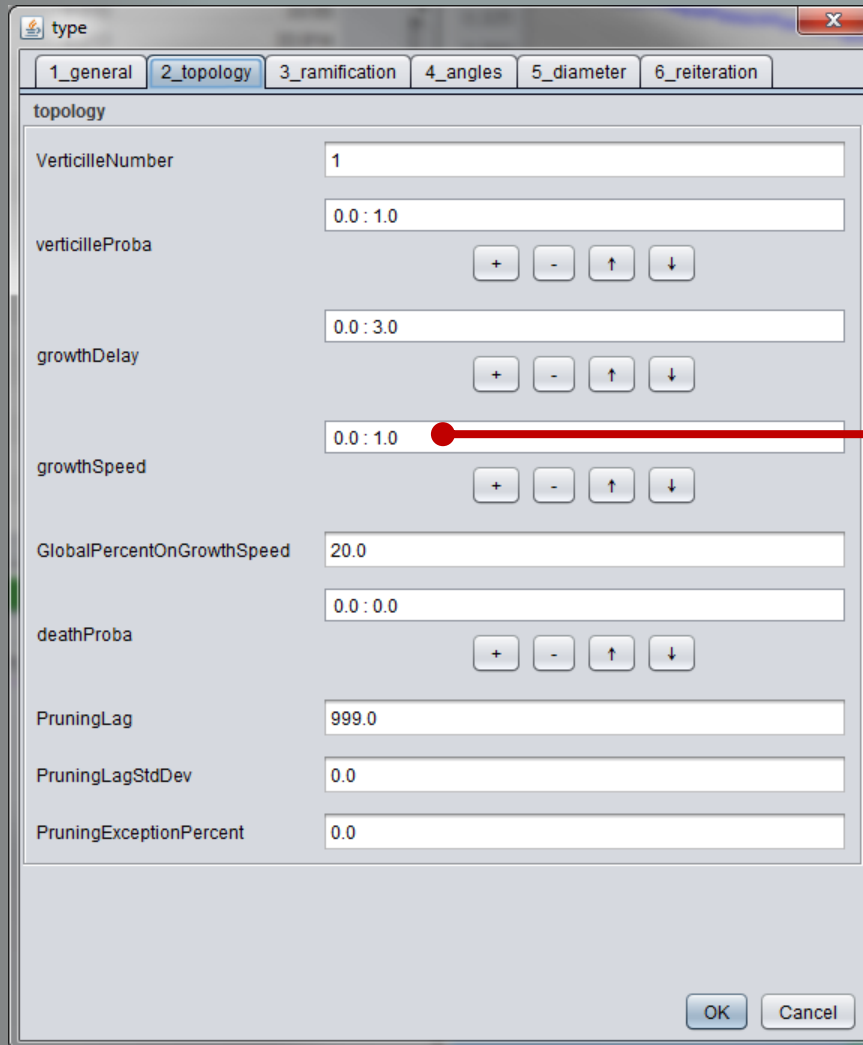
Training X03: Reinit Project



Training X03: Data Control : Compare Simulated Values vs Parameter File Values



Training X03: How much time for 102 sPrimary ?



The screenshot shows a software window titled 'type' with a tabbed interface. The '2_topology' tab is selected. The window contains several parameters for topology generation:

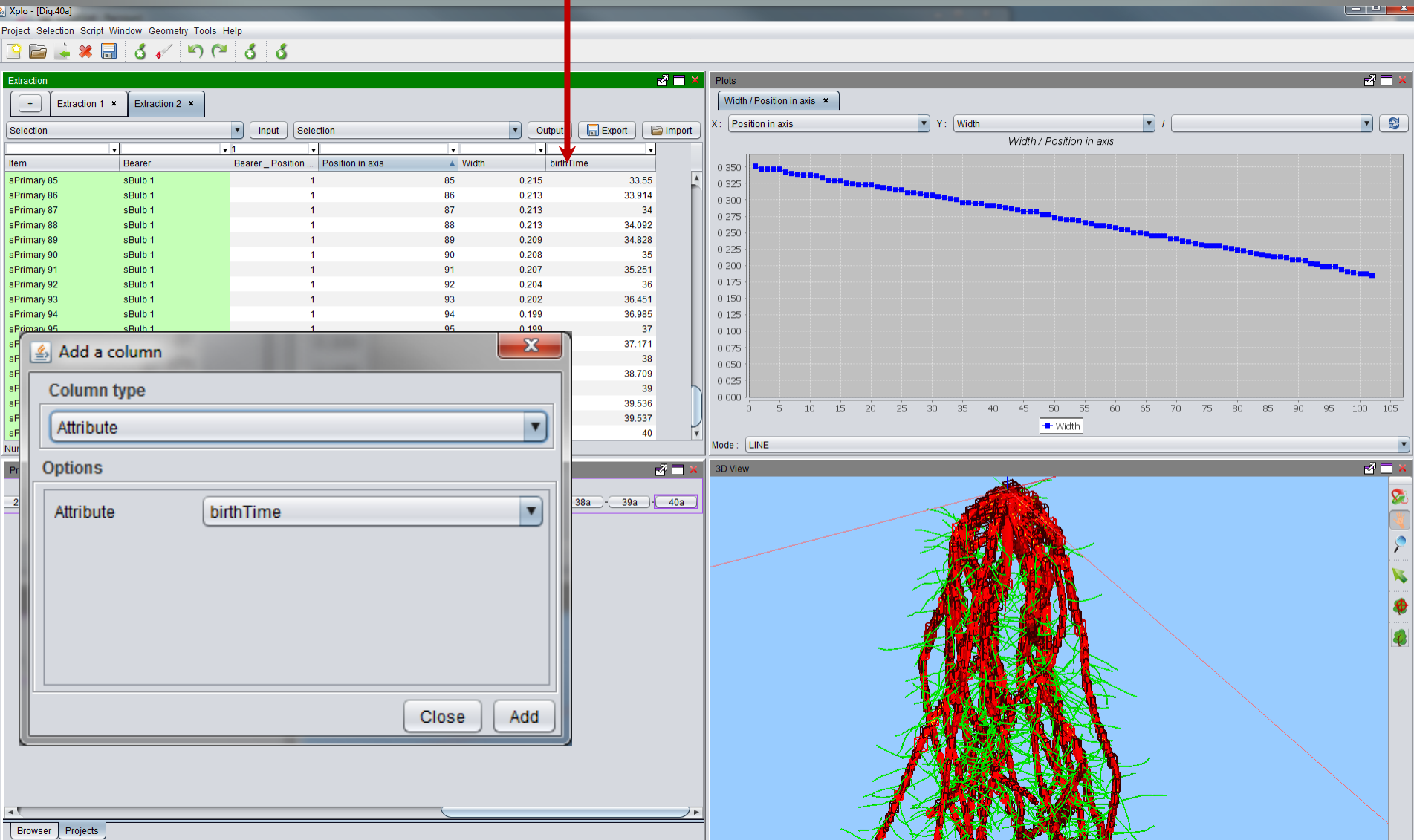
Parameter	Value
VerticilleNumber	1
verticilleProba	0.0 : 1.0
growthDelay	0.0 : 3.0
growthSpeed	0.0 : 1.0 (Slider set to approximately 0.5)
GlobalPercentOnGrowthSpeed	20.0
deathProba	0.0 : 0.0
PruningLag	999.0
PruningLagStdDev	0.0
PruningExceptionPercent	0.0

At the bottom of the window are 'OK' and 'Cancel' buttons. A red arrow points from the 'growthSpeed' slider to the text on the right.

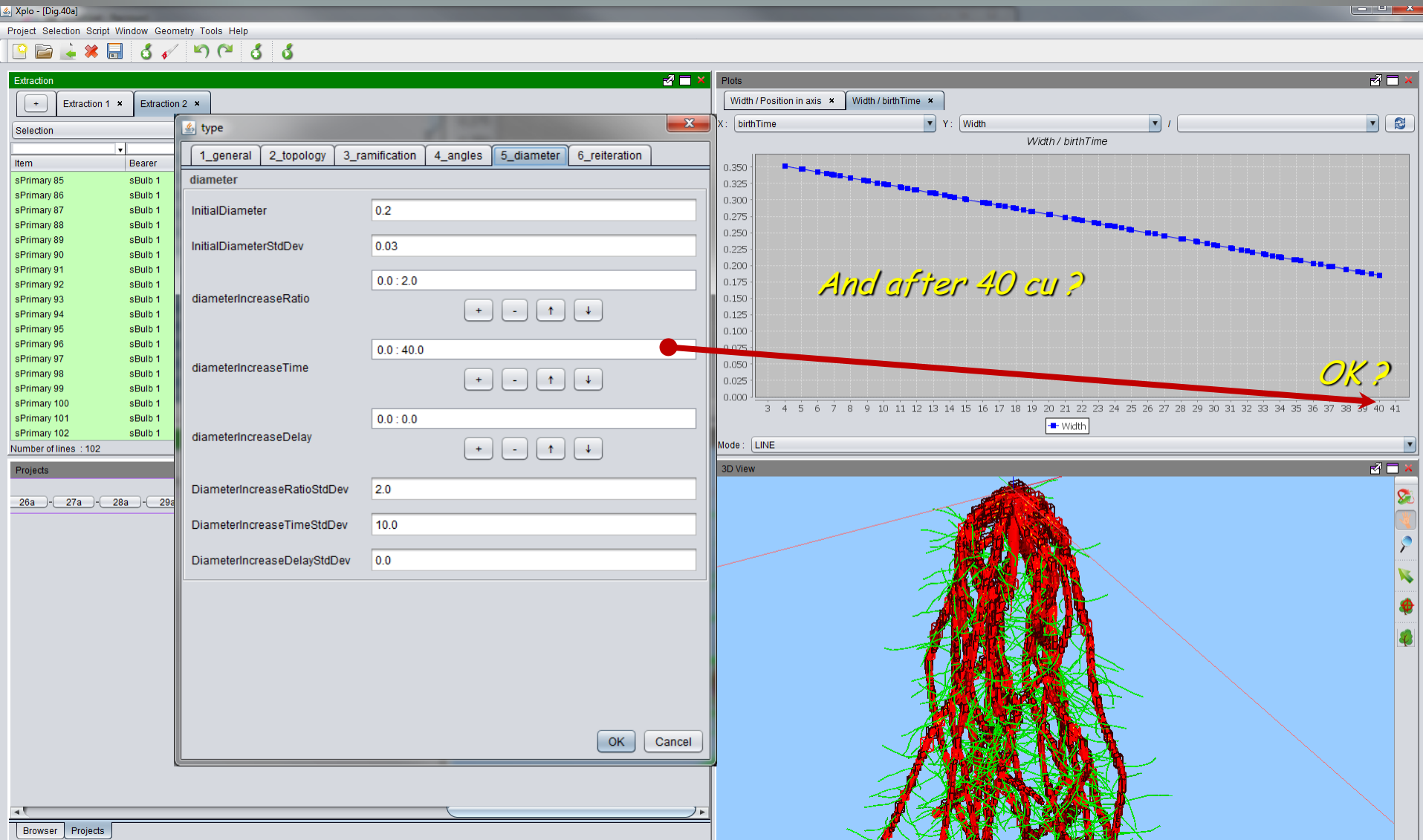
*But 1 sPrimary is generated by
Growth and branching.
So We are going to use
« birthTime » attribute
To control diameterIncreaseTime*

Training X03: sPrimary birthTime added

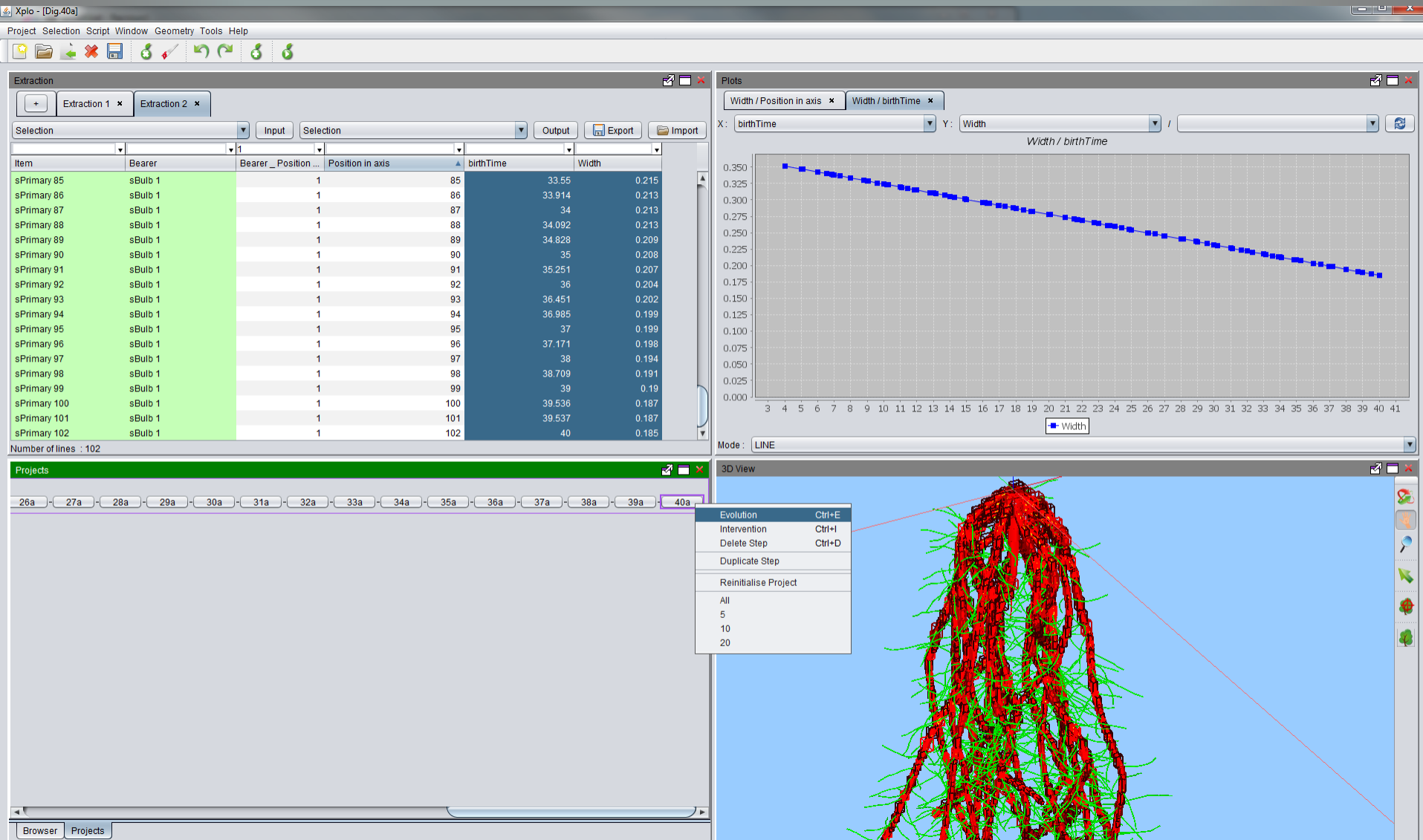
Added



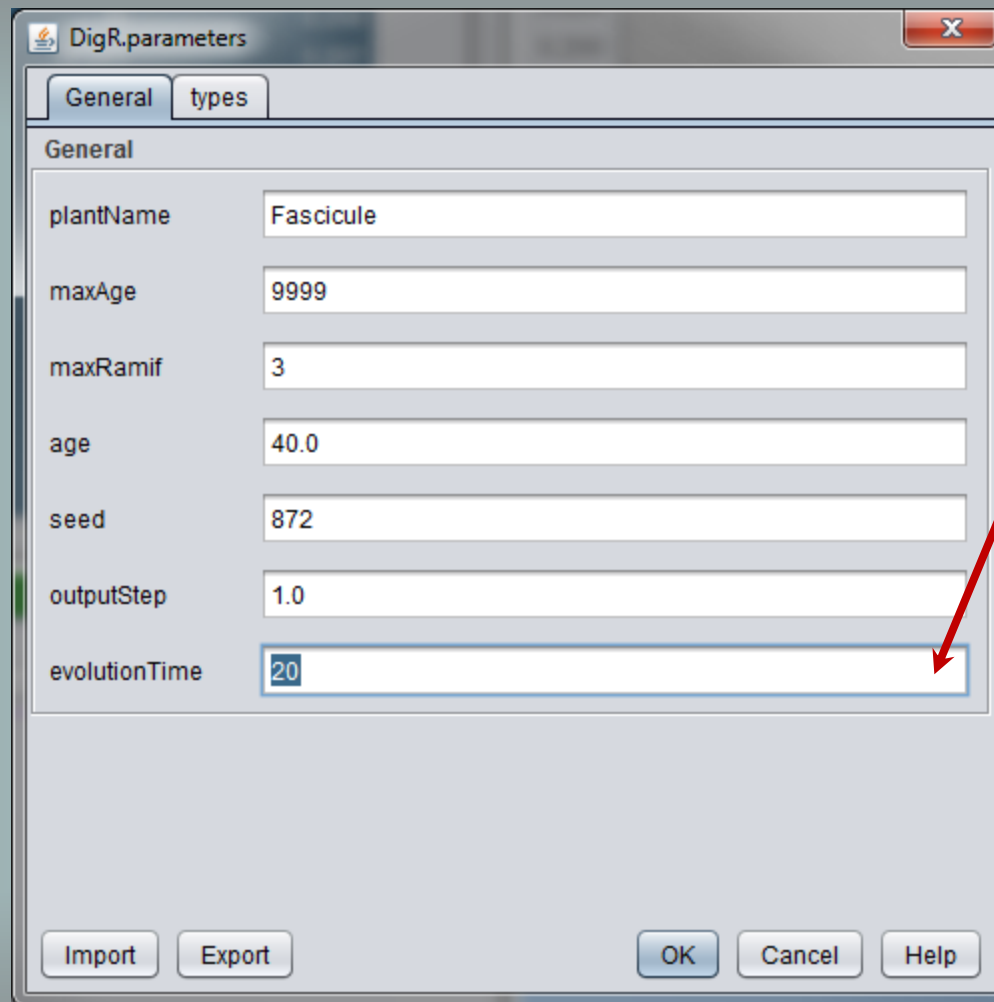
Training X03: Primary Diameter Increase Control



Training X03: Evolution



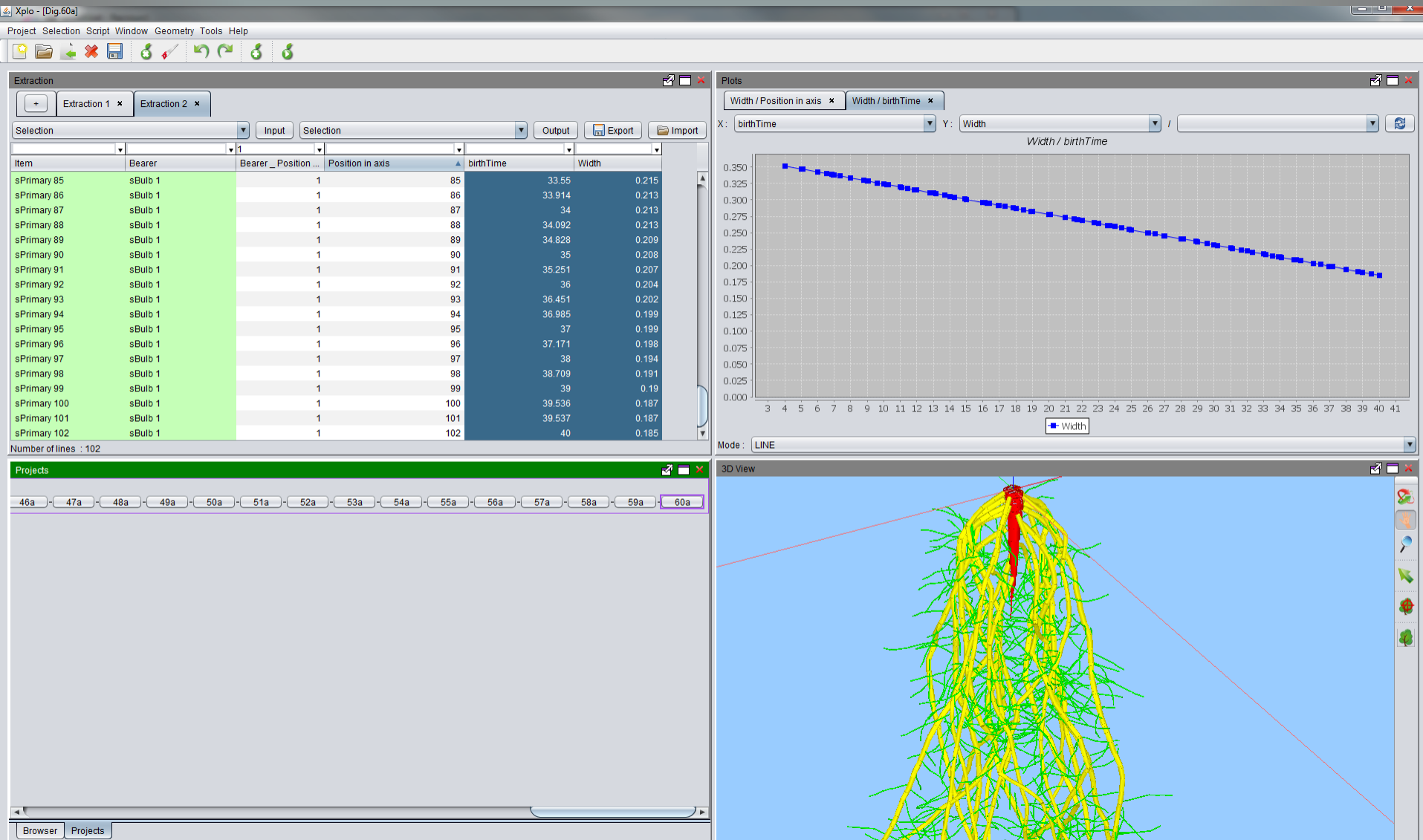
Training X03: Evolution Time



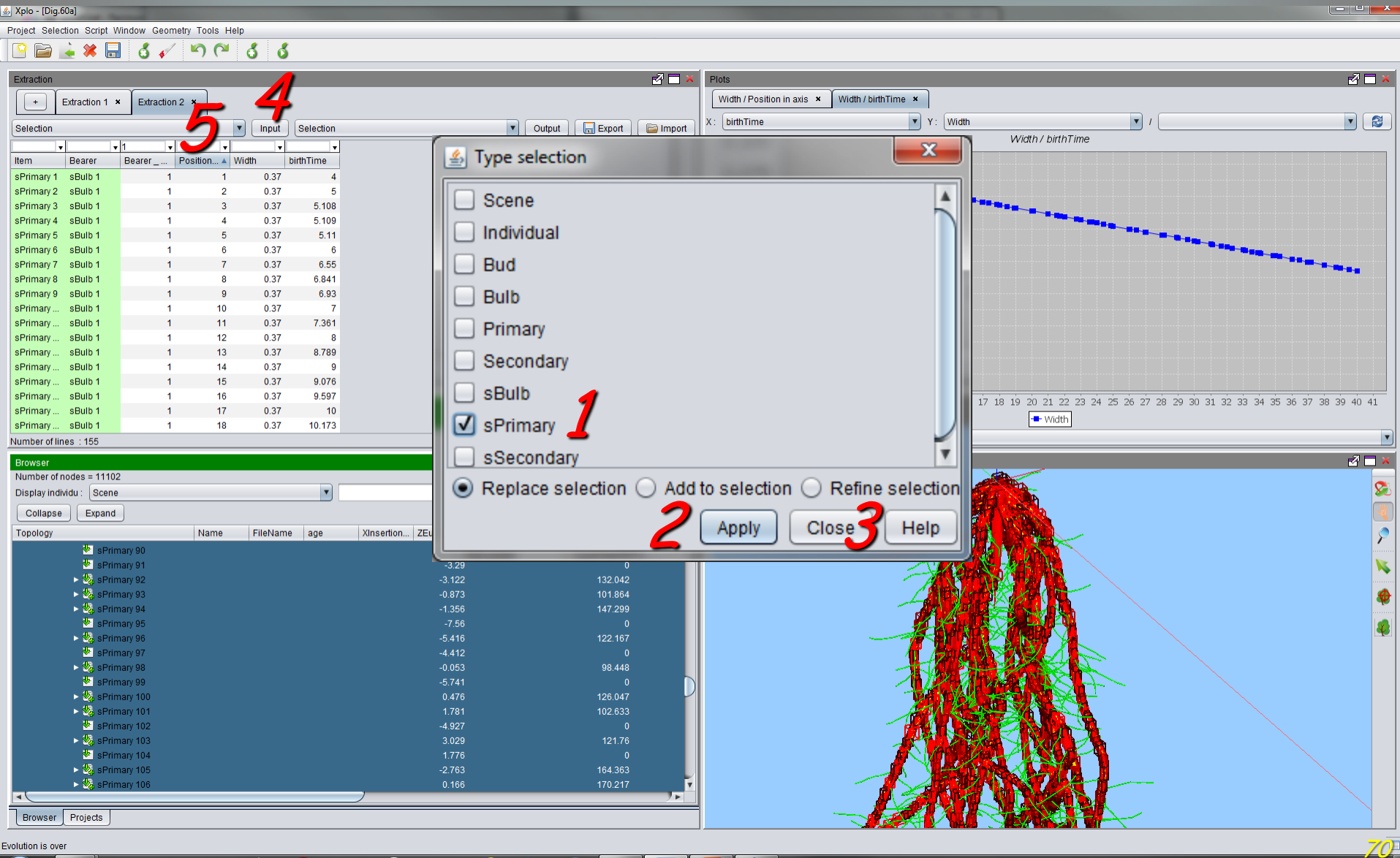
The image shows a software dialog box titled "DigR.parameters". It has two tabs: "General" (selected) and "types". The "General" tab contains several input fields with the following values: plantName (Fascicule), maxAge (9999), maxRamif (3), age (40.0), seed (872), outputStep (1.0), and evolutionTime (20). A red arrow points from the top right towards the "evolutionTime" field. At the bottom of the dialog are four buttons: "Import", "Export", "OK", and "Help".

Parameter	Value
plantName	Fascicule
maxAge	9999
maxRamif	3
age	40.0
seed	872
outputStep	1.0
evolutionTime	20

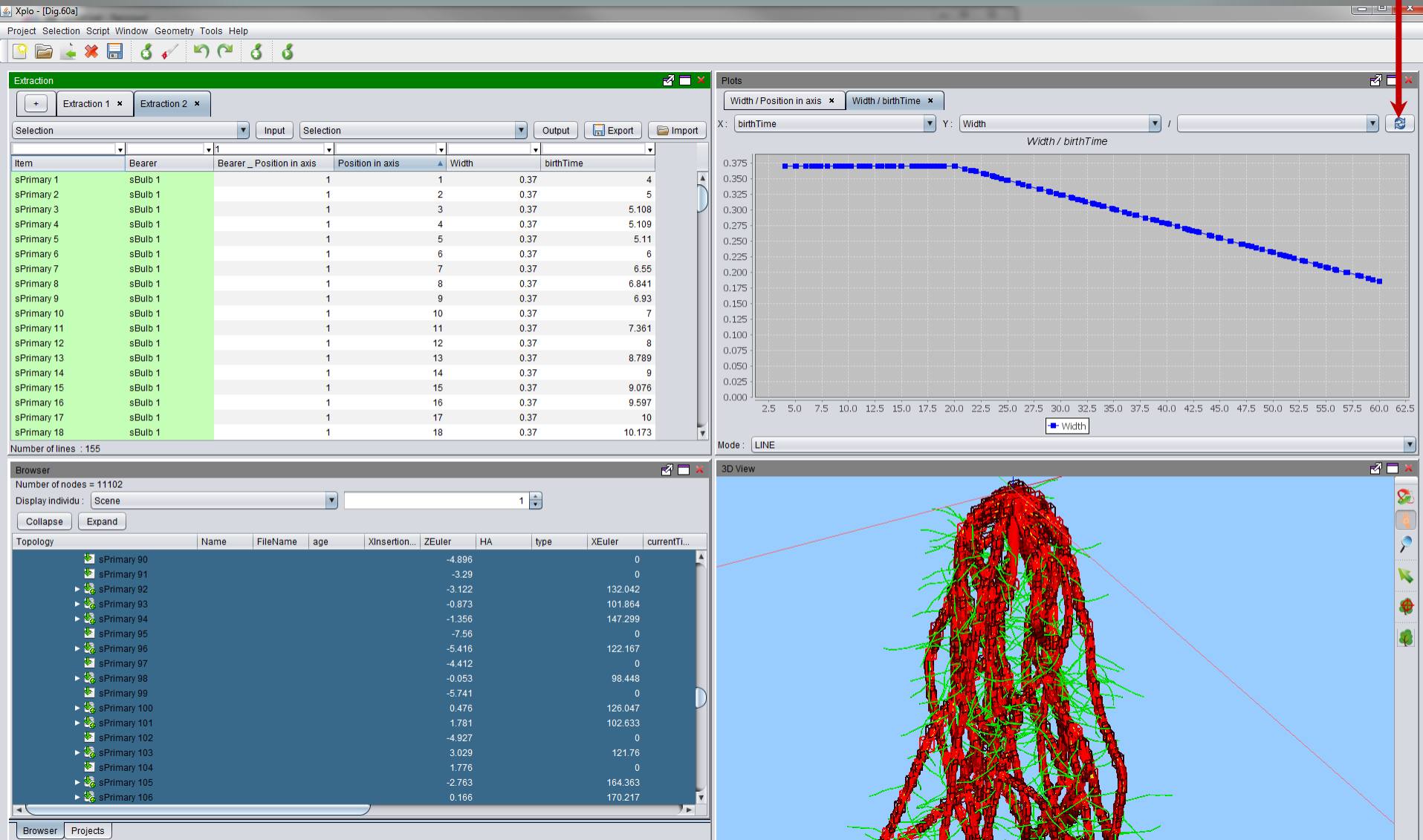
Training X03: Evolution Time Result



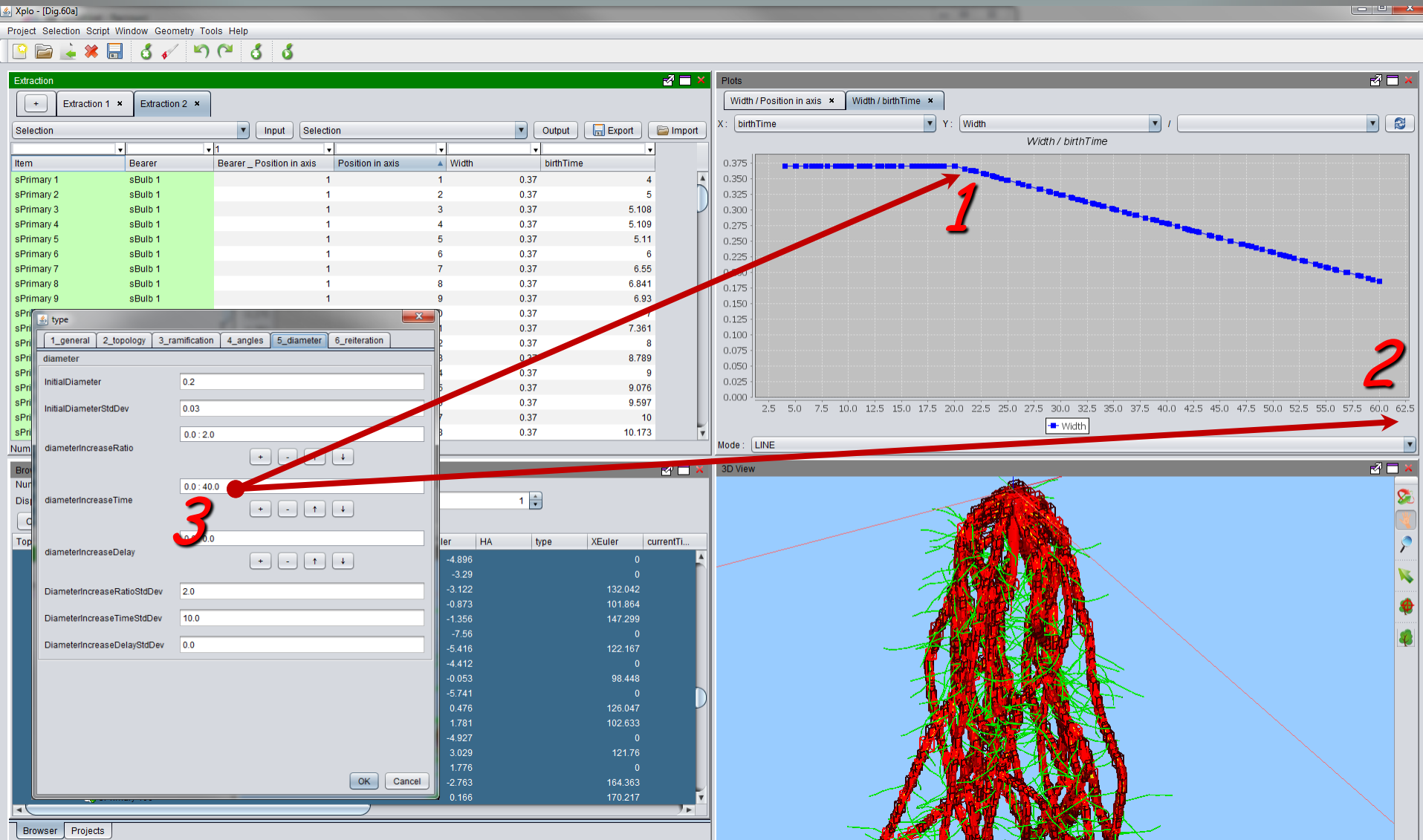
Training X03: Input Evolution Time



Training X03: Refresh Plot



Training X03: Control Diameter Evolution Time

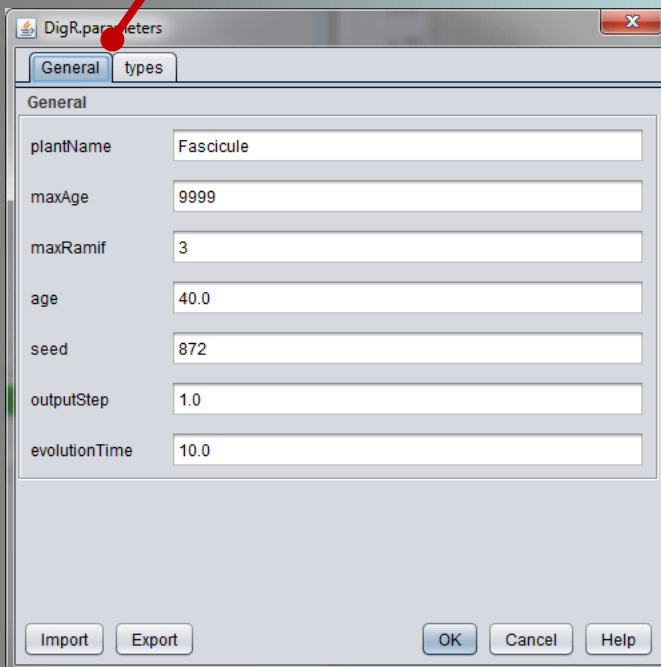
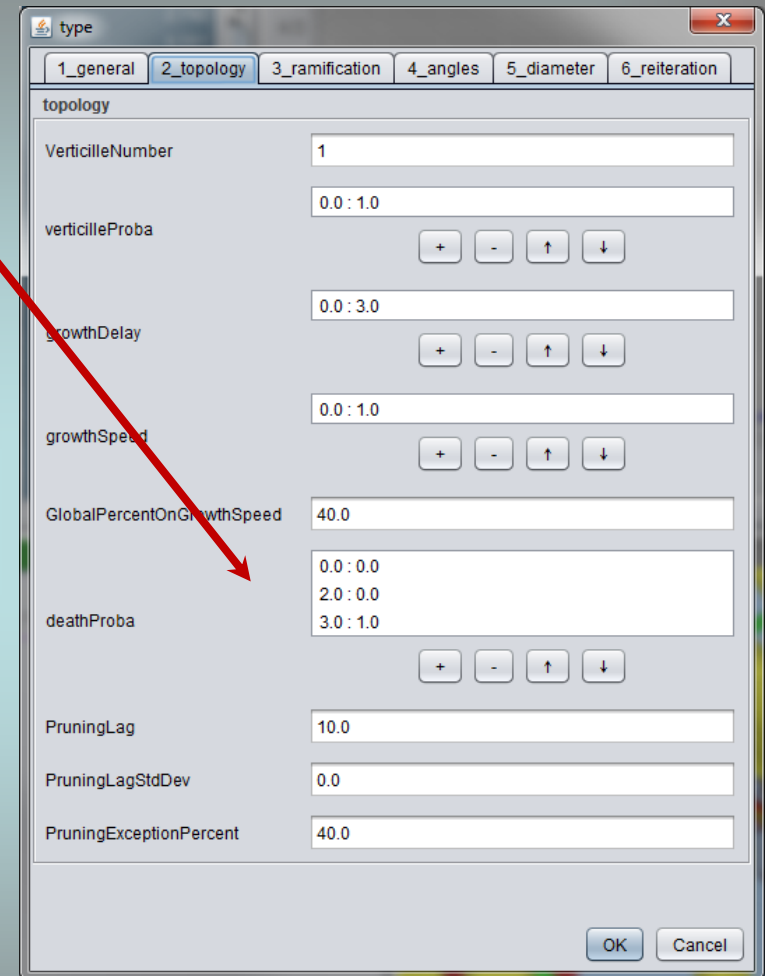
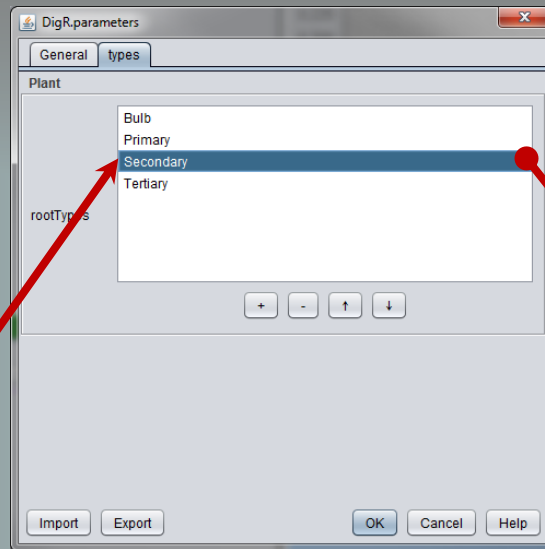




-X04-

SECONDARY LENGTHS

Training X04: Parameter File Data

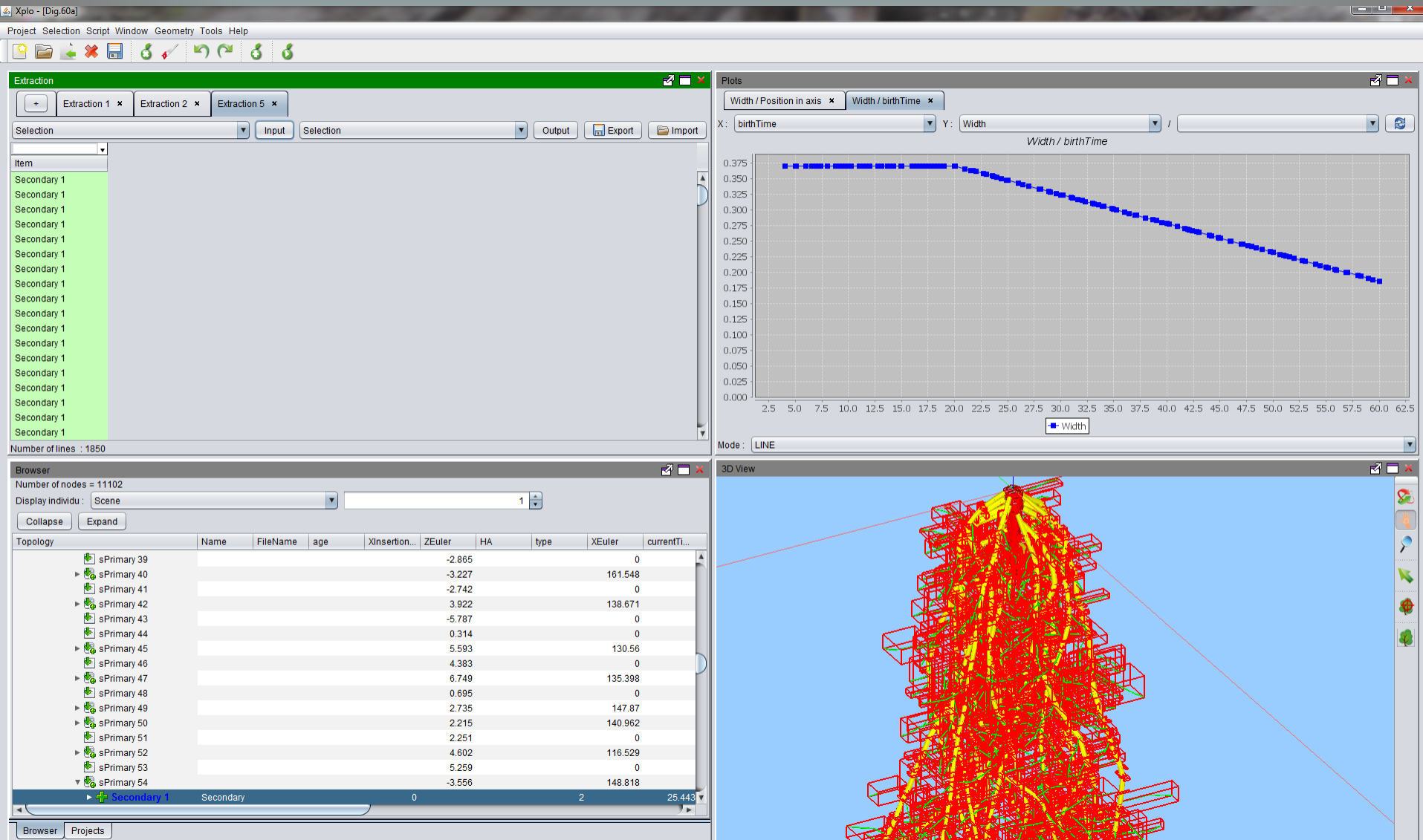


*Secondary Lengthes come from :
growthDelay, growthSpeed & GlobalPerCentGrowthSpeed
deathProba
PruningLag & PruningExceptionPercent*

Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root

- 1- Select Secondary Type*
- 2- Add Extraction Folder*
- 3- Input Selection*

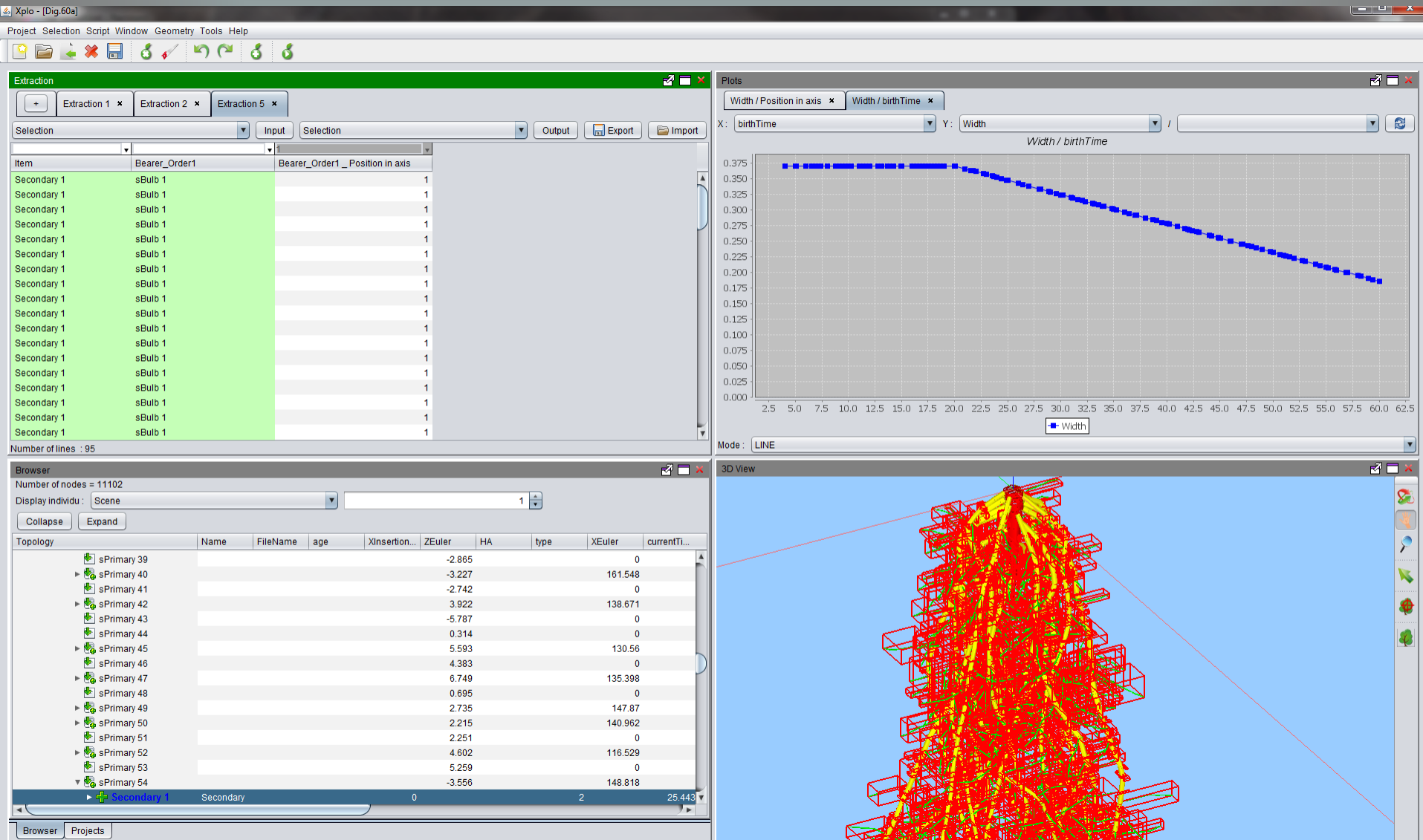
Training X04: Plot Secondary Roots Lengths vs Position on First Primary Root



Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root

- 1- Select Secondary Type*
- 2- Add Extraction Folder*
- 3- Input Selection*
- 4- Determine Secondary Bearer at order 1 -> sBulb*
- 5- Add Bearer_Order_1 Position in Axis*
- 6- Filter Position 1*

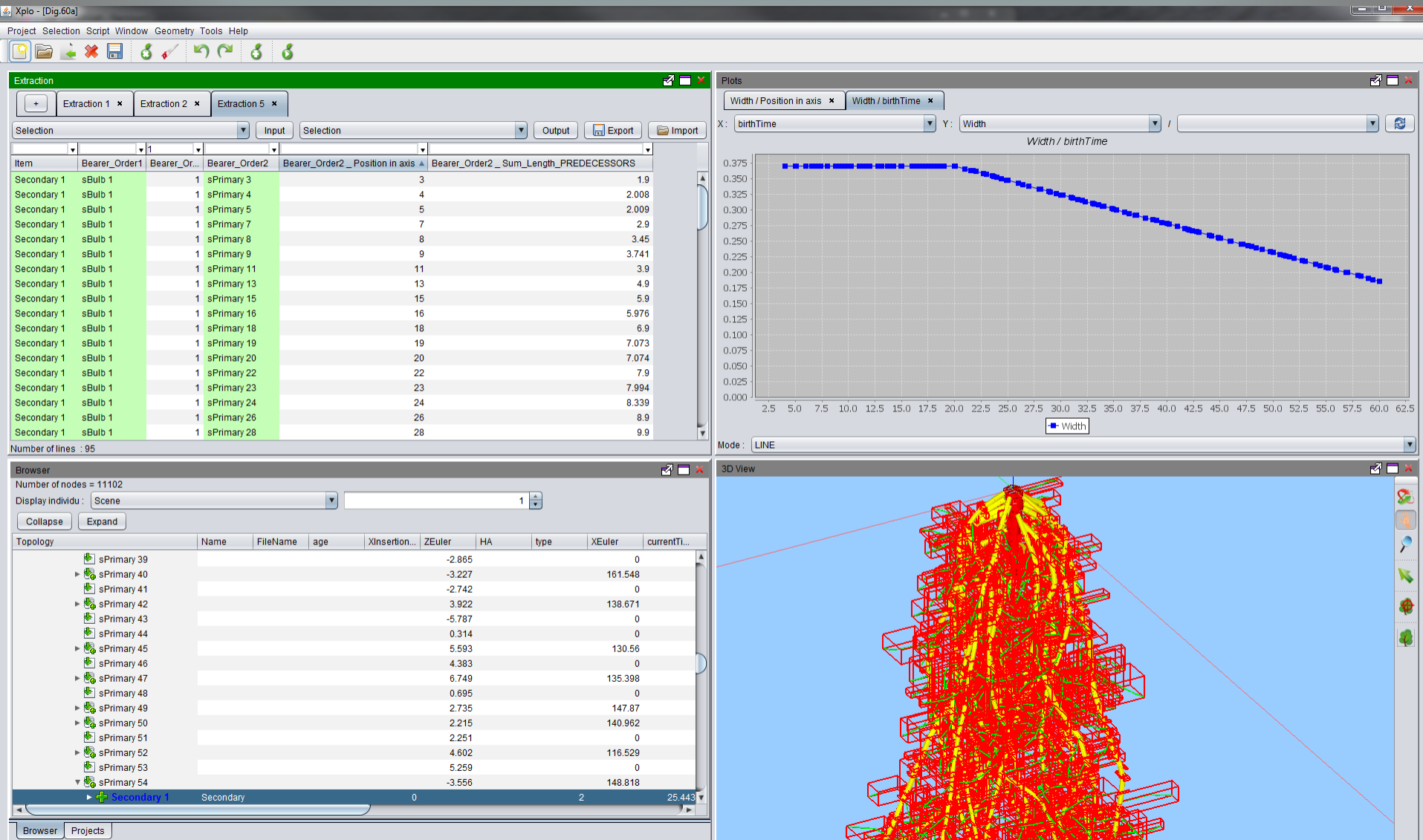
Training X04: Plot Secondary Roots Lengths vs Position on First Primary Root



Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root

- 1- Select Secondary Type*
- 2- Add Extraction Folder*
- 3- Input Selection*
- 4- Determine Secondary Bearer at Order 1 -> sBulb*
- 5- Add Bearer_Order_1 Position in Axis*
- 6- Filter Position 1*
- 7- Determine Secondary Bearer at Order 2 -> sPrimary*
- 8- Add Bearer_Order2_Position in axis*
- 9- Add Bearer_Order2_Sum_Length_PREDECESSORS*

Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root



Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root

- 1- Select Secondary Type*
- 2- Add Extraction Folder*
- 3- Input Selection*
- 4- Determine Secondary Bearer at Order 1 -> sBulb*
- 5- Add Bearer_Order_1 Position in Axis*
- 6- Filter Position 1*
- 7- Determine Secondary Bearer at Order 2 -> sPrimary*
- 8- Add Bearer_Order2_Position in axis*
- 9- Add Bearer_Order2_Sum_Length_PREDECESSORS*
- 10- Add Secondary Sum_Length_COMPONENTS*
- 11- Add Secondary Death Position*
- 12- Plot Secondary DeathPosition (secondary lengthes before death)
vs their length position on Primary*
- 13- Plot Secondary Sum_Length_COMPONENTS (secondary lengthes)
vs their length position on Primary*
- 14- Control simulated data vs model data and comment!...*

type

1_general 2_topology 3_ramification 4_angles 5_diameter 6_reiteration

topology

VerticilleNumber 1

0.0 : 1.0

verticilleProba

+ - ↑ ↓

1 0.0 : 3.0

growthDelay

+ - ↑ ↓

2 0.0 : 1.0

growthSpeed

+ - ↑ ↓

3 40.0

GlobalPercentOnGrowthSpeed

4 0.0 : 0.0
2.0 : 0.0
3.0 : 1.0

deathProba

+ - ↑ ↓

5 10.0

PruningLag

0.0

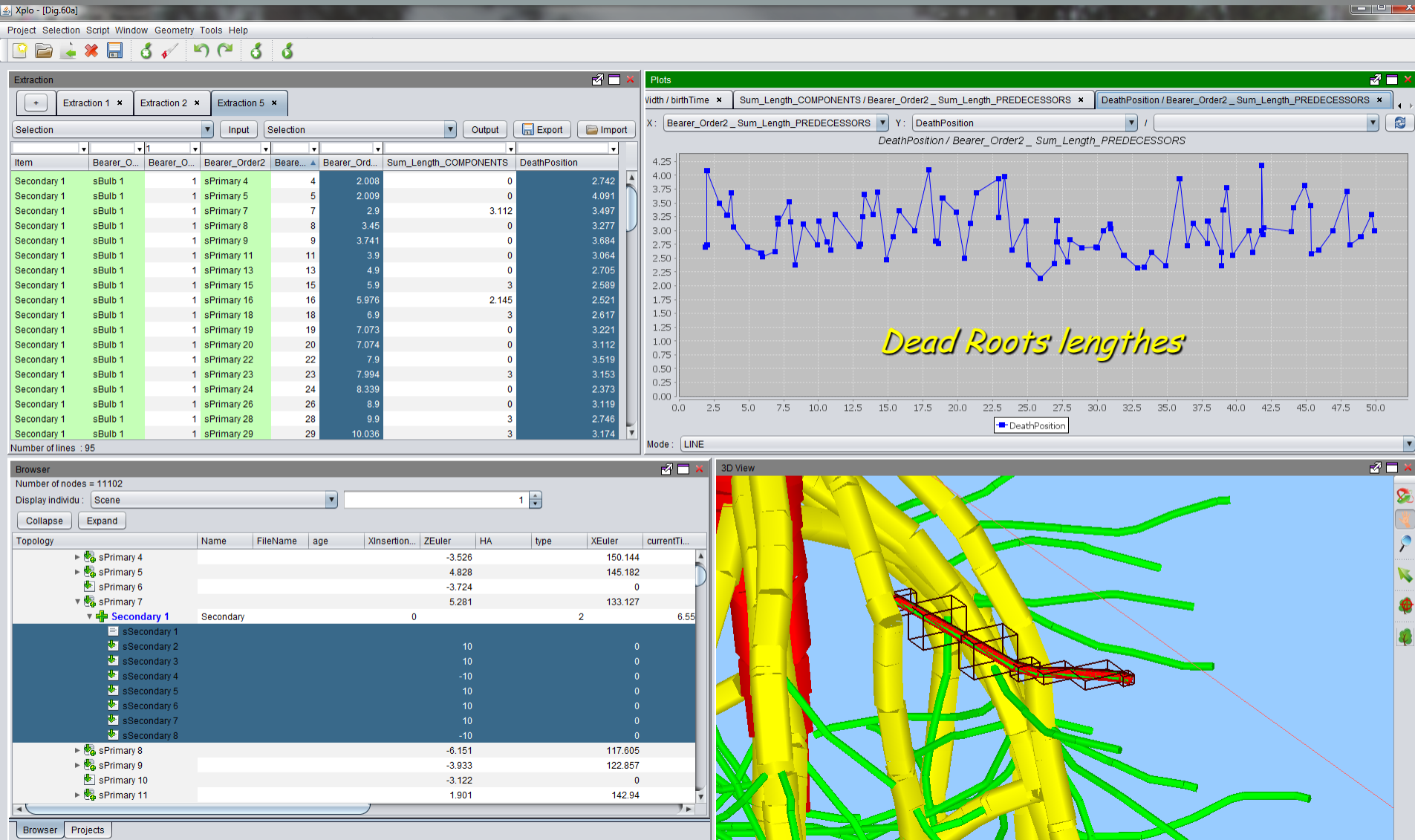
PruningLagStdDev

6 40.0

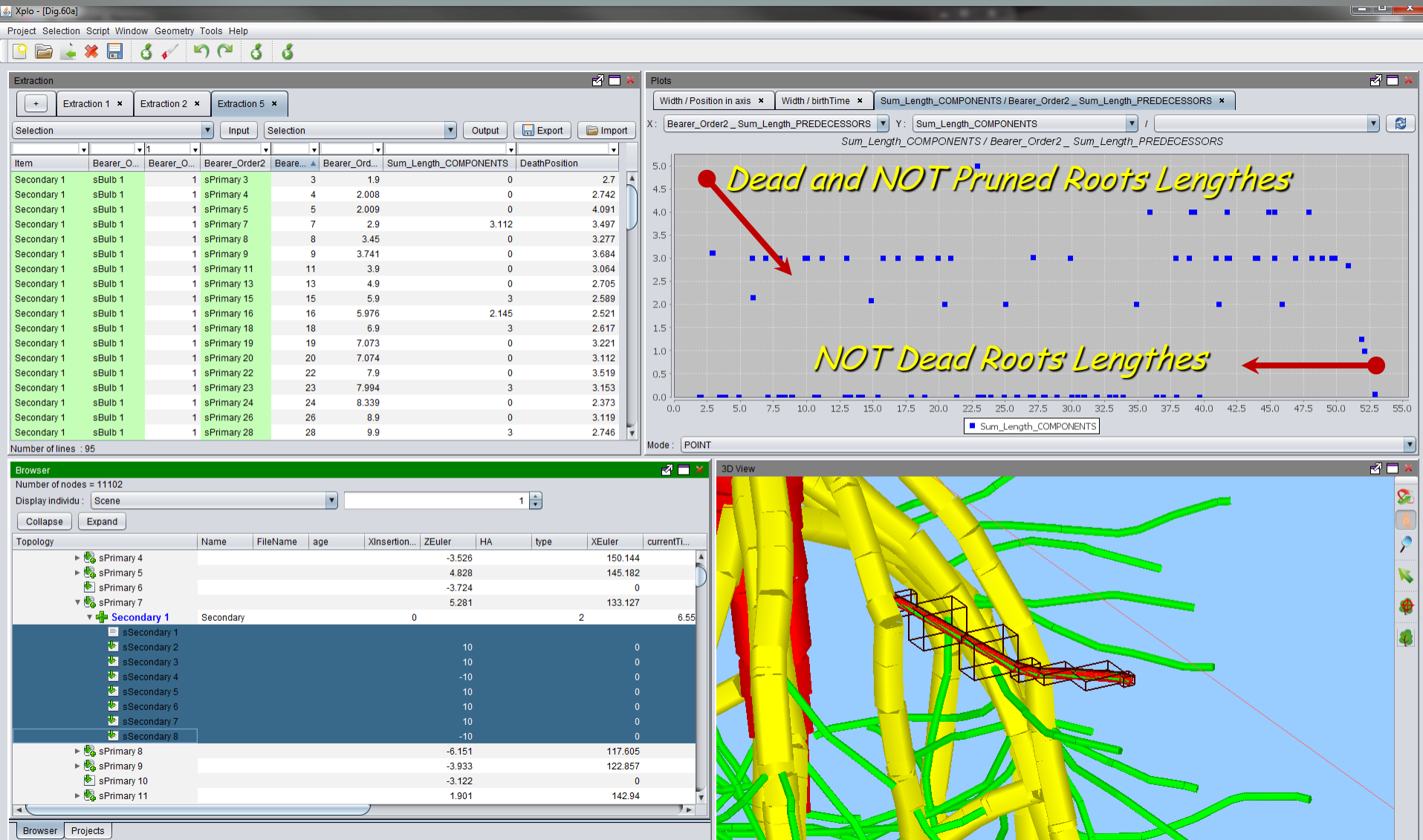
PruningExceptionPercent

OK Cancel

Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root



Training X04: Plot Secondary Roots Lengthes as a function of their Position on First Primary Root





-X05-

BRANCHING

*Training X05:
Plot Secondary Roots inter-Branching Lengths
as a function of their Position on First Primary Root*

Training X05: Plot Secondary Roots inter-Branching Lengths as a function of their Position on First Primary Root

- 1- Select Secondary Type*
- 2- Add Extraction Folder*
- 3- Input Selection*

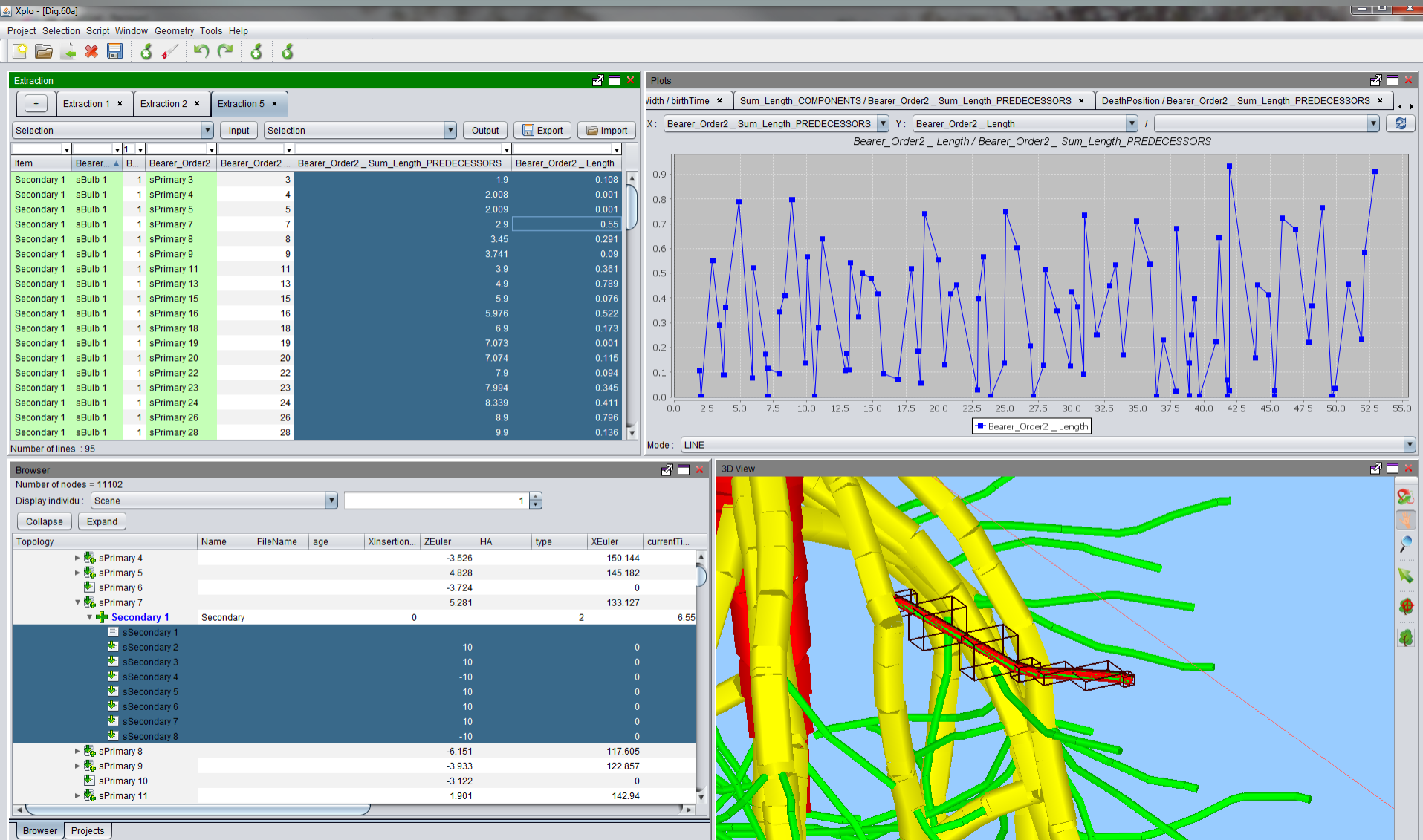
- 4- Determine Secondary Bearer at Order 1 -> sBulb*
- 5- Add Bearer_Order_1 Position in Axis*
- 6- Filter Position 1*

- 7- Determine Secondary Bearer at Order 2 -> sPrimary*
- 8- Add Bearer_Order2_Sum_Length_PREDECESSORS*
- 9- Add Bearer_Order2_Length*

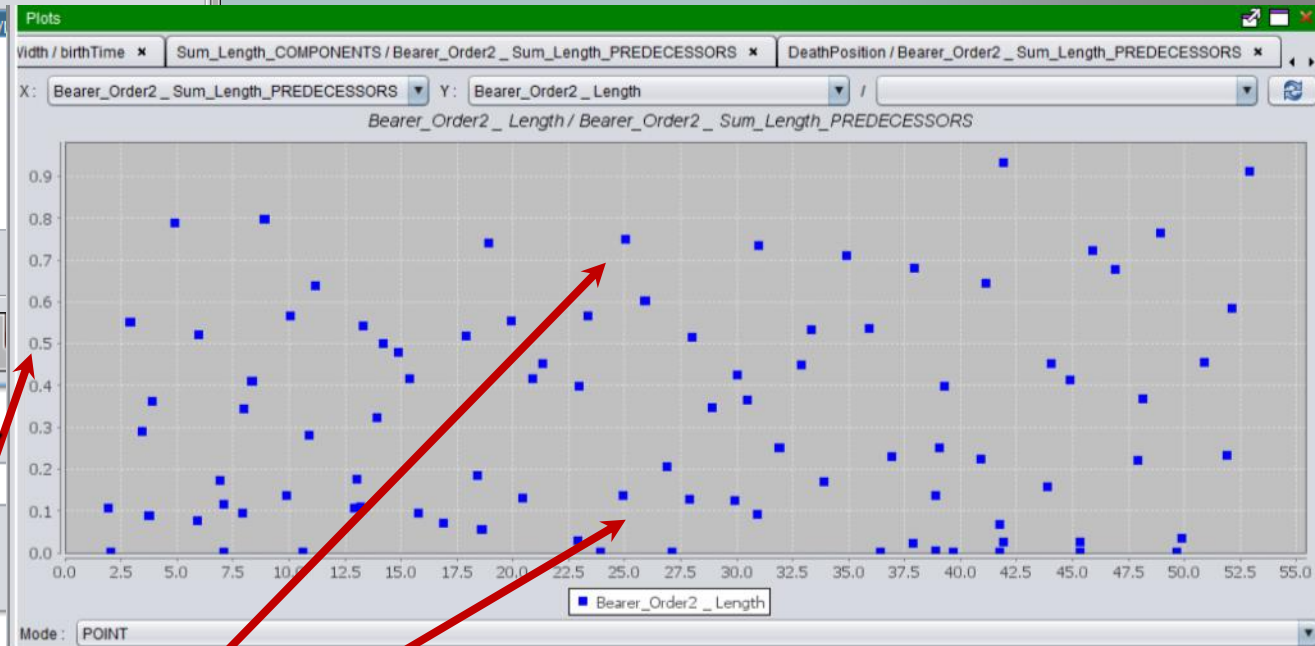
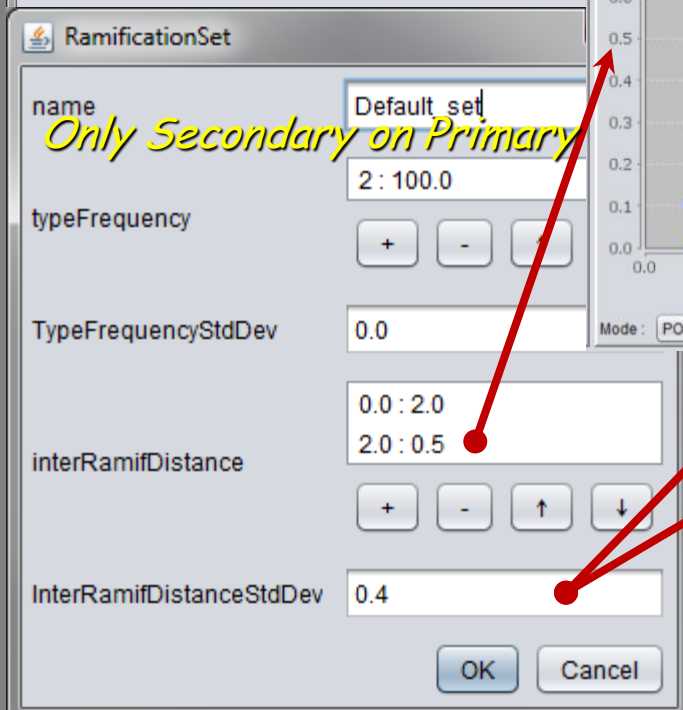
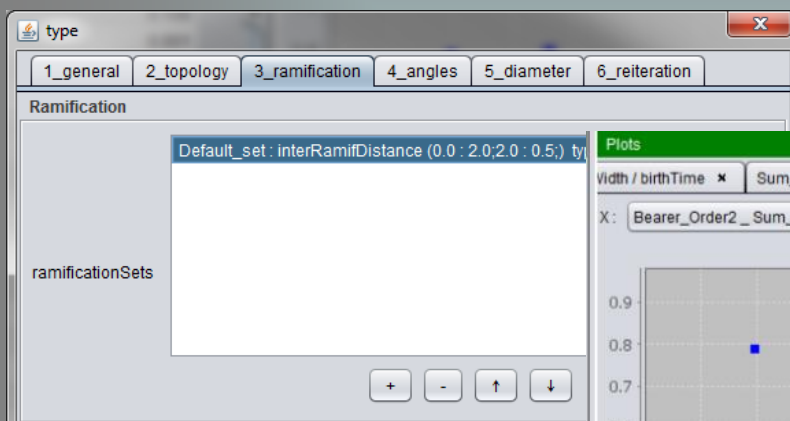
- 10- Plot Bearer_Order2_Length vs Sum_Length_Predecessors*

- 11- Control simulated data vs model data and comment!...*

Training X05: Plot Secondary Roots inter-Branching Lengths as a function of their Position on First Primary Root



Training X05: Plot Secondary Roots inter-Branching Lengths as a function of their Position on First Primary Root

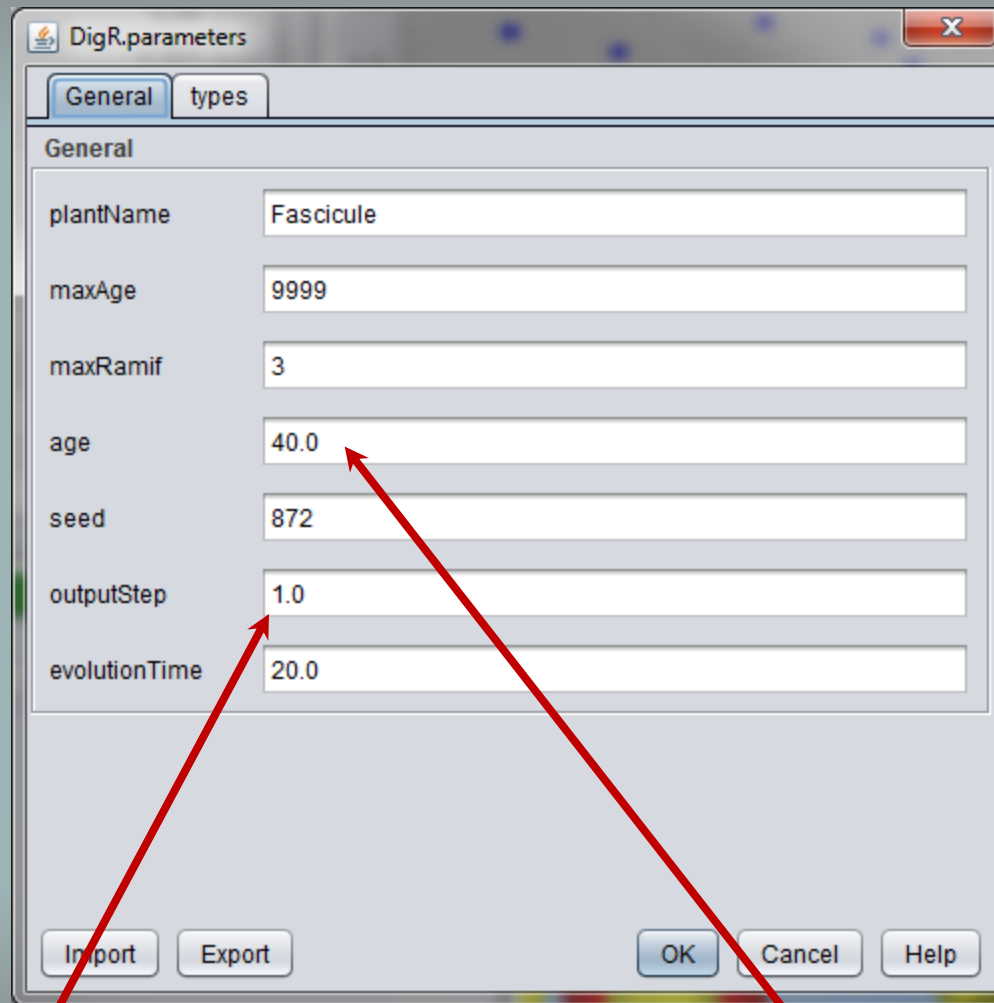




-X06-

DYNAMICS

Training X06: DigR : Growth in Xplo



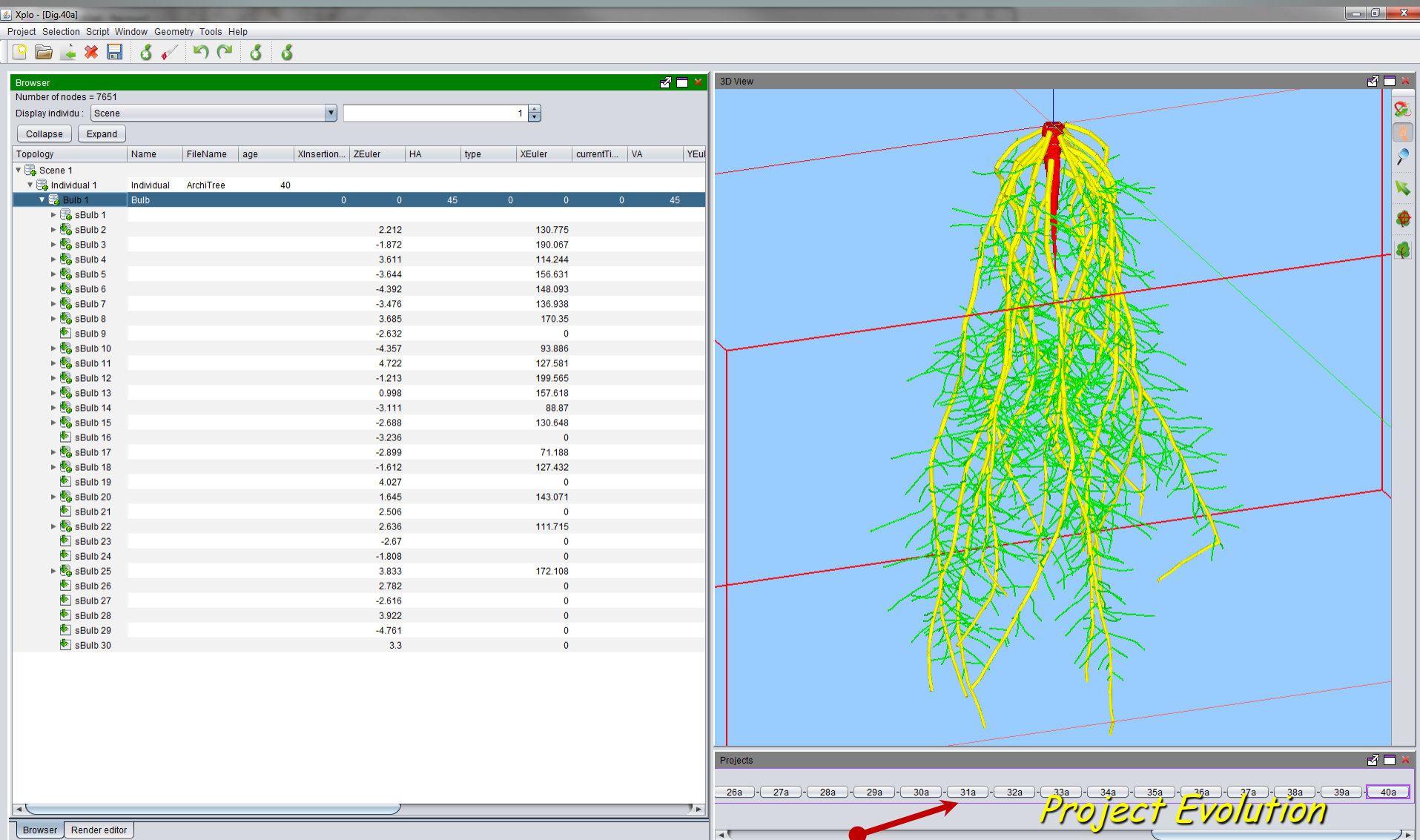
The screenshot shows a software window titled "DigR.parameters" with a close button (X) in the top right corner. It has two tabs: "General" (selected) and "types". The "General" tab contains several input fields with the following values:

Parameter	Value
plantName	Fascicule
maxAge	9999
maxRamif	3
age	40.0
seed	872
outputStep	1.0
evolutionTime	20.0

At the bottom of the window are four buttons: "Import", "Export", "OK", and "Help". Two red arrows originate from the bottom of the slide. One arrow points from the text "Output Step is 1:" to the "outputStep" field, which contains the value "1.0". The other arrow points from the text "Geometry is computed each Computing Unit, from 1 to 40 CU_Old Root System" to the "age" field, which contains the value "40.0".

Output Step is 1:
Geometry is computed each Computing Unit, from 1 to 40 CU_Old Root System

Training X06: DigR : Growth in Xplo





*Danke
Gracias
Grazie
Hvala
Mersi
Obrigado
Sheshe
Shoukran
Spassiba
Terimah Kasih
Thank you*