ARECACEAE

2013

AMAP

DIGR SIMULATION EXPLORATION

cirad













NEW PROJECT

Training X01: Xplo Software

	Xplo Soft	:ware				
Ordinateur → donnees (D:) → jee	eb ▶		-	Rechercher	r dans : je	eeb 🔎
<u>Fichier</u> Edition Affichage Outils ?						
Organiser 🕶 📾 Ouvrir Imprimer Gra	ver Nouveau do sier					
 2013 - TERRES ANR- Terrestrialisation 2013 - TOSCA - Foret 3D STEM+LEAF 2013 - UVED AmapSimEnv BOOTCOPYPOOL.BIN Dropbox jeeb LiveBackup Cache Ma Flore - Botanique Ma Flore - Herbier Mes Donnees 	Nom xplo.bat xplo.command xplo.sh xplo_splash.jpg xplo32.bat xplo32.sh xplo64.bat xplo64.sh xplo64.sh xploInstall.xml XploReadme.txt	Modifié le 10/11/2012 13:07 07/12/2011 10:17 16/11/2012 15:07 07/12/2011 10:18 07/12/2011 10:18 07/12/2011 10:18 07/12/2011 10:18 07/12/2011 10:18 07/12/2011 10:18	Type richier de comma Fichier COMMAND Fichier SH Fichier JPG Fichier de comma Fichier SH Fichier SH Document XML Document texte	Taille 2 K0 1 K0 2 K0 70 K0 1 K0 1 K0 1 K0 3 K0 1 K0	4 III	<pre>@rem Xplo launch script @rem PATH=.\ext \windows64;% PATH% java - Dfile.encoding =IS08859-15 - Xmx1024m -cp . \bin;.\ext* - splash:xplo_sp lash.jpg jeeb.xplo.kern -</pre>
xplo64.bat Modifi Fichier de commande Windows Ta	é le : 07/12/2011 10:18 sille : 210 octets	Date de création : 07/12/	2011 10:18			
L'élément selectionne					Urdi	inateur

AMAPStudio Directory



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Orbit: Click+Move to orbit, Shift+Click+Move to translate, Ctrl+Click+Move to zoom

Training X01: New Project

	P Net	NY .	
🛃 Xplo			
Project Selection Script Win	dow Geometry	Tools Help	
Image: Save Image: Save Save Import Import from clipboard Export Rendering Save screenshot Save animation Quit	Ctrl+N Ctrl+O Ctrl+W Ctrl+S Ctrl+I Ctrl+Shift+V Ctrl+T Ctrl+R Ctrl+R		
Browser Render editor			
Orbit: Click+Move to orbit, Shift+	Click+Move to tr	anslate, Ctrl+Click+Move	to zoom

New Project	Training X01: DigR Project	
Iype : Coffee DRAFt DigR GL 5 Gloups	DigR model DigR Window	
Palms	DigR.parameters	×
Principes (Palm)		
Description :	Conorol	
DigR Author(s) : JF. Barczi Root system simulator	plantName Default_Root	
	maxAge 9999	
	maxRamif 2	
	age 10.0	
	seed 0	
	outputStep 1.0	
	evolutionTime 10.0	
Ok Cancel Help	Import Export Ok Cancel	Help

-

Training X01: Parameter File Choice

🛓 DigR.parameters	×
General types	
General	
plantName	Default_Root
maxAge	9999
maxRamif	2
age	10.0
seed	0
outputStep	1.0
evolutionTime	10.0
1	
Import Expor	t Ok Cancel Help
Left Clic	: k

Look In:	_AMAP-DigR						
2008 - Mod 2011 - Euca 2013 - Erat 2013 - Fich 2013 - Imag 2013 - Imag File Name: Files of Type:	ele (i alyptus ble (construction) iers Parametres de Reference (construction) ges Parametres de Reference (construction) All Files	 2013 - Picea 2010-05-30 - DigR_ParameterFile.xls 2010-08-30 - DigR_ParameterFile.xls 2010-09-27 - DigR_ParameterFile.xls 2011-06-22 - DigR_ParameterFile.xls 	Templat				
		<u>O</u> pe	en <u>C</u> ancel				
🔔 Open			×				
Look in: 📋	Look In: 📄 2013 - Fichiers Parametres de Reference 🔽 👔 🏠 📳 🝺						
1Type_fascicule.fpd 23Mortality.fpd 51Diameter.fpd							
1Type_fas	cicule.fpd 23Mortality.fpc	d 📑 51Diameter.fpd					
1Type_fas	rot.fpd 23Mortality.fpc	d 📄 51Diameter.fpd fpd 1Type fpd					
1Type_fas	cicule.fpd 23Mortality.fpc rot.fpd 31Branching.f rotsec.fpd 32Branching1 agio.fpd 33Branching2	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd					
1Type_fas 1Type_Piv 1Type_Piv 1Type_Piv 1Type_Pla 21ApicalG	scicule.fpd 23Mortality.fpc rot.fpd 31Branching.f rotsec.fpd 32Branching1 agio.fpd 33Branching2 rowth.fpd 41Aangles.fpc	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd d					
1Type_fas 1Type_Piv 1Type_Piv 1Type_Pia 21ApicalG	scicule.fpd 23Mortality.fpc rot.fpd 31Branching.f rotsec.fpd 32Branching1 agio.fpd 33Branching2 crowth.fpd 41Aangles.fpc pd 42Aangles2.fp	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd d pd					
1Type_fas 1Type_Piv 1Type_Piv 1Type_Piv 1Type_Pla 21ApicalG	scicule.fpd 23Mortality.fpd rot.fpd 31Branching.f rotsec.fpd 32Branching1 agio.fpd 33Branching2 irowth.fpd 41Aangles.fpd pd 42Aangles2.fp	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd d pd					
1Type_fas 1Type_Pix 1Type_Pix 1Type_Pix 1Type_Pia 21ApicalG 22Death.fp	scicule.fpd 23Mortality.fpc vot.fpd 31Branching.1 votsec.fpd 32Branching1 agio.fpd 33Branching2 crowth.fpd 41Aangles.fpc pd 42Aangles2.fp 1Type_fascicule.fpd 7	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd d pd					
IType_fas TType_Pix Ttype_Pix	scicule.fpd 23Mortality.fpc vot.fpd 31Branching.1 votsec.fpd 32Branching1 agio.fpd 33Branching2 wowth.fpd 41Aangles.fpc pd 42Aangles2.fp 1Type_fascicule.fpd All Files	d 📄 51Diameter.fpd fpd 1Type.fpd 2Types.fpd d pd					

Training X01: Fascicule Parameter File

S DigR.parameters	
General types	
General	
plantName	Fascicule
maxAge	9999
maxRamif	3
age	40.0
seed	1
outputStep	1.0
evolutionTime	10.0
	1
Import Expor	t OK Cancel Help

Training X01: XPlo Browser & 3D View

🚣 Xplo - [Dig.40a]

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Browser					-7 🗖 🗙	3D View
Number of nodes = 7078						
Display individu : Scene				1		
Collapse						
Topology	Name FileName	age XInsertion Z	Euler HA	type XEuler	currentTi V	
🔻 🛺 Scene 1						
🔻 🔚 Individual 1	Individual ArchiTree	40				
🔻 🚟 First Type 1	First Type	0	0 45	0	0 0	
► 🔚 sFirst Type 1						
► 💑 sFirst Type 2			-2.734	114.8	309	
► 🖏 sFirst Type 3			-4.108	133.9	946	
► 💑 sFirst Type 4			-2.986	109	.43	
► 💑 sFirst Type 5			3.121	104.8	352	
► 💑 sFirst Type 6			-2.626	135.9	937	
► 🛃 sFirst Type 7			2.669	77.2	274	
► 📲 sFirst Type 8			2.915	134.0	035	
🛃 sFirst Type 9			6.063		0	
► 🔩 sFirst Type 10			-5.073	124.2	296	
🕨 🖏 sFirst Type 11			-2.302	156.7	781	
🕨 🌄 sFirst Type 12			-3.324	169	.54	
🕨 🖏 sFirst Type 13			3.29	146.2	267	
► 🎭 sFirst Type 14			1.836	96.2	246	
► 💑 sFirst Type 15			-3.358	160.7	764	
🛃 sFirst Type 16			2.945		0	
🕨 🌄 sFirst Type 17			-3.377	120.2	248	
► 🔩 sFirst Type 18			-4.238	152.9	965	
🛃 sFirst Type 19			3.694		0	
🕨 🎭 sFirst Type 20			3.621	164.7	762	
🛃 sFirst Type 21			3.279		0	
🕨 🖏 sFirst Type 22			-3.088	142.0	095	
🛃 sFirst Type 23			-2.634		0	
🛃 sFirst Type 24			-3.946		0	
🔻 🖏 sFirst Type 25			1.406	105.7	728	
v d second Type 1	second Ty	0	10	1	6.985	
ssecond Type 1						
🐑 ssecond Type 2			-1.992		0	
🐑 ssecond Type 3			-2.737		0	
🕨 💐 ssecond Type 4			-1.016	159.0	006	
🐑 ssecond Type 5			5.291		0	
Ssecond Type 6			-5.056	154.5	529	
			-1.103	153	.53	
🐑 ssecond Type 8			-2.871		0	
Ssecond Type 9			0.056	164.4	416	
🕨 🦉 ssecond Type 10			5.31	139	.03	
💌 ssecond Type 11			2.096		0	Projects
Besterne State S			-3.154	128.3	308	1 NJSNS
Ssecond Type 13			3.18	124.8	392	
Ssecond Type 14			1.43	146	.12	
					7 •	
Browser Render editor						

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Training X01: Simulation & Parameter File



Training X01: Reinit Project

- 0 - X

🐇 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

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Training X01: Save Parameter File

🐁 DigR.parameters	X	
General types		Save
General		
plantName	Fascicule	Look In: 💼 2013 - Fichiers Parametres de Reference 🔽 👔 👔 📳 🝺
maxAge	9999	Image: Image: Type_fascicule.fpd Image:
maxRamif	3	Image: Type_Pivotsec.fpd 32Branching1Type.fpd Image: Type_Plagio.fpd 33Branching2Types.fpd
age	40.0	21ApicalGrowth.fpd 41Aangles.fpd 22Death.fpd 42Aangles2.fpd
seed	872 Changed	
outputStep	1.0	File Name: 1Type_fascicule.fpd
evolutionTime	10.0	Files of Type: All Files
		Save Cancel
1	'	
Import Expo	rt OK Cancel Help	





PRIMARY LENGTHES

		DigR.para General Plant rootT.pes	Bulb Primary Secondary Tertiary		
				+ - (• •
		Import	Export		OK Cancel Help
DigR.partmeters			-	X	
General					
nlantName	Fascicule				
planuvaille					
maxAge	9999				
maxRamif	3				
age	40.0				
seed	872				
outputStep	1.0				
evolutionTime	10.0				
Import Expor	.t		OK Cancel	Help	

Training XO2: Parameter File Data

Primary Lengthes Come from Growth Speed !

1_general	2_topology	3_ramification	4_angles	5_diameter	6_reiteration
ology					
/ertic/leNuml	ber	1			
		0.0 : 1.0			
verticilleProba			+	- 1	↓
		0.0 : 3.0			
prowthDelay			+	- +	↓
		0.0 : 1.0			
prowthSpeed			+	- +	¥
GlobalPercen	tOnGrowthSpe	ed 20.0			
		0.0 : 0.0			
deathProba			+	- +	↓
runingLag		999.0			
PruningLagSt	dDev	0.0			
PruningExcep	tionPercent	0.0			

OK

Cancel

Trainil	ng X02:
Extraction	Layout

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	-						
			/ _				
🐇 Xplo - [Dig.4	10a]						0 ×
Project Selec	tion Script Window Geon	netry Tools Help					
	🛓 💥 🖡 Display	t≝ 3, 3					
Browser	Theme					3D View	
Number of n	nodes = 707 Preference	▶					
Display indiv	vidu : Scer Edition Layou	it 📕		1 🔷			S
Collapse	Expand	Jour					
Topology		Name FileName	age XInsertion ZEuler HA	type XEuler cur	rrentTi V		0
	🕨 📲 ssecond Type 8		-3.683	146.117	A		
	🕨 🍇 ssecond Type 9		-2.66	142.415			
	🕙 ssecond Type 10		3.093	0			
	Second Type 11		-2.649	134.014			
	ssecond Type 12		2.53	0			
	Issecond Type 14		5.446	130.79			4
	🕨 🍇 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	132.072			
	ssecond Type 19		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			
	Second Type 20		-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			
	v de courte 1	courte	-0.572	2	16.649		
	scourte 1		-	_			
	🛃 scourte 2		10	0			
	🛃 scourte 3		10	0			
	scourte 4		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			
	Second Type 37		0.904	129.12			
	 ssecond Type 38 ssecond Type 39 		0.77 4 784	156 953			
	Second Type 40		-7.408	119.782		Projects	2 🗆 🗙
	🕨 🛃 ssecond Type 41		-1.705	139.55			
	🕨 🍇 ssecond Type 42		0.862	111.144	T	<u></u>	- <u>40a</u>
	· · · · ·				7 •		
Browser	Render editor					•(J •

<u>18</u>

Training XO2: Extraction Layout

Extraction Window

Kplo - [Dig.40a]		and in case	-						
ject Selection	Script Window Geometr	y Tools Help							
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xtraction							3 - ×	Piots	2 🗖
+ Extra	action 1 ×								
		Ba							
di scene		Input	Selection		Output	Save	Load		
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Number of node	rs = 7651								
Display individu	: Scene				1			ZAPARAN	8
Collapse	Expand								
Topology		Name FileName	age Xinsertion	ZEuler HA	type	XEuler cu	rrentTi	TO SA PASS	
	🔻 🍦 Secondary 1	Secondary		0	2		18.30		<u>′</u>
	sSecondary 1								
	sSecondary 2			-10		0	_		
	Secondary 3			-10		0			4
	Secondary 4			10		0	D		
	Secondary 6			10		0			4
	Secondary 7			10		0		CHES NO STA	
	SPrimary 47			-0.904		161.667			
*	SPrimary 48			3.749		136.426			
	* 🖶 Secondary 1	Secondary		0	2		18.585		
	sSecondary 1			10		0			
	Secondary 3			-10		0	_		
	sSecondary 4			-10		0			
	🛃 sSecondary 5			10		0			
	Secondary 6			-10		0	1		
-							7.6		
Browser	ojects								

Training XO2: Type Selection

1/	_ 2		
Xplo - [Dig Pa]	hetry Tools, Help		
🔽 🕴 Type			
Extrac			× Plots
All scene	Input Selection	🗾 🛛 Output 🗍 🔚 Save 🖉 📄 Load	
Browsor		-7 -	-]
Number of nodes = 7651			
Display individu : Scene		1	
Collapse Expand			
Topology	Name FileName age XInsertion 2	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	
P Ca SPrimary 111		2.831 120.033	
sPrimary 113		-5.002 137.456	
sPrimary 114		1431 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	Driver	-2.899 71.188	
► C Primary T	Primary 0		
Browser Projecto		· · · · · · · · · · · · · · · · · · ·	
Lowser Flojects			
elect: Click ou Click+Move to select, Ctrl+C	lick adds to the selection or removes from the selection		20

Training XO2: Primary Type Selection



2 Pi Choose		ess 3		Training XO2: Selection Input	
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Browser			Z 🗆 🗙	3D View	Z□×
Number of nodes = 7651 Display individu : Scene		1			2
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Topology	Name FileName age X	Insertion ZEuler HA type	XEuler currentTi		2
Primary 107		-1.18	0		
 SPrimary 108 SPrimary 109 		4.668	111.363		
SPrimary 110		-2.118	145.191		\$
SPrimary 111 SPrimary 112		2.831	125.633		
SPrimary 112		-5.002	137.456		
Primary 114		1.431	0		
🖻 👘 sPrimary 116		-2.421	0		
► 🧞 sBulb 12		-1.213	199.565		
▶ 🥦 sBulb 13 ▶ 🥦 sBulb 14		0.998 -3 111	157.618 88.87		
► 🖏 sBulb 15		-2.688	130.648		
🛃 sBulb 16		-3.236	0		
▼ 🧞 sBulb 1/	Primary	-2.899	1 <u>2.15</u>		
			J.F.		
Browser Projects					

Training XO2: Add a Column for Primary

Right click to open clialog box 🍝 Xplo - [[g.40a] - 0 X lection Script Window Geometry Tools Help Project S 💥 🔚 👌 🎸 🖄 🍽 🖒 💧 4 Extractio 2 🗆 🔰 (Ĵ-Extraction 1 × Selectio Input Selection 💌 🛛 Output 📄 🔚 Save 📄 🖾 Load Item Primary Primary 1 🛃 🗖 🗙 🛃 🗖 🗙 3D View Browser Number of nodes = 7651 8 1 🗘 • Display individu : Scene Collapse Expand Topology Name FileName age XInsertion... ZEuler HA type XEuler currentTi.. ۶ 🛃 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 15 130.648 -2.688 🛃 sBulb 16 -3.236 0 🔻 🔩 sBulb 17 -2.899 71.188 2.158 Primary 7 H. Browser Projects

Dialog Box : left click to choose item

Training XO2: Add a Column for Primary

Xolo - [Dig.40a]	-		_	These is later of the	
Project Selection	Script Window Geometry	Tool Help			
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Primary 1					
Number of lines :	19				
Browser				🗹 🗔 🗡	3D View
Number of node	s = 7651				
Display individu	Scene				
Collapse	Expand				
Topology	10 m	Name FileName age	XInsertion ZEuler HA	type XEuler currentTi	
	SPrimary 104		-6.667	124.294	
•	a 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	
	V C Secondary 1	Secondary	0	2 34.940	
	🖹 sSecondary 1				
	🛃 sSecondary 2		-10	0	
	Secondary 3		10	0	
	secondary 4 Secondary 5		-10 -10	0	
	B oBrimon 112		4.003	0	
	SFIIIIdly LIZ				
Þ	SPrimary 113		-1.274	133.121	
4	💽 sPrimary 112 🔩 sPrimary 113 🍇 sPrimary 114		-1.274 5.51	133.121 161.914	
Browser Pro	sPrimary 112		-1.274 5.51	133.121 161.914	

Training XO2: Add a Column for Primary



Training XO2: Add a Column for Primary

Choose Navigation



Training XO2: Column Bearer of Primary Added



Training XO2: Add a Column for Bearer

Xplo - [Dig.40a]	10000	-	-	The state of the local distribution of the l		-
Project Selection	Script Window Geomet	ry Tools Help				
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Extraction				- ∛ □ ×	Plots	
+ Extra	action 1 ×					
Selection		Input Selection		🔽 🛛 Output 🛛 🔚 Save 📄 🕞 Load		
	• •					
Item	Bearer					
Primary 1	sBulb 17			A		
Primary 1	sBulb 10					
Primary 1	sBulb 13					
Primary 1 Primary 1	SBuib 15 Hide colum	in : Bearer				
Primary 1	sBulb 7 Bearer : Ad	d a column				
Primary 1	sBulb 18					
Primary 1	sBulb 8					
Primary 1	sBulb 20					
Primary 1	sBulb 5					
Primary 1	sBulb 14					
Primary 1 Primary 1	sBulb 25 cBulb 22					
Primary 1	sBulb 6					
Primary 1	sBulb 11					
Primary 1	sBulb 12					
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Number of lines	: 19					
Browser				🗹 🗖 🗡	3D View	4
Number of node	es = 7651					0
Display individu	Scene	•		1 🟹		2
Collapse	Expand					
Topology		Name FileName age	XInsertion ZEuler HA	type XEuler currentTi		1
Þ	SPrimary 104		-6.667	124.294		
P	• Wasserimary 105		-2.988	122.679		
	SPrimary 107		3,376	116 544		Š.
▶	- 🔩 sPrimary 108		2.47	130.723		1
	🛃 sPrimary 109		2.575	0		
Þ	🛚 🍇 sPrimary 110		1.24	148.686		4
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	V C Secondary 1	Secondary	0	2 34.94(
	Secondary 1		-10	0		
	sSecondary 3		-10	0		
	sSecondary 4		-10	0		
	🛃 sSecondary 5		-10	0		
	🛃 sPrimary 112		4.003	0		
Þ	🖏 sPrimary 113		-1.274	133.121		
•	SPrimary 114		5.51	161.914		
	rejecto					
- urouro or I Dr	rojects					

Training XO2: Add Position



Training XO2: Column Bearer_Position in axis Added

Project Selection	Script Window	Geometry Tools He	lp			
	•	• - / (-	00		-7 = \	
+ Extraction	action 1 ×				<u> </u>	
Selection			Input Selection		🔍 Output 🔲 Save 🕞 Load	
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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	sBuid 5		5			
Primary 1	sBulb 25		25			
Primary 1	sBulb 22		22			
Primary 1	sBulb 6		6			
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	📲 sPrimary 105			-2.988	122.679	
	SPrimary 106			4.478	157.775	
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	sPrimary 109			2.575	0	
,	SPrimary 110			1.24	148.686	
	sPrimary 111			1.96	104.02	
	🛛 🔻 🕂 Secondar	y 1 Seconda	гу	0	2 34.94(
	📄 sSecond	dary 1				
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	SPrimary 113			5.51	161.914	
•						
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Xplo - [Dig.40a

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Training XO2: Add a Column for Primary

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Primary 1	sBulb 10		10								
Primary 1	sBulb 13		13								
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Prim Item : Add	l a column		7								
Primary	3D010 4		4								
Primary 1	SBUID 18		18								
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								
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	SPrimary 105				-2.98	8 0		122.679			
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	a sPrimary 108				2.4	7		130.723			
	🛃 sPrimary 109				2.57	5		0			
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.	🖏 sPrimary 111				1.9	6		104.02			
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►	🖏 sPrimary 114			,	5.5	1		161.914	v		
Browser Pro	ojects										

Training XO2: Add Sum of Segments : Primary Length



1 🖌 Add a column

Training XO2: Primary Lengthes Added

🚣 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

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Primary 1	sBulb 10	1) 34.131		
Primary 1	sBulb 13	1	40.87		
Primary 1	sBulb 15	1	5 35.04		
Primary 1	sBulb 7		40.313		
Primary 1	sBulb 4		43.22		
Primary 1	sBulb 18	1	34.495		
Primary 1	sBulb 8		31.827		
Primary 1	sBuib 20	2	30.98		
Primary 1	sBuib 5	1	30.909		
Primary 1	sBulb 25	2	28.746		
Primary 1	sBulb 22	2	28.944		
Primary 1	sBulb 6		37.999		
Primary 1	sBulb 11	1	41.009		
Primary 1	sBulb 12	1	29.003		
Primary 1	sBulb 2		43.233		
Primary 1	sBulb 3		30.918		
Number of line	es : 19				
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Number of no Display indivi Collapse Topology	dus = 7651 du : Scene Expand • 🚱 sPrimary 104 • 🚱 sPrimary 105	Name	FileName age	Xinsertion ZEuler HA -6.667 -2.988	1 • Vype XEuler currentTi 124.294 122.679
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Number of no Display indivi Collapse Topology	bdes = 7651 du : Scene Expand • SPrimary 104 • Sprimary 105 • Sprimary 106 • Sprimary 107	Name	FileName age	Xinsertion ZEuler HA -6.667 -2.988 4.478 3.376	type XEuler currentTi 1 • 124.294 122.679 157.775 116.544
Number of no Display indivi Collapse Topology	bdes = 7651 du : Scene Expand € sPrimary 104 € sPrimary 105 ► Sprimary 106 ► Sprimary 107 ► Sprimary 108	Name	FileName age	Xinsertion ZEuler HA -6.667 -2.988 4.478 3.376 2.47	1 • type XEuler currentTi 124.294 122.679 157.775 116.544 130.723
Number of no Display indivi Collapse Topology	bdes = 7651 du : Scene Expand Sprimary 104 Sprimary 105 Sprimary 106 Sprimary 107 Sprimary 108 Sprimary 108 Sprimary 108	Name	FileName age	Xinsertion ZEuler HA -6.667 -2.988 4.478 3.376 2.47 2.575 	type XEuler currentTi 1 • 124.294 122.679 157.775 116.544 130.723 0 10 bross 0
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Number of no Display indivi Collapse Topology	bdes = 7651 du : Scene Expand * SPrimary 104 * SPrimary 105 * Sprimary 106 * Sprimary 107 * Sprimary 107 * Sprimary 108 * Sprimary 108 * Sprimary 109 * Sprimary 109 * Sprimary 110 * Sprimary 110	Name	FileName age	Xinsertion ZEuler HA -6.667 -2.988 4.478 3.376 2.47 2.575 1.24 1.96 0	type XEuler currentTi 1 • 124.294 122.679 157.775 116.544 130.723 0 148.886 104.02 2 2104
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Number of no Display indivi Collapse Topology	bdes = 7651 du : Scene Expand Expand Sprimary 104 Sprimary 105 Sprimary 105 Sprimary 106 Sprimary 107 Sprimary 108 Sprimary 109 Sprimary 109 Sprimary 111 Sprimary 111 Sprimary 111 Sprimary 111 Sprimary 111	y 1 Secondary dary 1	FileName age	Xinsertion ZEuler HA -6.667 -2.988 4.478 3.376 2.47 2.575 1.24 1.96 0 -10	1 • type XEuler currentTi 124.294 122.679 157.775 116.544 130.723 0 148.686 104.02 2 34.94
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Training XO2: Order by Position

Click on Column Header

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Primary 1	sBulb 2		2	43.233				
Primary 1	sBulb 3		3	30.918				
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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	SBUID 11		11	41.009				
Primary 1	sBuib 12		12	29.003				
Primary 1	sBulb 14		14	40.07				
Primary 1	sBulb 15		15	35.04				
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Þ	🎭 sPrimary 105			-2.988		122.679		
Þ	🖏 sPrimary 106			4.478		157.775	_	
Þ	SPrimary 107			3.376		116.544		
►	SPrimary 108			2.47		130.723		
	SPrimary 109			2.5/5		149.696		
- -	sPrimary 111			1.24		104.02		
	V G Secondary 1	Secondary		0		2	34.94	
	sSecondary 1	1						
	🛃 sSecondary 2	2		-10		0		
	🛃 sSecondary 3	3		10		0		
	🛃 sSecondary 4	4		-10		0		
	sSecondary 5	5		-10		0		
	Primary 112			4.003		0		
Þ	SPrimary 113			-1.274		133.121	-	
•	😋 sPrimary 114	_		5.51		161.914	7	
Browser	ojects							

Drag Left Click or CTRL+Left Click to select

Training XO2: Plot Primary Lengthes

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Primary 1	sBulb 1	1	36.9		4		
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Training XO2: Plot Primary Lengthes

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Training XO2: Reinit Project

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Project Selection Script Window Geometry Tools Help

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:Training XO2 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 XO2: Plot Lengthes Distribution



Training XO2: Lengthes Distribution

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Project Selection Script Window Geometry Tools Help

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+ Ext	action 1 ×				Sum_Length_COMPONENTS / Bearer _ Position in axis	Sum_Length_COMPONENTS distribution	
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Gelection	1-1					Sum_Length_COMPONENTS distribution	
Item	Bearer	Bearer Position in axis	Sum Length COMPONENTS		4.00		
Primary 1	sBulb 1	1	36.9	×	3.75		
Primary 1	sBulb 2	2	43.233		3.50		
Primary 1	sBulb 3	3	30.918		3.25		
Primary 1	sBulb 4	4	43.22		3.00		
Primary 1	sBulb 5	5	30.969		2.75		
Primary 1	sBulb 6	6	37.999		2.50		
Primary 1	sBulb 7	1	40.313		2.25		
Primary 1	sBuib 8	10	31.827		Z 2.00		
Primary 1	sBuib 10	11	34.131		1.75		
Primary 1	sBulb 12	12	29 003		1.50	·····	
Primary 1	sBulb 13	13	40.87		1.25		
Primary 1	sBulb 14	14	28.96		1.00		
Primary 1	sBulb 15	15	35.04		0.75		
Primary 1	sBulb 17	17	37.854		0.50		
Primary 1	sBulb 18	18	34.495		0.25		
Primary 1	sBulb 20	20	36.98	L. L.	0.00		
Primary 1	sBulb 22	22	28.944	¥	0.0 2.5 5.0 7.5 10.0 12.5	15.0 17.5 20.0 22.5 25.0 27.5 30.0 Classes) 32.5 35.0 37.5 40.0 42.5 45.0
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Vumber of lines	a)-(_)-(29a)-(_30a)-(_31a)-(_	<u>32a</u> - <u>33a</u> - <u>34a</u> - <u>35</u> a	■ - <u>36a</u> - <u>37a</u> - <u>38a</u> - <u>39a</u> + <u>40a</u>	3D View		

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Training XO2: Optimize Plot Values

🕨 Step, Min & Max 👂

Project Selection Script Window Geometry Tools Help

🐇 Xplo - [Dig.40a]

Extraction				🗹 🗔 🗡	Plots		🗹 🗖 🗙
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	v		•			Sum_Length_COMPONENTS distribution	
Item	Bearer	Bearer _ Position in axis 🔹 S	Sum_Length_COMPONENTS		3.00		
Primary 1	sBulb 1	1	36.9	×			
Primary 1	sBulb 2	2	43.233		2.75		
Primary 1	sBulb 3	3	30.918		2.50		
Primary 1	sBulb 4	4	43.22		2.25		
Primary 1	sBulb 5	5	30.969				
Primary 1	sBulb 6	6	37.999		2.00		
Primary 1	sBulb 7	7	40.313		1.75		
Primary 1	sBulb 8	8	31.827		Z 1.50		
Primary 1	SBUID 10	10	34.131		1.05		
Primary 1 Primary 1	SBUID 11 cBulb 12	11	41.009		1.25		
Primary 1	sBulb 13	12	40.87		1.00		
Primary 1	sBulb 14	14	28.96		0.75		
Primary 1	sBulb 15	15	35.04		0.50		
Primary 1	sBulb 17	17	37.854		0.50		
Primary 1	sBulb 18	18	34.495		0.25		
Primary 1	sBulb 20	20	36.98	ľ	0.00		
Primary 1	sBulb 22	22	28.944	v	25 26 27 28 29	30 31 32 33 34 35 36 37 38	39 40 41 42 43
Number of line	s : 19					Classes	
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Projects				2 🗖 🗙	3D View		
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Projects	:7a - 28a -	<u>29a</u>)- <u>30a</u>)- <u>31a</u>)- <u>32</u>	2a - 33a - 34a - 35a	- 36a - 37a - 38a - 39a - 40a	3D View		
Projects 26a - :	:7a - 28a - (<u>29a</u> - <u>30a</u> - <u>31a</u> - <u>32</u>	2a - 33a - 34a - 35a	- 36a - 37a - 38a - 39a - 40a	3D View		
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-X03-

FIRST PRIMARY DIAMETER

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	age	40.0					
	seed	872					
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Training X03: Parameter File Data

Primary Diameters Come from Diameter Folder !

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Training X03: Type Selection



Training X03: Type Selection

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le <mark>∛o</mark> si	Primary 58 Primary 59	-4.383 -4.124	140.527	-3.791 -3.727	24.668	0.561	0.304 jéeb.lib.st 0.302 jeeb.lib.st			
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Training X03: Column Bearer of Primary Added

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	SPrimary 40	-5.923	133.659	-1.411	21.738	0.237	0.319 jeeb.lib.st		
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Training X03: Add a Column for Bearer

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sPrimary 38	sBulb 1									
sPrimary 63	sBulb 6									
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	sPrimary 43	-0.495		4.807	20	0.009	0.33 jeeb.lib.st	A		
	SPrimary 44	1.899	90.621	-1.69	20.269	0.311	0.328 jeeb.lib.st 0.328 jeeb.lib.st			
	SPrimary 45 SPrimary 46	4.553	148.317	3.305	20.636	0.423	0.326 jeeb.lib.st			
	🛃 sPrimary 47	-0.59		-4.744		0.42	0.324 jeeb.lib.st			49
	SPrimary 48	3 -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			
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	SPrimary 54	5.465	121.229	4.953	23.323	0.181	0.312 jeeb.lib.st			
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Training X03: Add Position



Training XO3 Column Bearer_Position in axis Added

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sPrimary 38	sBulb 11			11							
sPrimary 117	sBulb 2			2							
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sPrimary 40	sBulb 17			17							
sPrimary 41	sBulb 7			7							
sPrimary 38	sBulb 1			1							
sPrimary 63	SBUID 6			6							
sPrimary 101	SBUID 1			1							
sPrimary 60	sBuib to			13							
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	🕙 sPrimary 43	-0.495			4.807	20	0.009	0.33 jeeb.lib.st	4		
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	SPrimary 51	2.731	99.262		-7.535	22.837	0.966	0.314 jeeb.lib.st			
	🛃 sPrimary 52	-2.763			-0.94		0.188	0.313 jeeb.lib.st			
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	🖻 🍇 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			2.114		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			
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Training XO3 Filter on Bearer_Position in axis

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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	SBUID 1 cBuib 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					٣	
Number of lines	: 102									
Browser									🛛 🗹 🖂 🗙	3D View 🛃 🗐 📩
Number of nod	es = 7651									
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	SPrimary 43	-0.49	5 0		4.807	20	0.009	0.33 jeeb.lib.s	t	
	sPrimary 44	1.895	9 131.004 5 00.621		-1.09	20.209	0.311	0.328 jeeb.iib.s	•	
	> SPrimary 46	4 553	3 148 317		3 305	20.27	0.001	0.326 jeeb.lib.s	t	
	sPrimary 47	-0.59	9 0		-4.744	21	0.42	0.324 jeeb.lib.s	t	
	SPrimary 48	-3.512	2 168.38		-3.746	21.738	0.852	0.32 jeeb.lib.s	t	
	> 🍇 sPrimary 49	-5.923	3 133.659		-1.411	21.943	0.237	0.319 jeeb.lib.s	t	
	🟝 sPrimary 50	-5.212			-0.695		0.065	0.319 jeeb.lib.s	t	
	> 🍇 sPrimary 51	2.73	1 99.262		-7.535	22.837	0.966	0.314 jeeb.lib.s	t	
	SPrimary 52	-2.763	3 0		-0.94	23	0.188	0.313 jeeb.lib.s	t	
	SPrimary 53	-4.58	7 179.45 5 101.990		-4.913	23.166	0.192	0.312 jeeb.lib.s	t •	
	sPrimary 54	-2.200	2 1/13 120		4.953	23.323	0.602	0.312 Jeeb.IID.S	t	
	SPrimary 56	-2.300	70		2.114		0.092	0.308 jeeb.lib.s	t	
	SPrimary 57	6.07	1 105.721		1.057	24.182	0.21	0.307 jeeb.lib.s	t	
,	> 🍇 sPrimary 58	-4.383	3 140.527		-3.791	24.668	0.561	0.304 jeeb.lib.s	t	
	🖖 sPrimary 59	-4.124	4 0		-3.727		0.383	0.302 jeeb.lib.s	t	
	> 🍇 sPrimary 60	4.544	4 163.564		-2.579	25.246	0.284	0.301 jeeb.lib.s	t	
Browser	rojects									

Xplo - [Dig.4	Oa]							_			
Project Selec	tion Script Window C	Geometry Tool	s Help								
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+ [Extraction 1 × Extra	action 2 ×									
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sPrimary 10	1 sBulb 1			1							1
sPrimary 99				1					J		1
sPrimary 37	Edit label			1							1
sPrimary 86				1							1
sPrimary 49	sBulb 1			1							1
sPrimary 47	sBuib 1			1							1
sPrimary 93	sBulb 1			1							1
sPrimary 27	sBulb 1			1							1
sPrimary 70	sBulb 1			1							1
sPrimary 1	sBulb 1			1							1
sPrimary 42	SBUID 1 sBuib 1			1							1
sPrimary 56	sBulb 1			1							1
sPrimary 11	sBulb 1			1							1
sPrimary 10	2 sBulb 1			1							1
Number of lin	es : 102										
Browser									🖉 🗖 🗙	3D View	4
Number of n	odes = 7651										
Display Indix	idu : Escene						1				
Collapse	Expand										1
Topology	Brimon 42	ZEuler	XEuler	currentTi Y	Euler 1	Insertion birthTime L	ength	Width Geometri			
	SPrimary 43	1.899	131.654		-1.69	20.269	0.311	0.328 jeeb.lib.st	ĥ		1
	🕨 🍇 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			-4.744		0.42	0.324 jeeb.lib.st			
	SPrimary 48	-3.512	168.38		-3.746	21.738	0.852	0.32 jeeb.lib.st			1
	sPrimary 50	-5.212	0		-0.695	21.343	0.065	0.319 jeeb.lib.st			1
	SPrimary 51	2.731	99.262		-7.535	22.837	0.966	0.314 jeeb.lib.st			1
	🖢 sPrimary 52	-2.763			-0.94		0.188	0.313 jeeb.lib.st	\mathcal{D}		
	🕨 🍇 sPrimary 53	-4.587	179.45		-4.913	23.166	0.192	0.312 jeeb.lib.st			1
	SPrimary 54	5.465	121.229		4.953	23.323	0.181	0.312 jeeb.lib.st			
	sPrimary 55	-2.388	143.128		2.114		0.092	0.308 jeeb.lib.st			
	SPrimary 57	6.0 <u>71</u>	105.721		1.057	24. <u>182</u>	0.2 <u>1</u>	0.307 jeeb.li <u>b.st</u>			1
	🕨 🍇 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			1
	sPrimary 60	4.544	163.564		-2.579	25.246	0.284	0.301 jeeb.lib.st	V		1
Browser	Projects										

Training XO3: Add Position in Axis For Primary



Training X03: Order by Position

Click on Column Header

Xplo - [Dig.40a]	-				_		_		
Project Selectio	n Script Window (Geometry Tools	Help							
<u> </u>	* 🖬 🔞	s/ 🔊 (*	≥ ວິ ວິ							
Extraction								A 🗆 🗙	Plots	🔊 🗖 🗙
+ Ext	raction 1 × Extr	action 2 ×								
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	*	v 1	*							
Item	Bearer	Bearer _ Posi	tion in axis Positio	n in axis				_		
sPrimary 89	sBulb 1		1	89				<u></u>		
sPrimary 38	sBulb 1		1	38						
cPrimary 101	sBuib 1		1	101						
sPrimary 37	sBulb 1		1	37				ſ		
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 ePrimary 42	sBuib 1		1	1						
sPrimary 67	sBulb 1		1	67						
sPrimary 56	sBulb 1		1	56						
sPrimary 11	sBulb 1		1	11						
sPrimary 102	sBulb 1		1	102				Y		
Number of lines	: 102									
Browser								🛃 🗔 🗙	3D View	🛃 🗖 🗙
Number of not	les = 7651									
Display individ	u : Scene			•		1 🗘				See
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	SPrimary 43	-0.495	U 121.654	4.807	20	0.009	0.33 Jeeb.IID.St.			
	> SPrimary 44	3.045	90.631	7.085	20.209	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		-4.744		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		-0.695		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 SPrimary 52 	-2.703	U 170.45	-0.94	23	0.188	0.313 jeep.iip.st.	··· /		
	SPrimary 53	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		2.114		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.			
	Primary 59	-4.124	0	-3.727	25	0.383	0.302 jeeb.lib.st.			
	SPrimary 60	4.544	103.564	-2.579	25.246	0.284	0.301 Jeeb.lib.st.			
Browser	Projects									

Training X03: Add Primary Widthes

🚣 Xplo - [Dig.40a] Project Selection Script Window Geometry Tools Help ሪ√ ୬୯ ሪሪ 💥 🔚 -Extraction n 🔁 🗖 🗙 2 🗆 🕯 Plots + Extraction 1 × Extraction 2 × 🔽 Output 🔲 Export 🕞 Imp Input Selection Selection х **v** 1 v 🖆 Add a column Position in axis Item Bearer Bearer _ Position in axis sPrimary 1 sBulb 1 Column type sPrimary 2 sBulb 1 sPrimary 3 sBulb 1 sPrimarv 4 sBulb 1 v Attribute sPI Edit label • sPi Item : Add a column sPrimary 7 sBulb 1 Options sPrimary 8 sBulb 1 8 sPrimary 9 sBulb 1 C sBulb 1 10 sPrimary 10 Width V Attribute sPrimary 11 sBulb 1 11 sPrimary 12 sBulb 1 12 . sPrimary 13 sBulb 1 13 VA sPrimary 14 sBulb 1 1 14 sPrimary 15 sBulb 1 15 Width sPrimary 16 sBulb 1 1 16 sPrimary 17 sBulb 1 17 XEuler sPrimary 18 sBulb 1 1 18 XInsertionAngle Number of lines : 102 🛃 🗔 🗙 Browser YEuler Number of nodes = 7651 8 Display individu : Scene • YInsertionAngle Collapse Expand ZEuler currentTi... YEuler ٦ Topology XEuler ZEuler Yinser 🕙 sPrimary 43 -0.495 ZInsertionAngle Image: Second K Image: Second 0.328 jeeb.lib.st 🕞 🍇 sPrimary 46 0.326 jeeb.lib.st. 🖖 sPrimary 47 -4.744 0.324 ieeb.lib.st Image: Second -3.746 0.32 jeeb.lib.st Image: Second 0.319 jeeb.lib.st. 🛃 sPrimary 50 0.319 jeeb.lib.st. SPrimary 51 0.314 jeeb.lib.st 🖢 s Primary 52 0.313 jeeb.lib.st. SPrimary 53 0.312 ieeb.lib.st SPrimary 54 0.312 jeeb.lib.st 🕨 🍇 sPrimary 55 0.308 jeeb.lib.st. 🛃 sPrimary 56 0.308 jeeb.lib.st. SPrimary 57 0.307 jeeb.lib.st. SPrimary 58 0.304 jeeb.lib.st. 🖖 sPrimary 59 -4.124 0.302 jeeb.lib.st Image: Second Browser Projects

Training X03: Primary Widthes Added

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'roject Selection	n Script Window	Geometry Tools He	0			_		
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Item	Bearer	Bearer _ Positi	n in axis 🔺 Position in	axis Widtl	n			
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	sBuib 1		1	8	0.339			
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							
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	Primany 42	-0.495		4.807	20	0.009	0.33 jeeh lih st	
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_	 SPrimary 43 SPrimary 44 SPrimary 45 	1.899 1	31.654	-1.69	20.269	0.311	0.328 jeeb.lib.st	
	 SPrimary 43 SPrimary 44 SPrimary 45 SPrimary 45 	1.899 1 3.045	31.654 90.631 49.217	-1.69 7.085	20.269 20.27 20.626	0.311 0.001	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.328 jeeb.lib.st	
	 S rimary 43 S Primary 44 S Primary 45 S Primary 46 S Primary 47 	1.899 1 3.045 4.553 1 -0.59	31.654 90.631 48.317 0	-1.69 7.085 3.305 -4.744	20.269 20.27 20.636 21	0.311 0.001 0.423 0.42	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.326 jeeb.lib.st 0.326 jeeb.lib.st	
	 Srimary 43 Srimary 44 Srimary 45 Srimary 46 Srimary 47 Srimary 48 	1.899 1 3.045 4.553 1 -0.59 -3.512	31.654 90.631 48.317 0 168.38	-1.69 7.085 3.305 -4.744 -3.746	20.269 20.27 20.636 21 21.738	0.311 0.001 0.423 0.42 0.852	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.326 jeeb.lib.st 0.324 jeeb.lib.st 0.32 jeeb.lib.st	
• • •	 SPrimary 43 SPrimary 44 SPrimary 45 SPrimary 46 SPrimary 47 SPrimary 47 SPrimary 48 SPrimary 49 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 <u>1</u>	31.65 90.631 48.317 0 168.38 33.659	-1.69 7.085 3.305 -4.744 -3.746 -1.411	20.269 20.27 20.636 21 21.738 21.943	0.311 0.001 0.423 0.42 0.852 0.237	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.326 jeeb.lib.st 0.324 jeeb.lib.st 0.32 jeeb.lib.st 0.319 jeeb.lib.st	
, , ,	 SPrimary 43 SPrimary 44 SPrimary 45 SPrimary 46 SPrimary 47 SPrimary 47 SPrimary 48 SPrimary 49 SPrimary 50 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 1 -5.212	31.654 20.631 48.317 0 168.38 33.659 0	-1.69 7.085 3.305 -4.744 -3.746 -1.411 -0.695	20.269 20.27 20.636 21 21.738 21.943 _22_	0.311 0.001 0.423 0.42 0.852 0.237 0.065	0.328 jeeb lib.st 0.328 jeeb lib.st 0.326 jeeb lib.st 0.324 jeeb lib.st 0.32 jeeb lib.st 0.319 jeeb lib.st	
	 Sprimary 44 Sprimary 44 Sprimary 45 Sprimary 46 Sprimary 47 Sprimary 47 Sprimary 48 Sprimary 49 Sprimary 50 Sprimary 51 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 1 -5.212 2.731	91,654 90,631 48,317 0 168,38 33,659 0 99,262	-1.69 7.085 3.305 -4.744 -3.746 -1.411 -0.695 -7.535	20.269 20.27 20.636 21 21.738 21.943 22 22.837	0.311 0.001 0.423 0.42 0.852 0.237 0.065 0.966	0.328 jeeb lib st 0.328 jeeb lib st 0.326 jeeb lib st 0.324 jeeb lib st 0.324 jeeb lib st 0.319 jeeb lib st 0.319 jeeb lib st 0.314 jeeb lib st	
•	 Sprimary 44 Sprimary 44 Sprimary 45 Sprimary 46 Sprimary 47 Sprimary 47 Sprimary 48 Sprimary 49 Sprimary 50 Sprimary 51 Sprimary 52 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 1 -5.212 2.731 -2.763	31.654 90.631 48.317 168.38 33.659 99.262 0	-1.69 7.085 3.305 -4.744 -3.746 -1.411 -0.695 -7.535 -0.94	20.269 20.27 20.636 21 21.738 21.943 22 22.837 23	0.311 0.001 0.423 0.42 0.852 0.237 0.065 0.966 0.188	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.326 jeeb.lib.st 0.324 jeeb.lib.st 0.32 jeeb.lib.st 0.319 jeeb.lib.st 0.319 jeeb.lib.st 0.319 jeeb.lib.st	
	 Sprimary 44 Sprimary 44 Sprimary 46 Sprimary 46 Sprimary 47 Sprimary 48 Sprimary 49 Sprimary 50 Sprimary 51 Sprimary 52 Sprimary 53 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 1 -5.212 2.731 -2.763 -4.587	31.654 90.631 183.317 168.38 33.659 0 99.262 0 179.45	-1.69 7.085 3.305 -4.744 -3.746 -1.411 -0.695 -7.535 -0.94 -4.913	20.269 20.27 20.636 21 21.738 21.943 22 22.837 23 23.166	0.311 0.001 0.423 0.42 0.852 0.237 0.065 0.966 0.188 0.182	0.328 jeeb.lib.st 0.328 jeeb.lib.st 0.326 jeeb.lib.st 0.324 jeeb.lib.st 0.329 jeeb.lib.st 0.319 jeeb.lib.st 0.319 jeeb.lib.st 0.319 jeeb.lib.st 0.313 jeeb.lib.st 0.313 jeeb.lib.st	
-	 Sprimary 44 Sprimary 45 Sprimary 45 Sprimary 46 Sprimary 47 Sprimary 48 Sprimary 48 Sprimary 50 Sprimary 52 Sprimary 53 Sprimary 54 	1.899 1 3.045 4.553 1 -0.59 -3.512 -5.923 1 -5.212 2.731 -2.763 -4.587 5.465 1	31.654 90.631 48.317 0 168.38 33.659 0 99.262 0 179.45 21.229	-1.69 7.085 3.305 -4.744 -3.746 -1.411 -0.695 -7.535 -0.94 -4.913 4.953	20.269 20.27 20.636 21 21.738 21.943 22 22.837 23 23.166 23.323	0.311 0.001 0.423 0.42 0.852 0.237 0.065 0.966 0.188 0.192 0.181	0.328 jeeb lib st 0.328 jeeb lib st 0.326 jeeb lib st 0.324 jeeb lib st 0.319 jeeb lib st 0.319 jeeb lib st 0.319 jeeb lib st 0.314 jeeb lib st 0.314 jeeb lib st 0.312 jeeb lib st	
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	S Primary 44 S Primary 44 S Primary 45 S Primary 45 S Primary 45 S Primary 47 S Primary 47 S Primary 48 S Primary 54 S Primary 51 S Primary 52 S Primary 54 S Primary 55 S	1.899 1 3.045 4.553 1 -0.59 -3.512 2.731 -5.212 2.731 -2.783 -4.587 5.465 1 1.887 8.87	31.654 30.631 48.317 168.38 33.659 99.262 0 179.45 21.229 43.128 0 12.259 43.128 0 0 12.259 12.259 13.128 0 0 15.251 15.2	-1.69 7 085 3.305 4.744 -3.746 -1.411 -0.695 -0.94 4.953 -4.953 -4.953 -4.953	20 269 20 27 20 636 21 21,738 21,943 22 22 2837 23,166 23,323 23,922 24 24,92	0.311 0.001 0.423 0.42 0.852 0.237 0.065 0.966 0.188 0.192 0.181 0.692 0.09	0.328 jeeb lib.st 0.328 jeeb lib.st 0.326 jeeb lib.st 0.326 jeeb lib.st 0.321 jeeb lib.st 0.339 jeeb lib.st 0.339 jeeb lib.st 0.331 jeeb lib.st 0.332 jeeb lib.st 0.332 jeeb lib.st 0.332 jeeb lib.st 0.338 jeeb lib.st 0.308 jeeb lib.st	
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Drag Left Click or CTRL+Left Click to select

Training X03: Plot Primary Widthes

Xplo - [Dig.40	a]			_		_		_		
Project Selecti	on Script Window C	Geometry Tools	s Help							
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sPrimary 2	sBulb 1		1		0.347					
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sPrimary 5	sBulb 1		1	5	Hide column	: Width		ľ		
sPrimary 6	sBulb 1		1	6	Copy as attrib	oute	-			
sPrimary 7	sBulb 1		1		Plot					
sPrimary 8	sBulb 1		1		0.339					
sPrimary 9	sBulb 1		1		0.338	7	Con Ital			
sPrimary 10	sBulb 1		1		0.338	Lei	rt Click	- 1		
sPrimary 11	sBulb 1		1		0.336	,		- 1		
ePrimary 12	sBulb 1		1	12	0.333			- 1		
sPrimary 14	sBulb 1		1	15	0.329			- 1		
sPrimary 15	sBulb 1		1		0.328			- 1		
sPrimary 16	sBulb 1		1		0.326			- 1		
sPrimary 17	sBulb 1		1		0.324					
sPrimary 18	sBulb 1		1	18	0.323			٧		
Number of line	s : 102									
Browser							Z.	2 🗖 🗙	3D View	
Number of no	des = 7651									0
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	sPrimary 43	-0.495	0	4.807	20	0.009	0.33 jeeb.lib.st	4		
	SPrimary 44 SPrimary 44	1.899	131.654	-1.69	20.269	0.311	0.328 jeeb.lib.st			
	sPrimary 45	3.045	148.317	3 305	20.27	0.001	0.328 jeeb.iib.st 0.326 jeeb.lib.st			
	sPrimary 47	-0.59	0	-4.744	20.030	0.425	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			4
	🖢 sPrimary 50	-5.212		-0.695		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		-0.94		0.188	0.313 jeeb.lib.st			
	 SPrimary 53 SPrimary 53 	-4.587	1/9.45	-4.913	23.166	0.192	0.312 jeeb.lib.st			
	sPrimary 54	-2 200	1/3 128	4.953	23.323	0.602	0.312 jeeb.lib.st 0.308 jeeb.lib.st			
	sPrimary 56	-2.300	0	2.114	23.522	0.092	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		0.304 jeeb.lib.st			
	🖢 sPrimary 59	-4.124		-3.727		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									

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Training X03: Plot Primary Widthes

🚣 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

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Extraction							2 🗆	× Plots	its 🛃 🗖 🗖 🗙
+ E	xtraction 1 × Extr	action 2 ×						Wi	Vidth / Position in axis ×
Selection	_			Selection		Out	put 🔲 Export 📄 Impo	rt X: F	Position in axis Y: Width Y /
		- 1							Width / Position in axis
Item	Bearer	Bearer Po	sition in axis	Position in axis	Width			0.05	
sPrimary 1	sBulb 1			1	1 0.352			A 0.35	
sPrimary 2	sBulb 1			1	2 0.347			0.32	
sPrimary 3	sBulb 1			1	3 0.347			0.30	
sPrimary 4	sBulb 1			1	4 0.347			0.27	
sPrimary 5	sBulb 1			1	5 0.347			0.25	250
sPrimary 6	sBulb 1			1	6 0.343			0.22	225
sPrimary 7	sBulb 1			1	7 0.34			0.20	
sPrimary 8	sBulb 1			1	8 0.339			0.17	175
sPrimary 9	sBulb 1			1	9 0.338			0.15	
sPrimary 10	sBulb 1			1	10 0.338			0.12	
sPrimary 11	sBulb 1			1	11 0.336			0.10	100
sPrimary 12	sBulb 1			1	12 0.333			0.07	375
sPrimary 13	sBulb 1			1	13 0.33			0.05	150 -
sPrimary 14	sBulb 1			1	14 0.329			0.02	725
sPrimary 15	sBulb 1			1	15 0.328			0.00	
sPrimary 16	sBulb 1			1	16 0.326			0.00	000 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105
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Number of line	is : 102							Mode	le: Line
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	SPrimary 43	-0.495	0	4.80	7 20	0.009	0.33 jeeb.lib.st		
	SPrimary 44	1.899	131.654	-1.6	9 20.269	0.311	0.328 jeeb.lib.st		
	SPrimary 45 db a Daimary 46	3.045	90.631	7.08	5 20.27	0.001	0.328 jeeb.lib.st		
	SPrimary 46 db. a Drimary 47	4.553	148.317	3.30	5 20.636	0.423	0.326 Jeeb.IID.st		
	 SPrimary 47 SPrimary 47 	-0.59	160.20	-4./4	4 ZI	0.42	0.324 jeeb.lib.st		
	sPrimary 48	-5.012	133 659	-3.74	1 21.738	0.002	0.32 jeeb.iib.st		
	SPrimary 50	-5 212		-0.69	5	0.065	0.319 jeeb lib st		
	SPrimary 50	2 731	99 262	-7 53	5 22 837	0.000	0.314 jeeb lib st		
	sPrimary 52	-2 763		-0.9	4 23	0 188	0.313 jeeb lib st		
	SPrimary 53	-4.587	179.45	-4.91	3 23.166	0.192	0.312 jeeb lib st.		
	SPrimary 54	5.465	121.229	4.95	3 23.323	0.181	0.312 jeeb.lib.st		
	SPrimary 55	-2.388	143.128	-4.82	5 23,922	0.692	0.308 jeeb.lib.st.,		
	SPrimary 56	1.88 <u>7</u>		2.11	424	0.09	0.308 jeeb.lib.st		
	SPrimary 57	6.07 <u>1</u>	105.721	1.05	7 24.182	0.21	0.307 jeeb.lib.st		
	🕨 🍇 sPrimary 58	-4.383	140.527	-3.79	1 24.668	0.561	0.304 jeeb.lib.st		
	📥 sPrimary 59	-4.124		-3.72		0.383	0.302 jeeb.lib.st		
	🕨 🍇 sPrimary 60	4.544	163.564	-2.57	9 25.246	0.284	0.301 jeeb.lib.st	V	
	Designet								

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Training X03: Reinit Project

🚣 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

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:Training XO3 Data Control : Compare Simulated Values vs Parameter File Values

Training X03: How much time for 102 sPrimary ?

🛃 type				x	
1_general 2_topology 3_ra	amification 4_angles	5_diameter	6_reiteration		
topology					
VerticilleNumber	1				
verticilleProba	0.0:1.0) - 1	↓		
growthDelay	0.0:3.0) - 1	¥		
growthSpeed	0.0 : 1.0) - (†	I		 But 1 sPrimary is generated by Growth and branching.
GlobalPercentOnGrowthSpeed	20.0				50 We are going to use
deathProba	0.0:0.0) - (†	+		« birthTime » attribute To control diameterIncreaseTime
PruningLag	999.0				
PruningLagStdDev	0.0				
PruningExceptionPercent	0.0				
			ок	Cancel	

Training X03: sPrimary birthTime added

Training X03: Primary Diameter Increase Control

Project Selection Script Window Geometry Tools Help 💥 🖬 👌 🎸 🏷 🍽 🖒 👌 -Extraction n 🔁 🔁 🗙 2 🗆 Plots Width / Position in axis × Width / birthTime × Extraction 2 × + Extraction 1 × × Y: Width • **•** 🔁 birthTime 🐁 type Selection Width / birthTime . 2_topology 3_ramification 4_angles 5_diameter 1_general 6 reiteration Item Bearer 0.350 sPrimary 85 sBulb 1 diameter 0.325 sPrimary 86 sBulb 1 0.300 sPrimary 87 sBulb 1 InitialDiameter 0.2 0.275 sPrimary 88 sBulb 1 0.250 sPrimary 89 sBulb 1 InitialDiameterStdDev 0.03 0.225 sPrimary 90 sBulb 1 0.200 sPrimary 91 sBulb 1 And after 40 cy? 0.0:2.0 0.175 sPrimary 92 sBulb 1 sPrimary 93 sBulb 1 diameterIncreaseRatio 0.150 + - 1 sBulb 1 0.125 sPrimary 94 sPrimary 95 sBulb 1 0.100 sPrimary 96 sBulb 1 0.0:40.0 sPrimary 97 sBulb 1 0.050 OK? diameterIncreaseTime sPrimary 98 sBulb 1 + - 1 + 0.025 sPrimary 99 sBulb 1 0.000 sPrimary 100 sBulb 1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 sPrimary 101 sBulb 1 0.0:0.0 --- Width sPrimary 102 sBulb 1 diameterIncreaseDelay + - + + Mode : LINE Number of lines : 102 🛃 🗔 🗡 Projects 3D View DiameterIncreaseRatioStdDev 2.0 8 26a)- 27a)- 28a)- 29a 10.0 DiameterIncreaseTimeStdDev ٦ DiameterIncreaseDelayStdDev 0.0 K OK Cancel Browser Projects

🚣 Xplo - [Dig.40a]

Training XO3: Evolution

🚣 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

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Extraction					Z 🗆 ×	Plots
+ Extra	ction 1 × Extraction 2 ×					Width / Position in axis × Width / birthTime ×
Selection		Input Selection		Output		X: birthTime Y: Width Y /
	T				<u> </u>	Width / birthTime
Item	Bearer	Bearer _ Position Position in axis	▲ birthTime	Widt	h	
sPrimary 85	sBulb 1	1	85	33.55	0.215	0.256
sPrimary 86	sBulb 1	1	86	33.914	0.213	0.30
sPrimary 87	sBulb 1	1	87		0.213	0.306
sPrimary 88	sBulb 1	1	88	34.092	0.213	0.275
sPrimary 89	sBulb 1	1	89	34.828	0.209	
sPrimary 90	sBulb 1	1	90		0.208	0.25
sPrimary 91	sBulb 1	1	91	35.251	0.207	0.200
sPrimary 92	sBulb 1	1	92	36	0.204	0.175
sPrimary 93	sBulb 1	1	93	36.451	0.202	0.150
sPrimary 94	sBulb 1	1	94	36.985	0.199	0.125
sPrimary 95	sBulb 1	1	95	37	0.199	0.100 -
sPrimary 96	sBulb 1	1	96	37.171	0.198	0.075 -
sPrimary 97	SBUID 1		97	38	0.194	0.050 -
sPrimary 98	SBUID 1		98	38.709	0.191	0.025
ePrimary 100	eBulb 1	1	100	39 536	0.19	0.000
sPrimary 101	sBulb 1		101	39 537	0.187	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41
sPrimary 102	sBulb 1	1	102	40	0.185	- Width
Number of lines	102					Mode: LINE
Projects					⊿ – ×	3D View
Projects					2 🖬 ×	3D View
Projects 26a - 27a	- <u>28a</u> - <u>29a</u> - <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- <u>35a</u> - <u>36a</u> -	· <u>37a</u> - <u>38a</u>	🛃 🗖 🗙	3D View
Projects 26a - 27a	- <u>28a</u> - <u>29a</u> - <u>30a</u>)-(31a)-(32a)-(33a)-(34a	- <u>35a</u> - <u>36a</u> -	· 37a - 38a	- 39a - 40a -	3D View
Projects 26a - 27a)- <u>28a</u>)- <u>29a</u>)- <u>30a</u>)- <u>31a</u>)- <u>32a</u>)- <u>33a</u>)- <u>34a</u>	- 35a - 36a -	- <u>37a</u> - <u>38a</u>	2 - 39a - 40a -	3D View
Projects 26a - 27a]-[28a_]-[29a_]-[30a_)- <u>31a</u>)- <u>32a</u>)- <u>33a</u>)- <u>34a</u>	<u>35a</u> - <u>36a</u> -	·(<u>37a</u>)-(<u>38a</u>	- <u>39a</u>)+ <mark>(40a</mark>)	3D View
Projects 26a - 27a)-(29a_)-(30a_)- <u>31a</u>)- <u>32a</u>)- <u>33a</u>)- <u>34a</u>	_)-(<u>35a</u>)-(<u>36a</u>)-	· <u>37a</u> - <u>38a</u>	29a + 40a →	3D View
Projects 26a - 27a	- 28a - 29a - 30a)- <u>31a</u>)- <u>32a</u>)- <u>33a</u>)- <u>34a</u>	_)-(<u>35a</u>)-(<u>36a</u>)-	· <u>37a</u> - <u>38a</u>	2 = × - 39a + 40a →	3D View Image: Christian C
Projects 26a - 27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	- <u>37a</u>)- <u>38a</u>	- <u>39a</u> + <u>40a</u> -	3D View Image: Circle of C
Projects 26a - 27a	<u>28a</u> <u></u> <u>_30a</u> _	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	38a	40a	3D View Image: Citi-E Evolution Citi-E Intervention Citi-I Delete Step Citi-D Duplicate Step Citi-N Reinitialise Project Image: Citi-A All Image: Citi-A 5 Image: Citi-A 10 Image: Citi-A
Projects 26a)-(27a)- <u>28a</u>)- <u>29a</u>)- <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- 35a - 36a -	- 37a - 38a		SD View Image: Step of the step of t
Projects 26a - 27a	- <u>28a</u> - <u>29a</u> - <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- <u>35a</u> - <u>36a</u> -	- 37a - 38a	- <u>39a</u> - <u>40a</u> 	SD View Image: Cirl +
Projects 26a - (27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	<u>35a</u> <u>36a</u>	- 37a - 38a	- <u>39a</u> + <mark>40a</mark>	3D View Image: Control of Citrity of
Projects 26a - 27a	<u>28a</u> <u>29a</u> <u>30a</u> _	- <u>31a</u> - <u>32a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	372 - 382	40a	3D View Evolution Citi+E Intervention Citi+D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a - 27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	- <u>37a</u>)- <u>38a</u>	 	SD View Evolution Citri-E Intervention Citri-D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a - 27a	- <u>28a</u> - <u>29a</u> - <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- <u>35a</u> - <u>36a</u> -	- <u>37a</u>)- <u>38a</u>		SD View Evolution Ctri+E Intervention Ctri+D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a)-(_27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- 35a - 36a -		 	SD View Evolution Ctri+E Intervention Ctri+D Duplicate Step Reinitialise Project All 5 10 20
Projects <u>26a</u> - <u>27a</u>	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	372 - 382	 	D View Evolution Cit+E Intervention Cit+D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a - 27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	372 - 382	40a	D View Evolution Citi+E Intervention Citi+D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a - 27a	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u>	- <u>35a</u> - <u>36a</u> -	- <u>37a</u>)- <u>38a</u>	 	D View Evolution Ctri+E Intervention Ctri+D Duplicate Step Reinitialise Project All 5 10 20
Projects <u>26a</u> - <u>27a</u>	<u>28a</u> <u>29a</u> <u>30a</u>	- <u>31a</u> - <u>32a</u> - <u>34a</u>)- <u>35a</u>)- <u>36a</u>)-	37a - 38a	 	Diview Evolution Citi+E Intervention Citi+D Duplicate Step Reinitialise Project All 5 10 20
Projects 26a - 27a Browser Pro	28a29a30a_	- <u>31a</u> - <u>32a</u> - <u>34a</u>	<u>- 35a</u> - <u>36a</u> -	37a - 38a	- 39a - 40a -	Diview Image: Cirl+E Intervention Cirl+D Duplicate Step Cirl+D Reinitialise Project Image: Cirl+D All 5 10 20

This model does not support evolution

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Training X03: Evolution Time

🛓 DigR.parameters		•
General types		
General		
plantName	Fascicule	
maxAge	9999	
maxRamif	3	
age	40.0	
seed	872	
outputStep	1.0	
evolutionTime	20	
Import Expo	rt OK Cancel Help	

Training X03: Evolution Time Result

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Training X03: Input Evolution Time

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Training X03: Refresh Plot

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Extraction					2 🗖 🗸	Y Plots
+ Extract	tion 1 × Extraction	12 ×				Width / Position in axis × Width / birthTime ×
Salaction		T logut Calar	tion		ut 🔲 Evenet 🕞 Import	X: birthTime Y: Width I
Selection		Input Selec	aion			Width / birthTime
Item	Bearer	Bearer Position in axis	Position in axis W	idth birth	Time	0.375
sPrimary 1	sBulb 1		1 1	0.37	4	▲ 0.350 ·
sPrimary 2	sBulb 1		1 2	0.37	5	0.325
sPrimary 3	sBulb 1		1 3	0.37	5.108	0.300
sPrimary 4	sBulb 1		1 4	0.37	5.109	0.275
sPrimary 5	sBulb 1		1 5	0.37	5.11	0.250
sPrimary 6	sBulb 1		1 6	0.37	6	0.225
sPrimary 7	sBulb 1		1 7	0.37	6.55	0.200
sPrimary 8	sBulb 1		1 8	0.37	6.841	0.175
sPrimary 9	sBulb 1		1 9	0.37	6.93	0.150
sPrimary 10	sBulb 1		1 10	0.37	7	0.125
sPrimary 11	sBulb 1		1 11	0.37	7.361	0.100
sPrimary 12	sBulb 1		1 12	0.37	8	0.075
sPrimary 13	sBulb 1		1 13	0.37	8.789	0.050
sPrimary 14	sBulb 1		1 14	0.37	9	0.025
sPrimary 15	sBuib 1		1 15	0.37	9.076	0.000
sPrimary 16	SBUID 1		1 16	0.37	9.597	2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5 35.0 37.5 40.0 42.5 45.0 47.5 50.0 52.5 55.0 57.5
sPrimary 17	sBuib 1		1 17	0.37	10 172	- Width
Jumber of lines 1	55		10	0.57	10.173	Mode: LINE
Browser					-2 🗆 >	3D View
Number of nodes	= 11102					
Display individu :	Scene			1 🖨		
Collapse	Expand					
Topology		Name FileName ag	A XInsertion ZEuler	HA type	XEuler currentTi	
4	sPrimary 90		-4.	396	0	
<u>.</u>	🛓 sPrimary 91				0	
► 🖞	🗞 sPrimary 92			122	132.042	
► 🖞	🗞 sPrimary 93			373	101.864	
► 🖞	🗞 sPrimary 94			356	147.299	
8	sPrimary 95				0	
► 8	🗞 sPrimary 96		-5.	416	122.167	
<u>e</u>	SPrimary 97		-4.	412	0	
► 8	& sPrimary 98		-0. -	053 - · ·	98.448	
×	SPrimary 99		-5.	/41	U 400 047	
• •	g serimary 100			704	120.047	
	ePrimary 101		1.	701	102.633	
	s Primary 102		-4.	129	121 76	
	sPrimary 104			776	0	
	sPrimary 105			763	164 363	
► 《	a sPrimary 106			166	170.217	
•			,		The second se	
Browser Proj	ects					

Training X03: Control Diameter Evolution Time

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SECONDARY LENGTHES

Training XO4: Parameter File Data

		General types	
		Plant	
		Bulb	
		Primary	
		Tertiary	
		rootTypes	
		•	
		Import Export	OK Cancel Hein
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General type	es		
General			=
plantName	Fascicule		
maxAge	9999		
maxRamif	3		
age	40.0		
seed	872		
outputPtop	10		
outputstep	1.0		
evolutionTime	10.0		
			Secondary l
			anouthDala
			grownidela

🛃 type				×
1_general 2_topology 3_ra	mification	4_angles	5_diameter	6_reiteration
topology				
VerticilleNumber	1			
	0.0.4.0			
verticilleProba	0.0 : 1.0			
		+	- [+ [4	
	0.0 : 3.0			
growthDelay		+		
growthSpeed	0.0 : 1.0			
growinoped		+	- († (4	
GlobalPercentOnGNwthSpeed	40.0			
	0.0:0.0			
deathProba	3.0 : 1.0			
		+		
PruningLag	10.0			
PruningLagStdDev	0.0			
PruningExceptionPercent	40.0			
			L	

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

Import Export

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

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Project Selection Script Window Geometry Tools Help



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

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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

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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	200	-					x
1_general	2_topology	3_rai	mification	4_angles	5_diameter	6_reiterat	ion
topology							
VerticilleNum	ber		1				
verticilleProba	а		0.0 : 1.0	+	- • •		
growthDelay		1	0.0:3.0	+	- + +		
growthSpeed		2	0.0 : 1.0	+	- + +		
GlobalPercen	tOnGrowthSpe	ed 3	40.0				
deathProba		4	0.0 : 0.0 2.0 : 0.0 3.0 : 1.0	+	- • •		
PruningLag		5	10.0				
PruningLagS	tdDev		0.0				
PruningExcep	otionPercent	6	40.0				
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Concentin					Output		DeathPosition / Bearer_Order2 _ Sum_Length_PREDECESSORS
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Secondary 1	sBulb 1	1 sPrima	8 8	3.45	0.112	3.977	
Secondary 1	sBulb 1	1 sPrima	9 9	3 741	0	3 684	
Secondary 1	sBulb 1	1 sPrima	11 11	3.9	0	3.064	
Secondary 1	sBulb 1	1 sPrima	13 13	4.9	0	2.705	
Secondary 1	sBulb 1	1 sPrima	15 15	5.9	3	2.589	2.00 -
Secondary 1	sBulb 1	1 sPrima	16 16	5.976	2.145	2.521	1.75
Secondary 1	sBulb 1	1 sPrima	18 18	6.9	3	2.617	1.50
Secondary 1	sBulb 1	1 sPrima	19 19	7.073	0	3.221	1.25
Secondary 1	sBulb 1	1 sPrima	20 20	7.074	0	3.112	Dead Roots lengthes
Secondary 1	sBulb 1	1 sPrima	22 22	7.9	0	3.519	0.75
Secondary 1	sBulb 1	1 sPrima	23 23	7.994	3	3.153	0.30
Secondary 1	sBulb 1	1 sPrima	24 24	8.339	0	2.373	0.00
Secondary 1	sBulb 1	1 sPrima	26 26	8.9	0	3.119	0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5 35.0 37.5 40.0 42.5 45.0 47.5 50.0
Secondary 1	sBulb 1	1 sPrima	28 28	9.9	3	2.746	- DeathPosition
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Browser Number of noc Display individ Collapse Topology	es = 11102 J: Scene Expand Sprimary 5 Sprimary 5 Sprimary 7 Sprimary 7 Sprimary 7 Sprimary 7 Sprimary 7 Secone Ssec Ssec	Name dary 1 Seconda condary 1	FileName age	Xinsertion	h ZEuler HA -3.526 4.828 -3.724 5.281 0 10	1 type XEuler 150.14 145.18 (133.127 2	CurrentTI 144 100 127 6.55 0
Browser Number of noc Display individ Collapse Topology	es = 11102 u: Scene Expand Sprimary 5 Sprimary 6 Sprimary 6 Sprimary 7 Secon Secon Secon Secon Secon Secon	Name dary 1 Second: condary 1 condary 2	FileName age	Xinsertion	n ZEuler HA -3.526 4.828 -3.724 5.281 0 10 10	1 x type XEuler 150.14 150.14 145.18 (133.12) 2	CurrentTI
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Browser Number of noc Display individ Collapse Topology	es = 11102 :: Scene Expand • SPrimary 4 • Second •	dary 1 Seconda condary 1 Seconda condary 2 condary 3 condary 5 condary 5 condary 6	FileName age	Xinsertion	h ZEuler HA -3.526 4.828 -3.724 5.281 0 10 -10 10 -10 10 10 -10 10	1 type XEuler 150.144 145.183 (1 133.127 2 (((((((((currentTI 144 182 0 127 6.55
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DRRelay.gettingInitialParameters

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Extraction							-2 🗖 🗙	Note that the second seco
+ Extra	action 1 ×	Extraction 2	* Extraction	5 x				Width / Position in axis × Width / birthTime × Sum_Length_COMPONENTS / Bearer_Order2_Sum_Length_PREDECESSORS ×
								X: Bearer Order2 Sum Length PREDECESSORS Y: Sum Length COMPONENTS Y/
Selection			Input	Selection		Output	Export import	A. beens_order_semplerings_necessore. Sim Length_COMPONENTS_Rearry_order
	• •	1,	•	• •	•		r v	
Item	Bearer_O	Bearer_O	Bearer_Order	2 Beare 🔺	Bearer_Ord Su	m_Length_COMPONENTS	DeathPosition	
Secondary 1	sBulb 1	1	1 sPrimary 3	3	1.9	0	2.7	A AS DEAD AND PRUNED ROOTS LENGTNES
Secondary 1	sBulb 1	1	1 sPrimary 4	4	2.008	0	2.742	
Secondary 1	sBulb 1	1	1 sPrimary 5	5	2.009	0	4.091	4.0
Secondary 1	SBUID 1		1 sPrimary /	/	2.9	3.112	3.497	
Secondary 1	sould 1		1 sPrimary 9	0	3.45	0	3.684	
Secondary 1	sBulh 1		1 sPrimary 11	11	3.741	0	3.064	3.0
Secondary 1	sBulb 1	1	1 sPrimary 13	13	4.9	0	2 705	2.5
Secondary 1	sBulb 1	-	1 sPrimary 15	15	5.9	3	2,589	
Secondary 1	sBulb 1	1	1 sPrimary 16	16	5.976	2.145	2.521	2.0
Secondary 1	sBulb 1	1	1 sPrimary 18	18	6.9	3	2.617	1.5
Secondary 1	sBulb 1	1	1 sPrimary 19	19	7.073	0	3.221	
Secondary 1	sBulb 1	1	1 sPrimary 20	20	7.074	0	3.112	NOT Dead Poots Lengthes
Secondary 1	sBulb 1	1	1 sPrimary 22	22	7.9	0	3.519	
Secondary 1	sBulb 1	1	1 sPrimary 23	23	7.994	3	3.153	
Secondary 1	sBulb 1	1	1 sPrimary 24	24	8.339	0	2.373	
Secondary 1	sBulb 1	1	1 sPrimary 26	26	8.9	0	3.119	Sum Length COMPONENTS
Secondary 1	sBulb 1	1	1 sPrimary 28	28	9.9	3	2.746	
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Number of node Display individu Collapse (Topology	ses = 11102 Scene Expand Sprimary 4 Sprimary 5 Sprimary 7 Secon Ssec	dary 1 condary 1 condary 2 condary 3	Name F	ileName ag	• Xinserti	on ZEuler HA -3.526 4.828 -3.724 5.281 0 10	1 • type XEuler 150.144 145.182 0 133.127 2	CurrentTL 144 144 142 127 6.55 0 0
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BRANCHING

85

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 Bearear_Order2_Length vs Sum_Length_Predecessors

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

🚣 Xplo - [Dig.60a]

Project Selection Script Window Geometry Tools Help

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			2	
Extraction				Plots
+ Extraction 1 × Extraction 2	× Extraction 5 ×			Vidth / birthTime × Sum_Length_COMPONENTS / Bearer_Order2_Sum_Length_PREDECESSORS × DeathPosition / Bearer_Order2_Sum_Length_PREDECESSORS × , ,
Selection	Input Selection	Output	Export Export	X: Bearer_Order2_Sum_Length_PREDECESSORS 🛛 Y: Bearer_Order2_Length 🔽 /
				Bearer_Order2 _ Length / Bearer_Order2 _ Sum_Length_PREDECESSORS
Item Bearer A B Bearer Or	der2 Bearer Order2 B	earer Order2 Sum Length PREDECESSORS	Rearer Order2 Length	_
Secondary 1 sBulb 1 1 sPrimary 3				0.9
Secondary 1 SBulb 1 1 SPrimary 4	4	2.008	0.001	
Secondary 1 sBulb 1 1 sPrimary 5	5	2,009	0.001	
Secondary 1 sBulb 1 1 sPrimary 7	7	2.9	0.55	
Secondary 1 sBulb 1 1 sPrimary 8	8	3.45	0.291	
Secondary 1 sBulb 1 1 sPrimary 9	9	3.741	0.09	
Secondary 1 sBulb 1 1 sPrimary 1	11 11	3.9	0.361	
Secondary 1 sBulb 1 1 sPrimary 1	13 13	4.9	0.789	
Secondary 1 sBulb 1 1 sPrimary 1	15 15	5.9	0.076	
Secondary 1 sBulb 1 1 sPrimary 1	16 16	5.976	0.522	
Secondary 1 sBulb 1 1 sPrimary 1	18 18	6.9	0.173	
Secondary 1 sBulb 1 1 sPrimary 1	19 19	7.073	0.001	
Secondary 1 sBulb 1 1 sPrimary 2	20 20	7.074	0.115	
Secondary 1 sBulb 1 1 sPrimary 2	22 22	7.9	0.094	
Secondary 1 sBulb 1 1 sPrimary 2	23 23	7.994	0.345	
Secondary 1 sBulb 1 1 sPrimary 2	24 24	8.339	0.411	0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5 35.0 37.5 40.0 42.5 45.0 47.5 50.0 52.5 55.0
Secondary 1 SBuild 1 1 SPrimary 2 Secondary 1 SBuild 1 1 SPrimary 2	20 20	8.9	0.796	 Bearer_Order2 _ Length
Secondary 1 SBuild 1 1 SPrimary 2	20	9.9	0.136	Node : LINE
Barrisson				
Browser				3D View
Browser Number of nodes = 11102				
Browser Number of nodes = 11102 Display individu : Scene		V	1	
Browser Number of nodes = 11102 Display individu : Scene Collapse Expand			1	
Browser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology Topology	Name FileName	age Xinsertion ZEuler HA	1 🔹	CurrentTi
Browser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology Sprimary 4	Name FileName	age Xinsertion ZEuler HA -3.526	1 🔹 type XEuler 150.144	CurrentTI
Browser Number of nodes = 11102 Display individu : Collapse Expand Topology	Name FileName	age Xinsertion ZEuler HA -3.526 4.828 2.71	1 Vpe XEuler 150.144 145.182	CurrentTi
Browser Number of nodes = 11102 Display individu : Collapse Expand Topology	Name FileName	age XInsertion ZEuler HA -3.526 4.828 -3.724 -3.724 5.01 5.01	1 • type XEuler 150.144 145.182 0	CurrentTL.
Browser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology 	Name FileName	age XInsertion ZEuler HA -3.526 4.828 -3.724 -3.521 5.281 0	1 • type XEuler 150.144 145.182 0 133.127 2	CurrentTi
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Browser Number of nodes = 11102 Display individu : Collapse Expand Topology ▶ ♣ \$Primary 4 ▶ ♣ \$Primary 5 ♣ \$Primary 6 ▼ ♣ \$Primary 7 ▼ ♣ \$Pecondary 1 ● \$Secondary 1	Name FileName Secondary	age Xinsertion ZEuler HA -3.526 4.828 -3.724 -3.724 5.281 0	1 • type XEuler 150.144 145.182 0 133.127 2	CurrentTL
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Prowser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology ► ► Sprimary 4 ► Sprimary 5 ► Sprimary 6 ▼ Sprimary 7 ▼ Secondary 1 ► Specondary 1 ► Specondary 3 ► Specondary 4 ► Specondary 4	Name FileName Secondary	age Xinsertion ZEuler HA -3.526 4.828 -3.724 5.281 0 1	1 vpe XEuler 150.144 145.182 0 133.127 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CurrentTi
Browser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology ► 🖏 sPrimary 4 ► ♥, sPrimary 5 ● sprimary 6 ▼ ♥, sPrimary 7 ▼ ♥, sPrimary 7 ▼ ♥, sPrimary 7 ▼ ♥, secondary 1 ● sSecondary 1 ● sSecondary 3 ● sSecondary 3 ● sSecondary 3 ● sSecondary 5 ● sSecondary 5	Name FileName Secondary	▼ age XInsertion ZEuler HA -3.526 4.828 -3.724 5.281 0 10 10 10 10 10 10 10 10 10	1 vpe XEuler 150.144 145.182 0 133.127 2	CurrentTI
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Browser Number of nodes = 11102 Display individu : Scene Collapse Expand Topology ► 🖏 sPrimary 4 ► ♥, SPrimary 5 ♥ Primary 5 ♥ ♥, Sprimary 7 ♥ ♥, Sprimary 7 ▼ ♥, Sprimary 7 ♥ Secondary 1 ● Secondary 1 ● Secondary 1 ● Secondary 3 ♥ Secondary 3 ♥ Secondary 5 ♥ Secondary 5 ♥ Secondary 7 ♥ Secondary 7 ♥ Secondary 8 ▶ ♥, SPrimary 8 ▶ ♥, SPrimary 10 ♥, Sprimary 11	Name FileName Secondary	age Xinsertion ZEuler HA -3.526 4.828 -3.724 -3.724 5.5281 0 0 10 10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 10 -10 10 -10 -10 10 -10 -3.933 -3.122 1.901 -3.121	1 • type XEuler 150.144 145.182 0 133.127 2 0 0 0 0 0 0 0 0 0 0 0 0 0	CurrentTI







DYNAMICS

90

Training X06: DigR : Growth in Xplo



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

Training X06: DigR : Growth in Xplo

- 0 ×

🚣 Xplo - [Dig.40a]

Project Selection Script Window Geometry Tools Help

Browser			-2 = 1	3D View #2
Number of nodes = 7651				
Display individu : Scene	•	•	1	
Collanso Expand				
Collapse Expand				
Topology	Name FileName age	XInsertion ZEuler HA	type XEuler currentTi VA YE	
V 🔄 Scene 1				
Individual 1	Individual ArchiTree	40		
Buib 1	Bulb	0 0	45 0 0 0 45	
⊫ ⊖ajsBuib 1 ⊳e® aDuib 0		0.010	100 775	
⊭ @g_sbuib 2 ⊳∰C cBuib 2		2.212	100.067	
⊳ 🗞 sBulb 4		-1.072	114 244	
⊭ ega sBuib 4		-3.644	156.631	
⊳ SBulb 6		-3.044	148.093	H AND I I I I I I I I I I I I I I I I I I I
⊳ ∰a sBulb 7		-3.476	136.938	
⊳ ∰a sBulb 8		3.685	170.35	
SBulb 9		-2 632	0	
► 🦓 sBulb 10		-4.357	93.886	
► 🍇 sBulb 11		4.722	127.581	
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	
► 🎭 sBulb 18		-1.612	127.432	
🛃 sBulb 19		4.027	0	
🕨 🌄 sBulb 20		1.645	143.071	
🛃 sBulb 21		2.506	0	
🕨 🍇 sBulb 22		2.636	111.715	
🛃 sBulb 23		-2.67	0	
🛃 sBulb 24		-1.808	0	
► 🛃 sBulb 25		3.833	172.108	
🕙 sBulb 26		2.782	0	
💌 sBulb 27		-2.616	0	
SBuib 28		3.922	0	
SBUID 29		-4.761	0	
M SBUID 30		3.3	U	
				Projects de la companya
				<u>26a</u> - <u>27a</u> - <u>28a</u> - <u>29a</u> - <u>30a</u> - <u>31a</u> - <u>32a</u> - <u>33a</u> - <u>34a</u> - <u>35a</u> - <u>37a</u> - <u>38a</u> - <u>39a</u> - <u>40</u>
•				Project Evolution
Browser Render edit	or			
alate: Click+Move to trans	slate			

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