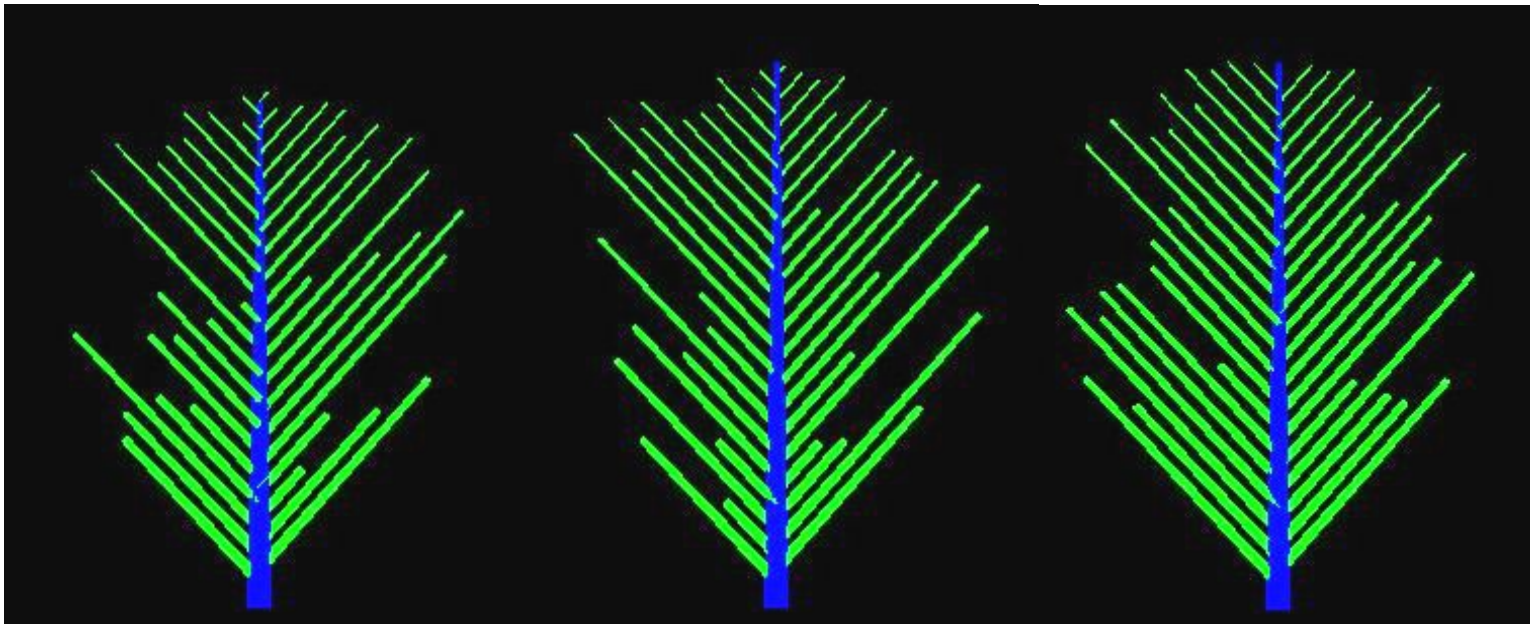


Death

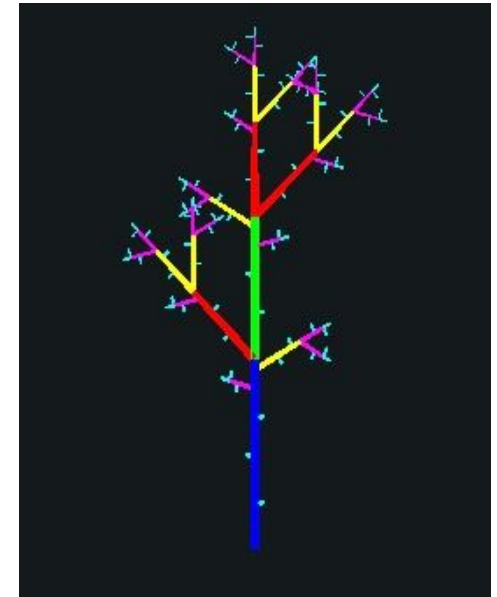
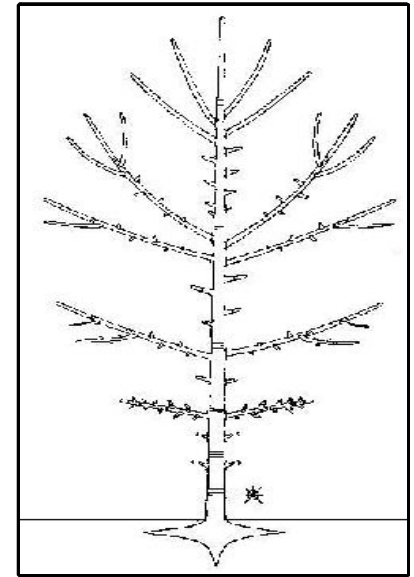
- Most of the time accidental for monopodial systems
- Bud death is mimiced using a [probability](#) indexed on position along the current unit



(deReffye. 1979)

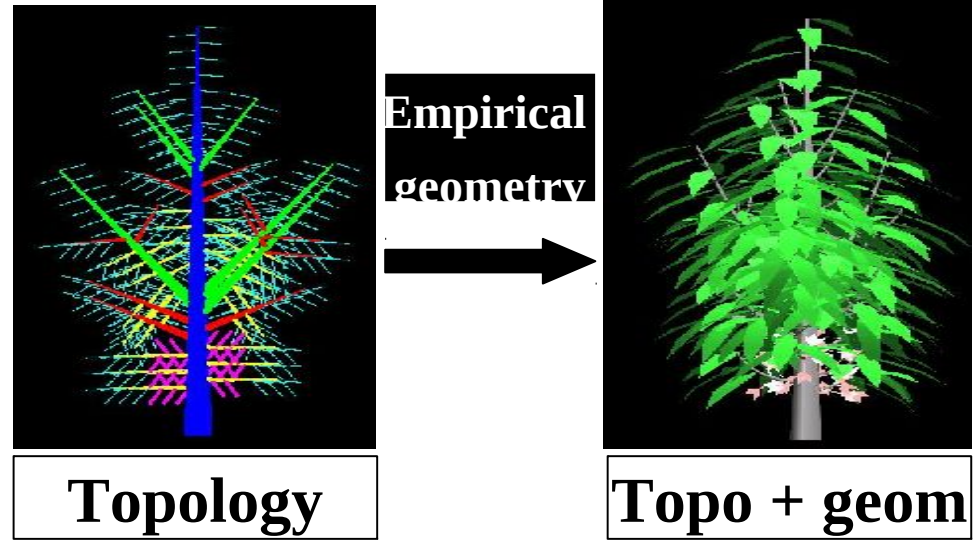
Differentiation-metamorphosis

- Meristems capabilities are evolving (young, adult, senescent)
- ➔ Physiological age : a numerical value to control meristems production capabilities
- ➔ Reference axis : the ordered set of possible physiological ages into the plant
- ➔ A finite state left-right automaton to rule meristems Phy-Age transitions through reference axis along their life



Geometry

- Mapped on topology
- Controlled thanks to :
 - Insertion angle, phyllotaxy
 - Wood stiffness, straightening angle
 - Organ's length and diameter
 - Link to a 3D shape to draw the organs
- No feedback to topology



Reference axis Example : *Lagerstroemia indica*

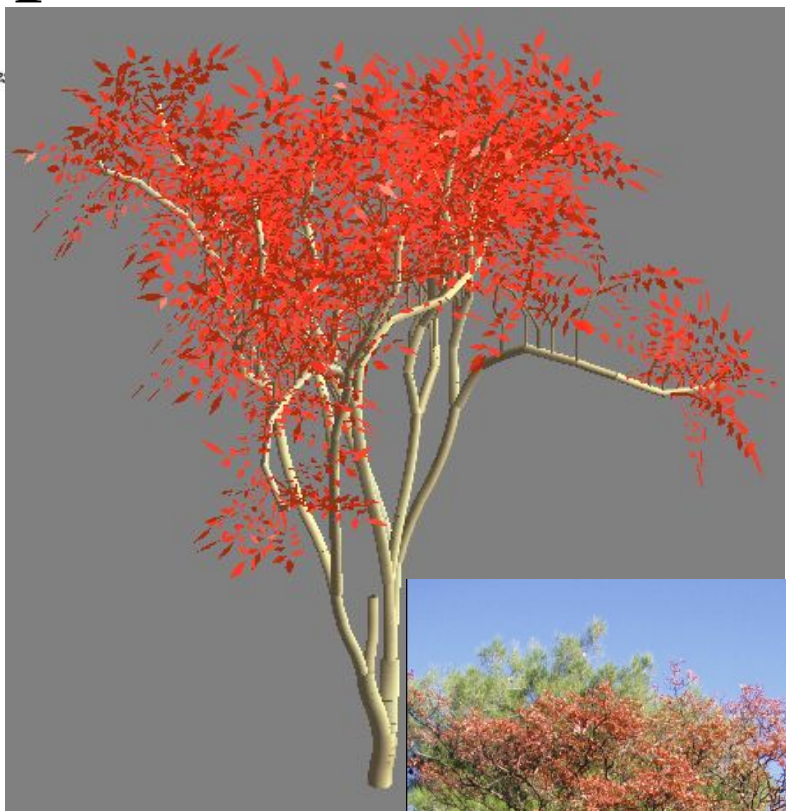
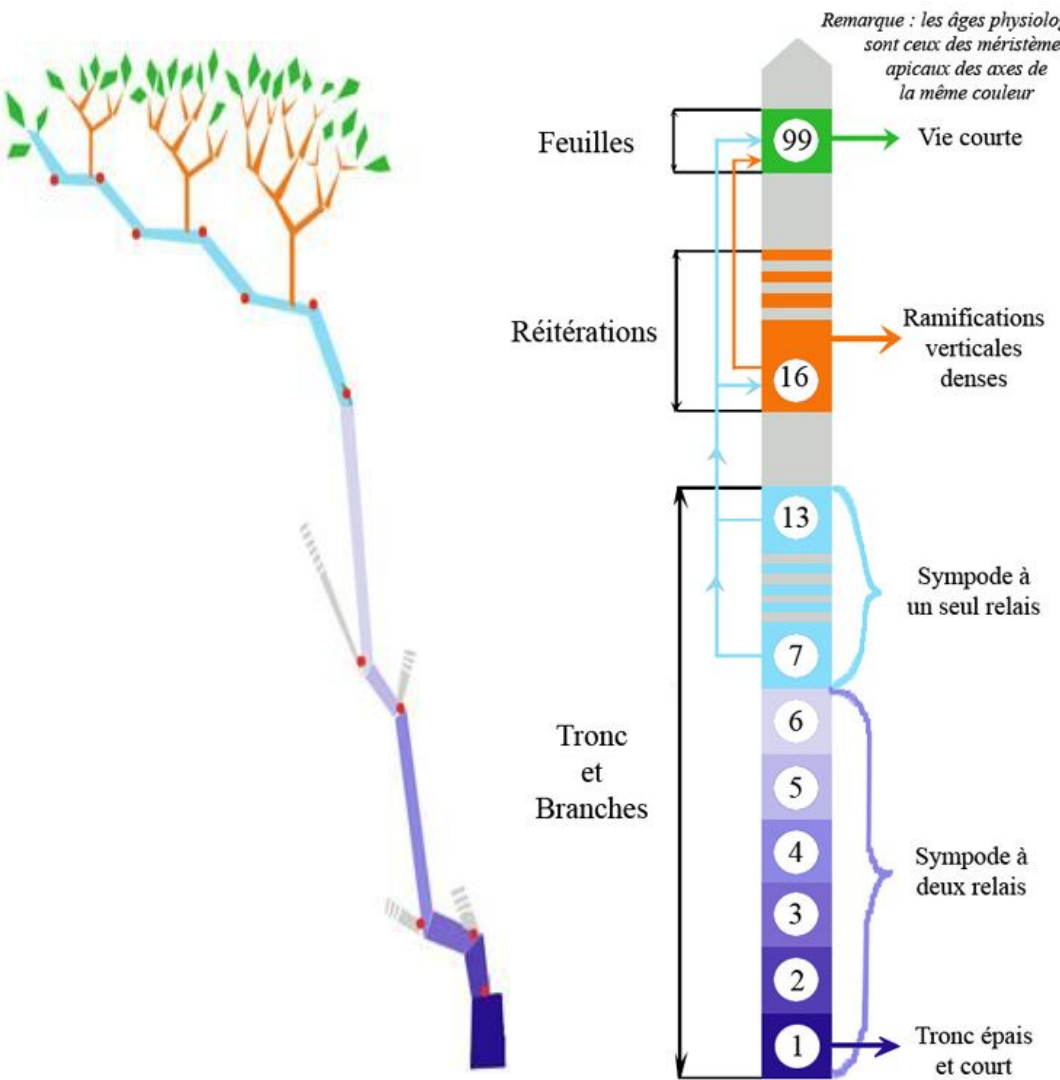
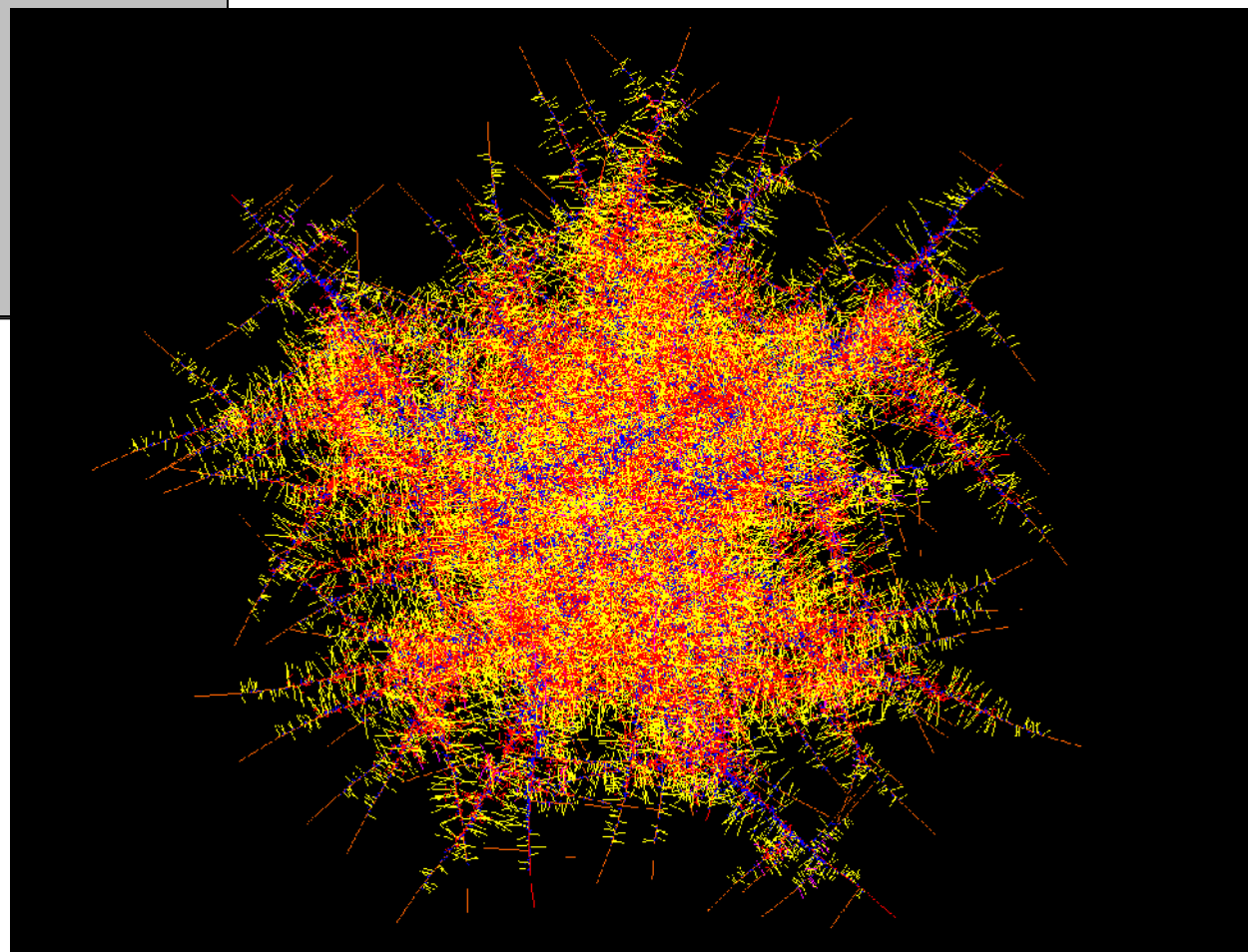
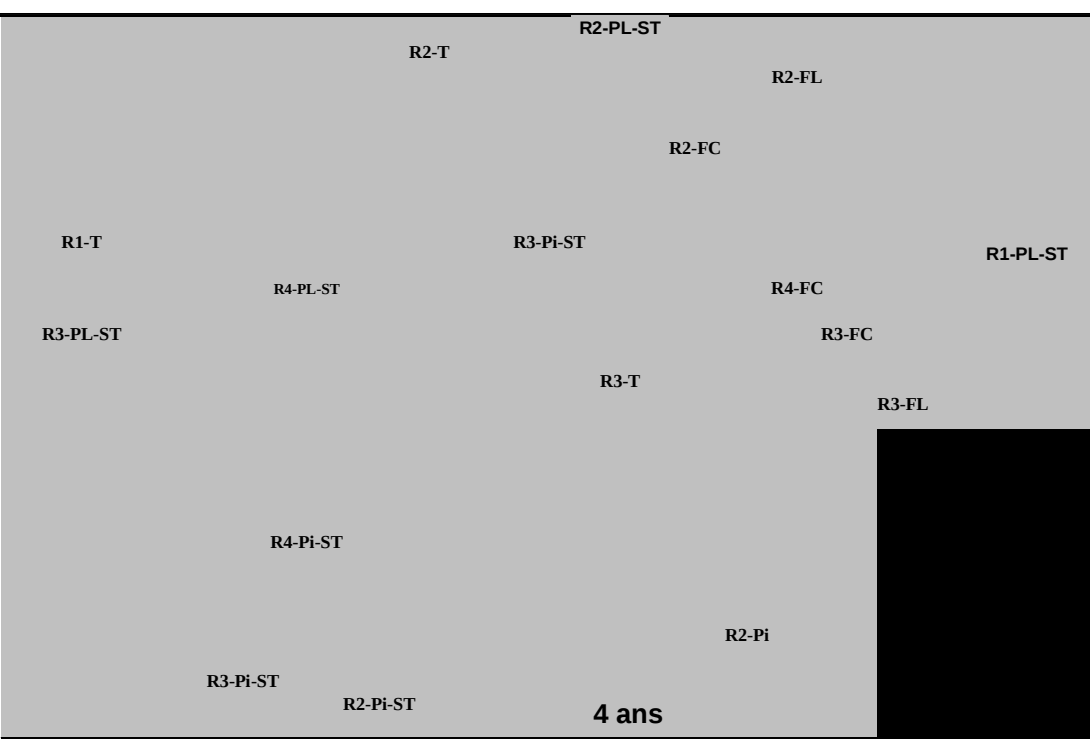


Figure 18 : Axe de référence pour le Lilas d'été

Reference axis Examples : Eucalyptus root system

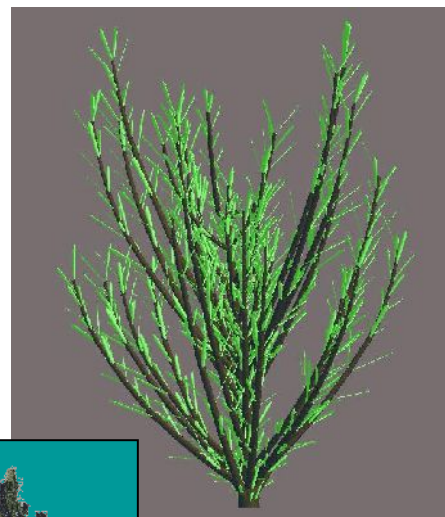


Results

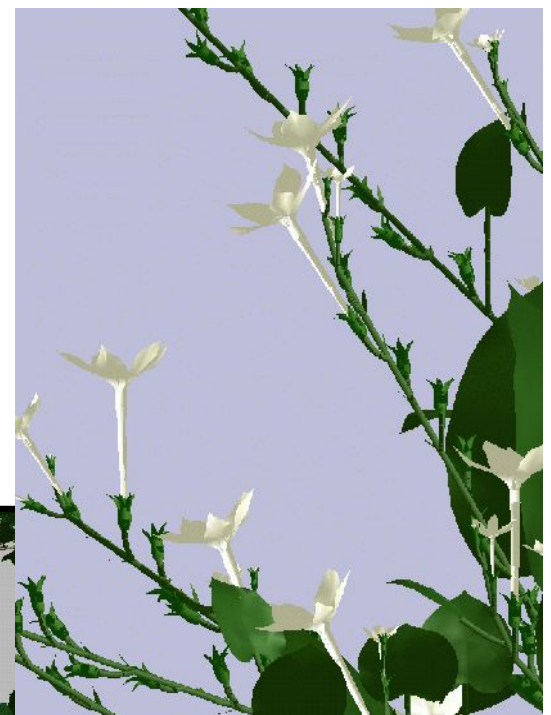
Pine tree



rosemarin



Tobaco



Beech



Growing spruce



Bean



Growing cotton tree

