LabyR

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Propriétaires	Mathuww
Statut	En cours
Dont mon site Web	☐
Dont une vidéo	☐
Technologie, Language	ProgR

Sypnosis : package sur toutes formes 3D vers un code g-code en programmation R

Les 4 prochaines étapes d'impressions

- Les contours d'un carré
- Un carré rempli
- Une cuve carrée
- Un Labyrinthe 3D

Les avancées du projet

- Nous avons déjà généré une GT-40

Les rôles de chacun

- **Eloi** : Recherche et programmation sur la partie Visuel
- **Florian** : Conversion des données tortues en données exploitables
- **Mathéo D.** : Conversion du projet en code g-code
- **Mathéo T.** : Transfert du projet avec la tortue 3D

Sources :

Starter

Coudre Studio | Printed L-Systems

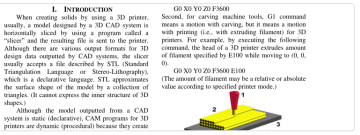
An L-System (or Lindenmayer System) is a mathematical and computational method that can generate complex behavior from very simple rules, usually used to simulate plants and fractal growth.

https://coudre.studio/projects/printed-l-systems/

(PDF) "3D Turtle Graphics" by using a 3D Printer

PDF | When creating shapes by using a 3D printer, usually, a static (declarative) model designed by using a 3D CAD system is translated to a CAM program... | Find, read and cite all the research you need on ResearchGate

https://www.researchgate.net/publication/275209379_3D_Turtle_Graphics_by_using_a_3D_Printer



I. Introduction

When creating solids by using a 3D printer, usually, a model designed by a 3D CAD system is horizontally sliced by using a program called a "slicer" and the resulting file is sent to the printer. Although there are various output formats for 3D design data outputted by CAD systems, the slicer usually accepts a file described by STL (Standard Triangulation Language or Stereo-Lithography), which is a declarative language. STL approximates the surface shape of the model by a collection of triangles. (It cannot express the inner structure of 3D shapes.)

Although the model outputted from a CAD system is static (declarative), CAM programs for 3D printers are dynamic (procedural) because they create

G0 X0 Y0 Z0 F3600

Second, for carving machine tools, G1 command means a motion with carving, but it means a motion with printing (i.e., with extruding filament) for 3D printers. For example, by executing the following command, the head of a 3D printer extrudes amount of filament specified by E100 while moving to (0, 0, 0).

G0 X0 Y0 Z0 F3600 E100

(The amount of filament may be a relative or absolute value according to specified printer mode.)

1 2 3

G-Code