Archaeology of CAD (2019)

Experimental Reconstruction of Christos Yessios'
"CISP" System (1972)
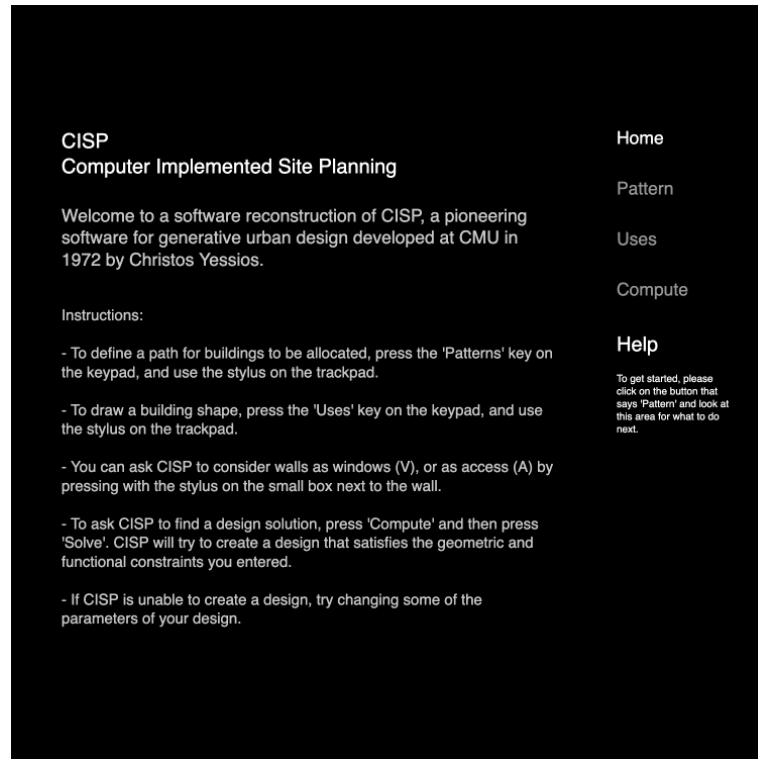
Archaeology of CAD (2019)

Experimental Reconstruction of Christos Yessios'
"CISP" System (1972)

Welcome to C.I.S.P (Computer Implemented Site
Planning) - This is a program developed by
Christos Yessios in the early 1970's at Carnegie
Mellon University for his doctoral dissertation
in Computer-Aided Design. This is a recreation
of that program based on two key papers, first is
Yessios's dissertation titled Syntactic Structures
And Procedures for Computable Site Panning (1973),
and the second is a 10-Page paper Yessios published
a year earlier (1972) titled Modelling the Site
Planning for Homogeneous Uses.

It must be noted that the above program is
based primarily on his 1972 paper, and that the
dissertation has been used as conceptual reference.
Since CISP was never implemented, this is the first
time we can see it come to life.

The pages that follow include step-by-step
instructions for using our reconstruction of CISP.

CISP
Computer Implemented Site Planning

Welcome to a software reconstruction of CISP, a pioneering software for generative urban design developed at CMU in 1972 by Christos Yessios.

Instructions:

- To define a path for buildings to be allocated, press the 'Patterns' key on the keypad, and use the stylus on the trackpad.

- To draw a building shape, press the 'Uses' key on the keypad, and use the stylus on the trackpad.

- You can ask CISP to consider walls as windows (V), or as access (A) by pressing with the stylus on the small box next to the wall.

- To ask CISP to find a design solution, press 'Compute' and then press 'Solve'. CISP will try to create a design that satisfies the geometric and functional constraints you entered.

- If CISP is unable to create a design, try changing some of the parameters of your design.

Home

Pattern

Uses

Compute

Help

To get started, please click on the button that says 'Pattern' and look at this area for what to do next.

This is the landing page for CISP. Navigation occurs by pressing the keys above labeled "Pattern", "Uses" and "Compute" (notice the highlighted text showing you where you are).

Typically you want to go top to bottom, being by clicking "pattern" and moving on to "use" and then compute when you are done.
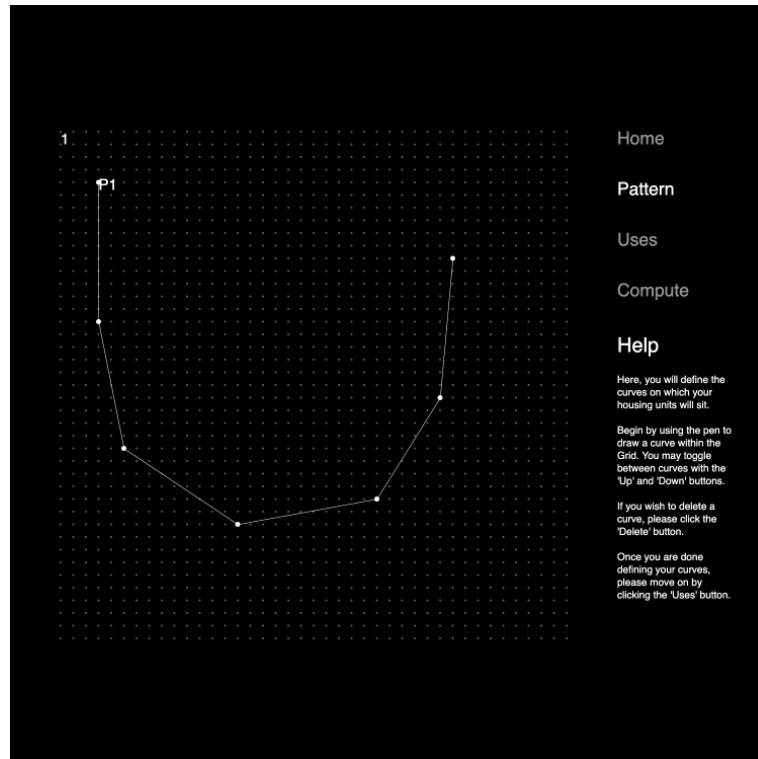
Here, you'll be drawing the "pattern" curve which defines your site. Think of it almost like a guideline for future housing units on your site.

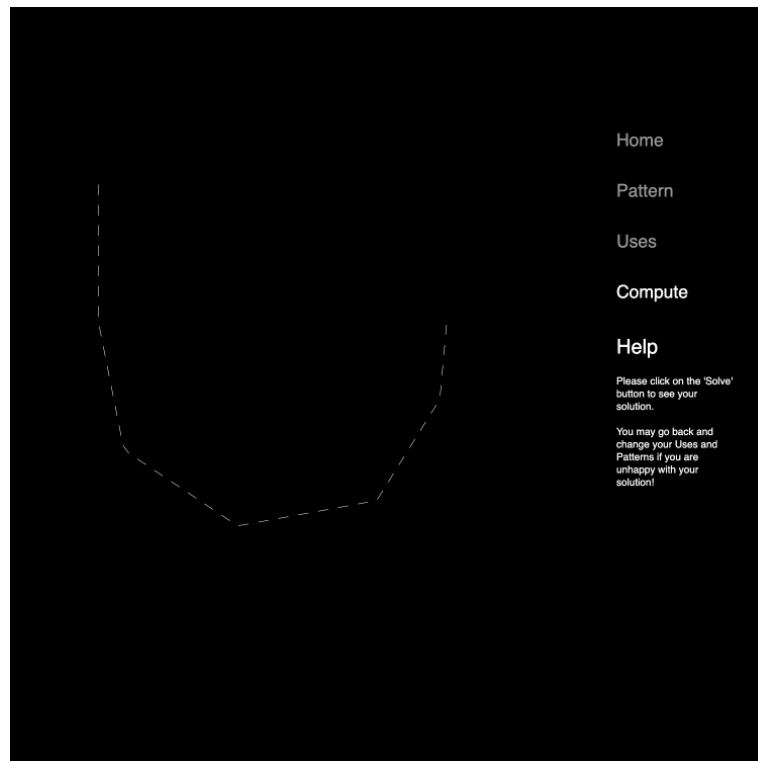To begin, try drawing a curve similar to the one you see above.
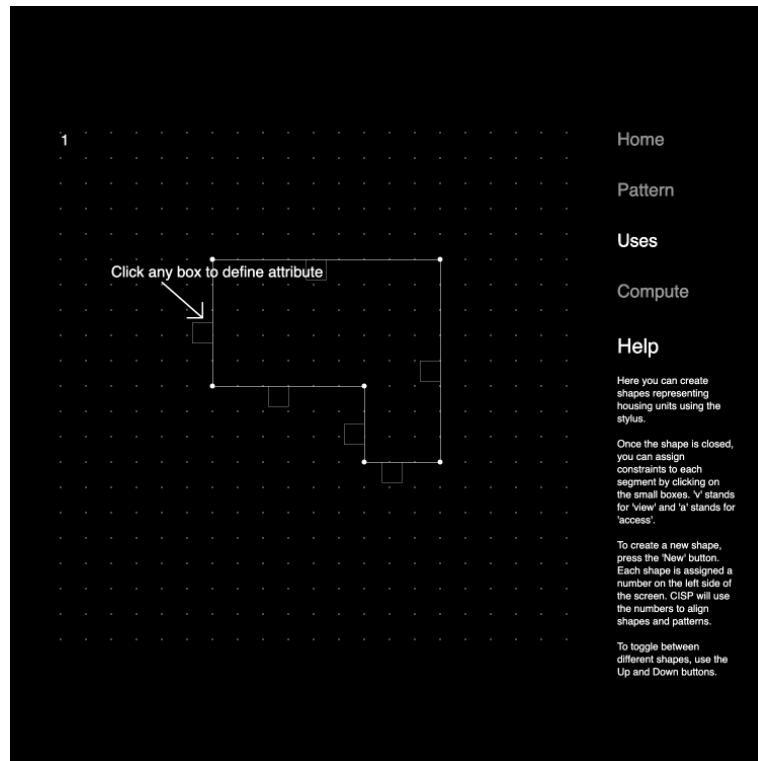
Here, you will draw a "use" curve. Click on the screen to begin drawing. Your drawing will always consist of orthogonal curves as constrained by the system.

Note: The curve must be "closed" in order for the computation to be successful.
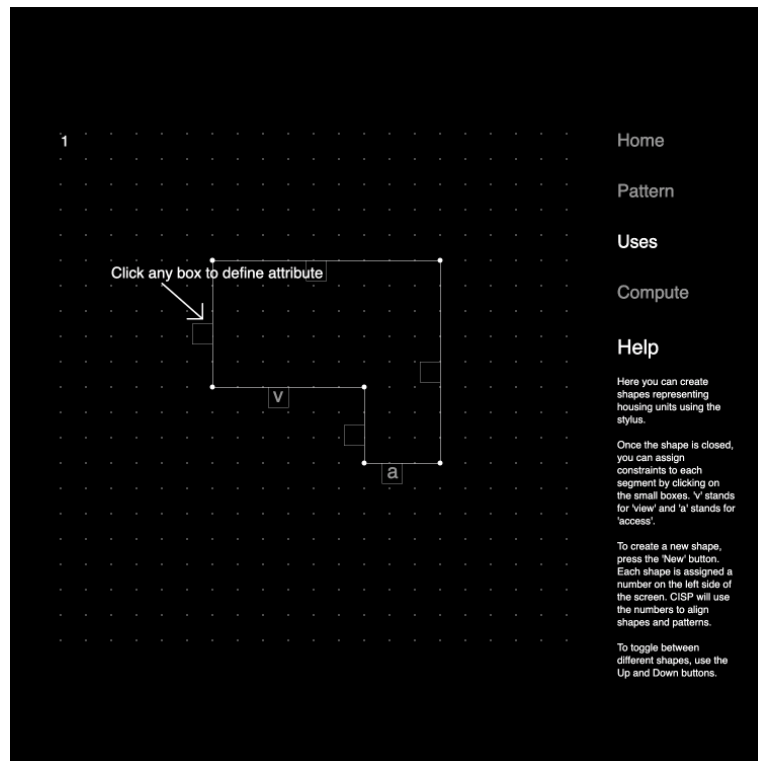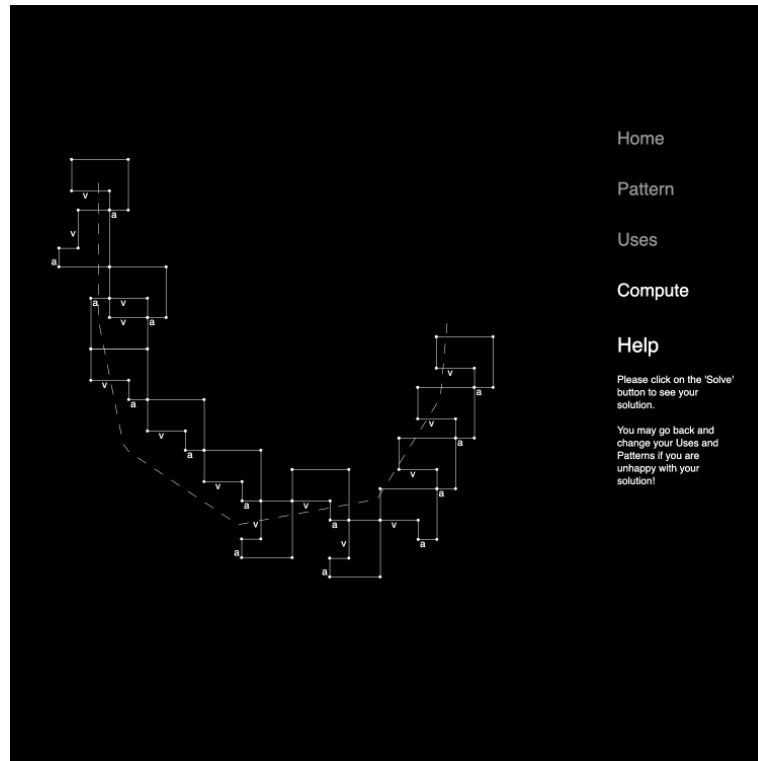
Once you've closed your orthogonal curve, you can give each side an attribute associated with a type of building element - the types currently implemented are "a", standing for access and "v" standing for view.

You do this again by clicking on the rectangular boxes next to the sides.

Home

Pattern

Uses

Compute

Help

Please click on the 'Solve' button to see your solution.

You may go back and change your Uses and Patterns if you are unhappy with your solution!

Here, click the "solve" button to see what the system produces based on the constraints.

The result is shown in the image above.
If you're unhappy with the solution
you got, you can repeat the process
above in order to reduce / increase the
constraints or re-define pattern curves.

About the Project

"Archaeology of CAD" (2019) is an ongoing project at
the Computational Design Laboratory (CoDe Lab) at
Carnegie Mellon University that examines the origins
of Computer-Aided Design by reconstructing some of
its pioneering technologies, which were central to
re-shape design practices during the second half of
the twentieth century.

Drawing from primary and oral sources, these
interactive installations playfully revisit these
transformative technologies, and enable visitors to
approximate the experience of designing with them.
Developed using present-day hardware and software
languages, these reconstructions are inquisitive
artifacts of historical inquiry. By evoking the
embodied experience of interacting with these
technologies, they shed light on the new forms of
human-machine work that emerged with the rise of
interactive computing during the Cold-war years, and
highlight the sensual and gestural dimensions of the
"computer revolution".

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