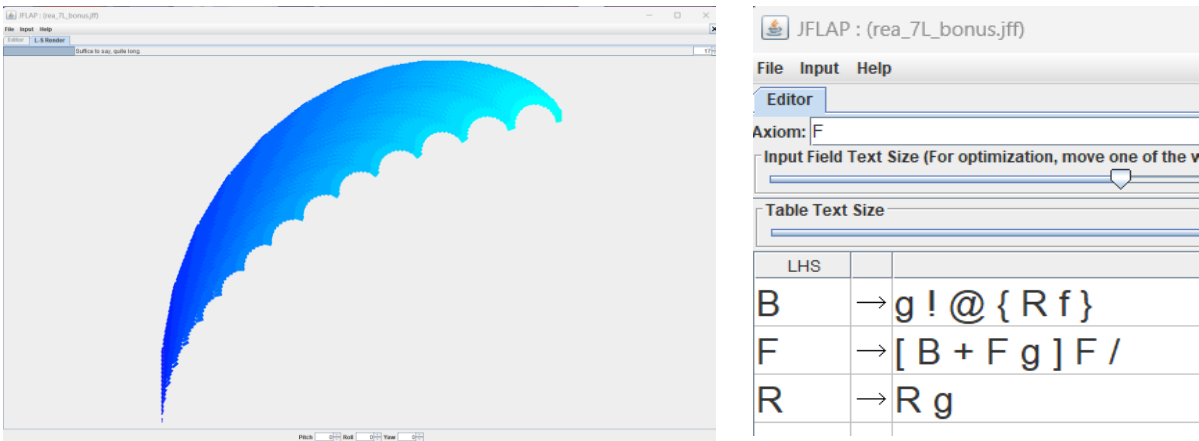


Fractal Graphic: Tidal Wave



Figures. Iteration 17 (Top-left), Production Rules (Top-right), and Animation Adjustments (Bottom)

For this L-system, each iteration shows a tidal wave that slowly enlarges in size, note that the best iteration is at Iteration 17.

We first adjusted some animation details to make it easier to achieve the graphic. We used blue for the wave, distance 9 to make the space of pin movement minimal, an angle 10 so that the turns of the movement are not sudden, and a hueChange of 4 for a gradual change in hues.

With the starting Axiom: F, it creates a new branch every time F is called. Here, we have one F within the stack and another call of F outside the “[” and “]” symbols – this is to ensure multiple creations of the branch that we are going to make for every iteration. The ones within the square brackets only create one line of wave. With the outside F, we can stack multiple wave lines to make it look thicker. We place a “+” for every new branch of the stack to yaw the turtle 10 degrees right to create the wave illusion. We use the g symbol to draw a line and to move our placement where we produce new graphics. The “/” then rolls the outside branches to the right by 10 degrees.

The B production rule is the branch or mini square polygons that we adjust. We have the “!” symbol to make each new line thicker. The “@” symbol is used to decrease the hue of the lines, making it transition closer to cyan for the gradient effect. We then create the blue polygons using the curly brackets which contain a new production rule (R) and the f symbol (contrary to g, the f symbol only moves direction and does not draw any line). Finally, the R production rule is responsible for drawing more lines for a stacked effect.