PST-marble Commands

`http://people.csail.mit.edu/jaffer/Marbling/pst-marble-commands.pdf`

Colors

RGB colors can be specified in three formats:

`[ 0.906 0.8 0.608 ]`
Red, green, and blue color components between 0 and 1 in square brackets.

`[ 231 204 155 ]`
Red, green, and blue color components between 0 and 255 in square brackets.

`(e7cc9b)`
Red, green, and blue (RrGgBb) hexadecimal color components between `00` and `FF` (or `ff`) in parentheses.
In the command arguments [*rgb* ...] indicates a bracketed sequence of colors. For example:

`[(c28847) [231 204 155] [0.635 0.008 0.094]]`

Dropping Paint

x y R_d *rgb* `drop`
Places a drop of color *rgb* and radius R_d centered at location x, y.

x y R_i [*rgb* ...] *n* `concentric-rings`
Places n rings in color sequence [*rgb* ...] centered at location x, y, each ring having thickness R_i.

x y θ [*R* ...] [*rgb* ...] R_d `line-drops`
Places drops of colors [*rgb* ...] (in sequence) of radius R_d in a line through x, y at θ degrees clockwise from vertical at distances [*R* ...] from x, y.

x y R θ *S* δ [*rgb* ...] *n* R_d `coil-drops`
Places n drops of colors [*rgb* ...] (in sequence) of radius R_d in an arc or spiral centered at x, y starting at radius R and θ degrees clockwise from vertical, moving S along the arc and incrementing the arc radius by δ after each drop.

x y R θ ϵ [*rgb* ...] *n* R_d `Gaussian-drops`
Places n drops of colors [*rgb* ...] of radius R_d randomly in a circular or elliptical disk centered at x, y having mean radius R, θ degrees clockwise from vertical, and length-to-width ratio ϵ. For a circular disk, 63 % of drops are within radius R, 87 % of drops are within $R\sqrt{2}$, and 98 % of drops are within radius $2\,R$.

x y L_x L_y θ [*rgb* ...] *n* R_d `uniform-drops`
Places n drops of colors [*rgb* ...] of radius R_d randomly in a L_x by L_y rectangle centered at location x, y and rotated by θ degrees clockwise from vertical.

Deformations

θ [*R* ...] *V S D* `rake`
Pulls tines of diameter D at θ degrees from the y-axis through the virtual tank at velocity V, moving fluid on the tine path a distance S. The tine paths are spaced [*R* ...] from the tank center at their nearest points.

x_b y_b x_e y_e *V D* `stylus`
Pulls a single tine of diameter D from x_b, y_b to x_e, y_e at velocity V. Legacy `stroke` also works.

x y [*R* ...] ω θ *D* `stir`
Pulls tines of diameter D in circular tracks of radii [*R* ...] (negative R is counterclockwise) around location x, y at angular velocity ω. The maximum angle through which fluid is moved is θ degrees.

x y Γ *t* `vortex`
Rotates fluid clockwise around location x, y as would result from an impulse of circulation Γ after time t. At small t the rotational shear is concentrated close to the center. As time passes the shear propagates outward.

θ λ Ω *S* `wiggle`
Applies sinsusoidal wiggle with period λ and maximum displacement S to whole tank. With $\theta = 0$, a point at x, y is moved to $x + S\,\sin(360\,y/\lambda + \Omega), y$.

θ *R* `shift`
Shifts tank by R at θ degrees clockwise from vertical.

[*n S* Ω `tines`]
The tines command and its arguments are replaced by a sequence of n numbers. The difference between adjacent numbers is S and the center number is Ω when n is odd and $S/2 - \Omega$ when n is even.