# Suica 2.0 for JavaScript

<script src="**suica.js**"></script>

boytchev.github.io/suica
version 1

## BASIC OBJECTS

**circle** (center, size, color)
**cone** (center, size, color)
**cube** (center, size, color)
**cylinder** (center, size, color)
**line** (center, size, color)
**point** (center, size, color)
**polygon** (count, center, size, color)
**prism** (count, center, size, color)
**pyramid** (count, center, size, color)
**sphere** (center, size, color)
**square** (center, size, color)

## ADVANCED OBJECTS

**construct** (expression, size, color)
**convex** (src[2], size, color)
**group** (object, object, ...)
  .**add** (object, object, ...)
**model** (filename, center, size)
**model.save** (filename, [object, object, ...])
**surface** (center, curve[3], count, size, color)
**text3d** (text, font[!], center, size, color)
**tube** (center, curve[2], radius, count, size, color)
**extrude** (shape, center, size, color)
  .radius .offset .count[!,2]
**spline** (src[2], closed, interpolating)
  (src[5], param, param)
**splane** (src[3], closed[!,2], interpolating[!,2])
  (src[4], param, param)

## BASIC PROPERTIES

.**center** = [.**x**, .**y**, .**z**]
.**color** = "colorname" / 0xFFFFFF / [r,g,b][0...!]
  = **rgb** (r,g,b)[255] / **hsl** (h[360],s[100],l[100])
.**count** = count / [count, count]
.**image** = drawing / "filename" / **image** ("filename")
.**images** = .count / [count, count]
.**size** = width / [.**width**, .**height**, .**depth**]
.**spin** = spinH / [.**spinH**, .**spinV**, .**spinT**]
.**visible** / .**hidden** = true / yes / false / no
.**wireframe** = true / yes / false / no

## ADVANCED PROPERTIES

.**closed** = bool[!] / [bool, bool][2]
.**curve**[2] = [point, ...] / spline / f(u)
  [3] = [[point, ...], ...] / splane / f(u,v)
.**expression** = "string"  A+B, A-B, A*B, (...)
.**font**[!] = "fontname.json"
.**interpolating** = bool[!] / [bool, bool][2]
.**src** = [point, ... point][2] / f(u)[5]
  = [[point, ...], ... [point, ...]][3] / f(u,v)[4]
.**vertices**
.**threejs** = THREE.Mesh
  .**material** = THREE.Material
  .**geometry** = THREE.BufferGeometry
.**intersectData**
.**randomIn**
.**randomOn**

## SUICA

**background** (color)
**oxyz** (size, color)
**demo** (distance, altitude, speed)
**orbit** (distance, altitude, speed)
**lookAt** (from, to, up)
**perspective** (near, far, fov)
**orthographic** (near, far)
**fullWindow** ()
**fullScreen** ()
**stereo** (distance)
**anaglyph** (distance)
**vr** ()
**capture** (filename, time, fps, format, skipframes)

## EVENTS

**onPointerEnter**, **onPointerLeave**, **onPointerMove**, **onPointerDown**, **onPointerUp**, **onClick**, **onTime**, **onLoad**

obj.**addEventListener** (eventName, eventHandler)
obj.**removeEventListener** (eventName)
obj.eventName = eventHandler

function pointerEventHandler (event) { ... }
function timeEventHandler (time, dTime) { ... }
function loadEventHandler (object) { ... }

**proactive** ()

## MISC

**its**
obj.**clone**
obj.**style** ({name: value, ...})
**allObjects** ()
**findPosition** (event)
**findObject** (event, interactive)
**findObject** (event, [object, ...])
**findObjects** (event, interactive)
**findObjects** (event, [object, ...])
**objectPosition** (local)
**screenPosition** (local, global)
**radians** (degrees)
**degrees** (radians)
**random** (from, to)
**random** ([value,...])
**randomIn** (object)
**randomOn** (object)

## DRAWINGS & SHAPES

**drawing** (width, height, color)
**shape** (count)
**moveTo** (x, y, x, y, ...)
**lineTo** (x, y, x, y, ...)
**curveTo** ($m_x$, $m_y$, x, y)
**arc** (x, y, radius, from, to, cw)
shapes
**stroke** (color, width, closed)
**fill** (color)
**fillText** (x, y, text, color, font)
  "bold 20px Courier"
**clear** (color)

## LMS

**scorm**
  .**api**, .**score**, .**studentName**, .**getValue** (value) .**setValue** (name, value), .**derandomize** (seed)

# Suica 2.0 for HTML

<script src="**suica.js**"></script>

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version 1

## BASIC OBJECTS

<**circle** center size color ...>
<**cone** center size color ...>
<**cube** center size color ...>
<**cylinder** center size color ...>
<**line** from to color ...>
<**point** center size color ...>
<**polygon** count center size color ...>
<**prism** count center size color ...>
<**pyramid** count center size color ...>
<**sphere** center size color ...>
<**square** center size color ...>
<... id spin image images wireframe>

## BASIC PROPERTIES

**center** = "**x**, **y**, **z**"
**color** = "colorname" / "0xFFFFFF", "r,g,b"[1]
= "**rgb** (r,g,b)"[255] / "**hsl** (h[360],s[100],l[100])"
**count** = "count" / "count, count"
**id** = "string"
**image** = "drawing" / "filename"
**images** = "count" / "count, count"
**size** = "width" / "**width**, **height**, **depth**"
**spin** = "spinH" / "**spinH**, **spinV**, **spinT**"
**visible** / **hidden** = "bool"
**wireframe** = "bool"

## SUICA

<**suica** width height background orientation proactive
perspective orthographic fullWindow fullScreen stereo
anaglyph vr> ... </**suica**>
<**background** color>
<**oxyz** size color>
<**demo** distance altitude speed>
<**orbit** id distance altitude speed>
<**lookAt** from to up>
<**perspective** near far fov>
<**orthographic** near far>
<**fullWindow**>
<**fullScreen**>
<**stereo** distance>
<**anaglyph** distance>
<**vr**>
<**capture** filename time fps format skipframes>

## DRAWINGS & SHAPES

<**drawing** size color>
<**shape** count>
<**moveTo** point>
<**lineTo** point>
<**curveTo** m point>
<**arc** point radius from to cw>
<**stroke** color width closed>
<**fill** color>
<**fillText** point text color font>
<**clear** color>

shapes

**point**="x, y" or **x**="x" **y**="y"
**font**="bold 20px Courier"

## ADVANCED OBJECTS

<**clone** src[1] center size color ...>
<**construct** expression center size color>
<**convex** src[2] size color ...>
<**group** center size color ...> ... </**group**>
<**model** filename center size ...>
<**surface** center curve[3] count size color ...>
<**text3d** text font[1] center size color ...>
<**tube** center curve[2] radius count size color ...>
<**extrude** shape center size color radius offset count[1,2]>
<**splane** src[2,5] closed[1] interpolating[1]>
<**splane** src[3,4] closed[1,2] interpolating[1,2]>
<... id spin image images wireframe>

## ADVANCED PROPERTIES

**closed** = "bool"[1] / "bool, bool"[2]
**curve**[2] = "point; ..." / "spline" / "func(u)"
[3] = "point; ... | ... " / "splane" / "func(u,v)"
**expression** = "string" A+B, A-B, A*B, (...)
**font**[1] = "fontname.json"
**interpolating** = "bool"[1] / "bool, bool"[2]
**src** = "id"[1] / "point; ..."[2] / "func(u)"[5]
= "point; ... | ... "[3] / "func(u,v)"[4]

**interpolating** vs **approximating**
**closed** vs **open**, **cw** vs **ccw**

## EVENTS

**onPointerEnter**, **onPointerLeave**, **onPointerMove**,
**onPointerDown**, **onPointerUp**, **onClick**, **onTime**, **onLoad**

<tag ... eventName="eventHandler">

<**proactive**>