

BASIC OBJECTS

circle (center, size, color)
cone (center, size, color)
cube (center, size, color)
cylinder (center, size, color)
line (center/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)

ADVANCED OBJECTS

construct (expression, size, color)
convex (src², size, color)
group (object, object, ...)
 .add (object, object, ...)
model (filename, center, size)
model.save (filename, [object, object, ...])
surface (center, curve³, count, size, color)
text3d (text, font¹, center, size, color)
tube (center, curve², radius, count, size, color)
extrude (shape, center, size, color)
 .radius.offset.count^{1,2}
spline (src², closed, interpolating)
 (src⁵, param, param)
splane (src³, closed^{1,2}, interpolating^{1,2})
 (src⁴, param, param)

LMS

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

BASIC PROPERTIES

.center = [x, y, z]
.color = "colorname" / 0xFFFFFF / [r,g,b]^{0..1}
 = **rgb** (r,g,b)²⁵⁵ / **hsl** (h³⁶⁰,s¹⁰⁰,l¹⁰⁰)
.count = count / [count, count]
.image = drawing / "filename" / **image** ("filename")
.images = .count / [count, count]
.size = width / [.width, .height, .depth]
.spin = spinH / [.spinH, .spinV, .spinT, .spinS]
.visible / **.hidden** = true / yes / false / no
.wireframe = true / yes / false / no

ADVANCED PROPERTIES

.closed = bool / [bool, bool]²
.curve² = [point, ...] / spline / f(u)
 ³ = [[point, ...], ...] / spline / f(u,v)
.expression = "string" A+B, A-B, A*B, (...)
.font¹ = "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

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

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)
lerp (first, second, k)
clamp (value, min, max)
random (from, to)
random ([value,...])
randomIn (object)
randomOn (object)
lookAt (object, spin, axis)

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)
stroke (color, width, closed)
fill (color)
fillText (x, y, text, color, font)
 "bold 20px Courier"
clear (color)

shapes

Suica 3.0 for HTML

BASIC OBJECTS

```
<circle center size color ...>
<cone center size color ...>
<cube center size color ...>
<cylinder center size color ...>
<line center/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>
```

ADVANCED OBJECTS

```
<clone src1 center size color ...>
<construct expression center size color ...>
<convex src2 size color ...>
<group center size color ...> ... </group>
<model filename center size ...>
<surface center curve3 count size color ...>
<text3d text font1 center size color ...>
<tube center curve2 radius count size color ...>
<extrude shape center size color radius offset count1,2>
<splane src2,5 closed1 interpolating1>
<splane src3,4 closed1,2 interpolating1,2>
    <... id spin image images wireframe>
```

LMS

```
<scorm>name</scorm>
    studentId, studentName, score, cmi.core....
```

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

BASIC PROPERTIES

```
center = "x, y, z"
color = "colorname" / "0xFFFFFF", "r,g,b"
    = "rgb (r,g,b)"255 / "hsl (h360,s100,l100)"
count = "count" / "count, count"
id = "string"
image = "drawing" / "filename"
images = "count" / "count, count"
size = "width" / "width, height, depth"
spin = "spinH" / "spinH, spinV, spinT, spinS"
visible / hidden = "bool"
wireframe = "bool"
```

ADVANCED PROPERTIES

```
closed = "bool" / "bool, bool"2
curve2 = "point; ..." / "spline" / "func(u)"
3 = "point; ... | ..." / "splane" / "func(u,v)"
expression = "string" A+B, A-B, A*B, (...)
font1 = "fontname.json"
interpolating = "bool" / "bool, bool"2
src = "id" / "point; ..." / "func(u)"5
    = "point; ... | ..." / "func(u,v)"4
interpolating vs approximating
closed vs open, cw vs ccw
```

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>
<trackball id distance altitude>
<lookAt from to up>
<perspective near far fovy>
<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

<tag ... eventName="eventHandler">

<proactive>
```

boytchev.github.io/suica

version 1

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>
```

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

shapes