Interactive Photo Displays
JSON data format documentation

This document describes the JSON data format for the user created files: configurations and sceneries. This document describes each available variable and their types and default values. Any variable can be omitted, in which case the default value will be used.

Configurations

useKinectInput

Default: true
Type: Boolean
When disabled, Kinect input will not be used to move around in sceneries, but instead you can move by clicking the left mouse button and moving the cursor. This is mostly for debugging purposes.

kinectMultiplier

Default: {"x":1, "y":1, "z":1}
Type: Object
Sets the sensitivity (scale) of movement input. Give float values to x, y and z variables of the object.

kinectOffset

Default: {"x":0, "y":0, "z":0}
Type: Object
Sets the input offset of movement input. This can be used to correctly calibrate and adjust the input depending on where the Kinect sensor is located in relation to the users. Give float values for x, y and z variables of the object.

kinectSmoothing

Default: 10
Type: Float
Sets the smoothing of movement input. The higher the value, the faster the camera keeps up with user movement. The lower the value, the smoother (but slower) the camera follows user movement.

transitionDuration

Default: 3
Type: Float
The duration in seconds of the "fade to color" transition when changing the displayed scenery to another.

transitionColor

Default: {"r":0, "g":0, "b":0}
Type: Object
The color to which the scenery transition should fade to. Give values ranging from 0 to 1 to each color component.

handAlwaysActive

Default: false
Type: Boolean
Determines if hand pointers should always be active and visible. If the value is "false", the hand pointers will only activate when the user lifts their hand above their elbow and keeps it up for a certain amount of time. See handActivationTime and handDeactivationTime below.

multipleHandUsers

Default: true
Type: Boolean
If true, any recognized user can use hand controls, even if they're not the active movement controller. If false, only the currently active user (the one closest to the sensor) can use hand controls.

handActivationTime

Default: 1
Type: Float
The time in seconds that the user should keep their hand above their elbow to activate hand controls for that hand.

handDeactivationTime

Default: 1
Type: Float
The time in seconds after which hand controls will be disabled when the user's hand is below their elbow again.

OscUserLocationUpdatesPerSecond

Default: 5
Type: Integer
How many location updates should be sent per second via OSC. In practice the frequency is limited to what the Kinect can output, which is 30 frames per second.

OscOutputIP

Default: "127.0.0.1"
Type: String
The IP to connect to for sending data via OSC.

OscOutputPort

Default: 57120
Type: Integer
The port to use for sending data via OSC.

OscInputPort

Default: 57122
Type: Integer
The port to use for listening to and receiving data via OSC.

displayCameraFeed

Default: false
Type: Boolean
Can be used to display a video view from the Kinect on the screen. This can be useful for debugging and calibration purposes.

cameraFeedAlpha

Default: 1
Type: Float
The transparency with which the video view (described above) should be displayed.

resolutionWidth

Default: (Detected at runtime)
Type: Integer
The target resolution width. When using multiple displays, one can use this to force the application to cover all the displays. By default the application will attempt to detect the currently used display's resolution automatically.

resolutionHeight

Default: (Detected at runtime)
Type: Integer
The target resolution height. See above.

Vsync

Default: false
Type: Boolean
Enable synchronizing application's framerate with the monitor's framerate

sceneryChangeInterval

Default: 0
Type: Integer
The time in seconds after which the scenery will automatically change to the next one in queue.
With values equal to or less than zero the queue will not advance automatically, and manual
control is needed (pressing space bar)

shuffleSceneries

Default: false
Type: Boolean
Whether or not the scenery queue (defined below) should be shuffled each time the queue is
started again.

sceneries

Default: (Empty list)
Type: List
The list (queue) of sceneries to be displayed. Give scenery JSON file paths (strings) as either
absolute paths or relative to the executable file that's used to run the application.

Scenery

cameraHeight

Default: 720
Type: Integer
The view's height in pixels.

images

Default: (Empty list)
Type: List
A list containing all image elements (objects) to be included in the scenery. See "Image element" below.

texts

Default: (Empty list)
Type: List
A list containing all text elements (objects) to be included in the scenery. See "Text element" below.

popUps

Default: (Empty list)
Type: List
A list containing all pop-up elements (objects) to be included in the scenery. See "Pop-up element" below.

Image element

transform

Default: (Default MovableSceneryObject)
Type: Object
An object of type MovableSceneryObject. See its JSON format later in this document.

animation

Default: (Default AnimatedSceneryObject)
Type: Object

An object of type AnimatedSceneryObject. See its JSON format later in this document.

fileName

Default: ""
Type: String
A path to an image file. Supports at least PNG and JPG files for static images and OGV for video. Can be an absolute path or a path relative to this scenery JSON file. Can also be an internet URL.

restrictHorizontalMovement

Default: false
Type: Boolean
If true, the view won't go past this image's left or right borders. This should mostly be used for images in the background of the scenery to restrict camera movement to that image's dimensions.

restrictVerticalMovement

Default: false
Type: Boolean
If true, the view won't go past this image's top or bottom borders. See above.

transparencyRed

Default: 0
Type: Float
The red component of the color that should be invisible in the image. Values from 0 to 1.

transparencyGreen

Default: 0
Type: Float
The green component of the color that should be invisible in the image. Values from 0 to 1.

transparencyBlue

Default: 0
Type: Float
The blue component of the color that should be invisible in the image. Values from 0 to 1.

transparencyThreshold

Default: 0
Type: Float

The threshold for making pixels of the given color (see transparencyRed, -Green and -Blue) invisible.

Text element

transform

Default: (Default MovableSceneryObject)
Type: Object
An object of type MovableSceneryObject. See its JSON format later in this document.

animation

Default: (Default AnimatedSceneryObject)
Type: Object
An object of type AnimatedSceneryObject. See its JSON format later in this document.

text

Default: ""
Type: String
The text to be displayed. The text can use simple text formatting described at
https://docs.unity3d.com/Manual/StyledText.html.

font

Default: ""
Type: String
The font to render the text with. This should be a name of a font that is installed on the machine running the application.

fontSize

Default: 8
Type: Integer
The base font size of the text. The font size can be modified with text formatting too.

color

Default: {"r":1, "g":1, "b":1, "a":1}
Type: Object
The base color of the text. The color can be modified with text formatting too. Give float values to r, g, b and a from 0 to 1.

Pop-up element

transform

Default: (Default MovableSceneryObject)
Type: Object
An object of type MovableSceneryObject. See its JSON format later in this document.

text

Default: ""
Type: String
The text to be displayed. The text can use simple text formatting described at
https://docs.unity3d.com/Manual/StyledText.html.

font

Default: ""
Type: String
The font to render the text with. This should be a name of a font that is installed on the machine running the application.

fontSize

Default: 8
Type: Integer
The base font size of the text. The font size can be modified with text formatting too.

width

Default: 100
Type: Integer
The width of the text container in pixels. The height will be automatically adjusted according to width and the content (text).

autoHideDelay

Default: 0
Type: Float
The time in seconds after which the pop-up will automatically close itself if no hand control pointers are interacting with it. Values equal to or lesser than 0 will result in the pop-up not closing automatically without user action.

textColor

Default: {"r":1, "g":1, "b":1, "a":1}
Type: Object
The base color of the text. The color can be modified with text formatting too. Give float values to r, g, b and a from 0 to 1.

backgroundColor

Default: {"r":1, "g":1, "b":1, "a":0}
Type: Object
The color of the text container.

alwaysVisible

Default: false
Type: Boolean
If true, the pop-up will always be opened and cannot be closed.

alwaysOnTop

Default: false
Type: Boolean
If true, the pop-up will always render above other elements on the screen independent of its position in the z axis.

MovableSceneryObject

position

Default: {"x":0, "y":0, "z":0}
Type: Object
The starting position of the scenery element on the screen. One unit represents 100 pixels on the screen.

scale

Default: {"x":1, "y":1, "z":1}
Type: Object
The starting scale (multiplier of size) of the scenery element relative to its original size.

rotation

Default: 0
Type: Float
The angle in degrees in which the scenery element should be rotated in the z axis.

AnimatedSceneryObject

horizontalAnimationSpeed

Default: 0
Type: Float
The speed of the horizontal sway. Larger value for faster swaying.

horizontalAnimationMagnitude

Default: 0
Type: Float
The magnitude of the horizontal swaying animation. Larger value for more intense swaying.

verticalAnimationSpeed

Default: 0
Type: Float
The speed of the vertical sway. Larger value for faster swaying.

verticalAnimationMagnitude

Default: 0
Type: Float
The magnitude of the horizontal swaying animation. Larger value for more intense swaying.