OSC/TUIO Demo Notes

This report helps to investigate the Quest3D demo applications.

For customers, the following annotated source cgr's are included:

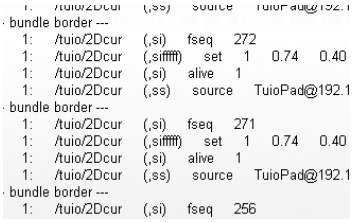
1. OSCdump.cgr,
2. OSCmouseWriter.cgr,
3. OSCbidirectionalBallControl.cgr,
4. TUIOpaint.cgr,
5. TUIOreactivisionReader.cgr

General advice:

1. Install all plug-ins first.
2. Turn your firewall off while testing.
3. Avoid port failures: Close all applications that occupy a port you need: Example: A *.cgr loaded in the Quest3D Editor with a UDPreader channel on port 9000 will not allow an *.exe to access this port.
4. Turn features only on if needed, e.g. an accelerometer. This saves bandwidth and eases trial restrictions.
5. If in doubt, use dump tools.
6. Delays occur, if the production rate of OSC messages exceeds the consumption rate.
7. Use of Broadcast addresses is OK, if apps support it.

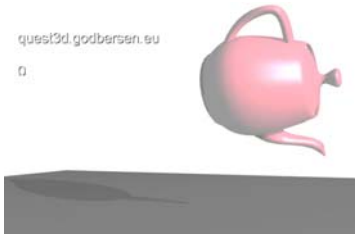
1. OSC Demos

These demos focus on Controller interaction with iOS / Android smartphones and tablets. OSC is used in a variety of other application domains, like connecting to

Application	**Screenshot**	**Controller Info** (App /Layout)
00 OSC Dump		*<any>* *Reads from any source, just specify listening port.*

01 OSC Newton Teapot

Uses the previously published plug-in OSCreader. Included for future reference.



touchOSC, OSCdemoRC Page 1

02 OSC Mouse Writer

(Message Encoder)

touchOSC, OSCdemoRC Page 2

03 OSC Walk in the Woods

Accelerometer Controller
(Message Decoder)

touchOSC, OSCdemoRC Page 3

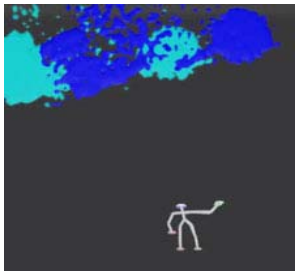
andOSC (Android):

04 OSC Bidirectional Ball Control

Controller
(Bidirectional Messages)

touchOSC, OSCdemoRC Page 4

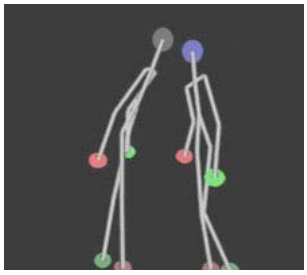
05 OSC Kinect 3D Paint



Uses Kinect, OSCeleton, PhysX

- *not included* -

06 OSC Kinect Group Dance



Uses Kinect, OSCeleton, group may be distributed across the world.

- *not included* -

1.1 OSC Controller

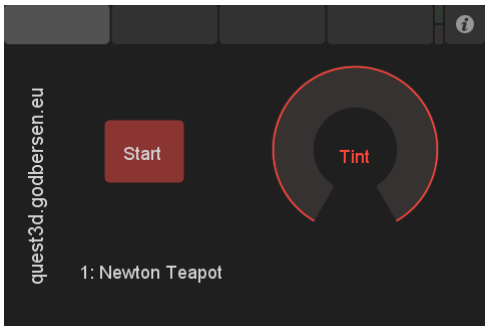
Most of the OSC examples use "**touchOSC**" in iOS. (Android version may be available too, not tested). TouchOSC comes with a Win Layout editor. Install this editor, load the file **OSCdemoRC.touchosc**, and upload it to your iOS device.

Setup:

- Network → Host, Port → outgoing port to 7000, and incoming port to 9000.
- Layout: Add or select layout
- Options: Accelerometer on/off

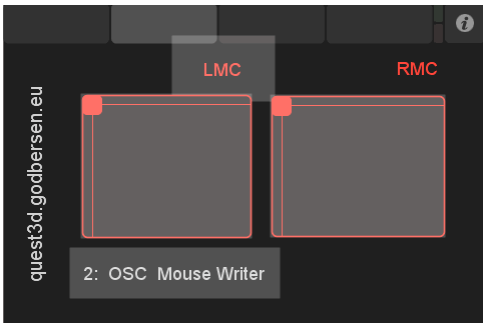
Usage instructions:

Page 1 (plug-in sold separately)



Start Newton, change tint

Page 2



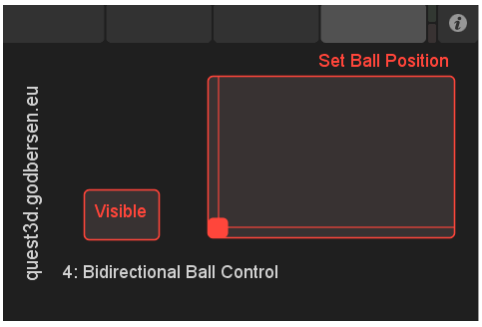
See mouse cursor positions from Quest3D application, at left and right clicks

Page 3

Walk avatar, if green button is pressed (move forward, turn left or right), turn head up/down, toggle sparse rendering, set wind speed, exit program.

AndOSC (Android): Move forward, turn left or right

Page 4



See ball position, send new target position and toggle ball visibility

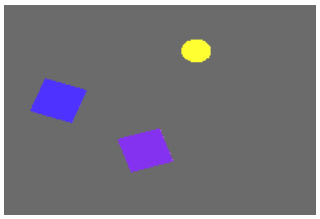
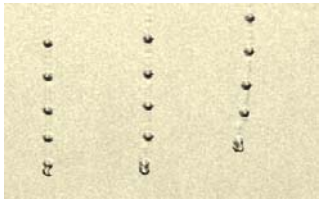
If touchOSC is not available: Use any OSC software that allows you to generate the following address pattern and arguments:

Application	**Address pattern**	**Arguments**	
01 OSCreader	/rotary1	f	
	/push1	f	
02 OSC Mouse Writer	/xy1	f f	
	/xy2	f f	
03 OSC Walk in the Woods	/acc	f f f	--- enable in setup
	/fader1	f	
	/fader2	f	
	/push1	f	
	/push2	f	
	/toggle1	f	
04 OSC Bidirectional Ball Control	/xy1	f f	
	/toggle1	f	

Any other address pattern can be chosen, if you have access to the cgr sources (customers only).

2 TUIO Demos

The demos focus on multi-touch finger tracking and reactiIVision. Support for 2D- cursor and 2D- objects is provided.

Application	**Screenshot**	**Controller Info** (App /Layout)
07 TUIO reactIVision Reader		TUIOsimulator.jar, TuioPad, TUIOdroid
08 TUIO Paint		TouchOSC , TuioPad, TUIOdroid *No clearscreen*
09 TUIO Sand Paint		TouchOSC , TuioPad, TUIOdroid *Uses Normal maps*

2.1 TUIO Controller

TUIOsimulator.jar, TuioPad, TUIOdroid

And any other TUIO enabled device, including touch monitors.

Usage instructions:

Finger tracking is intuitive. The Simulator differentiates between Objects and Cursor. See simulator help file. Consider to opt for regular updates.