

OSCpacketDecoder

General

Use this channel for decoding (deserialize) OSC packages that contain bundled OSC messages. A typical scenario using these sets of OSC messages is TUIO (Tangible User Interface Objects). This channel requires OSCmessageDecoder as a child to perform the detailed decomposition of a set of single OSC messages. Use UDPreader or equivalent to read from the network.

Incoming single OSC messages are accepted too.

Children

- | | | |
|--------|------------------------------|---------------------------|
| 1. IN | OSC package (Buffer) | -- required |
| 2. OUT | OSC time stamp (Value) | -- <i>not implemented</i> |
| 3. OUT | OSC message (Buffer) | // continuously called |
| 4. IN | OSCmessageDecoder (Value) | // continuously called |
| 5. OUT | Process single message (any) | // continuously called |

Description

OSCpacketDecoder reads a single OSC bundle or message from the buffer. It then calls OSCmessageDecoder for each single OSC message found in the input stream and checks for error codes. Typically this results in multiple calls to OSCmessageDecoder in a single frame. Make sure to set the update settings accordingly in the relevant channel property panels. The last child is called immediately after each call to OSCmessageDecoder. Connect any processing logic here.

The channel behaves as a value channel, return values are:

- >0 Number of OSC messages handled
- 0 ready
- 1 improper child assignment
- 2 license restrictions apply

Errors received from OSCmessageDecoder are passed through. Check debug window for reasons.

Volume, runtime duration, and expiration restrictions are enforced with trial and lite licenses. The applicable restrictions are listed in the editor debug window.

Tips

- Use OSCDUMP.exe for test purposes.
- Evaluate the return value to check for proper operation.
- OSC protocol specification 1.0: http://opensoundcontrol.org/spec-1_0

- TUIO protocol specification 1.1 <http://www.tuio.org/?specification>
- Error messages from the OSCmessageDecoder child are passed through. Thus only this channel has to be monitored for error/license conditions.
- Be aware of call frequency requirements: Lets say we are running with 60 fps: UDP packages arriving in slower intervals than 1/60 sec are processed without delay, if the frequency is higher, a queue piles up. OSCmessageDecoder and the evaluation trunk are called typically many times in each frame.
- Try to keep the OSCpackage creation interval at the OSCclient moderate.

Legal note: Permission granted for evaluation and educational purposes only (Trial version), commercial use requires an explicit license agreement.

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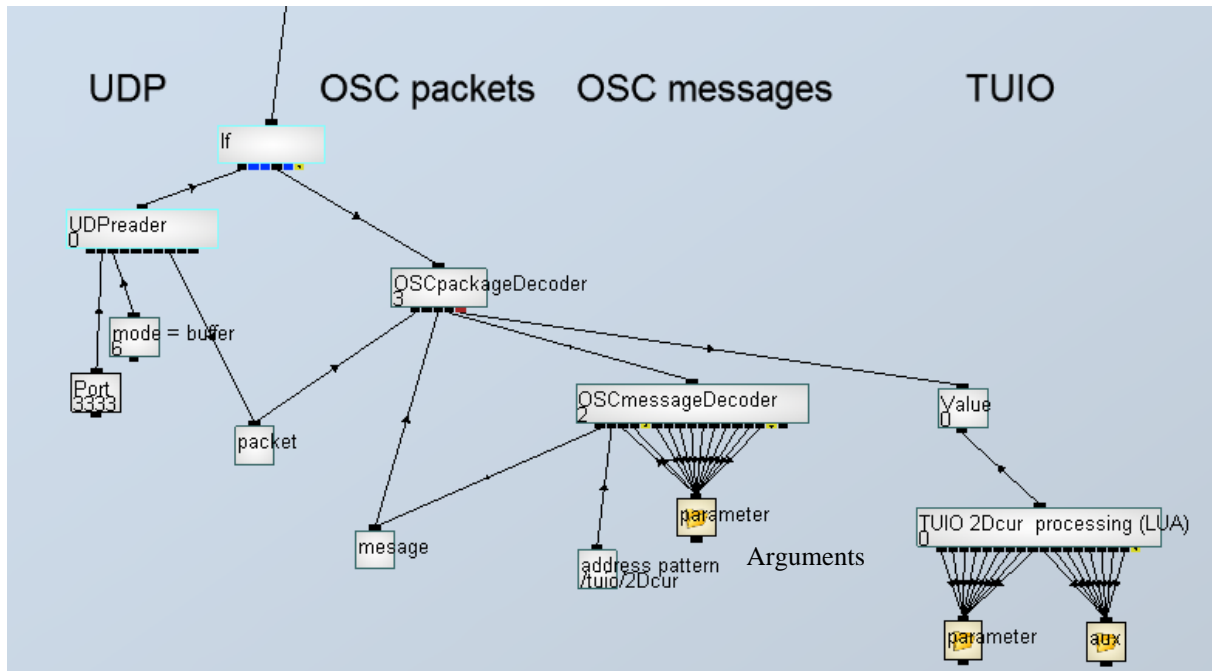
Known Problems:

- OSC time stamp currently not supported

Revision History:

2011 05 22 initial version

Sample scenario:



UDPreader runs on default IP (0.0.0.0) and port 3333. The delivery mode is set to Buffer output. OSCpacketDecoder is called, if an UDP package is received. OSCpacketDecoder calls the OSCmessageDecoder and in succession the evaluation sub-tree as many times as needed, transferring new address pattern and sets of arguments each time. Note that more than one message has to be processed in on Quest3D frame. Make sure that The evaluation is done here according to the TUIO protocol with a LUA script.

Sample application:

1. OSC Dump
2. TUIO ReactiVIsion Reader ReactiVIsion <http://reactivision.sourceforge.net>
3. TUIO Paint Finger Tracing
4. TUIO Sand Paint Finger Tracing