

ReacTacT

RealTime Algorithmic Composition Toolkit for the ReacTable

- Software Manual -

Table of Contents

1	About.....	3
2	System Requirements	3
3	Software Dependencies	3
4	Installation	4
5	Usage	4
6	Software Architecture	5
7	Table Architecture	6
8	Example Setup	6

1 About

The ReactacT is a real-time algorithmic composition toolkit for the ReactTable tangible user interface (<http://mtg.upf.es/reactable/>).

It is developed in the Max/MSP programming environment, with Java and Ruby externals.

Three algorithmic units are available for the composer to experiment with:-

- Twelve-tone row generator for serial composition.
- Probability distribution for stochastic music.
- Formal grammar for generating musical phrases.

These can be used as individual entities or combined into larger *hybrid systems*. An example patch is included that demonstrates this with multi-marker functionality.

2 System Requirements

- Microsoft Windows XP or Vista, Mac OS X
- Max/MSP 4.x or Max 5
- ReactTable table setup and ReactTIVision software OR the ReactTIVision Simulator (version included)
- MIDI synthesizer or sampler

3 Software Dependencies

- The Max/MSP TUIO client implementation has been included for convenience. Latest version:-

www.tuio.org

- Ajm objects for Max. Version 0.8.1 is included here. Latest version <http://compusition.com/web/software/maxmsp/ajm-objects>

- **DRP Ruby Gem.** A compiled version of the library has been included with this release. To build the latest version it will need to be compiled with jruby, the java implementation of Ruby. This will allow it to be used with the ajm objects in Max. Latest versions:-

JRuby:- <http://jruby.codehaus.org/>

DRP - <http://drp.rubyforge.org/>

4 Installation

Copy the **reactact_common** folder into the patches folder of the Max installation. This includes common patches for all the algorithmic units, such as the TUIO_Interface. For example, with Max 4.x on Microsoft Windows the path would be:-

C:\Program Files\Cycling '74\MaxMSP 4.6\patches

To install the ajm components with the DRP library, copy all the contents of the **ajm\lib** folder to:

C:\Program Files\Cycling '74\MaxMSP 4.6\Cycling '74\java\lib

Copy **ajm\ajm** into the patches folder where reactact_common was copied.

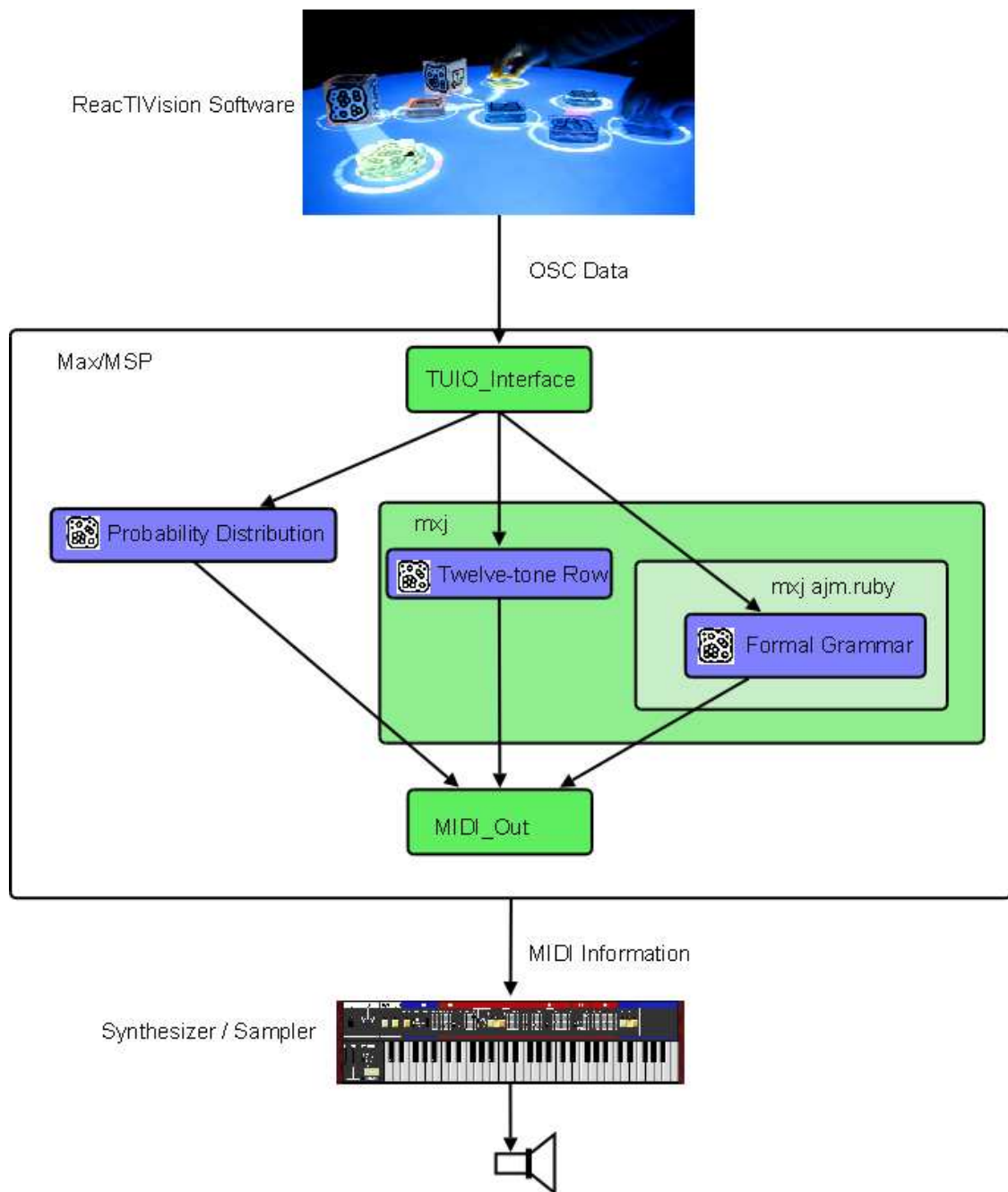
5 Usage

A good place to start would be the example performance patch in the performance folder. This can be used right away with the TUIO simulator and gives a good overview of the operation of the system

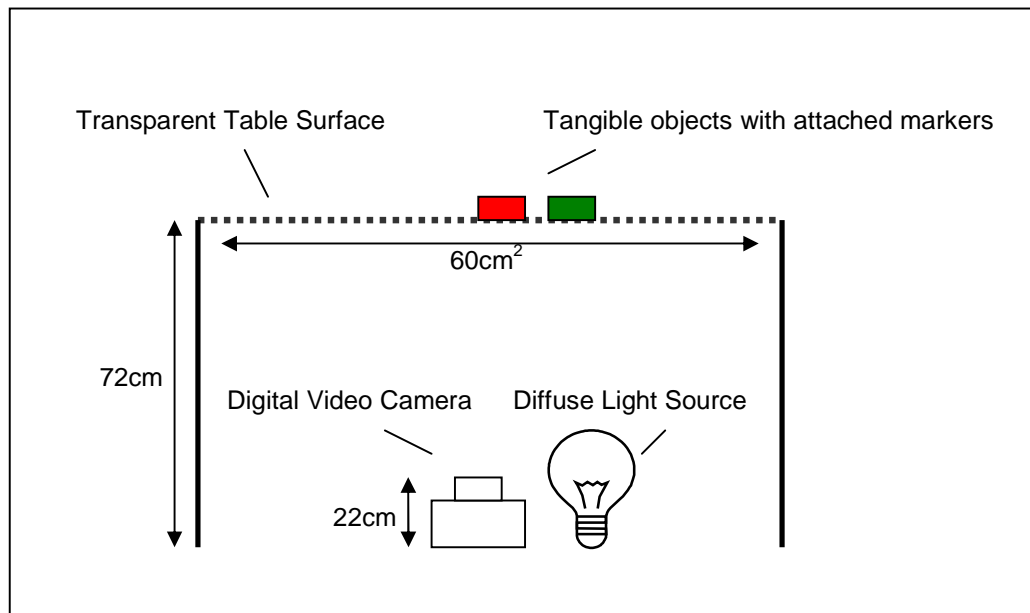
This software functions by sending MIDI data to external devices such as samplers and synthesizers. To send MIDI data to software instruments running on the same computer, use a virtual MIDI patch cable.

On Mac OS X the IAC driver can be used. A number of virtual cables can be downloaded for Microsoft Windows, including the Maple Virtual MIDI cable:- www.hurchalla.com/Maple_driver.html

6 Software Architecture



7 Table Architecture



8 Example Setup

