

The i-score interactive sequencer

an intermedia sequencer for interactive scenarios authoring

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LaBRI, Blue Yeti, GMEA

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The problem

- ▶ A lot of tools for entirely fixed, "rendered" content.
- ▶ A lot of tools for entirely interactive content (artistic installations).
- ▶ What goes in between ?

Example installations



Futuroscope, France. Blue Yeti

Example installations



Tumbleweed, Les Baltazars

Screenshot

The screenshot shows a Max/MSP patcher window titled "demo". The left side features a "Devices" panel with a tree view of parameters like "OSCdevice", "ui", "master", and "layer". The main area displays a timeline from 0.00.0 to 0.30.0. A blue box highlights a condition block with the text: "This will trigger when a condition on remote parameters become true". Another blue box highlights a join block with the text: "Various elements can rejoin themselves". A third blue box highlights a message block with the text: "The full dots will send a cue (a list of OSC messages)". Below these, a complex structure is labeled with "A curve", "Other curves", "In sequence", and "A loop". A green box highlights a "Loop pattern" with the text: "Automation.1:". The right side contains an "Inspector" panel with sections for "Constraint", "Processes", and "OSCdevice:/master/flash".

i-score

Contributors, Companies, Agencies involved



LaBRI
www.labri.fr



Blue Yeti
www.blueyeti.fr



GMEA
www.gmea.net

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ENSATT

ÉCOLE NATIONALE SUPÉRIEURE DES ARTS ET TECHNIQUES DU THÉÂTRE

ENSATT
ensatt.fr

Artists: Les Baltazars, Renaud Rubiano, Antoine Villeret...

What i-score is :

- ▶ A visual programming language
- ▶ Free software : GPL v3 (UI) & LGPL v2.1 (Engine)
- ▶ Built in C++ (Qt, CMake)
- ▶ Available in Linux / OS X / Windows
- ▶ Alpha-quality ☹

What i-score is not :

- ▶ PureData (yet)
- ▶ Ableton Live (yet)
- ▶ Bug-free (yet !)

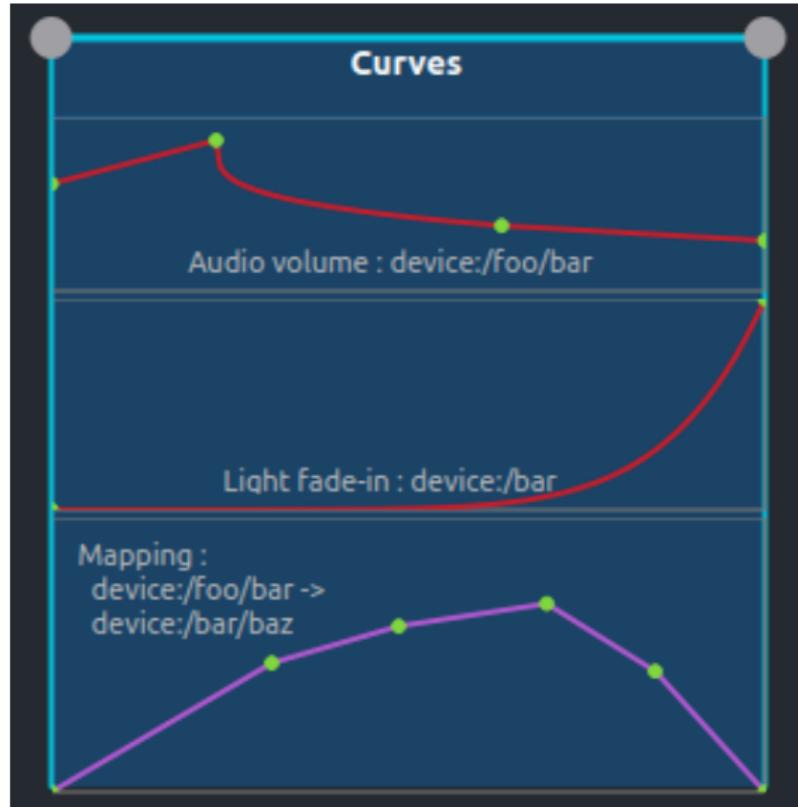
Demonstration

Inter-operability

- ▶ Compatible environments :
Max, PureData, Unity, OpenFrameworks,
Processing, Jamoma, Modul8, Millumin, Quartz
Composer, Qt...
- ▶ Anything that communicates over OSC.
- ▶ Extensibility via plug-ins*.

*API not stable until v 2.0

Automations, mappings



Various kinds of curves

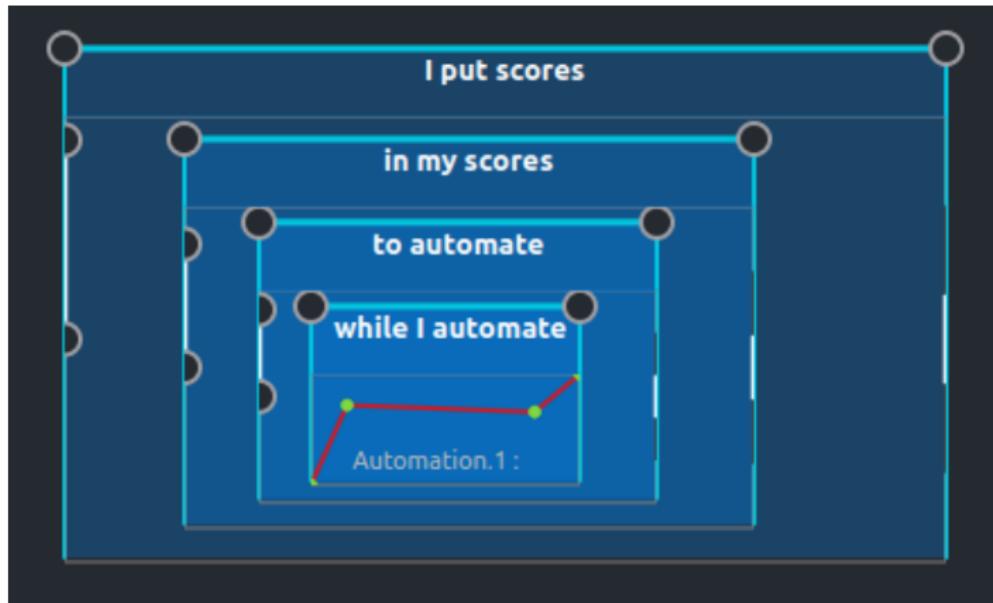
JavaScript

```
function(t) {  
    var obj = new Object;  
    obj["address"] = 'dev:/ foo/bar';  
    obj["value"] = t + iscore.value('other:/ baz');  
    return [ obj ];  
}
```

Called at each tick

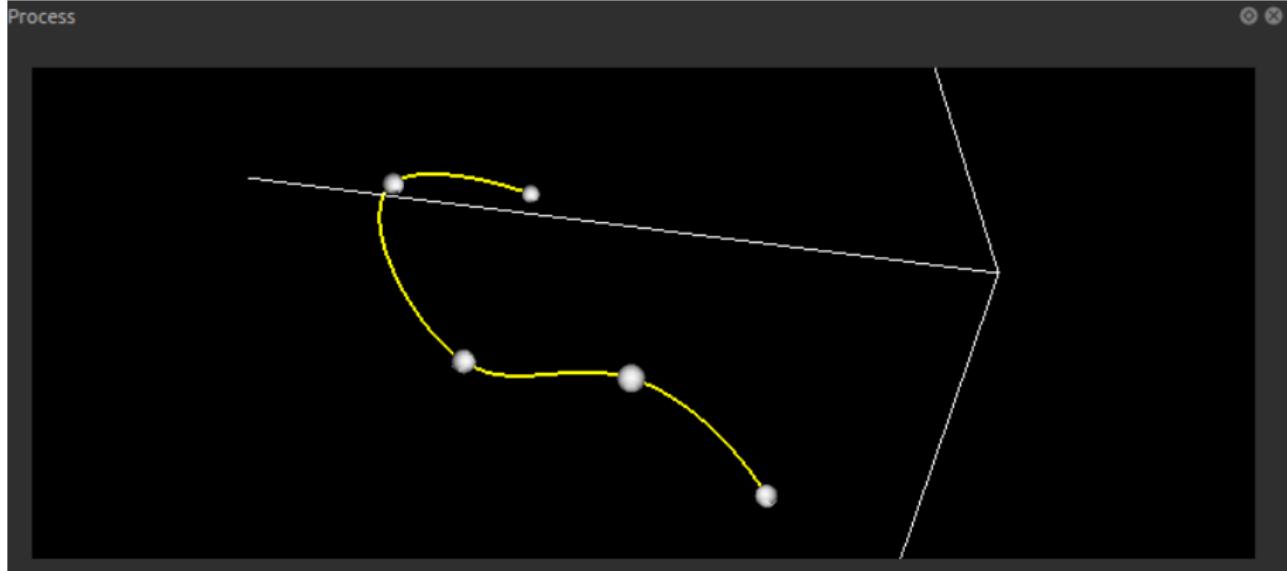
- ▶ Uses Qt's QJSEngine.
- ▶ For now API with a single function : should be extended.

Hierarchy



Scenarios can be nested arbitrarily

WIP : Spatial automations



- ▶ 3d splines that uses VTK. Can be used to create paths in space for instance.
- ▶ Spatial mappings to compute collisions, distances, etc. and performs actions according to the result of such computations.

Future : distribution ?

- ▶ Currently : multiple instances can work together at the editing stage.
- ▶ Soon : distributed execution.
- ▶ Example scenarios :
 - ▶ 100 phones controlling a parameter together.
 - ▶ Live backups if a computer dies during performance.
 - ▶ Offloading.

Future : other features

- ▶ MIDI, WebSockets support
- ▶ Some level of patching, like Pd
- ▶ Complete remote-control abilities.
Currently : execution can be followed via a web page.
- ▶ Port execution engine to FPGA.
- ▶ Audio engine ?

Contributing

- ▶ UX, UI (mock-ups were done but not entirely implemented)
- ▶ Documentation, writing demo scenarios
- ▶ Translations
- ▶ Implement the Minuit protocol in your software with the OSSIA API
- ▶ Many "low-hanging fruit" TODOs
- ▶ Mobile devices ports :
 - ▶ Android : builds and run but requires adapted UI.
 - ▶ Web port : with PNaCl, runs but crashes. Will open the way to WebAssembly.
 - ▶ iDevices (many artists use them).

Links

- ▶ **Grab a release !**
[github.com/OSSIA/i-score/releases.](https://github.com/OSSIA/i-score/releases)
- ▶ **Protocols and implementations :**
github.com/OSSIA

Thanks ! Questions ?

Credits: 'simple' Beamer theme, Facundo Muñoz; Fira font