

Functional Reactive Programming in ClojureScript with Flapjax



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FRP

- Programming paradigm
 - Set of language and/or library features
- Key Ideas
 - **Time-varying values**
Event stream reference types
 - **Stream composition**
Work with events like seqs
 - ...instead of callbacks (or watches)

Existing Things

- .NET Rx
- FrTime
- Elm
- JavaScript
 - Arrowlets
 - **Flapjax**

Where FRP Helps

- events: user, DOM, scheduled/periodic
 - generation, consumption
 - conditional propagation, fusion, filtering
 - “wiring”
- ~~structural composition, templating~~
- ~~css~~

DEMO

Future Work

- Port to ClojureScript!
 - Separate browser bits from propagation algorithm
 - Wire arbitrary events in ClojureJVM too
 - EventStream/Behavior implement ISeq?
- Implementation pieces
 - Topological sort
 - “delay” a la Prolog cut to halt propagation
 - Expose “wiring” itself as data

Thanks!

- @alandipert
- <https://github.com/alandipert/flapjax-demo>
- <http://www.flapjax-lang.org/>