

Evan Czaplicki

Prezi / @czaplic



<http://elm-lang.org>

Functional Reactive Programming in **Elm**

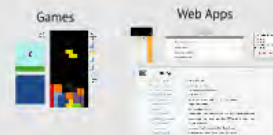
Functional Graphics
make graphics simple and declarative



Reactive Programming
control flow for events



Write short, reliable code
Making things with Elm



Integrate with JavaScript
'Component Model' to use Elm strategically



Evan Czaplicki

Prezi / @czaplic



<http://elm-lang.org>

Functional Reactive Programming in **Elm**

Functional Reactive Programming in Elm

Functional Graphics

make graphics simple and declarative

Text and Links



Layout



Free-form Graphics



Reactive Programming

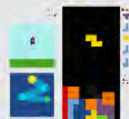
control flow for events



Write short, reliable code

Making things with Elm

Games

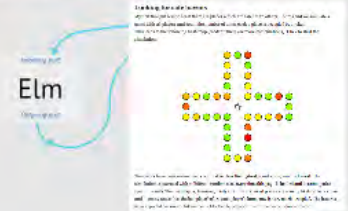


Web Apps



Integrate with JavaScript

'Component Model' to use Elm strategically



Functional Graphics

make graphics simple and declarative

Text and Links



Layout



Free-form Graphics



Reactive Programming

control flow for events



Input

Mouse.position : Signal (Int, Int)

Signals *are values that change over time*

Transform

`lift : (a -> b) -> Signal a -> Signal b`

`lift2 : (a -> b -> c) -> Signal a -> Signal b -> Signal c`

⋮

Update State

`foldl` "fold from the **left**"

`foldr` "fold from the **right**"

`foldp` : `(a -> b -> b) -> b -> Signal a -> Signal b`

"fold from the **past**"

Reactive Programming

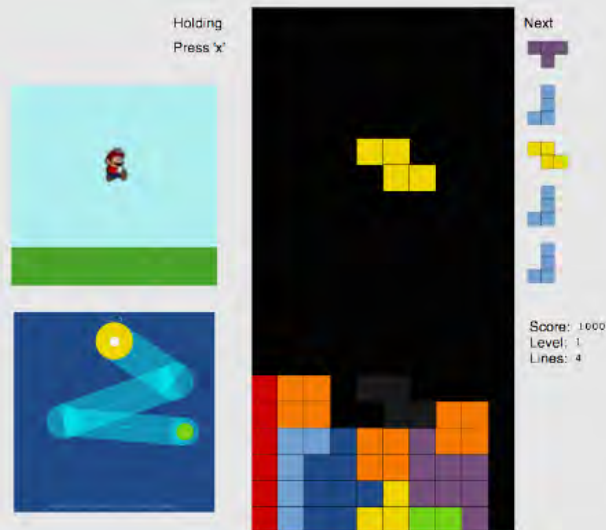
control flow for events



Write short, reliable code

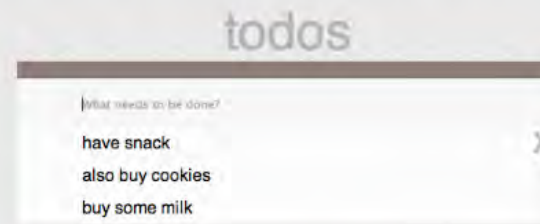
Making things with Elm

Games

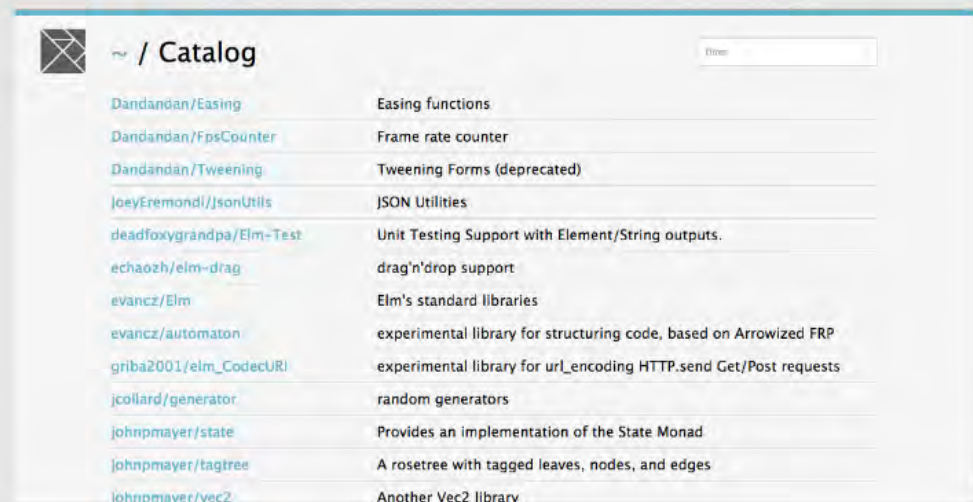


Web Apps

A screenshot of a calculator application with a dark theme. The display shows the number 0. The keypad includes buttons for C, %, *, /, +, -, =, and digits 0-9.



A screenshot of a sign-up form titled 'Example Sign Up'. It includes input fields for 'First Name', 'Last Name', 'Your Email', and 'Re-enter Email'. A red error message below the email fields reads: 'Must re-enter your email address. Email addresses do not match.' A 'Sign Up' button is located at the bottom right.



Integrate with JavaScript

"Component Model" to use Elm strategically

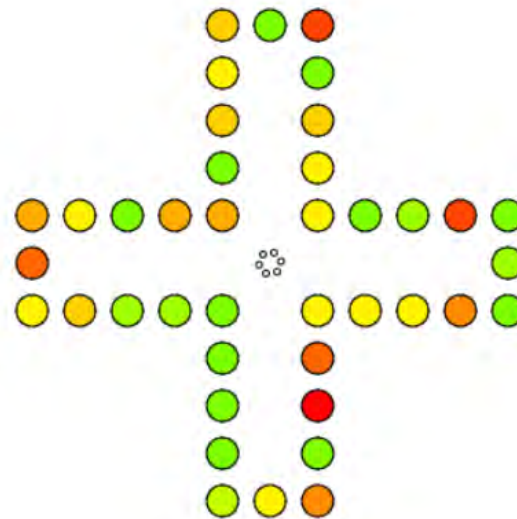
Incoming port

Elm

Outgoing port

Looking for safe havens

My first thought was to see if there are places which are safer than others. To this end we simulate a game with AI players and count the number of times each a place is occupied by a token. This leads to the following heat-map (redder if there are more combinations). Click to start the simulation.



The colors have been normalized such that red has the highest count and green the lowest. The simulation is executed with a different random seed every time this page is loaded and I cannot point to specific results. The heatmap is, however, likely to show that most places are equally likely to be occupied and in many cases that the last place before each player's home row is very much occupied. The latter is to be expected because of tokens being blocked by others in the homerow or bounced back.

Evan Czaplicki

Prezi / @czaplic



<http://elm-lang.org>

Functional Reactive Programming in Elm

Functional Graphics

make graphics simple and declarative

Graphics.Canvas



Graphics.Element



Graphics.Element2D



Reactive Programming

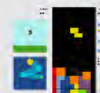
control flow for events



Write short, reliable code

Making things with Elm

Games



Web Apps



Integrate with JavaScript

"Component Model" to use Elm strategically

