REPLACING HTML WITH CANVAS
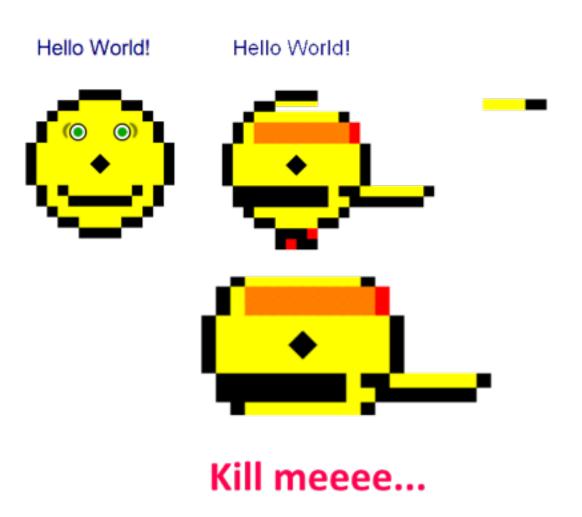
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CONTENT

- Current problems with HTML
- Possible solutions
- Canvas UI library demo

HTML PROBLEMS

- HTML on acid
- Old but always valid problem

Hello World!

Hello World!

Kill meeee...

HTML PROBLEMS

- HyperText Markup Language
- Best (and in practice only) tool we have
- Complex to implement and optimize
- Mobile browsers add problems
- Living standard
- Slow to get new features supported

HTML UI SOLUTIONS

- jQuery, Ember, Backbone, Angular etc.
- Quickly evolving frameworks replacing each other
- Mostly more about data binding than UI, HTML is assumed
- Can't hide the underlying HTML problems very well
- The hammer mentality

HTML PROGRESS

- Wait for blessings from above
- Wait until new features supported
- Wait until features work consistently between browsers
- Each cycle can take a long time

REPLACING HTML

- Current situation is an unusual way to do things
- Browser as a low-level platform like Windows, OS X or Linux
- More freedom and options
- Tools, not pre-made solutions

CANVAS/WEBGL

- Use low level API's (canvas, WebGL) to build UI's
- Pixel-perfect, consistent and reliable UI's
- New features immediately available
- Fast bug fixes
- Flash and Java-applets might try to rise from their graves

DEMO

- https://github.com/heikkisa/tsgui
- http://54.228.240.96/demo/home.html

DEMO

- About 10 000 lines of TypeScript
- TypeScript transcompiles to JavaScript, well suited for larger applications
- UI idioms from Android, Windows Phone, iOS, qt (qml)
- Better suited for mobile apps than traditional web pages
- Can be mixed with normal HTML content

CANVAS/WEBGL PROBLEMS

- Lose native look and feel, drag & drop etc.
- Accessibility (canvas spec)
- Performance (layout and rendering)
- Lose support for many existing libraries
- Most problems solvable with some additional JavaScript API's
- More difficult for beginners and non-programmers

PROPHECY

- Canvas and WebGL usage will grow
- Web development starts to resemble desktop or mobile platform development

QUESTIONS?

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