Fluid Infusion: Enabling Next-Generation Personalization

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Rethinking Disability
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A mismatch between the user and the user interface
Accessibility is... the ability of the system to accommodate the needs of the user
Are you typical?
Make yourself at home...
One Size Fits One

• **User interfaces** that can adapt to the needs, preferences, tastes of users—feel at home

• **Content that fits**—delivered in a form that learners can understand and use
Global Public Inclusive Infrastructure

http://youtu.be/YHXSWQvV39k
Problems & Needs

The Internet is no longer optional, but many can’t use it.

Computers are everywhere, but accessibility isn’t.

The assistive technology market is stagnant.

The cost of assistive technology is unsustainable.

We are in a new era of cross platform diversity.
GPII in a Nutshell

- Discover, edit and refine needs and preferences
- Securely store and share in the cloud
- Automatically personalize desktop, mobile, and web
- Get help when you need it (assistance on demand)
- Reduce the cost and complexity of developing accessible software
An open community for designers, users, accessibility folks, and all the other people who don’t usually fit into open source.

fluidproject.org
Tools and advice for creating personalized, inclusive open educational resources.

floeproject.org
1. Contribute to open web accessibility
   - ARIA, Dojo, jQuery
2. Share documentation, resources, and advice
   - Mozilla Developer Network
   - Design Handbook
3. Address systemic software development problems
1. Framework for building personalizable web apps
2. Collection of UI components you can use and adapt
3. An approach and way of thinking about development
infusion is declarative

- The *what*, not the *how*, of your program
- You write programs as JSON documents, not code
- **Why?** Data can be easily parsed, manipulated, transformed, saved, authored, and edited by people and programs
- That means your program can be changed by other developers and, increasingly, by users
infusion is reusable

- Even open source code is a problem
- To change code, you need to fork it
- For marginal, unusual, extreme, or awesome changes, these are often rejected or ignored
- Infusion lets you change code without changing it
- Programs can merged and unmerged from the outside
• The conventional wisdom of object orientation and MVC is to hide everything.

• Accessibility is all about exposing useful model information so we can represent it.

• Models in Infusion are transparent and mediated by change events that anyone can listen to.
A Closed Graph of Creators

Source code

Developer

Compiler

World of Compiled Code

Executable

User

No direct interaction allowed between the User and Source code.
An Open Graph of Creators

Developer 1
Configuration

Developer 2
Configuration

Configuration
Aggregation/Merging

Configuration
Integrator 1

Configuration
Integrator 2

Configuration
User 1
To User n

Configuration
Plugin author 1

Configuration
Developer 3

Configuration
infusion is open source

- Licensed under the BSD and ECL (Apache) license
- An open and welcoming community for contributors
- Mailing lists, wiki, IRC, Github and other public forums

github.com/fluid-project/infusion
Questions?

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