#### Doua Koellmer

Software Developer

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#### Open Source

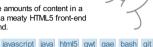
I maintain several projects related to math, physics, games, and application frameworks. Check out my account profiles to the right and my most ambitious endeavours below.



#### Swarm source, demo, demo

A next-generation web-based CMS...

for surfing and organizing large amounts of content in a natural, seamless fashion. Has a meaty HTML5 front-end and fast, scalable Java back-end.



### QuickPhvx source, demo, forums

A high-level game physics engine...

with an extensible, event-driven DOM-like API, CSS-like property system, multi-language support, top-down car physics, softbody simulation, and much more.



haxe as3 java javascript physics geometry git

#### Professional Experience

Most of my paid experience has been in game development, web development, virtual reality, CAD, and related fields. Check out a few select projects to the right and more details below.









#### Cofounder, CTO

Eagre Interactive EdTech Startup Summer 2012 - Recently



- · Created the company website.
- Ran a Kickstarter campaign.
- Created a series of interactive HTML5 minigames for McGraw-Hill's Earth Science division. See some samples here.
- Prototyped a radical new kind of fixed-layout ePub3 reader for textbooks.
- · All the overhead that goes along with running a business.

html5 javascript php java epub3 svn

### Game Programmer

Venan Entertainent Mobile Game Studio Winter 2011 - Spring 2012



- · Codeveloped the hit social MMORPG Book of Heroes.
- Codeveloped a social gaming platform running on Amazon's cloud service that serves millions of monthly users.
- Developed an internal web application for Book of Heroes allowing three designers to work concurrently to create hundreds of items, monsters, NPCs, quests, locations, and more.

ios android c++ c java php sql nosql aws svn

# Lead Programmer

Johnson Center for Simulation Serious Game Studio Spring 2008 - Winter 2011



- Led the programming and design for a \$1 million game funded by the Department of Defense to teach metal corrosion principles and prevention. They gave us another \$2 million the next year.
- Led a \$200,000 project funded by Medrad using force-feedback devices to simulate a gluing procedure that was too expensive to teach with real
- Programmed and co-designed a rhythm-based iOS game called <u>Touch</u> Tone Hero. It currently has a 4/5 rating.
- Created an in-house logging system to track daily project progress and compile reports for clients. It has been used for 4 years and saved countless manager-hours.
- · Made a proof-of-concept for using a \$30 Wilmote as a 6-DoF 3d tracker. Funded by the NSF to replace the multi-thousand dollar trackers normally in use.
- Made numerous custom hardware components for the center's various VR systems; mounts, electronics, casings, mock-ups, etc.



## Lead Programmer

Fluid Desk CAD Software Firm Fall 2005 - Winter 2008



- · See a quick presentation of my work here.
- Led a team of three developing a mesh-based geometric primitives API. supporting variably-triangulated, highly-flexible surface approximations, along with operations for creating various sections/intersections thereof.
- Used the above API to construct ~150 distinct 3d piping and ventilation elements, configured dynamically by dimensions retrieved from a UI and manufacturer specifications.
- Developed a Hidden Line Removal (HLR) engine, which takes 3d scenes. of elements from any viewpoint and renders a symbolic 2d line drawing of use to sanitary engineers.
- Developed a parametric geometry primitives API as a compliment to the mesh-based API. This was used for HLR as well as extremely accurate collision detection.



c++ objectarx autocad svn









ios as3 c++ c# php aug-reality positioning-system svn