
GOING COMMANDO

Developing a game with just you and the
demons in your head

Quinn Dunki, Pandemic Studios



Quinn Dunki
Lead AI Engineer, Pandemic Studios

Educated in Canada
Working in the US since 1998
Making games since 1981

ME

(which makes me 29)

- Apple //+/e/c
- Apple //gs
- Commodore 64
- Macintosh OS 6→OS X
- Windows 3.1→XP
- Atari Jaguar
- Nintendo 64
- Gameboy Advance
- PlayStation 2
- Xbox
- Xbox 360
- PlayStation 3

ME

- Silicon Graphics
- PlayMaker Studios
- H2O Entertainment
- Bungie
- The 3DO Company
- Pandemic Studios
- Electronic Arts
- Freelance / Contract

(last vanity slide, I promise)



PANDEMIC



300 employees

4 Studios

3 Countries

Merged with BioWare in 2005

Acquired by VGH in 2005

Acquired by Electronic Arts in 2008

My Desk Moved 14 times



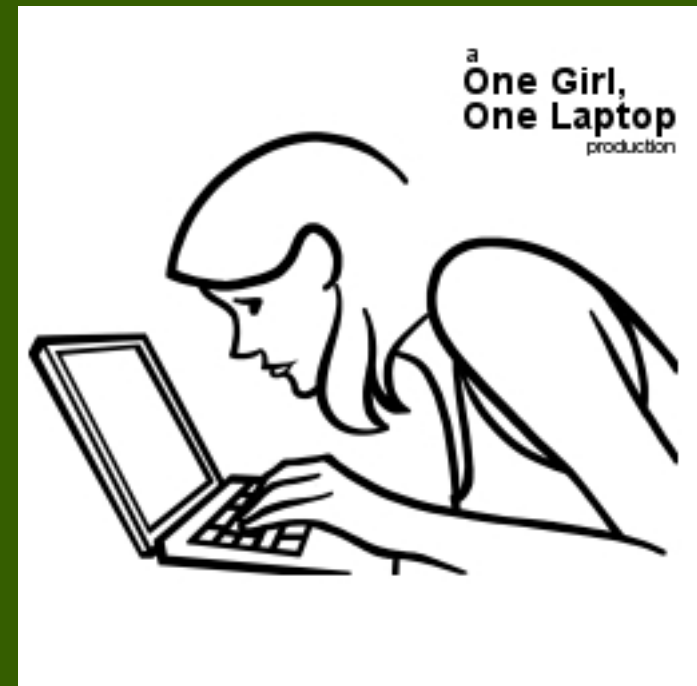
PANDEMIC



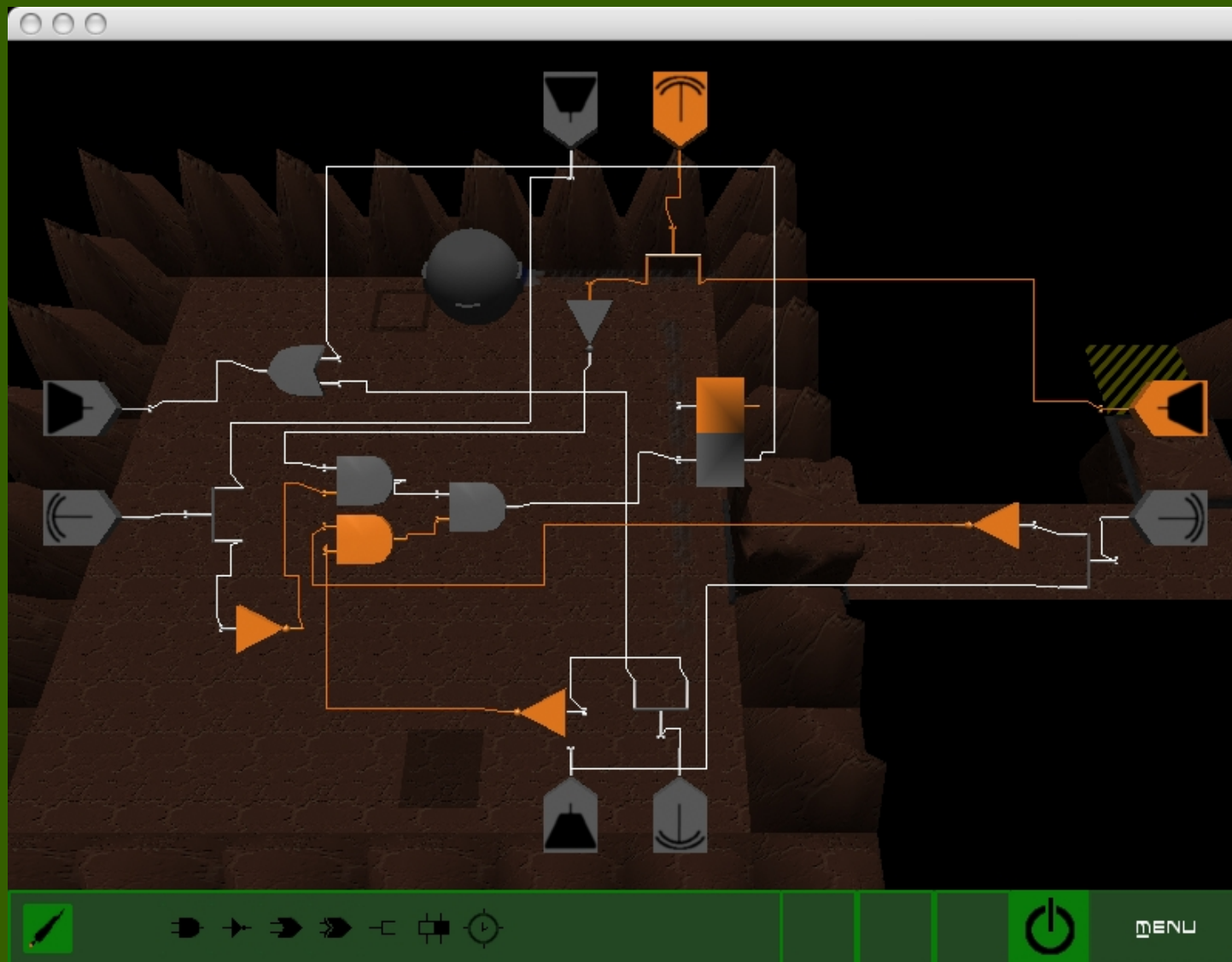
- Battlezone 1 & 2
- Dark Reign 1 & 2
- Triple Play Baseball
- Army Men RTS
- Star Wars: The Clone Wars
- Star Wars: Battlefront 1 & 2
- **Future Combat Systems Army Trainer**
- **Full Spectrum Warrior**
- **Full Spectrum Warrior: Ten Hammers**
- Mercenaries: Playground of Destruction
- Destroy All Humans 1 & 2
- Mercenaries 2
- Lord of the Rings: Conquest
- **Saboteur**
- Two unannounced projects

GATE

- Logic Puzzle Game
- QLib Engine
- ~4 years in development
- ~60100 lines of C++
- Second game with QLib
- ~1 year on Gate itself



GATE



AM I CRAZY?

- 1981: Pac Man, Atari 2600
 - Team:
 - Tod Frye (renaissance man)
- 2007: Grand Theft Auto IV, Xbox 360/PS3
 - Team:
 - 183 people in 6 countries
 - 43 programmers

AM I CRAZY?

- Can one person still do it?
- Will the end result be worth playing?
- Learning experience
- Working on areas I don't normally get to
- Small cog, big machine
- Therapy
- Too much free time

AM I CRAZY?

(yes)

HARD LESSONS

- Polish is hard
 - Incredibly time consuming
 - What's obvious to you is mysterious to others
 - Beta Testing is critical

HARD LESSONS

- Scale is vital
 - Think small
 - Think small!
 - Better to finish what you start
 - Everything is 3 times as much work as you think
 - Think small

HARD LESSONS

- Scale is vital
 - Avoid bipeds
 - Avoid 3D
 - Focus on a technology
 - Physics
 - Networking
 - AI
 - Graphics
 - Put your work where people can see it
 - Stupid bumpers

HARD LESSONS

- User Interface is hard
 - Incredible amount of work
 - Difficult to debug
 - Expensive to iterate
 - Difficult to make intuitive

SURPRISES

- Multi-platform is easy and worth it
 - Gate: Mac/PC, ~1000 lines of code
- Building your own engine is fun
 - QLib rocks cause I wrote it
- Localization is easy
 - Pardon my French
- Good engineering pays off
 - XML, OO, Decoupling, Design Patterns, UT

GOING IT ALONE

- Think small
 - Puzzle games
 - Side scrollers
 - Anything 2D
 - Modding
 - Pre-1995

GOING IT ALONE

- What resources do you have?
 - Friendless programmer?
 - Puzzle games
 - Procedural games
 - Armadillo Run
 - Crayon Physics
 - Geometry Wars
 - Ragdoll Kung-fu
 - Sundog
 - Public domain art sets
 - Sprites, textures, models
 - Indie community

GOING IT ALONE

- What resources do you have?
 - Next great Designer?
 - Experimental games
 - The Marriage
 - Cursor*10
 - Armageddon Empires
 - Scripting, SDKs, Mod Kits
 - XNA
 - Flash
 - Lua

GOING IT ALONE

- What resources do you have?
 - Starving Artist?
 - Art games
 - Dangerous High School Girls Ready to be Bad
 - The Witch's Yarn
 - Art-centric tools
 - Adventure Game Studio
 - Director
 - Web games

GOING IT ALONE

- What resources do you have?
 - Really starving Writer?
 - Web games
 - Kingdom of Loathing
 - Interactive Fiction engines
 - TADS
 - Z-Machine

PLATFORM

- Choose your tools wisely
 - Flash
 - XNA / C#
 - Lua, Ruby, Python
 - C/C++
 - Torque
 - Half-Life
 - Unreal
 - Mac, PC, Linux, Emulators?

MARKET

- Who are you trying to reach?
 - Mainstream
 - Flash: small fish big pond
 - Hard Core
 - XNA: emerging area, steep learning curve
 - Mods: quick start, limited skill set
 - Niche
 - IGF
 - Mac
 - Emulators

YOUR GOALS?

- Why are you doing this?
 - To learn to program
 - C/C++
 - To experiment with ideas
 - Flash
 - To make money
 - C/C++
 - To get a job
 - Use the tools of the trade
 - C/C++, OpenGL, DirectX, Lua, Photoshop, XSI, Maya

GAME = JOB?

- Yes, please
- Finish your project
 - Proves you've got what it takes
 - You've seen the ups and downs (and the 80/20)
 - Shows you can polish and debug
- Make a game, not a demo
 - Shows an appreciation of reality

GAME = JOB?

- Programmers:
 - Polish less important
 - We won't laugh at your art
 - Make the code good
 - We will look at it and judge your whole family by it
 - Demonstrate software engineering
 - Teams are huge. Show you play well with others.
 - Do one cool hard thing
 - Physics, animation, networking, AI, shaders, etc...

BE A PRO

- Credit where credit is due
 - Android Nation: Nate Piekos
 - One Girl One Laptop logo: RC Montesquieu
- Mind your copyrights!
- Don't burn bridges
- Don't sell it unless you own it

ANY QUESTIONS?

No hard ones, please. I'm trying to look smart up here.

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<http://www.quinndunki.com/gate>

<http://www.quinndunki.com/xfer/gate.pdf>