## iOS Games—Part 2

Game Design

Session 403

Graeme Devine
GRL Games

These are confidential sessions—please refrain from streaming, blogging, or taking pictures

## iOS Games—Part 1

- The secret sauce to
  - Game Center
  - iCloud
  - GL Kit
  - AirPlay

## **iOS** Games

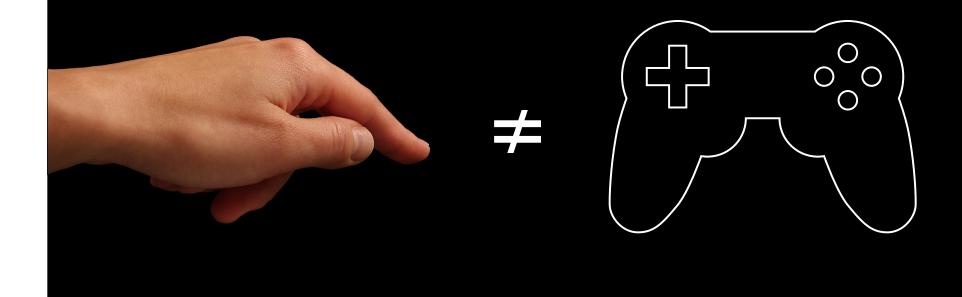
It is a great time to be making games for iOS



### iOS Games—Part 2

- Long way from first-generation iPhone
  - Graphics much more powerful
  - New and powerful toolkits such as Game Center
  - Games themselves are also evolving

# 10 Ideas for Making Games Great



- We are holding the world
- We are touching the world
- We are sharing the world







**Harbor Master** 



# Design to the Platform Different devices





Example: iMovie







**Direct interaction** 



**Indirect interaction** 







### Discoverable and useable



## Touching the world



- It is great to have 60hz in action games
- But you need that in word games too!

#### 10 Principles For Making Great Games

1. Design to the platform

# 2. Design in Audio from the Start

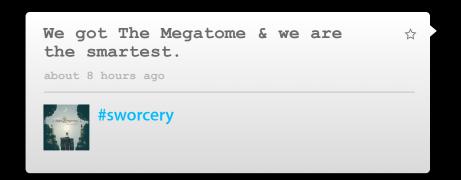
## **Audio**

- Many different environments for sound on iOS
  - Designing audio from the beginning
  - Speakers and headphones
  - Where people are playing

## Audio

## Adding to immersion

- Pervasive mood
- Fantastic audio





# Superbrothers Sword & Sworcery EP

Nathan Vella, Cofounder and President Capybara Games

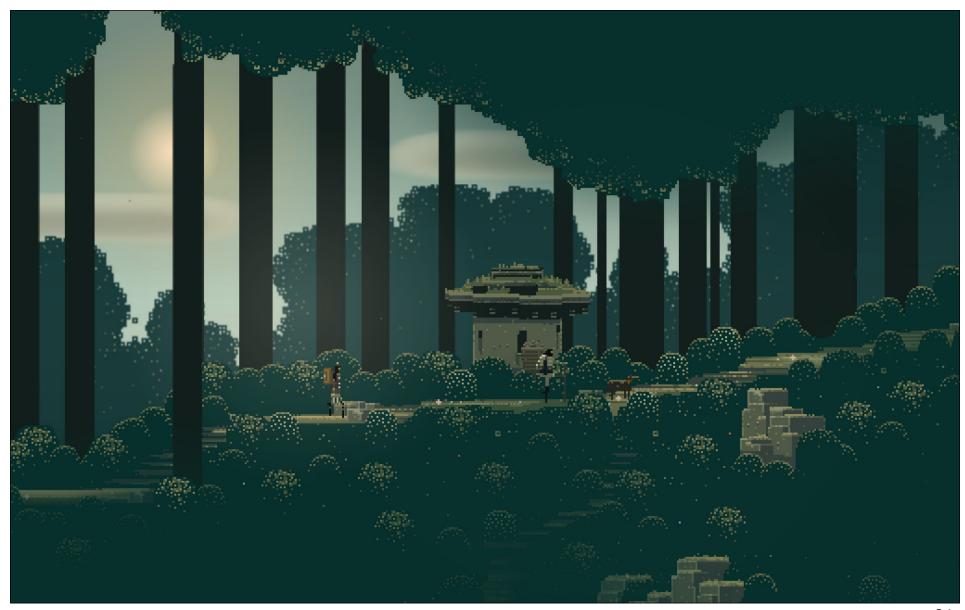
Craig Adams, Creative Director Superbrothers



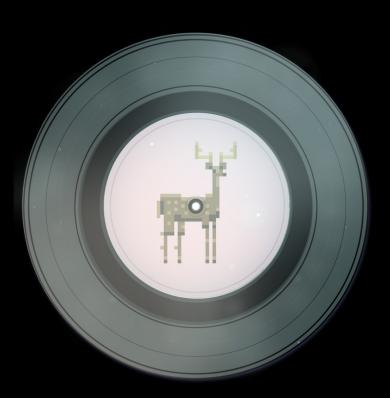






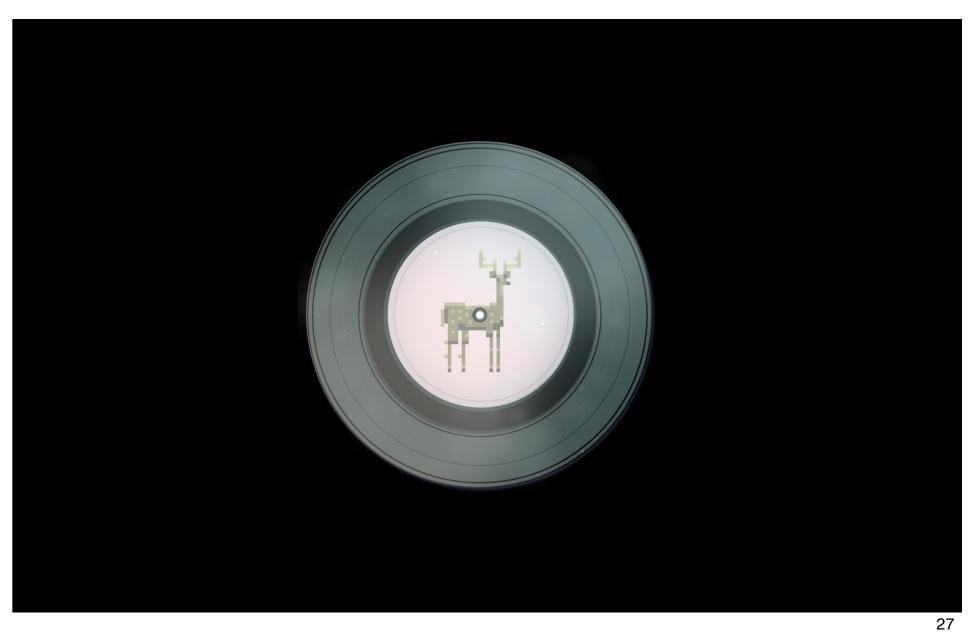


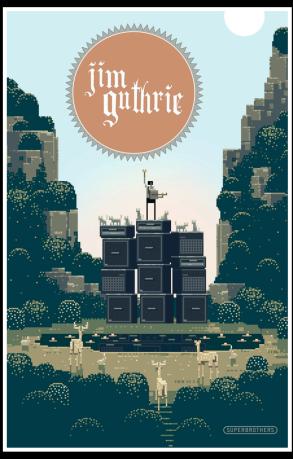
# "...it's like a record you can hang out in."



# Demo

Superbrothers: Sword & Sworcery EP











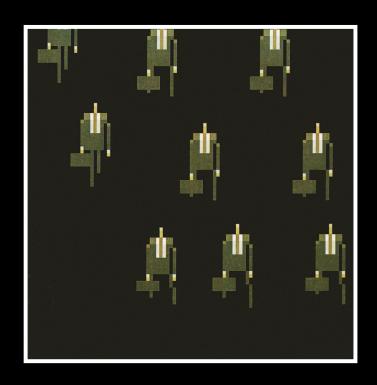


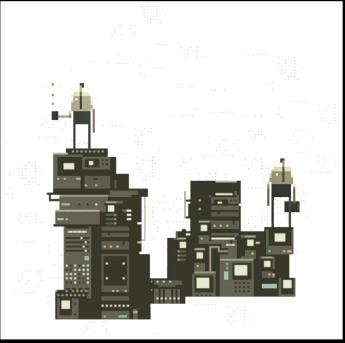
## **Start with Great Music**

Jim Guthrie: composer

# Songs as a Foundation

### Superbrothers + Jim Guthrie





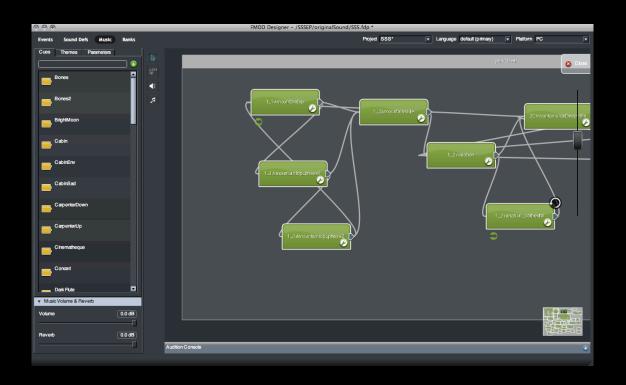
# Pre-Visualization Interpreting the Song

## Playable Prototype

Implementation and development

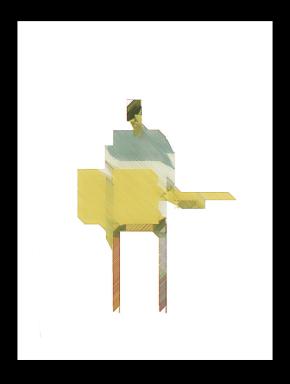
Song > Pre-Viz > Prototype

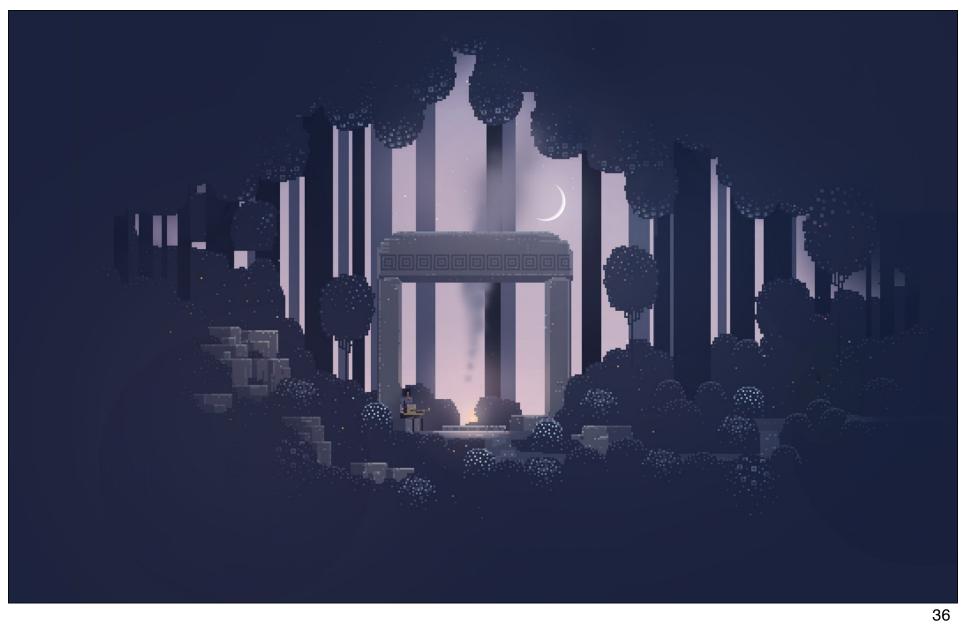
# Iterative Audio Design Using FMOD



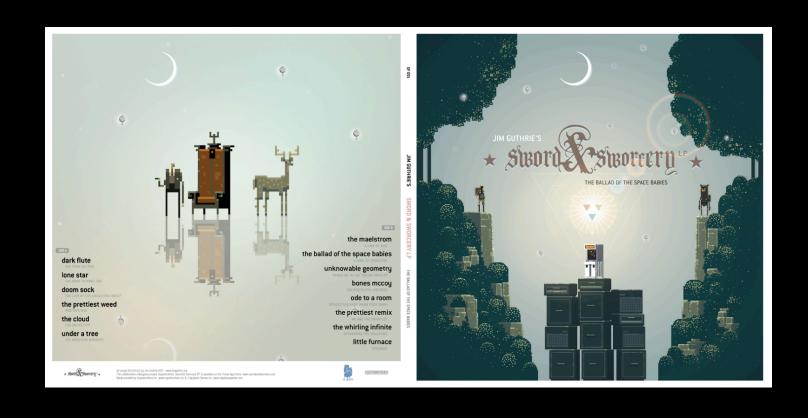
## **Collaborative Process**

Composer as co-creator





## Sword & Sworcery LP

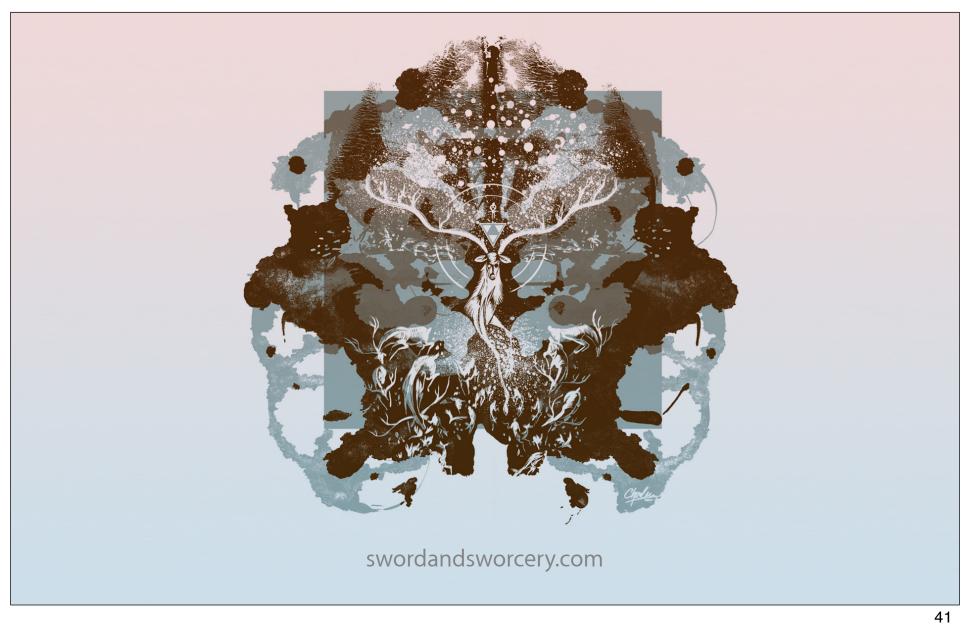


# There Is an Audience for Songs, Style, and Soul

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# There Is an Audience for Songs, Style, and Soul

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- 1. Design to the platform
- 2. Design in audio from the start

## 3. Leverage Game Center



- Leaderboards—friend to friend
- Achievements—individual challenges
  - Creative
  - Fun
  - Make them interesting

#### Beyond tic-tac-toe

- Add a challenge mode to your single-player game
- Co-op action game checkpoints
- Think outside the box!



- Photos
  - I love seeing pictures
  - Developers love OS photos

# "Am I not destroying my enemies when I make friends of them?"

**Abraham Lincoln** 

#### The secret sauce to your games



- Your friends
- Who play games

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center

## 4. Go the Extra Mile

#### Go the Extra Mile

- Polish is everything
- Polish is more than UI—use iOS technologies
  - Make sure the gameplay engages and builds
  - Read reviews
  - Add preferences you will never use yourself

#### Go the Extra Mile

- Try your game on every device you will sell it for
- Check every path through your app
- Development- and release-environment differences
  - Two paths through a server
  - Lots more friends in release!
- Think about that first update now

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
- 4. Go the extra mile

## 5. Refine Through Play Testing

# Refinement Play testing

- You do not come with every app install
- Hold back—watch people complain
- Better that they complain to you than on the App Store

# Refinement Scope

- Feature-creep design
- Gameplay stats
- Prioritize your work
- Cut features

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
- 4. Go the extra mile
- 5. Refine through play testing

# 6. Optimize

# Optimize Graphics

- Approach to optimization
  - Brain first
  - Then tools
  - GL Analyzer
  - GL Detective
  - XCode GL Debugger

# Optimize Startup time

- The 3-second rule
  - Defer asset loading
  - Thread code
  - Work out what's going on

# Optimize Battery life

- All these devices run off batteries
- Players are sensitive to power-hungry applications
- Test and retest between updates
- Fortunately, there is an app for that

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
- 4. Go the extra mile
- 5. Refine through play testing
- 6. Optimize

# 7. Connect

## Connect Update your players

- Add a news section to your app that you can push to
  - This may become your primary marketing channel
  - It is a good way of talking to your players on their terms
  - Remember to update it postlaunch

### Connect Feedback

- Provide an in-game mechanism for your players to contact you
  - Make this opt-in

# Connect Community



- Allow users to share gameplay experiences
  - Puzzle solutions
  - Race ghosts
  - Jump flags

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
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- 7. Connect

# 8. Localize

## Localize World market

- Design for localization
- Markets outside North America are growing
- Localize your app description
- Localize your app

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
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- 7. Connect
- 8. Localize

## 9. Get Up and Running

### **Get Up and Running**

#### Day two

- Make it run on paper, chalkboards, whiteboards, cards, etc.
  - Play it every day
  - Do not let technology stop you from playing your game

## **Get Up and Running**

#### Reality is overrated

- Super-duper renderer/physics, etc.
  - Absolutely great
  - Absolutely terrible if this is all you work on

#### 10 Principles For Making Great Games

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
- 4. Go the extra mile
- 5. Refine through play testing
- 6. Optimize
- 7. Connect
- 8. Localize
- 9. Get up and running

#### Game programming

- iOS SDK provides a stable foundation
  - Better than rolling your own
  - Expected behavior
  - Finish your game faster
  - Be an iOS app

#### Save games and home buttons



- The home button is the save-game button
- Most of these things are also phones
- You need to accept that and play nice
- Remember to pause the game when they return

iOS 5—iCloud



- Think about more than syncing
- Universal Apps become much more attractive
- Different gameplay, different devices, one game

iOS 5—AirPlay



- What is the player looking at?
- Opportunity
  - Many local devices

#### iOS Games - Part 2

- 1. Design to the platform
- 2. Design in audio from the start
- 3. Leverage Game Center
- 4. Go the extra mile
- 5. Refine through play testing
- 6. Optimize
- 7. Connect
- 8. Localize
- 9. Get up and running
- 10. Embrace the platform

# Make It Fantastic!



## **Game Center Sessions**

Introduction to Game Center	Mission Tuesday 4:30PM
Multiplayer Gaming with Game Center	Mission Wednesday 10:15AM
Turn-Based Gaming with Game Center	Mission Wednesday 11:30AM
Introduction to Game Center	Russian Hill Friday 9:00AM

## iCloud Sessions

iCloud Storage Overview	Presidio Tuesday 11:30AM
Taking Advantage of File Coordination	Pacific Heights Tuesday 4:30PM
Storing Documents in iCloud Using iOS 5	Presidio Wednesday 3:15PM

## **OpenGL ES Sessions**

Advances in OpenGL ES for iOS 5	Mission Wednesday 2:00PM
Tools for Tuning OpenGL ES Apps on iOS	Mission Wednesday 3:15PM
Best Practices for OpenGL ES Apps in iOS	Mission Wednesday 4:30PM

## **AirPlay Session**

AirPlay and External Displays in iOS Apps

Presidio Tuesday 3:15PM

## Labs

Game Design for iOS Lab

Graphics, Media & Games Lab A Tuesday 2:00PM

## For More Information

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Graphics and Game Technologies Evangelist aschaffer@apple.com

# **É** WWDC2011