Surviving Cross Platform Development with Skulls OF THE SUGUN



Borut Pfeifer Lead Programmer, design 17-BIT/Plush Apocalypse Productions

















SKULLS OF THE SHOGUN



Gameplay Overview

Development Cycle

Design Challenges

Technical Challenges

Business/Marketing Challenges



Why Cross Platform?

Myth of multi-screen gameplay

Building audience/awareness

Mitigate platform lifecycle risks

Use platform deals to help build

Background



Cross-platform roots

- Started as iPhone concept (2009)
- Turn based + sped up gameplay/HD art
- Launched on Xbox 360/WinPhone/Win8
- Then Win7 PCs (Steam), iOS, Mac/Linux/Android

Development

- 4 years (10 months part time)
- 2 programmers, 1 artist
- Support people (sound, QA, porting)
- Remote development (3 locations)

Development Cycle

Concept – prototyping, mission statement

Pre-production - vertical slice

Production – build remaining art, functionality

Post-production – QA, beta, porting

Concept & Preproduction (1st year)

- PC + Xbox 360 focused (XNA)
- Prototype 2 levels (small to big), avg level size



Production (~2 years)

- Focus on remaining work: story, AI, networking, tutorial
- Start mobile/Windows phone development



Post-Production (~1 year)

Microsoft Platforms

- Windows 8 port w/MonoGame
- ARM tablet optimizations
- Added asynchronous cross platform play

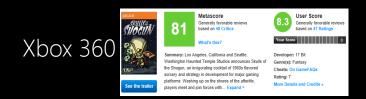
Steam/iOS/Android

- 4 level expansion added
- New backend for realtime & async networking

Launch & Reception

| 🚫 met | tacritic | Movies | Game | es TV | Music | Features | | |
|--------------|--|--|--------------------------|---------------------------------------|--|--|--|--|
| New Releases | Coming Soon | High Scores | Browse A-Z | Publications | Publishers | Trailers | | |
| | the Shogu Date: Nov 26, 2013 Critic Re | Also On: PC, | Xbox 360 User Reviews | | Tweet & Credits | Trailers & Videos | | |
| | 93 | Metascore Universal acc based on 5 C What's this? | laim ritics | Yo | | core average reviews 14 Ratings 0 | | |
| | Summary: Crush your enemies and eal their skulls! Skulls of the Shogun is a fast-paced turn-based strategy game, supercharged with fighting-game fare and double-suffed with a serious sense of humor! Enter the Samurai Aflertife and join forces with undead warriors, magical monks, and mighty Expand * | | | game, Che stuffed Mor Afterlife | Genre(s): Fantasy Cheats: On GameFAQs More Details and Credits » | | | |
| iPad/ | 'iPho | ne | | | | | | |





- 1/2013 Microsoft launch
- 5/2013 Steam Early Access
- 11/2013 iOS
- 5/2014 Humble PC + Android Bundle
- 8/2014 Google Play
- 10/2014 OUYA
- ??? PS4 (Vita?)

Critical reception

- +20 awards & nominations
- ~4.4 user rating on app stores







Technology

Business & Marketing

Design Challenges

Satisfying multiple audiences

Best-in-class Interface

Design Challenge - Accessible Strategy

- Introduce strategy gameplay to casual players:
- Larger potential audience, fit on console
- Fix common flaws in genre
- Streamline interface, keep depth
- Approachable style East meets West influences



Design Challenge - Accessible Strategy

Arcade Strategy – direct control, realtime multiplayer <u>Gridless combat – more st</u>rategy, less puzzle

- Rely on intuitive complexity
- Needed crisp visual/audio design



Design Challenge - Accessible Strategy

Heavily playtested (10 festivals/shows) 3 major tutorial revisions Success in controls, strategy, visual design



Problems:

- Single player difficulty spikes different playstyles
- Appealing to different players (marketing)
- Briefly attempted metrics (time vs. traditional playtesting)

Interface challenges

Strategy game on console!

Touch interface that felt as responsive as a console game

Keep PC interface precision







Console Interface

Modes became mandatory:

- Select
- Move
- Targeting



Thumbstick diagonals are horrible



Info placed front & center where eye is

The Secret of Good Touch Interfaces

Touch DOWN

Touch up - disambiguation (drag, pinch, double tap)

Disambiguate contextually, less aggressively

- Tap unit always selects, except for pinch
- low impact false positives drag always moves camera

Touch-anchored (relocating) virtual dpad

Relocate anchor drawing paths on tablets





PC Interface

Remove double click

- First click changes state
- Second advances again
- Bonus: less effort!

Remove hover as a necessity

- Find other states to display info
- Modal and contextual e.g. near targets by dist

Keep any speed shortcuts for expert players

Design Challenges – Lessons Learned

Find & streamline universal aspects of gameplay.

Importance of visual design in making mechanics read across platforms

Manage long-term playtesting as well as short term. Too much single player content?

Don't sacrifice the strengths of any platform

Technical Challenges

2D Art

User Interface/Menus

Connectivity

C# - productivity win

- XNA->MonoGame for Win8/iOS/Mac+Linux/Android
- High code sharing, Fast tool dev
- Memory management (always avoid garbage)



2D Art Pipeline

Custom animation, level tools XNA content pipeline

Lessons:

- Avoid double compression!
- No pre-mult alpha compression!
- Android texture format hell ETC1

Optimizations:

- Find all opportunities to reduce fill rate
- 16 bit shader precision (battery life)
- Simpler blending, lower detail skeletons

| File End Build Tenniate Rotate Scale Pirot Partic Perit Perit Perit Partic Perit Perit Perit Perit Perit Perit Perit | Nar ACT IDLE ZER Mov ATT | NATED_AP E NO POSE e_Enter_AP ACK_tangeting _1 cate Copy Trim D | elete | #Frames 150 50 50 111 15 25 | FF 40 30 30 30 18 Up | |
|--|---|--|-------|---|--|----------|
| Very risk | Nar ACT IDLE ZER Mov ATT HIT_ Cre Parts | me TVATED_AP E Ko POSE ex_Enter_AP ACK_targeling 1 exte Copy Trim D s: | | 150 50 11 15 25 | 40 40 30 30 30 18 | |
| Partie Partie Party Stap Corp Graph Corp Graph Corp Graph Corp Graph Partie Partie | Nar ACT IDLE ZER Mov ATT HIT_ Cre Parts | me TVATED_AP E Ko POSE ex_Enter_AP ACK_targeling 1 exte Copy Trim D s: | | 150 50 11 15 25 | 40 40 30 30 30 18 | |
| Partie Scale Graph Corp Graph Graph Dech Graph Graph Dech Graph Graph Partie Partie Partie Partie Partie Partie Partie Scale Graph Eventa Eventa Partie Party Stop Scalecter France # 14 | ACT IDLE ZER Mov ATT HIT Cre Parts | TVATED_AP | | 150 50 11 15 25 | 40 40 30 30 30 18 | |
| Scale Graph Color Graph Color Graph Dech Graph Perior Poste Poste Poste | IDLE ZER Mov ATT HIT Cre Parts | E RO POSE re_Enter_AP ACK_Jargeting _1 eate Copy Trim D s: | | 50 50 11 15 25 | 40 30 30 30 18 | |
| Car Gaph Car Gaph Dreph Gaph Dreph Gaph Partie Partie Partie | ZER Mov ATT HIT Cre Parts | NO POSE re_Enter_AP _1 _1 eate Copy Trim D | | 50 11 15 25 | 30 30 30 18 | |
| Car Gaph Car Gaph Dreph Gaph Dreph Gaph Partie Partie Partie | Mov ATT HIT Cre Parts | e_Enter_AP ACK_targeting _1 eate Copy Trim D | | 11 15 25 | 30 30 18 | _ |
| Perior Poiss Parts Pa | ATT HIT Cre Parts | ACK_targeting _1 eate Copy Trim D | | 15 25 | 30 | |
| Corry Corry Corry Corry Partie Partie Par | HIT_ Cre Parts | _1 eate Copy Trim D | | 25 | 18 | |
| Corry Corry Corry Corry Partie Partie Par | Cre Parts | reate Copy Trim D | | | - | ~ |
| Pois Pois Prime Point Point Point Point <t< td=""><td>Parts</td><td>s:</td><td></td><td></td><td>Up</td><td>Dn</td></t<> | Parts | s: | | | Up | Dn |
| Pose VS Pose VS Pose | Parts | s: | | | Op | Un |
| Pay Step << >> Selected Frame # 14 | _ | | | | | |
| Pay Step << >> Selected Frame # 14 | | | Pmt | Use L | Lck Vis | Img ^ |
| Play Scop << >> Selected Frame #: 14 Screenshot | 9 | army SKULL | 11 | | 6 | |
| Play Stop << >>> Selected Frame #: 14 Screenshot | - | | | | | 2.5 |
| Play Stop Selected Frame #: 14 Screenshot | 10 | army_JAW | 9 | Image: Second | | |
| Play Scop << >> Selected Frame #: 14 Screenshot | 11 | cav_HELMET | 4 | I | ſ | ~ |
| Play Stop << >>> Selected Frame #: 14 Screenshot | 12 | army_BLUE_HORN | 11 | • | ، | \odot |
| Play Stop Selected Frame #: 14 Screenshot | 13 | army_RED_HORN | 11 | • | ، | \sim |
| They stop accession accession accession | 14 | amy_SWORD | 16 | | <u>_</u> | |
| | 15 | amy_IDLE_HANDS | 17 | | <u>^</u> © | 3 |
| Time Scale: 1.0 Preview Looped: Preview Range: to color None v Sprite Properties: Part Properties: width 3000 \$ | 16 | army_ACTION_HAND | 17 | | <u>r</u> o | E. |
| A Misc | 17 | army_GAUNTLET | 7 | | n o | |
| Anims (Collection) Data AngelXNA.Actors.SpritePartData | | amY GAUNTLET BACKHAND | 14 | | 00 | Ř |
| ▷ Color 255, 255, 255, 255 4 Local ▷ ColorVec 1, 1, 1, 1 ▷ Color 205, 255, 255, 255 | | ann_anonneen_anonno | 1.4 | | | ~ |
| MpMapType Normal DrawDepth 20 | 18 | | | Parent | | |
| ▷ OriginalSize 0.6, 0.6 ▷ PositionOffset 0.170439035, -2.03938985 | | d Replace Delete | | rururu | | |
| Rotation 0 RotationOffset 49.74713 | Ad | | | | | ^ |
| ▷ Size 0.6, 0.6 ▷ ScaleOffset 0.209439531, 0.209439531 SpriteSheetDity False ✓ ▲ World ✓ | Ad | d Replace Delete | | | | |



SECRET TO CROSS PLATFORM UI

SECRET TO CROSS PLATFORM UI

NO ONE CARES HOW GOOD YOUR MENUS LOOK

SECRET TO CROSS PLATFORM UI

Simple

Functional

Not horrible looking

Cross Platform UI

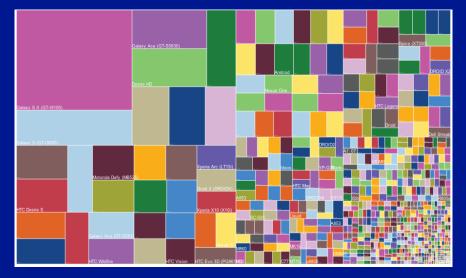
Hardware Fragmentation Inconsistent APIs for DPI/size

KISS:

- Use 3:2 as base
- Touchable/readable fonts on 800x600, 4"

Spend effort on basic tech:

- Anchoring, resolution scaling
- Auto scaling text & font resolutions
- Auto-adjust widgets per platform (eg. button prompts)
- Any testing/visualization tools help a lot



Android devices July 2013

Cross-platform functionality

Cloud saves

- Merge progress
- Differentiate cloud vs local saves

Async multiplayer

- Repurpose tech realtime net packets, scripting
- 4 player matchmaking time sink
- Don't rely on push notifications
- Parse backend

Achievements/Leaderboards

• Platform specific for featuring – not worth it?

Tech Challenges – Lessons Learned

Pick right tools w/focus on productivity – for us C#

Minor features in some areas can cause exponential work across platforms.

Cover weaknesses in cross platform tech in design.

Pick spots to amortize dev costs across platforms.

Business Challenges

Marketing to different audiences

Dealing with changing markets

Pricing/Sales

Other Promotions

Business Challenge – Reaching Multiple Audiences

Casual players: still put off by genre-specificity Hardcore players: art style too casual?

Marketing = signaling who should pay attention

- How does user perceive app through art/videos/marketing?
- Why do they perceive it is for them?
- Don't be afraid to target different audiences with marketing
- Hard on single storefronts

Business Challenge – Reaching Multiple Audiences

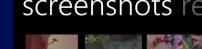
Windows Phone Storefront



Size: 57 MB

Skulls of the Shogun is an arcade strategy game featuring dead samurai fighting in the samurai afterlife.

TEEN









Skulls of the Shogun 17-BIT





Speedy turn-based strategy, with arcade flair and a serious sense of humor!

Business Challenge - Changing Markets

Xbox 360 Windows Phone Windows 8 Steam iOS Android

- 2010: 200k vs 2013: 20-30k
- underserved, growing
- brand new marketplace
- starting to get crowded, EA
- 40% of similar features prior year
- <50% of iOS sales?</p>

Understand where in the lifecycle the platform is:

- Early days risky, pre-launch PR
- Golden age featuring has biggest impact
- Crowded & old post-launch, pay for eyeballs

Pricing

Different platforms, different prices?

- Launch XBLA \$15, Win8 \$10, Phone \$7
- 2 months MS price drop \$10/\$7/\$5 no effect
- iOS \$5, Gplay launch \$2

Players now used to price differences per market

Negative perception mobile -> PC/console

Don't be afraid of "premium" mobile prices

Sales

Steam & Steam sales:

- 50% 75% off
- 2-3 months apart
- Front page promotion

Promotion, not discounts

iOS sales - in between (use w/other promotions)

Bundles can backfire

Whatever you do, DON'T PANIC

Marketing strategies - Steam

Featured sales Coupon based cross-promotion

- Based on similar games
- Knock on sales effect

Recommendations & Curators:

- Most traffic from store page (direct recommendations)
- Curator lists: not effective?
- Tagging



Marketing strategies - iTunes

IOS - Hard for premium games

Keyword selection strategy

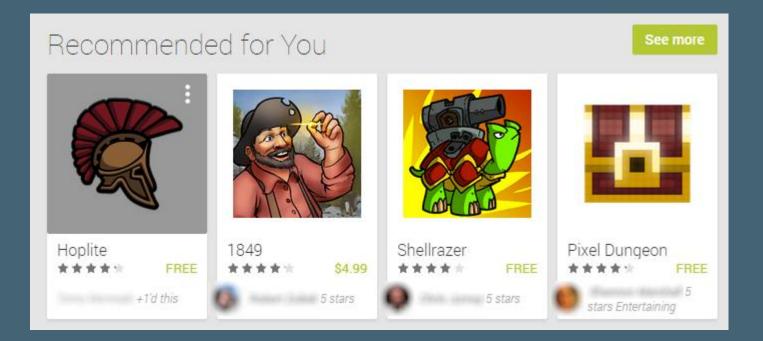
- Highly searched terms
- Lowest # of results





Free Promotions - only with IAP or other titles

Marketing strategies – Google Play Google Play: G+ sharing/recommendations How to encourage users to +1/review? Direct marketing?



Business/Marketing - Lessons learned

Multiple audiences – avoid only the overlap

When targeting multiple audiences, be sure to signal to each of them individually

Patience in sales, focus on promotion opportunity

Surviving Cross Platform Development!

Marathon not a sprint

Build on each launch – & post launch!

Commit time, use all the tools:

- Festivals & shows
- Sales & promotions
- Announcements/updates
- Cross promotion
- Direct marketing
- Advertising



http://skullsoftheshogun.com

XBLA, Win Phone, Win 8, Steam (PC/Mac/Linux), iPhone/iPad, Android, OUYA, & soon PlayStation 4!

Questions: **borut@plushapocalypse.com**

Game/Business/Press related: pr@17-BIT.com

http://www.gamasutra.com/view/feature/185853/accessible_strategy_is_not_an_.php

http://www.plushapocalypse.com/borut/presentations/SotSAIPostMort.ppt