



Build That Wall: Creating the Audio for *Bastion*

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SUPERGIANT
GAMES



Who is this guy?

...and why is he standing up there?

- Responsible for the music, SFX and recording/directing the narration for *Bastion*
- *Bastion* is my first game
...and this is my first GDC talk
- Musician/songwriter/producer



How did I get involved?

- I have talented friends
 - Amir Rao
 - Friends since we were 8
 - Amir asked me, I said "Yes!"
- I'm super lucky!

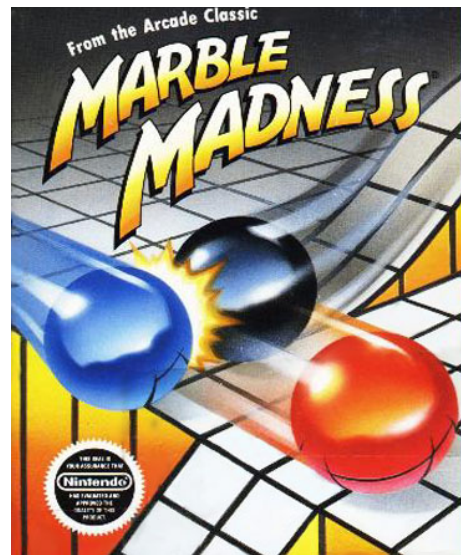


I Love Games.



Influences

- Grew up on games:
 - Nintendo, Snes, PC, Sega, you name it!
 - Marble Madness
 - Dungeon Keeper
 - Bionic Commando
 - Diablo 2



More Influences

- Wide range of musical influences
 - From The Beatles to Jeff Buckley
 - Show tunes to Led Zeppelin
 - Bjork, Pixies, Radiohead, DJ Shadow, etc!



How did I do it?

- Alone in a closet, that's how.
 - I'm the whole audio team
 - All recorded in my NY apartment (video)
 - Rest of the team in a house in San Jose, CA
 - Acceptable to look like this =>



How did I do it?

- Skype, Dropbox, Subversion
- Configured game around the talent we had on team
- I had no money
 - Tried to make it sound like I DID!
 - Time + effort can yield “expensive” results

Overview

- Music:

How I made over an hour of hi-fi (sounding) original music with a lo-fi setup

Overview

- Narration:

How I recorded 3,000+ lines of professional sounding narration in my closet

Overview

- Sound Effects:

How I made hundreds of sound effects with only a small sample library and mouth noises

Early Involvement

- Joined project early while tone was still being established
- Gritty frontier fantasy, a la Cormac McCarthy
- First to execute on tone



Early Involvement

- This is how early I was involved (video)
 - Before there was art, there was music
 - Oldest shipping assets "TownMusicRough"
 - Music led design, art, writing
 - Gave me time to figure out what I was doing!



The Tools

- Logic Pro, Sure KSM-32, Digi002...

...that's about it!

(SM 57 for talkback
and mouth noises)



The Tools

- Plugins are a miracle of modern science
- Wall of outboard gear = expensive
- Logic Pro is awesome/Presets are friends



Music

- I did the thing I knew how to do...
write songs!
- Set out to make something I'd
never heard in games before
- Big unexplored region for game
music: not just electronic,
orchestral, or straight up rock



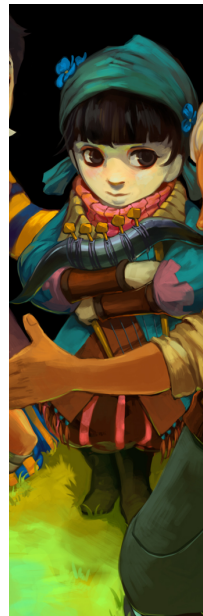
Music

- Acoustic Frontier Trip-hop
 - Gritty western vibe, exotic sounds, with modern urban flare
 - Transportive/Other-worldly



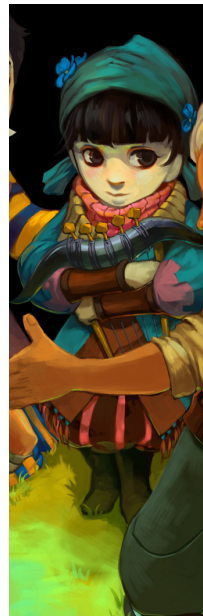
Zia's Song

- Wanted to create a moment based around a song performed by a character
- Plenty of songs in games, but not quite like this
- Somber moment, finding a survivor



Zia's Song

- Wrote lyrics based on game world fiction
- Massive gameworld doc by Greg, tons of background
- Written from character's perspective
- Demoed songs myself for the team (Audio)



Zia's Song

- Once song was approved, recorded with Ashley Barrett
- Level designed around song
 - Narration references lyrics



Zia's Song

- Applied programmatic reverb/panning
 - Getting closer to the singer makes the music louder, and the reverb quieter
- Here's how it all came together (video)

Music Techniques/Approach

- Had to be creative to get a hi-fi sound on a low budget
 - Can't get a huge live drum sound in my closet...
 - Tailored approach to suit my means

Music Techniques/Approach

- Equal parts MIDI, Samples, and Live
(Logic Session)
 - Tonal goal + tempo that leads to a riff or loop
- Dressed up my samples!
 - Give them some character

Narration

- Logan Cunningham is a good man
- Friend + roommate + great actor = "Let's try narration!"
- Over 3,000 lines of narration in Bastion!
 - Recorded over the course of a year, dozens of sessions
 - Willingness to spend time overcame low-fi setup



Narration

- Close mic to minimize room noise
- Many takes to get the performance right (video)
- We'd pick takes together, and make a comp if necessary (apparently this is not normal...)
- Treat each line like the vocal in a song
 - Automate levels, Compression, EQ

Narration

- Consistency is key
 - Recorded over a super long period
 - Had to re-record some of the early lines, since the character evolved
 - Developed a warm-up to find Rucks quickly

Narration

- Gangs of New York + The Big Lebowski + Deadwood = Rucks



Narration

- Gangs of New York + The Big Lebowski + Deadwood = Rucks (video)



Narration Implementation

- Don't break the immersion!
- No line stomping
 - NEVER interrupts himself
 - NEVER repeats himself

Narration Implementation

- Everything scripted
 - “Queue = NeverQueue” means don’t play if another line is playing
 - “Queue = Always” is for essential lines of narration
 - Here is a bunch of scary code (our scripting system):

```
Someone who aint like Mr Beckley
OnDestroy 7282 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
OnDestroy 7277 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
OnDestroy 7297 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
OnDestroy 7278 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
OnCounter NumFamilyDestroyed >= 1 PlaySound Survivor01_9 ; Queue = NeverQueue ; RequiredFalseFlag = FlagNearZulf ; DelaySeconds = 0.8 ;

OnEnter 12926 SetFlagTrue FlagNearZulf ; DelaySeconds = 0.4 ;

// They never saw what it was like
// OnDestroy StatuesA PlaySound Survivor01_10 ; DelaySeconds = 0.6

// OnDestroy 7282 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
// OnDestroy 7277 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
// OnDestroy 7297 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
// OnDestroy 7278 IncrementCounter NumFamilyDestroyed 1 ; FireCount = 1
// OnCounter NumFamilyDestroyed >= 1 PlaySound Survivor01_10 ; DelaySeconds = 0.6 ;

// It was someone... like him
OnEnter 9302 PlaySound Survivor01_11 ; Queue = Always ;

// Kid sees im there agape
//OnEnter 9304 PlaySound Survivor01_12
OnCounter NumSurvivorSeen >= 1 PlaySound Survivor01_12 ; Queue = NeverQueue ; RequiredFalseFlag = FLAGS_NEW_GAME_PLUS ; DelaySeconds = 0.85 ;

// Something so familiar about that man...
OnCounter NumSurvivorSeen >= 1 PlaySound Survivor01_44 ; Queue = NeverQueue ; RequiredFlag = FLAGS_NEW_GAME_PLUS ; DelaySeconds = 0.85 ;

OnEnter 9304 IncrementCounter NumSurvivorSeen 1 ;
OnDestroy 7917 IncrementCounter NumSurvivorsSeen 1 ;
OnDestroy 11587 IncrementCounter NumSurvivorsSeen 1 ;
OnDestroy 11338 IncrementCounter NumSurvivorsSeen 1 ;
OnDestroy 7917 IncrementCounter NumSurvivorsSeen 1 ;
OnDestroy 7916 IncrementCounter NumSurvivorsSeen 1 ;

// Can't do nothing to get his attention.
OnHit 14156 14151 PlaySound Survivor01_45 ; Queue = NeverQueue ; DelaySeconds = 0.35 ;

// Hits a snag or two
// OnEnter 9313 PlaySound Survivor01_13 ; DelaySeconds = 0.8
OnEnter 9320 PlaySound Survivor01_13 ; Queue = Always ; DelaySeconds = 0.35 ;

// He aint about to stop
OnDestroy 13681 PlaySound Survivor01_14 ; Queue = Always ; DelaySeconds = 1.15 ;

// He aint about to slow down [[ GREG: I commented this out because of stomping ~ Amir ]]
// OnEnter 9314 PlaySound Survivor01_15 ; SaveStatus = true

// He's got so many questions after all
OnEnter 9313 PlaySound Survivor01_16 ; Queue = Always ;
```

(More) Narration

- Neutral line delivery
- Allowed us to have lines appear in any order
(this also made the writing extra tricky)
- Reactive!
- Inspired by moments like Psycho Mantis from Metal Gear: Solid (video)
- Tried have a bunch of this kind of moment

SFX

- First time doing SFX,
lots of experimentation
- Comprised of samples, foley, and...
...mouth noises.
- If John Ottman can do it, so can I!



SFX

- Good sound libraries make life better
 - Apartment not an ideal foley studio
(LOGIC SFX SESSION)

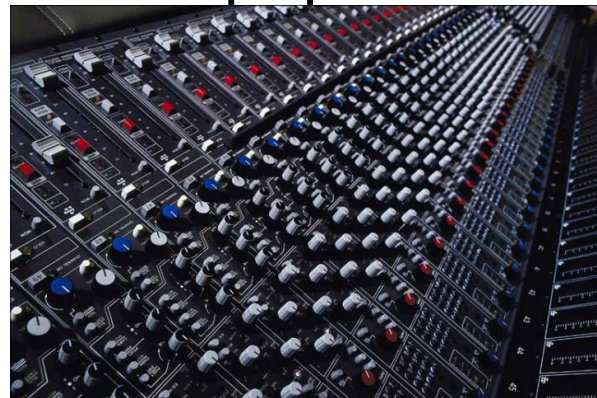
SFX

- Looked for similar sounds to use as ingredients...
...CATAPULTS!
- My main SFX goals:
 - Give good player feedback
 - Don't be annoying
 - Seem like I know what I'm doing



Mixing and Integration

- Tried to highlight my strengths in the mix
 - Narration > Music > SFX
(in order of importance)
 - Automation helped the narration pop out
- Immersion is king



Mixing and Integration

- XACT is...free.
 - Counter intuitive for a DAW guy like myself
 - Horrible build times...
not designed for this much audio!
 - Made the team hate me

Summing it up

- I got in early, drove the tone of the game
 - Helped the audio feel organic/integral
- Played to my strengths
 - I scoped for what I knew I could accomplish
 - Limitations were guidelines
- I worked super hard, alone in my apartment
- Poured a lot of love into it and loved the work!

It Worked

- Not bad for recording in my closet!!!



Questions?