Job Simulator Postmortem
VR Design, Tech, and Business Lessons Learned
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What is Job Simulator?
What went right/wrong?
What did we learn?
Who has 14 hours free? ;)
Sharing some of the things we think are most relevant.
Time for questions!
Back to a time before VR...
Next Steps in VR

• All our VR game ideas felt like a massive compromise
  • Nothing felt right
  • Something was missing
• How can we build a game without motion sickness?
1 week together to build something for GDC
Idea before receiving hardware: A Warioware-like
Hands!!!
So much possibility with such simple input!
Mini-games with hands — Circus Performer
Window Washer
Near-field manipulation!

All of these are jobs
Titled a document “Job Simulator” as a temp/joke name
Kitchen had the most promise
Pushed forward on that
Now just have to build the GDC demo!
Death by a million expectations

• The problem with a kitchen
  • People have pre-conceived notions
  • Need to satisfy all expectations
  • Don’t always have to deliver on exact expectations
  • Have to deliver something, or cut it
• Ex: Rolling pin and Knife
Rolling Pins

- Have a very specific purpose in real life
  - Did not do the thing people expected in VR
  - Unable to implement “flattening” for every object
  - Also a physics nightmare

- Every object needed a purpose!
“The Knife”
rubber knives that cartoonishly bend away from things so as not to cut them

in list Tech - Valve Showcase
UHHHH....
(Post-GDC we ended up cutting the knife)
We need a character!

- Floating robots!
- No need to rig/skin
- Performance friendly
- Could actually yield empathy through anthropomorphism
- Easy to build exaggerated expressions
Jobbot’s Office
Extremely useful design exercise early on
Please ring bell for service
Jobbot’s Office

• We cut it
• Valve: “you have 3 minutes”
  • Removed the intro
• One of the most valuable exercises
  • Led us to our premise
A Game About Jobs

- Original premise
- Training simulator
- Robot led you through various jobs
- ...why?
In 2050, robots have taken all human jobs.

The “Job Simulator” is a historical recreation of jobs that used to exist.

Learn what it was like “to job”.

Robots did poor research on history and that would be apparent in-game.
Strong premise = better design

- Making soup
  - Toss objects in a pot
  - Out comes a full can of soup!

- Making cake
  - Microwave it, of course!
How to do ... ANYTHING

• Things that seem simple were challenging
  • How to pick up items?
  • What does the hand show?
  • Rules of physics interactions in VR?
• People were using controller visuals
• Some were building first person full-arm IK
Tomato Presence
Object in hand acts as a stand-in for hand presence
How to get people to move around and stay in the proper area?

- Build environments to afford playable space
- Before chaperone kicks in
Physics

• People want to pick up EVERYTHING!!
• So everything needed to be pickupable!
• Our 1 and only lighthouse died
• Ship another to Canada overnight?
• Time to fall back to Razer Hydra!
  • Not comparable!
• Got the lighthouse!
• Wrapped the GDC build!
• We did it!
GDC Kitchen Demo
GDC response was AMAZING!
Time to build the full game!
(btw, this hardware may never ship)
Colleagues, friends, family, advisors: “Maybe build a mobile freemium game? VR is pretty risky…”
NO THX!
VR OR BUST
Early Dev Thoughts

- 10 jobs
  - We began prototyping immediately
- Job prototypes
  - Chem lab technician
  - Magician
  - Space station repair person
Uh oh...

- Something is wrong.
  - The kitchen killed it! Everyone loved it
  - Our new prototypes weren’t as great
  - Testing wasn’t nearly as fun
  - Humor wasn’t coming as easy as the kitchen
What makes a good Job Simulator job?

- **Familiarity**
  - Everything works better when you can take expectations and play with them
  - Other-worldly areas have weak expectations
    - Changing the result of making soup vs combining crazy chemicals
The Office

• Ended up being the demo for the shipped game
• Most shown job
• 8th job we prototyped
• WUT?
The Office Prototype
Office Tasks

• Clearly have to open with donuts and coffee
  • Well crap, I guess we need eating and drinking tech
  • Avoided it for kitchen
  • Now we have to deliver on coffee and donuts!
Eating in VR

• Put it near your face
• Not so simple
  • Moving hands by face
  • Accidental eating
  • Multi-stage eating = Bite-states!
Liquid in VR

• Incredible can of worms
• 3D fluid simulation not done in games
  • Let alone VR
  • Let alone at 90FPS
  • With direct hand input
Early liquid tech
Liquid in VR

- Building a believable fluid system in VR
  - Boiling
  - Fluid conservation
  - Color mixing
  - World interactions
  - Each mL stores:
    - Temperature
    - Ingredients list
    - Color
  - Pouring into volumes
    - With proper timing to particle system
    - Physics momentum

- All so we can show a proper cup of coffee
Liquid in VR - IT FINALLY WORKS!
Further reading:
Why a cup of coffee in Job Simulator took 850 hours to make
-Upload VR
Systems in Job Simulator

• New systems = fundamental expectation changes
  • Every system had implications on rest of game
  • Both good and bad
• Eating and Drinking is in!
  • Now every food-like item in the kitchen needs to be edible
  • Everything liquid-like needs to be drinkable
  • Can’t set expectations incorrectly
Meeting Expectations

• Playtesting!
Plant Watering
Grabbing Costume Items
Crap, we can’t rely on any pre-existing designs
Designing interactions for VR

- Found ourselves walking through toy aisle
- Fisher Price toy design!
Failing fast and iterating quickly

• This was key
• Everyone had VR headset at desk
• Everyone wears multiple hats
• Iteration with least amount of pass-off between people
• Everyone is a writer
• Every design of every object needs to be “In IP”
Room Resizing
Menus

• Nothing to draw from!
• A regular menu on a floating 2D plane seemed like a cop-out
• How do we use in-world interactions?
Menus

- Ring a bell!
- Throw a mug!
- Smack a button!
Menus

• The “BOP IT!” Design
Menus

• Museum is a hidden tutorial!
Museum Progression

The image shows a virtual museum setting with a sign that reads "JOB SIMULATOR: the 2050 archives." The scene includes an interactive interface and various displays related to job simulation and the future of jobs.
Performance / Framerate

- Art style was conducive to good perf
- Prior work in mobile / Unity helped us here
- Lots of great perf tips in our Multiplatform VR talk from Vision Summit 2016!
Vive Launch!

- Launched day one
  - 4 jobs, more depth than breadth
- Bundled w/ Vive!
PlayStation VR!

- Challenges with perf, especially CPU
- Challenges with play space redesign
  - Hard mode with manually re-built levels
- Did a whole talk on that! See our “Bringing Job Simulator to PlayStation®VR” talk from Unite 2016!
PlayStation VR!

• PSVR platform was a big risk
• Move Controllers were not packed in all SKUs
• Sub-segment of a sub-segment of VR market
#1 selling VR game on PlayStation Store in all of 2016!
PlayStation VR!

- Vindication for hand input
  - Job Simulator and Batman #1 and #2 top selling!
Oculus Touch

- Day 1 launch title
- Third launch of 2016
- Trifecta complete!
3 platform launches in 2016

- Everywhere with hands
- Did not fall into the ‘exclusive’ trap
  - Better for the industry to avoid exclusives
Marketing

• Be fast, be there for day 1
  • And ready for conference demos
• Need to give partners enough so they could help market our games
  • Super short lead times
• Gave away the demo to all dev
  • Scary, but good for many reasons
Marketing

- Trailers!
  - 4 trailers before our launch trailer
  - Over the top gameplay showing physics madness
- Kert Gartner
  - Launch trailer with mixed reality
  - First of its kind with Fantastic Contraption
- Lets Play’s
  - Spectator mode, built in Twitch support
Launch Reception

- Players loved it!
- Lower ratings early on from ‘traditional gaming reviewers’
  - IGN/GameInformer, etc
- Lots of complaint about price
  - Originally launched at $39.99
  - Changed to $29.99 after a few weeks
  - Didn’t know what market expectations would be
  - Were being compared to traditional PC with nothing else to compare to
Today
  • Receiving higher reviews
  • Little to no price complaints
    • Just the expected amount of complaints 😊
  • Winning fantastic awards
• Being early to market is hard!
  • Developers, press, and consumers are new to this!
Trusting our predictions

- Had some guesses on demographic
  - Expendable income
  - Skewed toward younger male
  - Build your own PC
  - Shooter-heavy audience
- Chose to build for everyone instead
  - Why, if not everyone will be purchasing?
Year one use case for VR

• Hardware owner isn't the player most of the time
  • Showing friends, family
  • Group play, VR parties, etc
  • Spectating / streaming
• Building for the long term
  • VR is for everyone
  • Most accessible computing platform to date
  • Players should feel like VR is for them
So, was Job Simulator a success?

- Financially, yes!
  - Over $3M in sales in 2016
  - Still selling well
- What about by other metrics?
Job Simulator

- Accessibility
- Hands and physics interactions
- Prevalence in the VR space early
- Humor
- Shareability / Social VR
Questions?

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