

The logo features the text 'RDC' in a large, bold, black sans-serif font. To the right of 'RDC' is the number '18' in a smaller, blue sans-serif font. The entire text is enclosed within a thick, bright blue square border that is slightly rotated clockwise. The background is white with faint, light gray geometric patterns consisting of squares and lines.

RDC¹⁸

ROBLOX DEVELOPER CONFERENCE



How Changes Are Made On Roblox

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Overview



- Learn how things get shipped on Roblox
- Achieve an understanding of our process
- Outline
 - How we choose what we work on (brief)
 - Easy example (additive)
 - Hard example (disruptive)



Choosing What We Work On



- Figure out what developers and players need
- Make sure it's aligned with our vision
- Prioritization and scheduling
- Will do a standalone talk on this someday!



Easy Example: Mobile Portrait Mode

Portrait Mode: Concept

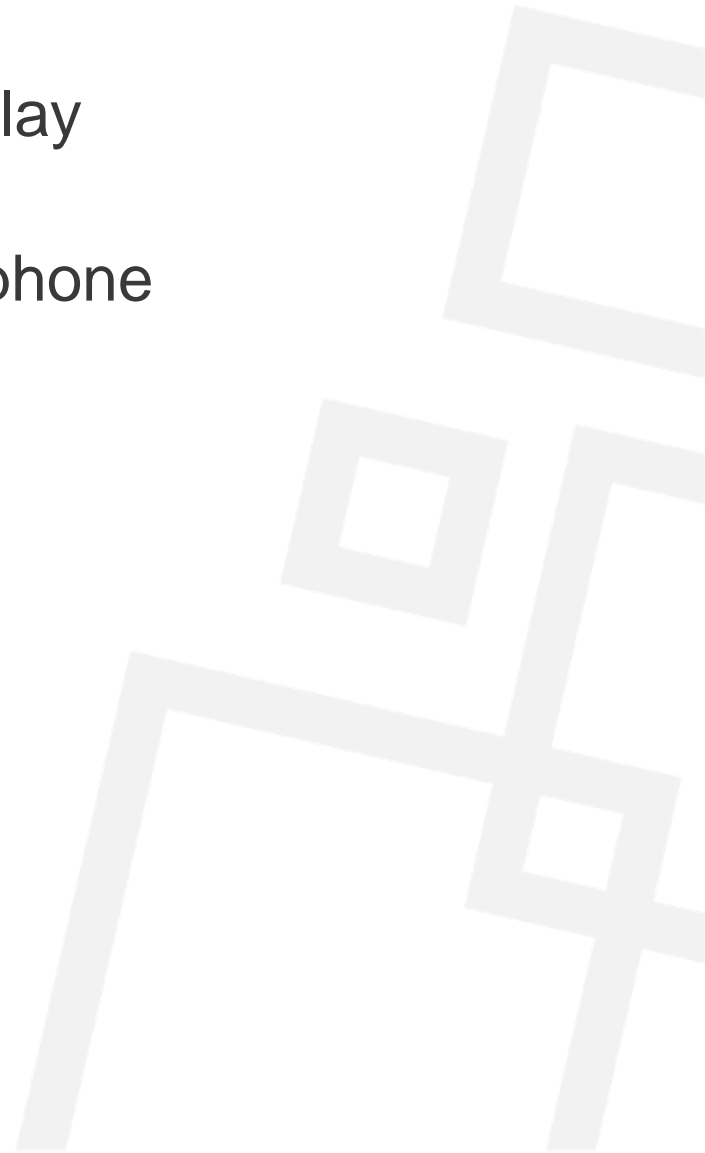
- Historically all Roblox games only landscape on a phone
- A lot of game genres work better in portrait



Alignment and Scheduling



- Aligned with our vision of unlocking new genres of gameplay and content
- Scheduled along with a bigger mission to focus on great phone games
- Work began early 2017
 - Basic functionality
 - Developer APIs
 - All the core scripts and UI



Design Phase



- One big question: can games change orientation while playing?
- Pros:
 - Maximum flexibility while playing: supports more use cases
 - Doesn't require mode to be baked into place
- Cons:
 - Adds complexity to all core UI if it has to reorient while running
 - Game load screen shown before orientation is known, leading to extra rotations
 - Orientation has to be baked into metadata
- Chose the flexible approach

Roll Out Plan



- Build and test internally
- Release as optional and not default feature
- Document APIs, make examples, and communicate with developers

ScreenOrientation

Property of: [StarterGui](#)

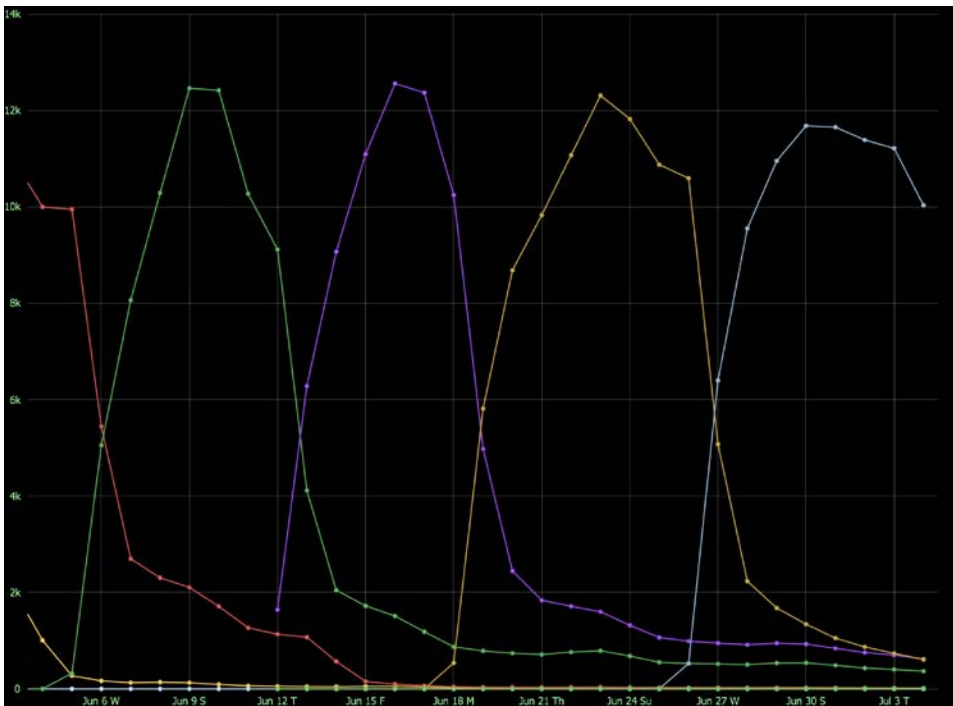
Value Type: [ScreenOrientation](#)

Description: Sets the preferred screen orientation mode on mobile devices.

Releasing on Mobile

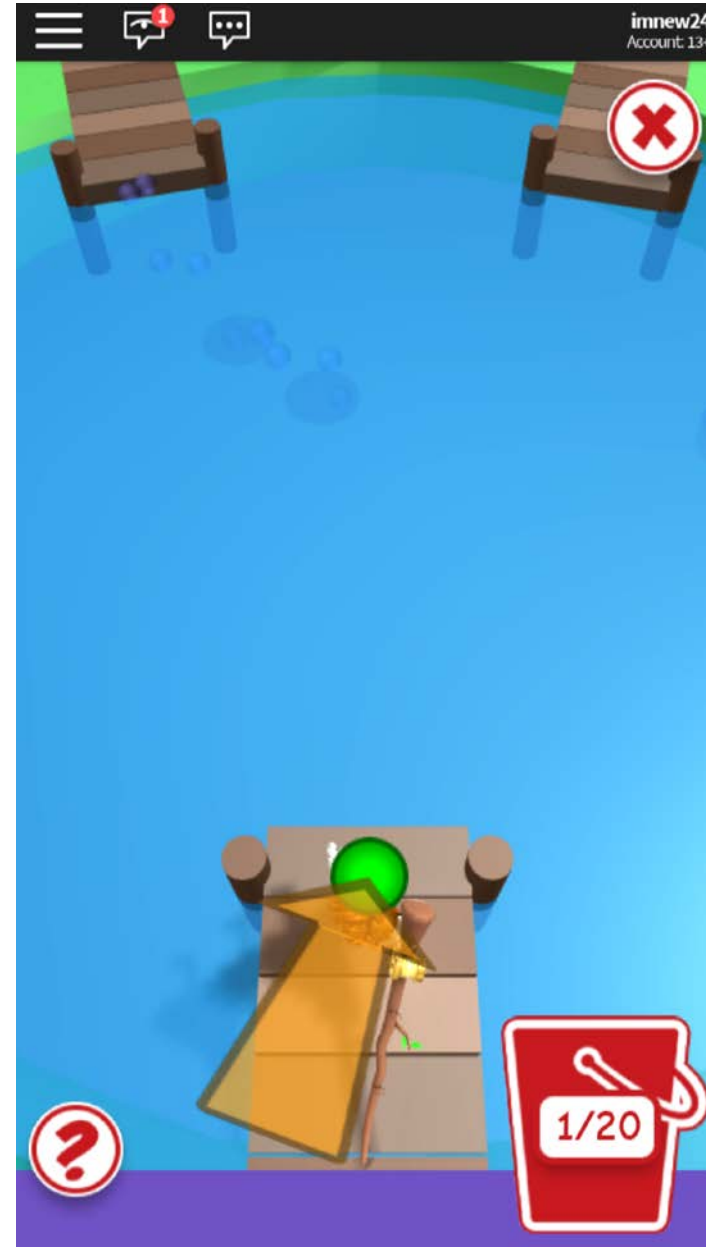


- Multiple versions live simultaneously on iOS and Android
- Wait until all versions that are live support the feature



Results

- Successful release
- Games gradually adopted
 - Old games didn't convert
 - Used for new games or features (Meep City fishing, Shred)





Hard Example: Smooth Terrain

Smooth Terrain: Concept



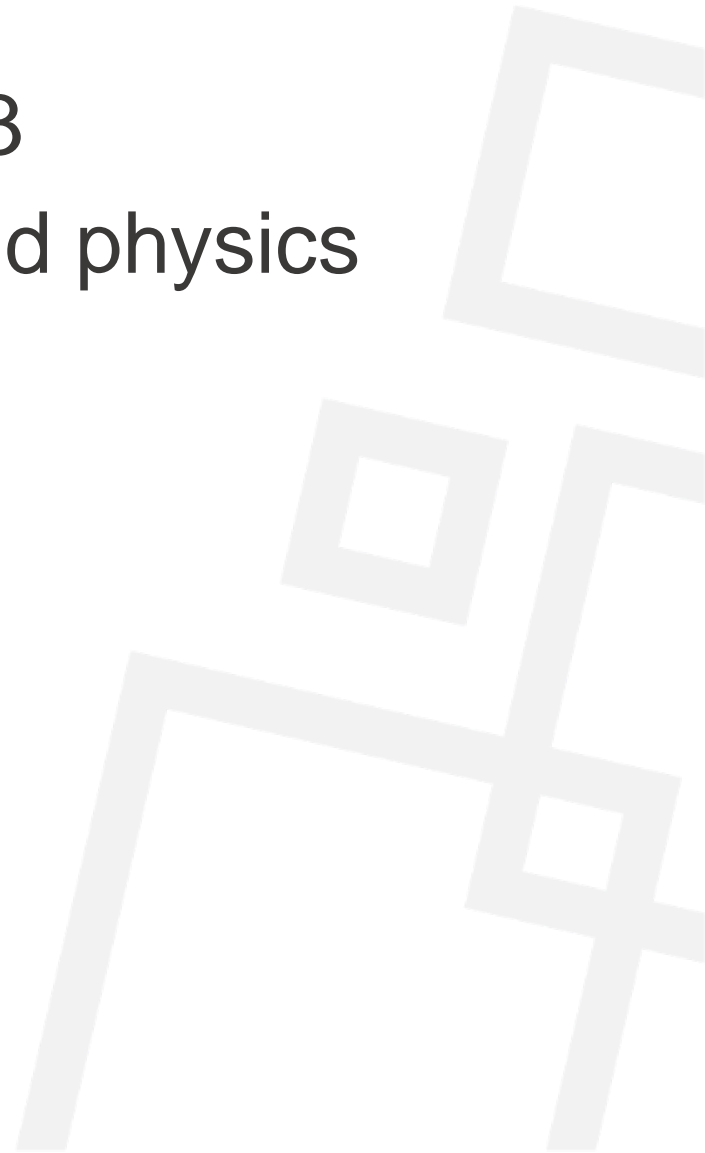
- Original Roblox terrain system from 2011, was blocky
- Wanted to see if we could make terrain better



Smooth Terrain: Prototype



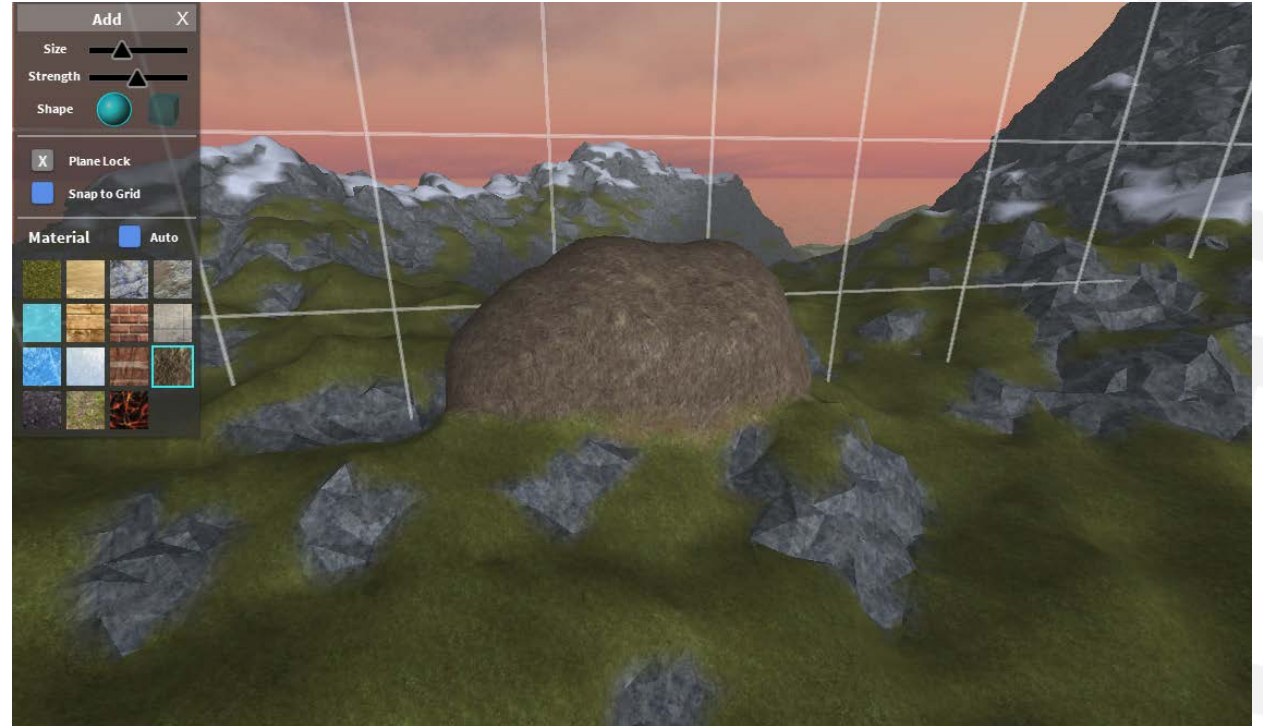
- Built during our hack week, December 2013
- Proved basic look, character interaction, and physics



Building V1



- Work began April 2014, shipped v1 in May 2015
- First version had 8 materials, Lua API's, and a terrain editor in Studio
- Smooth terrain configured via optional setting



Making It Awesome



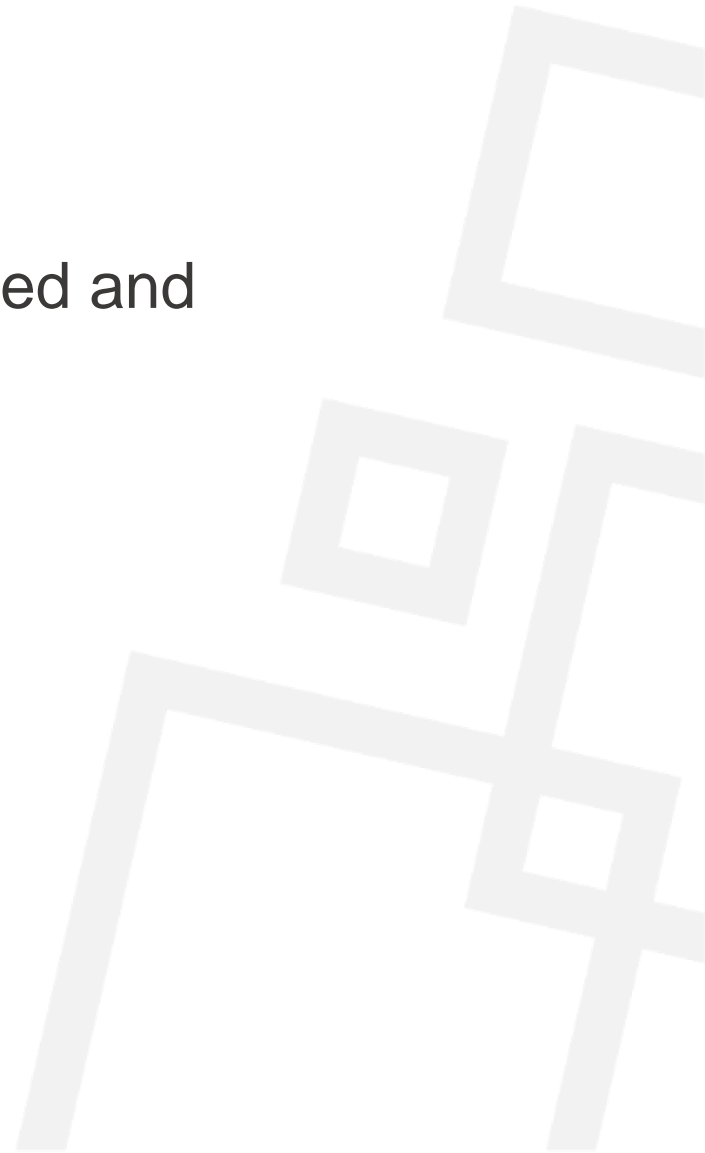
- From the first release in April 2015 to September 2016 we keep making it better
- Listening to developer feedback
 - Improved memory efficiency
 - Faster performance with visual LODs
 - More materials
 - Control over water appearance (waves, color, etc)



Do we remove old terrain?



- Why not just keep both forever?
 - We think old terrain not worth it
 - Having two systems slows down our development speed and bloats the game
- Removing things on Roblox is hard!



Gathering the Data



- Implemented a system to measure usage: minutes spent playing in games with old terrain vs new terrain
- By August 2016, smooth terrain is ahead 8:1
- This gives us confidence to remove the old terrain



The Hard Part: Removing Old Terrain



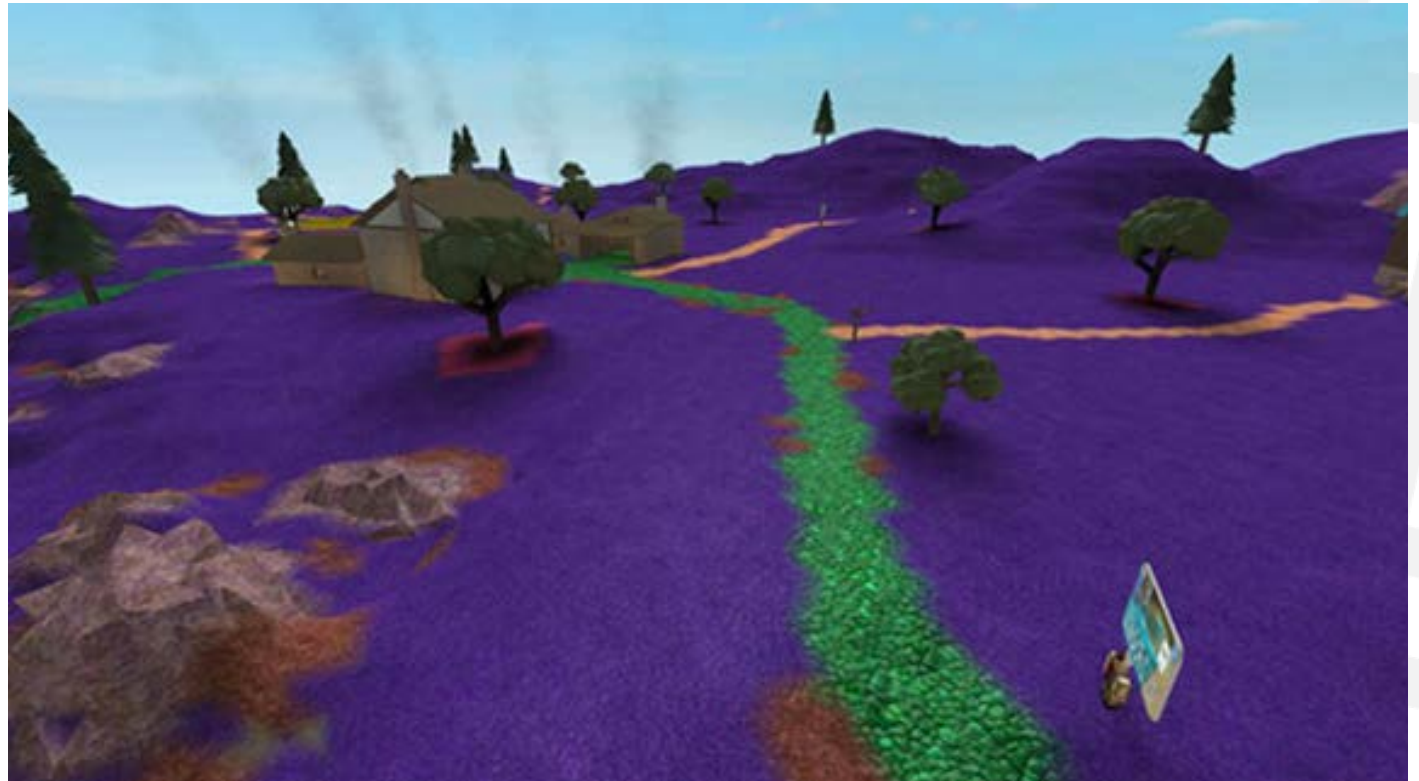
- Mark old terrain as deprecated
- 6 month warning for developers
 - Appeared as banner inside Studio when the place was opened
 - Reached out to devs using old terrain
- Built terrain conversion system
 - Old terrain converted with one click into new terrain
- On go live day, all places with old terrain get it automatically converted when they run on production, or opened in Studio



And Keep Improving Terrain



- Terrain color control
- Faster rendering
- Memory reduction
- More things coming in the future!



Summary



- We are always careful about what we ship
- Extra care needed to change or remove things
- Roblox thinks about the long term vision of how to have the best game development platform in the world and moves in that direction



Q & A