

The background is a 10x10 grid of light green squares. A blue river with a rainbow-colored border flows from the top right, turns left, and then right, ending at the bottom right. There are several trees: round trees with green foliage and red fruit, and pointed evergreen trees. A red four-pointed star is located in the lower right quadrant. The text 'Get Across!' is centered in a large, bold, black serif font. Below it, the text 'a tile-based multiplayer puzzle game' is centered in a smaller, black serif font.

Get Across!

a tile-based multiplayer puzzle game

Presentation Outline

- Explain Game Mechanics
 - What is Get Across? What makes it a game?
- Discuss Player.IO
 - What worked and what didn't
- Logging Results
 - Lots of Yummy Graphs and numbers
- Game Improvements
 - What did the data teach us? How did we fix problems?
- Lessons Learned
 - It's been a loooooong quarter, what did we learn?
- Questions



The Game

mechanics & implementation

Intro & Mechanics

Get Across is a **multiplayer puzzle game** with tile-based movement.

The goal is to get to the **red star**.

The player also has **Action Points (AP)** which can be spent moving over certain terrain, or casting abilities.



The Player

Novice



Cook



Crafter



Planter



Monster Bacon

Build Bridge

Red Flower

The Map

Button

Start

Coins



The Map – various elements



- different elements provide challenges
- every class has a tile only they can cross
 - **Crafter** can cross River with bridge
 - **Planter** can cross Bramble with bloom
 - **Cook** can cross Hungry Snake with Snake Snack

55

Abilities – what are they used for?

- To get across terrain -- i.e. bridges over water
- Replenish AP -- i.e. red flower

Level: 2
Experience: 0

Abilities

Build Bridge
Build a bridge to get across water
AP cost: 3
Lumber needed: 2

Red Flower
Plant a flower on flat ground to reduce AP use for 5 moves
AP cost: 1

AP: 20
5.15 seconds until more AP

Main Menu
HINT

Gathering action
Use the Red Flower ability to navigate this brutal terrain, and reach the red star!

Resources
Lumber: 0
Cherry: 0

Zoom in
Default View
Zoom out

A mountain. You need 15 AP to cross to cross it! (5,6)

Multiple Ways to Solve a Level

Level: 2
Experience: 0

AP: 20

9.26 seconds until more AP

Main Menu

HINT

Abilities

Build Bridge
Build a bridge to get across water
AP cost: 3
Lumber needed: 2

Red Flower
Plant a flower on flat ground to reduce AP use for 5 moves
AP cost: 1

Zoom in

Default View

Zoom out



The game map is a grid-based environment. A blue river flows from the top left, turns right, and then flows down the right side. There are several green trees scattered across the map. A small black robot-like character is positioned in the center. A red star, representing the goal, is located on the right side of the map. The map is divided into different terrain types: grass (green) and water (blue). A yellow square is visible in the top left corner of the map area.

Grass -- no travel cost! Go freely!

(4,4)

Gathering action

Find a way past this monster to reach the red star!

Resources

Lumber: 0

Cherry: 0

Multiple Ways to Solve a Level

Level: 2
Experience: 0

AP: 15

7.84 seconds until more AP

Main Menu

HINT

Abilities

Build Bridge
Build a bridge to get across water
AP cost: 3
Lumber needed: 2

Red Flower
Plant a flower on flat ground to reduce AP use for 5 moves
AP cost: 1

Zoom in

Default View

Zoom out



The game map is a grid-based environment. A blue river flows from the top left, turns right, and then flows horizontally across the middle. A black monster is positioned on the grass to the right of the river. A red star is located further to the right. The map includes various terrain features: mountains in the top left, trees in the top right and bottom center, and a small bridge structure in the bottom center. Several gold coins are scattered on the grass. The bottom right corner of the map area displays the coordinates (6,4).

(6,4)

Gathering action

Find a way past this monster to reach the red star!

Resources

Lumber: 0

Cherry: 0

Invalid Move, can't cross water

Multiple Ways to Solve a Level

Level: 2
Experience: 0

AP: 19

2.80 seconds until more AP

Main Menu

HINT

Abilities

Build Bridge
Build a bridge to get across water
AP cost: 3
Lumber needed: 2

Red Flower
Plant a flower on flat ground to reduce AP use for 5 moves
AP cost: 1

Zoom in

Default View

Zoom out



A mountain. You need 15 AP to cross to cross it! (3,0)

Gathering action

Find a way past this monster to reach the red star!

Resources

Lumber: 0

Cherry: 0

Multiple Ways to Solve a Level

Level: 2
Experience: 0

AP: 15
6.77 seconds until more AP

Main Menu
HINT

Abilities

Build Bridge
Build a bridge to get across water
AP cost: 3
Lumber needed: 2

Red Flower
Plant a flower on flat ground to reduce AP use for 5 moves
AP cost: 1

Zoom in
Default View
Zoom out



The game map is a grid-based environment. A blue river flows from the top left, turns right, and then flows horizontally across the middle. Below the river, there is a waterfall. A red star is located on the right side of the map. A monster is positioned near the river. There are several trees and rocks scattered throughout the landscape. A yellow arrow points down towards the monster.

Gathering action
Find a way past this monster to reach the red star!

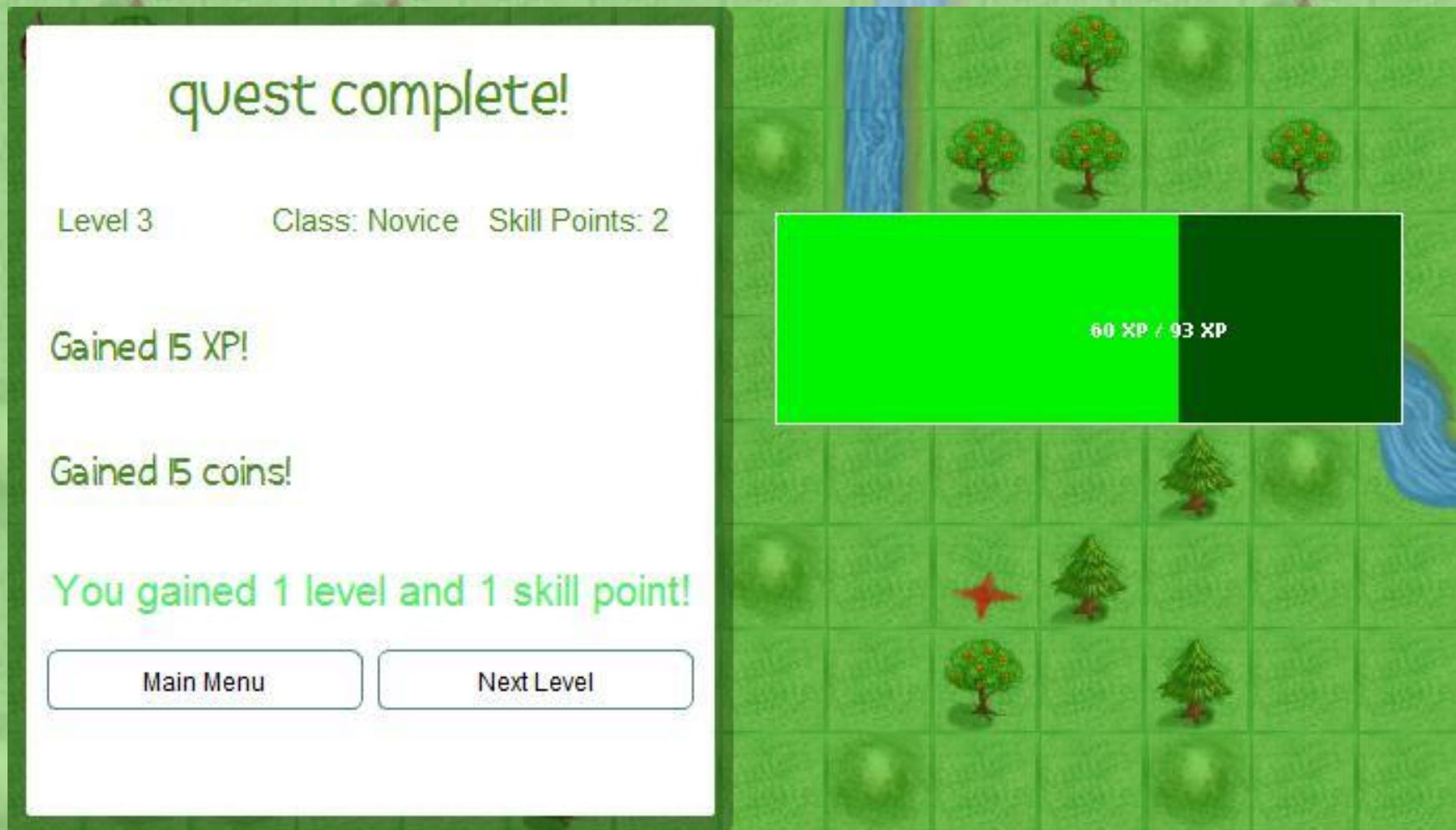
Resources
Lumber: 1
Cherry: 0

Grass -- no travel cost! Go freely! (8,3)

Invalid Move, can't cross water

Rewards

- More experience = more Skill Points (SP)
- SP can purchase new abilities
- Gathering coins can buy new avatar skins



Avatars

Novice



Cook



Crafter



Planter



Player.IO



- scalable noSQL database
- use their servers to host synchronous multiplayer games
- support for Kongregate and Facebook releases
- helpful, error log can note errors, times, frequencies

Player.IO – Users

playerio.com/admin/quickconnect/overview/get-across

My Games My Account

My Games » Get Across » QuickConnect

QuickConnect for Get Across

SimpleUsers: ●
Total Users: 31
[Export Users as CSV](#)

Facebook: ●
(disabled)

Kongregate: ●
Total Users: 226
[Export Users as CSV](#)














[Change QuickConnect Settings](#)

Registered Users

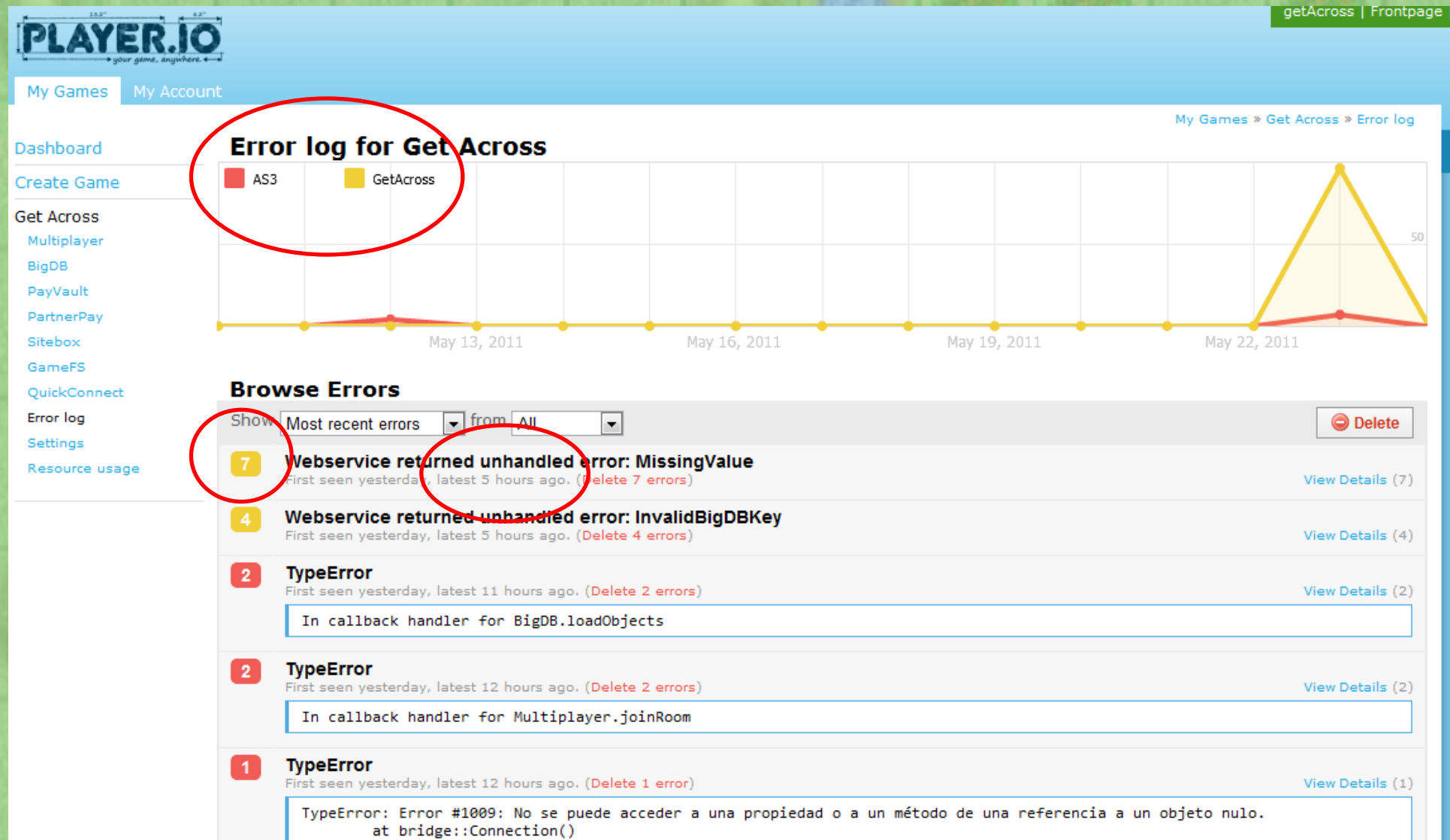
Here you can browse through the users that have registered in your game through QuickConnect.

Show:

[Delete Users](#)

Name	ConnectUserId	Registered
 ZihtOn	kong3767379	24 May 2011 06:05
 Nevou	kong1702783	24 May 2011 05:57
 PirateIvy	kong5276679	24 May 2011 04:41
 CraftyTurtle	kong1479469	24 May 2011 03:44
 divineaphasia	kong4334095	24 May 2011 03:17
 Zheben	kong4752281	24 May 2011 02:55
 McReal	kong2990610	24 May 2011 02:49
 jungart	kong4269407	24 May 2011 02:45
 Gabox	kong1127484	24 May 2011 02:44
 durk	kong868581	24 May 2011 02:43
 god_of_war	kong232922	24 May 2011 02:16
 OatouBby	kong4192964	24 May 2011 01:46
 Jayniner	kong5228800	24 May 2011 01:41

Player.IO -- Error Log



you can put your own debug code to show too!

Player.IO -- Persistent User Data

The screenshot shows the Player.IO BigDB interface for the game 'Get Across'. The main view is titled 'BigDB for Get Across » NewQuests'. It displays a table of objects with the following structure:

Object Key	Object Data																
15Woe2r_g0yB1BD9YB7euA	<table border="1"><tr><td>players</td><td><table border="1"><tr><td>fb662066919</td><td><table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table></td></tr></table></td></tr><tr><td>numPlayers</td><td>1</td></tr></table>	players	<table border="1"><tr><td>fb662066919</td><td><table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table></td></tr></table>	fb662066919	<table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table>	positionX	7	positionY	7	AP	20	resources		lastSessionEndTime	2011-06-03 01:58:23	numPlayers	1
players	<table border="1"><tr><td>fb662066919</td><td><table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table></td></tr></table>	fb662066919	<table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table>	positionX	7	positionY	7	AP	20	resources		lastSessionEndTime	2011-06-03 01:58:23				
fb662066919	<table border="1"><tr><td>positionX</td><td>7</td></tr><tr><td>positionY</td><td>7</td></tr><tr><td>AP</td><td>20</td></tr><tr><td>resources</td><td></td></tr><tr><td>lastSessionEndTime</td><td>2011-06-03 01:58:23</td></tr></table>	positionX	7	positionY	7	AP	20	resources		lastSessionEndTime	2011-06-03 01:58:23						
positionX	7																
positionY	7																
AP	20																
resources																	
lastSessionEndTime	2011-06-03 01:58:23																
numPlayers	1																
Monsters	<table border="1"><tr><td>0</td><td></td></tr><tr><td>1</td><td></td></tr></table>	0		1													
0																	
1																	
StaticMapKey	Campaign_2																
tileValues																	
MonsterCount	2																
RoomID	xh5S6UYZ7kWxAvezzh6ApQ																

Red circles highlight the 'positionX', 'positionY', 'AP', and 'lastSessionEndTime' fields in the player object, indicating the data being discussed in the text.

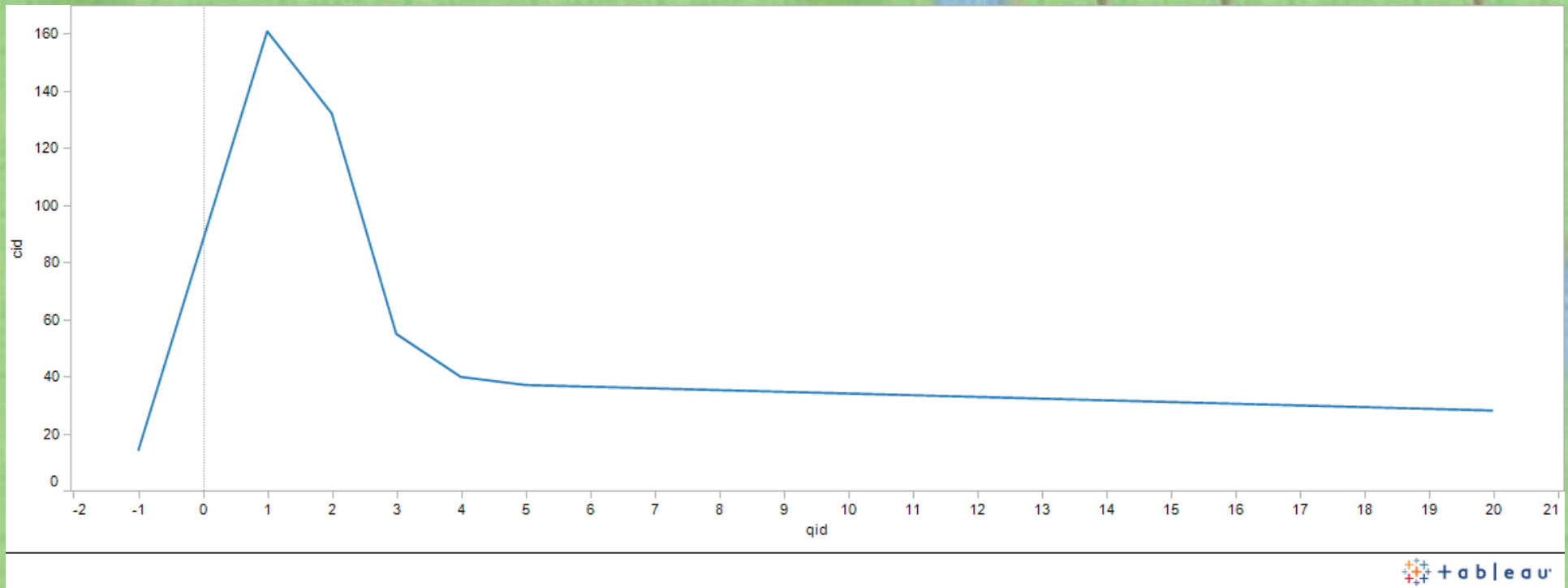
we could save player's last position & state, and add back AP depending on how long a player was gone

The background is a green grid with a blue river flowing from the top center to the right edge. There are several trees scattered across the grid: some are round with green leaves and red fruit, while others are tall, thin evergreens. A single red star is located in the lower right quadrant of the grid.

Analytics & Logging

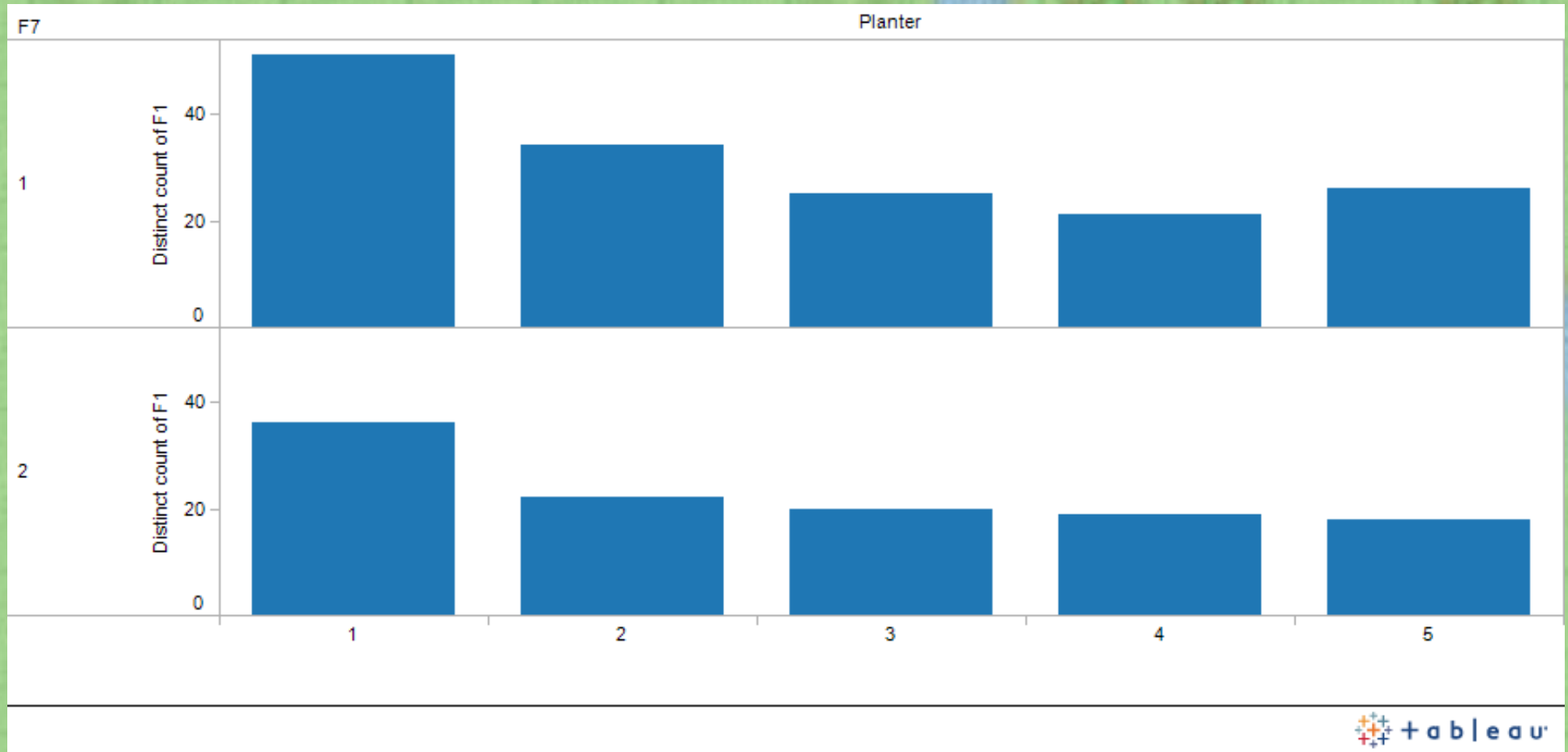
numbers & graphs galore

Analytics on earlier version (Kongregate)



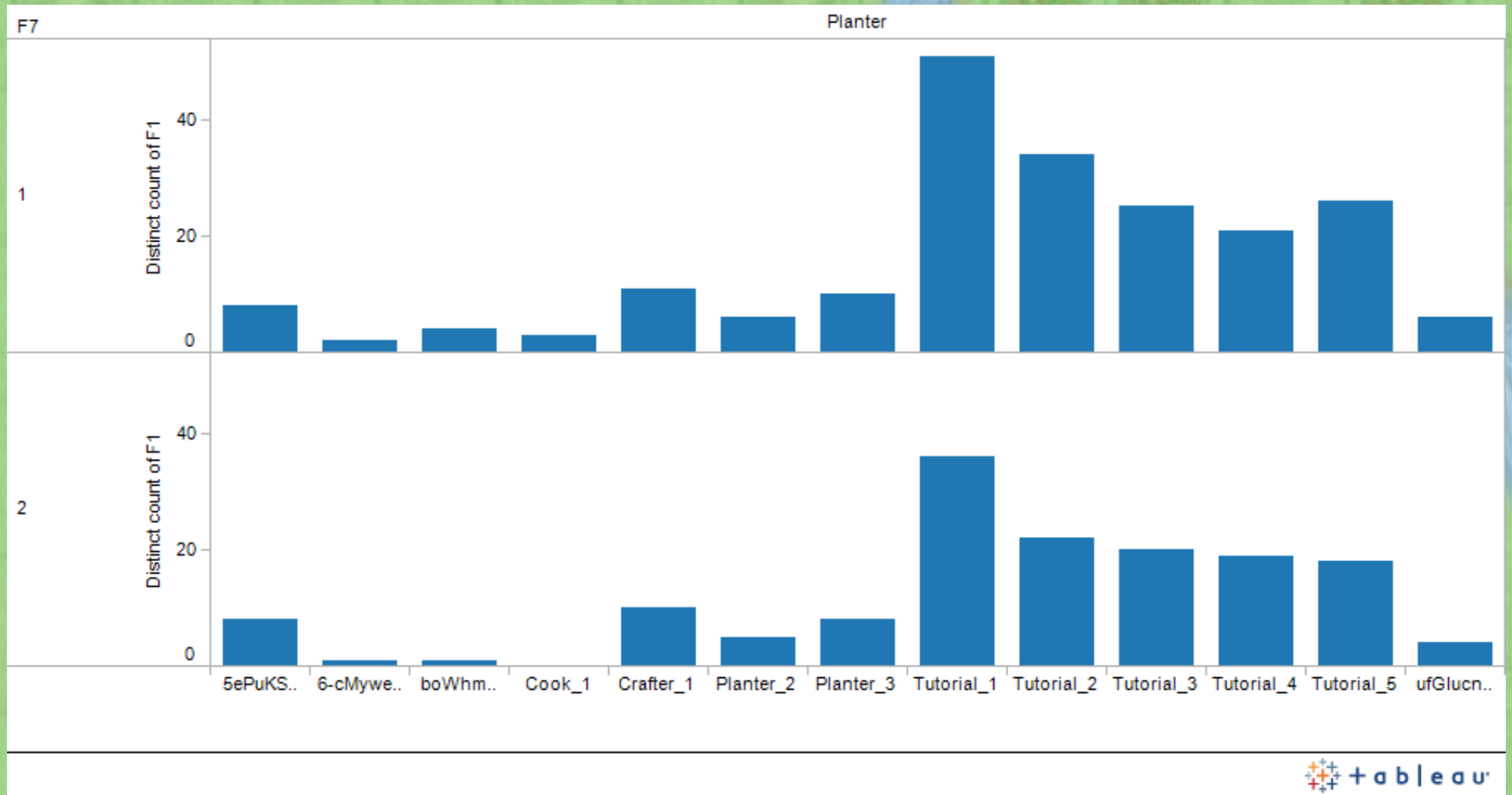
In the earlier version of the game, people stopped playing the game after the second tutorial level because of a long delay

Analytics on current version (Facebook)

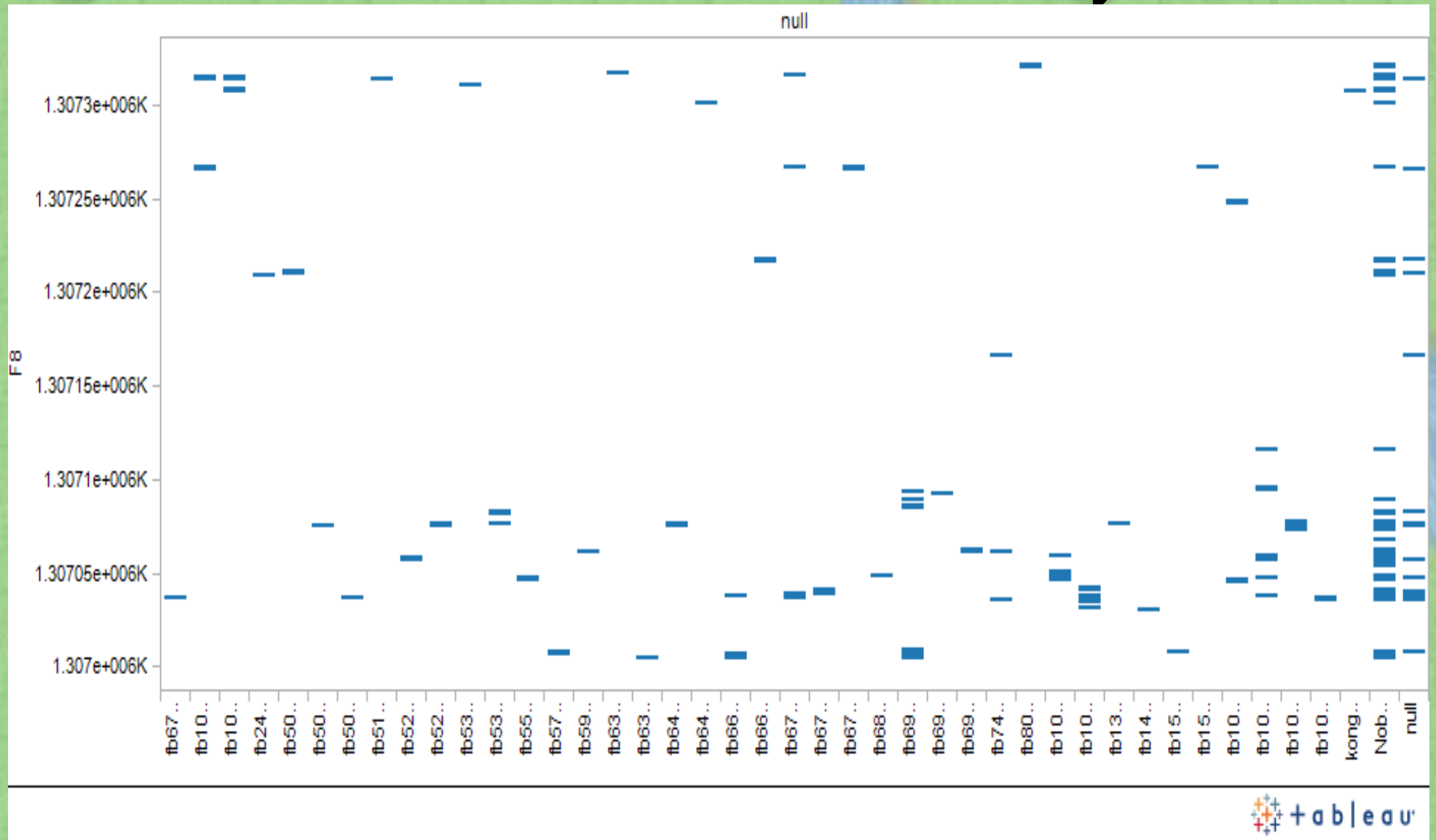


In the current version of the game, the number of levels played decreased at a much smaller rate after tutorial level 1

Number of Games Played and Finished



Return Rate & Duration of Play



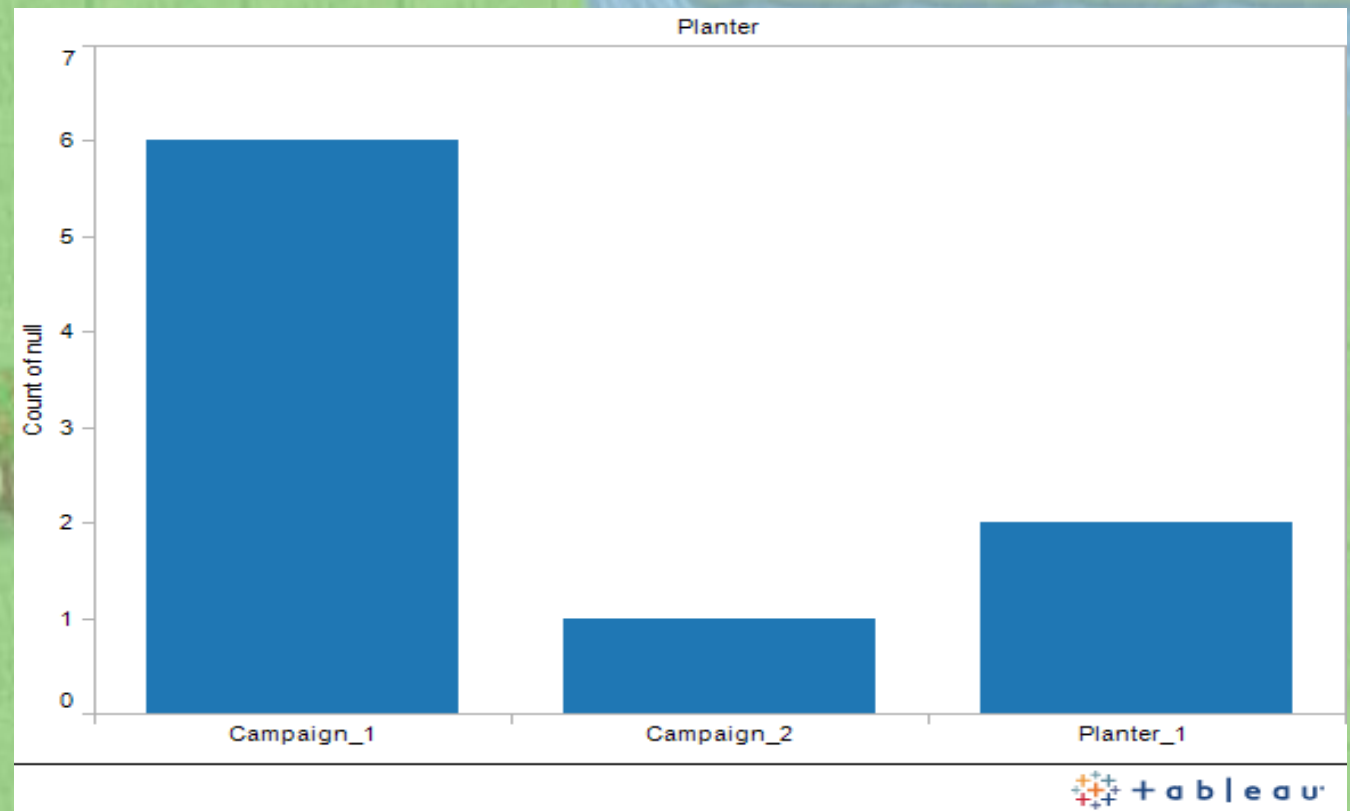
Social elements and other analytics

Choosing class:

3 Cooker, 8 Planters, 8 Crafter

4 User-generated maps

17 Games where there were 2+ players on the map



The background is a green grid with a blue river on the right side. There are several trees of different types (deciduous and coniferous) scattered across the grid. A red star is located in the lower right quadrant.

Refinements

design, iterate, iterate, iterate, iterate...

Game Refinement – Main Menu

- "your character" more prominent
- prettier in general
- more relevant information

Main Menu

Level: 3 Class: Novice Coin: 45

Continue Tutorial

Get Across

Character Screen

Continue Your Previous Quest

Start New Quest

Quest Editor

Buy abilities with Skill Points

Buy items with Coins

Level 5 Planter

You have 100 XP. 172 XP until level 6!



Skill Points: 1

Coins: 120

Game Refinement – Cooperative Play



- Don't make people wait!
- New tile types encourage cooperative play

Game Refinement -- Cooperative Play

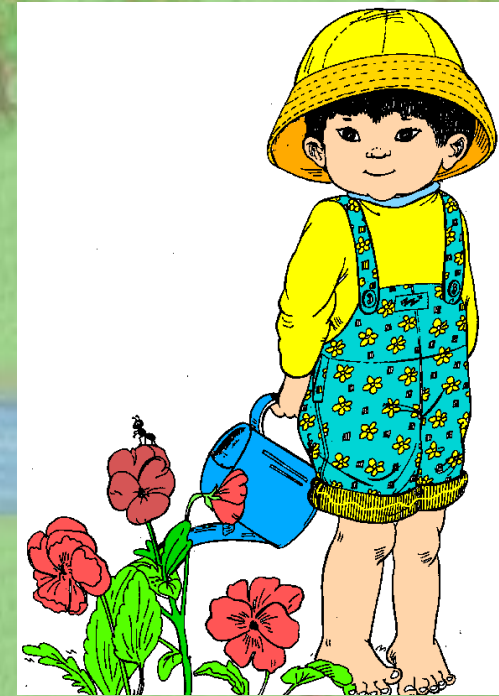


Kelly Dunn WHY DO I HAVE TO WAIT FOR AP
3 hours ago · Like



focus AP usage less on movement, more on abilities

Game Refinement – Classes



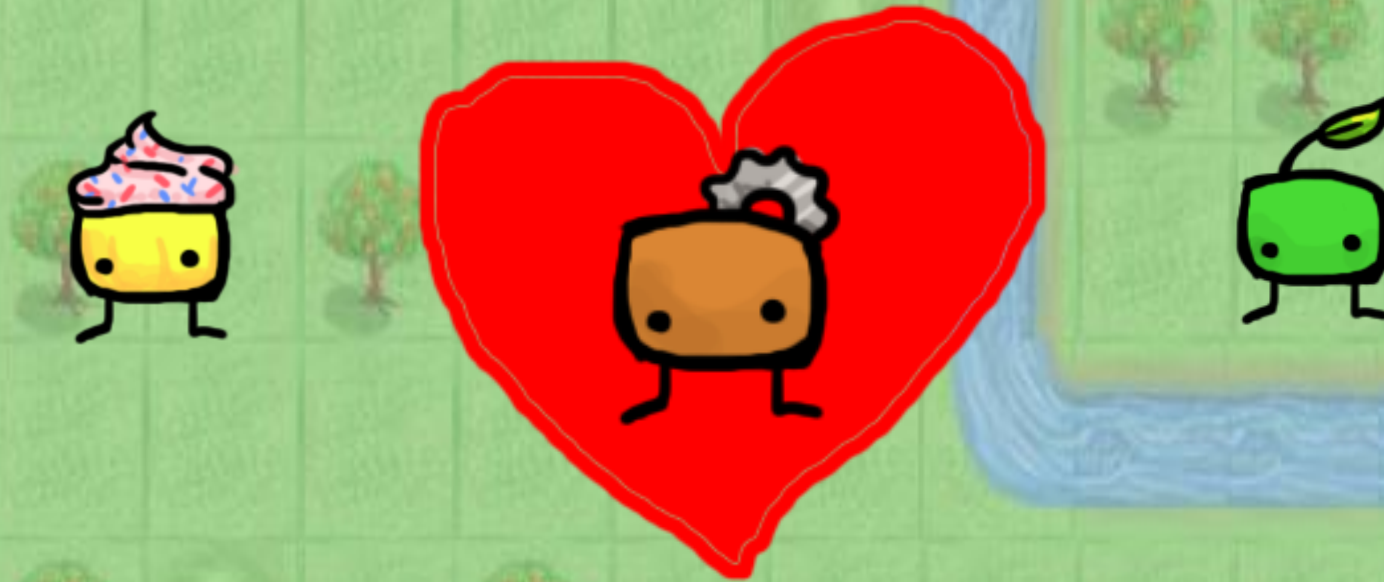
Problem: "Runner" doesn't sound cooperative

If the name of the game is "Get Across," it sounds like Runner would just...run off

Solution: New Classes!

Ones that don't have much of a "bias" with players

Game Refinement – Classes



Problem: Everyone loves Crafter

Crafter seems like the only one "conducive to getting across," and what do Cook and Planter do? Who knows!

Solution

Flavor text to illustrate a class's general play-style

Game Refinement – Classes



New Problems: Class Balancing

Some abilities were over-powered or too expensive for anyone to want to use

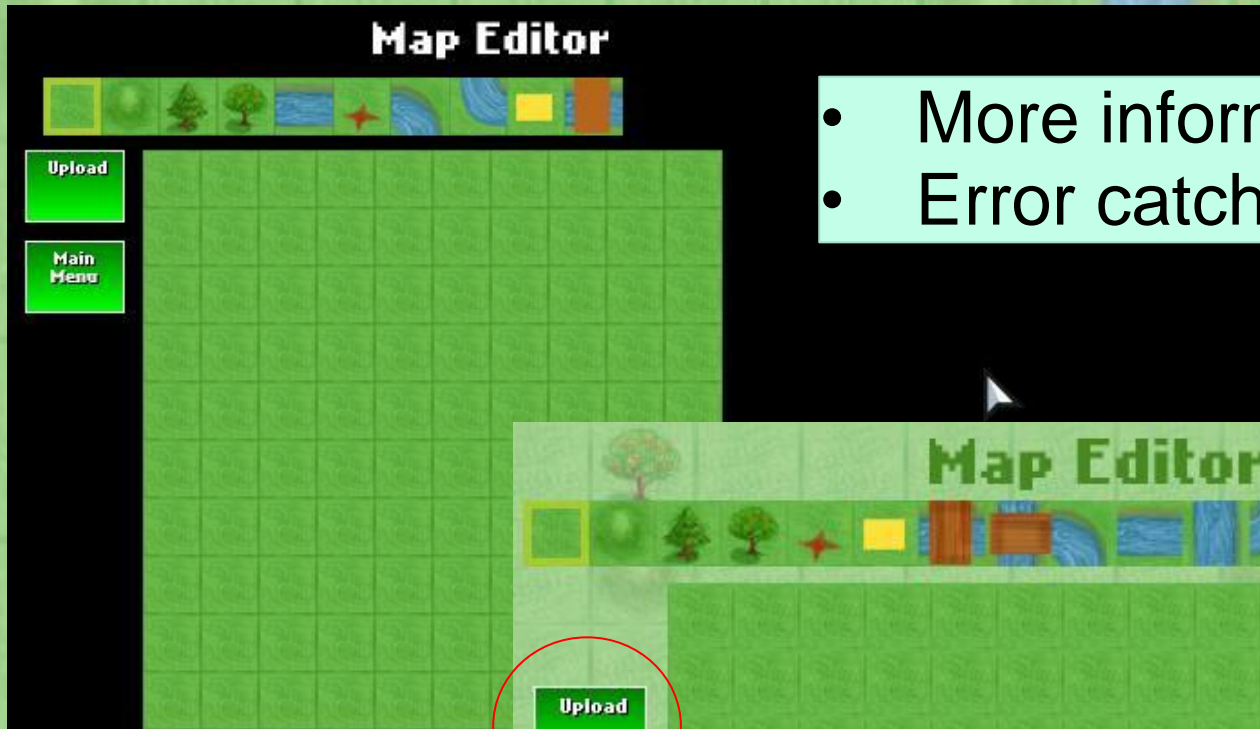
Solution

Just keep iterating



Game Refinement – Map Editor

- More informative Map Editor
- Error catching, tile information



Game Refinement – Server Load

Player.IO Development Server (v2.2.0.0)

PLAYER.IO your game, anywhere

GetAcross.dll

Status osmUobXI20OXwfJomncTWg

Bandwidth: 0.00KiB/s Up: 0.00KiB/s Down: 0.00KiB/s Play

Band...	Id	Player...	PayVa...	Partn...	Name	level	AP	positi...	positi...	chara...	tutori...
0.00KiB/s	simplen41 (1)	{sp: 0...	not lo...	Player...	[null]	0	20	0	9	Novice	1

```
at System.Net.Connection.ReadCallback(IAsyncResult asyncResult)
at System.Net.Connection.ReadCallback(IAsyncResult asyncResult)
at System.Net.LazyAsyncResult.Complete(IntPtr userToken)
at System.Net.ContextAwareResult.Complete(IntPtr userToken)
at System.Net.LazyAsyncResult.Complete(IntPtr userToken)
at System.Net.Sockets.BaseOverlappedAsyncResult.Complete(IntPtr userToken)
at System.Threading._IOCompletion.ExecuteCallback(IAsyncResult asyncResult)
>Error: Thread was being aborted.
at System.Threading.Thread.AbortInternal()
at System.Threading.Thread.Abort(Object stateInfo)
at ea.a(Boolean A_0)
>Error: Thread was being aborted.
at System.Threading.Thread.AbortInternal()
at System.Threading.Thread.Abort(Object stateInfo)
at ea.a(Boolean A_0)
at ea.b(ft A_0)
at PlayerIO.ServerCore.PlayerIOClient.PlayerIOChannel.ProtobufHttp.Call[A,O,E](Int32 method, A args, Callback`1 success, Callback`1 error)
at ml.Call[A,O,E](Int32 methodId, A args, Callback`1 successCallback, Callback`1 errorCallback)
at PlayerIO.ServerCore.PlayerIOClient.PlayerIOChannel.CreateObjectsCaller`1.CallAsync(Callback`1 onSuccess, Callback`1 onError)
at PlayerIO.ServerCore.PlayerIOClient.BigDBImpl.CreateObject(String table, String key, DatabaseObject obj, Callback`1 successCallback, Callback`1 errorCallback)
at PlayerIO.GameLibrary.BigDB.CreateObject(String table, String key, DatabaseObject obj, Callback`1 successCallback, Callback`1 errorCallback)
at GetAcross.GameCode.<>c__DisplayClass8.<>c__DisplayClass8.<UserJoined>b__3(DatabaseObject staticMap) in C:\Users\nadine\Desktop\Get-Across\Server\GameCode.cs:line 100
at PlayerIO.ServerCore.PlayerIOClient.BigDBImpl.<>c__DisplayClass4.<Load>b__3(DatabaseObject[] objs)
at PlayerIO.ServerCore.PlayerIOClient.PlayerIOChannel.LoadObjectsCaller`1.success(LoadObjectsOutput output)
at ml.a.a.c()
at me.a(e A_0, BasePlayer A_1, Message A_2, Action A_3)
```

FFFFFFFFFF
FFFFFFFFFF
FFFFFFFFFF
FFFFUU
UUUU
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UUUU

people won't play if game won't even load!

"After getting finishing the first tutorial lvl it freezes..."

- Kongregate User



Game Refinement

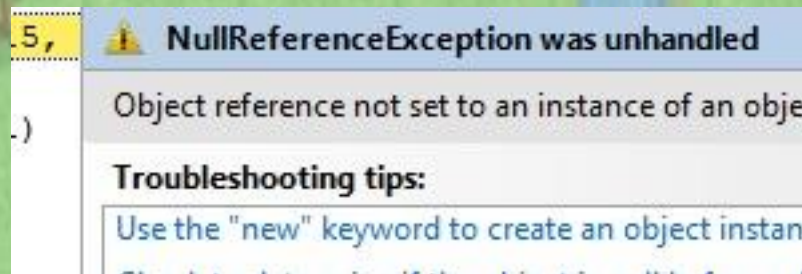
- Retooled Tutorials multiple times to draw more people in and help them understand the game

"Just the first tutorial level, if you realize you can collect stuff and want to reach that pack of trees, in the bottom left, you end up having to wait at least 2 minutes to finish the level." - Kongregate User



Lessons Learned

- Asynchronous function calls suck
 - you never know if you have the data you want at the right time



- Git is amazing but merging is always dangerous



Lessons Learned

- Learning languages and APIs takes time
 - a lot of time



FLIXEL POWER TOOLS

- Art! Makes your game look really polished



Lessons Learned

- 10 weeks is shorter then it sounds (our eyes bigger were then our stomachs)
 - couldn't implement cards, ability choosing



- Nothing is obvious to users, they never read (and hate pop-ups)



Jimmy Zhang i hate pop-ups

June 1 at 11:56am · Like

Lessons Learned

- Early design and following set guidelines is essential to effective team programming
 - we worked on specific features that we wanted to do, rather than a strict schedule

29		add "you can't cross water" alert to tutorials if player hasn't clicked on water before and does so, on any tutorial	abandoned	
30		remove text about resources in tutorial 1	done	
31		tutorial 2: remove text about cherry resources	done	
32		make goal more apparent in the right side of the hud	done	
33		change "selected tile" overlay on map editor to initialize in the right position	done	
34		show how many moves you have left with red flower	done	
35		make swf larger for facebook friends		
36		remove the "goals" panel in the hud, place context-specific buttons there instead (i.e. battling, gathering resources)		
37		make the red star ending tile more shiny		
38	high	reset button for tutorial levels		
39		sparkle on star	done	

GoogleDocs To-Do List

Lessons Learned

- Social games are complicated
 - hard to iterate and find brand new players, or to get people to come back
 - we spent a lot of time with back-end and infrastructure, versus social design

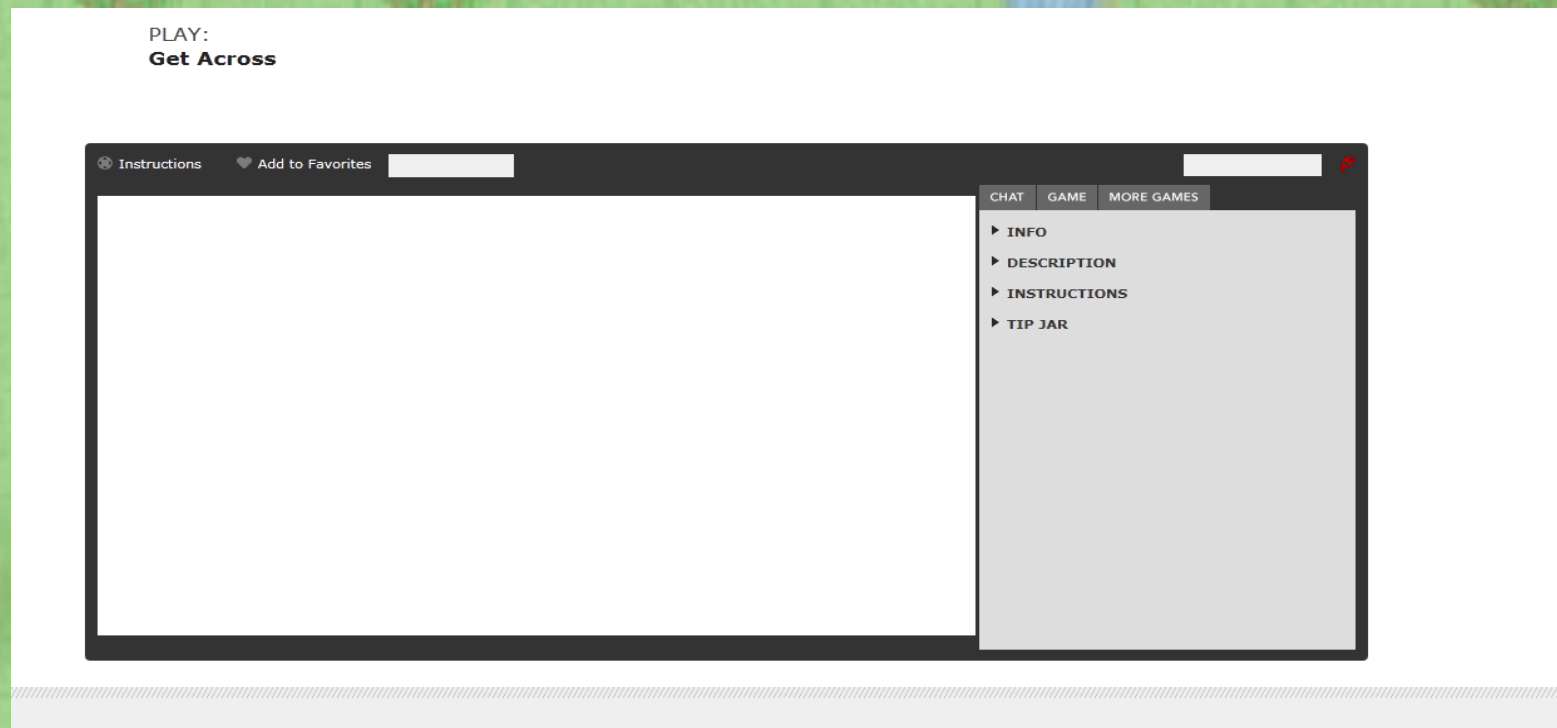
It's complicated with



Social Games

Lessons Learned

- Don't release a game before it is ready
 - Kongregate release flopped



fail):

Questions?

