



# XEODesign®

Putting Emotion into Play™

## Fun Meters: Data Driven Design for Tilt HD: Flip's Adventure in 1.5 Dimensions

Nicole Lazzaro  
XEODesign, Inc.  
GDC Austin  
October 6, 2010

Follow my research on Twitter: **@NicoleLazzaro**  
Twitter: **#GDCOnline**

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# Fun Meters

Where issues are

Why happening

What to do

# Imagine Global Games for Change in 2020 MSO = 6B

Games Can Unlock Human Potential and Improve Quality of Life Through Play





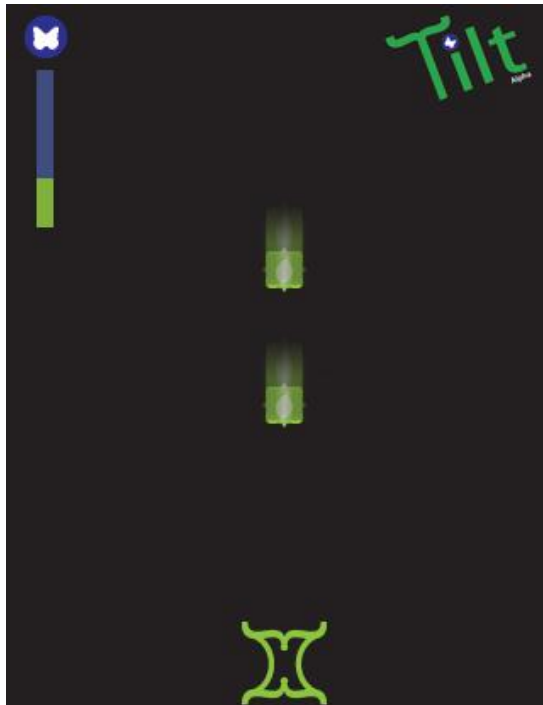
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# Tilt a Research Platform

to Help Us Get There


3

***Tilt*** the first iPhone  
accelerometer game



***Tilt*** HD: Flip's Adventure in 1.5 Dimensions



250,000 visits  
 iPhoneDevCamp  
Winner Best Game 2007

#1 Top Free iPad Download



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# Interaction Unlocks Emotion

Game Design Create Engagement with Emotion and Fun

4

## Hard Fun

Frustration  
Fiero

## Easy Fun

Curiosity  
Wonder  
Surprise

## People Fun

Amusement Amici  
Admiration Ameiro  
Schadenfreude

## Serious Fun

Excitement  
Relaxation  
Values





# 4 KEYS 2 FUN

## MASTERY "THE BRASS RING"

### The 4Keys 2Fun:

Player Experience (PX) is how player interaction creates emotion. Best selling games use emotion from four types of interactions to capture attention and motivate play. Use the 4Keys 2Fun to paint attention onto any UI like Velcro and color it with emotions to match a brand or the task at hand.

### Hard Fun

Provides the opportunity for challenge, mastery, and feelings of accomplishment. Hard Fun focuses attention with a goal, constraints, and strategy.

### HARD FUN

FIERO

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Inspires exploration and role play. Fun failure states, fantasies, or simply enjoying the controls enchants and captures the imagination. Easy Fun is the bubble wrap of game design.

### SOCIAL BONDING

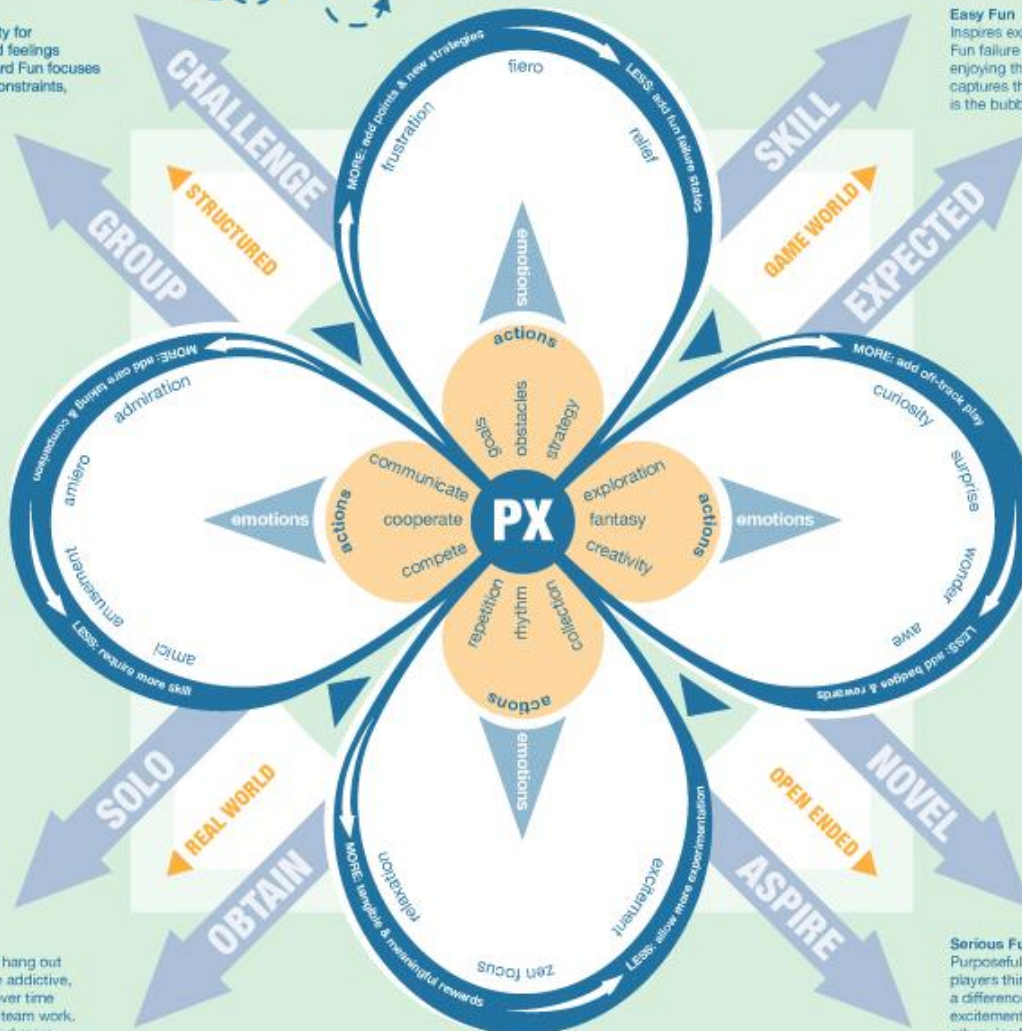
### PEOPLE FUN

AMUSEMENT

### EASY FUN

CURIOSITY

### VEHICLE FOR IMAGINATION



### People Fun

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# Games for Real Change

Clear Goals Leverage Emotions to Accomplish with Gameplay

6

Emotion	
Attract	
Learn	remember to come back
Participate	Decide Perform

Relax

Excite

Amici

Kawai (cute)

Schadenfreude

Disgust

Fear

Almost!





Putting Emotion into Play™

# Games for Real Change

Clear Goals Leverage Emotions to Accomplish with Gameplay

7

## Motivation

Intrinsic

Interesting

not pushy or over  
powering

Obstacles

Constraints Opposing  
force, fun failure



## Blight Destroys Flip's Home

Tilt: Flip's Adventure in 1.5 Dimensions



# Games for Real Change

## Clear Goals Leverage Emotions to Accomplish with Gameplay

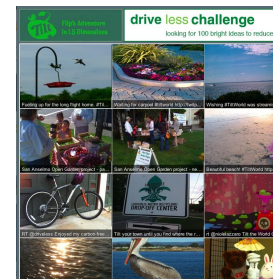
8

# Action

# Easy

# Tell a Story

# Accomplish





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# Games for Real Change

Clear Goals Leverage Emotions to Accomplish with Gameplay

9

Goal
Audience
Cause
Change



**Help Flip Replant Shady Glen**  
Tilt: Flip's Adventure in 1.5 Dimensions



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# Games for Real Change

Clear Goals Leverage Emotions to Accomplish with Gameplay

10

<b>E</b> motion	<b>M</b> otivation	<b>A</b> ction	<b>G</b> oal
Attract	Intrinsic	Easy	Audience
Learn remember to come back	Interesting not pushy or over powering	Tell a Story	Cause
Participate Decide Perform	Obstacles Constraints Opposing force, fun failure	Accomplish	Change



Putting Emotion into Play™

# GAME Action Grid

Clear Goals Leverage Emotions to Accomplish with Gameplay

11

G oal	A ction	M otivation	E motion
Audience	Easy	Intrinsic	Attract
Cause	Tell a Story	Interesting not pushy or over powering	Learn remember to come back
Change	Accomplish	Obstacles Constraints Opposing force, fun failure	Participate Decide Perform

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# Fun Meters

How to Measure It





Same as Beta's? Tilt HD: Flip's Adventure in 1.5 Dimensions



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# How to World Wide Beta Test with only 100 devices

14



Tilt HD: Flip's Adventure in 1.5 Dimensions  
Multiplayer Prototype

**Problem:** How to stage a world wide beta test of thousands of players

- Know basic usage patterns to know where to put the hooks for the meta game
- Build metrics and analytics system
- How do beta players compared to real audience?

**Solution:** Launch title for the iPad and test the metrics system and game design for the iPhone version.

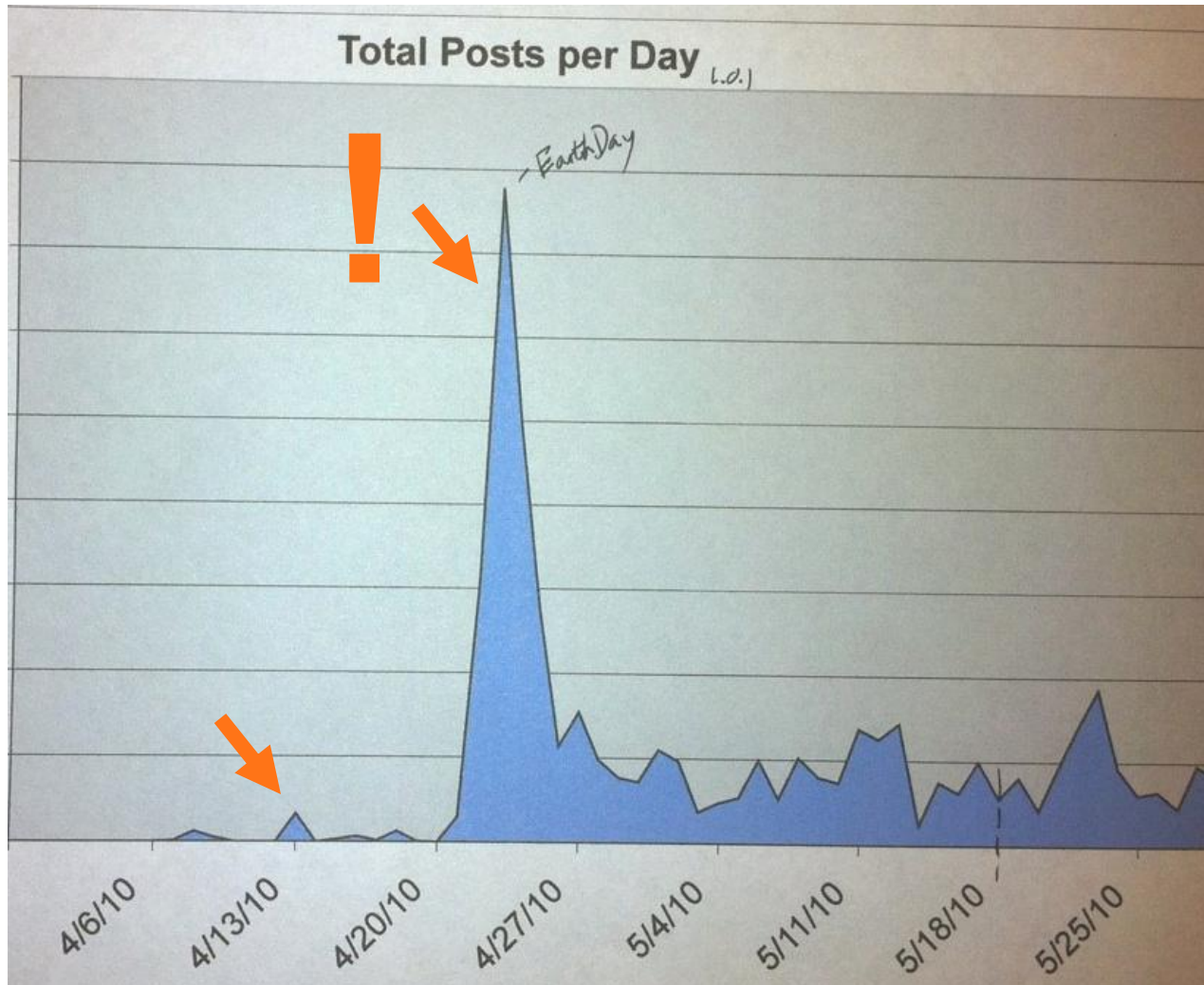


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# What Free Looks Like

Score Posts Per Day are Easy to Measure

15





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# Tilt's Earth Day #1 Free Download was 1000 x Paid

16

**“Free Game!”** Channels opened up around the world then made it on the top 10 list in the App Store

- #1 Free iPad App Download. Top 10 in 10 countries, #3 in US.
- Downloads disappeared after free day
- Was top 50 paid in UK the day after
- Players kept playing
- About 50% devices reported scores over WiFi
- Free update did not spike new sales
- Still installed on a most systems
- Fear the 1 star



QuickTime™ and a  
decompressor  
are needed to see this picture.


# In-App Purchases\* 50% of Revenue for Flower Garden by Snappy Touch

\* in free version

Downloads of free  
version not boosted  
by App Store  
feature

QuickTime™ and a  
decompressor  
are needed to see this picture.

50% revenue  
comes from  
free version's  
in-app purchases  
(orange)



**Noel Llopis** Twitter: @SnappyTouch

<http://gamesfromwithin.com/making-a-living-comfortably-on-the-app-store>



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# Fun Meters

How to Measure It



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# Using Data to Design Fun What You Can't See

19



## Tuning w/o Hardware What we changed

- Accelerometers tuned by taping 3 iPods to a plastic lid
- Added Tap UI

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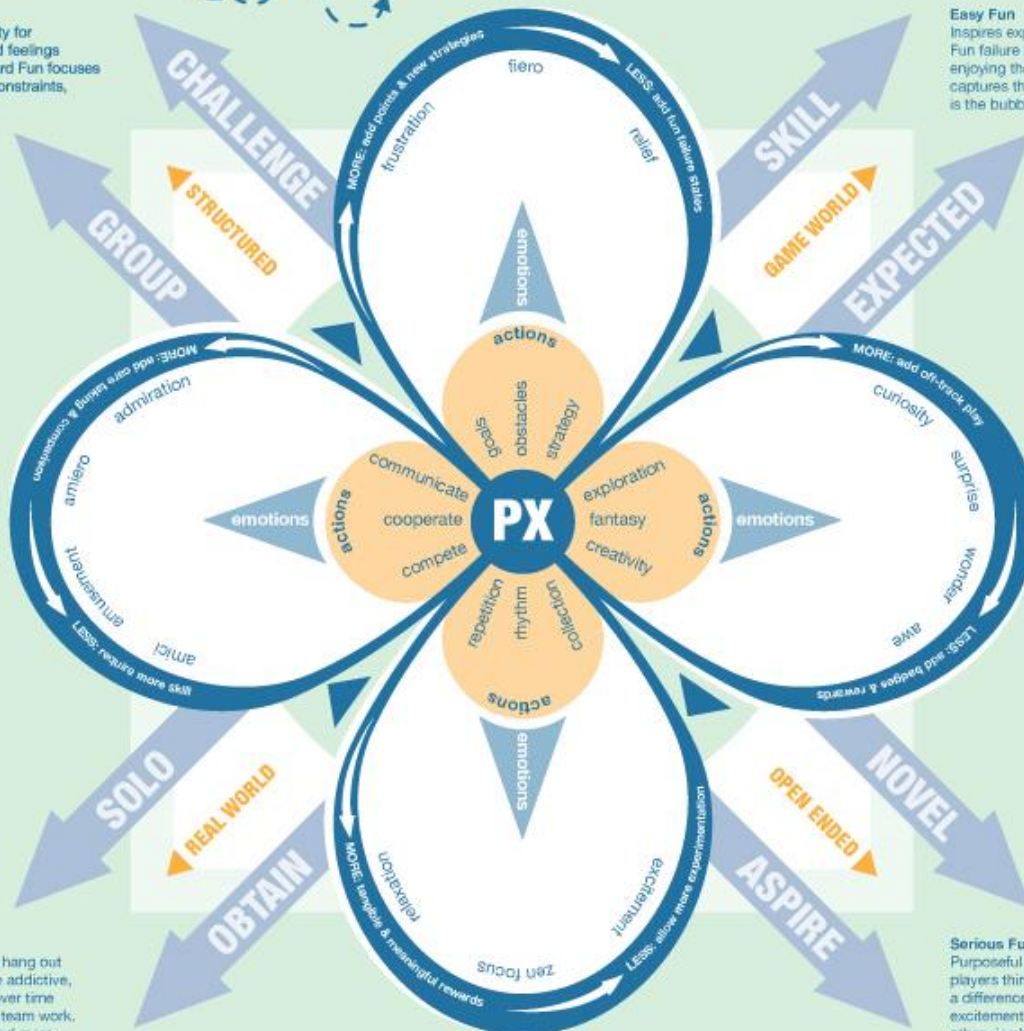
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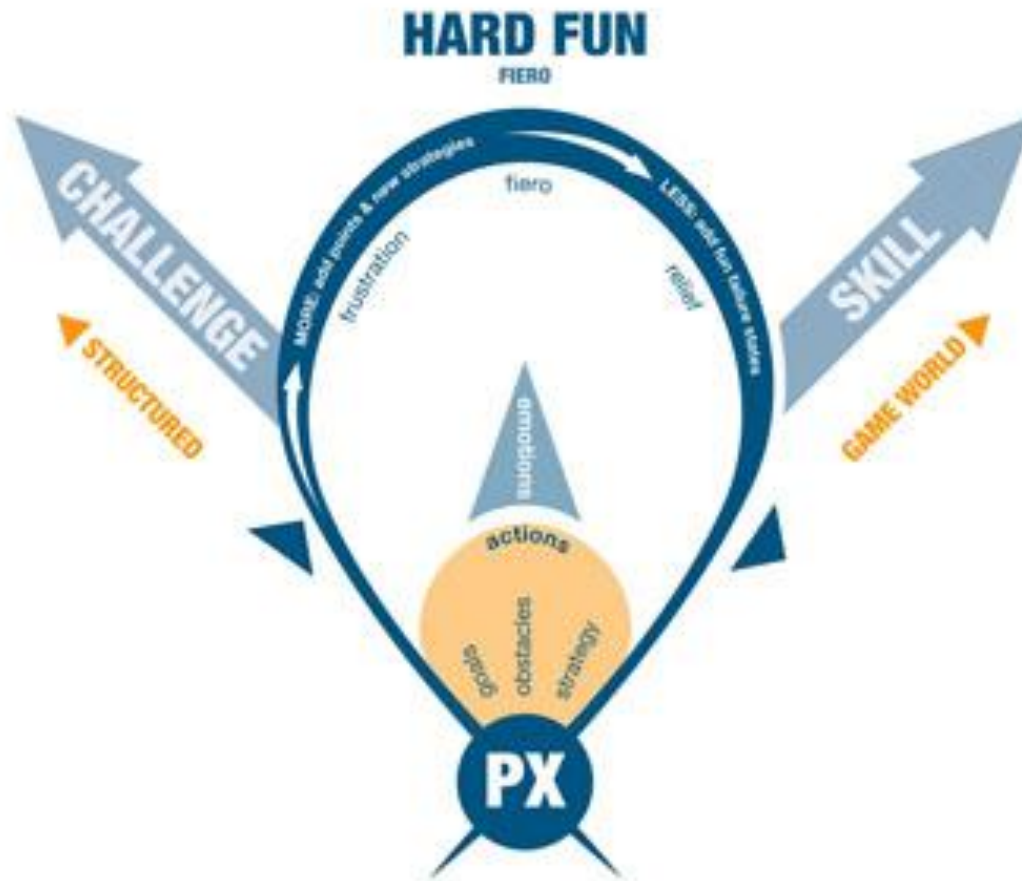
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# Measuring Hard Fun

21

## MASTERY "THE BRASS RING"

**Hard Fun**  
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# Hard Fun: Challenge + Mastery

Can't Push a Button and Win (Unlike Usability)

22





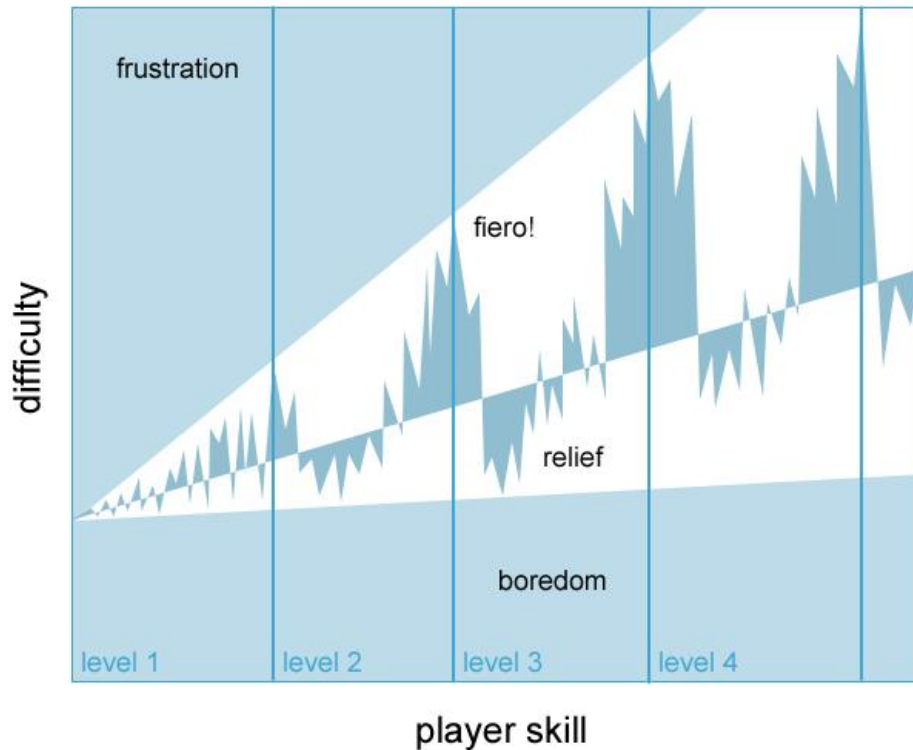


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# Hard Fun: Challenge + Mastery

Games Focus Attention with Goal and Constraints: Frustration and Fiero

23



modified from "Flow" Csikszentmihalyi



## choices

- goals
- obstacles
- strategy
- power ups



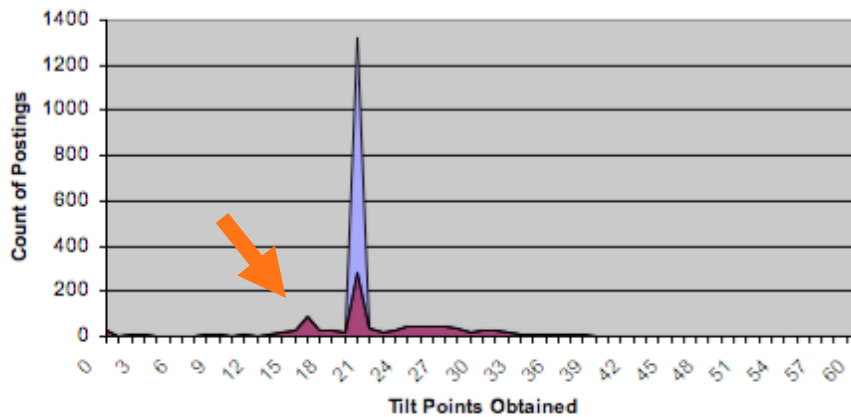
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# Data Driven Design

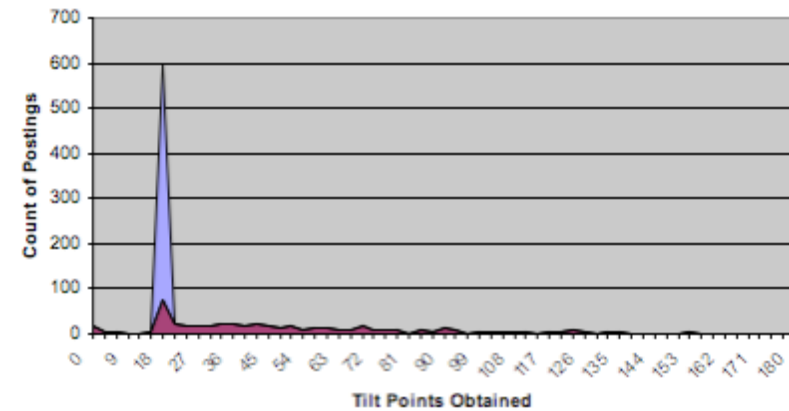
24

Level	Entries	Won	%Won	EH	%EH	Avg Loss	%Near	Num Quit	Last Loss	Losses	Current	ConvRate	Cur Lvl
1	1032	689	63.9	173	26.3	0.3		71.3	226	26	373	252	252
2	517	435	83.9	39	9.0	0.1		11.9	115	126	83	127	50%
3	422	355	84.1	109	30.7	0.1		10.7	71	28	67	23	65%
4	291	250	85.9	35	14.0	0.1		3.3	54	14	41	49	65%
5	218	197	90.4	12	6.1	0.1		5.3	48	9	21	52	106%
6	170	158	92.9	10	6.3	0.0		3.1	33	6	12	35	67%
7	124	113	91.1	4	3.5	0.0		2.2	15	22	11	25	71%
8	167	64	38.3	28	43.8	0.6		57.4	17	7	103	22	88%
9	74	25	33.8	19	76.0	0.8		52.2	17	13	49	20	91%
10	49	18	36.7	3	16.7	1.4		72.2	4	15	31	4	20%
11	33	24	72.7	8	24.2	0.3		44.4	8	8	40	2	75%

TiltPoint Distribution for Selected Level



TiltPoint Distribution for Selected Level



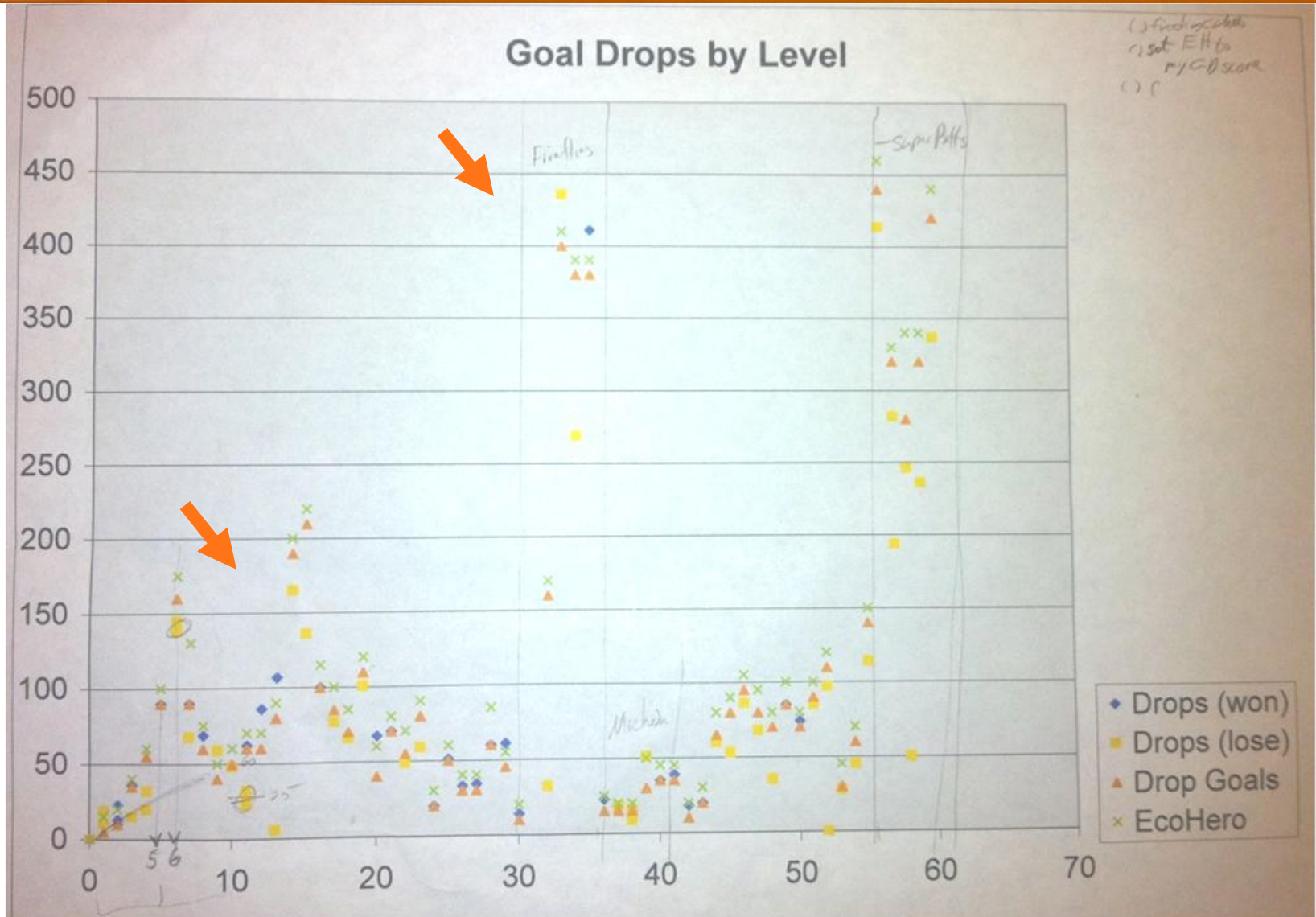


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# TiltPoints, Goal Drops, EcoHero

Balance with data Driven Design

25



What's Good?

(Alpha Test) Tilt: Flip's Adventure in 1.5 Dimensions

Players Want Patterns and Strategy  
(Alpha Test) Tilt: Flip's Adventure in 1.5 Dimensions





Hard Fun Starts Easy 3 types of drops: Tilt



Hard Fun Avoid More Blight: Tilt





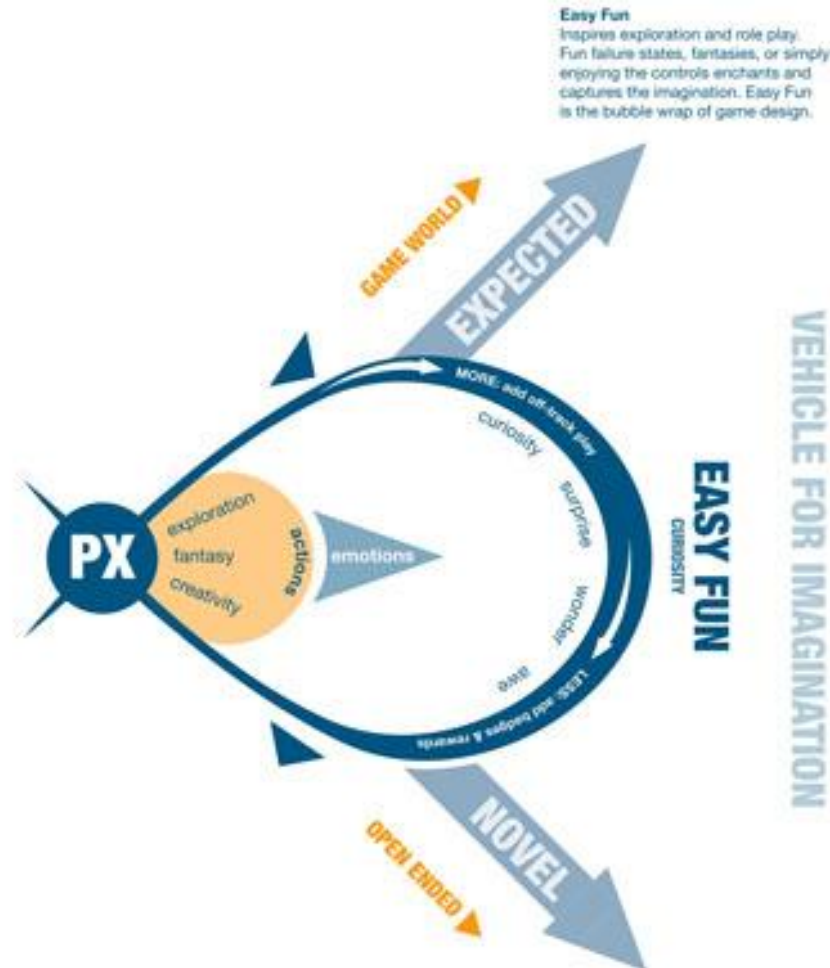
Hard Fun Mid Air Catches: Tilt



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# Measuring Easy Fun

31



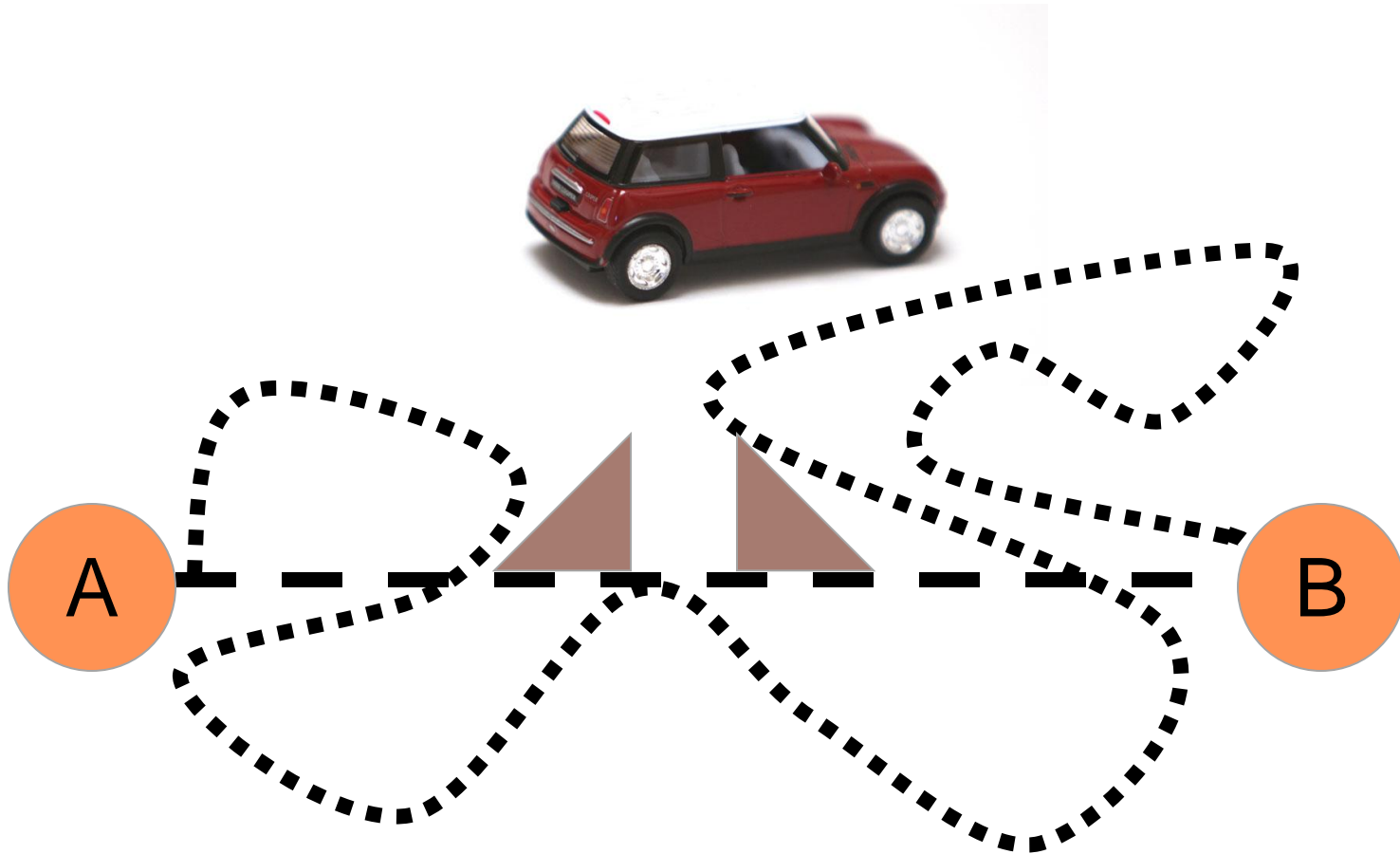


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# Easy Fun: Exploration + Roleplay

Beyond challenge adding curves makes game more fun

32





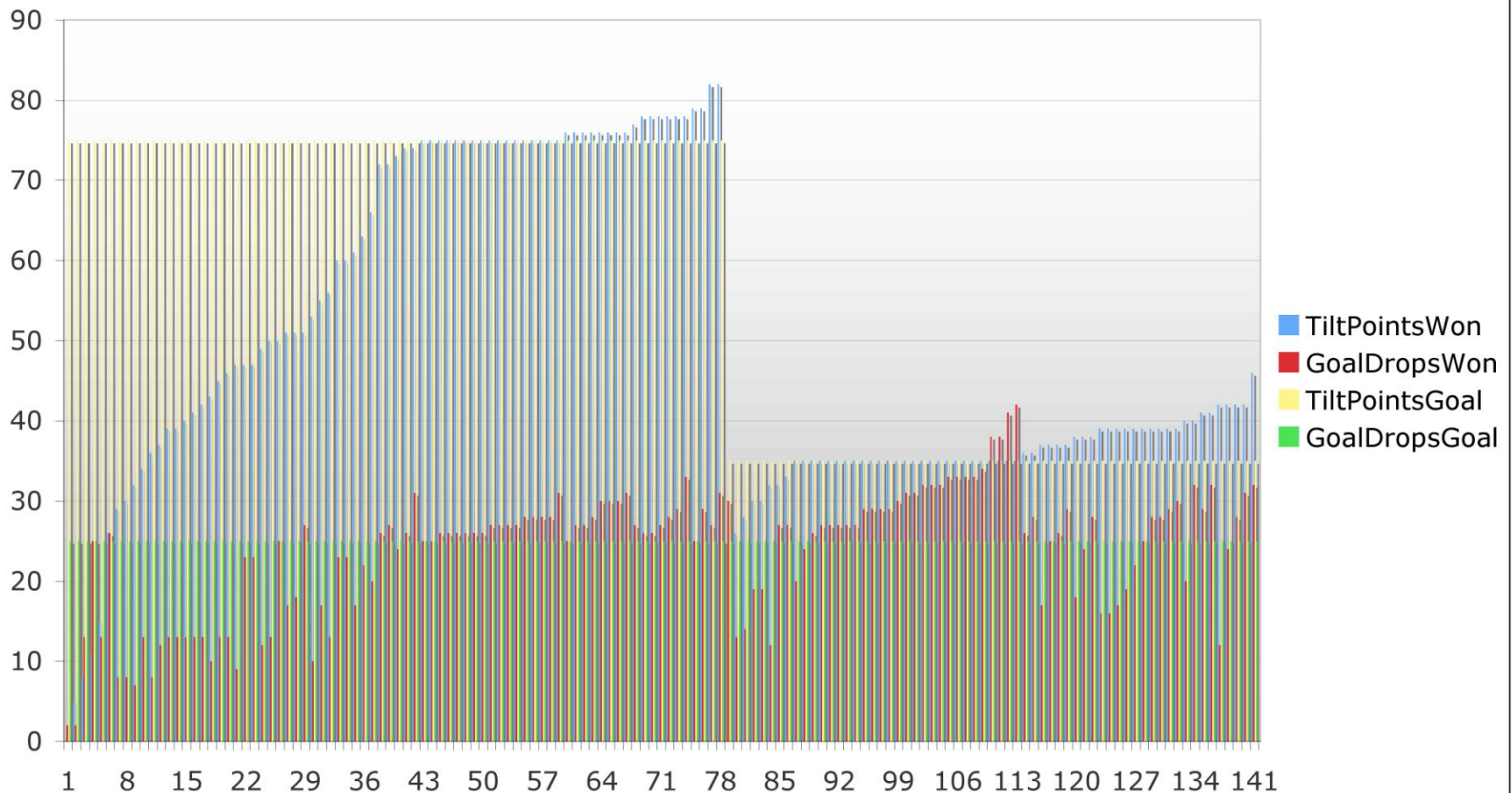


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# Adjusting Hard Fun More Tutorial Success

33

**Level 11 Tutorial for New Mechanic v 1.0.1 to 1.0.2**





Easy Fun: Where Does Blight Come From? Tilt





Hard Fun and Easy Fun New Half Tilt Mechanic: Tilt

Players Want New Mechanics But Confused  
(Alpha Test) Tilt: Flip's Adventure in 1.5 Dimensions

Joy of Controls: Tilt HD: Flip's Adventure in 1.5 Dimensions

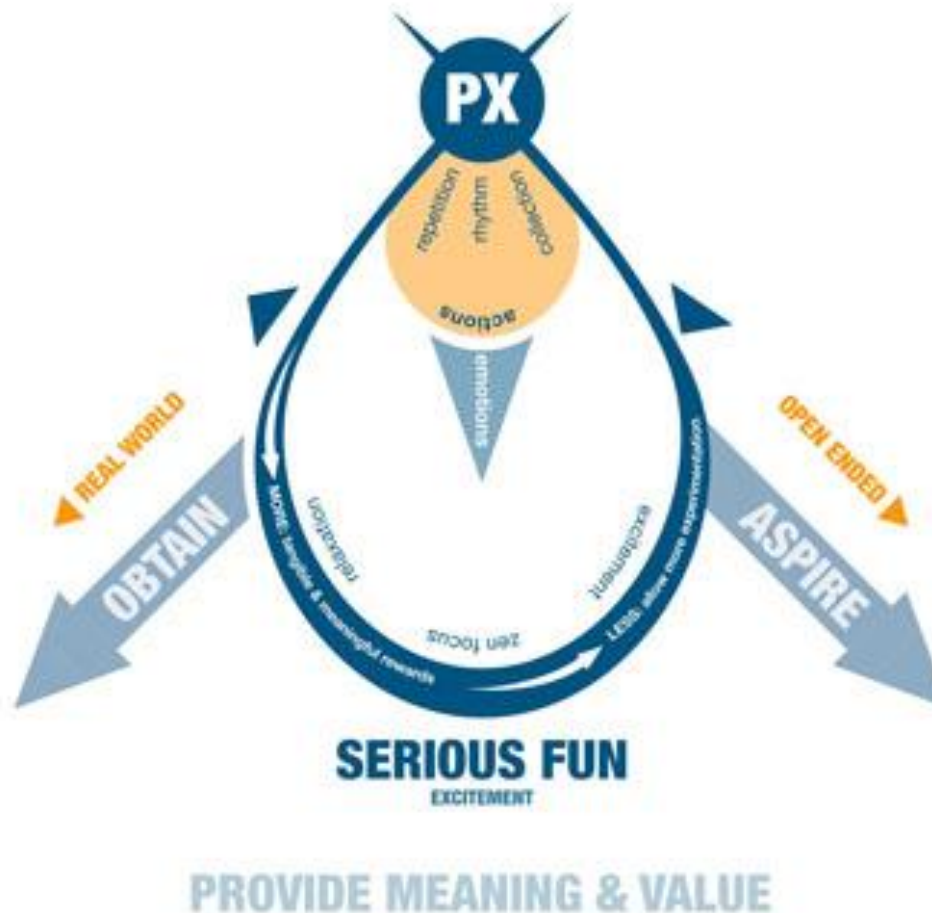




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# Measuring Serious Fun

38



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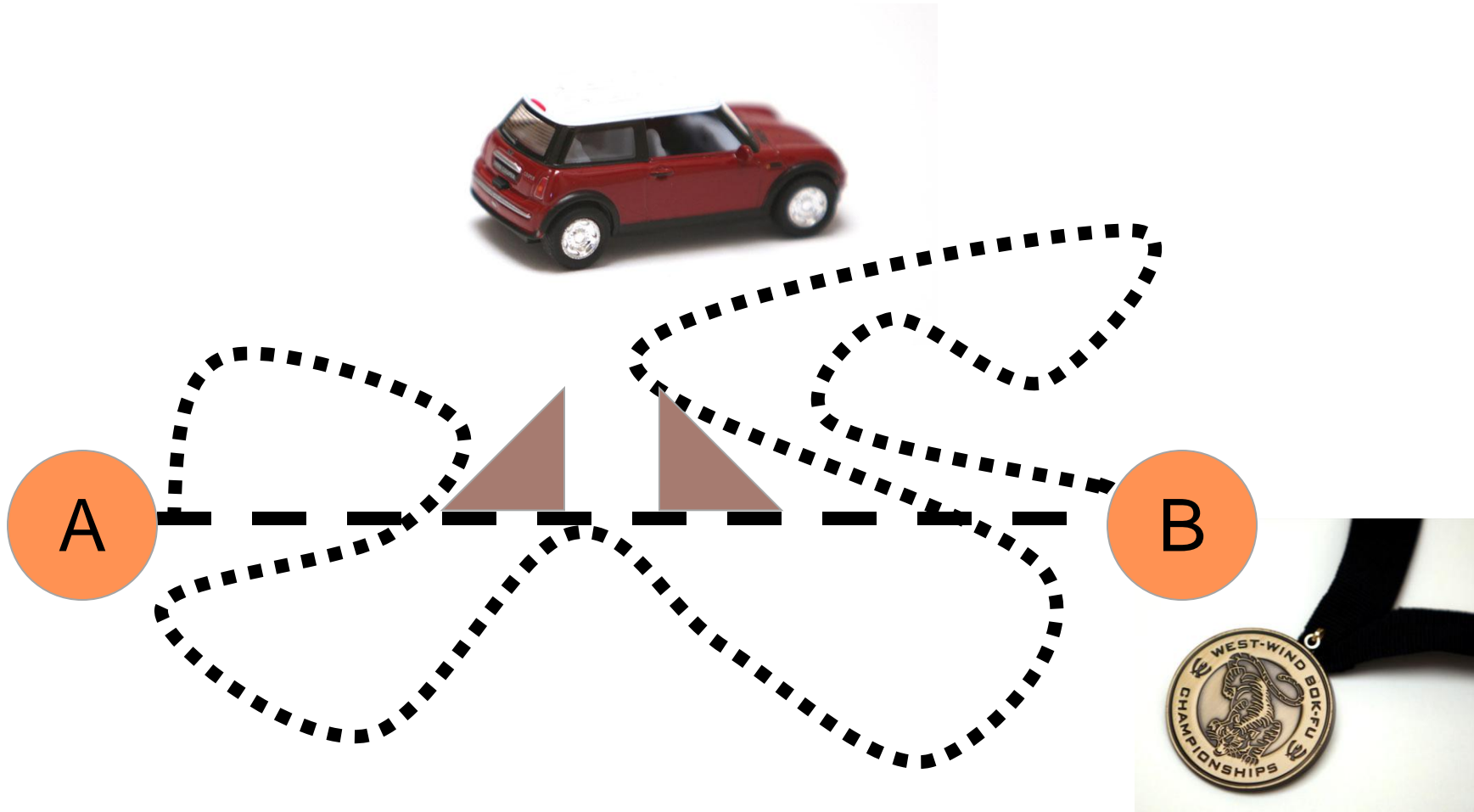


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# Serious Fun: Create Value

Play Brain Age to Get Smarter or DDR to Loose Weight Adds Emotion and Engagement

39





20

Fantastic!



2345



40 of 40



45 of 45



Next Level



Serious Fun Reward and Progress: Tilt



42

Almost!



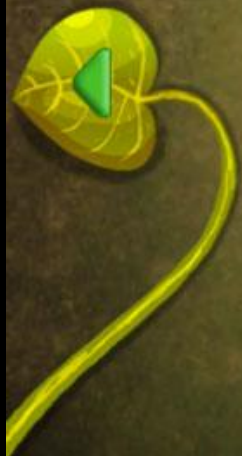
2080



0 of 10



-5 of 60



Try Again



Serious Fun Reward and Progress: Tilt





Environmental Values Increase Engagement.

Tilt: Flip's Adventure in 1.5 Dimensions





World Blight Map TiltWorld.com

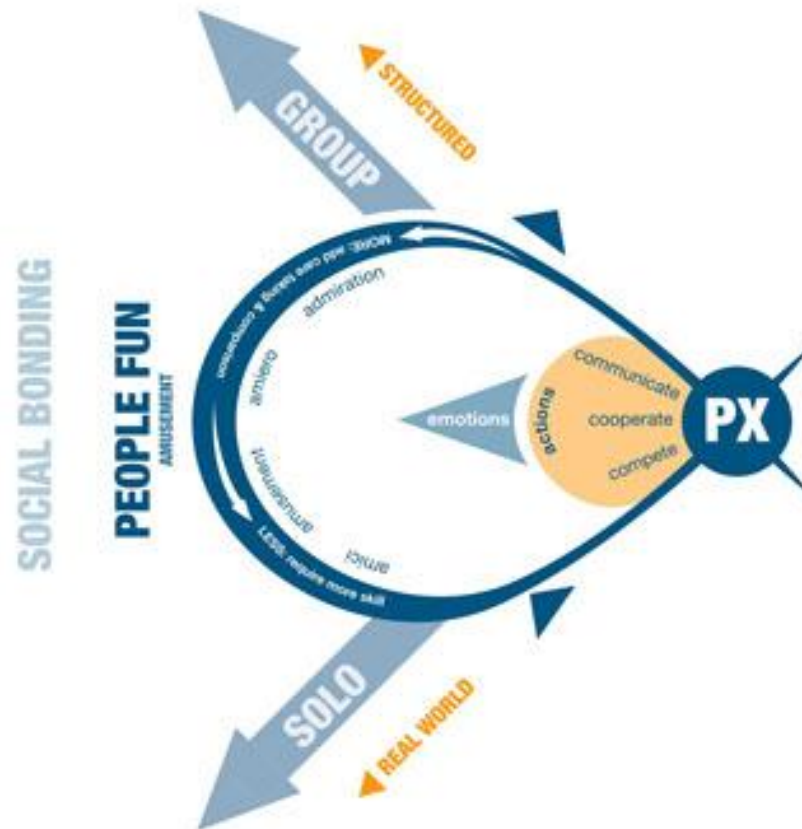
Values are Fun Tilt: Flip's Adventure in 1.5 Dimensions



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# Measuring People Fun

46



## People Fun

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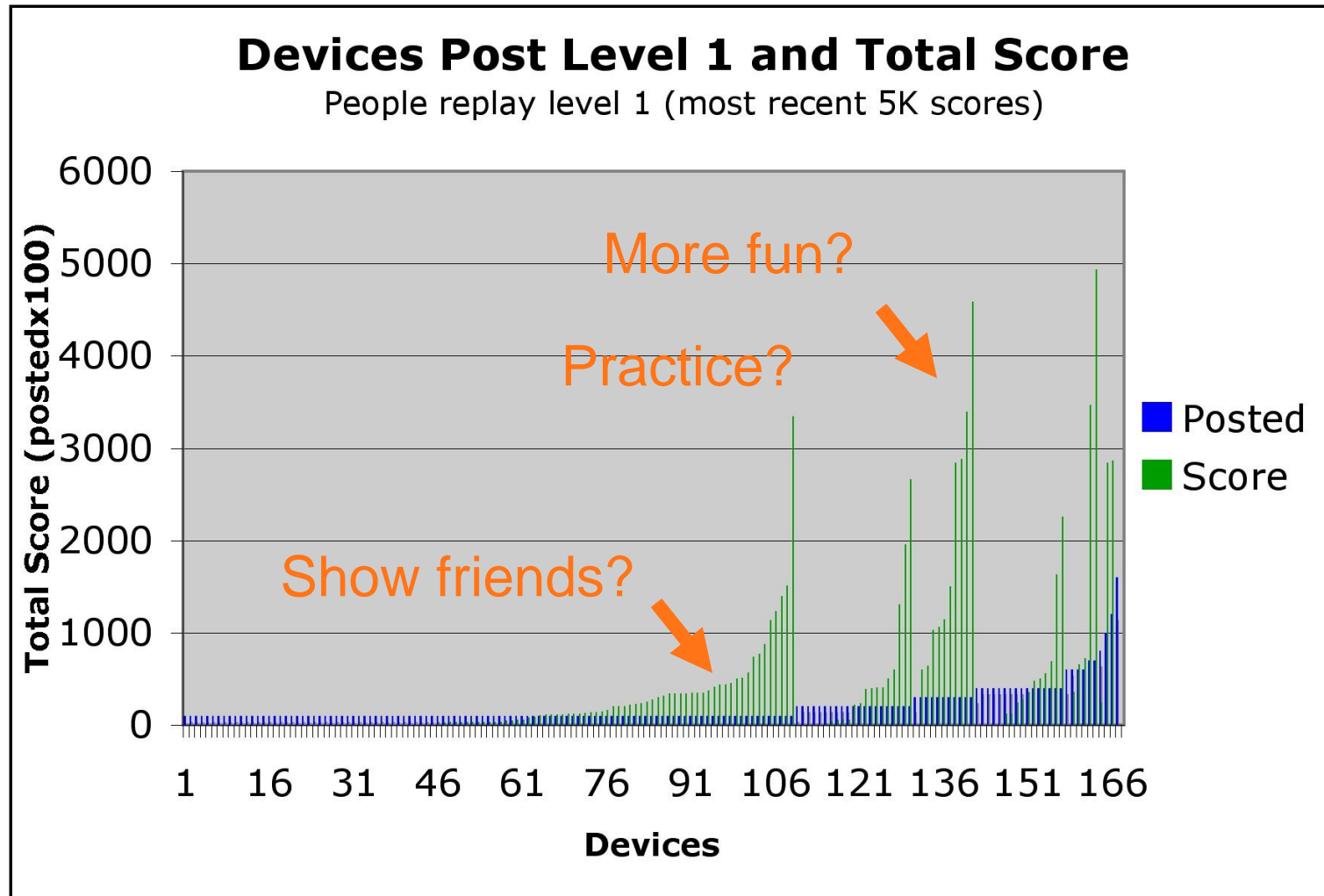




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# Why So Much Replay?

Over 30% High Score Devices Replay and WIN! Level 1





Friends are Fun Tilt: Flip's Adventure in 1.5 Dimensions



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# Tilt's Geo Meta Game Prototype

51



## Earth Day Tilt MOB Challenge

350,000 points from players playing a few levels

Global Gameplay: Tilt HD: Flip's Adventure in 1.5 Dimensions





Blighty

# VOTE!

## Are They Blighty or Mighty?



[skip](#) [flag image](#)



Mighty



*twitter\_christinevel: Support your local Waste*







Flip's Adventure  
in 1.5 Dimensions

# drive less challenge

looking for 100 bright ideas to reduce your carbon footprint

beta  
drivelesschallenge.com



Fueling up for the long flight home. #Til...



Waiting for carpool #tiltworld <http://twitp...>



Wishing #TiltWorld was streaming so I ...



San Anselmo Open Garden project, htt...



San Anselmo Open Garden project - pa...



San Anselmo Open Garden project - ne...



Beautiful beach! #TiltWorld <http://twitpi...>



Driving green since 2003 - wish our 200...



RT @driveless Enjoyed my carbon-free...



Tilt your town until you find where the r...



rt @niolelazzaro Tilt the World Games ...



My Eco-friendly walk back from school...





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# Next

54

- Interviews on the why
- Global metagame
- AB testing (yes on the iPhone/iPad)



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# Fun Meters Conclusion

55

## **Quantitative Data**

- Hard Fun easiest to measure remotely
  - Scores, EOL wins
- A/B testing compare ideas
- Where the issues are

## **Qualitative Data**

- Emotional reaction
- Why players have issues
- What to do to fix them





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# GAME Action Grid

Clear Goals Leverage Emotions to Accomplish with Gameplay

56

G	A	M	E
oal	ction	otivation	emotion
Audience	Easy	Intrinsic	Attract
Cause	Tell a Story	Interesting not pushy or over powering	Learn remember to come back
Change	Accomplish	Obstacles Constraints Opposing force, fun failure	Participate Decide Perform

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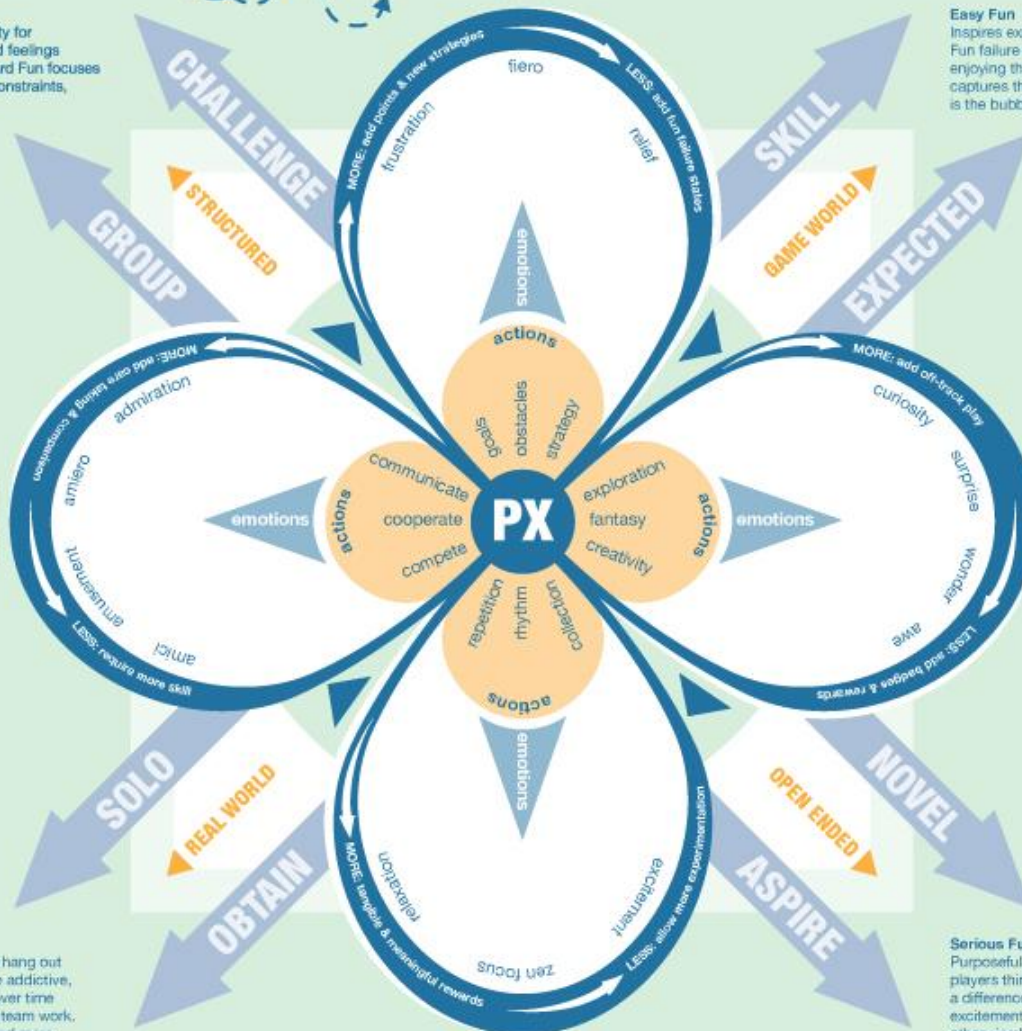
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# Join Us!

Play! It's what people do.



Tilt HD: Flip's Adventure in 1.5 Dimensions



← Want?

↙ Get!

[xeodesign.com/gdc](http://xeodesign.com/gdc)

Top Secret URL!

## Nicole Lazzaro

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Twitter: @NicoleLazzaro

### White Papers and Slides:

[xeodesign.com](http://xeodesign.com)

[Slideshare.com/NicoleLazzaro](http://slideshare.com/NicoleLazzaro)

### Book Chapters:

1. Beyond Game Design, Bateman
2. Game Usability, Isbister
3. Human-Computer Interaction Handbook, Jako





Ding! Level Up!