

# 10 STEPS TO CREATIVE PROTOTYPING

# 1. MAKE CHANGE



# HARD DECISIONS

- “A Point & Click adventure game in a world that has turn based battles”
  - Too large, too unfocused
- “Cut it in half and do only one part”

# QUESTION TIME

- How many people **CUT** their pitch after being told it was too large?

# FOLLOW UP

- Fallacy - **False Dilemma**
  - X or Y, when a whole spectrum of choices actually exists
- You will create **False Dilemma's** for yourself



# PIVOT

- Good advice does not mean right advice
- **PIVOT** – Taking an idea or product into a new direction
- **MAKE** a new prototype
  - THIS - “A Point & Click adventure game in a world that has turn based battles”
  - INTO THIS – “**A turn based adventure game**”



# 1.5. DON'T GET STUCK ON TECHNICALITIES

# 2. MAKING IT PERSONAL





# WHAT IS PROTOTYPING?

- Prototyping is building something **YOU'VE** never made before
- Every game is unique
- **Treat everything as a prototype**

# **THE ORIGINAL ROGUE LEGACY PROTOTYPE**

- A 2D Dark-Souls with puzzles

# THE EVOLUTION OF ROGUE LEGACY



# REITERATION

- Everything's a prototype
- A game is just a pile of prototypes



# 3. DIRECTED PROTOTYPING

# BREAK IT DOWN

- Combat System
- Status Effects
- Enemy AI
- Meta Progress
- UI
- Skill Tree



# MAKE TIERS

- Combat System – Tier 1
- Status Effects – Tier 3
- Enemy AI – Tier 2
- Meta Progress – Tier 3
- UI – Tier 2
- Skill Tree – Tier 3

# KEEP BREAKING IT DOWN

- Combat System
  - Puzzle System – Tier 1
  - Mana – Tier 2
  - Blocking – Tier 3



# 4. CREATIVITY SAVES TIME



# “DIFFICULT PROBLEMS”

- No such thing as “Creative Problems”
- There is only “Creative Solutions”

# “DIFFICULT PROBLEMS”

- Bullet Audyssey
- “A Rhythm-Based-Bullet-Hell where you couldn’t shoot unless you stole ammo by grazing enemy bullets”
- **Tutorial?** A problem for later
- **Long Loading Time?** **MAJOR BLOCKER**

# “DIFFICULT PROBLEMS”

- FALSE DILEMMA



great idea that we can play the tutorial while the game is loading :)

(2615)

[reply](#)

The idea of a tutorial while the game was loading was great! Also, the save warning was good because I know a lot of people use private browsing so it wouldn't of kept the saved game. And you made another style of game then the same as usual, its just fighting bosses in a way...But the biggest difference I could find in the game is that you don't have ammo in a way, you steal energy from there bullets then fire your own.

(1449)

[reply](#)

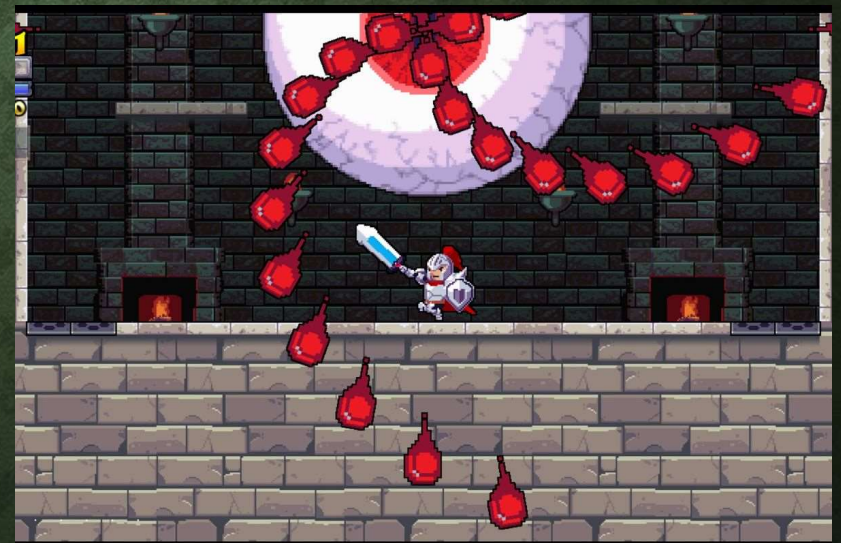
# 5. SWEAT THE DETAILS

# GOAL OF A PROTOTYPE

- IT IS NOT:
  - To get something to **WORK**
- IT IS:
  - To see if something can be **GOOD**

# DEVIL'S IN THE DETAILS

- GOAL: **Faster paced Castlevania**
  - Castlevania without Move-Locking



# WHAT'S IN A SWING



- Animation Separation
- Added Direction-Locking
- Added Priority Animation Canceling
- Added Input Queuing
- Etc.



# 6. KEEP EXPERIMENTING



# CHURN AND BURN

- Prototyping is about rapid experimentation
- Make Editable Values
- Don't stop at "it works"

```
EV
REVIVE_LENGTH = 3.00f;//3.15f;//3.5f;//3.25f;//2.5f;//2.0f;//3.0f;//3.5f;//6.0f; // Length of time required to re
REVIVE_HP_PERCENT = HEALTH_REGEN_AMOUNT; //SHOULD BE SAME AS HEALTH REGEN AMOUNT;//0.20f; // Will change once mi
REVIVE_DEGRADATION_TIME = 0.5f;//2.0f; // Length of time before the revive bar starts to degrade.
REVIVE_DEGRADATION_LENGTH = -24f;//-30.0f;//-32f;//-35f;//-30f;//-25f;//-30f;//25f;//30.0f; // Length of time req
PLAYER_CRAWL_SPEED_MOD = 0.20f;//0.15f;//0.125f;//0.155f;//0.200f;//0.150f;//0.075f;//0.05f;
PLAYER_CRAWL_ANIMATION_SPEED = 1 / 7f; //1 / 9f;
REVIVE_ELLIPSE_WIDTH = 38;//35;//50; // Remember that this is radius, so diameter is x2.
REVIVE_SPEED_INVULN_MOD = 0.50f;//0.55f; //0.6f;//0.5f;//0.45f; //How much SLOWER reviving is when you're invulne
or2 PLAYER_FLAVOUR_DELAY = new Vector2(8.5f, 14f);//(4.5f, 6);//5; // How long you must wait until the player does
```



# CHURN AND BURN

- Prototyping is about rapid experimentation
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REVIVE_ELLIPSE_WIDTH = 38;//35;//50; // Remember that this is radius, so diameter is x2.
REVIVE_SPEED_INVULN_MOD = 0.50f;//0.55f; //0.6f;//0.5f;//0.45f; //How much SLOWER reviving is when you're invulne
or2 PLAYER_FLAVOUR_DELAY = new Vector2(8.5f, 14f);//(4.5f, 6);//5; // How long you must wait until the player does
```

# DON'T STICK TO THE SCRIPT



# ~~10~~ 6 STEPS TO CREATIVE PROTOTYPING

# THE PLAYTESTING CHECKLIST

# THE 4 STAGES OF PLAYTESTING

- **PREP** - What to do before the playtest
- **LIVE** – The Psychology of Assholes
- **POST** – Collating data
- **FIX** - Reaching conclusions

# STAGE 1



# PREP



# FIX OBVIOUS ISSUES

- Feedback stops at:
  - The **First Major** "bug"
  - Poor **Balance and Controls**
  - Confusing **User Experience**

# MAKE A TUTORIAL

- One **Un-Manned Tutorial**
  - In-game or on a cut-out stand
- One in-person **Tutorial Pitch**
  - Backup

# DATAMINING

- **DATAMINING** - Collecting user play session data programmatically
  - Heat maps, Damage dealt, Item usage, etc.
- Be selective
- Too much is a bad thing

# STAGE 2



# LIVE



# WRITE IT DOWN

- You **WILL** forget the details
- Laptops? **MEH**
- Pen and Paper? **GREAT**
  - Mobile
  - Doodle

# MAKE IT A CONVERSATION

- Get people talking
- Keep it open ended
  - “What are you thinking about?” - **GOOD**
  - “How’s the difficulty?” – **GOOD**
  - “Did you like that?” - **BAD**
- Real-time opinions > “neutered” thoughts afterwards



# QUESTION TIME #1

- “This is literally the worst boss fight ever”
- “That boss fight was ok”
- “That boss fight was interesting”

# SUSS OUT PERSONALITIES

- “This is literally the worst boss fight ever”
  - The boss fight sucks
- “That boss fight was ok”
  - The boss fight sucks
- “That boss fight was interesting”
  - The boss fight sucks

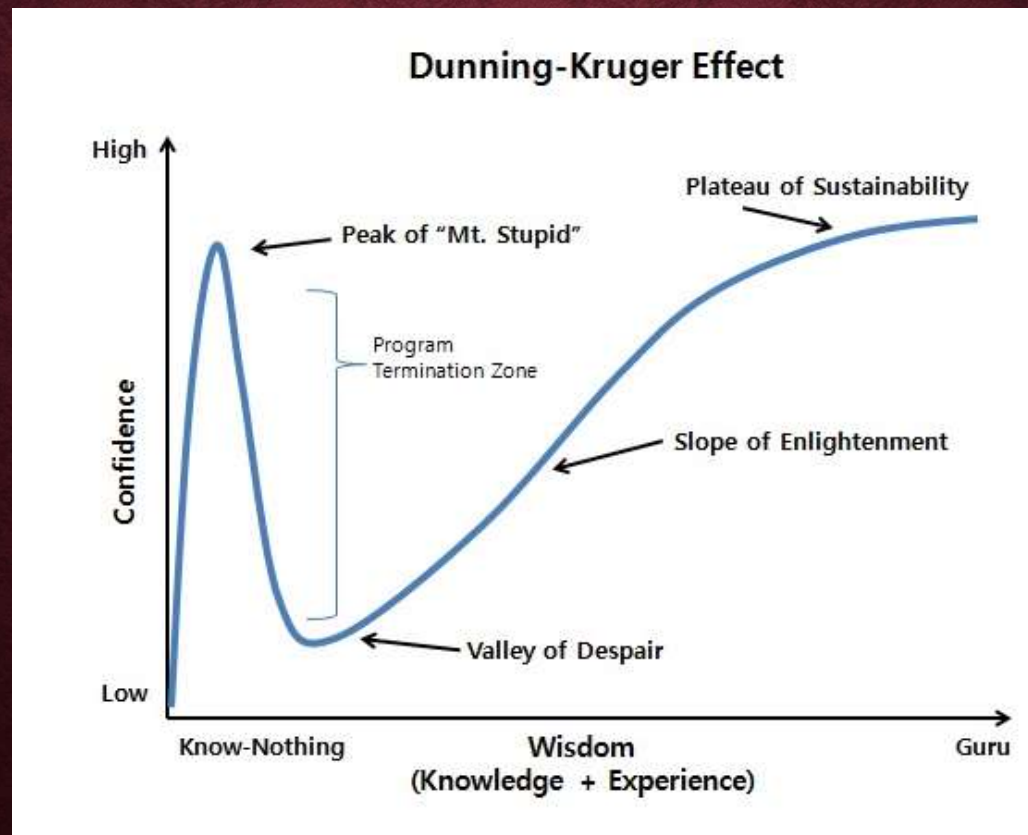


# BEWARE THE EUPHEMISM

- Don't trick yourself
  - “That boss fight was interesting”
- Euphemisms lead to bad games

# EVERYONE SUCKS

- Dunning Kruger Effect



# STAGE 3



# POST

**QUESTION TIME #2!**

# TAKE TIME TO COOL OFF

- You are not thick-skinned
  - Professional criticism != Personal criticism
  - Go to sleep
  - Give yourself 24 hours to think on it

# THE SURVEY

- Surveys are a safety net
  - Don't make it just about the game
  - Feedback ISN'T EQUAL
  - Pay attention to wording
    - **BAD** – “How fun was the boss?”
    - **GOOD** – “I found this boss to be...”
  - Use the right answer forms

# ANSWER FORMS

My favorite types of games are:

Short answer text

In general I prefer games that are:

	1	2	3	4	5	
Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Difficult

I believe that I am:

# RESULTS

RPG

Coop, indie

MMO or RTS

RPG (but really anything except sports games)

Action adventure

Platformer

Action adventure, survival horror

Action-Adventure / RPG

Cellar door games - :P - simulation

Zombie related

Action games in general (2D, 3D, Platformers, FPS, Fighting etc.)

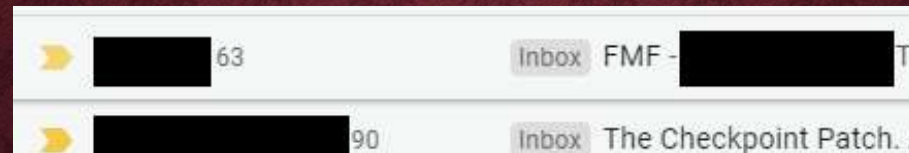
Tower defence, puzzle... I don't have a specific favorite.





# THE FOLLOW UP

- Don't be afraid to follow up
  - Be **Honest** and **Responsive**



***How many pieces of equipment have you bought do you think (all classes)?***

I've attached screencap of what equipment I got, along with skill tree for each characters. Looks like I remembered my levels wrong D: (sorry!) I've had the chance to buy Sniper's stuff.

***How many times do you think you've died?***

That's hard to say, I've died a tonnn of times. Probably between 80-150? Mostly in Styx & Tartarus. And then there's also dying in the Security drone

***How many stages do you think you've grinded for gold?***

Not sure how to estimate this one... I haven't really replayed a mission with the intention of grinding for gold, though I find that the New Foloji (Tartarus

***And finally, and this is a long shot, how many "levels" do you think you've gained from dying/grinding stages?***

I think I was around Lv. 26 & lower after beating Lelantos, and am at around 35, so I guess about 10 levels per character? (After Lelantos, I played th

# READING THE DATA

- LEARN EXCEL
- It's only as good as what you extrapolate

LEVEL	TIME PLAYED (SECONDS)	GOLD GAINED	GOLD FROM END CHEST	STAGE BEATEN	TANK NAME	TANK LVL	TANK DMG	TANK GOLD	TANK MASTERY LVL	TOTAL GOLD	TOTAL TIME	ENGINEER NAME	ENGINEER LVL	ENGINEER DMG	ENGINEER GOLD	ENGINEER MASTERY LVL	TOTAL GOLD	TOTAL TIME	FIGHTER NAME	FIGHTER LVL	FIGHTER DMG	FIGHTER GOLD	FIGHTER MASTERY LVL	TOTAL GOLD	TOTAL TIME	SNIPER NAME	SNIPER LVL	SNIPER DMG
June 5th, 2017																												
Level_W99_Special_Tank_01	59	0	0	FALSE		6	66	15	10	0	317		0	0	0	0	0	0		8	0	15	10	0	317		0	0
Level_W99_Special_Tank_01	61	0	0	FALSE		6	75	15	10	0	401		0	0	0	0	0	0		8	0	15	10	0	401		0	0
Level_W99_Special_Tank_01	62	0	0	FALSE		6	78	15	10	0	500		0	0	0	0	0	0		8	0	15	10	0	500		0	0
Level_W99_Special_Tank_01	71	90	90	TRUE		6	0	105	10	90	634		0	0	0	0	0	0		8	172	105	10	90	634		0	0
Level_W02_01	393	1140	0	FALSE		6	2135	1245	11	1230	1217		0	0	0	0	0	0		8	2193	1245	11	1230	1217		0	0
Level_W02_01	60	160	0	FALSE		7	1005	491	11	1390	1351		0	0	0	0	0	0		8	377	491	11	1390	1351		0	0
Level_W02_01	297	1160	0	FALSE		7	1437	1651	12	2550	1683		0	0	0	0	0	0		8	2613	1651	12	2550	1683		0	0
Level_W02_01	264	1000	0	FALSE		8	3159	1334	13	3550	1981		0	0	0	0	0	0		8	1185	1334	13	3550	1981		0	0
Level_W02_01	548	2620	1125	TRUE		9	2538	3128	14	6214	2796		7	5682	3128	14	6214	2796		0	0	0	0	3550	1981		0	0
Level_W01_SubBoss_02	216	620	0	FALSE		11	1450	1110	14	8014	3469		0	0	0	0	6214	2796		8	1694	1110	14	8014	3469		0	0
Level_W01_SubBoss_02	289	1610	832	TRUE		11	2479	1648	14	9624	3785		0	0	0	0	6214	2796		9	1419	1648	14	9624	3785		0	0
Level_W02_02	187	560	0	FALSE		0	0	0	0	9624	3785		8	1009	1561	15	10336	4568		9	1737	1561	15	10336	4568		0	0
Level_W02_02	537	2100	0	FALSE		11	2064	3871	15	12646	5184		0	0	0	0	10336	4568		9	5776	3871	15	12646	5184		0	0
June 5th, 2017 - 2																												
Level_W02_02	107	420	0	FALSE		0	0	0	0	0	0		8	1024	1837	16	13108	5475		10	1189	1837	16	13108	5475		0	0
Level_W02_02	288	1070	0	FALSE		0	0	0	0	0	0		8	2476	1784	16	14285	5804		11	1974	1784	16	14285	5804		0	0
Level_W02_02	491	2170	0	FALSE		0	0	0	0	0	0		8	4811	4171	18	16572	6318		11	2654	4171	18	16572	6318		0	0
Level_W02_02	627	3510	1237	TRUE		0	0	0	0	0	0		8	5949	4124	18	20533	7068		12	3101	4124	18	20533	7068		0	0
Level_W02_KeyGate_01	370	2650	1260	TRUE		0	0	0	0	0	0		8	5949	4124	18	20533	7068		12	3101	4124	18	20533	7068		0	0
Level_W02_03	318	1100	0	FALSE		12	3446	4417	18	23376	7533		0	0	0	0	20533	7068		12	2077	4417	18	23376	7533		0	0
Level_W02_SubBoss_02	77	170	0	FALSE		12	1769	2578	18	24762	8104		0	0	0	0	20533	7068		12	2877	2578	18	24762	8104		0	0
Level_W02_SubBoss_02	77	170	0	FALSE		12	153	1029	18	24949	8310		0	0	0	0	20533	7068		13	116	1029	18	24949	8310		0	0
Level_W02_SubBoss_02	67	90	0	FALSE		12	239	1128	18	25048	8407		8	0	1138	18	25048	8407		0	0	0	0	24949	8310		0	0
Level_W02_03	337	1780	0	FALSE		12	1302	3086	18	27006	8818		8	4115	3086	18	27006	8818		0	0	0	0	24949	8310		0	0
Level_W02_03	484	2190	0	FALSE		13	6072	2819	19	29415	9407		9	1429	2819	19	29415	9407		0	0	0	0	24949	8310		0	0
Level_W02_Special_05	28	0	0	FALSE		13	0	1114	19	29415	9513		10	0	1114	19	29415	9513		0	0	0	0	24949	8310		0	0
Level_W02_SubBoss_02	192	1970	1462	TRUE		13	838	3216	19	31517	9866		10	977	3216	19	31517	9866		0	0	0	0	24949	8310		0	0
Level_W01_02	394	1160	220	TRUE		0	0	0	0	31517	9866		0	0	0	0	31517	9866		13	2615	4492	19	32793	10480		5	16
Level_W01_03	139	560	0	FALSE		0	0	0	0	31517	9866		0	0	0	0	31517	9866		13	1696	1608	19	33992	10978		6	8
June 10th, 2017																												
Level_W02_03	110	330	0	FALSE		0	0	0	0	0	0		10	980	1541	21	36390	12005		14	734	1541	21	36390	12005		0	0
Level_W02_03	453	2120	0	FALSE		0	0	0	0	0	0		11	2455	2751	21	38722	12523		14	5784	2751	21	38722	12523		0	0
Level_W02_03	421	2200	0	FALSE		0	0	0	0	0	0		11	5334	2496	22	41087	12971		15	2257	2496	22	41087	12971		0	0
Level_W02_03	498	3840	1372	TRUE		0	0	0	0	0	0		12	8262	5442	22	45246	13512		15	2348	5442	22	45246	13512		0	0
Level_W02_TiranBoss_01	82	0	0	FALSE		0	0	0	0	0	0		12	267	1667	22	45246	13693		15	712	1667	22	45246	13693		0	0
Level_W02_TiranBoss_01	138	1410	22	TRUE		0	0	0	0	0	0		12	1545	3218	23	46797	13850		15	1284	3218	23	46797	13850		0	0
Level_W02_04	783	1410	0	FALSE		13	1418	4768	24	48348	14608		0	0	0	0	0	0		15	944	4768	24	48348	14608		0	0



# EXACERBATE THE ISSUES

- Then fix it

# PART 4



# FIX

# ISOLATE THE PROBLEMS

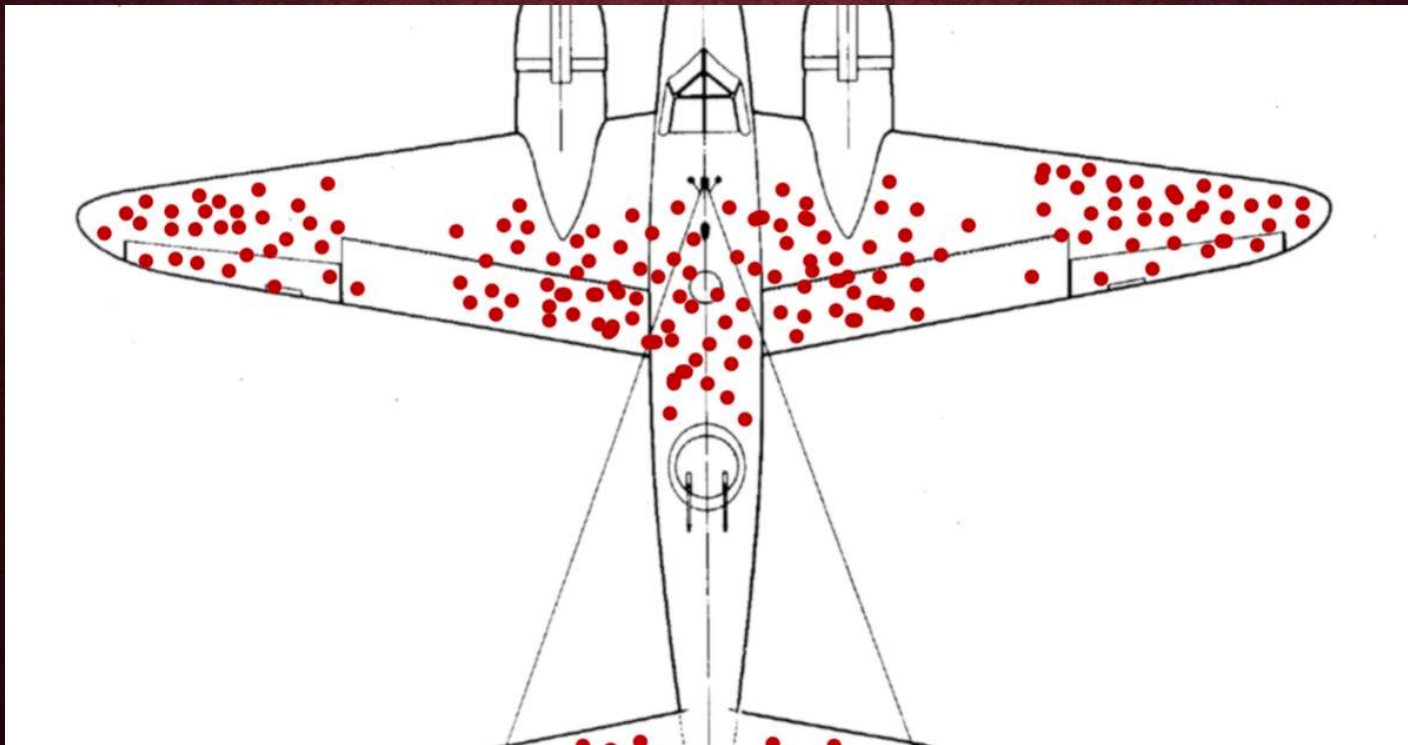
- Full Metal Furies was too difficult

# COME UP WITH A SOLUTION

- “Make it easier”
  - **NOT** a solution
- Design a **REAL** solution
  - Less enemy HP, tweak econ, etc.
- Think of the consequences (3-Steps ahead)
  - Effects of your solution
  - Effects that cascade from that solution
  - Effects that cascade from the cascade

# IS THIS THE “REAL” PROBLEM?

- Abraham Wald – Hungarian Mathematician



# ISOLATE THE “REAL” PROBLEM

- Parsing feedback is both Science AND Art
- Game is too **HARD**?
  - Yes, but it’s misleading
- Game is too **FRUSTRATING**?
  - Yes, and this was the main problem



# THE ACTUAL PROBLEM

- A stage in FMF takes around 5-10 minutes.
- When a player died, they had to replay the whole stage again
- Even 3-7 minutes of replaying stages was too frustrating (even with XP rewards)
  - **So how do we fix this?**

# SOLUTION

- How do you alleviate frustration?
  - Added a checkpoint system
  - Jury rigged it onto existing camera triggers.

# RE-CAP

- Game's too hard!
  - **False Feedback** - No, too frustrating
- Lower frustration by lowering difficulty!
  - **False Dilemma** - OR we lower punishment
- Game designed for 1-life runs
  - **Pivot** – Add checkpoints
- We'll have to remake every stage!
  - **Creative Solutions** - Jury-rig off camera



# MORE THEN A PROTOTYPE

- If you are good at prototyping you'll be good at making games.

# THANK YOU

- Contact

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