Fighting Genre Design Guidelines

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ABSTRACT

This paper is intended to identify how fighting games can be better designed. It will clarify what user exists, and what they generally want. The paper will establish a categorization of fighting game characters, *arch types*. In the end guidelines for designing fighting games will be established, many of the guidelines (if not all) are also reasonable to use for designing modern beat-em up games.

Keywords

Fighting games: Refers to the genre, of 1 user versus 1 user, duel game between 2 users.

Ultra Attack: Extra powerful attacks, which usually demands a very complicated input from the user.

Arch type: Each character in a fighting game is one of the eight arch types, and every arch type represents a detailed gameplay ideal a fighting game user can have.

Thor: *MVC*3 playable character, based on the Marvel comic character (which is based on the Nordic mythology)

Threshold: refers to how hard a character is to start playing, not how hard it is to master the character.

Combo: A user chains input one after another to perform more efficient damage on the other user's avatar.

Self -imposed challenge: User unnecessarily makes it harder for him/her to make the game more fun.

Blazblue[7] = BB, Dead or Alive[8] = DoA, Guilty Gear[9] = GG, Marvel Vs. Capcom[10] = MVC, Soul Calibur[11] = SC, Street Fighter[12] = SF, Tekken[13] = TK

1. INTRODUCTION

The fighting genre has had a steady decline in market segment over many years [6]. The genre is known by most casual gamers, to be too hard to learn. Meaning it has shunned away any new users for a long time. A big difference from other genres is that the games primarily only offers the pure core gameplay of the game, and most of all they usually have a total lack of user friendliness. Recent years some game developers have tried to create different modes to ease the learning curve.

This research's empiric studies were conducted by having several lab studies with different users groups. Field studies, by going to different fighting game tournaments/fighting game communities (observation) and having interviews with seasoned fighting game users, this was done from the end of 2010 to the end of 2011 [2].

2. EXTREME EXPERT USERS

During the empiric studies especially from field study method, showed that expert users are bountiful of the total percentage of users, which is to my knowledge rare.

This number is high, basically almost every user who regularly plays fighting games is an expert or "higher", which is why there was a need to create the term Extreme expert user.

In fighting games, the better user (player) always wins. It's a very fundamental piece of the genre, that for example mechanics that has to do with random coincidence is never used (extremely few examples exist). E.g. in fighting games an attack do not have dispersion damage of 10-15, an attack does exactly 10 damage. There is no "use of chance" [1]. In fighting games an expert users always wins over an intermediate users, but then during the empiric studies it was clear that an expert user, by all reasonable standards, playing the game 1-2 hours per day owning an arcade stick for roughly 2000 SEK. Still would lose every game to roughly half of the users in a fighting game community. In numbers for example, in game X with character Y a beginner user can do a 2-5 hit combo, intermediate 10-15, expert 20-30, extreme expert 70-90. From this a minor conclusion was taken (it eased the analyzing of other parts). It can still be a huge difference between users in the expert user group.

Note: Extreme expert is not the same as professional user, but reasonably is an aspiring professional user.

3. FUN FACTORS OF FIGHTING GENRE

A big part of the empiric studies was to conclude exactly what is the factor that makes people play fighting games. This was primarily done by using the Mechanics, Dynamics, and Aesthetics [3]. A combination of questioners (around 40 people) interviews (40), lab studies (20) and numerous Internet community, forums etc. (quantitative data)

Hypothesis A: Most users will answer that challenge fun factor is the most important one

Hypothesis B: Most users will say that sensation fun factor is the second most important factor.

Hypothesis A was proven right, more or less every user that plays fighting game enjoys the challenge, which is not a surprise as fighting game as stated is hard, if not the hardest game genre.

Hypothesis B was proven wrong[2]. While still many users indicated that they cared about sensation, the second most important aesthetic for a fighting game user is the expression fun factor. This was at first hard to grasp and understand, but according to the users, it's the feeling of being able to do show their skills that is a very thrilling emotion they want to achieve. Which then fighting games supplements by the combo indicating of hits, the more the better the user. And actually expression often becomes combined with challenge. As users of fighting games tends to strive for *self-imposed challenge*. It's extremely common

to observe a user, which has "won" the game, playing purposely wrong and trying to win with some special flashy finish of, then just wining. This is because the user enjoys the challenge aspect and the expression as other user(s) will observe this overkill, in lack of better words.

Another important thing when designing a fighting genre using the MDA [3] is to understand that they have absolutely no submission fun factor. Every expert/extreme user (which is roughly 90% of the user group), clearly explains that they feel the need to play the game for at least 1 hour per game session if not a lot more. Most users would say they feel there is no point turning on a fighting game if they do not know they can play for at least 2 hours without having to take a break. There are two different approaches to this, either decided to ignore to design anything that will support submission or add extra modes that can work as submission fun.

4. TOTAL LACK OF USER FRIENDLINESS

Fighting genre usually has a total ignorance of the existence of beginner/intermediate users, this is obviously not good .Especially as fighting genre is by far one of the hardest games for a new user to understand.

In recent years there have been a few new attempts to create some easy mode etc. No game has been able to do it well enough. The first problem is that many fighting games solely have their core gameplay, meaning the user have to really like the core gameplay right away to want to play the game more. Today a fighting game needs more than just arcade mode and versus to keep users who are not expert/extreme.

During the lab studies, the main agenda was to test how hard it was for beginners and intermediate users to learn a new fighting game. This was focused on the games, *Super SF 4*, *MVC*3 and *BB*, other games *SC*1-4, *VF*4-5, *GG*, DoA1-*4* and *TK*3-6, was tested to a less extent.

Specifically the Simple Mode of *MVC*3 (the game had been released the day before) was tested, and the Easy Input of *BB*. In both cases half of the testers would play with the games intended user friendly system. For *MVC*3 the testers had more problem learning the game from using the system (Simple Mode), this is probably because the system does too much for the user. This would lead the user to not evolve very far, but the system works pretty well for casual gaming. The Easy Input of *BB* works very well, the user can set specific commands to buttons this will still force the user to do normal combos. But the user does not have to do overcomplicated input for *Ultra Attacks*. This makes it easier for the user to learn how to chain the attack of their character. Note that the system is also well functional on the Internet gameplay, the Easy input is turned off for ranked games but in custom lobbies the host can set it to true or false, supporting users at different user groups to play with each other's.

Primarily with SF4 different inputs system was tested. The "Charge, Motion and Direction input" [2]

Hypothesis C: Charge input is the hardest to learn.

This was proven to be correct, not a single person was able to play easier with charge input. But there seems to an upside to charge input, which is that on expert level is very easy for a user to pick up any other charge controlled character and play them.

The genre does have some user friendliness which is that most companies follow a general design for user inputs. This makes a user know that Input A, is mechanic A. It eases the interaction part for the user, if the game follows what earlier game has used.

But some problems have been identified with this design approach, first of all this is depending on that the user has played other fighting games before. This is not something unique to Fighting games, more a point that the design cannot always trust in that the user knows on beforehand how the game works. Still it's better to follow established games then not to. The biggest problem is for example in *MVC*3, where more than 40 characters have Light-Medium-Hard-Special as a standard combo and then *Thor*, have Light-Medium-Special for the same combo. This will make the user press the combo wrong as they have trained their muscle memory to perform 4 inputs and not 3 for the same thing. Letting most characters have the specific mechanic with input A, e.g. character A-K has input A = mechanic A, but for character L input A = mechanic B. Having Characters with their own unique input system, makes the gameplay more unique (arguably), it's more that they just get harder to learn. A user that a start playing for example *Thor* as his/her first character is really confused playing any other character afterwards.

Many characters is also created by the developers with the mindset that the user plays with an arcade stick, making many characters be extremely hard to play with a normal console controller or keyboard.

Another problem is that they do not explain anything to the user, there is a need for 2 things.

First an explanation of the system (Tutorial/Campaign mode or something similar) is needed as this will help the user learn the specific games core mechanics.

Secondly, detailed explanation of each characters main strength and weakness

Arguably fighting genres biggest unique selling point, is the incredible unique gameplay each character can offer, meaning a game can have ridiculously variance in gameplay. This also means that a user who have played for 30+ hours with character A, just barely knows how character T works. If the game could explain most favorable mechanics and reasonable tactics per character the games would be much easier to understand. Currently if a user wants to learn how a game works they have to go and search for big Internet forums where other users have written guides/videos and learn from that. It's very much up to the user if they want to be good at a fighting game, while the games usually have some sort of training mode, but it's nearly not enough for the common person.
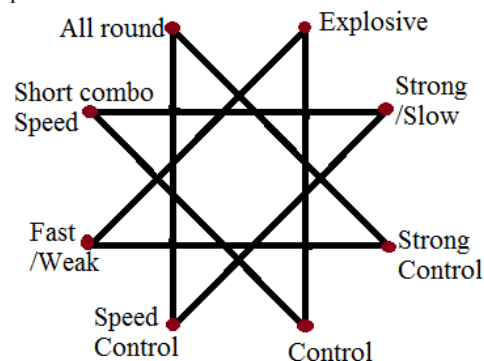

Figure 1 The Arch Types in relation to each other

Table 1: The 4 more popular arch types

Arch Type	Fast/weak	Short CS	All round	Explosive
Learning Curve	Low /Medium Threshold	Low Threshold	Low Thres hold	Low Threshold
Gameplay	Aggressive (Fine Motor Skills)	Aggressive/ Variance	Varian -ce	Brute Force /Variance
Limited Resource	abundant	abundant	Abund -ant	abundant
Mechanic	Mobility (Dash,Air Jump) Different angled attacks	Dash Attack Wall /Ground Bounce	Mix of all	Take Down. Invisible Frame Attack. High Priority Attacks
Statistic	Low Recovery. Weak Attacks Low Health	Low Recovery. Weak Attacks Low Health	Mediu -m	High Health Slow Speed High Damage
Game Examples	Chun-Li:SF Pai:VF Chip:GG Zack:DoA Maxi:SC	Ken:SF Jin:BB Lau:VF Sol:GG Vergil.MVC	Anjo: GG Necrid :SC	Ryu:SF Ragna:BB Akira:VF Bryan:TK Ein:DoA

Table 2: The 4 less popular arch types

Arch Type	Strong/slow	Strong Control	Control	Speed Control
Learning Curve	Low /Medium Threshold	High Threshold	Medium /High Threshold	Medium Threshold
Gameplay	Brute Force	Proactive	Proactive/ Reactive	Reactive
Limited Resource	Several	abundant	Several	Several
Mechanic	Increased Defence Command Throw Priority	Back Traveling Projectiles Ranged Throw Game resource	Avoidance(Teleport, Counter etc) Projectiles. Chip	Long Range attacks or projectiles Mobility
Statistic	Very High Health Very High Damage Very Slow.	Extremely High Recovery Very Slow	Low value in everything (expect Recovery)	Low Recovery. Weak Attacks
Game Examples	Zangief:SF Wolf:VF Potemkin:GG Marduk:TK Hulk:MVC	Testament: GG Dormammu: MVC Astaroth:SC	Akuma:SF V-13:BB Eddie:GG Ivy:SC	Guile:SF Axl:GG Hawkeye: MVC Kilik:SC

5. ARCH TYPES

The most detailed design pattern for fighting genre established by this research is the *arch type* categorization. Based on the empiric studies, especially connected to the field studies, mainly expert users of *SF*4 and *MVC*3 was observed for over 100 hours and usually connected with interviews, and from observing testers during the lab studies.

From this different behaviors[2] where identified, this was the base for the *arch type* design pattern. And then connected with game analysis, 8 *arch types* has been established. Every fighting game character can be placed in one of the 8 different types (Figure 1).

As stated by Björk et al [1]. There exist different aesthetic ideals which are important to different kind of people within a games gameplay. The 8 *arch types* is in a way a very in detailed version of different users' "ideals" within fighting games. The *arch types* do not only represent 8 different game characters, but more precisely represent 8 different gameplay in the fighting genre; the *arch type* can be used to describe different kind of users of a fighting game. Because of this each fighting game should have at least 8 characters placed each in one of the axles (Figure 1).

The arch type becomes a very good "Personalization" [5] as different users plays in different ways, giving the users different mechanics empowers different users skills. This will make the user feel powerful. The game will be suited to be played in a way where the user can utilize his/her skills the best, and the user will feel it much more enjoyable.

For example, a Fast/Weak character emphasize on that the user, has to learn exact inputs sequence, the user has to train the fine motor skills, and learn to how utilize movement mechanics[2] (Table 1). While a Strong Control features a very proactive gameplay, emphasizing Meta gameplay, with the usages of abnormal projectile mechanics[2] and letting the user be able to use game resource (Table 2). This two different *arch types* features completely different gameplay.

Fundamentally the *arch type* is similar to Orthogonal Unit Differentiation [4], it's clear that a game developer with limited resources (Table 1-2) should create 2 significantly different units, rather than having 2 units with the same mechanics. But the arch types are much more complicated problem, for example if every character has 15 mechanics. Control character A might only share 3 mechanics with control character B. Because it exist many different mechanics that all contributes to control gameplay. Its 8 dimensions (each axle). And each dimension has a few inner dimensions (mechanics).

When designing a fighting game, it's important to favor certain *arch types*, this to make the game more user friendly. The empiric studies also shows that even extreme expert users, tend to play with character that have a low threshold (Table 1).

Analyzing *SF*4 shows a game with 43 playable characters and not one is Strong Control. It's the most popular fighting game even while it's lacking a gameplay, instead it has extremely varied gameplay of low threshold characters.

A game should have more All Round, Short Combo Speed and Explosive, because the users tends to if they leave their comfort zone of for example all round they are very rarely going to move to play the reverse arch type the control. They will most likely play one of the closest axles (Figure 1), and these 3 are the easiest to get started with, it should clearly be more of these 3. The empiric studies shows that users prefer the Fast/Weak over many of the other *arch types*, especially in comparison with Strong/Slow(Table 2), while the Strong/Slow has the same *Threshold* to overcome as the Fast/Weak, it's not as popular to play.

And Fast/Weak is close axle (Figure 1) with Short Combo Speed, 2 steps from All Round. This makes, it a better design choice to have more fast/weak characters.

Summary *arch type*: Have one character per arch type as bare minimum or the game will lack a lot of gameplay, but to make the game more accessible for new users and for many seasoned users it's better to have an uneven distribution of arch types(Table 1-2)

6. MISCELLANEOUS

Internet: Fighting games really need a good system for letting users on the same level of skills play against each other. The genre is not a genre, where users of different skills can play with each other. Usually fighting games network functions, makes it neither enjoyable for the expert or for the beginner user.

Community: Still most fighting game users, tends to prefer offline gaming. There exit games with game modes with no offline support, for example *MVC*3 (Heroes and Heralds). Then many users won't use those modes at all, on the same time, it's important to have supplement for community gaming online. Which to be frank is hard, because fighting games are 1 versus 1 gameplay. It's more that it easy to find examples not how to do it.

7. CONCLUSIONS

From the gathered information, I have come up with these 12 guidelines. They do not have any priority order. But recommend a designer to start with designing the core mechanics and then design one character per arch type and what notable mechanic they each will have (some of this guidelines will be hard to follow without some former knowledge of fighting games).

Arch type: Have at least one character per arch type. (Means a game should have at minimum 8 characters), not having one arch type, means one type of user will be displeased.

Learning Curve: While every game should have at least 1 arch type, distribute the number of character per type after the indented user persona.

Uniqueness: Every character should have their own touch, don't create pallet swaps.

Mechanics: Use different game mechanics for the same effectual gameplay to make characters feel unique when playing them.

Notable Mechanic: Give each character a notable mechanic. This is an easy way to create different gameplay. This doesn't have to be over the top mechanics, good design usages the small detail mechanics to create different gameplay.

(Un)Official rules of user input: Follow the rules established by other games to make experience users quickly learn the game

Input most be consistent: Regardless of following the established input by other games, make sure your game is the same for each character. Is Dragon input *anti air*, for 5 characters the 6th cannot have *anti air* as quarter input.

Mixed Input: Mixing the usages of Motion input and Direction input. This is the best way to make characters work in different ways and creating a good learning curve for the user. This also gives room for more abilities per character.

Training Mode: Fighting games is possibly the hardest genre of games. Make sure the game has a good way to teach the user how it works, and add a system that explains the most important game mechanics for the user.

Extra Modes: Modern games need more than the core gameplay. Include different extra modes, especially arbitrary modes that make the user play the game in another way, indirectly teaching the user the core gameplay.

Internet: Needs to be very stable, fighting game users are in an extremely dislike of games with bad ranked functions, both on connection, delay, how the actual system works. And define user's skill on a character base and not all games played.

Community: Support a community, modes for community games such as lobby rooms and tournament mode, if possible add team play modes as they are rare. The game needs to have replay functions

8. ACKNOWLEDGMENTS

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