Conventions within eSports: Exploring Similarities in Design

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ABSTRACT
Among the thousands of competitive games, only a few have emerged as the eSports sensations that they are. To understand the cause of this phenomenon, this paper applies the notion that successful eSports share design characteristics which ordinary competitive games do not possess. Drawing from the MDA framework (Hunicke et al. 2004), these similarities are explored by conducting a comparative interface study (Consalvo and Dutton 2006) on two leading eSports – *League of Legends* (Riot Games 2009) and *Counter Strike: Global Offensive* (Valve Corporation 2012) – in order to understand how they may be similar in design despite the contrast in genre. As a result, this paper identifies five design characteristics – *Match Based Structure*, *Player Evaluation System*, *Explicit UI*, *Player Performance Feedback* and *Game Client* – that are shared explicitly between these eSports and elaborates them in detail with discussions on the potential reasons behind their implementations. In doing so, this paper argues for the consideration of implementing these design characteristics in the construction of any competitive game that seeks success within eSports.

Keywords
Game Design, Competitive Games, eSports, *League of Legends*, *Counter Strike: Global Offensive*

INTRODUCTION
Although Electronic Sports (eSports) "can be traced back to even the earliest days of computer gaming" (Taylor 2012, 3), it is only in the past decade that it has shown remarkable growth in success. With this recent and rapid advancement, eSports has become the structural backbone of many research papers inside – as well as outside – of games studies, and has similarly spawned different perspectives in studying the phenomenon. These include the commonly, conducted comparison between eSports and traditional sports (Hutchins 2008; Witkowski 2009; Jonasson and Thiborg 2010; Thiborg and Carlsson 2010; Taylor 2012; Ferrari 2013), the study of professional players (Reeves et al. 2009; Taylor 2011; Taylor 2012; Faust et al. 2013) as well as their spectators (McCrea 2009; Cheung and Huang 2011; Taylor 2012; Hamilton et al. 2014; Hamari and Sjöblom 2015), and the social impact of eSports in general (Chee et al. 2005; Hutchins 2008; Taylor 2012; Harper 2013; Hamilton et al. 2014). In the perspective of design, however, eSports is an area that is in need of further study.

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As noted by Weiss (2008), online gaming connotes different types of player experiences: among these types is competition. In spite of this, Weiss further explains that eSports games, although always multiplayer, denote competitive play only – shaping eSports are competitive games, after all. Drawing from this, player-base statistics – derived from digital distribution platforms – consistently indicate that *League of Legends* (Riot Games 2009), *DOTA 2* (Valve Corporation 2013) and *Counter Strike: Global Offensive* (*CS: GO* [Valve Corporation 2012]) – all of which are eSports – are the three titles that are leading the competitive games market (Murphy 2015; Steam 2016). Further, *League of Legends* – in addition to the most popular eSport – is the most played computer game at the time of writing (Solo 2015). A question arises as a result of this information: among the thousands of competitive games, why is it that only a few emerge as the eSports sensations that they are? Perhaps these eSports share characteristics in their design of which ordinary competitive games lack?

This paper will explore these ideas by comparing two leading eSports, *League of Legends* and *CS: GO*, in order to identify the design characteristics that they may share. To do this, an interface study (Consalvo and Dutton 2006) will be conducted during critical play where the mechanics that lead to aesthetics (Hunicke et al. 2004) of competition are detailed and comparatively analysed. Concluding this, the similarities that are explicitly apparent will be retrieved and identified as the core design characteristics that are found commonly within the eSports in question. In doing so, we will be able to answer the research question: What are the design characteristics that successful eSports explicitly share? This paper will first explore existing literature on what constitutes an eSport's success in hopes of framing this paper and placing the topic into perspective. Of course there are myriad factors which contribute to a game's success or failure, such as marketing, market saturation, and a host of other social and economic factors. However, this paper approaches the issue from the perspective of a designer and aims to identify design characteristics, specifically.

REVIEW OF LITERATURE

The consistency of eSports leading in the competitive games scene (Murphy 2015; Solo 2015; Steam 2016) gives rise to this notion that, despite the differences in genre, these games share design characteristics that contribute to their success; design characteristics which ordinary competitive games (or less successful eSports) do not possess. In a similar study conducted as part of a university degree, Bornemark shares the same views. He questions why some competitive games "rise to become the norm among e-sport tournaments while others do not" (2013, 1). In order to answer his questions, he presented a thesis stating that "there are properties of multiplayer video games that all established e-sport games have in common" (2013, 1). His findings concluded that this is not the case, and that the identified properties – which were purely hand-picked from game design research – exist inconsistently within eSport titles. However, due to the very nature of his research strategy – deriving properties from relevant literature and later looking for their existence within eSports, as opposed to reverse-engineering the eSports in question – properties residing elsewhere within the game systems are rendered unnoticed.

On the other hand, some research argues that eSports may have commonalities in design. Jonasson and Thiborg (2010), for example, state that a good eSport is delimited in time and space. Despite plausibility, such a claim may be inconsistent with certain eSports that reside in the MOBA genre. A *League of Legends* match, although limited in space, does not contain an explicit time limit and can thus be argued endless unless a player influences the space. However, Winn – with application of performance theory – argues

that *League of Legends* is *indeed* limited in time because the game reaches a state "where the minions become strong enough to overpower the defensive structures present on the map without player interference" (2015, 3). In that case, is the delimitation of time and space a key factor of an eSport's success? If so, what does the delimitation of time and space suggest?

Rollings and Adams describe the structure of a sports (video) game as "typically simple. Its main play mode is match play" (2003, 378). Matches are in theory delimited in time and space. Perhaps a match based structure is a characteristic that is essential within any successful eSport? Olejniczak supports this theory and argues that successful eSports make "players face each other instead of making them compete against highly predictable artificial intelligence. Hence, they are heavily focused on teamwork, individual player skill, split-second decision making, strategy and objective control" (2015, 329) – all of which are qualities that are achievable through a match based structure. In this context, a match based structure fuels "direct competition" as opposed to "indirect competition" made available through leaderboard systems (Liu et al. 2013).

Further, Bosc et al. argue that "balance is the most important aspect in e-sport: in a match, all opponents should have exactly the same chances to win given the initial conditions" (2013, 8-9). There are two claims made in this quote: first, Bosc et al. use the word 'match' as if a match based structure is already expected from an eSport, which supports the arguments made in the previous paragraph. Second, Bosc et al. mention balance as a key characteristic of an eSport. In other words, the idea that all players within a match have a fair chance and that the winner is determined by player skill as opposed to exploits of 'broken' game elements, which can provide sizable advantages during competitive play. Supporting this are Fitscher et al., who argue that "often game balancing is one of the most important aspects for a successful e-sport game" (2008, 1). However, a perfectly balanced eSport is difficult to achieve due to the very nature of their complexion. An eSport rarely reaches perfect balance, and Bosc et al. recognise this: "when a balancing problem is detected, either by the game developers or by the players themselves, the game properties are adjusted to correct this balance issue" (2013, 9). Perhaps these eSports are expected to be constantly balanced, or – as Lee and Shoensted frame it – their competitiveness "continuously cultivated and optimised" (2011, 42) in order to provide the tools necessary for eSports gamers to be better than others, to win over others, and to be faster and more skilled in their game experience. In this sense, is part of an eSport's success defined by the continuous balancing and cultivation of its competitive play?

As one can see, there have been a number of claims as to what constitutes the success of an eSport's design. From the literature above, we find that a match based structure – or play delimited in time and space – as well as the consistent cultivation and optimisation of the competitiveness of eSports – through continuous updates – are the design characteristics that have been argued to exist consistently within successful eSports. It is clear here that this requires further investigation, which this conference paper will address beginning with a description of how the research was undertaken through the detail of the methodology.

METHODOLOGY

In order to discuss the common design characteristics of successful eSports, this paper will first detail the methodology used to study each game, starting with the sampling selection procedure. *League of Legends* and *CS: GO* have been chosen in this study for

two reasons: first, they have proven to be extensively successful in comparison with other eSports and competitive games – as outlined earlier in this paper (Murphy 2015; Solo 2015; Steam 2016). Second, it is important that two eSports of contrasting genres are compared here. Since genre is defined as a "general term for a number of texts with similar characteristics" (Kücklich 2006, 101), this paper circumvents potential conflation of genre-specific characteristics by looking at two eSports which come from different mechanical genres. In this case, *League of Legends* and *CS: GO* – a MOBA and a first-person shooter, respectively – are compared.

In order to answer the research question, What are the design characteristics that successful eSports explicitly share?, *League of Legends* and *CS: GO* were critically played, excluding personal leisure hours (up to 150 hours each), for over 40 hours each. During critical play, a thorough interface study, as described by Consalvo and Dutton (2006), was conducted within all aspects of the two eSports in question. Among the number of tools Consalvo and Dutton provide, the interface study was deemed the most appropriate here, since it allows us to objectively identify the mechanics that each section of the interface represents. This results in the accumulation of the utmost amount of mechanics that an eSport may possess. Further to this, the MDA framework (Hunicke et al. 2004) was additionally applied to rid of redundant mechanics that were likely to emerge. The MDA framework is described as a combination of three components:

- "**Mechanics** describes the particular components of the game, at the level of data representation and algorithm.

- **Dynamics** describes the run-time behaviour of the mechanics acting on player inputs and each other's outputs over time.

- **Aesthetics** describes the desirable emotional responses evoked in the player, when she interacts with the game system" (Hunicke et al. 2004, 2).

In application, the MDA framework functions accordingly: "the mechanics give rise to dynamic system behaviour, which in turn leads to particular aesthetic experiences" (Hunicke et al. 2004, 2). In this case, these aesthetic experiences are identified by exploring research on eSports consumption motivations; importantly in the context of play. Consistent research suggests that eSports create aesthetics of competition predominantly (Kim and Ross 2006; Jansz and Tanis 2007; Lee and Schoenstedt 2011; Weiss and Schiele 2013), and hence the mechanics that fuel these aesthetics, directly through dynamic system behaviours, were placed in focus during the interface study.

After critical play had ended, the resulting mechanics from both eSports underwent a comparative analysis where differences have been filtered out, and so the data was left consisting of only design similarities. Examples of the differences that were filtered out include the character selection screen, which is a feature that is exclusive to *League of Legends*. This could imply that the character selection mechanic is not necessarily vital in an eSport's success, but perhaps vital to a MOBA's. Now that the paper's methodology has been detailed, it will progress to discuss key results and findings.

RESULTS AND ANALYSIS

Once the similarities have been gathered, they were appropriately categorised into five design characteristics where, to draw conclusions, engagement with game design literature ensued. The results show that *Match Based Structure*, *Player Evaluation*

System, *Explicit UI*, *Player Performance Feedback* and *Game Client* are the five distinct design characteristics that the two eSports explicitly share. The rest of this paper will detail each design characteristic within five subsections and will be structured to reflect the MDA model in order to (1) identify these mechanics in conjunction with in-game screenshots (as clarifications) to provide explanations on how they are present within both eSports, (2) discuss and elaborate the dynamics that these design characteristics give rise to, and finally (3) – using relevant literature – why/how they fuel aesthetics of competition.

Match Based Structure

Rollings and Adams describe the structure of a sports (video) game as "typically simple. Its main play mode is *match* play" (2003, 378). Adding an *e* in front of the word, as in *e*Sports, one can only expect the same structure to remain. After all, competitive play here refers to "head-to-head competition" (Weiss and Schiele 2013, 309), and a match structure allows for just that; rather than indirect competitive play made available through a leaderboards system (Liu et al. 2013, 113). Although both *League of Legends* and *CS: GO* possess leaderboard systems, competition occurs predominantly through their *Match Based Structures* or match "play modes" (Rollings and Adams 2003, 378). This is identified by the 'Searching for Match/Finding a Game' signifiers present within both clients (see Figure 1 below). In spite of the different match modes these eSports possess, this section looks exclusively at their competitive, ranked match modes that allow players to compete against one another within a ranking system: *League of Legends*' draft pick and *CS: GO*'s competitive mode precisely.

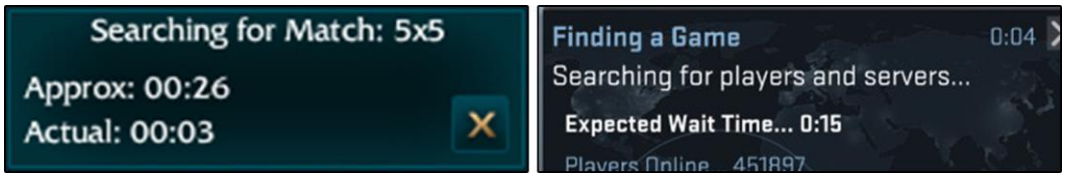

Figure 1: *League of Legends* (left) and *CS: GO* (right). System in both cases is looking for players to match the player with.

While the *Match Based Structure* is shared explicitly between both eSports, the qualities that define these structures differ. *League of Legends* matches, for example, are played until one side destroys the opposing team's base or agrees to surrender. *CS: GO* matches, on the other hand, are played in 30 rounds of three minutes. A round is won when a team either achieves the objective (defending or destroying the objective – dependant on what side one is on) or kills every member of the opposing side. The winner of a match is decided by the team that wins 16 rounds first; creating the potentiality of a draw – a characteristic that cannot occur within *League of Legends*' *Match Based Structure.* From this, we find that the qualities that form these *Match Based Structures* can differ from eSport to eSport; while the implementation of a *Match Based Structure* is deemed essential.

In addition to this, Figure 1 implies further dynamics. The 'Searching for Match/Finding a Game' signifier is a procedure that is automated by a matchmaking system (Kow and Young 2013, 391); a system within both eSports that matches players with other opponents of similar skill. These matchmaking systems strictly set up *new* matches only. In other words, a player is never placed in a match in progress, even if that particular

match has a disconnected player that can potentially be 'filled'. The system will only commence a match once a specific number of players have been found. As Bosc et al. explain, in an eSports match "all opponents should have exactly the same chances to win given the initial conditions" (2013, 8), and 'initial conditions' can only be shared between opponents who have simultaneously been present in the inception of a match. If a player were to be placed in an existing match in progress, for instance, the player would then face opponents who have already made *progress* within that particular match – such as the accumulation of gold for the purchase of stronger weapons and items – and in turn establishes unfair advantages over newly joined players, hinders competitive aesthetics, and spawns perfectly valid excuses for losing players.

The strictness of this matchmaking system, existent within both eSports, is further emphasised when a match is found. While such an event takes place, the player is given the option to accept the match by clicking 'accept' within a given time limit (seen below in Figure 2).

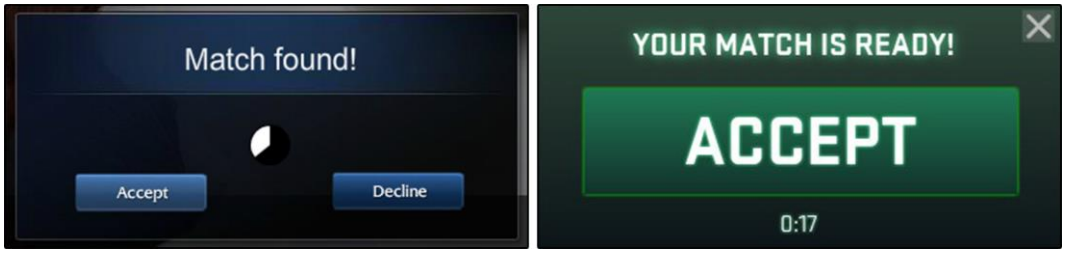

Figure 2: *League of Legends* (left) and *CS: GO* (right) asking for player confirmation upon finding a match. Match can be declined by clicking the relevant button or remaining idle for the duration of the time limit.

The requirement of player confirmation indicates the seriousness and importance of these matches as well as an expectation of commitment from players that choose to accept them. Within both eSports, matches last on average between 30 - 45 minutes. If a player accepts a match, he/she is thereby expected to play the match to completion despite the length. The seriousness and importance of these matches is similarly reflected within Figure 3 (below), where the match length descriptors present within both systems serve as potential warnings to the player.

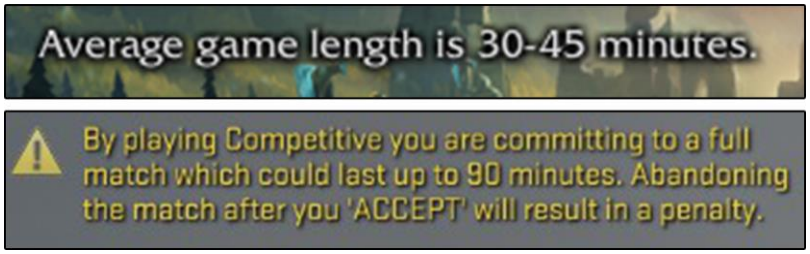

Figure 3: *League of Legends* (top) and *CS: GO (*bottom) providing average game length descriptors.

In summary, the *Match Based Structure* refers to a mode of play that is essentially delimited in time and space, which in turn allows for head-to-head competition to occur. The *Match Based Structure* is supported by the matchmaking system in that it automates

the procedure of matching players of similar skill. During this process, there is a level of commitment that is expected from players that accept these matches, which emphasises their seriousness and importance even further.

Player Evaluation System

Player Evaluation Systems refer to "decision support systems designed to assist team and tournament managers in the process of evaluating the effectiveness of players" (Bonner & Woodward 2012, 43). In this case, a player's effectiveness level (or skill level) is "calculated using the results of their recent matches" (Kow and Young 2013, 391), where skill level is represented by league titles that comprise both *League of Legends*' and *CS: GO*'s *Player Evaluation Systems* (see Figure 4 below). 7 different league titles, ranging from 'Bronze' (the lowest) to 'Challenger' (the highest), make up *League of Legends*' *Player Evaluation System*, while *CS: GO*'s consists of 18 different league titles ranging from 'Silver 1' to 'The Global Elite'. It is clear that these *Player Evaluation Systems* have some sort of an algorithmic procedure in the calculation of a particular player's skill level (a detailed breakdown of *League of Legends'* matchmaking calculations can be found in Véron et al's paper [2014]). However, the specific parameters and variables within these calculations are hidden behind the interface and therefore difficult to identify. As it is now, the obvious win record is the only identifiable variable that informs this calculation; players rank up when they win matches as much as rank down when they lose them – a quality that marks the key difference between *Player Evaluation Systems* and conventional level-up systems (found predominantly within MMORPGs).

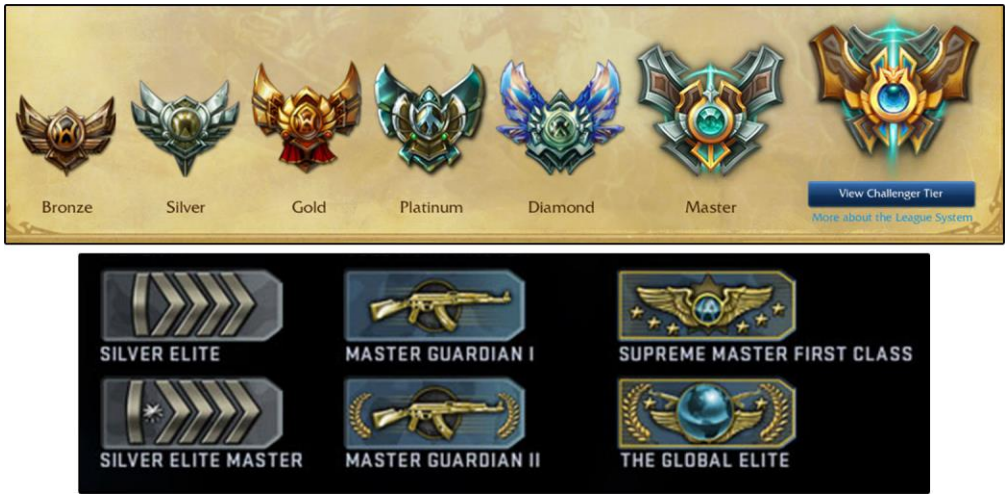

Figure 4: Full list of the *League of Legends* (top) ranking system (excluding the divisions). Partial list of the *CS: GO* (bottom) ranking system.

Within both of the eSports in question, the *Player Evaluation System* supports the matchmaking system in the accumulation of players of the same skill by providing relevant numbers that aid algorithmic calculations appropriately. Salen and Zimmerman warn of the consequences that can arise if such a procedure is absent. They state that if a player's skills exceed the challenge (the opponent's skill level); the result is an experience that does not fully engage the player. On the other hand, if the sense of challenge from the opponent is overwhelming; negative and intimidating experiences can ensue (2004, 351). Supporting this is Véron et al's description of the matchmaking

system, where they argue that when skilled players face weak ones, it "satisfies none of the players involved" (2014, 1). Having said that, variations of skill levels in a ranked match can still occur within both eSports, though this is only a result of players searching for a match as a group (or searching as a 'duo'). In which case, the average skill level of the group is calculated and applied.

As a final note, the *Player Evaluation System* can likewise be seen fuelling specific player motivations that could further emphasise aesthetics of competition. Huberman et al. (2004) – for instance – argue the motivations that *status* as a valuable resource can create within competitive spaces. Status in this context is defined by player rankings, and thus players are driven by motivation to compete for higher status (higher rankings). In addition to this, Robertson recorded data from an interview with an avid *League of Legends* player and later wrote that the ranked system, as in the *Player Evaluation System*, can provide "interesting dynamics for players. Since it is the same system that allows the pros to become pros, even "regular" players can become a part of the greats" (2015, 15). After all, the *Player Evaluation System* is designed to assist managers. Players that perform at an extremely high level reach the highest of ranks, where they are in range of the scouting radius of professional team managers who are looking for new players – aiding the professionalisation of players as a result.

Explicit UI

A user interface (UI) refers to the "system that provides the player with gameplay relevant information and with the right tools to interact with the game" (Llanos and Jorgenson 2011, 2). An *'Explicit' UI* in this sense does not contain information that is "absent or difficult to find" (Consalvo and Dutton 2006); but provides all of the information in an explicit and organised manner. In cases outside of eSports and competitive play, UIs hide information from the player for various reasons. Perhaps to build suspense or add a sense of realism, such as the absent information of ammunition within *Condemned 2: Bloodshot* (2008). Players are required to eject their weapon's clip in order to check ammunition status, which can aid horror conventions as a result. In this case, however, both eSports in question feature *Explicit UI*s that consistently convey information without confusion or ambiguity.

Figure 5: *League of Legends* (left) and *CS: GO* (right).
UI in both examples have the scoresheet enabled.

When we compare both UIs side-by-side, it is clear that *League of Legends'* UI displays more information in comparison to *CS: GO*'s (see Figure 5 above). However, this does not necessitate that *League of Legends* has a more *Explicit UI* than *CS: GO*. The MOBA genre in its very nature is complex (Ferrari 2014) and has a dense structure. In order to present all of the information to the player, a dense UI is thus designed. *CS: GO* is not

comprised of dozens of playable characters, complex player attributes, and skill trees like *League of Legends* is; and so the imbalance of complexity between the two UIs can only make sense. In other words, the density of the UI is reflected by the level of complexity of the genre in which the eSport is situated in; the more complex the system, the more dense the UI. Regardless of *League of Legends*' evidently denser UI, the focus is that both eSports in question share an *Explicit UI*.

In describing UIs and their involvement within digital games, Llanos and Jorgenson further explain that "those who argue for that making the system information explicit and readily visible to the player seem to understand gameplay and/or the game system as the primary source for involvement" (2011, 4), or – as Ermi & Mäyrä (2005) call it – challenge-based immersion. Within the eSports in question, gameplay and/or the game system is indeed the primary source for involvement, and hence an explicit system information – or an *Explicit UI* – provides the absolute information that players require to maximise their potential during competitive play.

In addition to the thorough representation of player attributes, item information, objectives etc. conveyed through *League of Legends*' *Explicit UI* (see Figure 5 above), players are also provided information regarding their teammate's purchases of team-influential items. For example, player A has been taking far too much magic damage in previous 'team fights' during a match. However, the player notices a pop up in the chat that informs the player of a team member's purchase: "Janna purchased Aegis of the Legion!" (see Figure 6 below) – an item that provides extra magic resist for teammates that are inside the specified radius. Player A is now aware that he/she is able to take extra magic damage during 'team fights' (so long as they are within the relevant range of Janna) and thus strategises accordingly. This can similarly be seen in *CS: GO*'s UI (see Figure 6 below), where players are informed of their team member's actions ("Fire in the hole!") as well as the location ("Cart") in which the action was carried out. Both of these qualities of the UI exemplify some of the ways *League of Legends* and *CS: GO* possess *Explicit UI*s.

Figure 6: *League of Legends*' (left) and *CS: GO*'s (right) automated messages regarding a team-influential action by a team member.

What is further interesting within these *Explicit UIs* is the extent in which the line is drawn back to. Both eSports display information regarding one's computer performance as well, specifically network connection strength (ping) and frames per second (fps) – (as seen in Figure 7 below). Perhaps this information could influence in-game tactical decisions; the player could choose to avoid engaging in fights if they find that their ping is weak (delayed input registration) or fps is low (smoothless gameplay). Supporting this is K. Claypool and M. Claypool's research (2007), which concluded that low frame rates affected player performance within games. Similarly, Véron et al have commented on the effects of high level ping within *League of Legends*, and said that "server response time is crucial in this game which requires extremely sharp reflexes. Lags caused by the servers

often increase the ping by up to 300%, which severely impedes the gameplay" (2014, 2). Stressing the importance of this particular information even further, is the fact that some blogs provide guides on the process of installing 3rd party software that modifies a digital game's UI to display information regarding fps (How-To-Geek 2015), information that would otherwise not be displayed without the modification.

Figure 7: *League of Legends*' (left) FPS and Ping (ms) count. *CS: GO*'s (right) FPS and Ping (ms) count among other information (enabled through the console).

As a final note on *Explicit UIs*, it is important to stress that by providing all in-game information to players without leaving much ambiguity or implication, information regarding opponents must have limitations. Indeed, players have access to opponent information to some extent (items, attributes etc.), but rarely information on their location or money they hold. The extent here is highly dependent on what rules of play the specific eSport is fuelled by. If the emphasis lies on the importance of remaining hidden from your opponents, then displaying information regarding the opponent's location is deemed contradictory to the objectives of the eSport.

Player Performance Feedback

Within both eSports in question, players are given access to rigorous, statistical data regarding their performance within matches; data that contains detailed records of player actions within specific phases of a particular match. This data essentially defines *Player Performance Feedback*, in that it provides performance feedback to a player using statistical data representations displayed through the interface (see Figure 8 below).

Figure 8: *League of Legends* (left) and *CS: GO* (right) providing information regarding player performance through detailed graphs.

Player Performance Feedback in this sense is a design characteristic with a potential aim to improve player effectiveness levels by providing appropriate performance feedback. Constituting *Player Performance Feedback* is pure data; and no corrective suggestions. In this case, it is up to the player to make use of the *Player Performance Feedback* by

reflectively observing the data in order to construct schemata and enable the discovery of new and better solutions (Kiili 2005) to certain problems that can arise during gameplay. For example, *League of Legends* provides *Player Performance Feedback* within three sections of its structure: the client, during a match, and in the post-match screen. The client – under 'player info' – provides statistics that essentially break down the events of a previously played match and presents the information through a graph (see Figure 8 above). If a player views the data of a lost match, they can observe the graph of that match and identify key points that marked certain match changing events. From this, the player can detail the mistakes that occurred during that match and attempt to avoid them in the future, hereby improving their chances of success. Additionally, of that selected match, the player is given a detailed breakdown of the players that participated in that match, providing information such as the overall gold gained, item possessions, and kill counts etc., in an attempt to remind the player of the specific opponent statuses that might have influenced the loss – aiding reflective procedures even further.

After a match has ended, players are similarly provided further *Player Performance Feedback*. The post-match screen includes deeper analytical data such as overall damage dealt, damage taken, gold acquired, kill as well as assist counts etc., wherein using this data, players are able to compare these variables with team members as well as opponents and thus reflect and identify the predominant cause that led to the results of the match.

Additionally, *Player Performance Feedback* can also be found during the course of a match. This is seen just after the player is killed, where they are given specific data regarding the damage which resulted in the death. For example, Figure 9 (below) shows that the player was killed by mostly 'physical' (as opposed to 'magical') damage. In using this information, which emphasises the *Explicit UI* previously discussed, the player can strategise accordingly and either purchase items that fend off against physical damage or attempt to avoid these specific characters in the future.

Figure 9: *League of Legends* (left) and *CS: GO* (right) providing information regarding the cause of death.

On the other side of the spectrum, *CS: GO* provides *Player Performance Feedback* in similar ways and also arranges data using graphs (see Figure 8 above), though affords these during matches as opposed to after. However, these are only accessible while players are waiting to respawn. In this time, players can use this data to evaluate the status of the match and in what direction it is heading to, and thus construct alternative strategies that can change the course of the match favourably.

Moreover, *CS: GO's Player Performance Feedback* can similarly include metrics regarding shooting accuracy, kills to death ratio, most used weapon etc. This type of data is accessible throughout the entire game. To exemplify, players may use this data to

determine whether to shift focus on developing a more controlled weapon aim in order to increase shooting accuracy, or grasp a more cautious approach overall to lessen the chances of death (if data shows high death counts).

In essence, *Player Performance Feedback* are statistics that aid in developing player performance by providing data which players can observe and evaluate in order to discover newer strategies that can be applied during competitive play. As this subsection has described, both eSports in question provide *Player Performance Feedback* in different ways and thus suggests that – again – the methods used to provide *Player Performance Feedback* should not be in focus; but that such a design characteristic is firstly present.

Game Client

One of the most apparent similarities found within both eSports in question is the consistent support that both developers have shown to their respective eSports. Communicated to players directly through the client, developers publish news regarding events, newly released content, or even in-game changes to the rules of play. However, the ability to showcase all of this information to players is made available only through a *Game Client* (see Figure 10 below), which essentially provides the developer with the ability to dynamically influence the system in a number of ways.

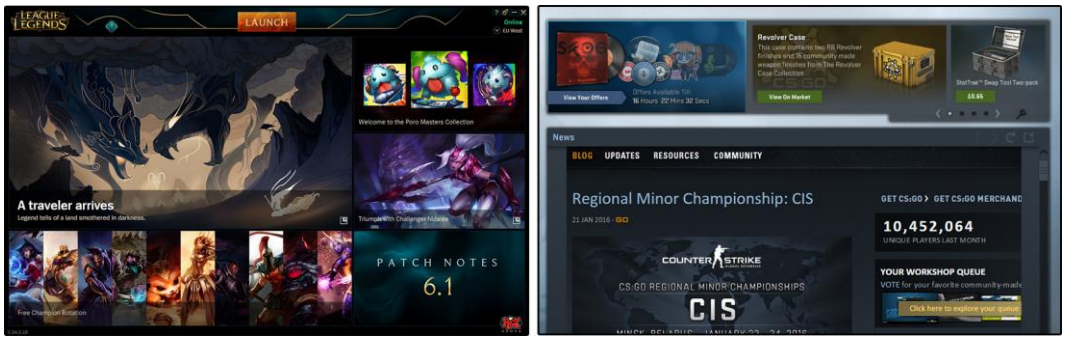

Figure 10: *League of Legends* (left) prior to logging in. *CS: GO* (right) when logged in. However, *League of Legends* possesses further information beyond the login screen.

The most important thing about this design characteristic is the level of control for which the developers possess over maintaining equity in the competitive space. As earlier mentioned, Bosc et al. explain that "balance is the most important aspect in e-sport: in a match, all opponents should have exactly the same chances to win given the initial conditions" (2013, 8-9). *Game Clients* allow developers to make changes to the rules of the game after its release. If a balancing problem is detected, such as a weapon that is exploited to be 'overpowered' by the players or even by the developers themselves, the game properties are adjusted to correct the imbalance (Bosc et al. 2013, 9). Additionally, Lee and Schoensted (2011) – in their study on eSports consumption motivations – argue that the competitiveness of eSports games needs to be continuously cultivated and optimised in order to provide the tools necessary for eSports gamers to be better than others, to win over others, and to be faster and more skilled in their game experience. If this is the case, developers are only able to 'cultivate and optimise' the competitiveness

of these eSports by influencing the space directly, which is an ability that can only be assumed through the use of a *Game Client*.

For all that, the *Game Client* is nothing new in the digital games industry. Most contemporary games already provide tools that allow developers to make in-game changes to already released games. However, in spite of this, the key difference that is in focus here is not the ability to make changes to the game; but the consistency that the developers express through these *Game Clients.* It is stressed here that the developer's commitment informs the effectiveness of this system. *League of Legends* and *CS: GO* undergo updates much more frequently in comparison to digital games in general, with intervals between each new update of no more than two weeks (League of Legends 2016; Counter Strike Blog 2016).

Moreover, 'patch notes' are similarly released in parallel with these major updates. These 'patch notes' are a detailed description of the changes that were made during the latest update, which the player is given access to through the *Game Client* (see Figure 11 below).

Figure 11: The button that provides the player access to *League of Legends*' (left) latest changes. *CS: GO* provides these details under the 'Updates' tab.

Emphasising the intentions of the *Explicit UI* even further is the fact that these 'patch notes' inform the player of in-game changes ahead of time to avoid encountering new changes to their surprise. For example, players may falsely calculate their damage output without realising that the damage item they have in possession has recently been weakened (or 'nerfed'), and thereby notice the change only after they are killed as a result of this miscalculation. In this case, the match can be lost due to misinformation being a significant factor in contrast to player skill, and can thus develop inaccurate player effectiveness evaluations (see *Player Evaluation System*). 'Patch notes', in this regard, essentially informs players of these changes so that they may prepare accordingly for future play.

CONCLUSIONS

In conclusion, this paper has explored the ways successful eSports can be similar in design despite the contrast between their genres. By drawing from the MDA framework (Hunicke et al. 2004), an interface study (Consalvo and Dutton 2006) was conducted on two successful eSports – *League of Legends* and *CS: GO* – to identify the key design characteristics that these eSports have in common. In doing this, this paper has identified five design characteristics – *Match Based Structure*, *Player Evaluation System*, *Explicit UI*, *Player Performance Feedback* and *Game Client* – and further elaborated their

meanings as well as the potential reasons of their application using synthesis with relevant literature.

One of the intentions of this paper is to provide implications for developers looking to design future eSports. The identified characteristics can be considered as the 'essential ingredients' of a successful eSport. However, it must be stressed that (1) this paper is written on the premises that there is a connection between these design similarities (retrieved from the two eSports in question) and the success of an eSports title. Additionally, (2) the implementation of these design characteristics does not assure success in design. These competitive games in their very nature are still in requirement of sufficient gameplay and must not purely rely on the design characteristics that have been discussed. Instead, the identified design characteristics should serve as the structural backbone of their construction as eSports.

As a final note, this paper hopefully serves as a contribution in understanding eSports-related game design, and provides inspiration for further research on the topic; research that would bring much value to this underexplored area of literature.

BIBLIOGRAPHY

Bonner, J and Woodward, C. "On domain-specific Decision Support Systems for e-sports Strategy Games." In OzCHI '12 Proceedings of the 24th Australian Computer-Human Interaction Conference (Melbourne, November 2013), 42-51.

Bornemark, O. "Success Factors for E-Sport Games." In Proceedings of Ume°a's 16th Student Conference in Computing Science (UMEA UNIVERSITY, January 2013), 1-12.

Bosc, G., Kaytoue, M. & Raissi, C. (2013). *Strategic Pattern Discovery in RTS-games for E-Sport with Sequential Pattern Mining*. Retrieved January 2nd, 2016: http://liris.cnrs.fr/Documents/Liris-6365.pdf

Cheung, G and Huang, J. "Starcraft from the Stands: Understanding the Game Spectator." In Proceeding CHI '11 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Vancouver, May 2011), 763-772.

Chee, F and Smith, R. Online Gamers and the Ambiguity of Community: Korean Definitions of Togetherness for a New Generation. In *Editors Internet Research Annual, Volume 4*, Peter Lang Publishing Inc, Oxford, 2006.

Claypool, K and Claypool, M. (2007). On Frame Rate and Player Performance in First Person Shooter Games. *Multimedia Systems*, 13 (1), 3-17.

Consalvo, M. and Dutton, N. (2006). Game Analysis: Developing a methodological toolkit for the qualitative study of games. *Game Studies*, 6 (1). Retrieved January 5th, 2016: http://gamestudies.org/0601/articles/consalvo_dutton

Counter Strike Blog (2016). *Release Notes.* Retrieved January 20th, 2016: http://blog.counter-strike.net/index.php/category/updates/

Ermi, L and Mäyrä, F. "Fundamental Components of the Gameplay Experience: Analysing Immersion." In Proceedings of DiGRA 2005 Conference: Changing Views – Worlds in Play. (June, Vancouver 2005).

Faust, K., Meyer, J., & Griffiths, M. (2013). Competitive and Professional Gaming: Discussing Potential Benefits of Scientific Study. *International Journal of Cyber Behavior, Psychology and Learning*, 3 (1), 67-77.

Ferrari, S. "ESport and the Human Body: Foundations for a Popular Aesthetics." In Proceedings of the 2013 DiGRA International Conference: DeFragging Game Studies (Georgia, August 2013).

Ferrari, S. “From Generative to Conventional Play: MOBA and League of Legends.” In Proceedings of the 2013 DiGRA International Conference: DeFragging Game Studies (Georgia, August 2013).

Fitscher, T., Voigt, B. & Schiller, J. (2008). *The next generation of competitive online game organization*. In *NetGames’07,* (Melbourne, September 2007).

Hamari, J and Sjöblom, M (2015). *What is eSports and why do People watch it?* Retrieved January 15th, 2016: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2686182

Hamilton, W., Garretson, O., & Kerne, A. “Streaming on Twitch: Fostering Participatory Communities of Player within Live Mixed Media.” In Proceeding CHI '14 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Toronto, May 2014), 1315-1324.

Harper, T. *The Culture of Digital Fighting Games: Performance and Practise*. Routledge, London, 2013.

How-To Geek (2015). *4 Quick Ways to See a PC Game’s FPS (Frames Per Second).* Retrieved January 10th, 2016: http://www.howtogeek.com/209710/4-quick-ways-to-see-a-pc-game%E2%80%99s-fps-frames-per-second/

Huberman, B., Loch, C. & ONculer, A. (2004). Status As a Valued Resource. *Social Psychology Quarterly*, 67 (1), 103-114.

Hunicke, R., LeBlanc, M., & Zubek, R. (2004). *MDA: A Formal Approach to Game Design and Game Research*. Retrieved January 8th, 2016: http://www.cs.northwestern.edu/~hunicke/pubs/MDA.pdf

Hutchins, B. (2008). Signs of meta-change in second modernity: the growth of e-sport and the World Cyber Games. *New Media & Society*, 10 (6), 851-869.

Jansz, J and Tanis, M. (2007). Appeal of Playing Online First Person Shooter Games. *CyberPsychology & Behavior*, 10 (1), 133-136.

Jonasson, K and Thiborg, J. (2010). Electronic Sport and its Impact on Future Sport. *Sport in Society*, 13 (2). 287-299.

Kiili, K. (2005). Digital game-based Learning: Towards an Experiential Gaming Model. *The Internet and Higher Education*, 8 (1), 13-24.

Kim, Y and Ross, S. D. (2006). An exploration of motives in sport video gaming. *International Journal of Sports Marketing and Sponsorship*, 8 (1), 34–47.

Kow, Y and Young, T. “Media Technologies and Learning in the Starcraft eSport Community.” In CSCW '13 Proceedings of the 2013 conference on Computer supported cooperative work (San Antonio, February 2013), 387–398.

Küklich, J. Literary theory and digital games. In *Understanding Digital Games*, SAGE Publications, London, 2006.

League of Legends (2016). *Most Recent Patch News.* Retrieved January 20th, 2016: http://euw.leagueoflegends.com/en/news/game-updates/patch

Lee, D and Schoenstedt, L. (2011). Comparison of eSports and Traditional Sports Consumption Motives. *ICHPER-SD Journal of Research*, 6 (2), 39-44.

Liu, D., Li, X. & Santhanam, R. (2013). Digital games and beyond: What happens when players compete? *MIS Quarterly*, 37 (1), 111–124.

Llanos, S and Jorgensen, K. “Do Players Prefer Integrated User Interfaces? A Qualitative Study of Game UI Design Issues.” In Proceedings of DiGRA 2011 Conference: Think Design Play. (Hilversum, September 2011).

McCrea, C. Watching Starcraft, Strategy and South Korea. In *Editors Gaming Cultures and Place in Asia-Pacific*, Routledge, New York, 2009, 179–193.

Monolith Productions (2008). *Condemned 2: Bloodshot*. [Xbox 360, PlayStation 3, Offline Game], Sega, Warner Bros. Interactive Entertainment, Tokyo, Japan: 9th April, 2009.

Murphy, M (2015). *Most Player Games: November 2015 – Fallout 4 and Black Ops III Arise While Starcraft II Shines*. Retrieved January 10th, 2016: http://caas.raptr.com/most-played-games-november-2015-fallout-4-and-black-ops-iii-arise-while-starcraft-ii-shines/

Olejniczak, J. (2015). *A Linguistic Study of Language Variety used on Twitch.TV: Desriptive and Corpus-Based Approaches*. Retrieved January 4th, 2016: http://www.afahc.ro/ro/rcic/2015/rcic'15/IEL/Olejniczak.pdf

Reeves, S., Brown, B., & Laurier, E. (2009). Experts at Play: Understanding Skilled Expertise. *Games and Culture*, 4(3). 205-227.

Riot Games (2009). *League of Legends*. [PC Computer, Online Game], Riot Games. Santa Monica, California USA: 25th February, 2016.

Robertson, C. (2015). *Wandering the World without Leaving Your Chair: Crossing Borders Through eSports*. University Honors Program Theses. Paper 104. Retrieved January 3rd, 2016: http://digitalcommons.georgiasouthern.edu/honors-theses/104

Rollings, A and Adams, E. *On Game Design*. New Riders, California, 2003.

Salen, K and Zimmerman, E. *Rules of Play: Game Design Fundamentals*. The MIT Press, Cambridge, 2004.

Solo, K (2015). '*League of Legends' Continues Streak as Most-Player PC Games.* Retrieved January 10th, 2016: http://www.inquisitr.com/1847992/league-of-legends-continues-streak-as-most-played-pc-game/

Steam (2016). *Steam & Game Stats*. Retrieved January 10th, 2016: http://store.steampowered.com/stats/

Taylor, N. (2011). Play globally, act locally: The standardization of pro Halo 3 gaming. *International Journal of Gender, Science and Technology*, 3(1). Retrieved January 19th, 2016: http://genderandset.open.ac.uk/index.php/genderandset/article/viewArticle/130

Taylor, T.L. *Raising The Stakes: E-Sports and the Professionalization of Computer Gaming*. The MIT Press, London, 2012.

Thiborg, J and Carlsson, B. (2010). Law and Morality in Counterstrike. *Entertainment and Sports Law Journal*, 8 (2), 1-14.

Valve Corporation (2012). *Counter Strike: Global Offensive*. [PC Computer, Online Game], Valve Corporation. Bellevue, Washington, USA: 20thrd February, 2016.

Valve Corporation (2013). *DOTA 2*. [PC Computer, Online Game], Valve Corporation. Bellevue, Washington, USA: 23rd October, 2015.

Véron, M., Marin, O. & Monnet, S. "Matchmaking in Multi-Player On-Line Games: Studying User Traces to Improve the User Experience." In NOSSDAV '14 Proceedings of Network and Operating System Support on Digital Audio and Video Workshop (Singapore, March 2014), 42-51.

Weiss, T. "Cultural Influences on Hedonic Adoption Behaviour: Propositions Regarding the Adoption of Competitive Video and Computer Online Gaming." In DIGIT 2008 Proceedings (Paris, December 2008).

Weiss, T. and Schiele, S. (2013). Virtual Worlds in Competitive Contexts: Analyzing eSports Consumer Needs. *Electronic Markets*, 23 (4), 307-316.

Winn, C. "The Well-Played MOBA: How DOTA 2 and League of Legends use Dramatic Dynamics." In Proceedings of the 2015 DiGRA International Conference. (Lüneburg, May 2015).

Witkowski, E. Probing the Sportiness of eSports. In *Christophers, J. and Scholz, T. (eds.) eSports Yearbook 2009*, 53-56. Retrieved January 20th, 2016: goo.gl/3W0hx6