Esports Audience Interaction in the ArenA

Abstract
Esports has been very successful in countries in Asia such as Japan and Korea, and is starting to create interest in the Netherlands too. Esports events have the same structure of traditional sports such as football matches. However, one trait that separates esports from traditional sports is the ability to ‘attend’ the event online and the gamer cultures it incorporates. Popular streamers are considered top sporters, their live streams on Twitch are just as popular, if not more, than event itself. Esports differs from other sports in how technology always plays a big role in the experience. This allows for strong community building, not only in the game but also for the online and offline communication in the audience. Using data driven business models and media theory, a new concept for this unique audience is created in this paper.

Author Keywords
Data driven business models; liveness; esports; fan experience; problematic gambling.

ACM Classification Keywords
H.5 Human-computer interaction

Introduction
From the professionality that goes into some players’ regimen to the watchers that can fill a whole stadium: esports is called this way because of its strong resemblance to actual physical sports. It is even going to be a medal event at the 2020 Asian Games [1]. “This decision, reflecting “the rapid development and
popularity of this new form of sports participation among the youth" [1], could constitute a milestone for esports to be officially and worldwide recognised as a sport" [2]. Esports is institutionalising significantly, holding events that can be put into the category 'sports events', a recreational or competitive sports activity to watch or participate in, which can also be in combination with other events. But esports is still in a constant growth, and a lot of its developments are still to be assessed properly and thoroughly. Like Breuer says, “eSports should develop its own league model” [2]. Because esports differs from other professional sports in a unique way where technology always plays a big role in not only the game but also communication in the audience, it allows for a setting for strong community building. Esports makes it possible for a big audience to watch the game while also holding on to the more casual and fun side of a 'leisure event'; a one time only or recurring event, free or paid, which is organised to entertain, and can also work in combination with other events. However, this area is still developing and the execution for interactivity in the audience is limited. Meanwhile, the interaction needs to be meaningful and not just 'interactivity for interactivity's sake', as gamification often struggles with this problem [3]. The following question arises: "how can we create meaningful online/offline audience interactivity surrounding esports events?". This paper defines the esports audience as the people who are interested in esports events. The people that game and/or watch gaming streams on a daily basis, who make up the biggest part of this audience, will be referred to as 'gamers' from now on.

Traditional Sportscape vs Esportscape
Edge gives a description on the audience structure in the present (British) football stadiums that consist out of "spatial confinement, surveillance and seating" [4]. This resembles Foucault's thoughts on the modern panopticon. The audience are "made to know their place" because of these delineated seating areas and form "a compact model of the disciplinary mechanism" [4]. Because modern technology is slowly making its way to traditional sports, Edge talks about a return to mixed land use where football could take place alongside a range of other activities, many of which were less "serious" and involved greater community use than was possible on the monocultural "sacred turf" of sportscape" [4]. However, if we are talking about the influence of modern technology, esports events are miles ahead in that area. They already rely heavily on its online component that gives the audience a way of communicating. It allows for a shift from a segregated and tense space to one that allows for community building. Using techniques concerning both the offline and online audience during such an event, esports have a structure unlike other professional sport events. It is interesting to see how interactivity during those esports events can be operated in a meaningful and friendly way between both the online and the offline audience.

Defining the 'Experience'
One of the aspects to spectatorship that gets mentioned often in media studies is the audience 'experience'. Part of that experience is the created framed behaviour during such an event, but another aspect of the experience that needs to be defined is the period of time it applies to. It speaks for itself that the specified time for the actual event itself belongs in that experience, but one should also consider the 'before' and 'during' period surrounding the actual event. For example, the event-goers may still be looking forward to the event long before it actually starts. And after the event has ended, the memories that will stay with the event-goers may be there forever. It can depend on online factors such as social media exposure (websites, blogs, Twitter). The audience might try and relive the event through online interaction [5]. "When events are fully integrated with social media platforms, they form what seems to be a highly effective way of leveraging consumer attachment and a sense of community" [6].

To be able to create meaningful interactivity between the audience, the theory behind event experience
needs to be understood and defined. Harry van Vliet writes about the broad understanding of the festival experience and how a framed behaviour is formed during such an event; it creates its “own rules, attitudes, atmosphere, symbols, values” [5]. Because of this, it creates possibilities for community building. The new rules that only apply in such a delineated space form an unspoken bond between the visitors as it is out of the context of everyday life and a place only the attendees will be aware of.

This research will work with the 4-cell matrix of Pine and Gilmore from 1998 [7], which was elaborated further upon by Seo in 2013, adjusted to suit esports events. This experience-matrix is looked at from a marketing perspective, a model on the experience economy, which consists out of the elements entertainment, education, esthetic, and escapism (4Es), but are not mutually exclusive to each other. Though his findings are slightly outdated already, his key concepts are still relevant this research. He mentions the concept of the value network of Lusch et al., in which the relationships with all the stakeholders of a project, heavily and loosely involved alike, are seen as equal co-actors [8]. “what is valued the most by eSports consumers is the experience associated with this form of consumption, co-created within the value network of marketing actors.” [8], as there are almost no physical products present, mostly services and of course, the experience. “when a person buys a service, she purchases a set of intangible activates carried out on her behalf. But when she buys an experience, she pays to spend time enjoying a series of memorable events that a company stages to engage her in a personal way’ [7].”

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For the ‘during’ part of the event, when it is actually going on, the concepts of Liveness can be used. The factors that determine the extent of liveness can be divided into 4 categories: “simultaneity, immediacy, authenticity and unpredictability” [9]. Because of the streaming elements during esports events, liveness concepts can structure the way this research can think of ways of interaction in both the online and offline audience. The ideas for interactivity shouldn’t disrupt the flow during liveness [10][11]. For example, if push notifications keep being sent at the wrong moments this could distract and annoy the audience. A solution needs to be found that makes the audience engaged instead of annoyed.

Thus, when thinking of new concepts for audience interaction, all these theories on the event experience need to be taken into account.

**Primary Research**

There are several researches done on the marketing aspect on esports events and its audience. However, a lot of them mainly involve either the general global overview of esports audiences or the continents where esports is already a widely established event like Asia and America. As this paper has esports in the Netherlands as its focus, some primary research needed to be done. A questionnaire has been sent out to the people that game on a daily basis. 71 people responded, and a few interesting results emerged:
To the question "why wouldn't you go to an esports event?", 21 (32.2%) people answered because “the event might be boring”, and several others commented with answers like "not much motivation" and "I’d rather watch at home". Another 41.9% answered “There is not much to do” when asked what they do not like about esports event. 51.6% answered that they "wanted more variation in the things to do" in an esports event.

The correlation between these statements is that there is a lack of motivation. Because of this, this research tried to find out what motivates this specific group of people or what could motivate them. Using a point system, the different ideas for prototypes are rated and from all those ideas, three are chosen to work out further.

Through methods like one-to-one interviews and a focus group, the preferences of gamers are found out. For the focus group, a method from the DSS Toolkit is used: in the ‘Dark Side’ method [12][Figure 1], the question “how do you make an esports event as terrible as possible?” is asked to the group. After they get 5 minutes to think of as many options as possible, the question “and how would you try to improve those terrible things?” is added. This method is used to get the focus group used to the idea of thinking out of the box, and think of solutions to problems they otherwise might not have thought of. After this exercise, three interactive esports-prototypes are presented to the group:

The good points, bad points and recommendations are asked about each of them, and which one is the most popular one. The focus group is asked afterwards to submit their online or offline experience surrounding esports streams or events. Both an online and offline user experience map is made with their answer.

After all this testing around, both the popular opinions in the focus group and online gamers is that the prediction app is the most appealing in an esports environment:

Predicting Game
42% of the answers on the questionnaires indicated that they wouldn’t go to an event because it might be boring. They want to participate in games themselves too during such an event. This concept is similar to ExMachina’s WinView, where you can predict which esports team might win and earn points that way. At the end of the event, you can exchange those points for goods.

It incorporates the competitive nature of the gamers that attend these events and gives them a chance to participate in a more interactive manner. However, before the prototype of the prediction app is elaborated on further, one big risk needs to be addressed: its characteristics that heavily resemble a betting app. An experience map is made based on the customer journey map of the Johan Cruiff ArenA. But instead of general attendees, this one is specific to gamers using the prediction app.
Era of Gambling

Online gambling is nothing new to traditional sport matches and have been a popular side-event for a long time. But with the rapid rise of popularity and constitutionalisation around esports under a younger audience, especially online, gambling is starting to grow and shift from its original place. Esports especially seems to play an big part in getting the online audience into the problematic side of gambling: “increased consumption of esports is strongly associated with increased participation in online and video game-related gambling and moderately associated with increased potential for problematic gambling behaviour” [13]. In 2016, 550 million U.S. dollars were expected to be spent on esports betting. Gambling during esports matches have been forbidden when the game is considered to incorporate a big element of chance (for example, the card game Hearthstone), so regulations have become more strict in response to the increasing popularity. But ‘gambling’ can still be performed during skill-based games like Call of Duty that rely more on the skill of both the gamer and the ‘knowledge’ of the betting audience [14]. This is because it is not necessarily seen as gambling but something that needs someone with knowledge to win the game. Twitch apps like WinView can thus still make money with a structure that resembles betting but can still be legally practiced as it is not considered as one. The lines between chance and skill in different games is and will remain blurry for the years to come however, and the increasing problematic side of gambling needs to be critically assessed from the esports perspective. But
seeing how gambling-based activities online are becoming more and more popular, esports is not the only factor that is stimulating problematic gambling. Factors like the heavily embedded history of traditional sports betting also contribute in popularizing gambling in a younger audience. When expanding this paper’s prediction app prototype, this is an aspect that needs to be taken into account.

**Hexagon: The Prediction App**

We decided to make it a web application so users don’t have to go through the hassle of downloading an app that’s only usable at events. Thus, the app Hexagon was made to embody all the values that were taken out of the previously discussed guidelines from esports papers and our own field researches. Hexagon emphasizes framed behaviour during events [5] by creating possibilities for interaction between the players and stimulating community building. We took away functions that were a hassle (pains) and added entertainment values (gains).

We incorporated the two entertainment values that were very important according to Edge in the esports community and that were later on confirmed with our test groups:

- *Bonding Social capital*
  Bonding social capital involve strong social ties that have its foundation in “emotional support and understanding” [4]. For example, nurtured through watchers sharing the joy of their favourite team overcoming and winning battles. Hexagon uses this community aspect of the online and offline esports audience to strengthen the social ties between the audience further.

- *Information asymmetry*
  The audience can see certain parts of the game that the gamers themselves have yet to unlock (fog of war), but in turn the audience does not know about the tactics of the gamers [4]. Information asymmetry thus provides for a huge part of the entertainment during such a game. Hexagon plays into this factor especially, using the information asymmetry between the esportsers and their audience to make the players guess what will happen.

According to Macey and Hamari, online social capital plays a part in increasing gambling revenue and stimulating the ‘problematic’ gambling community, together with an ease of access [13]. It is especially because of this that Hexagon wants to limit the risks of problematic gambling by adjusting these two factors to a more friendly and safe environment.

Entertainment is the main focus of the app, divided in the following categories:

- Interactive entertainment (Seo, [8])
- Online community
- Offline community
- Before, during and after (van Vliet, [5])
- (friendly) Competitiveness

This research will now explain the functionalities of Hexagon by dividing its stages into the before, during and after experience of an event.

**Before:**

**Figure 3: The Hexagon style guide.**

**Figure 4: The Hexagon logo.**
"While a festival in itself has a clear and established period of time, the event-goers may still be looking forward to the event long before it actually starts." [5] Especially for the online watchers, the before experience will take on a big part in the prediction app. By encouraging (random) players to form teams, the competitiveness that comes with prediction will be friendlier as it will be a group effort.

Through our (field) research and interviews we learned that any functions we created should have as few steps as possible. That means that the new interactivity shouldn't disrupt the flow of an event because you risk damaging the feeling of liveness [9][10]. To maintain the flow and get participants into the app, we only need a QR-code on the event ticket. Online watchers don't even need to go through this step.

In order to be able to chat with their teams and see results of the predictions, we need our Hexagon users to be able to receive notifications. We added the option to either use the popular conversation app under gamers, Discord, or receive notifications through sms. This also allows the users to converse with their teammates later on, especially when using Discord, allowing players to stay in their own kind of flow.

The possibility to form groups with either your friends or even random people will create interaction between the players. It is not a mandatory action to take, but it is encouraged. Because the more players you have in you team, the more collective points you will have at the end of the event, and the better rewards you can earn. This new opportunity for interaction might interest online viewers to attend an event afterwards.

Trivia questions
Once you have your team, you start off with a set amount of points. The players can earn some extra points by answering trivia questions about themselves. This will be shown on their Hexagon profiles, which can be made accessible to all their fellow players.

Offline with OnLive
Because they will be physically present, it will also be possible for attendees to use the location-based technology from OnLive, an app created by RS New Media Concepts [figure 5]. It allows for plugins such as our app. OnLive will immediately recognise the prediction app plugin because of the location, and it will be possible for the attendees to be linked into groups with each other based on location. This way, they can immediately get to know each other in person if they feel like it.

Figure 5: OnLive.

During:
The prediction part is the same for both the online watchers and the attendees [figure 6]. Everyone will have to participate in teams of four or less, even if you are the only one in your team. For the prediction part, the players don’t have to interact with each other yet. This way, it doesn’t become chaotic and they can just enjoy the matches individually if they choose to do so. Other functions include: the rewards shop, a leaderboard for online and offline players, chatroom, information and settings.

Figure 6: Hexagon prediction interface.
There are two categories for prediction: end-of-match predictions or live predictions. The more risk the wager takes, the more points you can potentially win.

After:
“The memories that will stay with the event-goers may be there forever” [5]. We want the attendees to return and for potential new attendees to become interested. There are, of course, the Hexagon rewards that you can collect with the final collective points of you and your team. But especially for the online players, there might be points left after they have exchanged them for prizes. These points you can still keep for the next events, so the players might feel more interested in joining them in the future.

Make the Data work
Hexagon also incorporates data driven approaches, such as process optimisation. It is possible to automatise the points-giving process using the screen scraping method, so we don’t have to be reliant on a game master, an actual person that is sending out the bets. Information is 'scraped' from the screen, literally reading from the screen which team wins. After a while, the point values of the predictions can even be automatised, derived from how many matches each team has won.

Another method is to use the input for developing new products and services. By looking at the amount of points the attendees are giving up and when they exchange these points can prove can indicate what kind of rewards attendees like the most. This is useful for game developers and esports organisers like eMense, to see for example what kind of merchandise is the most popular and how far players would go for them.

Future iterations
We explored the option of making a chatbot, as they would be able to relieve the pain people experience when searching for a quick answer to a general question about the event. However, not a lot of gains were possible in this concept. We incorporated the possibility of the chatbot into our notification option instead. Though this project has not made an actual chatbot, this would be a strong and very realisable addition to the prediction app.

Conclusion
While competition is good and we do want to stimulate competitiveness with it, we don’t want people to go overboard on their own, because it risks problematic gambling behaviour [13]. Hexagon is inspired by the prediction app WinView of ExMachina, but there are two aspects in Hexagon that distinguishes it from its inspiration by toning down the (unhealthy) competitiveness into something more friendly:

- The group function, which limits the obsessive behaviour a player could get when playing alone. When playing in groups, the feeling of solidarity makes the game a friendlier environment than that of the problematic gambling community.
- There is no actual money involved, but a point-system. This way, there are still the stakes of the points, but everyone starts out with a set amount of them, and the only way to earn more is by winning the predictions or answering personal trivia questions.

with the rapid rise of popularity and constitutionalisation around esports for an audience that is considered to be mainly under the 30s, problematic gambling is increasingly becoming a problem, especially online. One of the reasons is the high level of competitiveness between those gamers, which was confirmed after we ourselves organised a few test groups and questionnaires. While our main goal was to stimulate interactivity in both the online and offline audiences, another important value that emerged was the fact that we wanted to create a concept that took both the fun aspect of competitiveness while still trying to limit the
problematic gambling side it also stimulates. With esports becoming a more serious and professional environment, the unique community becomes an interesting subject to analyse further. Both the online and offline environment are relevant in this community. What is important is to try to understand and steer the rapid developments that the esports audience is currently undergoing into a responsible direction.

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