Privacy Compliance for Esports Leagues

CS 3750 Project Requirements

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Project Overview:

Esports leagues utilize large quantities of data from their players, often forgoing privacy when developing individual agreements. However, new data privacy regulations are being passed as players are beginning to form player associations. Hence, noncompliance with pertinent regulations can incur costs of billions of dollars. Nonetheless, privacy compliance is a nuanced, multi-faceted issue. The complexity of compliance limits the growth of eSports leagues and businesses, prevents players from controlling their data, and prevents professionals from implementing systematic changes. To alleviate these issues, we will be building a centralized league management application for players, managers, and privacy professionals that facilitates transparency and compliance through privacy-preserving data management. This application will include the necessary features for league management, including communication, registration, travel resources, and payment protocols among other affordances.

Methodology:

Our methodology draws upon the experiences of multiple stakeholders, past privacy cases, and current regulations. We have utilized interviews and surveys to obtain information from approximately twenty-five professional, aspiring professional, and amateur players as well as various esports employees and privacy professionals. Additional data will be collected by conducting more interviews and further disseminating the surveys we developed.

Constraints:

Constraints for this project include limited access to reach and interview high-profile stakeholders such as league managers, professional players, and privacy professionals. Moreover, the nuances of privacy preservation as well as league management may be too complex to fully

capture given our team's limited time and experience. Thus, we will only be building the primary interface for the majority of user scenarios as opposed to also building the supporting infrastructure and resolving rarer, more emergent edge cases.

User Characteristics:

Our system should cater to those who are not knowledgeable about privacy issues and esports operations, including the parents of players and privacy professionals. Our interviews revealed that, while privacy was a concern, players and league managers do not have much knowledge about privacy and what they should be asking for aside from transparency and compliance, respectively. Privacy professionals, on the other hand, have less familiarity with esports, but the necessary expertise to provide prescriptions and recommendations regarding regulations. Potential users include:

1. Jonah is a single father raising a fourteen-year-old girl interested in playing Overwatch professionally. He is reluctant to allow his daughter to join a league as he is unsure of the safety of esports operations, especially the sharing of his daughter's private information. He would like the ability to understand who is receiving his daughter's data.
2. Joseph is a seventeen-year-old former competitive player who left a league after witnesses stalking, harassment, and trolling. He would like to rejoin a competitive league provided that there are more safety and privacy precautions. He acknowledges that he would not read a privacy policy or negotiate for better conditions on behalf of himself out of pure convenience.
3. Daniel has a nascent Brawlhalla league with players from Brazil, California, and Finland. He would like to travel to venues such as DreamHacks with his team, but worries about the legal privacy implications of data management. He tries to keep everything as

simple as possible with a manual rolodex of contacts, limiting the growth and expansion of his league. He also does not know how to parse the privacy laws he's technically required to comply with as he cannot afford a privacy lawyer. He would like a method to figure out what he needs to comply with and how to comply with it.

4. Katie is a privacy professional mandated by the EU privacy office to ensure the league is complying with all the laws they need to. She is also responsible for making sure the league is transparent with their players about data management, protections, and privacy. Katie needs a system to showcase these information flows to the players. She also would like a system that would easily automate much of the technical complexity associated with privatizing non-standard data platforms.

	Joseph: Player	Jonah: Parent of Player	Katie: Privacy Professional	Daniel: League Manager
Privacy Familiarity Level	Unfamiliar with privacy laws	Unfamiliar with privacy laws	Very familiar with privacy laws	Unfamiliar with privacy laws
Educational level	In high school	Any educational level	Bachelor's Degree	Any educational level
Age	17	40	34	26
Area of Expertise	Esports	N/A	Privacy issues and solutions	Esports

Task Analysis:

Hierarchical Task Decomposition:

Privacy compliance for league management can be divided into three major tasks dependent upon each other:

1. Compliance direction: How does a league determine how to comply with privacy laws?
2. Violation detection: How does a privacy professional analyze a league for privacy violations?
3. Information analysis: How does a player share and track their data?

Compliance direction is done inherently within the application. When a league registers, they fill out a questionnaire that will automatically determine what global and local privacy regulations they must comply with, propagating throughout the rest of the application features. When adding users (by sending them an invite link to their league on the app), they will only ask for the information they are legally allowed to ask and the information will be stored according to the regulations's stipulations. For example, their ages will be stored using a technique called differential privacy if they must comply with a regulation known as COPPA. They can send and charge players by entering the payment option, message each player private, message the league collectively, set up calendars, and access player information necessary for travel.

Violation detection will primarily be done by privacy professionals and employees interested in ensuring compliance. The former is especially important for users located in the EU where there are assigned privacy protection officers at many organizations. After the users choose to analyze a specific league and pases authentication, all of the information and information flows embedded within the operations of the league will be

displayed as well as the relevant regulations. Privacy professionals can also provide feedback and apply further prescriptions as necessary by messaging the application managers or the league managers.

Information analysis empowers the league's players (and, quite often, their parents and guardians). After joining a league on the app, they can handle all of the operations necessary for participating in a league within while being told exactly what data is being collected from them and how it is being used. They can obtain information flows on their own player profiles by going to settings while relying upon the communication, calendar, and other league management features.

Environment Issues:

Internet access is required for all users. A basic understanding of the English language is also assumed (with the potential for expansion to other languages if necessary).

Usage Scenarios:

1. Jonah is very proud of his daughter; she just received an invitation to join the Brooklyn Overwatch League. Despite this, he is quite concerned about her privacy, having read stories about stalking, harassment, and data breaches. He is able to sign into our league management and generate an information flow diagram from the league. Thus, he is able to see that her name, age, and email address has been collected and added to the Brooklyn Overwatch League's encrypted and differentially private database that complies with privacy laws in NYC, Illinois, and California.
2. Joseph has been excelling in League of Legends after his former stint in StarCraft and would like to join new leagues. However, he's quite concerned about his privacy. He's aware that his gamer tag and location might reveal even more potentially sensitive information. He

can utilize an invite link to join a new league within our application and then analyze the inherent information flows. He can refuse to provide certain information. He can see if his location data is being shared with anyone.

3. Daniel wants to collect location information to calculate the optimal meeting point for a venue. However, it is not legal for him to ask minors for their address or he does not want to erode his player's sense of safety as the app warns him when he attempts to send a data request to his players. Hence, he uses a meeting point calculator inside of the app that performs the calculation without sharing anyone's information based upon secure multi-party computation, ensuring that he is complying with the relevant privacy laws.
4. Katie has been hired to ensure that a new league complies with a new privacy law that will be in effect within the next months and will be reporting to her country's privacy office. After logging into the app, she can analyze the exact information flows league management requires and all the methods the app uses to ensure privacy compliance. Then, she can easily report in the affirmative to her privacy office.

<u>Current User Interface Critique</u>:

Currently, *compliance direction* requires leagues and other businesses to search for and analyze the laws themselves to determine their compliance strategy. Many firms decide to hire costly privacy lawyers and consultants in order to ensure compliance. Other, often smaller, firms tend to limit their growth; one league we spoke to only recruited players from California and utilized a physical rolodex of contacts to avoid issues with CCPA (California's primary privacy regulation).

Violation detection for privacy professionals and other stakeholders of interest tends to be reliant on OneTrust tools (or similar services). OneTrust

offers 28 different tools for this purpose alone, increasing the complexity of compliance by delivering a fragmented and specialized toolset. They are forced to behave in this manner as there is no standardization regarding data management practices. At this point in time, players generally forgo privacy as the only strategy for *information analysis* is to analyze each individual privacy policy they opted into. These policies are frequently deliberately obtuse, lengthy, and misleading, making this a futile, yet still important task.

Usability Goals:

League Manager	**Privacy Professional**	**Player**
90% of all managers can easily start a league and answer the registration questions without assistance or prior exposure to privacy issues	90% of all users can authenticate to analyze a league within five minutes of opening the application	80% of all uses find it easy to upload necessary information and register for a league without assistance
90% of all users can handle payments, communication, and calendar features, rating its ease at least 4 out of 5 marks from difficult to easy	90% of all users can obtain the information flows and data of a league within five minutes of opening the app	80% of all users can handle payments, communication, and calendar features, rating its ease at least 4 out of 5 marks from difficult to easy
90% of all users can determine what privacy laws they comply with	70% of users can determine the compliance status of an	90% of all users can figure out how to see what information they

and what measures the app utilizes for compliance within five minutes of opening the application	app after obtaining the information flows	have shared and obtain information flows within five minutes of opening the application

Implications:

Since we are providing a solution for privacy compliance and data transparency, our application should also be able to do this. Moreover, the user interface and data descriptions should be as easy to understand as possible considering that minors may be using this app and that multiple stakeholders results in multiple levels of familiarity with the various domains at play (esports, data privacy, management, etc.). Simple English (and other languages in future expansions) will always be favored over complex English. Technical privacy terms and legal terms will be explained and/or references for further explanation will be linked to or provided. Furthermore, since privacy and esports management are nuanced, dynamic issues, there must be accessible and easy-to-use feedback protocols to add new features. This is also the reasoning behind having a centralized management system.

Reflections:

One of the most difficult components of our research process was obtaining access to esports and privacy professionals. While it was marginally easier to ask questions and learn more from professional players, we were only able to interview a small number of esports business employees as well as privacy professionals. Furthermore, the level of fragmentation resulting from there being multiple stakeholders very removed from each other lead to some difficulty in forming a coherent solution as different stakeholders

proposed different solutions. To illustrate, smaller esports leagues and businesses preferred a centralized management system, but larger ones preferred a series of recommendations. Meanwhile, privacy professionals proposed purely a standardized data management platform as opposed to a complete league management platform or method to message privacy professionals easily. However, the complexity of compliance was constant, resulting in our proposal for a centralized management application to reduce the complexity.

Breakdown of Tasks:

Name:	**Tasks**:
Suha Hussain	Idea generation Project overview Five interviews Current UI critique Task analysis
John Jones	Five interviews Methodology User characteristics Usability goals Reflection
Haolin Ye	Five interviews Methodology Usage scenarios Implications User characteristics

Yayun Huang	Project overview Multiple surveys Five interviews Task analysis User characteristics
Nealie Glasser	Project overview Multiple surveys Five interviews Constraints User characteristics