THE FUTURE OF ESPORTS: REGULATIONS, STANDARDS AND TECHNOLOGY

The technologies that drive esports' growth also bring unique risks. Sean Samuel Thompson and Sam McMullen consider the options for ensuring the industry is clean and compliant in the post-PASPA world

The news of the Supreme Court striking down PASPA has implications for esports in Nevada and beyond. The case ended in a six-to-three ruling to allow legal sports betting in states that want to offer it. The case had landed with the Supreme Court after the NBA, NFL, NHL, MLB and the NCAA sued New Jersey to prevent the roll-out of sports betting in the US. Of late, the NBA has relaxed its opposition to sports betting on a national level and is embracing the market opportunities it brings. The New York Times claims that the NBA League suggested sports betting procedures that included monitoring for unusual betting activity, the imposition of a 1% 'integrity fee' on bets to be paid to sports leagues and authorising digital betting platforms in addition to bricks-and-mortar casinos.

The ruling affects conventional and non-conventional sports. That includes esports, which comes with higher perceived risks than conventional sports because of technological limitations in preventing fraud, cheating and match-fixing, as well as stopping underage gambling and associated skins gambling. One issue at the heart of the debate is wagering on competitors who are not old enough to bet on the sport they are participating in, and who could become involved in illegal gambling. States will have to grapple with these limitations as new laws and regulations are enacted. A recent New York Times article quoted Gabriel Feldman, of Tulane Law School's sports law programme, describing the move as the "gamblisation" of sports. "Fans will become much more focused on gambling than following a team," he told the paper.

One area in which Nevada is ahead is the relationship between esports tournament organisers and their gaming-licensee partners when it comes to planning and running competitive tournaments where wagering takes place. In addition, the gaming licensees accept all risk of adverse public notice, embarrassment, criticism, loss of reputation or other actions or financial losses associated with the management and operations of the tournament organiser's competitive event.

Sean S Thompson of MS Network Security is a consultant on esports tournament and technology standards as they relate to wagering on the outcomes of tournaments. He is currently working with Sam McMullen, CEO of FiveGen, to develop new strategies for the industry.



Now that the ruling is in place, the perception that many tournament participants are underage where wagering is taking place will have to be addressed on the available evidence. In fact, while in some cases participants may be below gambling age, a majority are in the 21 to 25-year-old age range. According to statistical portal Statista.com, the average age of esports game players in North America is between 24 and 27 years old. ESPN's recent in-depth study of players' ages found that the top competitors in esports competitions for Super Smash Brothers Melee, Counter Strike: Global Offensive, Super Smash Bros. Wii U, Starcraft II and League of Legends fell into the 21.2 to 25.2 age range. In addition, market research company Interpret LLC puts the median age of US fans of esports at 28 years old, with 39% of the total audience aged 25 to 34.

Tech & Innovation



Figure 1: Minimum gambling age for state (parimutuel betting)

Across all US states the average legal gambling age is 18 years old, although Nevada requires bettors to be at least 21 (see Figure 1). There will need to be some form of standardisation of minimum gambling ages as the issues move forward with solutions.

Setting the standards

The most likely future for esports will be the introduction of tough gaming regulations in states that offer sports betting, like those in Nevada. These will be combined with best practices and rules provided by tournament standards and technology solutions. Esports standards, such as those we are developing, must be well drafted and need to be adopted by the whole industry if they are to address risks associated with the unique challenges of running a successful esports competitive tournament. Technology such as Titan Auth, which aids in player identification and helps prevent destructive behavior such as cheating, fraud, match-fixing and underperforming, will go a long way in bringing esports to a fair playing field. A process for implementing technology specific to competitive esports gaming will likely focus on verifying player identities, monitoring player actions during games, tracking player management and behaviours, reducing risks and auditing actions during game play.

One solution being discussed in industry circles is the use of blockchain (see Figure 2) which offers intelligent benefits as a technology for esports gaming competitions because of its superior security and reliability. Using blockchain is a smart business decision in competitive gaming because it relies on decentralised systems.

These can be used to authenticate player identities, deploy smart contracts to manage tournaments, flag up suspicious patterns, manage player activity, offer spectator judging, witness voting and secure transactions, push prize distributions to winners and allow the purchase of virtual assets and products.

The blockchain can be deployed as smart contracts to fuel betting, host tournaments and ease the purchase of virtual assets by players and spectators alike. It may also be a terrific candidate to reduce the risks of hacked game accounts, stolen game licenses and fraudulent activity related to match-fixing and other kinds of cheating. Critical data associated with a player's account, including items owned (characters, currency, inventory, licenses, player's win-loss profile and performance details) would be safe and unified in a ledger distributed across all of the authorised accounts involved in a tournament or other esports operation. That means the owner could give others access solely to what they need for any specific transaction without risking the loss of personal assets or information.

Blockchain-based solutions can be used for gathering well-documented statistics, scores and leaderboard rankings, while guaranteeing security, reliability and transparency in data and interactions. For the esports industry to expand, several technologies will have to work together to enable safe and fraud-free play that maintains compliances in a dynamic regulatory environment.

Manual compliance personnel could perhaps benefit from technologies designed to assist them in their duties. These may include applying biometric authentication to a wallet that holds

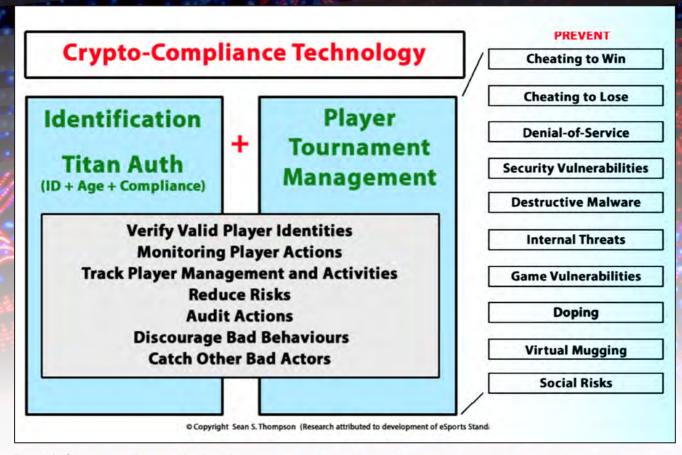


Figure 2: Crypto-compliance technology for esports

a player's professional and casual career data, verified identities and statistics. This wallet will be the recording ledger for their play statistics, biometrics and authorised personal identifiable information, as well as for tournament or ELO accounts, so that eligibility for tournaments can be checked. While a ledger wallet records everything a player does, a spectator version of the wallet can be used to track those making bets and their eligibility to place wagers according to their age and jurisdiction via geolocation, as well as to collect winnings (and determine in what format they are collected). The player and spectator wallets, and the biometric authentication system, will link the user's real world identity to one or more online or digital accounts and make account impersonation impossible.

Intelligent service

All of this would need to connect to the tournament-management system that automates the process of managing players, matches and rules. It would connect to on-site game servers and monitor the rules of the game and the actions of each player. Should there be activity that suggests cheating, it would alert the on-site referees or enforcement personnel. With these kinds of automated systems, regulators have access to flagged accounts that require immediate action to stop players – or anyone attending the tournament – from infringing the rules. It's possible this could even allow for the complete automation of judging systems where referees or enforcement personnel would be monitoring multiple tournaments at once.

Eventually an artificial intelligence-driven (AI) tournament-management process will protect game play. AI can be used to manage live tournaments, validate players' authorisations and identities and watch for fraudulent activity and suspicious patterns.

There are already several companies developing AI technologies, focusing on different modular pieces of this puzzle, that will connect to a core system backed by dynamic compliance standards. This will present unique opportunities for the industry and could positively inform and impact national wagering regulations and compliance.

The new normal

These kinds of blockchain-backed, biometrically secured, AI-assisted pattern-recognition systems will likely become the norm. Using this type of technology for the regulation of multiple compliance needs across ever-increasing numbers of tournaments will certainly be necessary. More focus on technology to replace manual checks will relieve the burden associated with the rapid growth of the esports industry and the expansion of esport's professional status in relation to gambling opportunities. Esports standards for Nevada and the US are undergoing internal peer review and we hope to see them accepted and used in the industry this autumn, following regulatory review.

Just in time too. The legalisation of sports betting nationwide in the US will cause esports to boom even bigger than it already has. Standards will bring welcome stability in this dynamic, expanding and evolving market.