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Wearable Tech Will Change Pro Sports — And Sports Law

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While fitness fanatics and weekend warriors alike are checking their FitBit or Jawbonestats, clocking their mileage for runs and rides, and analyzing their golf or tennis swings, wearable technology companies are working with pro sports teams and leagues to develop and implement cutting-edge wearable technology. The wearable technology arms-race is being played out on some of the biggest sports battlegrounds, such as the NFL, NBA, NHL and MLB, soccer, tennis and even college football teams, among many others, and the fast pace of the technology development is creating legal issues that challenge current laws, regulations and contracts. How is wearable technology impacting professional sports, and what are the legal issues that may result from its recent explosion?

Every major U.S. professional sport has implemented some form of wearable technology program. Last season, for example, the NFL began a partnership with Zebra Technologies to provide gather what Zebra and the NFL are calling "Next Gen Stats." The technology includes sensors, originally installed in the stadiums hosting Thursday Night Football and expanded for the 2015 season into all of the team's stadiums, that collect data generated by radio-frequency identification transmitters in the shoulder pads of the players. The sensors capture precise location measurements in real time during games, reportedly at a rate of about 25 times per second, which translates into location tracking of every player within a margin of error of about six inches for the duration of the entire game. The technology also collects data on the speed and distance. Zebra's MotionWorks server software processes the information, and sends a variety of stats out to NFL's broadcast partners, as well as for use by the league's other partners, and in its NFL app and XboxOne.

The information that Zebra collects has the capability to change how professional football is watched, analyzed, coached and played. Loyal fans — whether they are watching live or at home — get a game-day experience that is enhanced by new information and stats about the performance of their teams and players. The information will also benefit those competing in fantasy games — whether in season-long leagues on the increasingly popular daily fantasy sites. And while the original purpose of Zebra's technology reportedly was to enhance the game from a fan's perspective, the technology can be used for a number of other purposes, including coaching, training and injury management.

The NHL is working with Australian company Catapult Technologies, first known for player-tracking technologies in Australian Rules football, to develop wearables that interpret skating load and volume, player speed, force sustained in collisions and even which of the skater's legs is working harder. Catapult

touts their technology as an enhancement to coaching, addressing risk by providing information about who is overworked and allowing coaches to "economize practice with scientific performance management," readiness by comparing athletes' performance week to week and across seasons, and readiness to return to play through analysis of benchmark data.

More than two dozen NBA teams also use either Catapult's OptimEye or similar technology to track and analyze player performance. The OptimEye system uses a sensor unit in a player's jersey, positioned between the shoulder blades, that contains the kind of motion sensors found in many fitness trackers that measure speed and movement, as well as GPS or indoor antennas to track the player's position and movements in three-dimensional space. The hardware and software together allow teams to look at biomedical data, including impact forces, turn rates and orientation, as well as tactical information, such as two-dimensional animations of the play in real time or post-practice. As an example of the uses of these types of wearable technology, the New York Knicks reportedly used the Optimeye system to evaluate a player's readiness to return from injury by comparing his performance in training to benchmark readings from the preseason.

And Optimeye and similar technologies are not the only types of wearable technology that NBA teams are using. The Golden State Warriors have a partnership with Athos to test the company's high-tech smart clothing in practice. (Warriors majority owner and chairman Joe Lacob is an investor in the company, and minority owner Chamath Palihapitiya is Athos' co-founder and executive chairman.) The smart clothing uses motion sensors, breathing sensors and electromyography to tracks biometric data like heart rate, breathing and effort and activation of muscle groups. The sensors relay the data to a core unit worn by the athlete, which sends the aggregated information to a smartphone app that can display it in real time. The team can use the information not only to track the progress of players in training, but also to monitor and use fatigue as a way to prevent injury.

Since even before the "Moneyball" era, Major League Baseball has used data in defining and playing the game. As many commentators have noted, if something can be measured on the field, baseball has a stat for it, so it would seem that wearable technology would be a natural for this information-loving game. One of the biggest developments in wearable tech is the mThrow smart throwing sleeve and iOS app, also by sport-tech clothing company Motus, that collects three-dimensional motion data and generates key metrics relating to pitching, including workloads (collective stress placed on the ulnar collateral ligament from repeated throwing), and recommended daily throw limits to help maintain arm health. According to the mThrow site, 27 of 30 MLB teams are using mThrow as a way to protect pitchers from torn UCLs and season-ending Tommy John surgery. A number of MLB players are also reportedly using in-bat motion sensors made by companies including Zepp Baseball, Diamond Kinetics and Blast Motion to track and analyze players' swings during training to optimize their performance and reduce the risk of injury.

Wearable Tech — Big Data, Big Money, Big Legal Issues?

The implementation of these and other innovations in wearable technology will forever change the sports landscape — the way that sports is watched, coached and played. Many commentators have predicted that wearable technology may have begun as a way to collect better information to enhance fan engagement and enjoyment, or to reduce injuries and maximize training, but it won't remain that limited to those uses, as leagues and teams inevitably find new ways to use the increasingly vast amounts of data they get from the technology. There is also no doubt that there is big money to be made in wearable technology. According to technology industry analysis firm IHS Technology, its already a billion-dollar industry and growing rapidly. IHS predicts that global revenues for sports, fitness and

activity monitors will grow from $1.9 billion in 2013 to $2.8 billion in 2019.

With big data and big money come big legal issues, however. The sports wearables landscape is really unknown legal territory, and while sports teams are moving full speed ahead into the implementation of wearable tech, plenty of unresolved legal issues exist surrounding wearable tech.

Privacy, Confidentiality, Data Ownership and Use

Some of the thorniest issues surrounding wearable tech will likely focus on the ownership and use of the data collected, both data related to individual players and aggregated data collected by teams and leagues.

Who owns the data collected from wearable technologies worn by pro sports players? At present, the answer depends on who collects it — and it appears that the leagues and teams that collect the player information own at least the raw data, as well as whatever aggregation and analysis they undertake. What they can do with the data is yet another question. The issues surrounding the ownership and use of information collected during training by professional athletes mimic in many ways the issues surrounding data collection by any employer, and involve questions of privacy, confidentiality and use. At what point does the information become so personal to the player that the player's privacy rights may be violated? Does a player have any reasonable expectation of confidentiality in any information about him — including the data that team or the league collects?

Beyond the more typical issues involved in an employer's collection of data on employees, are the questions unique to pro sports. Can analytical data on individual players be shared (with or without confidentiality protections) with broadcast partners, sports commentators and analysts? Can it be used in video games? Can it be given (or sold) to fantasy sports contestants?

In the case of the NFL, at least, the answer appears to be yes to all of those questions. The league reportedly has recognized, however, that there are myriad ways to "slice and dice" the player data it collects and that there are many uses beyond the few that it has already clearly identified — including, for example, enhancing the intelligence teams have on their opponents' players and plays — so it is has said that it is moving cautiously with the kind and amount of data it's releasing and to whom.

Beyond the sanctioned use of data by the league and teams, there is the risk of inadvertent data leaks and purposeful hacks. The vast amount of data that professional sports teams and leagues may eventually collect, store and use would give "stealing the other guy's playbook" a whole new meaning. And it's unclear at the moment, what regulatory scheme, if any, would offer any protection. In the everyday world, the Health Insurance Portability and Accountability Act doesn't cover the data generated by wearable fitness devices, and the so-called Internet of Things remains largely unregulated, despite the Federal Trade Commission's recent efforts to get a handle on it. In the professional sports realm, it's similarly unclear what would constitute reasonable cybersecurity protection for information from devices worn by professional athletes. And as data gathered from wearable technology becomes increasingly detailed, there are concerns that this information could be hacked by stalkers, improperly used by employers, demanded by insurers, or even become a form of information that is subject to discovery in litigation of all kinds.

Labor Concerns

What teams and leagues can do with the player data they collect is certainly an issue to be covered by

collective bargaining agreements and player contracts. The issue includes not only which third parties can have access to player data and what kind, but also whether the players, and their representatives, are entitled to the information generated or derived through the use of wearable technology.

Player performance statistics and other data have always played a role in salary and contract negotiations, for obvious reasons. Until now, however, measurable past performance, combined with age, basic health information and injury history, has really been the only information available to predict the likely future performance of an athlete. As the availability of data grows, however, so too does the possibility that analytics may reveal information that previously would not have been known — previously undetectable biometric data, minute changes in player ability, or indicators of long-term health and future injury tendencies — information that teams may interpret to predict future declines in performance, even for athletes currently performing at the top of their games, and use in salary and contract talks. The National Basketball Players Association appears to have already raised the issue, citing reports that teams have already begun to use data from wearable technology in contract talks.

Patent Disputes and Trade Secrets

With so much money at stake, companies in the wearable technology industry will want to protect their investments and their intellectual property. Patent litigation and litigation is already on the rise. In California, wearable tech companies FitBit and Jawbone are going at each other — in and out of court. Jawbone filed actions againstFitbit, alleging both patent infringement and theft of trade secrets in separate actions. In one lawsuit, Jawbone alleges that Fitbit recruiters contacted as many as 30 percent of Jawbone's employees, eventually hiring several who allegedly took trade secrets and other confidential information out the door not only in their heads, but on thumb drives as well. Jawbone claims that these employees "brought access to and intimate knowledge of key aspects of Jawbone's business" to Fitbit.

In another lawsuit, filed in June 2015, the company alleges that Fitbit infringed on a Jawbone patent for "a wellness application using data from a data-capable band." Fitbit asserts that this was a "strategic filing;" the company had announced an IPO that was to be priced on June 17. Jawbone has also petitioned the U.S. International Trade Commission, requesting an investigation of whether Fitbit is infringing six of its patents. The ITC has announced that it will initiate the investigation, but the case does highlight questions of breadth and potential indefiniteness in claim construction. In Savint Technologies' suit against Adidas and other defendants for patent infringement over products such as the Adidas miCoach training shirt, defendants have asserted that the patents at issue were abandoned over eight years ago. Adidas has asked for summary judgment, claiming that equitable estoppel or laches should apply due to the plaintiff's "unreasonably long delay."

More litigation is likely to follow. If it includes companies working with professional sports teams, it's unclear what negative impact it might have on the pace of technological development of wearables, and their implementation with teams and leagues.

Regardless of the Legal Unknowables, Professional Sports Teams Are All-In With Wearables

Part of the promise of all of the new wearable technology is that it has the capability improve fan engagement and experience, enhance performance for teams and athletes, and even protect player health and help prevent injury, allowing teams and leagues a measure of protection for key players. Yet, there is currently little in the way of rules, regulations or guidelines regarding wearable tech, whether in pro sports or consumer wearables. Labor law, privacy and intellectual property law — these and other

areas of the law will almost certainly be affected by the surge in use of wearable tech in the very near future, as labor disputes, litigation, and other matters begin to wind their way through the legal system.

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