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## TECHNOLOGY AND SPORTS EQUIPMENTS

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### INTRODUCTION

Technology serves many functions in sports. It has a constituent function. Without ball and bats, there is no cricket. Without the bike, bicycling races are impossible. Technology might enhance performance, such as the new fast skin swimsuit that is said to reduce water friction, to the new alpine carving skis that seem that seem to help beginners master more easily the basic techniques of the sports. Other kinds of technology, such as helmets and body protection in boxing and ice hockey are supposed to prevent injuries. The possible use of video cameras in the refereeing of cricket matches is thought to enhance justice. It is no wonder, then that sports communicates regularly engage in controversies over technological development, implementation and use.

### SPORTS TECHNOLOGY

Sporting technologies are man-made means developed to reach human interests or goals in or relating to a particular sport. Technology in sports is a technical means by which athletes attempt to improve their training and competitive surroundings in order to enhance their overall athletic performance. It is the knowledge and application of using specialized equipment and the latest modern technologies to perform tasks more efficiently. Examples of sporting technologies include golf clubs, tennis rackets, pole vault poles, athletic sports gear (clothing and footwear), advanced computer stimulations and motion capture.

### BENEFITS OF ADVANCED SPORTING TECHNOLOGY

Recent developments in sporting technologies have created a variety of products aimed at improving and increasing athletic performance. Athletic health can be maintained and observed,

and injuries treated, through the production of modern sporting technologies such as heart rate monitors, pedometers and body-fat monitors. Through this, a greater deepened knowledge of the human body and its potential has been recognized, allowing athletes to train and compete in sports to a much older age.

## **SOME POPULAR TECHNOLOGY**

### **➤ CYCLING**

At top speed, ninety percent of an elite cyclist's energy is used to counter air resistance. By comparison, 3 to 7 percent of a runner's energy is spent overcoming air-resistance. Cycling behind a competitor or teammate, or draping, can reduce drag on a cyclist by up to 38 percent. However, since most cycling teams already practice this technique, cyclists today are searching for new ways to reduce air-resistance and themselves from their competitors. A rough formula used to calculate the drag of a cyclist is  $0.5qCA$ ,  $q$  being the air density,  $C$  being the drag coincident, and  $A$  being the projected cross-sectional area of the front of the bike and rider. Secross-sectional area is the variable cycling teams can best modify and reduce, and has the been focus of recent technological improvements.

### **➤ ROWING**

Elite rowers face a similar dilemma as cyclists. eye have to contend with drag from water, which creates 12 times the resistance of air. Manufacturers of top-end racing hulls, or shells, claim that the deference between shells can be the deference between first and second place Shell manufacturers are constantly looking for the perfect combination of high rigidity, balance, low surface area, and smoothness. Unfortunately, not all of these attributes can be achieved simultaneously. For example, the surface of the shell that comes into contact with the water, known as the wetted area, causes 80 percent of the drag. However, reducing the wetted area leads to a trade-o in stability, and a smoother material may be less rigid. A rigid hull is important, because the more a hull bends and torques, the less anciently power is transferred from the rower to the water. Much of the technology that has gone into reducing the friction

between the shell and the water %owing past it comes from racing yachts, which get their technology from the aerospace industry.

➤ **SNICKO METER**

Invented by Allan Plaskett, the snickometer is used to detect edges from the bat using a microphone placed near the stumps. Commonly known as Snicko, the technology uses the difference between sound frequencies of the ball hitting different surfaces. For example, a woody sound has a different frequency than that of the ball hitting the glove.



**Fig- 01**

➤ **PHOTO FINISH**

A photo finish occurs in a sporting race, when two (or more) competitors cross the finishing line at near the same time. As the naked eye may not be able to discriminate between which of the competitors crossed the line first, a strip photo, a series of rapidly triggered photographs, or a video taken at the finish line may be used for a more accurate check. Nowadays, the photographs may be digital. A digital photo finish camera uses a 1-D array sensor to take sequential images of the finish line. Since only a single line of the CCD is read out at a time, the frame rates can be very high (up to 10,000 frames per second). Unlike a film based photo finish, there is no delay from developing the film, and the photo finish is available immediately. They may be triggered by a laser or photovoltaic means.



**Fig- 02**

## CONCLUSION

Technology has helped athletes hit better shots and race faster. Still, competition has not fundamentally. I have suggested a particular understanding of sports technology and suggested a way of examining systematically and critically its role and consequences in sports. I have argued that in order to evaluate various kinds of sports technology from a moral point of view, we need a proper theory of sports, or more specifically, a proper theory of cricket performance from which such evaluation can take place.

- Increase in performance
- Accurate result
- Time Save & Time Management
- It helps to analyze the performance of each athlete stage by stage

## REFERENCE

1. Technology in cricket : Technology in cricket: New cameras should capture faintest of edges, says Hot Spot inventor | Cricket News | Global | ESPN Cricinfo
2. At the Sign of the Wicket: Cricket 1742–1751, Cricket Magazine, 1900
3. Arthur Haygarth, Scores & Biographies, Volume 1 (1744–1826), Lillywhite, 1862
4. "United States of America v Canada". CricketArchive. Retrieved 2008-09-06.
5. Track and field manual
6. IAAF Constitution. IAAF. Retrieved on 11 February 2011.

### WEBSITS

1. [www.soldiermod.com/pdfs/press-releases/2012-06-11-selex.pdf](http://www.soldiermod.com/pdfs/press-releases/2012-06-11-selex.pdf)
2. <http://www.topendsports.com/sport/cricket/technology.htm>
3. <http://www.topendsports.com/sport/cricket/technology.htm>
4. [www.media.theage.com.au/.../could-cricket-abandon-hotspo](http://www.media.theage.com.au/.../could-cricket-abandon-hotspo)