

Performance Point

Motion Capture and Analysis

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Motion capture is perhaps the most widely used form of analysis across the different disciplines of biomechanics. Both clinical and academic research (largely in the area of gait analysis) has driven the development of motion capture systems to the point where they are even used by the movie and video game industries for computer animation and can represent upwards of a \$500,000 investment. However, when applying motion capture to a sport situation, many of the more sophisticated systems are too expensive, bulky, and difficult to set-up in an actual training or competition environment. In today's sporting world, software is readily available that takes motion capture to the next level by allowing for rapid set-up, collection, and analysis for nearly instant quantitative feedback to athletes and coaches.

When can motion capture be used?

- At any time when a video camera can be set-up and operated.

What equipment do I need for basic motion capture?

- Camcorder (standard miniDV camera is sufficient)
- Tripod
- Computer (preferably a laptop for portability)
- Analysis software (i.e. Dartfish)

How can motion capture and analysis be used in sport?

- Feedback tool for athletes.
- Reference tool for reviewing performance.
- Store and catalogue a record of both training and competition.
- Assessing even small changes in technique.
- Determining factors that lead to an optimal performance.
- Monitoring international competition.
- Comparative analysis.



An example of a Dartfish Mediabook that provides video, picture, text, and audio feedback to a coach or athlete. These can be produced rapidly and distributed electronically via e-mail.



"With Allan's expertise he has been able to show us an in-depth analysis of Brent Hayden's starting technique. By the use of comparative analysis, Brent has been provided with the specific input to make the subtle changes necessary to improve his start. This process has allowed for an acceleration of Brent's understanding and application of proper starting technique, with the results being fairly dramatic to date. We are confident this will help Brent towards his goals for Beijing 2008."

Steve Price, Senior Coach, UBC Dolphins, comments on the on-going support provided to the team and specific work with Brent Hayden.

Powering Sport Performance

The Canadian Sport Centre Pacific, in partnership with the network of Canadian Sport Centres and PacificSport Centres, delivers sport performance programs to help athletes and coaches win medals for Canada. Working in support of our national and provincial sport partners, the Canadian Sport Centre Pacific is creating a stronger system for the development of athletes, coaches, performance enhancement teams and sport performance facilities. www.cscpacific.ca