

# The Champion's Choice



*Text: Amy Bathgate - Biomechanics & Video Analysis, hpc*

When a razor's edge or 1/100 of a second can mean the difference between gold and silver, or even no medal at all, it is not surprising that digital video technology has become an Olympic standard and is widely used by team and individual sports alike. The use of video footage is increasing in popularity at all levels as technology advances and becomes more readily available and easy to use. Its uses are numerous and the benefits invaluable when used efficiently. Although there are many software packages available worldwide, the University of Pretoria and the High Performance Centre (hpc) have chosen to partner up with Dartfish® video analysis software and are the biggest users of Dartfish® in South Africa. This partnership also aims to increase South African users' knowledge and expertise, thereby taking video analysis to the highest levels possible – and translating directly into better sporting performances. Here at the hpc, the Biomechanics and Video Analysis department does very little without utilizing Dartfish® software.

## **So why Dartfish®?**

The proof is most simply in the medal counts. Going back to the 2008 Beijing Summer Olympic Games, athletes using Dartfish® software specifically, racked up 372 medals, including 117 gold – more than doubling the medal count from 2004 in Athens. And these medals came from 34 different countries. More recently, the 2010 Vancouver Winter Olympics saw Dartfish® users produce 162 medals (62% of total medal count). In both these events, athletes used Dartfish® in their training



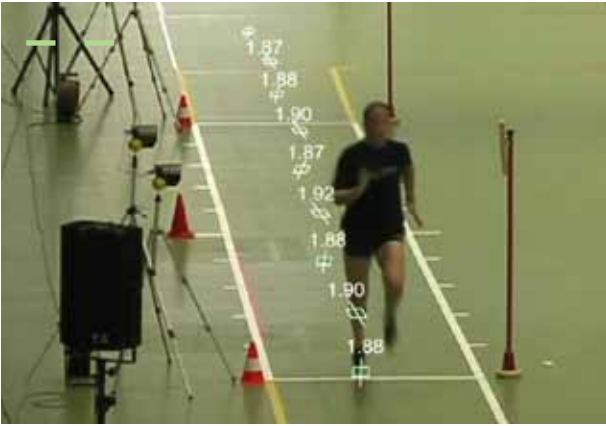
routines, long before arrival at the games, to analyse their performances and correct mistakes, to evaluate their opponents' performances and to increase their chances of taking home the coveted medals.

## **So why Dartfish®?**

Dartfish® developed the first training tool that brings cutting-edge visual technology to the training site, placing powerful analysis tools at the fingertips of coaches, athletes, teachers, students, sports doctors, and physiotherapists. It is a user-friendly tool that allows the breakdown and analysis of movement as well as the categorization of videos to create an index of events (e.g. passes, goals, player movements, etc.). The software uses digital video graphics to deliver instant visual feedback without disrupting the flow of the training session.

The hpc, together with Dartfish®, revolutionizes training of all athletic performance on three levels:





**Communication:**

instant and automatic visual feedback can be provided during a session for self-assessment, shared perspective and improved communication between coach and athlete, trainer and athlete, doctor and patient, teacher and student, physiotherapist and patient, etc.

**Analysis:**

a complete set of video analysis tools that include Simulcam© and StroMotion© can be used to highlight specific details and to make visible what was invisible with the naked eye. Thanks to these exclusive tools, coaches, athletes, trainers, and analysts alike, as well as all other users of the software, can make powerful technical, tactical and statistical analyses – thereby enhancing the learning process.

**Sharing:**

a versatile and easy method of sharing their expertise, is offered to the users, which allows distribution of their



content with others through CD/DVD, email or internet – making remote coaching and sharing of information and video content easy and hassle-free..

The most important aspect of effective training is understanding and communication. Athletes need to understand what to do, why, how and when, and the understanding and communication between coach and athlete is essential. Video analysis allows a new dimension of both understanding and communication by allowing athletes to self assess and better understand the difference between what is seen by the coach, what they “feel” in training, and what is actually happening in slow motion. Competition is where performance counts most, and by analysing competition performance, training can be tailored in the most efficient ways possible to allow the athletes to be most prepared and ready to compete, with the best chance of being successful. Through competition/match analysis, trends and statistics can be found and problem areas pin-pointed and addressed. By underlining or highlighting key points of interest and selecting key moments, an index of them can be created, with drawings added, and written and/or audio comments included.

Dartfish® allows the hpc to bridge the gap between the process of video analysis and the desired goals of improving performance through effective training solutions. It offers a solution for creating and distributing selective and qualitative user-generated video content with seamless processes that attract and create audiences who can best utilize video content. An added feature of Dartfish® software is the dartfish.tv video sharing platform which provides the solution for easily, quickly and efficiently publishing and sharing videos online. The powerful web-sharing platform provides all the functions of standard video consumer platforms, with numerous additional features and can be used in the daily workflow of all types of professional settings, including within sports, healthcare and education. Go check out the hpc channel on dartfish.tv at [www.dartfish.tv/hpc](http://www.dartfish.tv/hpc)





# hpc Biomechanics & Video Analysis Lab



## Functional Movement

Identifies limiting factors through the presence of compensation patterns adopted during specific movements, and allows athletes to realize their full potential

## Video

Filming and review of movements or techniques allows athletes to see what coaches “see” and the athletes themselves usually “feel”, thereby enhancing learning



## Technique

Filming specific techniques allows both coaches and athletes to analyze movements in slow motion and see faults/compensations that are often not obvious with the naked eye

## Game/Match

Review of filmed game/match content can produce highlights, statistic, trends and much other vital information needed for improved performances in both individual and team sports



## Biomechanical

Links functional movement patterns to technique performances and bridges the gap in understanding, rehabilitating and preventing injuries

## Gait

Slow motion filming links patterns in our gait to pain, injuries, and related conditions which might restrict an athletes walking comfort or running potential



## Performance

Integration of various measurements and additional aspects to increase understanding, learning and improvements in athletic/sporting performances

# Analysis is our Game

For more information contact Amy Bathgate: [amy@hpc.co.za](mailto:amy@hpc.co.za) or 012 362 9800