

Training at the next level


Improve your performance

- › *Thorsten Reinhold*
- › *Edward de Boer*

➤ *Company profile of Inmotio*

- *Founded by TNO Sport and ABATEC Electronic*
- *Development of sports tracking systems*
- *Close cooperation with clubs and sports institutes*
- *Based in Amsterdam, the Netherlands*

➤ *The game continues to speed up*

- ⬆ *More high intensity runs*
 - ⬆ *Sprint distance increased by 40%*
 - ⬆ *Top players clock up 9,7 m/s*
 - ⬆ *Individual ball possession Premier League 1,15s (Germany 2,2s)*
 - ⬇ *Little change in total distance covered*
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ProZone - Premier League season 2005-2006

► *Today's super striker*

4.000m walking

500 m sprinting

10% defending zone

1.000m light sprinting

31% in and around
the penalty box

9,7m/s top speed

11,8km covered
distance

1.500m running

4.800m jogging



► *Elite soccer training*

***“Large parts of training practice in elite soccer players lack scientific knowledge.
It is based solely on the coaches’ experience.”***

Tim Meyer: German Journal of Sports Medicine Vol. 5/2006

➤ *Training = preparation for the match*

FINDINGS

*no improvement of strength
no improvement of endurance
no improvement of speed
high rate of injuries*

REASONS

*poor individualization
traditional training
concepts
no innovation*

Coach: "I reached the top. What is wrong about my training?"

Wienecke 2007, activiteam 2007

➤ *Training at the next level*

Goals

- *Improvement of athletic performance*
- *Improvement of individual and team play tactics*
- *Avoidance of overload / injuries*
- *Better and more efficient training methods*

“You can’t improve what you can’t measure”

➤ *Training analyses*

LPM Soccer 3D provides performance indicators

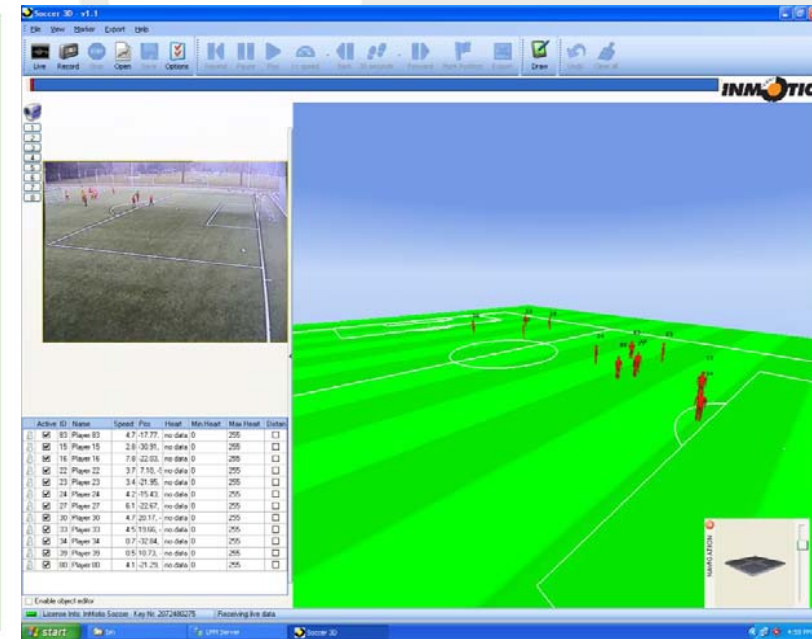
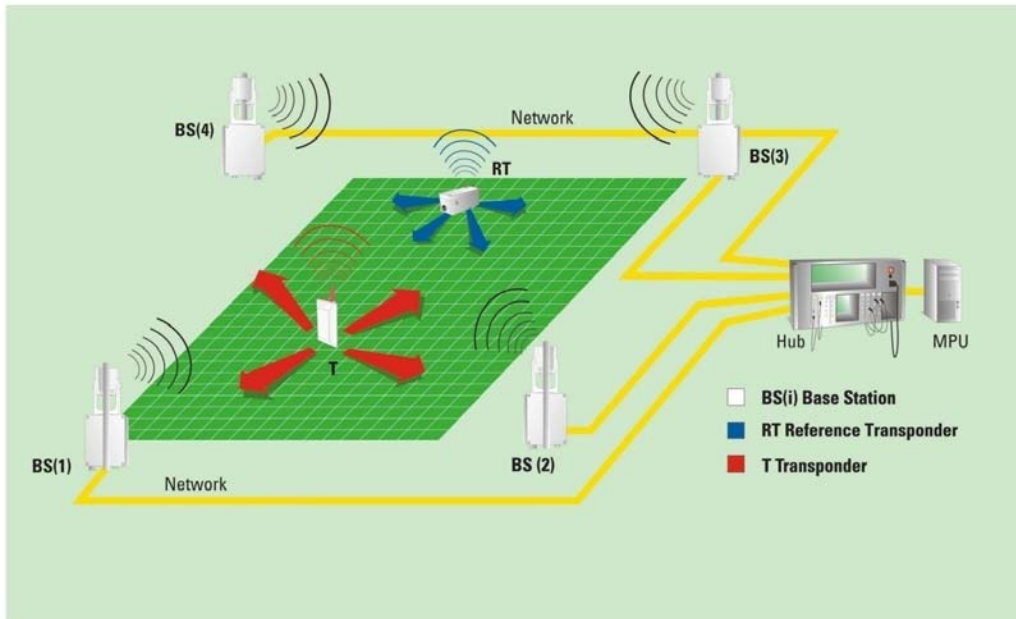
- *Movement patterns*
- *Heart rate*
- *Player´s positions*
- *Distances between players/lines*
- *Covered distances*

➤ *What is special?*

- *Real time*
- *Very high accuracy (+/- 5 cm)*
- *Data security – no supplier needed*
- *Direct feedback during training*
- *A solution adjusted to the training methods of the user*
- *A system simply handled by the trainer staff*

► *How does it work?*

- *RF based system that includes antennas, transponders and cameras*
- *application software*



▶ *LPM Soccer 3D installation (1)*



▶ *LPM Soccer 3D installation (2)*



➤ *PSV Eindhoven*

CHANGE OF WAY OF THINKING



Major role of the PSV youth academy

BENEFITS

- *5 youth players went to the first team in the past 3 years*
- *In the black after many years*

PURPOSE

- *One youth player per year to the first team*

➤ *Training at the next level*

PSV Eindhoven youth academy

FOCUSES ON

- *Athletic performance in general*
- *Recovery*
- *Sprinting ability*
- *Tactics*

More or less 50% individual, 50% group training

➤ *Practical example: Goal-scoring opportunities*

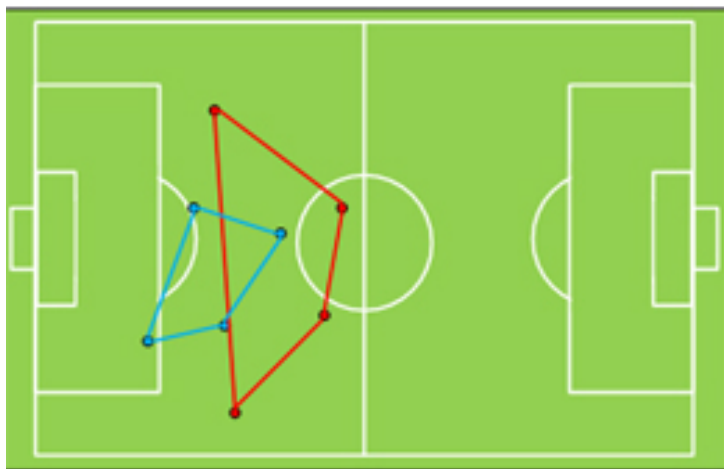
- *Most goals in modern soccer are scored when a team is capable to make a fast transition when the ball is won*
- *Better chance to score (70%) while entering the defense area with less than 3 contacts*

How can I train this efficiently?

➤ *Practical example: Goal-scoring opportunities*

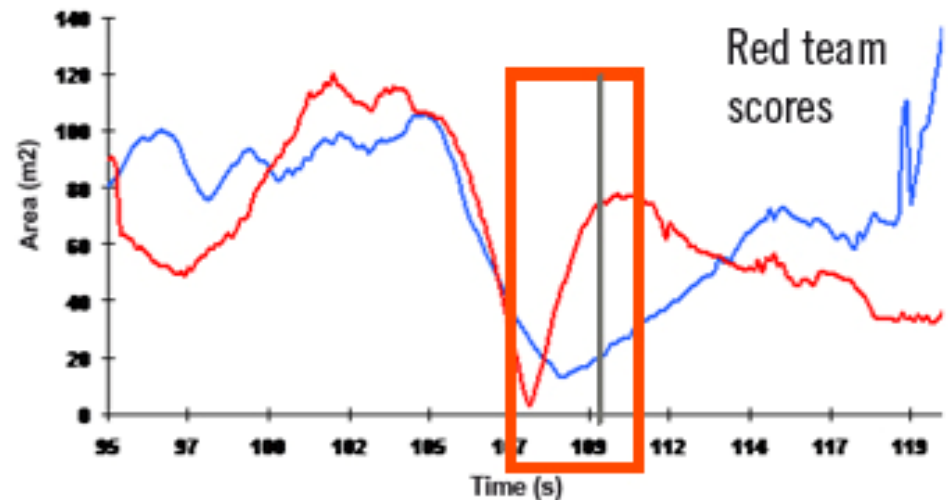
Variable: team position (surface area)

Red = strikers, blue = defenders



Connecting players, calculating areas

GOAL



Transition: winning the ball > increasing area

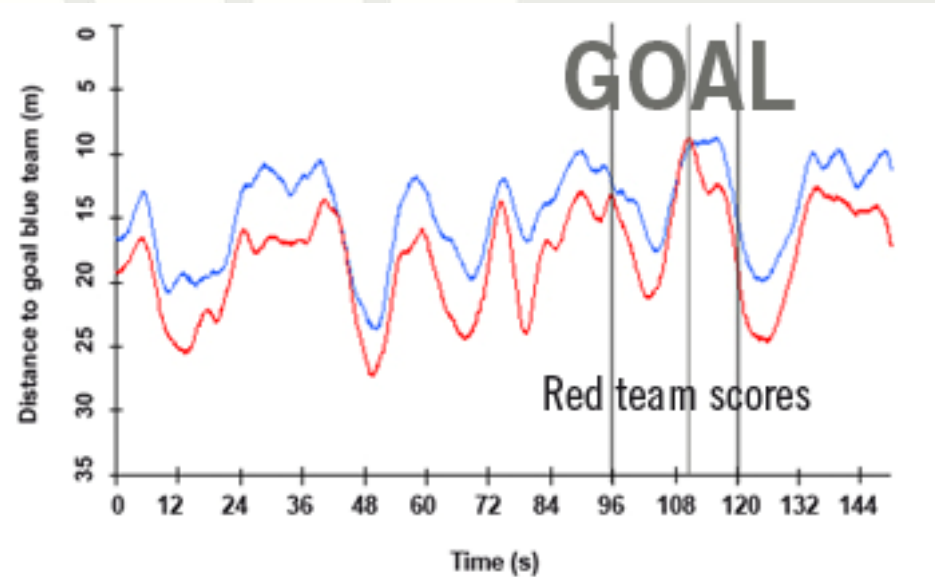
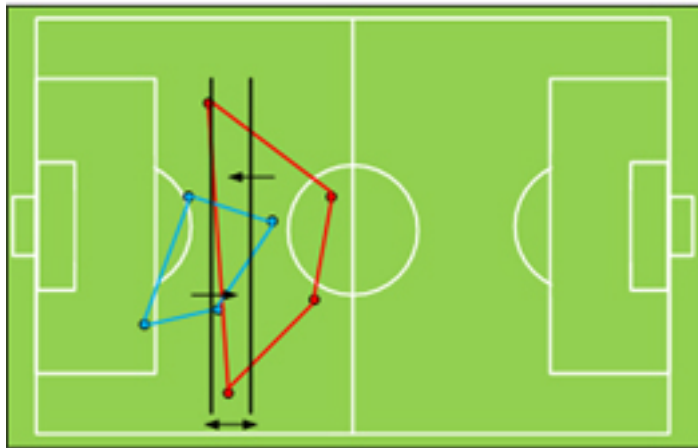
➤ *Practical example: Putting pressure*

- *Powerful weapon to win the ball*
- *Option to prevent the opponent from scoring goal*

How can I train this efficiently?

► *Practical example: Putting pressure*

Variable: team pressure (centre of teams)



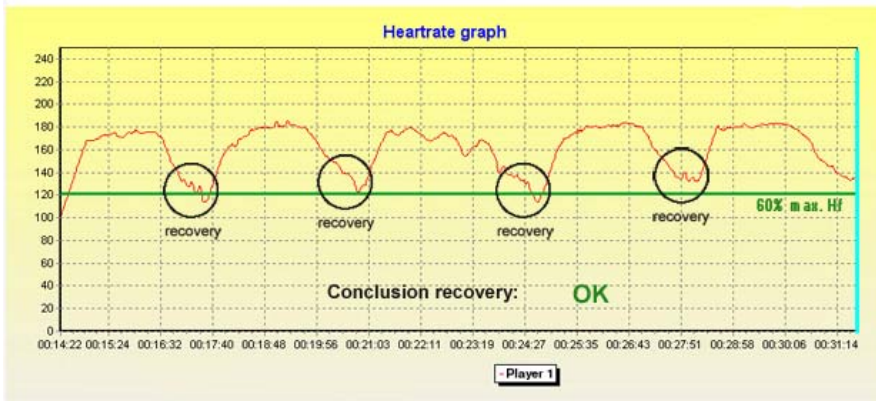
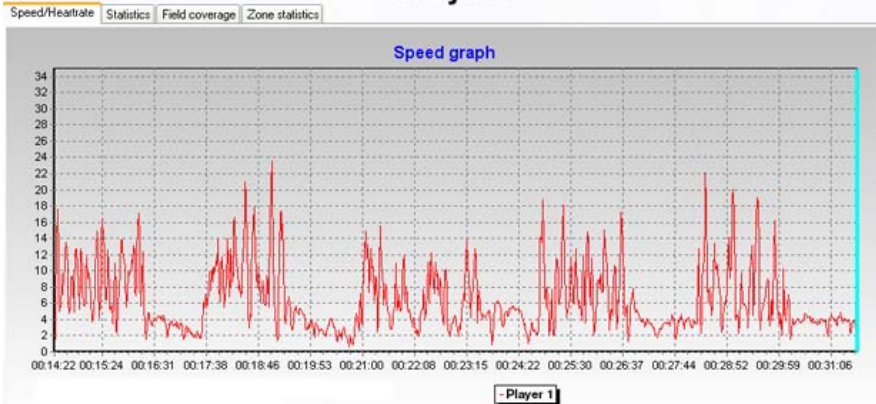
Analysing pressure upon opponent (distance between the attack and defence)

Visualization of tactics of the players/team

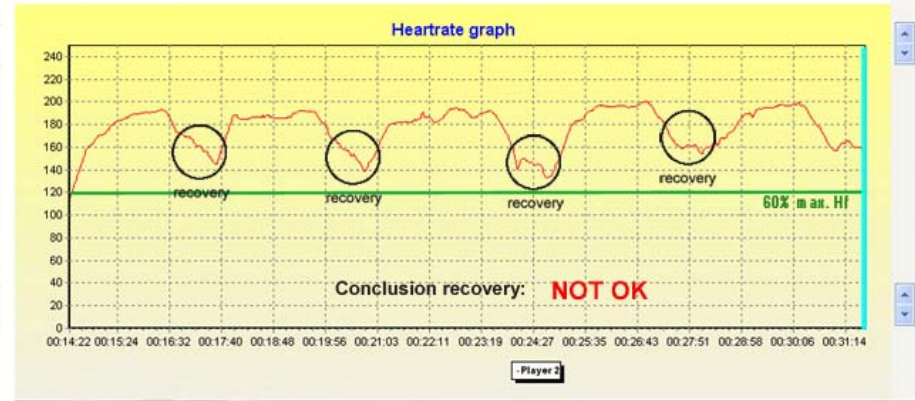
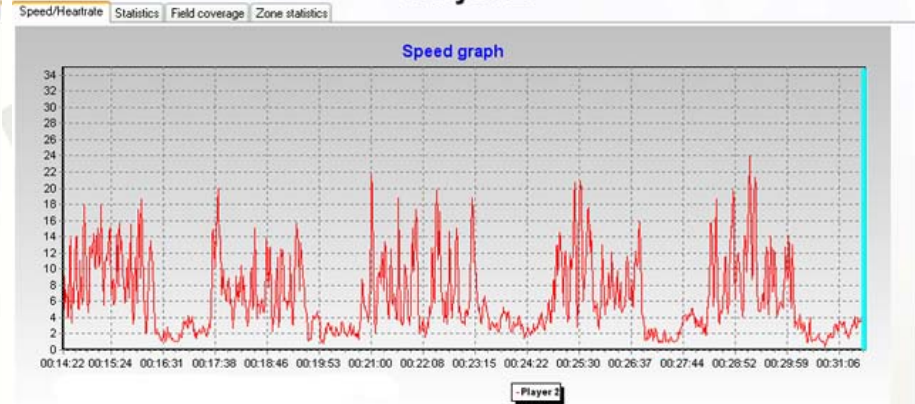
- ***Speeds up the learning effect***
- *Good tool when different languages are spoken*

► Practical example: Recovery

Player 1

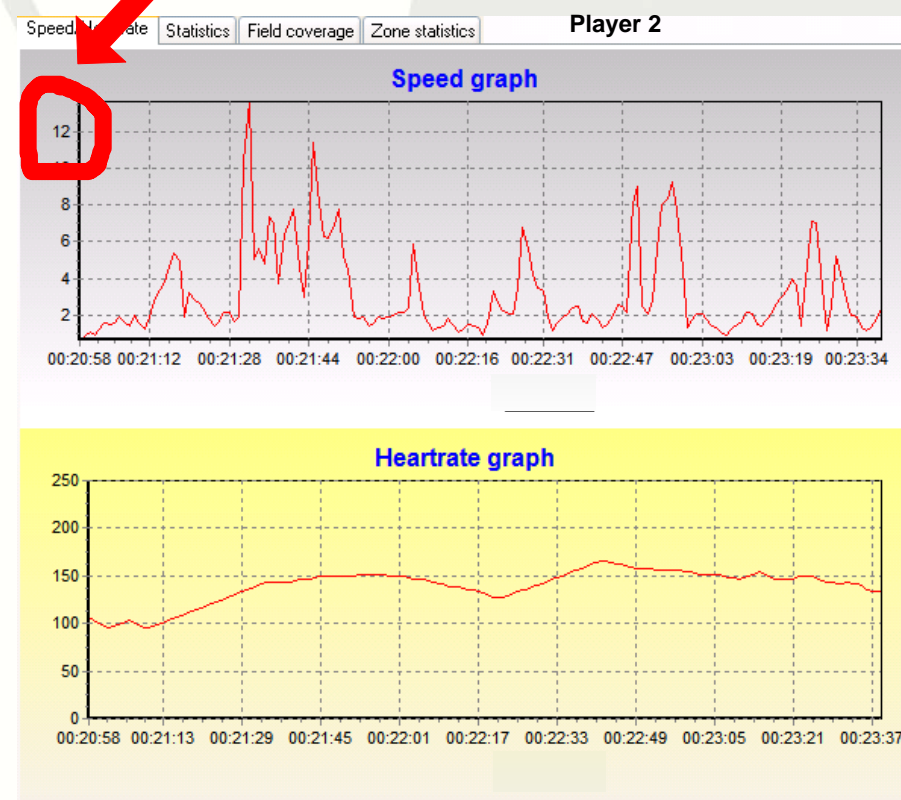
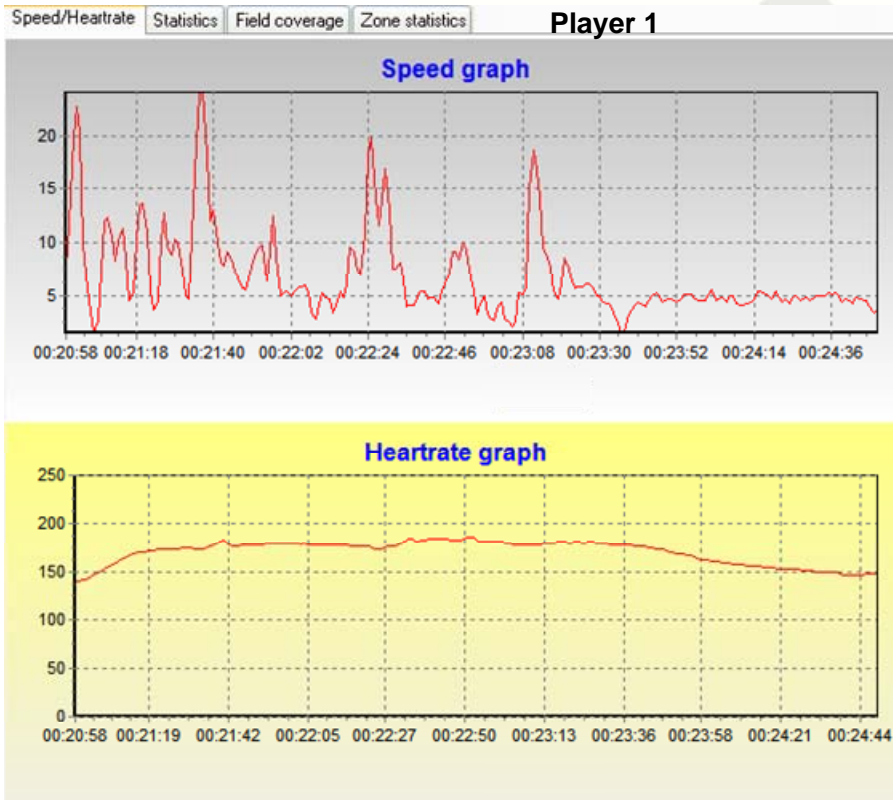


Player 2



► *Practical example: Training load*

- *Movement patterns and HR give more information*
- *Results are used to control the training and adjust the load, if necessary*

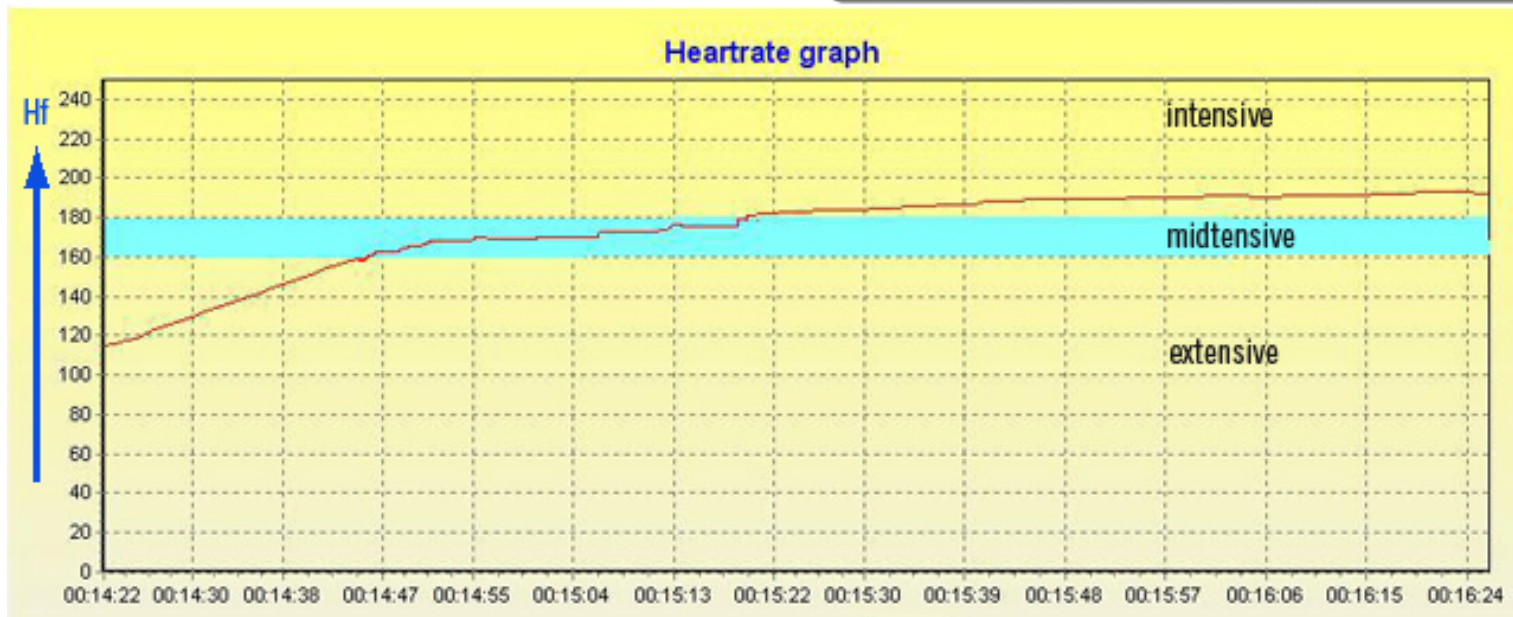


► *Practical example: Training load (2)*

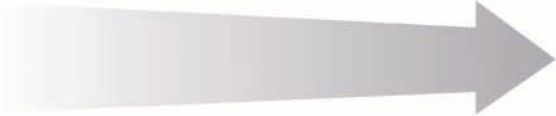





- *Control of (over-/under-)reaching the right load*
- *Immediate feedback easily to understand*

Purpose training: **extensive**

real time info for trainer



► *Key performance: Speed*

F. Ribery		40 km/h	11 m/s
W. Rooney		35 km/h	9,7 m/s
C. Ronaldo		33 km/h	9,1 m/s
Bundesliga		32 km/h	8,8 m/s
Oberliga		30 km/h	8,4 m/s
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Sprinter		44 km/h	12,1 m/s

► *Training at the next level at the PSV youth academy*

- *Very accurate measurement of speed*
- *Testing simultaneously = Time saving*

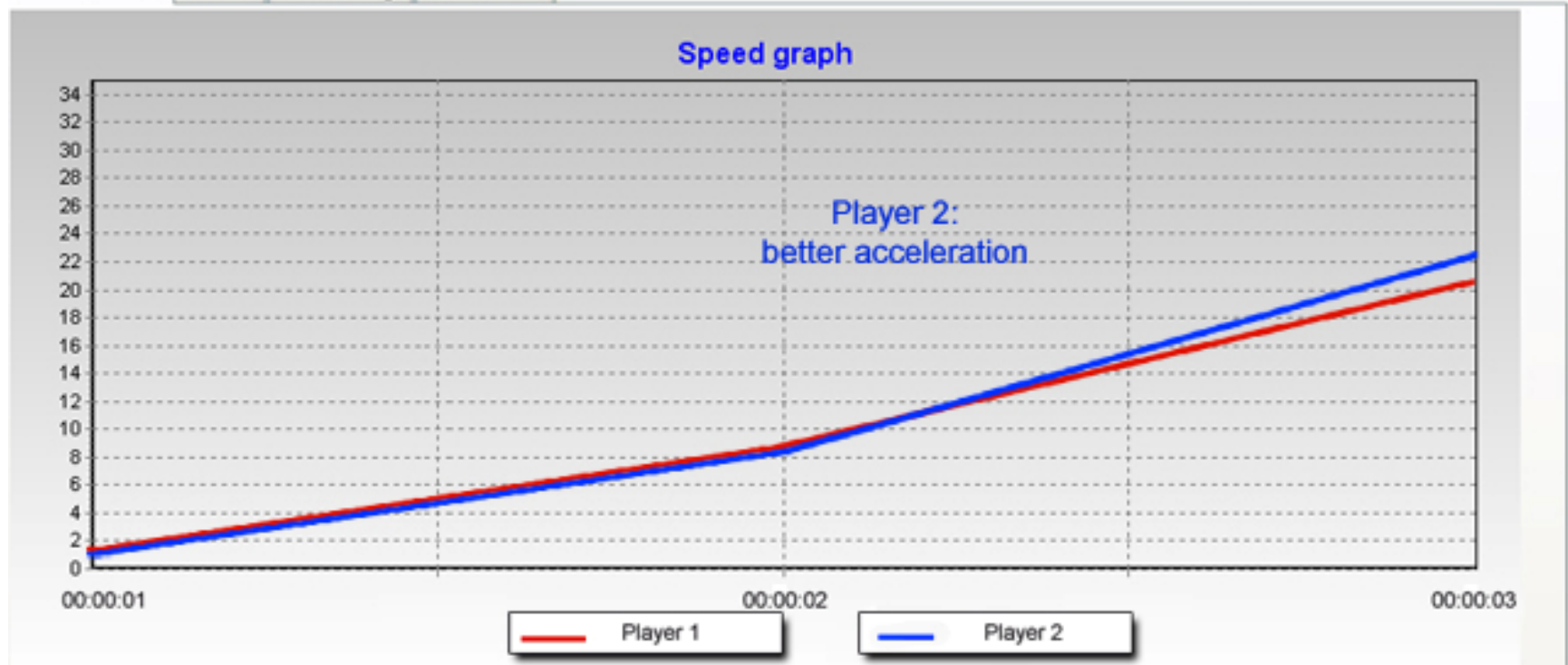
Accurate measuring speed in sprint

Speed/Heartrate

Statistics

Field coverage

Zone statistics



1

The game itself has changed – what about training?

2

Clubs invest 50,000 to 100,000 EUR per season for match analyses – what about training?

3

In modern soccer details have an impact on success – why not working on details?

➤ *LPM Soccer 3D*

“Small groups, permanent performance control and individual training carried out by a team of specialists - not only two coaches for 25 players. This is the future of soccer training.”

Jogi Löw (Headcoach german national team)

Have a nice day

Improve your performance