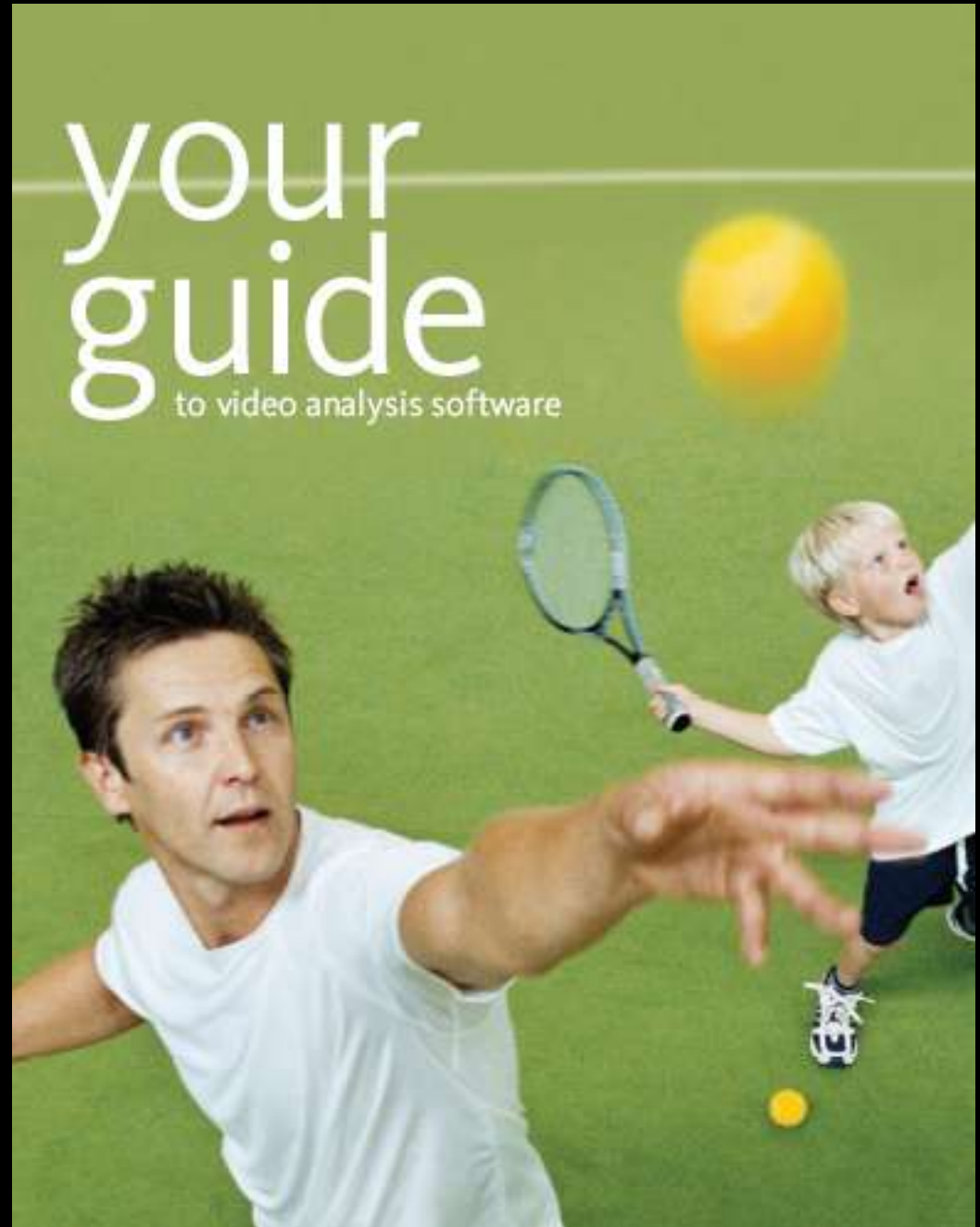


How to use siliconcoach Movement Analysis Software



Introduction

- Who are we
 - Steve Goodlass
 - Ferg d'Ardis
 - Contact details in conference book
- Who here are using SC products?
- Who here has heard of SC?

Overview

- What is video analysis
- Why video analysis
- Getting good video
- Using Pro
- Using Timewarp

Presentation (15 min)

Guided learning

Overview

What is video analysis

- Why video analysis
- Getting good video
- Using Pro
- Using Timewarp

What is Video Analysis

- **Capture fast movements for review**



What is Video Analysis

- **Capture fast movements for review**
- **Key Aspects**
 - Capture video
 - Watch and review
 - Analyse
 - Save, present and share
 - Feedback and learning

What is Video Analysis

- **Capture fast movements for review**

- **Key Aspects**

- Capture video
- Watch and review
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- Save, present and share
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Pro

What is Video Analysis

- **Capture fast movements for review**
- **Key Aspects**
 - Capture video
 - Watch and review
 - Analyse
 - Save, present and share
 - Feedback and learning

TimeWarp

What is Skill Analysis

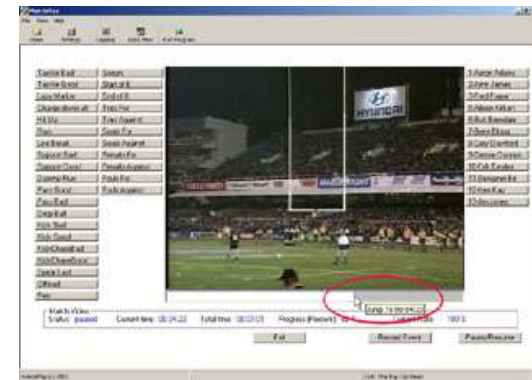
Skill analysis software

- Review one skill at a time in close detail
- Skill acquisition
- Technique assessment



Match analysis software

- How much, how often, statistics
- Tactics
- Tagging, Filtering



What is Skill Analysis

Skill analysis software

- Review one skill at a time in close detail
- Skill acquisition
- Technique assessment



Siliconcoach are providers of SKILL ANALYSIS solutions

What is Skill Analysis

Skill analysis software

- Review one skill at a time in close detail
- Skill acquisition
- Technique assessment



Siliconcoach are providers of SKILL ANALYSIS solutions

Question:

How many here use, or would like to use, Match Analysis software?

Overview

- What is video analysis



Why video analysis

- Getting good video
- Using Pro
- Using Timewarp

Why use Video Analysis in Education

- For the Teachers
 - Makes teaching easier
 - Teaching resources available (see us at our stand and www.siliconcoach.com)

Why use Video Analysis in Education

- For the Teachers
 - Makes teaching easier
 - Teaching resources available (see us at our stand and www.siliconcoach.com)
- For the Students
 - Movement makes it real
 - Improve your own skill level and have fun

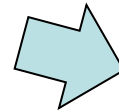
Why use Video Analysis in Education

Teacher must verbalise
what they **THINK** they
saw



Why use Video Analysis in Education

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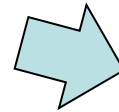


Student must understand the
teachers words as intended

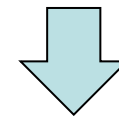


Why use Video Analysis in Education

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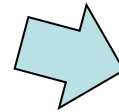
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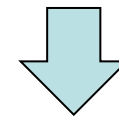
Student must create a
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Why use Video Analysis in Education

Teacher must verbalise
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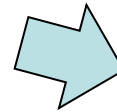
Student must create a
mental image of the
motion based on the
teachers words

Student must compare new mental
image with the one they thought
they did

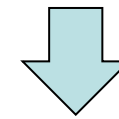
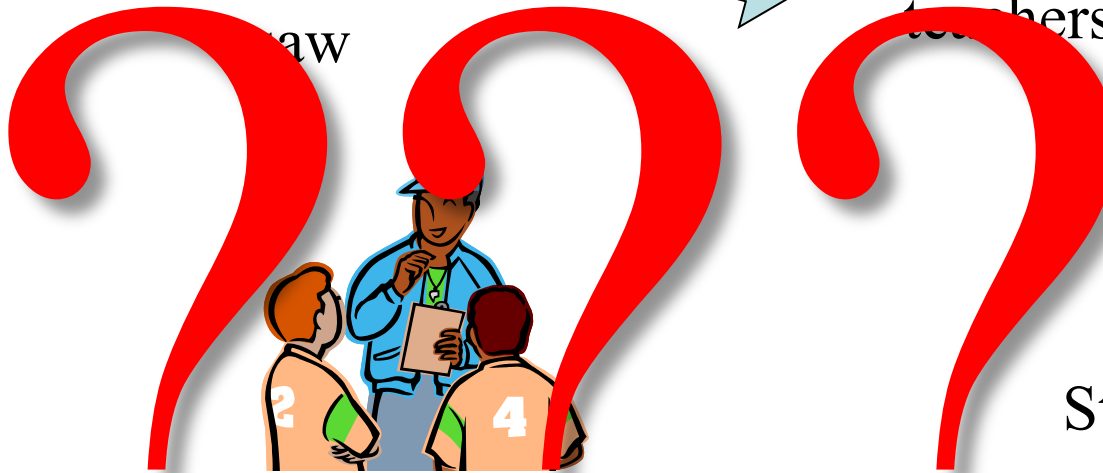


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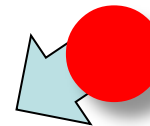


Student must understand the
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Why use Video Analysis in Education

Improve Communication



All look at the siliconcoach screen of what actually happened, talk about it and move on!

Overview

- What is video analysis
- Why video analysis

Getting good video

- Using Pro
- Using Timewarp

Getting Good Video

The setup concepts for a desktop are the same

Microphone plugged in

Output to
CD and email



Firewire cable (laptop or desktop)

Getting Good Video

Cameras

- Mini DV camera with Firewire connection
- All major brand Mini DV camcorders are compatible
- 3CCD camera gives same resolution but better colour, but slightly more expensive
- Other camera options are emerging



Getting Good Video

Shutter Speed and Lighting

- The shutter controls the time the sensor is exposed to the image/light
- If the image is moving at high speeds, a low shutter speed (1/120) will result blurring
- A high shutter speed (1/500 to 1/1000) give a clearer picture
- Ensure you have good lighting if you intend to video at high shutter speeds
- To video indoors with a high speed shutter will generally require additional lighting



Getting Good Video

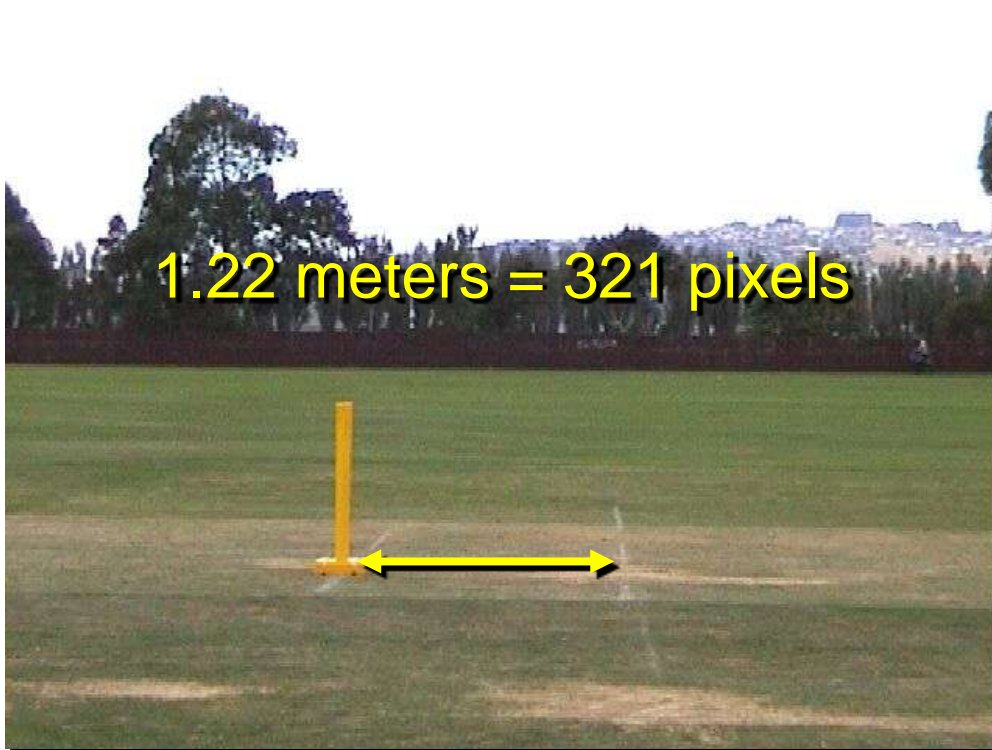
Filming Considerations

- Movement **perpendicular** to the camera
- Use a **tripod**
- Lighting should be from **behind** the camera towards the event.
- Panning introduces **perspective error**.
- Where possible encourage tight fitting clothes to be worn.



Getting Good Video

Setting a scale for measurements



312 pixels = 1220 mm
therefore
1 pixel is 3.91mm

By setting a scale we
can measure 'real-life'
distances off the screen

Overview

- What is video analysis
- Why video analysis
- Getting good video



Using Pro

Pro 7

- Using Timewarp

Conceptual overview of Pro



Conceptual overview of Pro



Capture and Edit Videos

Demo

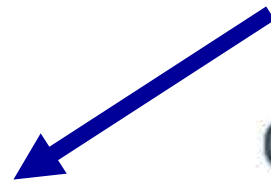
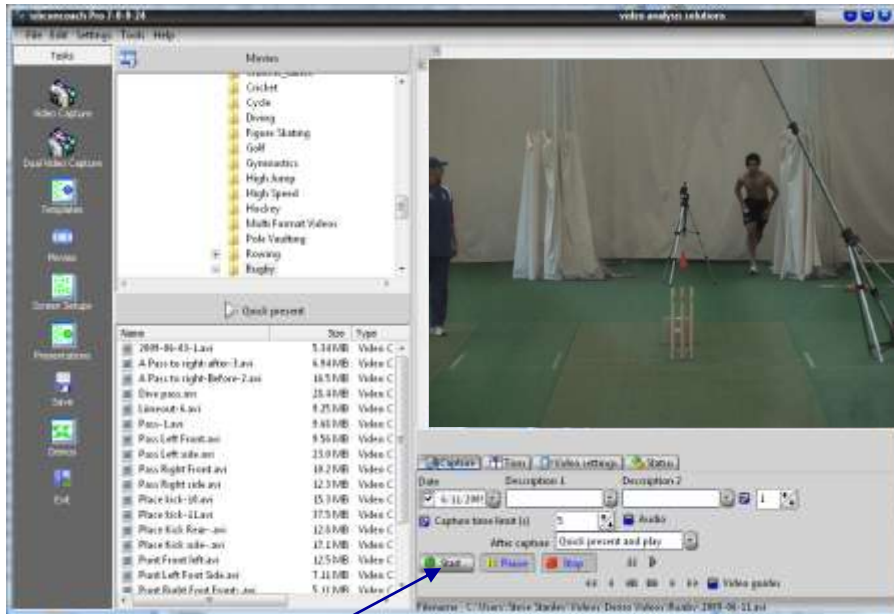
Build a Presentation

Analyse a Presentation

Record/Export a Presentation

Demo

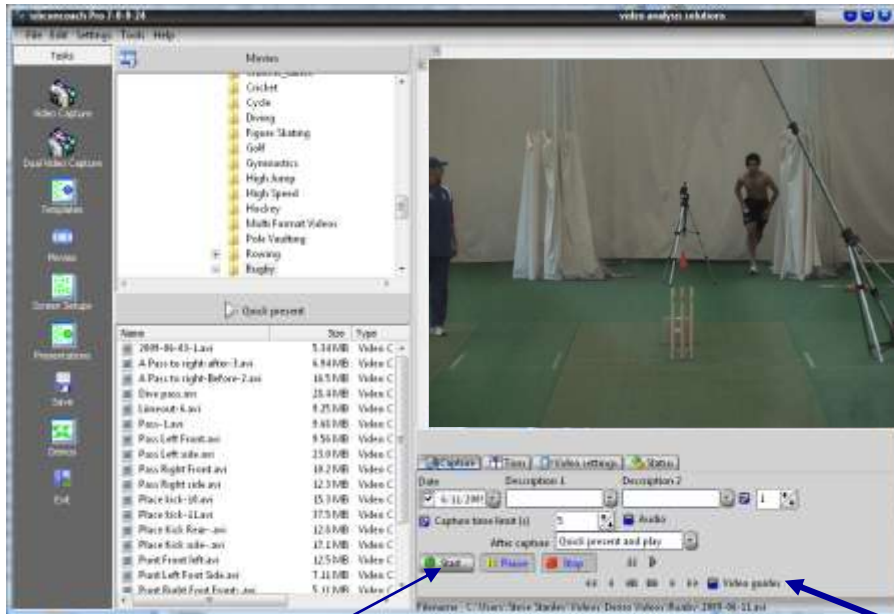
Live Capture



Press this button to
START and STOP
video capture

Demo

Capture from Tape



Video feed coming from the tape

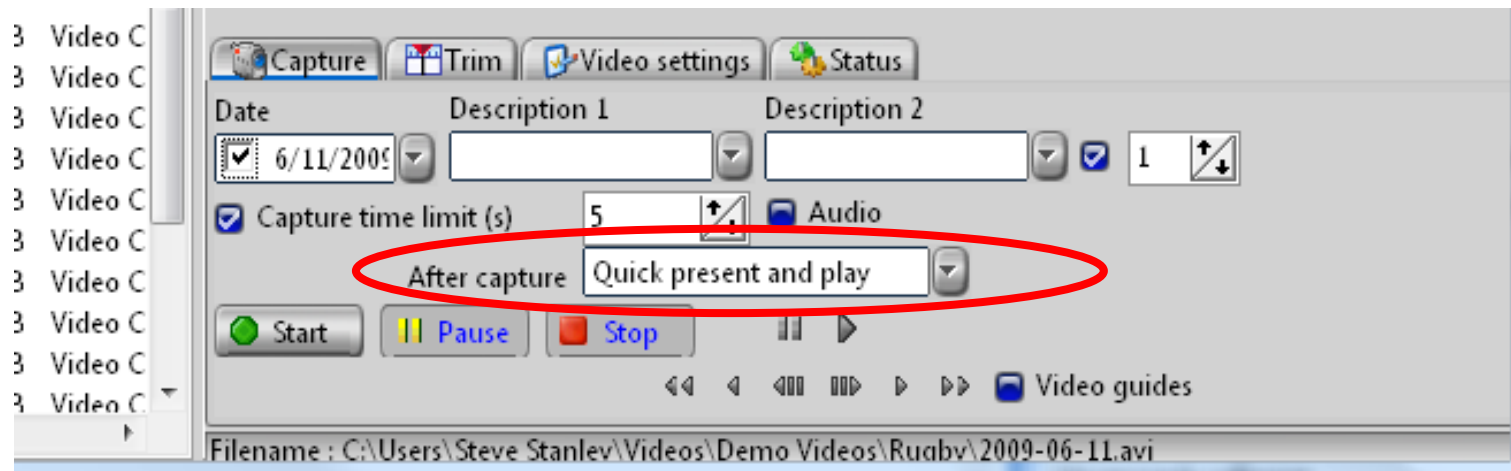
Press this button to START and STOP video capture

Press these buttons to control the camera in VCR mode.

Demo

Quick Present after Capture

- The easiest way to get into the analysis screen quickly is to use the “Quick Present and Play” option.
- When you press STOP Capture you will automatically be taken to the analysis screen.

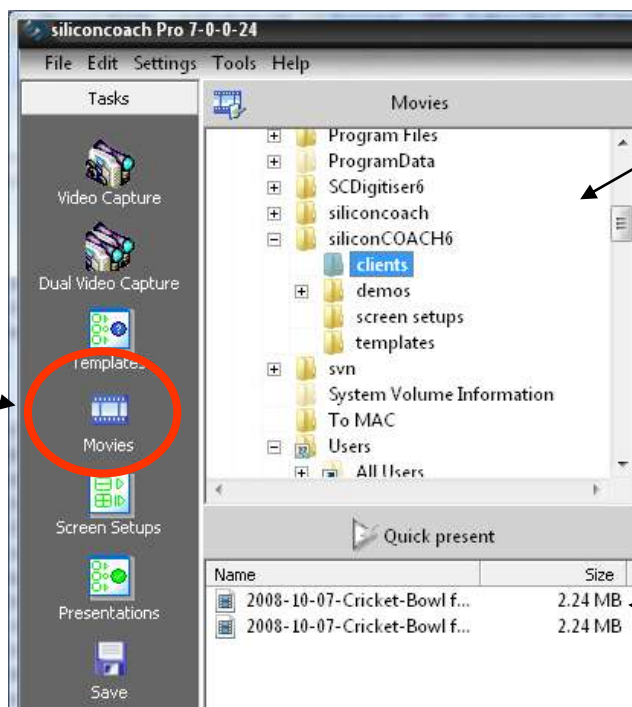


Demo

Where are the movies saved?

- The default folder for saved movies is C:/siliconCOACH6/Clients
- Movie files can be moved to other folders after capture using Windows Explorer.
- To search for movie files always remember to click on the Movies icon first in the task bar.

Click movies icon to search for a movie



Locate the folder where your movies are saved

Movies in folder will be listed here

Conceptual overview of Pro



Instructions

Build one movie on a single screen

1. Open siliconcoach Pro on your computer
2. Press the **Movies** button
3. Navigate to the **Golf** folder
4. Click once on one of the movies
5. Click on the **Quick Present** button
6. Look at the Analyse screen
7. Click on the blue door to exit (lower right)

Instructions

Build two movies on one screen

1. Press the **Screen Setup** button
2. Double click on **Dual Manual Vertical**
3. Press the **Movies** button
4. Navigate to the **Golf** folder
5. Double click on one of the movies
6. Double click on the other movie
7. Click on the **Play** button (top centre)
8. Look at the Analyse screen
9. Click on the **blue door** to exit (lower right)

More information on Build

- You can add more Screen Setups to create a presentation
- You can use Template for even faster Presentation creation (A Template is a presentation without any videos yet).
- You can synchronise videos in the Build area
- You can save a presentation for later review

Conceptual overview of Pro



Instructions

Analyse a dual video screen: Controlling the video

1. Use the dual screen golf presentation you just made
2. Click on the **Play** button (top centre of the Build screen)
3. Press the **green** play button on the Analysis screen and watch the videos in slow motion
4. Press the red stop button
5. Use the 'Slider' to move through the video
6. Use the arrow keys on the keyboard to step through the video frame by frame

Instructions

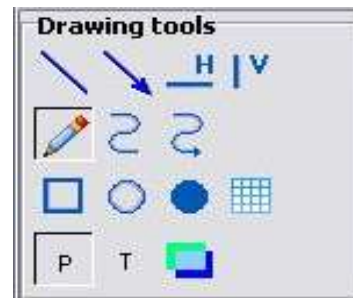
Analyse a dual video screen: Quick Synch

1. Use the 'slider' to move the video so the male golfer has just hit the ball.
2. Turn off the camera button related to that video (i.e. 1 or 2)
3. Use the 'slider' to move the video so the female golfer has just hit the ball.
4. Turn on the camera you just turned off.
5. (There is a permanent synchronisation method in the Build screen)

Instructions

Analyse a dual video screen: Drawing Tools

1. Play with the
 - Drawing tools
 - General tools
2. Make sure you try the screen image tools
3. Ask your tutors for tips here



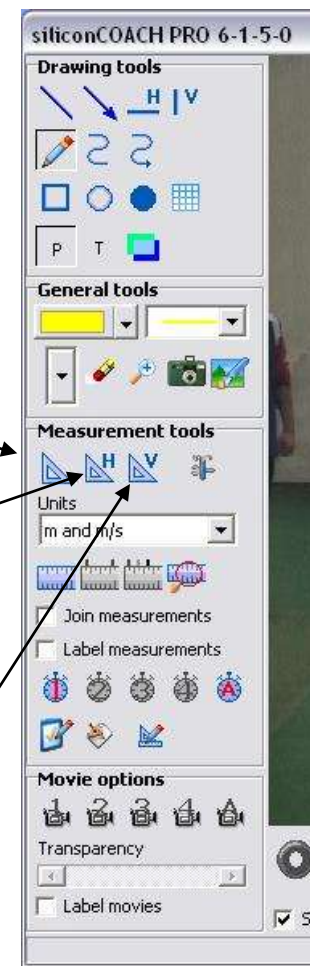
Instructions

Analyse a dual video screen: Measurement tools

Requires 3 clicks to make an angle
Eg knee joint angle

Requires 2 clicks to make an angle
relative to an imaginary horizontal line
Eg forearm angle

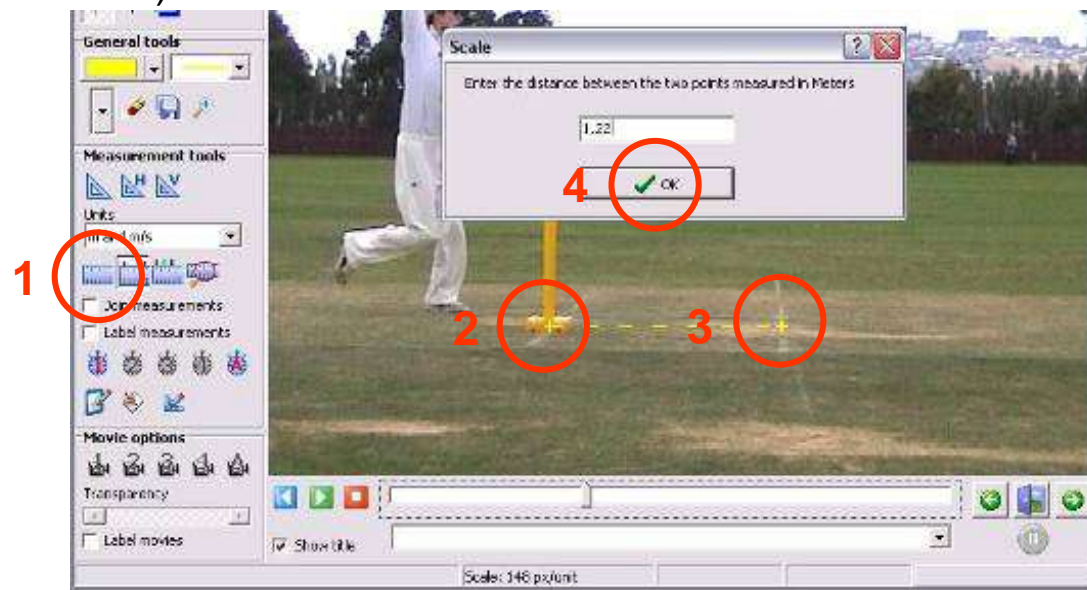
Requires 2 clicks to make an angle
relative to an imaginary
vertical line. Eg back angle



Instructions

Analyse a dual video screen: Measure Distance

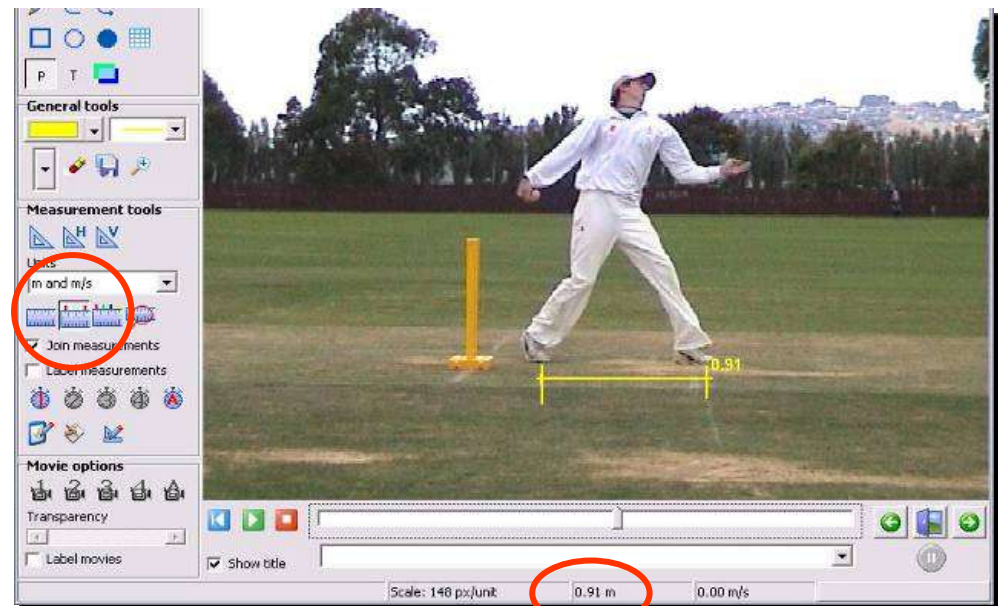
- **FIRST** you must set your scale
 - Click the set scale button
 - Click on two points of known distance apart
 - Enter the real-life distance (in metres) in the box as below



Instructions

Analyse a dual video screen: Measure Distance

- Measure discrete distance (between two points)
- Click on the two points you want to measure (e.g. stance length)
- The result appears on the screen and also along the bottom



Instructions

Analyse a dual video screen: Measure Distance

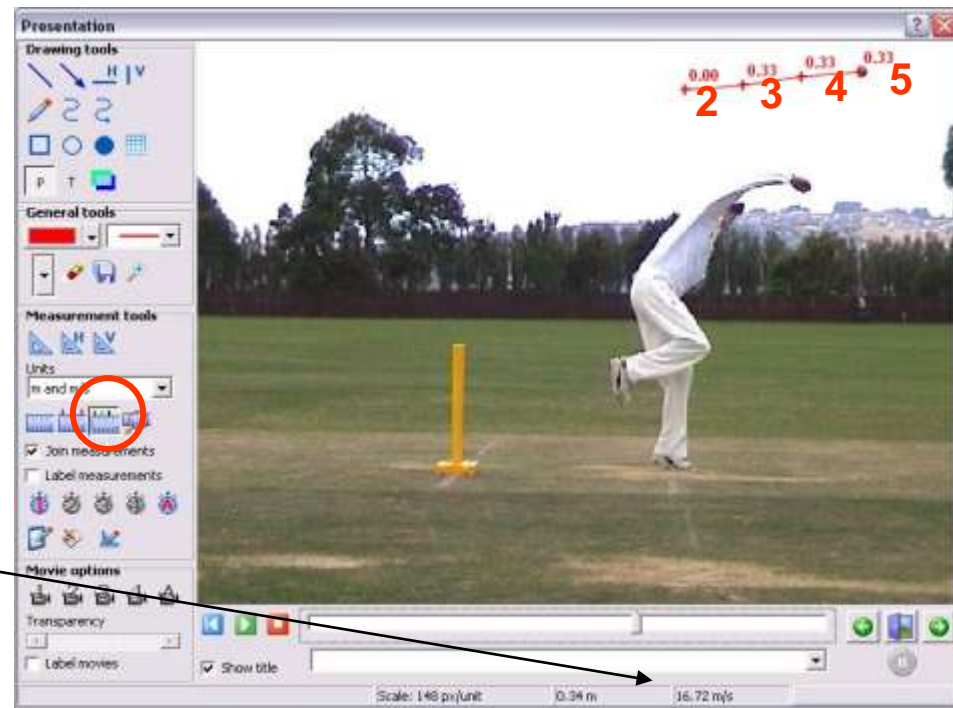
- Measure continuous distance and speed
- Click on the series of points you want to measure (e.g. ball flight) by advancing frame by frame through the video

*Remember to advance through the video to move through time to get speed.
(Speed = distance/time)*

Step 1

Speed

To convert m/sec to kph multiply by 3.6
Eg $16.72 \times 3.6 = 60.2 \text{ kph}$



Conceptual overview of Pro



Record your analysis (video, lines, text and voice)

Demo

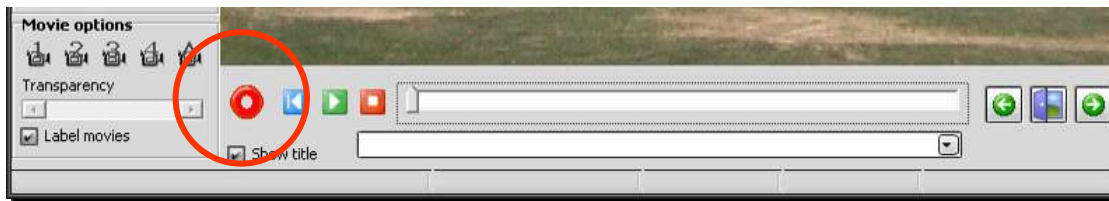
- Save your presentation first
- Go to 'Settings' on the top menu and make sure 'Start recording in paused state' is ticked.
- Click the RECORD FROM SELECTION or RECORD button



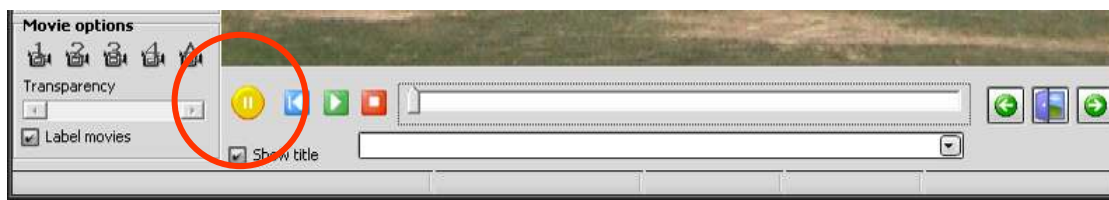
Record your analysis (video, lines, text and voice)

Demo

- When you are ready to start recording press the red button, it will turn yellow and will record your drawings and voice



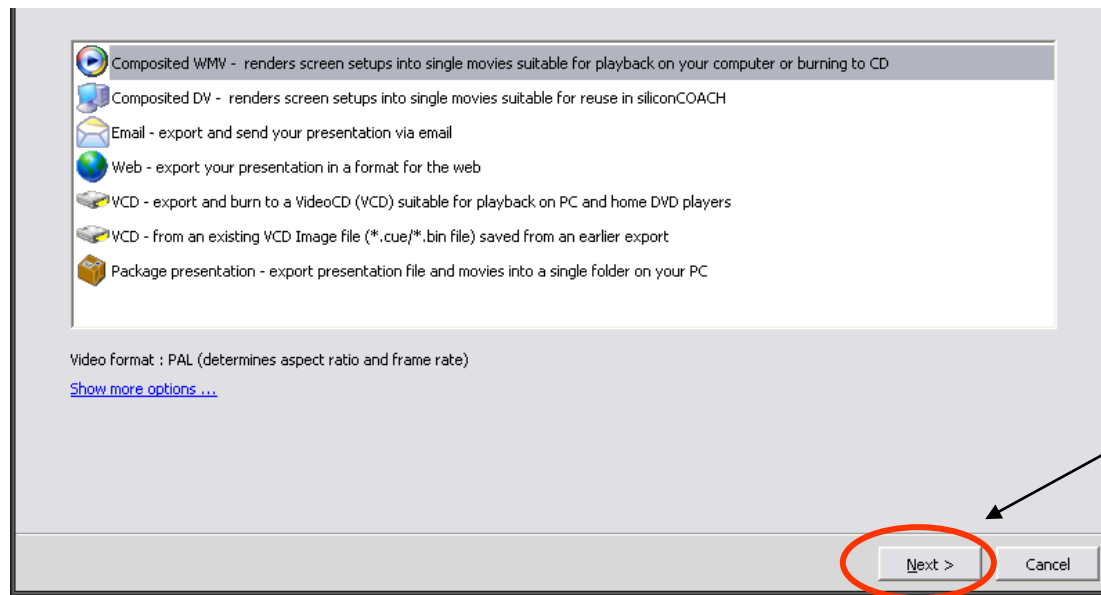
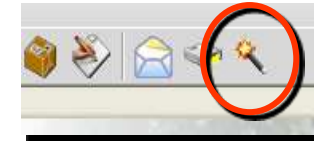
- Work through an analysis as normal, pressing the pause button to think or prepare drawings etc.



Demo

Save your recorded analysis to CD

- Once you have recorded and saved your analysis you can export it in different formats. You do this using the Export Wizard.
- Choose one of the following options.



Work through the rest of the Export Wizard



Example of a screen recording that has been exported (2 min and 3MB)

 **sport**

 **education**

 **clinical**

 **retail**

 **training**

Overview

- What is video analysis
- Why video analysis
- Getting good video
- Using Pro



Using Timewarp

TimeWARP 3

What is Timewarp?

- Automatic action replay system
- Very simple to use, set and forget
- Powerful feedback tool to improving technique

TimeWARP 3



 **sport**

 **education**

 **clinical**

 **retail**

 **training**

Using Timewarp

1. Set the capture duration
2. Set the warp (delay)
3. Press **Start**
4. Do an action, wait and watch, learn
5. Repeat Step 4

Brainstorming TimeWarp?

Time for your input

- Innovative way to use TimeWarp in Sports/coaching
- Innovative way to use TimeWarp in teaching skills
- Innovative way to use TimeWarp in fundamental skill assessment

Server version opportunity

- Provide us with your details and we'll provide access to a server version “pool” for the next 3 months.

Summary

- What is video analysis
- Why video analysis
- Getting good video
- Pro (\$1612 for V7 OR \$689 per year with upgrades)
- Student (a lighter version of Pro. \$387 for V3 OR \$141 per year with upgrades)
- Timewarp (\$420 for ever OR \$168 per year)
- More resources at www.siliconcoach.com
 - Help tutorials, Instructional videos, Contact details