

Sports Analysis Video Demonstration

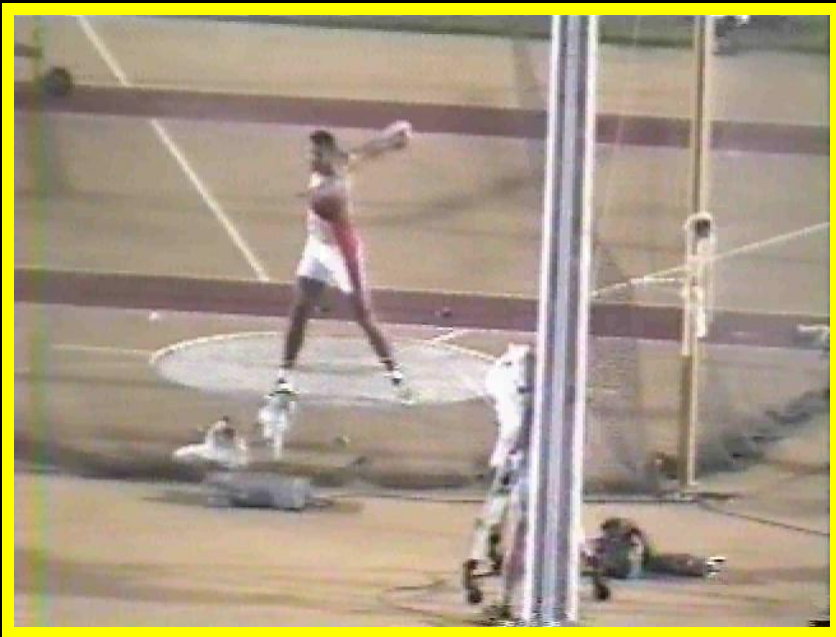
Alfred Finch - Indiana State University

pmfinch@scifac.indstate.edu



Track & Field

Olympic Discus



Hurdling Analysis

The screenshot displays the APASView 1.3 software interface, which is used for motion analysis. The main window is titled "APASView 1.3" and contains a menu bar (File, Window, Help) and a toolbar with various icons. The central area is divided into three main sections:

- Top Left:** A video window showing a person performing a hurdle jump on a field. The video is titled "jesse2.avp".
- Top Right:** An "AVIWindow" showing a skeletal model of the person in the video, with joints represented by colored circles and lines. The time displayed is "Time 0.083 Sec".
- Bottom Left:** A graph window titled "4: jessehurd.3d". It shows a red line graph representing a 3D coordinate over time. The peak of the curve is labeled "140.340" and the start of the curve is labeled "77.075". Below the graph, it reads "DY CG: 84.887 cm Time 0.08".
- Bottom Right:** An "APASViewControl" panel with a table of settings and playback controls.

Frame	Step	Speed	Start	Stop
5	1	10	4	44

The playback controls include buttons for play, stop, and a red circular button. The Windows taskbar at the bottom shows the Start button, open windows for APASView, My Computer, and HyperCam, and a system tray with the time "12:04 AM".

Ergonomics

APASView 1.3

File Window Help

APASViewControl

Frame	Step	Speed	Start	Stop
0	3	10	0	48

Lift47.avp

Time 0.000 Sec

Time 0.000 Sec

The screenshot displays the APASView 1.3 software interface. At the top, there is a menu bar with 'File', 'Window', and 'Help'. Below the menu bar is a toolbar with various icons for file operations and playback. A central 'APASViewControl' window contains a table with columns for 'Frame', 'Step', 'Speed', 'Start', and 'Stop', with values 0, 3, 10, 0, and 48 respectively. Below the table are several control buttons, including a play button. The main area is divided into four quadrants. The top-left quadrant shows a video of a person in a yellow shirt and black shorts performing a lifting task in a laboratory setting with a black backdrop. The top-right quadrant shows a skeletal motion capture overlay of the person's torso and head, with blue lines and dots representing joints and segments. The bottom-left quadrant shows another skeletal motion capture overlay, possibly of the lower body. The bottom-right quadrant shows another video frame of the person lifting the box. The text 'Lift47.avp' is visible in the top right corner, and 'Time 0.000 Sec' is displayed below the top-right and bottom-left quadrants.

Track & Field

High Jump



Baseball

The screenshot displays the APASView 1.3 software interface, which is used for motion analysis. The main window is divided into several sections:

- APASViewControl:** A control panel at the top center with a menu (File, Window, Help) and a toolbar. It includes a "Frame" field set to 5, a "Step" field set to 1, a "Speed" field set to 10, a "Start" field set to 0, and a "Stop" field set to 38. Playback buttons for previous, play, next, stop, and refresh are visible.
- Baseball2.avp:** A window on the right side of the top row.
- 3: Baseball.3d:** A window on the left side of the middle row, containing a 3D skeletal model of a pitcher in mid-throw. A red line graph is overlaid on the left side of this window, with a vertical yellow line at 3875.900. The graph shows a sharp increase in the red line's value as the pitcher's arm moves forward.
- 4: Baseball.3d:** A window on the right side of the middle row, containing a 2D line graph. A vertical yellow line is at 54.531. The graph shows a curve that dips to a minimum of 1.707 before rising sharply. The text "VRBall : 266.100 cm/s Time 0.23" is visible at the bottom left of this window.
- basebacl.avi:** A window at the bottom left showing a video frame of a pitcher on the mound. The text "Time 0.233 Sec" is visible at the bottom of this window.
- basebacl.avi:** A window at the bottom right showing another video frame of the same pitcher from a different angle. The text "VXCG: 3.676 cm/s Time 0.23" is visible at the bottom of this window.

Basketball

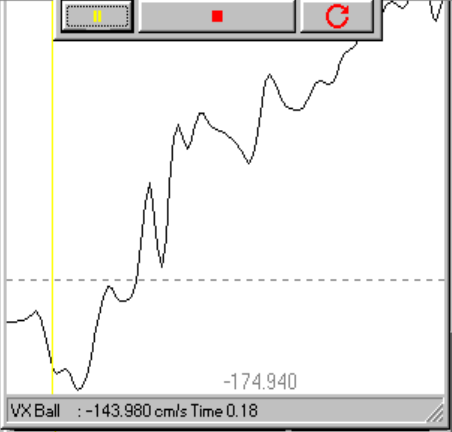

APASView 1.3

File Window Help

APASViewControl

Frame #	Step	Speed	Start	Stop
11	1	10	0	105

FTviewba.avp

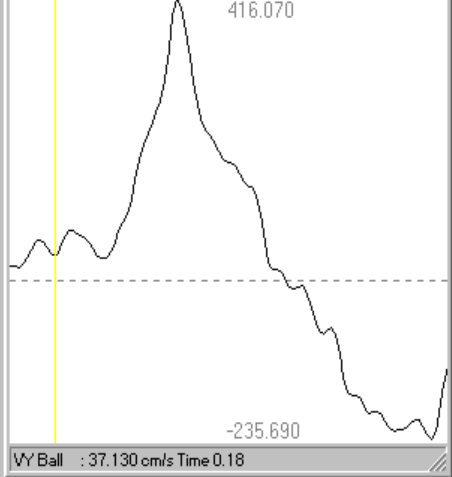



8:49:40 PM

VX Ball : -143.980 cm/s Time 0.18



416.070

-174.940



8:42:31 PM

4: abes20xc.avi



8:49:55 PM

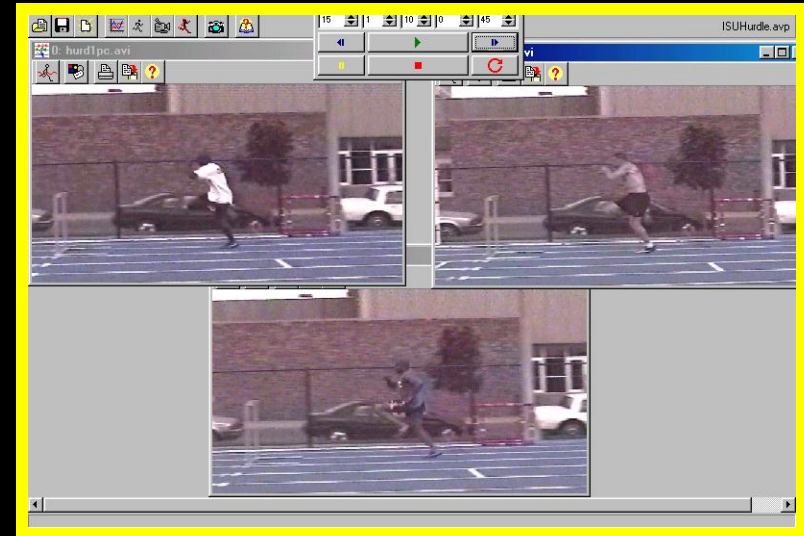
8:42:46 PM

37.130 cm/s Time 0.18

Step forward

ors

Hurdling Analysis *Sport Analysis*



Development Information



Alfred Finch, Ph.D.

Indiana State University

Biomechanics Laboratory

pmfinch@scifac.indstate.edu

(812)-237-3927