



Ariel Dynamics Inc. Media Library - Video

APAS System



Code	adi-vid-01109
Title	APAS System
Subtitle	The Best Motion Analysis System
Description	description of the APAS System
Subject	APAS;Favorite;Performance Analysis
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Ariel Performance Analysis System (APAS)

The Ariel Performance Analysis System (APAS) is a highly advanced computerized system for biomechanical analysis and the study of human motion. Developed by Dr. Gideon Ariel, a former Olympic Committee Chairman, NASA Consultant, and world leader in biomechanical research, APAS has been instrumental in the development of lunar and Mars invasion spacesuits.

Applications

APAS has been used by world-class athletes such as Frank Shorter, Hal Order, Brian Allfield, the U.S. Women's Volleyball Team, and Mack Wilkins. However, its applications extend beyond sports. It can be used by physical therapists, insurance personnel, coaches, and trainers to quantify physical performance and human movement.

Features

APAS uses sophisticated technology to analyze human movement in three dimensions. It can calculate the speed of every joint in the body, providing precise data on the efficiency of movement. It can also simulate different perspectives, such as a top view, even without a camera positioned at that angle.

APAS is not just for athletes. It can be used in medical facilities to analyze patient injuries and recovery. It can break down everyday activities like walking into quantifiable data, aiding in diagnosis and treatment. It can also be used in industrial medicine, taking data directly from a work situation for patient diagnosis.

User-Friendly Design

Despite its advanced technology, APAS is designed to be user-friendly. It is menu-driven and requires no previous knowledge of computers. Tutorials, descriptions, and menus make operation self-explanatory.

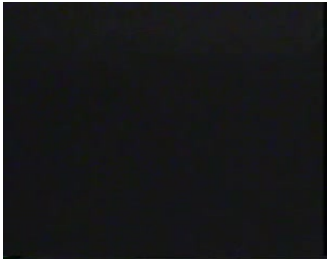




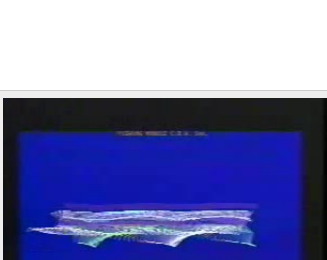
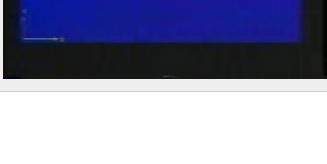
Unique Capabilities



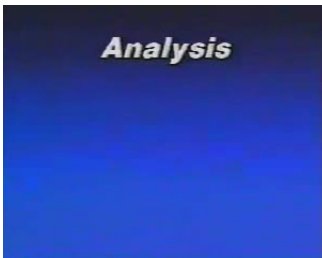
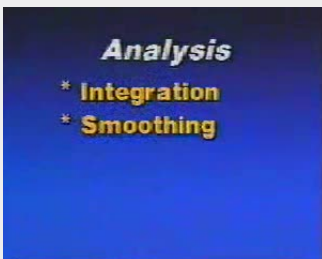
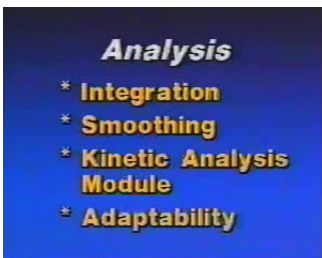
APAS is the only system that can integrate force platforms, EMG, and kinematic analysis in real-time. It provides a library of algorithms for accurate analysis of human movement. It can calculate the force exerted by specific body segments and work with any speed of video camera or high-speed film. It also allows for automatic picture storage and digital conversion of data for closer study.




In conclusion, APAS is not just another motion analysis system, but the most sophisticated system available to study human movement.

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Audio transcription

Frame	#	Time	Spoken text
	0.	00:00:00	<i>The APAS, the Ariel Performance Analysis System, the world's most advanced computerized</i>
	1.	00:00:13	<i>system for biomechanical analysis and the study of human motion.</i>
	2.	00:00:18	<i>The Ariel Performance Analysis System, or APAS, was developed by Dr. Gideon Ariel, founder</i>
	3.	00:00:24	<i>of Ariel Life Systems, former Olympic Committee Chairman, NASA Consultant, and world leader</i>
	4.	00:00:30	<i>in biomechanical research.</i>
	5.	00:00:33	<i>The APAS was instrumental in the development of the lunar and Mars invasion spacesuits,</i>
	6.	00:00:39	<i>and the APAS is the same system that has made Dr. Ariel a consultant to some of the</i>
	7.	00:00:44	<i>best athletes on the planet.</i>
	8.	00:00:46	<i>Among these athletes are Frank Shorter, Gold Medalist in the 1972 Olympics, Hal Order, former Olympian, Brian Allfield, world champion in the shot put, the U.S. Women's Volleyball</i>
	9.	00:00:52	<i>Team, and Mack Wilkins, winner of the Gold Medal in the 1976 Olympics, and world record</i>
	10.	00:00:58	<i>holder in the discus.</i>
	11.	00:01:04	<i>The same system can be used by you to diagnose and rehabilitate your patients.</i>
	12.	00:01:06	<i>We are going to demonstrate here, it's probably the most sophisticated technology was created</i>
	13.	00:01:12	<i>to analyze human movement.</i>
	14.	00:01:20	<i>The question is, why would you need a sophisticated system like this?</i>
	15.	00:01:22	<i>Well, today, in a modern world, whether you are a physical therapist, or whether you are</i>
	16.	00:01:29	<i>an insurance person, whether you are a coach, trainer, any place where we need physical</i>
	17.	00:01:35	<i>performance or human movement, the question is, how you quantify the results.</i>
	18.	00:01:42	<i>What we can do with our system, instead of using two eyes, we are using two commas.</i>
	19.	00:01:49	<i>And from there, we can do what the brain does to the human body and actually calculate the</i>
	20.	00:01:54	<i>third dimension.</i>
	21.	00:02:00	<i>For example, here I have a runner.</i>
	22.	00:02:01	<i>This runner actually was running while the pictures were taken, and he was not even aware</i>
	23.	00:02:04	<i>that the pictures were taken.</i>
	24.	00:02:11	<i>I can do it in a multiple image, so here I have many, many pictures.</i>
	25.	00:02:13	<i>As a coach or a trainer or physical therapist want to look on a person from the top, even</i>
	26.	00:02:18	<i>though he did not have camera on the top, the computer can calculate the view from the</i>
	27.	00:02:23	<i>top so I can go actually to the orient, put the top, and right now I see the same motion</i>
	28.	00:02:29	<i>from the top view.</i>
	29.	00:02:35	<i>With the human body, you have to know precisely if you want to optimize a baseball player</i>
	30.	00:02:36	<i>or a discus tutorial or a runner.</i>
	31.	00:02:41	

Frame	#	Time	Spoken text
	32.	00:02:44	What is the contribution of each segment in the body to the other segments?
	33.	00:02:49	If you don't know precisely the speed, you cannot tell what is the efficiency of the
	34.	00:02:54	movement.
	35.	00:02:55	Our system can derive precisely the speed of every joint in the body.
	36.	00:03:00	So, although it knows the position and the displacement, it also can calculate the velocity.
	37.	00:03:07	The APAS system is not just a tool for the Olympic athlete.
	38.	00:03:11	In your facility, the APAS will provide a clear-cut method for analyzing the injury and recovery
	39.	00:03:17	of your patient in their everyday activities.
	40.	00:03:21	Activities such as walking can be broken down and quantified so that the therapist can quickly
	41.	00:03:26	diagnose and treat the patient with increased success.
	42.	00:03:30	Fields such as industrial medicine will open up to the therapist due to the ability of
	43.	00:03:35	the APAS to take data directly from a work situation and extract the necessary information
	44.	00:03:41	to make all the calculations for the patient's diagnosis.
	45.	00:03:46	The APAS, like the Ariel computerized exercise system, was created to provide the user with
	46.	00:03:52	the maximum amount of technology and an easy-to-use format.
	47.	00:03:57	The APAS is all menu-driven, and no previous knowledge of computers is necessary to watch
	48.	00:04:05	and operate the APAS.
	49.	00:04:07	Tutorials, descriptions, and menus make operation of the APAS self-explanatory.
	50.	00:04:15	Analysis If your work involves measurement, diagnosis,
	51.	00:04:20	or improvement of human performance, you can't afford to operate without the corners the
	52.	00:04:25	competition is cutting.
	53.	00:04:27	Integration The APAS is the only system that can integrate
	54.	00:04:32	force platforms, EMG, and kinematic analysis in real-time.
	55.	00:04:39	Smoothing The APAS is the only system that gives
	56.	00:04:44	the therapist the tools necessary to accurately analyze human movement by making not one algorithm
	57.	00:04:50	available, but a whole library.
	58.	00:04:53	Kinetic analysis module It can actually calculate the force exerted
	59.	00:04:59	by specific body segments.
	60.	00:05:02	Adaptability The APAS can work with any speed of video
	61.	00:05:07	camera, and the APAS can also work with high-speed film.
	62.	00:05:12	Automatic Picture Storage The APAS is the only system that allows
	63.	00:05:18	the user to exploit the full potential of motion analysis by imposing the kinetic data
	64.	00:05:24	over the actual video of the subject.
	65.	00:05:28	Because all data is converted to digital form, the APAS allows the therapist to enlarge
66.	00:05:33	any part of the kinematic figure for closer study.	

Frame	#	Time	Spoken text
	67.	00:05:37	<i>What we try to show here, for example, to the occupational therapist, how to bring a person</i>
	68.	00:05:45	<i>to me and truly back to a maximum performance.</i>
	69.	00:05:49	<i>We try to show to the coach how can he understand the event better and how can he take an athlete</i>
	70.	00:05:56	<i>and perform with a person at his maximum.</i>
	71.	00:05:59	<i>We try to show here that every person is really a gold medalist in his own body, but</i>
	72.	00:06:07	<i>in order to find and quantify it, we need this technology and you have to analyze the</i>
	73.	00:06:13	<i>movement and try to perfect it.</i>
	74.	00:06:15	<i>That's why you need the ecosystem.</i>
	75.	00:06:19	<i>The APAS is not just another motion analysis system, but the most sophisticated system</i>
	76.	00:06:26	<i>available to study human movement.</i>

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