Ariel Dynamics Inc. Media Library - Video

APAS Tutorial 1
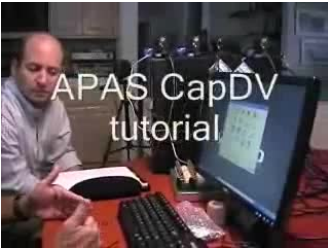
Code	adi-vid-01167
Title	APAS Tutorial 1
Subtitle	CapDV 1
Subject	APAS;Favorite;Help;Performance Analysis;Tutorials
Duration	00:09:01
URL	https://arielweb.com/videos/play/adi-vid-01167
Date	2009-04-03 00:00:00
Label	Approved
Privacy	Public

Synopsis

The video discusses the process of capturing and analyzing video data using multiple cameras. The speaker explains that at least two markers by two cameras on each marker are needed for a 3D display. To avoid missing any points, they use five cameras. The video data is saved on a hard drive and can be trimmed down if necessary. The speaker also mentions the importance of capturing long enough to get the whole event, such as three cycles for a walking gait. The cameras are synchronized using a sound, such as a clap, to ensure accurate analysis. The speaker emphasizes the importance of not dropping any frames during the capture process.

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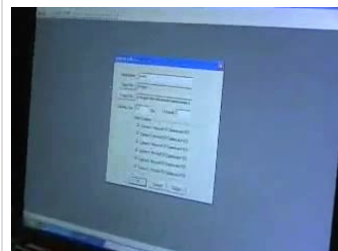Total tokens: 1687

Audio transcription

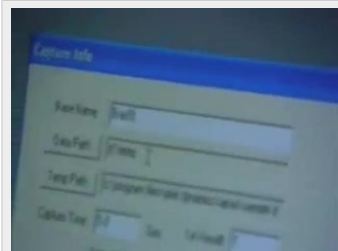| Frame	#	Time	Spoken text
	0.	00:00:00	*60 degrees apart. It cannot be a hundred meters anywhere else*
	1.	00:00:04	*So I see you know you need to overlap of I see what you're saying. Well, yeah, you have to have two perspectives*
	2.	00:00:11	*I'm going to read the*
	3.	00:00:13	*analysis*
	4.	00:00:14	*The problem is that when human but being move*
	5.	00:00:18	*Let's say we do a simple walking gate*
	6.	00:00:20	*There will be times when this foot would be in front of this foot and this*
	7.	00:00:25	*I wouldn't see the mark. Okay, so we need at least two markers by two cameras on each marker for a 3d*
	8.	00:00:33	*display, okay*
	9.	00:00:35	*What we do is we we spread these a little bit more and we'll add a third camera that way if this*
	10.	00:00:42	*Foot covers that point you'll still see it with these*

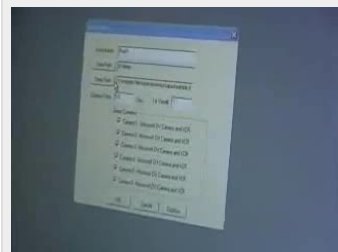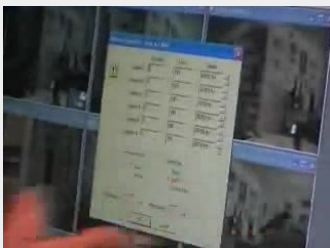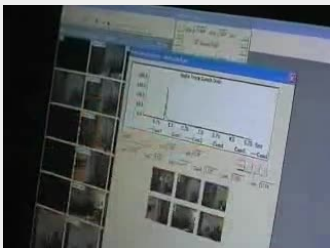| Frame	#	Time	Spoken text
	11.	00:00:45	Now that's a simple straight walking going in one direction. Well, that's not too much more remote
	12.	00:00:51	Okay, when we have a trubilary event
	13.	00:00:55	sent jazz golf
	14.	00:00:57	Where things are going all over the place there would even with three cameras there'd be points that would be this and that
	15.	00:01:03	So that's why we have five cameras
	16.	00:01:06	So that's that's not a basic format of what we do
	17.	00:01:10	So we grab the video and we're gonna describe it first and then we'll go through and we'll start doing some stuff
	18.	00:01:15	Okay, all right. This is a lot of hands-on stuff
	19.	00:01:17	So we grab the video in fact, I'll show you what I just did
	20.	00:01:31	In fact first thing I'll do is I'll show you the five cameras
	21.	00:01:36	We bring up cat TV and this little camera here
	22.	00:01:39	We can also do it a different way, but
	23.	00:01:42	This is a very simplistic you open it up. You set the file name
	24.	00:01:48	I'll call this bread one
	25.	00:01:52	It tells me that I'm putting a temporary path on the defile
	26.	00:01:58	But we can make that in here
	27.	00:02:02	So in this case I'm going to
	28.	00:02:09	Now this data path that's going to a separate memory card, or is that
	29.	00:02:16	This goes into the heart
	30.	00:02:19	That we think of C as hard drive we put the hard drive we split into a C in the D. Okay
	31.	00:02:25	Because we want you to store your stuff on D. You wouldn't want you
	32.	00:02:28	So
	33.	00:02:36	Well, we'll use a temper right now, but we'll create a new file later when we start doing our actual work
	34.	00:02:41	So temp is fine. I just say open this temp
	35.	00:02:45	It tells me that the data
	36.	00:02:47	The temp path is when you collect data it goes into a temporary file and then you have the opportunity to trim it down
	37.	00:02:55	You don't want to trim it then you want to save the whole thing you just say okay
	38.	00:02:58	Go and it puts it back in the temp in the temp file or whatever your name is
	39.	00:03:04	The way you're gonna actually do this okay, so in this case we have a file called bread one
	40.	00:03:11	Next thing is how long do we grab for where?
	41.	00:03:16	We're editing in the in the temp path or do we wait until it doesn't do that?
	42.	00:03:20	Grabs everything grabs everything and then it gives you an opportunity before you actually save it to the data
	43.	00:03:29	You can do that, but you probably want to do that

#	Time	Spoken text
44.	00:03:31	But what it does is gives you an opportunity to trim the file a little bit if you want
45.	00:03:35	The way I'm going to teach you to do it probably
46.	00:03:39	Let's say you're in the field you want to do a golfer out in the golf course
47.	00:03:43	There's gonna be a lot of wasted films you want to do you want to go and trim it down to something magical
48.	00:03:49	Okay, but for most of the stuff you do
49.	00:03:53	Next thing is how long do you want to capture?
50.	00:03:55	Well, you want to capture long enough so that you get the whole event
51.	00:03:59	In the case of a walking gate you're going to do about three cycles
52.	00:04:04	Three strides so probably five six minutes is adequate a
53.	00:04:10	second
54.	00:04:12	For many of the activities where we'll do TV analysis of the body part I do 30 seconds
55.	00:04:18	I can be a really quick vision of variation
56.	00:04:29	So this tells me that I have six cameras on
57.	00:04:34	If I only wanted one camera and I know which camera it is I could eliminate them like that
58.	00:04:39	In this case, I want to show you that the six are actually up and running and
59.	00:04:44	You'll never have to change this
60.	00:04:46	This is this is in case you want nine of yours and you have to have two computers say this one starts with number one
61.	00:04:52	First in number six this computer goes seven and one away
62.	00:04:58	So that's good we'll say okay
63.	00:05:16	It's zoomed
64.	00:05:21	So we have six cameras are live and everything is good
65.	00:05:30	You can unzoom it anything
66.	00:05:33	Yeah, no you didn't it was on a play mode and still on a play mode mode
67.	00:05:41	But now it's okay to stay
68.	00:05:46	Now I'm ready to go I have to do two things
69.	00:05:49	I have to put a calibration cube in the field and save that then I have to do the actual bit the calibration
70.	00:05:54	You really have to say for a half a second. I need one really good frame
71.	00:05:58	So in this case, I'm saving five seconds and I say okay ready and go now. It's capturing
72.	00:06:07	Do that so we know we have something and make a noise the noise is for synchronization
73.	00:06:12	What's too late? I'm going to cancel this and we'll do it again
74.	00:06:16	The sound is a synchronization. Okay

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	75.	00:06:19	If you're hitting a golf ball, that would be the same point for gee what I do is I tell the person
	76.	00:06:24	I'm going to clap as soon as you start don't be startled
	77.	00:06:26	Yeah, they take a step out and start moving the second foot and I go like that right now. I do it like this
	78.	00:06:34	Because I'm standing over here now, but I can see my hands go together as well as here
	79.	00:06:38	Okay, so in case some reason the sound failed again. I would still have this to synchronize on
	80.	00:06:44	Okay, so you should be and I can easily see when the when the cameras are are the same position
	81.	00:06:52	In order to digitize more than one view would have to make sure that the camera views are synchronized, right?
	82.	00:06:57	So in this case I'll start
	83.	00:07:03	Those five seconds
	84.	00:07:06	And the really important thing is to make sure you don't drop anything for some reason a number of five drops
	85.	00:07:24	Because if you happen to have a cycle that drops and God knows what happens in Microsoft anywhere
	86.	00:07:29	Some of the things going on you want to make sure that these are all yours
	87.	00:07:34	So you have this triggered to a stick that no, I said I started the camera collecting with this right the clock was a synchronization
	88.	00:07:42	I'll show you in a second where that comes in
	89.	00:07:45	Now if I say manually sync
	90.	00:07:49	It doesn't do anything if I say auto sync and I say sync over here
	91.	00:07:54	Now listen
	92.	00:07:59	It searches each film it points to the class the loudest marks. Okay, I'll try to adjust
	93.	00:08:24	Okay, so we heard six noises we know that everything's good now. It's gonna give us the whole scale
	94.	00:08:30	Okay sync it shows me where it found the same point to the views and I said sync and now we have this little graph and
	95.	00:08:40	There's you can't see them but there's actually six waters on there. Okay, and by going from camera to camera
	96.	00:08:45	It shows me where the same point is
	97.	00:08:49	And what you've seen a little differences here are half bridge
	98.	00:08:54	Let me back on you statement him if we didn't have the same
	99.	00:08:59	You

Video filename: **adi-vid-01167-apas-tutorial-1-1024kbps.mp4**