

# Kattelle Oral History, Tape 7

August 25, 2003

Andrea McCarty: Okay Alan, we were talking about 16mm. Why don't we continue?

Alan Kattelle: All right. Kodak's introduction of 16mm, as we've just seen, produced some terrific cameras. But it also [chuckles] gave birth to probably dozens of small manufactures who rushed into the market with some of the most primitive cameras. I've chosen this one as an example. This is called the —this was made by The Filmograph Corporation. [Opening camera]

AM: Oh, now I can see it. South Easton Massachusetts, which is a really small town.

AK: I would believe it. [Chuckles]

AM: Because Easton is a small town, and I've never heard of South Easton.

AK: It is absolutely bare-bones.

AM: [Looking at camera.] I see. Show the front so we can see how small the lens is. Wow. What is there to say about that camera? It just looks like a tin box.

AK: Exactly. It was designed apparently for waist-level. I don't know if you can get that. Here's the finder down here, so the operator is looking down into the camera.

AM: Okay. I didn't know that. Wow, so you would—

AK: And that's the lens down [there]. And it's hand-cranked. And that's it. There's nothing sophisticated about it at all.

AM: Nothing much else to it?

AK: It does tell you where to put the film reel.

AM: Well that's nice of them. [Chuckles]

AK: Yeah. [Chuckles] That's perhaps typical. Of course there were other manufacturers who joined the 16mm parade. One of them was Keystone. Keystone was a Boston manufacturer of metal toys, including a metal toy I owned as a child. It was a mechanical digger. But about 1919, Keystone came out—their first product was a very inexpensive projector. Then they went on to make 16mm [equipment]—quite a variety, and some of them were quite sophisticated cameras.

AM: So they were maybe a middle of the line manufacturer?

AK: Middle of the road, exactly.

AM: Were there any other manufacturers that were notable?

AK: Yes. There are companies like Stewart-Warner.

[Tape turned off.]

AM: Okay Alan, what do we have there?

AK: We have here one of the first sound on film cameras for the amateur. This is called the Auricon Ciné-Voice. It's for 16mm film. I believe that it's magnetic, but I wouldn't swear to it. It came out in 1938, I believe. And it required some auxiliary equipment, such as an amplifier, a battery pack, table microphone, and cords. Inside of the cover it has a sound absorbing lining. It would cut down the camera noise. [Opening camera] Here's the interior of the camera itself.

AM: So you said you believe that this is magnetic and that it was produced around 1938?

AK: That's what my recollection is, yes.

AM: Was this one of the first systems available to the amateur?

AK: Certainly. I can't think of—I'm sure there was an earlier one...

AM: But it's one of the first.

AK: One of the first.

AM: And it was developed by a Dr. Firth?

AK: Yes. Along with somebody else, they formed the Berndt-Bach Corporation, in Hollywood, by the way.

AM: So the first sound system available to the amateur was magnetic. Was there also an optical?

AK: Yes. That's what we'll see next.

AM: Okay. I want to note that I didn't have the tape recorder turned on the first time Alan talked about the Bach Auricon Ciné-Voice,

so if you see this on the mini DV [videotape] you'll see it twice. On the tape recording, we get to hear about it just once.

Here's a note for the listeners of the tape recording: Alan also mentioned that the Bach Auricon Ciné-Voice was one of first sound systems available to the amateur.

Okay Alan, what do you have there?

AK: This is the RCA sound camera, which I believe was announced in 1935, but didn't actually reach the market until 1938. It was spring motor driven. 16mm. The recording was on an optical track, and as I understand it, the cameraman was also the man producing the sound. His voice would be picked up by a microphone, and it would modulate a light beam that focused on the edge of the film, thus producing the optical sound track. [Note: Alan is referring to the RCA-Victor 16mm sound-on-film camera. See Kattelle, 231-32]

AM: Okay. So that was fairly sophisticated, and clearly very expensive no doubt.

AK: Probably. I can't tell you the—it had two speeds: 16 and 24 [frames per second]. I believe the 24 [fps] was preferred for sound recording. [Maneuvering camera]

AM: But you could you have recorded at 16 [fps] if you wanted to?

AK: Yes, but I think the quality improves the faster you [record] on the film.

AM: So RCA was a company that was fairly well-known for its sound technology, and so then they decided to get into the camera market.

AK: Right. The amateur camera market.

AM: Did they continue very long in the camera market?

AK: I don't believe so, because this camera very rarely shows up, so I don't believe it reached a very wide market.

[Tape turned off.]

AM: I have a couple of questions about sound on film for the amateur. Was it very expensive for the amateur to do sound on film?

AK: Well yes, because the sound camera was much more expensive than the silent camera. I don't believe the film was any more expensive, but his initial investment was. And then again, he had to have a sound projector, adding to the expense.

AM: And do you think—Were the sound cameras and the sound projectors popular?

AK: I don't believe so. Again, for the simple reason that you don't see a lot of them. And one film critic I remember, or film columnist, had this rather cynical comment to make about sound for the amateur. He said, "Good heavens. Ninety percent

of the amateurs don't know how to take a silent picture. What are they going to do with sound?" [Laughter] Which I thought was kind of cynical, but probably pretty much the truth.

AM: Right. That's a good point. I had another question about 16mm. A lot of the early cameras were spool-loading. When was 16mm offered in cartridge form?

AK: Oh yeah. From the earliest days almost, different manufacturers came out with 16mm in cartridges.

AM: What was the advantage of one over the other?

AK: Simplicity of loading. People seemed to have a lot of trouble making sure that the film was threaded through the aperture and into the take-up spool. It was so much nicer to just be able to drop a cartridge in.

AM: Okay. So there was the spool-loading. There was the cartridge-loading. Is a magazine-loading camera different?

AK: No. That term is—I'm not sure which is correct, magazine or cartridge. There probably is a distinction. I don't know off-hand what it is.

AM: There was one more 16mm manufacturer that we wanted to touch on, and that was Victor.

AK: Yes. Well Alexander Victor, sometimes called the Swedish Magician, born in Sweden, came to this country as a young man, and hooked up with a magician, and for a while was a traveling magician. So, a couple of things happened. In one place, one theater, he was all set to give his act and the theater

manager would not let him cut a hole in the stage, which he needed for one of his tricks. [Chuckles] And subsequent to that, I believe the barn where he was storing his magic equipment burned, and that was the end of his career as a magician.

He started out, I believe, making slide projectors. But he sure caught on to the idea of the coming importance of making home movies, and made a couple of interesting cameras.

Would you get that out? This is Victor's first 16mm camera.

AM: [Looking at the camera] Victor [Animatograph] Corporation.

AK: This camera has an interesting film path. I don't know whether I should say it's a copy, but it's similar to a number of Kodak 16mms, where they had the spools in parallel arrangement.

AM: Did Victor make any other gauge equipment besides 16mm? Was he in on any of the early rush to find a format?

AK: I don't believe that he—He came out with this just as Kodak announced the 16mm system.

AM: This camera has great instructions. Wow, that's great.

AK: And the story goes that one of Victor's first customers was Mr. Willard of the Willard Storage Battery Company, and Mr. Willard says, "Why don't you make an electrically driven camera?" So Victor says, "Okay, I will."

This is his masterpiece. [Retrieving another camera.] The Victor Ultra.

AM: Oh, the Victor Ultra Ciné camera. Now what's the advantage of having the electric motor, or the electric drive?

AK: Well, because you didn't have to stand there and turn the crank.

AM: But with the spring motor drive, you didn't have to turn the crank. Did you?

AK: True, but you had to remember to wind the motor. This is an electrically driven camera. You'll notice that it's longer by two inches than the other camera, and that's the battery compartment back here. [Working with camera.] The film path is the same as in the other one. This camera I was able to purchase from a gentleman whose name escapes me right now, but he was a very important man in lens design. It was very kind of him to let me buy one of his. There are only, I think, three or four of these known to exist. [Note: Alan bought the camera from Edward Kaprelian.]

AM: Well, why are they so rare? Was it not very popular?

AK: It wasn't very successful. The batteries lost power very quickly, they were a nuisance to keep charged, and it just wasn't very successful.

AM: Okay, but clearly that caught on later, the whole idea of having batteries. Did Kodak perfect that? Was that another--?

AK: I think between Kodak and Bell & Howell—

AM: Anything else to say about Victor?

AK: Yes. He went on to have quite a career. He made a slide projector and he made the Victor Animatograph projector.

AM: What's the Victor Animatograph projector? You don't need to show it. Do you just want to talk about it?

AK: Oh dear. I think that's the one that—Or was that a DeVry? No. I'm sorry. I can't—

AM: That's okay.

AK: You can read about Victor in my book. He was an interesting character. He lived to be quite well along, always inventing all the time. That's all I can say about him.

AM: Okay. Let's talk a little bit about one of your projectors.

[Tape turned off]

AM: Alan, we were just talking about Victor, and you were saying something about the Victor Animatograph?

AK: Yes. Victor made an interesting 35mm projector which was designed for portability. Because in that day, the late 1920s, early 1930s, there were traveling motion picture entrepreneurs. That's the 35mm portable projector.

AM: I'll show that when I pan the room.

AK: Okay. He made another interesting projector, and that's the Victor Animatophone, which is just to your left down there. It's a 16mm projector combined with a record player.

AM: I'll get a close up of that one in a little bit. That's very interesting. What year was the Animatophone? Around when would that have come out?

AK: In the late 1920s, early 1930s.

AM: So that was around when the sound on film craze hit the theaters. The amateur could play music along with—

AK: Yeah. But that Animat—Oh, you're talking about which one?

AM: I was talking about the Animatophone.

AK: This was designed for home use. Yeah.

AM: Okay. But it was designed to play music alongside the film, right?

AK: Or maybe there was a film of boxing. I think one of them is championship boxing. So it was a film with the announcer, you know, commenting.

AM: So did Victor release film along with record albums to be played?

AK: Yeah. You got them together.

AM: That's really great.

AK: Rudy Vallee was one of the—You ever hear of Rudy Vallee, the singer? He owned a Victor Animatophone. His picture is in the book.

AM: Selling one? Hawking an Animatophone?

AK: Oh, I don't know what he was playing. Maybe his own records.

AM: Was he used in an advertisement, or do you have just a picture of him with the Animatophone?

AK: I think it was a Victor ad.

AM: And was the Animatophone very popular for home use?

AK: I doubt it. Again, so very few of them show up.

AM: And the Animatograph was marketed to professional exhibitors?

AK: Yeah. And that, again, must have had a fairly limited market.

AM: But that's interesting for a traveling magician to invent that for

the professional exhibitor.

AK: Right. I think there's a picture back there of—

[Tape paused]

AM: Okay, we didn't have any luck finding the picture but we did find a projector.

AK: This is a 16mm Kodascope projector. I was very pleased to acquire it because it's one of the first that Kodak made. The Underwriter's Laboratories—that's the organization that had to give their approval to motion picture machinery in general. Since this was designed for home use, despite the fact that Eastman assured them that it used non-flammable film, they still required that the feed and take-up spools be closed.

[Working with projector.]

AM: When did they stop requiring 16mm projectors to have the enclosed--?

AK: Oh within months, or less.

AM: So that was really one of the very earliest Kodascope projectors?

AK: That's right. Yes.

AM: I noticed that on one of your 16mm projectors has a seal. Or one of your projectors does-- it may not be 16mm. The Underwriter's Laboratories gives every projector a seal?

AK: Right. If it was to be used in a public place, it required acceptance by the Underwriter's Laboratories.

AM: And I also noticed a machine over there where the motor says that it was the same motor used to operate a sewing machine.

[Chuckles] I'll read it to you. It says, "Westinghouse Sewing Machine Motor". I just thought that was interesting.

AK: I think it is too. I'm surprised that Kodak would let them—

AM: It was actually the Pathéscope.

AK: The Pathéscope?

AM: Yes. So they were using sewing machine motors on 16mm projectors.

AK: [Chuckles] Well I suppose the prospective customer might say, "Well if the motor runs out I can always go down and swipe my wife's sewing machine motor." [Chuckles]

AM: I'll show it to you when we're done. It's pretty interesting. Is there anything else you can think of to add about 16mm? That was a brief discussion, but—

AK: No. Except that 16mm hasn't died out yet. It's still used as far as I know.

AM: It seems to be. I think it's dying out a little bit faster now that churches and schools don't use it anymore, with the advent of video.

AK: Right. Yeah. They were big customers for a lot of years.

AM: Because we had spoken already about the brief life of 35mm safety film in the late teens, before 16mm came out. And then the churches and schools started to adopt 16mm. How did 16mm fare after the introduction of 8mm and Super 8?

AK: I think it probably lost a segment of the market. I don't think Super 8 immediately interested the scientist or the medical photographer. They probably liked the bigger image and stayed

with 16mm, but I think the average amateur, of course, was delighted with how much less expensive it was.

AM: And with color it didn't matter because you could have either one in color.

[Tape turned off.]

AM: At this point, on the mini DV [videotape], I'm going to photograph the Victor Animatograph and the Victor Animatophone so that we can see what they look like.

[Tape turned off.]

AM: On the mini DV [video]tape, you just heard Alan give a brief description of the Victor Animatophone. He talked a little bit about how the record and projector were driven by the same drive shaft so they were able to sync up correctly.

[Tape turned off]

AM: Okay, what is that?

AK: This is one of the records that went with the Animatophone. The producer was Gillette—or the sponsor, I think you would call it. *Cavalcade of Sports*. I sort of remember that. This particular record is a fight of Joe Lewis versus Tammy Mauriello. Whoever heard of Tammy Mauriello? [Chuckles]

AM: Well he lives on in infamy now, [Laughter] thanks to the *Cavalcade of Sports*.

AK: And it's dated September 18, 1946. Alright?

AM: Okay. Great. Wait a minute. September 18, 1946? That seems a little late, doesn't it? I would have thought the Animatophone would have been used much earlier than 1946.

AK: I don't know. I'm wondering if this record could have been marketed to other people who didn't own an Animatophone. They were played on any—I can't answer that.

AM: Okay. Alright.

[Tape turned off.]

AM: Okay Alan, I wanted to make a note just to clarify our earlier conversation. The Victor Animatophone was produced between 1930 and 1932. People can make of that what they will.

[Chuckles] Let's talk about—This is my favorite. What is this?

AK: This is the Sound Kodoscope Special.

AM: You want to tell me a little bit of the background behind this?

AK: As much as I know of it. The story goes that the workload at the Hawkeye Factory in Rochester—that's Kodak's Hawkeye plant, where they built the projectors—the workload had slacked off in 1937, and George Eastman was very good about his workforce. He always did the right thing, and he didn't want to lay off people if he could help it. So the story goes, anyway, that he told the manager, "Put your people to work on the best 16mm sound projector that you can possibly make. I don't care what it costs, but make it." And this is the result. And it is a classic, not only in appearance, but in its mechanical sophistication. Want me to try to open it?

AM: Sure. This is the one that's tricky to open, right?

AK: [Opening projector.]

AM: It's very elegant. It's just so elegant.

AK: [Chuckles] Yeah. Now the beauty of this projector was its very unusual film path. Conventionally, a projector that was going to show a thousand foot reel, the reel being that big—

AM: Being how big Alan? About? Can you motion how big? You can just show with your hands if you want.

AK: Shall I get one with the film on it?

AM: No. No, don't bother. This is fine.

AK: Okay. In the conventional projector, with the bottom take-up reel, the projector had to be placed at the edge of the table because the reel would be out here. But Kodak's engineers overcame that requirement by this interesting arrangement for the take-up reel. [Positioning projector] Here it is. You see it can be right on the same table.

AM: And it doesn't interfere with the lamp, with the path of the light.

AK: No. Of course the film path was very interesting. It went down through here--

AM: Do we want to show this to the side so you can see?

AK: And through there, and then onto the spool.

AM: So it made a little curve. Okay.

AK: Yeah. That's one interesting part of the design. The other part is that the gears are all running through oil.

AM: What do you mean by that?

AK: Well, instead of having oil bearings where you drop a little oil, the gears were in a little vat down here. It's got oil in it. It's like the crankcase of a car. This projector was not cheap. The list price in 1937 was 800 dollars, which in 1937 was a lot of money. I have no idea how many of them sold, but they're very, very rare.

AM: The design is gorgeous. It's very art deco.

AK: Yes. Art deco design.

[Tape turned off]

AM: Okay Alan, you had something to add about the Sound Kodascope Special.

AK: Well of course all we saw was the projector itself. Naturally the sound output had to go through an amplifier and a speaker, and that was a package as big as the projector.

AM: Do you have that?

AK: Yes.

AM: Okay. We don't need to show it. [Chuckles]

AK: Good. It's over in the garage. [Chuckles]

AM: Another thing I was going to ask you, we were talking at lunch about why, on a personal level, 16mm is your favorite film gauge.

AK: Oh yes. And I said that I thought perhaps it intrigued me because the 16mm system and I are about the same age. Actually 16mm was more or less introduced in 1918. I was born in 1919. But as I also told you, I missed out—by not being born in 1918, I missed out on getting the Kodak Anniversary

Camera. In 1938, on the fiftieth anniversary of—

AM: Or was it 1918? Was it 1918, not 1938?

AK: No. That was the birth year. And in 1938, on the fiftieth anniversary of *the* Kodak camera, the first Kodak camera, Eastman Kodak gave away five hundred thousand Brownie cameras with a little gold seal on them to any child who was born in 1918. I missed that.

AM: By one year. When you say that more or less 16mm was introduced in 1918, what do you mean?

AK: No. I shouldn't have said introduced. It was almost ready for introduction in 1918.

AM: Right. And what happened in the ensuing five years, do you think?

AK: Between 1918 and 1923? That's a good question. 1918 was when Barnes, as I might have mentioned-- an engineer with Kodak offered an amateur camera which took 35mm but, as in dual 8, it was filmed on one half of the 35mm film then turned over on the other half. But of course that was on nitrate film and so Eastman said no, we won't use that. So Barnes and other engineers continued and, as I say they—We recorded this didn't we, about Tessier?

AM: Yes. Alan, what I was wondering is that you had said how Eastman began work on the 16mm format before World War I. Was it after World War I that they, say about in 1918, that they went back to it seriously and geared up for the production and then [brought it out in] 1923?

AK: Yeah. It was pretty well nailed down by 1918, I suppose. And they—Let's see, the war wasn't over until 1919—I can't tell you anymore absolutely, or why there was that gap of four years. Or five years.

AM: Okay. That's fine.

[Tape turned off.]

AM: Alan, can you tell me about the introduction of 8mm for the amateur market?

AK: Well the thing that sticks in my mind about the introduction of 8mm, which was 1932, was the fact that it came out when there had been—within a few years prior to that, there had been several attempts to save the consumer money, such as the Movette that we talked about, and the Kemco HoMovie system. And there were other amateur gauges, or attempts at amateur gauges, and when 8mm came out, it knocked all those other gauges out of the field totally, except for one. And that was the 9.5mm, which continued to be produced.

AM: Was the attempt to save the consumer money, was this also an attempt to penetrate the market even further and to make amateur moviemaking available and affordable for people without as much income? Was it the depression?

AK: No. I'd say it was absolutely, judging from their ads—from Kodak's ads, they had this invention. It cut the cost of film, and correspondingly it cut the cost of the camera in half, or even more than that. An 8mm camera was so much simpler and smaller to build. I think that the motivating thing was that if we

can sell a camera for five dollars instead of twenty-five dollars, there are going to be ten times as many people buying it. And that's what motivated...

AM: Especially in the 1930s when people did not have as much money, even the more well-to-do people.

AK: Right. And the Kodak ads just played that up. They said, we cut the cost of film so much and cut the cameras so much. And, "Makes movies no more expensive than snapshots," was one of their phrases. They weren't worried about the other competitors at all, I don't think.

AM: Okay. Well let's get out some 8mm cameras and talk about them.

[Tape turned off.]

AM: Okay Alan, we thought of one more thing to add about 16mm.

AK: I have in my hand a Bell & Howell 16mm magazine camera, Model 200. A very handsome looking camera that took a 16mm cartridge, or magazine, whichever you prefer. It had an interesting method of changing lenses. [Working with a B&H Model 200 Auto Load camera.]

AM: Oh wow. That's pretty neat.

AK: Yeah, isn't it? [Words unclear]

AM: Why don't you hold up the side of it so I can zoom in on the logo. Okay I see that. So then what else do you have?

AK: Well, you know, they say imitation is the sincerest form of flattery. Did you ever hear that expression? So let's look at this camera. [Retrieving camera] It bears a striking resemblance to

the one in my right hand. From front to back, [exactly the same]. Now let's look at the label.

AM: Wow. It's Russian isn't it?

AK: In Russian, yes.

AM: Can you tilt that up a little bit? And you can see the Cyrillic writing on it. Okay.

AK: As far as I can see, every last screw, everything is identical.

AM: That's funny.

[Tape paused.]

AM: We're going to go back and talk about 8mm again, which is where we were before we took the detour with the Russian camera. So what do you have there?

AK: I have Eastman Kodak's first 8mm camera. It's called a Ciné-Kodak 8 Model 20. And it was introduced in 1932. I wish I could tell you the price off-hand, but believe me, it was less than half the cost of a 16mm camera. It's a very slim, easy to handle design. The finder is through the handle, and of course it's spring-motor driven. [Note: The list price was \$29.50. See Kattelle, 350.]

AM: So you didn't have to crank. There was only one speed on that, right?

AK: That's correct. There was an adjustment on the aperture from F35 to F16.

AM: When did they start offering two speeds?

AK: I can't tell you off-hand.

AM: Okay. Were 8mm cameras ever offered with interchangeable lenses the way the 16mm were?

AK: Oh yeah. Eventually they were.

AM: Do you want to pick up the next Kodak [camera]?

AK: Sure. I might mention that this was my own first movie camera that I found in a thrift shop, with a projector. I still have some of the early films I shot of our children.

AM: Did you switch to Super 8 later on?

AK: I sure did, yeah. This next one is an 8mm camera that Bell & Howell made, called a Filmo 141A. I like it for its art deco design.

AM: Yeah, that's a nice one.

AK: Isn't that pretty. Carried over the design onto the handle. It took a magazine.

AM: Most 8mm film that I've seen was magazine-loaded. Was it ever spool-loaded, the 8mm film? Did you ever have spool-loading with 8mm?

AK: Oh yeah. They had spool-loading.

[End of Tape 7, Side 1]

AM: Okay Alan, what do you have there?

AK: I have a Bell & Howell Filmo 121 8mm camera. You'll notice that it has a nice, slim design. And part of that design, enabling it to be slim like that, is the kind of shutter that it has.

Frequently, the shutter in a small camera is a circular device.

This particular camera has what is called a “barn door shutter.” It’s these two blades here, and watch when I turn the camera on. [Camera turned on.]

AM: They’re going back and forth, aren’t they? Do that one more time.

AK: Yeah. Or single frame—

AM: Right. That gives a better sense of the motion. Can you turn the camera around so that I can see the label? Okay. Great. So why was that an important advance?

AK: Well, because it took up less space in the camera body. It enabled them to have this narrow design.

[Tape turned off.]

AM: What do we have there, Alan?

AK: Kodak’s Electric 8 Automatic Camera, they called it.

AM: And why was that a significant camera?

AK: Well, it was Kodak’s first battery-operated camera. Not only battery-operated, but it’s operated with a battery pack rather than four individual batteries.

AM: So was there any advantage to having a battery pack?

AK: Yeah. There was, to the extent that it was quicker to load a battery pack than to load—you know when you load four batteries, you have to make sure you get the polarity correct, and that they don’t pop out.

AM: Could you buy the battery packs from Kodak?

AK: I would guess so. I can’t say for sure.

[End of Tape 7]