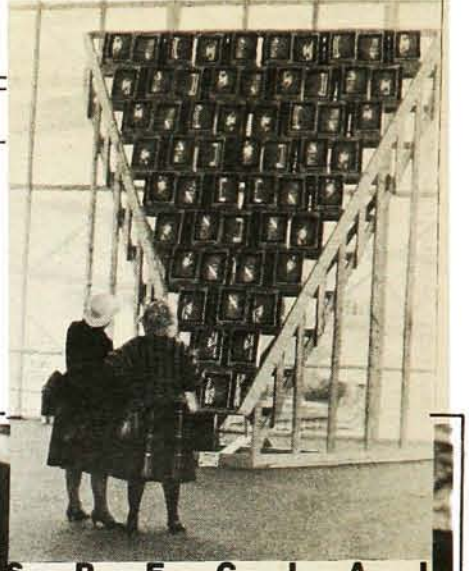

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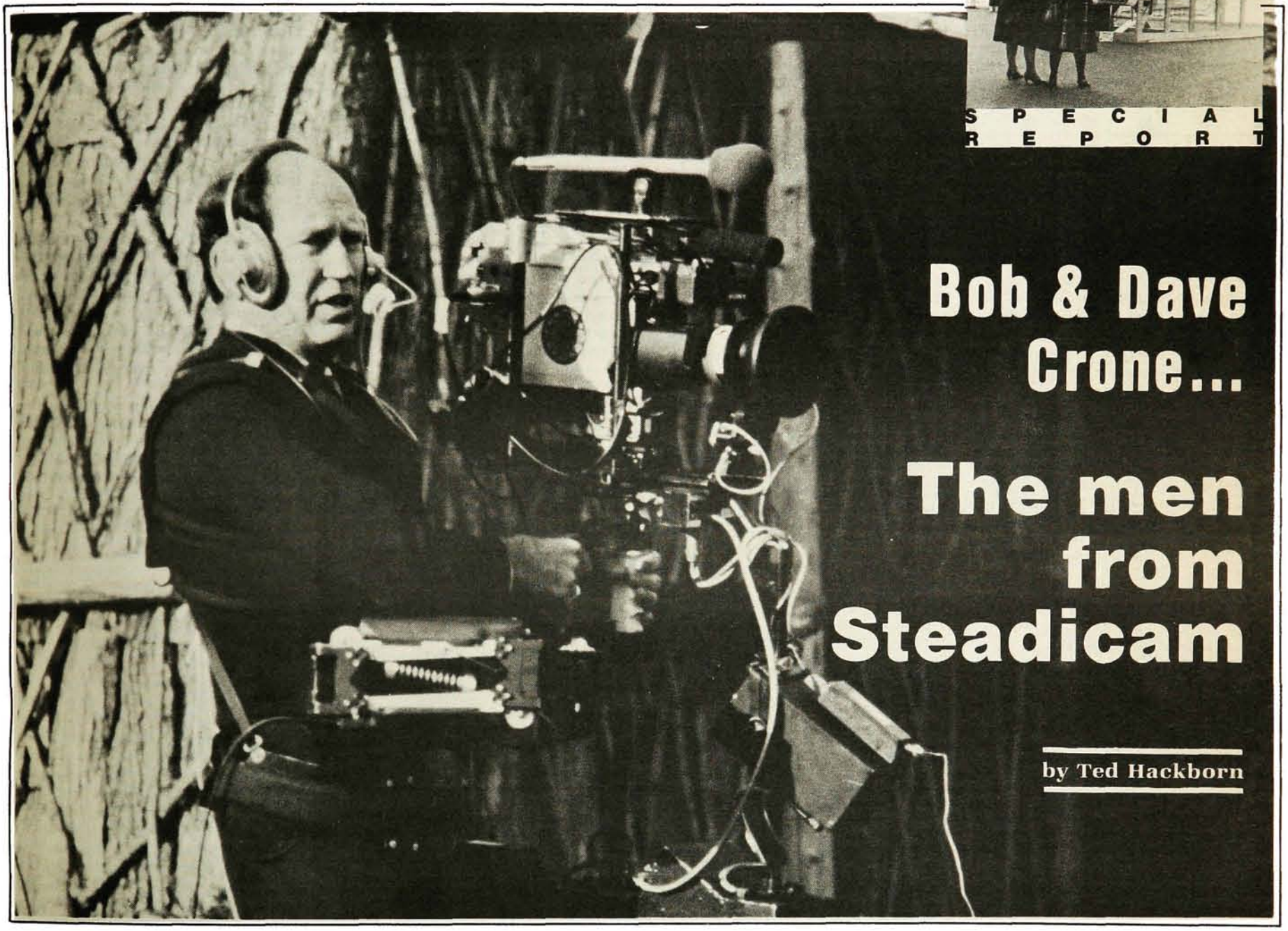


Bob & Dave Crone...

The men from Steadicam

by Ted Hackborn

Steadicam is a film/video camera stabilizing system that has now become a standard item in the filmmaker's list of production tools.

Since it was first introduced in the mid 1970's, Steadicam has changed film and video production techniques all over the world. It allows the camera to move more freely – arcing, doubling back, booming, panning, and tilting simultaneously in a way that would drive a dolly grip insane. Hollywood cameraman Garrett Brown and Ed DiGiulio of Cinema Products Corporation shared an Oscar in 1978 for the invention and development of the Steadicam. The very first film that used the Steadicam was Bound for Glory, *for which it received the technical Oscar.*

Bod Crone and his son, Dave, are considered to be Canada's top Steadicam operators, with 83 documentaries, 14 features, and 55 TV commercials behind them. Bob and Dave have over seven years of experience with the Steadicam, having both trained with Garrett Brown.

On a shoot, the Crones go out with the Steadicam unit and do the actual filming when the shot requires the system. The 55-75 lb. Steadicam unit itself dissassembles into a vest/arm breakdown. A spring-loaded arm totally articulating in the centre carries the weight of the camera placed on it. The tension in the spring can be adjusted to suit the camera weight. The arm is attached to the harness worn by the operator. In operating the Steadicam the idea is to hold the apparatus steady while moving. Originally designed to deal with a problem-shot in a film, the Steadicam is now in full production use all over the world, and is having a dramatic impact on television. The CBC's Papal coverage in September, for example, was largely made possible by Bob Crone and his Steadicam.

The following interview took place with Bob Crone in Toronto.

Ted Hackborn is a cameraman, assistant cameraman in Toronto and is an associate member of the Canadian Society of Cinematographers.

Cinema Canada: *As a cameraman, what got you interested in Steadicam? What do you enjoy most about it and why?*

Bob Crone: In the type of work I used to do, such as TV documentaries, I was limited to tripod or hand-held camera. Travelling all over the world to such places as Vietnam, Laos, Cambodia, or Little Rock, Arkansas, the idea of hauling dolly tracks was impossible. My first thought on seeing Steadicam was : now, here's a tool that will allow me to move like never before !

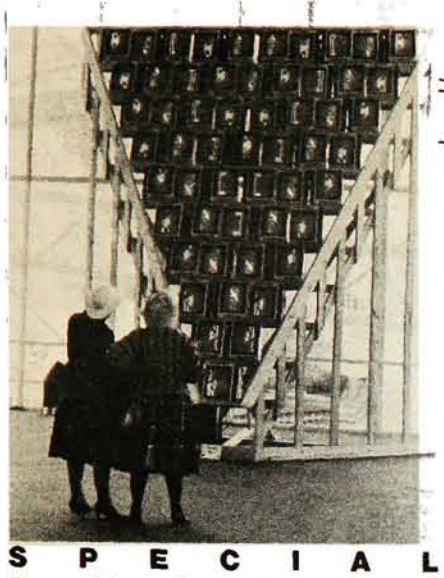
The biggest sense of pleasure when using the Steadicam comes from doing a very convoluted move that cannot be achieved any other way, and doing it well. The reward is seeing the results in the screening room and watching every aspect of the shot, the framing, the motivation, the pace, all come together from beginning to end. It's a real 'high' to see an exceptionally well-executed shot done with Steadicam.

The best reason to use it, I would say, is because it looks at a scene more in the way a human being would. A human doesn't walk in a straight line like dolly tracks. There are options to shift weight from one foot to another as you see the scene. Steadicam puts the camera in the best possible position to view what's happening.

Cinema Canada: *Was it a specific film or TV commercial you saw that first attracted you to the Steadicam?*

Bob Crone: My first contact with the Steadicam was out at the Cinema Products factory in Los Angeles, California, over eight years ago: I was having modifications done to one of my other CP-16R cameras. While I was there, I met Garrett Brown, who invented the Steadicam, and Ed DiGiulio, the president of Cinema Products Corporation. They introduced me to the system in the development stages and asked me what I thought of it. I got quite entranced with the possibilities of this device in as much as it giving a whole new dimension to moving pictures. No longer would camera-moves be encumbered with all that heavy steel, dolly, and tracks.

Part of what you give up when you have tracks, dolly, and crane – in addition to the physical restrictions that the tracks



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place on you – is the ability to respond to the necessities of the scene at the moment they're happening. You can push the dolly down to a set-mark following actors, but if you arrive one second too soon or two seconds too late, it's just not quite right. Or, if you push the dolly down to the mark and you're on time, because of the way the actors have placed their weight on their left foot or right foot, you want to be 5-6 inches over from where you are and there is nothing you can do about it!

I find the other systems too rigid, inconvenient, and insensitive to the way the scene should be seen – and that's the fascinating freedom that comes with a really thoughtfully operated Steadicam. It isn't just a way to jog and be bumpy – any machine could do that. But it's a way to compose your picture on the move and have that freedom to be bang on, time after time, and no other tool will do that for you.

Cinema Canada: *Could you give us a brief background of yourself? Your other interests in filmmaking?*
Bob Crone: My filmmaking experience began when I came out of business college: I attended the Television Workshop of New York, graduating with what they call their Gold Camera Award, which was the highest award for achievement among the students that year. Then I worked in Virginia as an operations manager in a TV station before returning to Canada. It was here, in Canada, that I quickly discovered the most fascinating and enjoyable way to work was to freelance. So in 1957 I formed my oen little corporation and began shooting virtually anything I could get my hands on, a lot of which was news, sports, and documentaries for the CBC.

I found that I developed a deep interest in doing the serious documentaries that were used on programs like This Hour Has 7 Days, which was a forerunner of the very popular W5 and the fifth estate, all of which I've worked for.

There were a lot of needs that just couldn't be filled in Canada. We didn't have a professional sound mixing house that could roll sound-tracks backwards and forwards in sync with the picture. There wasn't a laboratory for 35mm Eastman colour negative. As an outgrowth of my own needs, I started building Film House, and operated that from 1963 to 1973.

My Film House experience was marvelous: learning about organization, building a team and running a company. To give you a bit more, as a youngster, I took an electronics course and that has been invaluable to me. It doesn't matter where I am, I don't think I've been unable to shoot because I couldn't come up with some kind of primitive repair on the spot. My knowledge of electronics went into the whole design concept of the mixing theatre at Film House. We had a six-track stereo recording facility that enabled us to mix films, like the IMAX film *North of Superior*, in Canada.

After I sold Film House I went back to work shooting film which is my real love. And it wasn't long after that I saw the Steadicam and realized a lot more was involved than it appears.

Cinema Canada: *You've won awards at a number of film festivals. Were they for your Steadicam work?*
Bob Crone: No, not specifically. They were for other aspects of filmmaking. Although, those other aspects too are part of Steadicaming. The consumate Steadicam operator knows lighting, framing, movement, and the strength it takes to do repeated takes.

Cinema Canada: *How was your son inspired to pick up the system?*
Bob Crone: David had the opportunity to grow up in that period when we had Film House. He got the chance to play with all of the equipment. I wanted him to attend university and forget about filmmaking. But when he graduated, he still had a very strong interest in film and the industry.

He got many opportunities to learn with commercial companies like T.D.F. in Toronto and he did work as a production manager, sometimes as an assistant cameraman or operator and now and then as a Steadicam operator. I saw David's interest in the Steadicam and kept encouraging him to put it on, work at it – practice, be critical. We would video-tape all our practice shots – and review the tape over and over, criticising and doing it again. Every time he strapped the Steadicam on, he would struggle to get a little better.

Cinema Canada: *What has David recently worked on?*
Bob Crone: David just finished a 16-week production in Vancouver entitled *Clan of the Cave Bear* for P.S.O. Productions. Before this film, he did an 11-week shoot, also out in Vancouver, called *Runaway*, starring Tom Selleck and some robots. David is just blessed with working on very big American productions, with directors and cameramen with good track records. For instance, the director on *Clan of the Cave Bear*, Michael Chapman, gained recognition in the film industry as a cinematographer. David was hired on both films as the camera operator and Steadicam operator. They wanted to have a Steadicam on the set, even though they knew they wouldn't need to use it every day. Dave would leave the camera operating position to do a Steadicam shot and return when the special shot was done. He's getting experience perhaps 10-15 years before anyone else, because he's a very good Steadicam man.

Cinema Canada: *Have you and your son worked together using the Steadicam? Is there a recent film?*
Bob Crone: I suppose the one most recent film where we really worked as a team – shooting one and two cameras – sometimes me shooting or David – was *Canciones* for Mosannen Films in February 1984 with Veronica Tennant and other ballet dancers from the National Ballet. We shot the film with free-flowing camera-moves. Some 360° rotations around the dancers incorporated with 'crane-like' and 'tracking-like' shots – all with the Steadicam.

I helped David when he was on the M.G.M. feature *Mrs. Soffel* shot here in January-February, 1984. I went out to the location just north of Toronto to help get everything rigged. It was a cold, winter, outdoor job. There were a lot of things that might or might not be needed, so I made sure they had everything. I returned to Toronto and left him to shoot the job. They were very pleased with the dailies and had David on for several days whenever they had a tricky shot they couldn't do any other way.

Dave and I have worked together on numerous productions. We have a very comfortable working relationship – because it isn't one up and one down – we work together like partners. I respect a lot of David's ideas. He sees things through current eyes and notices that I see things through experienced eyes and together we are able to harmonize our thoughts.

We manage to harmonize on how we treat a particular frame of film. The information we leave out of the frame is often more important than what we put in. And that's what makes the picture work. David is so familiar with all the equipment that we don't have to discuss every single little thing when we are out on location. He can anticipate when I am doing a shot – if I've chosen one or two little things he'll think of what else I may need to go with it. Such as two C clamps and a piece of sash cord, for instance. We just go click!

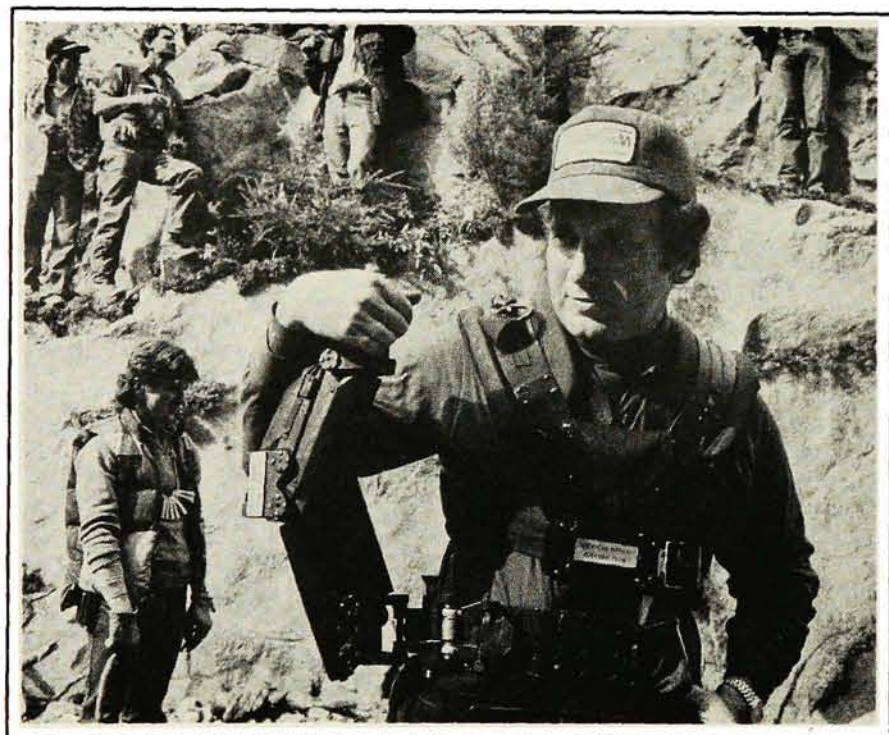


photo: Robert Semeniuk

● Dave Crone on the B.C. shoot **Clan of the Cave Bear**

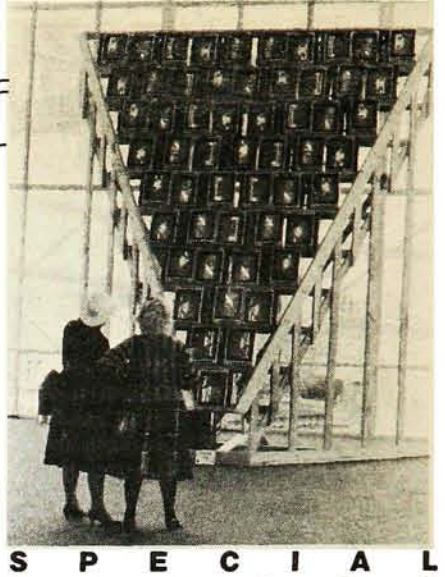
Cinema Canada: *Can you describe the Steadicam system you own and the modifications you've made?*
Bob Crone: Well, there are a lot of things on our system that make it different. When I was out at the factory over eight years ago, I tried on the very first Steadicam in its very rough form. At that stage I told Ed DiGiulio and Garrett Brown that I wanted the first one off the production line. They encouraged me not to take the first one away because they wanted to shake the bugs out of it.

So, instead, I wound up getting Steadicam with serial number 3. We don't actually have it anymore since it's gone to the great camera repair room in the sky. We now own two Steadicam units: a Universal Steadicam II which has been wildly modified and the new Steadicam III. There are now over 400 Steadicam all over the world.

We are continually modifying our equipment to help it serve our needs. For instance, the battery box mounted on the low-end of the camera-support arm, can be put on in a vertical or horizontal position and tracked left or right. That's something our new Steadicam III has built-in. In our view this modification displaced the weight of the Steadicam and enabled us to do better shots.

Another modification is that we have found a way to send a picture from a small video camera top-mounted adjacent to the eyepiece of the camera. The picture is sent to a portable receiver-monitor without the encumberance of cables. It gives us the freedom to move through a room of people and have our portable monitor and video-tape cassette-recorder show the director exactly what the camera is seeing. Our video-tape assist allows the director, producer, director of photography and anyone else involved with the shot to instantly play the shot back. This enables the director to discuss where the camera should be and where the talent should be as well. It ends the business of extra takes which so often turn out to be unnecessary. When you get a good take – and the director doesn't feel comfortable unless he says let's have one more just in case – it turns out that the 'just in case' shot becomes 8-10 extra takes, because the 'next time' the talent blows his/her lines or the 'next time' the camera runs out of film or the 'next time' a bulb blows and so on. Until finally, you've gone for another 1 1/2 hr. to get the 'just in case' take, which wouldn't be necessary at all if you could confirm. So the video-tape assist confirms instantly that you have succeeded and allows you to move on. We have found time after time this has cut hours out of shooting budgets.

cam that you don't generally see is a three servo motor-system which mounts to and around the zoom lens. One servo controls the iris, one controls the zoom, and one controls the focus. That's a real plus for the odd shot – when you really need to use all three. And it's a real help to be able to adjust the focal length of your lens, or pull iris, when going from a dark area to a light area. This device is radio-controlled by a transmitting unit that the assistant camera person holds.



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Cinema Canada : *Do you video-tape all your rehearsals ?*
Bob Crone : Oh yes. Use the video tape so that you can then specifically discuss details of that picture with everybody rightfully concerned, as well as critique it yourself. Often, I see little things that I'm not doing but the director, or d.o.p. or producer hasn't even spotted them. I don't have to point that out ; I'll just do a little better on the next take.

Cinema Canada : *Do you rent your Steadicam equipment ?*
Bob Crone : It isn't that we are unwilling, we just don't want to be in the rental business. But we wouldn't want to see anyone stuck if they were well-acquainted with the tools. What we have discovered, much like Wm. F. White in Toronto discovered when they had Steadicam for rent, is that anybody who could pick up the weight thought that's all that it took to be a good Steadicam operator. So they would rent the thing, take it out, get a terrible result and then blame it on the Steadicam. After five years in the Steadicam rental business, Wm. F. White threw up their hands and said 'this is an artist's tool.'

Cinema Canada : *How much pre-planning do you do before going to a location to shoot ?*
Bob Crone : Often we'll go to a location well before we intend to shoot there, if it's possible. If it's a real situation and not a set, then there are a lot of things to be looked at that you might not have anticipated : looking at floor plans is very good since they show length and width and obstacles along the route ; looking to see whether or not there are mirrors on the walls or whether there is glass which might show a reflection of the camera going by. You also have to look at where you can light the scene – because lighting for the Steadicam is different than lighting for a normal camera. On the film *Canciones*, we were tracking 180° and in some instances turning a full 360°. As you turn you don't want light-stands in the shots. And sometimes we've had to resort to some very ingenious little tricks to make a shot seem like a continuous shot and it actually wasn't : it was two shots.

Keeping your own shadow off the wall is partly a product of designing the shot well : positioning yourself properly and if possible, lighting it so that things look natural.

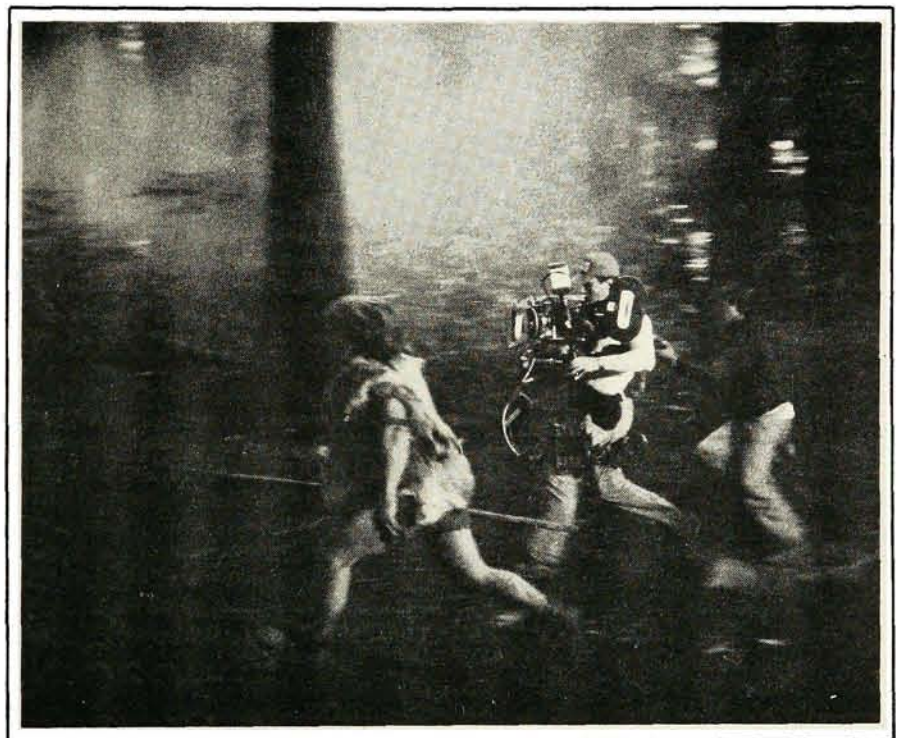
Cinema Canada : *What do you do to keep within the 'look' or shooting style of a picture ?*
Bob Crone : Well, they'll often give me a copy of the script, show me what they want and describe it as they imagine it. I'll look at what they're planning and, if I can, add to that something out of my experience and skill that I think will enhance the picture. I'll make that suggestion. Often that means I'll do a dummy take for them, taping it so that I give them an idea of what it would look like. If they like that, it's a plus for them. Often they really know what they do want. The easiest way to understand it is to tape a take, then we're able to look at something and talk about it specifically, right on the spot. In a way, we have instant dailies.

Cinema Canada : *What comments do you get after a shoot ?*
Bob Crone : There are many. I did a picture here in Toronto in the summer called ***Seduced*** for C.B.S., starring Greg Harrison. In one scene in the Kensington Market area, Greg came over to me and complimented me on my Steadicam work. It was as if he almost forgot a camera was out there – because you just move in the crowd so smoothly and unobtrusively. And after the dailies the director, Jerrold Freedman, said it was just so perfectly motivated. You come down with the camera off the meat market sign and start moving back. When the actors stop at the fruit-stand you stop with them and so on : right on.

It couldn't have been better choreographed. And Freedman appreciated that sensitivity : it's not the kind of thing you can whisper in somebody's ear : 'Go now' or 'Stop now', partly because it would distract the actors or be heard on the sound-track. Between the time the director would say start or stop and you do it, that split-second – which is the perfect moment – would have already passed. So you have to be able to make that judgement-call yourself and, when you do it, and do it right, the shot really rings just perfectly. Greg felt that the camera had not intruded on him one bit – and it made it easier for him to act. Without the feeling of a camera being there, his performance, he felt, was enhanced.

So I've learned to scan the peripheral area of vision, to scan the actual action and to scan the viewfinder in sequence, and sense my position in relation to upcoming obstacles, door jams, stairways, that makes it possible for me to fly that camera through tight situations, otherwise you'd be bumping the woodwork or other people around you.

Cinema Canada : *How does the Steadicam work ? Some people say it has to do with gyros or mercury.*
Bob Crone : It's still a puzzle to some people. It's a mystery to them and it's very hard for them to believe that there are no gyros in there that stabilize the camera. It is simply a spring-tensioned arm performing the same way your human arm does. If it's steady and pointing in the right direction, that's the work the Steadiman is doing. Its design is very simple and the magic that is presented with smooth dolly-like shots over the roughest of surfaces or in and out of the tightest spaces is the result of the operator's acquired skill. There are still a few people who don't know how to use the Steadicam or don't want to use it because they've had a bad experience with it before.



● Hi-tech meets low-tech as Dave Crone shoots **Clan of the Cave Bear**

Cinema Canada : *Can you tell how a shot felt, if it was a good take ?*
Bob Crone : I usually have very good, strong feelings right as the spot is going – that we're all up and getting it right. I am seldom wrong in my instincts. Sometimes I'll ask for another take to get another part of the movement a little more sympathetically positioned. That comes with watching that little viewfinder-screen mounted on the Steadicam and scanning the action as you're going. My eyes are darting back and forth between the viewfinder-screen and the real scene at quite a high rate. I'm glancing back and forth all the time.

I think that's a knack I developed partly from learning to fly an airplane on instruments. When you fly instruments, you have to develop the habit of keeping your eyes moving. You just don't sit there and watch the artificial horizon or watch the altimeter or the air-speed indicator ; you keep your eyes scanning all the instruments all of the time in a deliberate and definite pattern and speed.

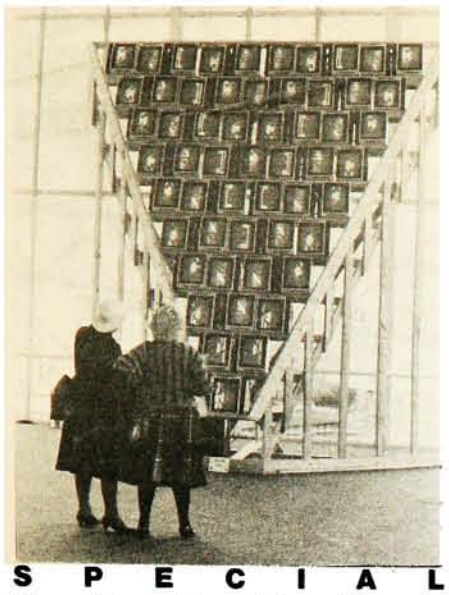
Cinema Canada : *Is there a problem in making directors aware of the Steadicam ?*
Bob Crone : If a director and producer and d.o.p. have decided that Steadicam is a tool and a service they can use, they have to relinquish a certain amount of their control and trust you to do the shot as well as or better than they would have. It's very hard for them to give up the methods that they've been used to, and trust that you're going to get them something they would've rather had. There is a fear of change in all of us. A d.o.p. is used to looking through a viewfinder and can tell from the look of the ground-glass how the actual finished film is going to look. Now all of a sudden he's standing around and getting a glimpse over your shoulder at your little screen or our small 2" hand-held TV set and he's very worried that it won't be what he wants. It takes time for him to get confidence. And that only comes with shooting with you a dozen times and seeing the dailies – and marvelling at how much better it is than they thought it was going to be. And after they've done that for a while then it's easy for them to welcome Steadicam onto the set and to allow maximum use to be made of it – not just use it for the shot that can't possibly be done with a zoom lens or tripod, crane, or dolly, but, rather to use it for all it's worth. It's still going to take time for people to see good Steadicam work. The video-tape playback has helped quite a bit to gain confidence in directors and cameramen for our system.

Cinema Canada : *What makes a good Steadicam operator ?*
Bob Crone : A lot of stick-to-it-iveness, determination and a sensitivity to the composition and framing and a knack of handling people well. A willingness to criticise your own work constructively and to accept criticism from others and the time to learn to do it all well. I notice that the work I've done in the last year is better than the work I've done a year ago. We've recently been shooting a series for H.B.O. in Montreal called *The Hitchhiker* and the stuff I've shot, I feel, is the best I've ever done. So, I think to get good – really good – a person needs five years of determined effort. Owning your own Steadicam with all the various gadgets that are needed, really lets you get the kind of practice you need.

It's an acquired skill. Anybody could learn to do it, but they have to make up their mind that's what they want to do. They have to keep getting into that Steadicam virtually everyday. And it isn't just getting in it and walking around, but setting targets for yourself to move off one frame and on to another frame in a specific number of seconds without that horizon dipping or tilting, without being too fast, too slow or ill-motivated. You're making up a fluid photographic composition right as it's going.

I have been working with the Steadicam a good seven years now. When I brought Steadicam to Toronto, I had no intention of trying to offer my services with the Steadicam to commercial and feature-film production companies. I was thinking of it as a tool for my own use. I discovered that I didn't have enough uses to fully justify it and that it takes a lot more time and skill to get good at it. There's a bit of the athlete in being a good Steadicam operator.

I found that there were many people, many producers, who would use it for a few complicated shots. My business has changed in its focus and scope because of the Steadicam. It has changed me. More recently, we've added the word Skycam to our company name. It's the next frontier. Skycam is a system for suspending a camera over an area of 1000 ft. square and it enables the operator to move a camera at speeds up to 27 mph in any complex combination of straight lines, curves, elevation and speeds. It's been used regularly on



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football games and I think it'll change the way we look at any event in the future. With Skycam, you're not limited by the length of your tracks or height of your crane.

We've changed ourselves into moving-picture specialists.

Cinema Canada : *You did the Steadicam work for the Papal Tour across Canada for CBC in September. How did you prepare for the Pope's visit to Midland, Ontario ?*

Bob Crone : Well, since the Steadicam played a key roll in the walk that the Pope did through the Huronia Village in Midland, getting there a month before the event and walking the route was very important.

It was there that I met director John Thompson, and technical producer Ian Morrison. We discussed where to place the Pope in the best possible light in relation to the surrounding buildings and where to put ourselves in the best position to cover him to maximum advantage. This is an exercise that you go through both on paper by looking at the plans and the layout of the area and by walking it through and planning all the technical moves as well, such as where camera cables will be plugged in and unplugged.

Because we were on the air live and being fed by satellite to viewers all over the world it made me acutely aware of the fact that I had to be very careful to mentally go over every single step, frontwards and backwards through every mechanical step of the shoot. When it came time to execute it physically, it seemed like a let-down. I had done the shot so often in my mind.

Cinema Canada : *Did you enjoy doing the Papal Tour ?*

Bob Crone : It was most satisfying to be on the air live and have no second chance. To know that my camera was sending out a signal to 500-700 million people world-wide. I knew that I was carrying the responsibility for the way all those people would see the Pope. And with only one take, you do it right the first time. Often I didn't know exactly where the Pope would go because frequently he did break away from the planned route to shake hands or touch children. He was very nimble on his feet.

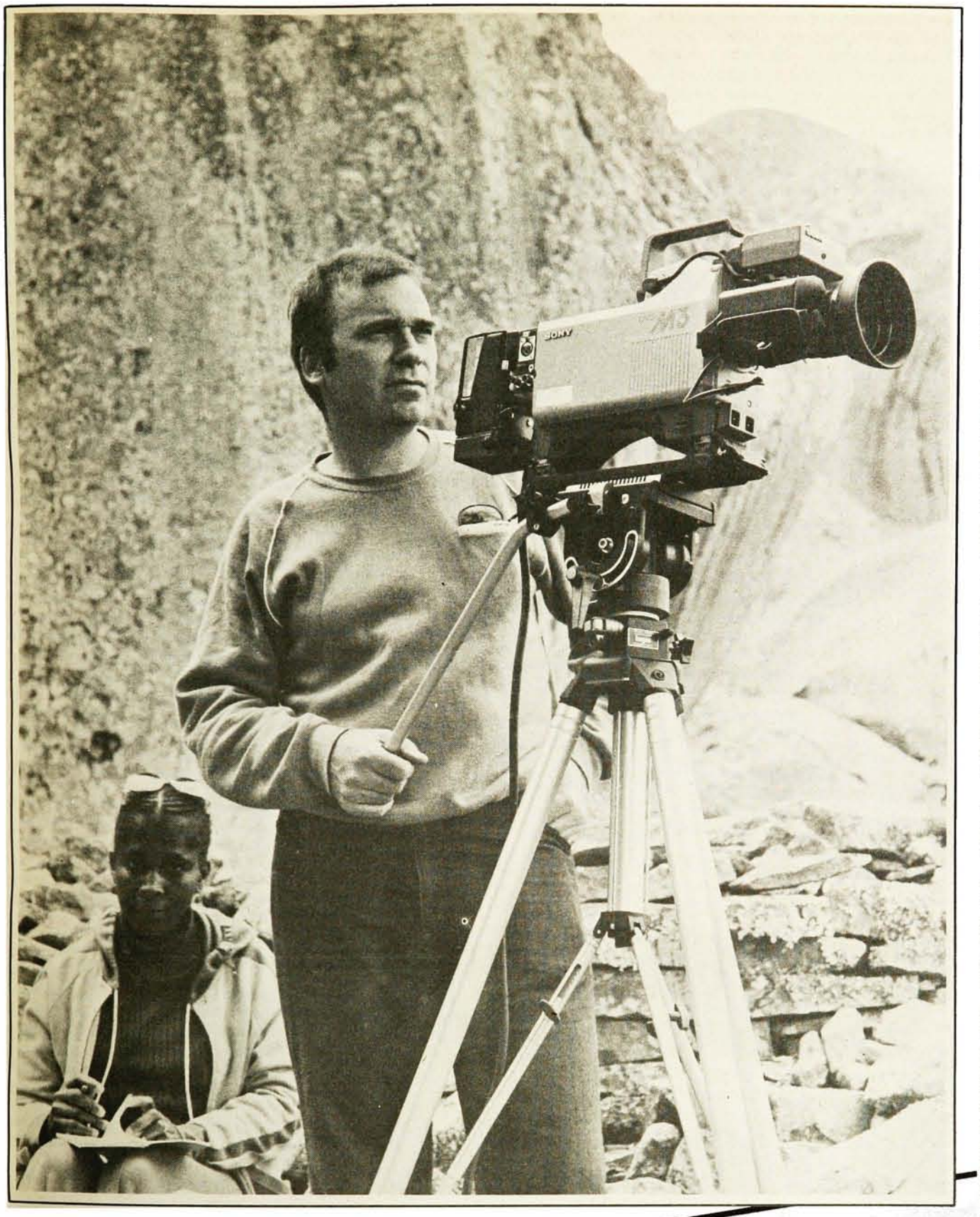
Cinema Canada : *Do you consider the Papal Tour a highlight to your career ?*

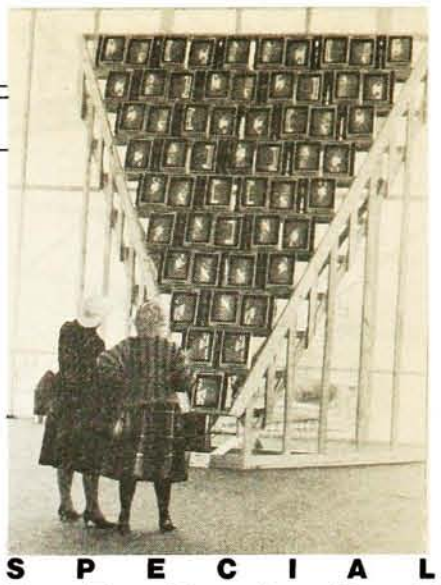
Bob Crone : Certainly from a photographic standpoint. Maybe it's not the most satisfying piece of photography in as much as you couldn't control the lighting or framing or the Pope. It was a different kind of challenge and the challenge is one of really testing your resourcefulness right to the limit and beyond. You had to make up out of the moment the best possible composition that was available to you.

● Bob Crone on location with Pope John Paul in Midland, Ontario

Because we had the Steadicam we got out of some jams. For instance, in Flatrock, Newfoundland. They had set up the platform for the Pope to speak facing the boats in the harbour. And they set up the scaffold and lighting and two cameras positioned out in front of him. As he got up to speak, he picked up the microphone and turned himself 180° right around so that his back was to the boats and to the two stationary cameras. So there wasn't a camera in front of the Pope. I quickly scurried around and ran off the little platform they built for me and worked my way around behind the people to come around in front of the Pope.

Then in Halifax, at St. Mary's Basilica, they had set up a camera across the street in front of the chuch. We were standing out in front of the church to pick the Pope up when he got out of his popemobile. Well, you probably saw that there was a parade of cars out in front of the popemobile, one was a bus full of press-people. The bus turned the corner and stopped right in front of the only camera they had covering the church. That camera then could not see a thing and all I hear in my headphone is 'Steadicam you're our only hope.' If it hadn't been for the flexibility in those instances, of the Steadicam's fleet-footedness, to be able to reverse position and go for it, there would have been no shot at all. ●





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Video Odyssey

by Ron Hallis

New York City, three o'clock in the afternoon, June 29, 1984. I enter an elevator on East 44th Street and ride calmly to my destination – Projection Systems International. The salesman's office is decorated with antique cameras and projectors. Ninety minute later, I emerge with the new tools – video recorder, camera, and 35 hours of tape.

Film and videomaker Ron Hallis lives in Montreal.

The next two days I spend in a hotel room waiting out the rains that had flooded the roads to JFK airport. My departure for Africa delayed, I use this interval to test the new equipment.

In the hotel-room, I watch television, I make television. I tape my bath filling, the maid making the bed and vacuuming the floor. As I pan across the dingy walls I'm smiling: soon I would leave the developed world.

My dialogue with film was over, or at least "on hold." I had crossed to the video camp.

I was going to Zimbabwe to shoot a one-hour TV documentary for the American PBS network.

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Unlike my first visit in 1980 which lasted twenty minutes when I was allowed to cross to the Zimbabwean side of the border from Mozambique to film several hundred refugees returning home, this time I would spend two months travelling and shooting in the Matabeleland and Mashonaland provinces.

The 1980 film (entitled ***I Can Hear Zimbabwe Calling***) was followed by ***Nkuleleko Means Freedom***, shot in 1982. Both films have been very useful in Zimbabwe in teacher-training programs, adult literacy classes, mobile cinema in rural areas, and education conferences. In America, the second film broke the mass media impasse for me when it was shown on the national PBS network in prime time.

Ironically, my new project (entitled ***Transformation***) was inspired by an aversion to television. I had been away from Southern Africa since mid-1982 and was beginning to believe some of the negative reporting on Zimbabwe. It took a firm jolt to wake me up.

A surly CBC documentary (***The Drums Of War***) on The Journal made me determined to return to Zimbabwe and produce a television program with an honest and sensible thrust.

A producer from The Journal had viewed some of my Zimbabwe footage and told me it didn't have the "required jolts-per-minute." I had to agree.

PBS was more accessible and interested in new material. Funding was available, my credibility with the Zimbabwe government was strong, and a modest but vital international network of people now existed to help promote the new project and aid in its distribution.

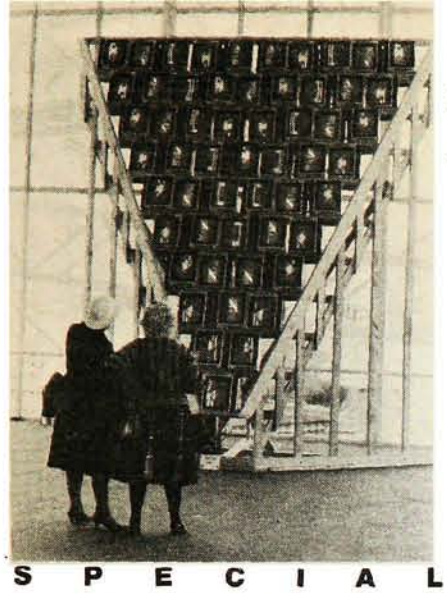
Until late last year, the scope of the project still seemed manageable with film as the medium. It was the difficulty of several interesting possible side-projects that bothered me. Their futility, however, was determined by economics, not the quality of the subject or concept. In a manner of speaking, these projects all fell below the poverty line. One was a possible film on the fascinating stone ruins of a complex structure built by Africans in the twelfth to fourteenth centuries near Masvingo (formerly Fort Victoria). And there was also the possibility of going to Mozambique to film a profile of president Samora Machel and interviews with captured "bandidos" of the anti-government resistance movement.

But my film budget would certainly not allow this and even if I could raise a little extra money to shoot these topics, the cost of finalizing each of these individual films would be exorbitant.

The argument for video, however, meant that I could shoot everything I had planned and so make maximum use of my time in Zimbabwe. It was going to cost so much to get over there, stay there, move around and get back, that it seemed shameful to stop short of doing a thorough job.

But no matter how convincing the argument for video became, it was a herculean task emotionally to turn my back on film.

After I had painfully set aside the



SPECIAL REPORT

problem of video's qualitative inferiority, my chief concern became reliability of the apparatus. I had not been free from technical problems shooting film in sub-tropical Africa. I had my share of lense fungus, flat batteries in the boondocks, crystal motor nervous breakdowns, heat and humidity hang-ups. On one occasion, an insect born to withstand hammer blows found its way into the claw mechanism of my Éclair NPR and caused intermittent jamming while sections of its body were periodically served up from the gate.

As an antidote to my fears I thought of a kid I met in 1980 in a refugee camp in north-central Mozambique. He called himself Scania after the Swedish-built truck because he had "a strong motor inside." It was his self-appointed Chimurenga or revolutionary name.

Scania was 16 and his prize possession was a Lloyds radio-cassette that looked as if it had been dropped several times from a plane. The case was held together with recycled tape and powered by a dynamite-like bundle of flashlight cells that he was constantly rejuvenating over the fire like hot dogs.

One morning I passed his hut and found him sitting on a grass mat by the fire making solder-joints with the tip of a coat-hanger wire heated in the coals of the fire.

"What are you doing, Scania?"

"I'm putting the negative on the battery," he replied.

●

For most of the shooting of *Transformation* we based ourselves in the south-west of Zimbabwe, Matabeleland province, home of the minority Ndebele people and site of persistent attacks and banditry by so-called anti-government "dissidents." Gathering a minimum of significant information and differing views consumed several hours of tape – this would have been impossible on film, given the budget.

We were two weeks into the eight-week production and gliding at full momentum when I realized that we had shot as much tape as was originally budgeted for filmstock for the entire shoot.

I came to appreciate how video gave me the opportunity to record unexpected encounters and personalities during my travels through Matabeleland: a long conversation with an old peasant watering his oxen on an almost dry river-bed; a woman painting the walls of her hut who we found almost by chance as we drove to another destination. Material like this continued to build-up and played an important part in the continual moulding of the project.

Another aspect of the gathering power of video came to the fore during the taping of an interview with a woman who had direct contact with "dissidents."

She was a 23-year-old nurse, daughter of a coal-miner and we were interviewing her three days after the infamous Lupote clinic attack. She, along with three of her colleagues, had been on duty when heavily-armed "dissidents" attacked and destroyed the clinic. She remained serene as she described her abduction and rape but began to cry quietly when she described how the "dissidents" forced her and her colleagues to set the clinic ablaze using diesel fuel siphoned from a nearby tank.

I do not think that we could've reached the same degree of intimacy using film – certainly not with the quantity of film that would have been available for this scene. Video is a better listener. The informality, quietness and the 20-minute roll was far-superior to 10 minutes of film, and were perfectly compatible with the tone of the situation.

The African approach to being filmed or photographed is rather formal. The process is more important than the end-result. The fact that somebody, somewhere, somehow will see the image is secondary. I have found myself often in the situation in which it would be insulting, or at least impolite and inappropriate, to turn the camera off, not turn it on, or not film something or somebody.

Video has a much wider aperture through which to receive and record this process, without forcing constrictions and time values that are foreign to the African sensibility.

To reach wonderful moments in a story, the whole must be told and experienced. Often stories of childhood precede stories of age and you find that the right concentration, lasting a few moments, requires a half-hour of warm-up.

My last few days in Zimbabwe, waiting for an elusive interview with Prime Minister Robert Mugabe (I was bumped by Yasser Arafat and Julius Nyerere), were spent with Stella Chiweshe, a spirit-medium and professional Mbira (traditional finger piano) player.

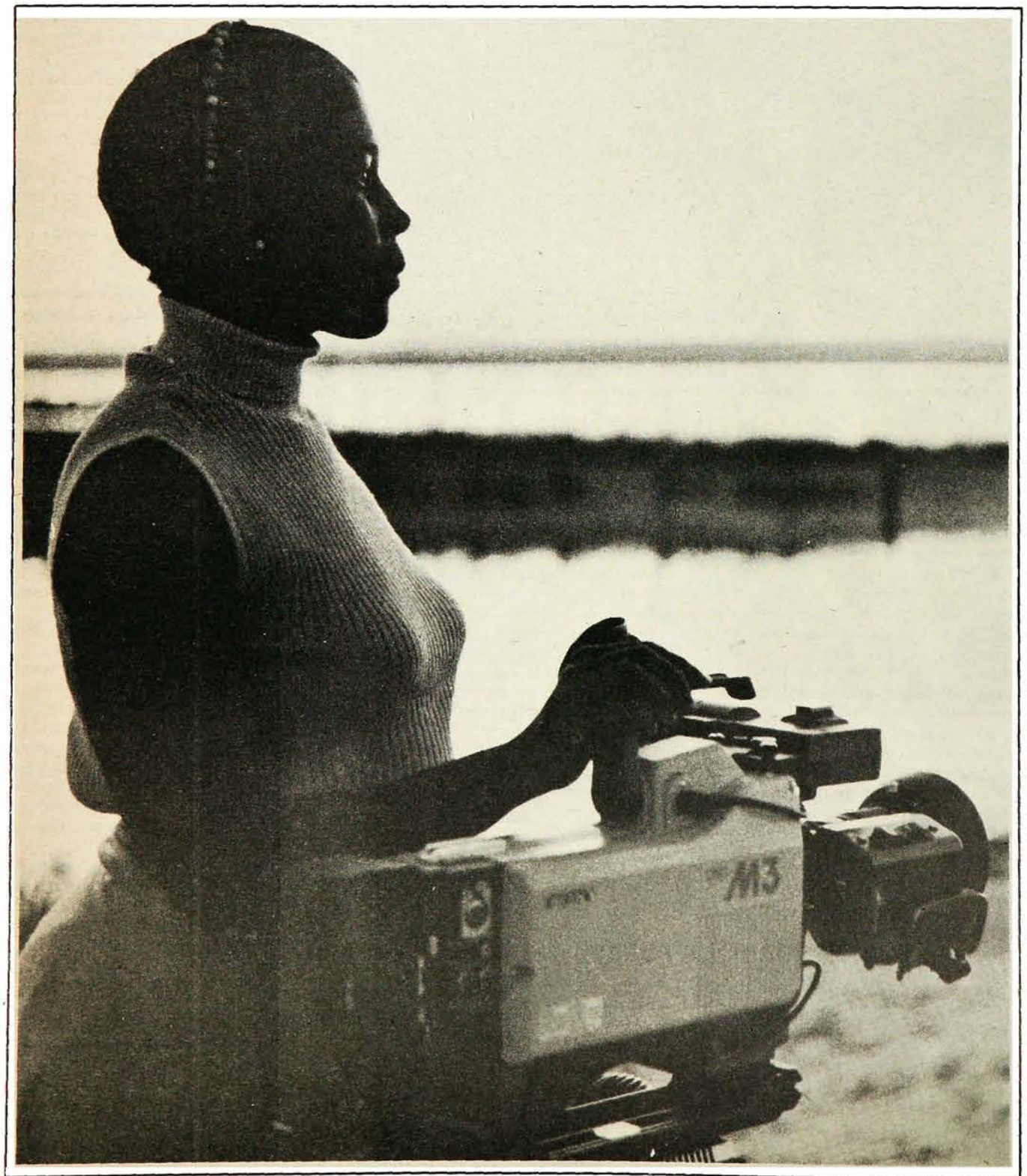
During one of our meetings Stella asked me if I ever dreamed of my camera the way she often dreams of her Mbira, which always appears in her dreams as a person, never a musical instrument.

I told Stella I had never dreamed of my camera in that way. My fears and preoccupations were incomprehensible to her or perhaps I was unable to articulate them properly.

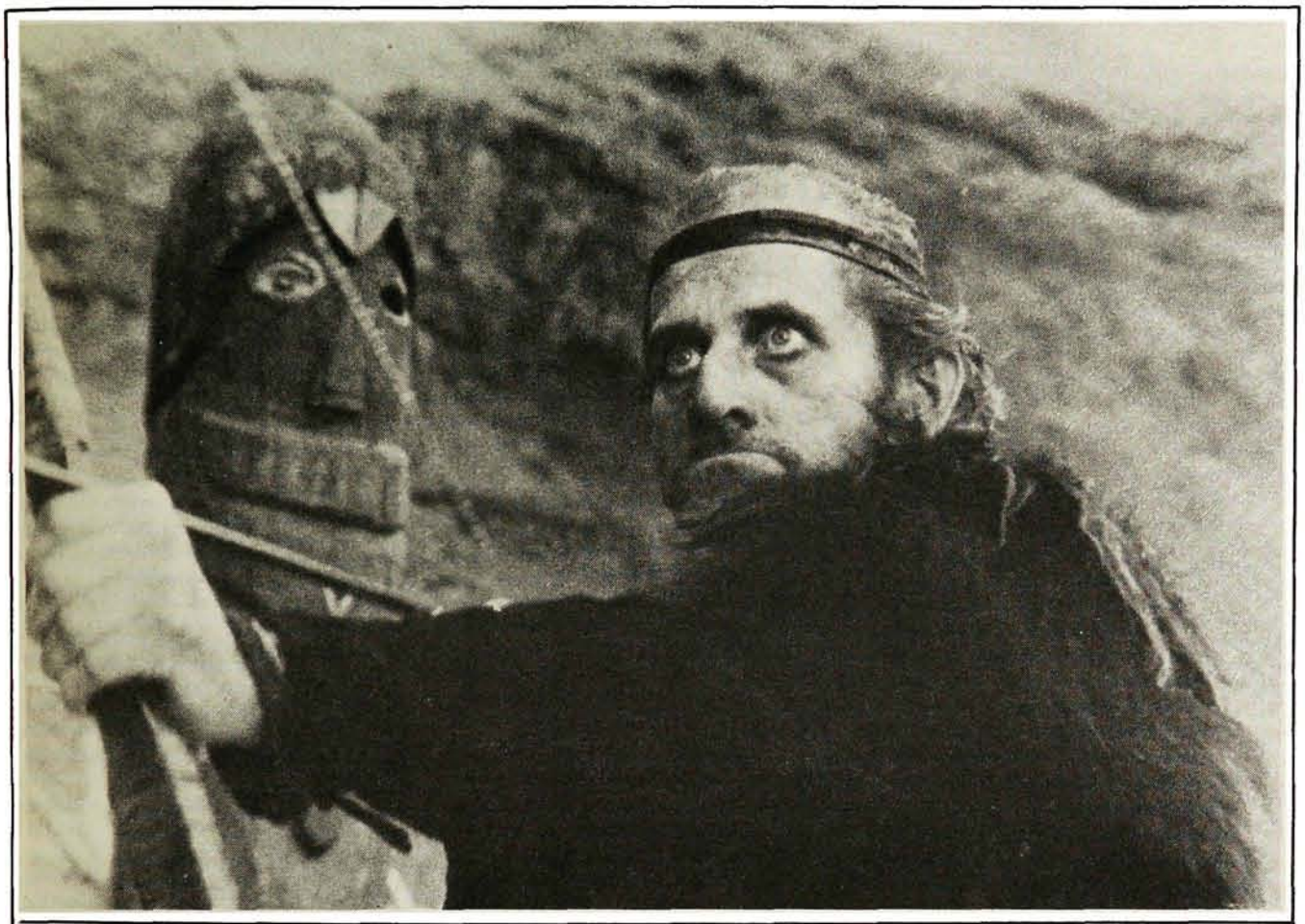
"Some of what I tell you is for you, some for you and the camera, and some things about my Mbira I cannot tell you without angering the spirits. Then I do not know what they would do to me," she said.

But I was able to get across to her that my camera is an extension of mind, and eyes, prepared to stare long and hard at perplexing and simple things, searching for essence, for answers. As a filmmaker I was more concerned with building and building cheaply, given the expense of materials. As a videomaker, however, I am still concerned with building in a filmic sense, but with a fuller possession of the tools, and from materials that are cheap and abundant. Video, I explained, was like matches from which comes the power to create fire.

I think she understood. ●



● Zimbabwean author Joyce Sikakane on location at Lake Kariba



● In **When The Raven Flies,** Gunnlaugsson achieves with the Viking saga what Sergio Leone did with the western

A film director's conversion
Editing on VHS

by Hrafn Gunnlaugsson

The Icelandic film When the Raven Flies, *shown at the Berlin Festival last February, and at the recent Atlantic Film and Video Festival in Halifax, was edited on a VHS cassette. No work print was made; instead, all the negative film was played from a scanner straight onto VHS cassettes, to which a time-code was added. The material on the cassettes was then edited together on ordinary VHS machines, and the negative film cut to fit the cassettes according to the time-code. Naturally, this sounds a bit hard to believe, and a lot of questions were asked while this method was being used. In the following, the director Hrafn Gunnlaughsson briefly explains why this method was used, how the work progressed, what sort of problems arose, and what the outcome was from both a technical and financial point of view.*

Hrafn Gunnlaugsson is a film and television director in Reykjavik, Iceland.

Why video instead of a cutting table?

I have often found myself sitting over a difficult scene on the cutting table, lengthening, shortening, changing, adding, until the work print had become scratched and sticky, jumping about on the screen every time we made a cut. When you have to deal with very precise action and you have finished splicing the clips together, it can be difficult to know whether the editing has really worked. It doesn't make it any easier when some of the frames get lost or destroyed and you have to substitute from the leader.

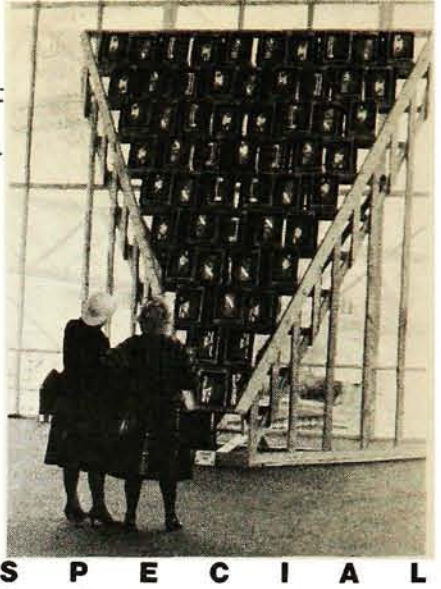
My curiosity was aroused when Sven Skans, the head of the video department at AB-Film Teknik in Stockholm, informed me that they had got a system which could play the negative straight onto VHS cassettes with the time-code. They had edited some commercials with this method straight onto VHS, and it went quite well. That meant that, instead of making a workprint, the negative film could be put onto cassette and then selected and edited. He called it the EFC system. This method obviously led to the additional possibility of being able to edit many versions of the same scene, one after the other without ripping the first one apart, because the videomaster always remained unchanged however many copies were made of it. It was also possible to preview all the clips before they were processed and add or subtract one or more frames after each preview if you needed a very tight clip.

The editing systems that I considered using were the Panasonic 8500 video cassette recorder, and the editing controller NV-A500. When I had experimented with some other material, I decided to use this method for *When the Raven Flies*. In other words, no work print – just the negative put onto cassette and edited through the video.

The editing itself

To make sure it was safe, the laboratory ran all the negative through an analyser as soon as the developing was finished to check whether there were any scratches or lighting errors before it was played onto the cassette. No visible errors appeared, and I had all the material – some 17 hours – sent on 10 VHS cassettes to Iceland. The laboratory is in Stockholm, but I did the editing here in Iceland. Unfortunately, Iceland is so small that it does not have a laboratory.

When I got hold of the cassettes, the



S P E C I A L R E P O R T

soundman synchronized all the sound we had recorded onto them. That took him about three days. We used an ordinary Revox tape-recorder attached to a video machine, and put the sound onto the soundtrack of the video cassette. The idea from the beginning was to post-synchronized all the dialogue, so this was our guide-track. In this way, I was able to make sure that the pace of the dialogue was in keeping with the editing.

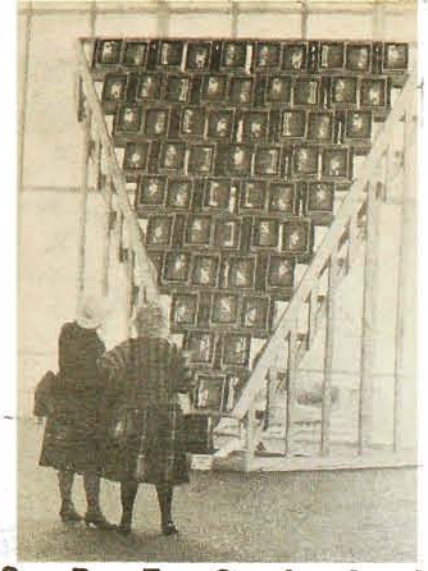
The new video machinery dispensed with the need for an editor to find and put together all the clips, so that I managed to do all the editing myself at home. I edited each scene separately on individual cassettes, and usually ended up with three to four versions of each scene. This method proved to be unproblematic, and in four weeks I had finished editing all the scenes and began to put them together. When that was over, I had a 150-minute film which was 40 minutes longer than the original estimate.

At this stage of the proceedings, the usefulness of this system became apparent. I was able to sit at home in front of a television screen, together with my assistants, and go over all the various prints of individual scenes, lengthening or shortening them without destroying what I had already made. This method was inspiring because it prompted one to experiment with daring and innovative changes, all of which could be made within a very short time. After a lot of careful viewing and many changes, the video-print was finally ready. The quality of the film on the cassette was beginning to decline a little since the final copy was four generations from the master. Actually, though, that didn't matter – the time code was still legible.

Various technical problems

Up to then, everything had gone fine. The soundman used the cassettes that I had edited to post-synthronize the dialogue, and we went back to Stockholm to finish off the work.

The next stage was to film a telecopy of the video cassette. The idea here was to use the telecopy to cut down the amount of time for the sound-tracking, if that should be necessary. When the sound work was over, the next plan was to cut the negative according, to the telecopy. When I got hold of the telecopy, it turned out that the time code was doubled up in some of the shots, as if the film and the video were not synchronized. Naturally, we were really surprised because for the first time it looked as if the EFC system had gone wrong. After a thorough investigation as to how this failure had occurred, we found the answer. The video machine had occasionally edited at half-frame – that is to say, that a 50th of a second had been cut out so that some of the frames



S P E C I A L
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were placed in the middle of the ones that preceeded them. This of course meant that some shots were variously half-a-frame too long or too short. We decided to solve this problem by taking the negative, selecting one frame either to the right or the left so that each scene as a whole would be equally as long as its counterpart on the telecopy. The only risk was the possible variation of a single frame in two or three of the shots. By doing that, we hoped to retain the synchronization. This method worked, but entailed a good deal more trouble. If this had been foreseen, we could have avoided the problem by setting a frame-lock on the playing of the negative onto the VHS, so that the machine would only have been able to edit one whole frame at a time. Whoever uses this system has to be very careful about this particular detail.

When the negative had been edited and we had run one light-rush print copy through the projector and we saw the film for the first time on a full screen, several additional errors appeared. On the video monitor some small focusing errors and two light frames did not appear, but on the full screen they were now very obvious. It then became necessary to switch four frames in the negative master. In the end, though, the inconvenience caused here was amply counterbalanced by the speed with which we could use the time-code on the telecopy and find the material by computer.

When these rectifications had been made on the negative so that nothing stood in the way of beginning the mixing, the post-synchronization onto the cassette went so well that we only had to get the actors to repeat very few lines, and that only took one afternoon. The film was then mixed in Dolby stereo and completed like any other film.

Technical outcome

After going through this experience – editing a full-length feature film onto VHS – I can only say : why take the long way round? It is so much more convenient and more stimulating to be able to edit the same scenes in a multitude of variations than it is to sit in a dark editing room, with bits of film covering all the walls, and not be able to see new possibilities without destroying everything that you have already made.

Moreover, this working method allowed us to be able to send the composer of the screen-music copies of the scenes as soon as they had been edited. In this way, he was able to get his work underway before the final editing began. All the problems that came up could be easily avoided or completely solved.

photo Hazel Field

● Iceland's D.W. Griffith : Gunnlaugsson at the '84 Montreal World Film Festival

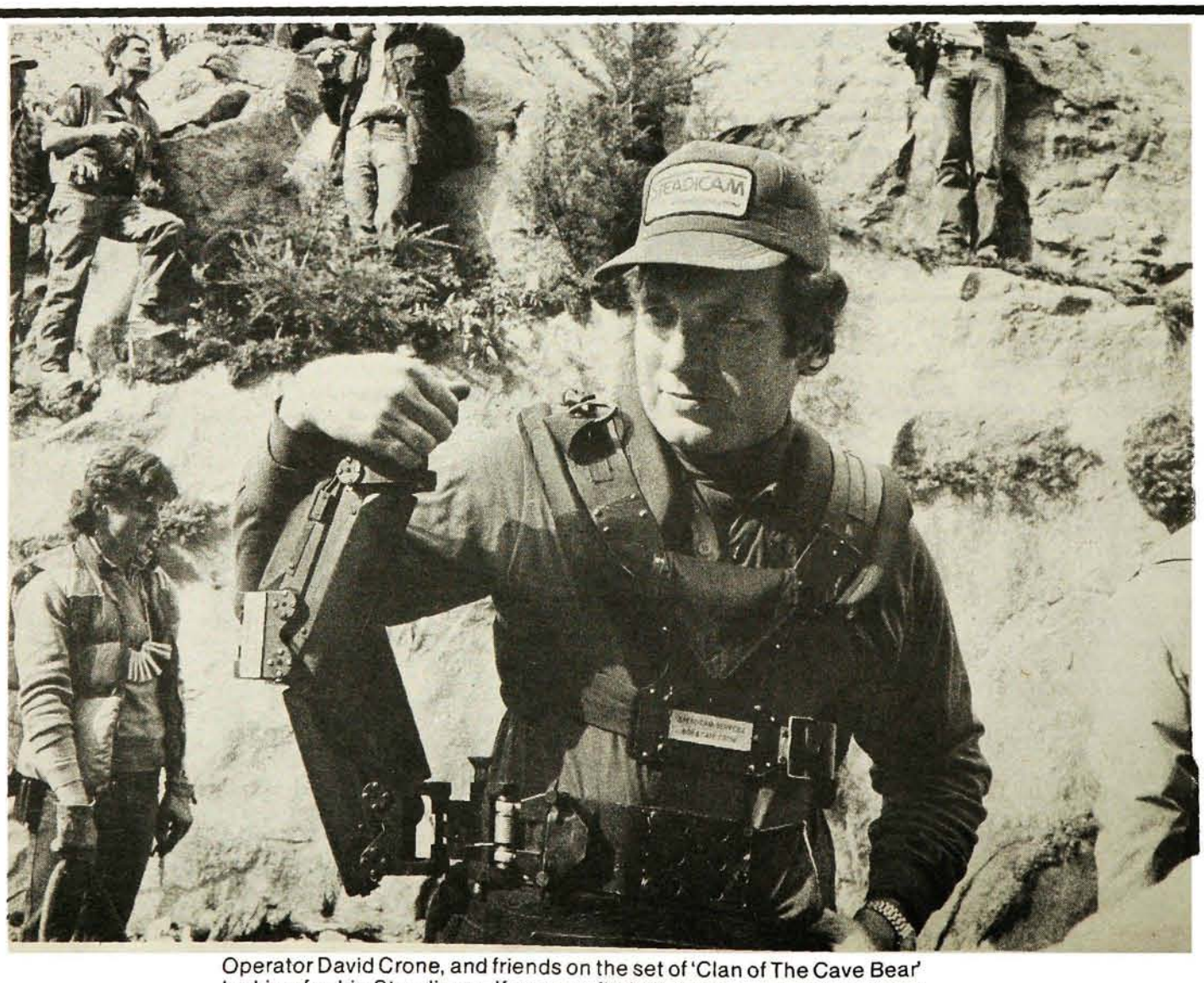
The financial side

The costs of a work-print, editor, and a cutting table were dispensed with, and in their stead came the cost of scanning all the material, the hire of the video machinery (it is that cheap – about $4,500 – that it's worthwhile buying it), the telecopy for the negative editing, the light-rush print copy for the mixing, and the lighting quality control.

If a third of the material is printed onto a work-print and 10 weeks taken on the cutting table, the costs of the old cutting-room method and the video-editing method are nearly the same.

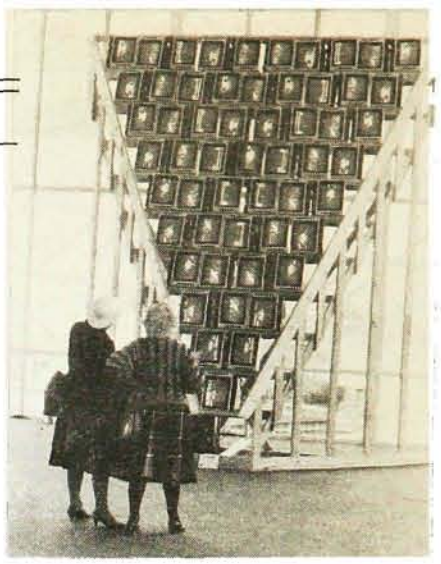
The new method has the advantage that ***all the material*** and not just selected scenes are played onto the video cassettes. That gives one a lot of freedom with the editing because so often one overlooks the whole and gets wrapped up in the fine details when having to decide which individual takes to print. When it is possible to see all the material together, these kinds of errors can be reduced to a minimum. It also means that the scene and clapperboard markings become unnecessary when using post-synchronization because ***all*** the material is in the cassette. We didn't use a script-girl to mark the scenes and trusted our own memories for the sound-track guide, where we read in all the information. That presented no problems – thus it was possible to save all the film that would have been used up by the markings, as well as the salary for the script-girl.

If I do another full-length feature, I have no doubts about the method – video. It has everything in its favour, and if you don't believe me, go and see ***When the Raven Flies.*** ●



Operator David Crone, and friends on the set of 'Clan of The Cave Bear' looking for his Steadicam. If anyone finds it, please call Bob or Dave Crone at Steadicam and Skycam Services of Canada. (416) 924-9044.

Rock video: The return to film's first principles



SPECIAL REPORT

by Sam Zero

The rock video has been getting a great deal of press and air time recently. In the October issue of Cinema Canada, John Harkness has even attempted, however prematurely, to define a morphology for this new genre which necessarily borrows from every previous medium while finding its own particular characteristics. Genre, then, is the essential factor Harkness fails to discover : the characteristic entity of rock video's attempts to discover genres within the formal whole. This intrinsic value of the RV is inherent both in rock'n'roll and in the first principles of the two-dimensional moving image, as Harkness shows in his historical reference to D.W. Griffith, but not in its placement in time nor in geography. Harkness places the RV's visual development before Griffith's shorts, but it is more analogous to the time of Griffith's major contributions and their effect on the experiments of Lev Kuleshov in revolutionary Russian filmmaking.

A genre is something that carries its own nature and mood ; in short, it has a style or personality all its own within a formalistic and contextual framework. What Harkness achieves is the insinuation of various rock video forms within the wholr RV network, failing to realize that there is a common thread in all the videos that is both filmic and characteristic of a burgeoning form. (Whether an evaluation as art can or should even be raised at this stage is another question.) The thing that is important here is that there is nothing intrinsically 'video' about RVs, yet. They are still entrenched in the cinematic – that is, they find their fuel for expression, or expressionlessness, in aspects of creation that are not particular to video but to film. Thus it is too soon to translate the RV genre into a theory of its form and structure before determining whether that structure is capable of being studied through any characteristic that makes the language of that structure particular to it : is there a video morpheme ?

As Harkness points out, most RVs do not even attempt to find one. However, it is possible to discover an intrinsic, though cinematic, characteristic that is particular to rock video and has its roots firmly planted in visual history. In so doing it may become possible for the video creator to attack the medium's form and find in it an expressive factor that video as a medium can bring forth ; I feel, however, that they will be hard pressed to find one. The video line, unlike the film frame is not perceptible as a coherent image to an audience, and even if it were there would be the movie's still frame to which it would relate. The sound on video is even more like the radio or the amplified speaker than film sound. The colour and compositional aspects of both media will always parallel painting. But RVs have managed to rescue from all of this the one aspect of visual style that makes film (I use film for obvious reasons) different from any of its feeder forms.

It has been said that film started as an attempt to increase the reality and immediateness of an image. (Film, here, is that transitory object layered with emulsion that captures an event in still, deathlike, exactitude.) The photograph, of course, opened new paths for formalistic painting and experimentation in the 'finer arts' because a portrait or landscape could be 'taken' as seen and often hand-tinted later. At these early stages, studies of motion were made and toys of various descriptions were invented to create the illusion of motion. Finally the celluloid strip arrived and the still, black and white, image came to life – it moved. There is nothing more central to film than than this one simple, though at the time devastating, fact, or to video at this point. It seems that this factor became so acceptable so fast that it's value is overlooked : what is the value of motion ?

Energy = motion X cinema^2

Motion is a process of constant change. Anything that moves must, by the nature of motion, be forever changing in relation to time and space. Add to this the various internal processes of the mind embodied in intellect and emotion, and one has discovered the tools of cinema. The celluloid strip moves with a constant rhythm through the projector (or the tape through the VRC), the perceiving eye's persistence of vision transforms the still frames into moving pictures, and the events that pass on the screen form intellectual and/or emotional associations in the viewer. Change is the essential factor in the effect of film be it slow, such as is witnessed in Andy Warhol's ***Sleep*** and ***Empire State,*** or sudden, such as the exploding violence of a great many contemporary pictures, or a combination of both. It is no wonder then that Lev Kuleshov, after seeing the American's use of editing, adopted the principles of montage as the single most cinematic characteristic of film and experimented with it with students like Pudovkin and Eisenstein. The edit is a sudden, often imperceptible change within the slower transient nature of the celluloid strip. The edit allowed jumps in time and place and, as Kuleshov theorized and Eisenstein and Pudovkin proved, intellectual and emotional stimuli by pacing, image construction and montage.

The rock video is packed with these expressive cuts from one image to the next in a desperate attempt to stimulate the audience beyond the music and lyrics. But the beat goes on in prominence. Rock moves with a constant rhythm cut, interwoven with rifts and synthetic sounds, and these elements are the showcase items along with the performing stars. The directors and editors of the videos themselves have adopted an appropriate rhythmic style, fast and forever changing, like Dziga Vertov's *Man With a Movie Camera.* What they appear to lack is the ability to bring the depth of imagery to any potent level of connected association – it inevitably serves to make the songs more tangible and the image more forgettable. There is a great deal of effect-oriented imagery in RVs : breaking telephone receivers, extreme close-ups on eyes, and sidewalk squares that light up, but they maintain a strictly surface value that leads ever back to the musician, the music and the lyric, or destroys these three elements for the listener by drumming up contrary visual associations to those imagined when at home with the record or compact disc. The rock visual image is often pure fantasy, surreal in nature and rich by design, but it has come second and remains secondary to the selling factor of star and music.

Harkness writes of the few daring musicians who have made videos without emphasis on themselves, though the music still stands out as primary. Now that the RV is a fast financial success, as film was at its inception not 100 years ago, musicians will doubtless compose with images in mind. This wholistic approach is a key process in the creation of audio-visual works of any note. Yet, there is the question of the video medium taking on its own personality separate from radio, painting, theatre, photography, and film. Outside of computer graphics, the effects of which can be accomplished through animation on film, video has little to call its own. It is, in a sense, in a vacuum surrounded by the rest of the forms of cultural communication, not the least of which is film. There is one central difference, however, which is linked to videos dwelling within this identity vacuum.

After the video image has made the trek through the wires to the picture tube, it is projected via cathode rays through the vacuum to the screen. This entire process is immediate and the image has begun its motion even as the video lines are beamed onto the screen. It is faster, in every way, than film : cost, production to screen time, editing and accessibility ; one need not get dressed and go out to see video. Video incorporates all previous media and reaches every possible audience. It is a means of communication between people and other people, nation and nation, people and computers. It can inform, teach and entertain. Video is very much a 'popular' medium borrowing its output from its immediate surroundings and changing with the times.

Video is the natural medium for the visual expression of rock. Since rock'n'roll first hit the music scene it has always affected or reflected popular social trends, and quite often caused some. Rock has, like television, seldom set out to be too political or philosophical. It is only recently with the ever-increasing popularity of the anti-nuclear and the welcome realization of the political force behind women's issues, that rock has begun to take these things into its repertoire, expanding beyond the simple minded babybaby-lust, brutality, and jilted idiot songs, which unfortunately will always exist unless some wonderful transformation take place. Similarly television has taken on these new popular subjects at a time when the two media, rock and video, have realized their natural affinity. Perhaps this media-merger will help insure that these topics do not go the way of obscurity like so many fads of fashion ; it cannot help but raise the social awareness of a greater majority of the public by the osmosis of message into media that must occur to achieve a recognizable quality. Thus, the social reality will take a stronger step forward, be it through revelations of individual psychic or communal relationships.

In this affinity between rock and video lies the all-encompassing entity that is the morpheme of video and video technology : the single factor that can create or destroy an effective communication. For years both have infiltrated the cultural strata and now that video is becoming a central force in communications, the rock industry is using it to sell. But because each is a universalizing social phenomena, the sudden world-wide accessibility to both, through the satellite dish, has brought them under the critical eye, which tests the value of that which has the potential to be meaningful. Video and rock have always had that potential by their ever-present influence on the modern society. It is in this social sphere that video finds its personality : its own particular strength. The transient vacuous identities of video and rock assure them creative immortality. They achieve this quality in their situation as culturally affected and effective entities. It has come time to take a closer practical look at each of them within that framework. In doing so it will demand of them a culturally*-responsible creativity. ●

Sam Zero is coordinator of the London Filmmakers.

* It is important to understand that by culture I mean the whole breadth of social action – a point of semiology too often forgotten for an elitist understanding of the word as art.