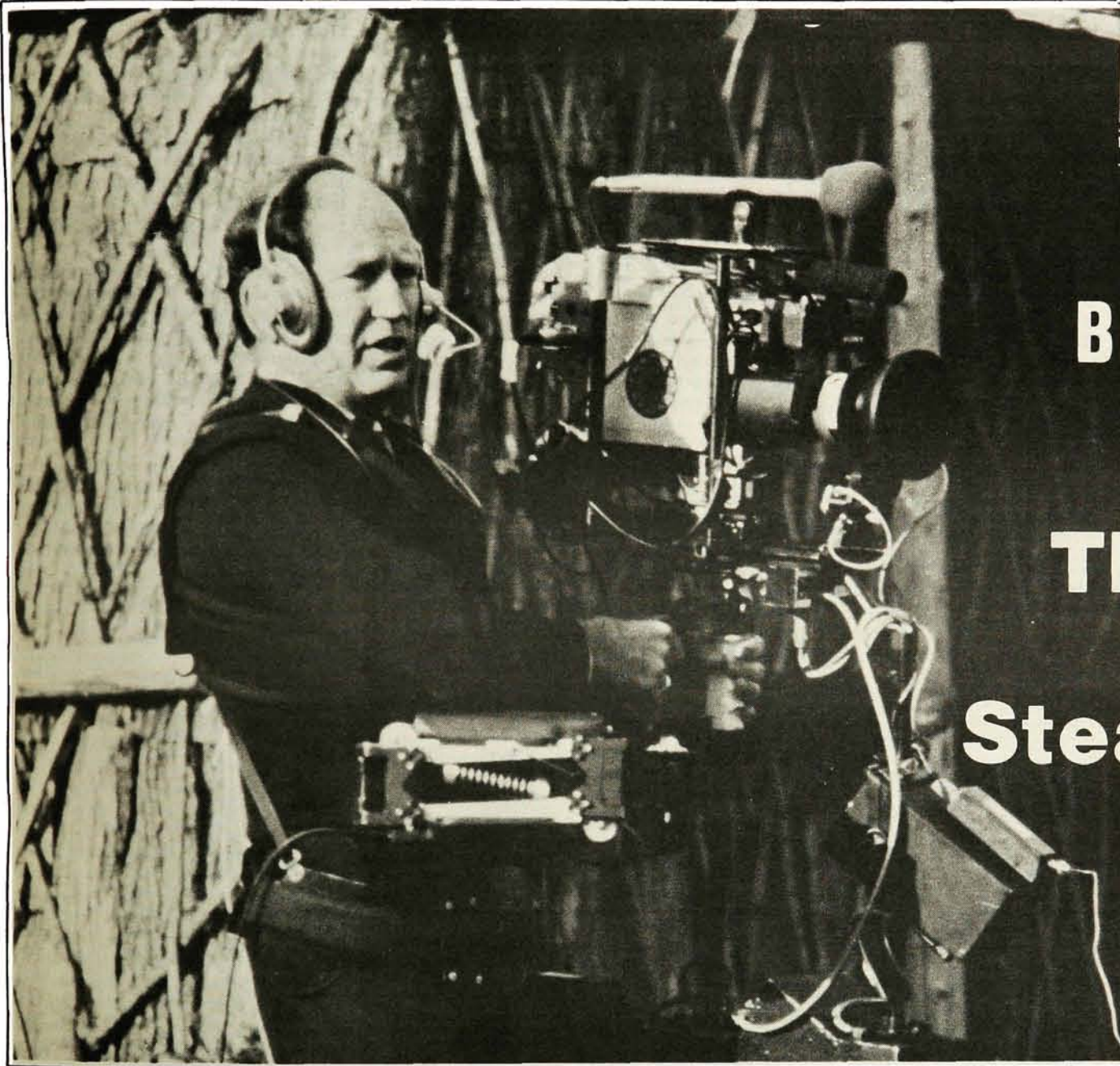


SPECIAL REPORT



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.

Bob Crone and his son, Dave, are considered to be Canada's top Steadicam operators, with 83 documentaries, 14 features, and 55 TV commercials

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

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 disassembles 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.

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.

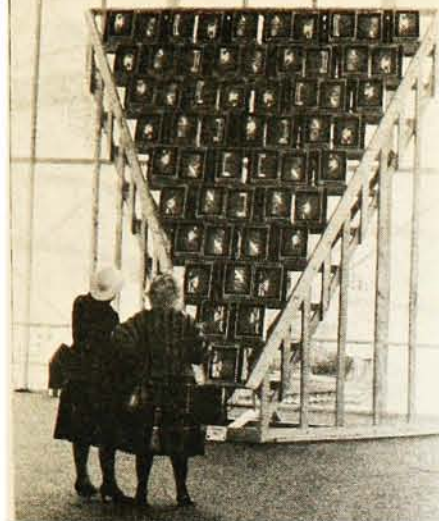
The best reason to use it, I would say, is because it looks at a scene more in the way a human being would. A human doesn't walk in a straight line like dolly

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 own 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 consummate 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

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

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!

Cinema Canada: Can you describe the Steadicam system you own and the modifications you've made?

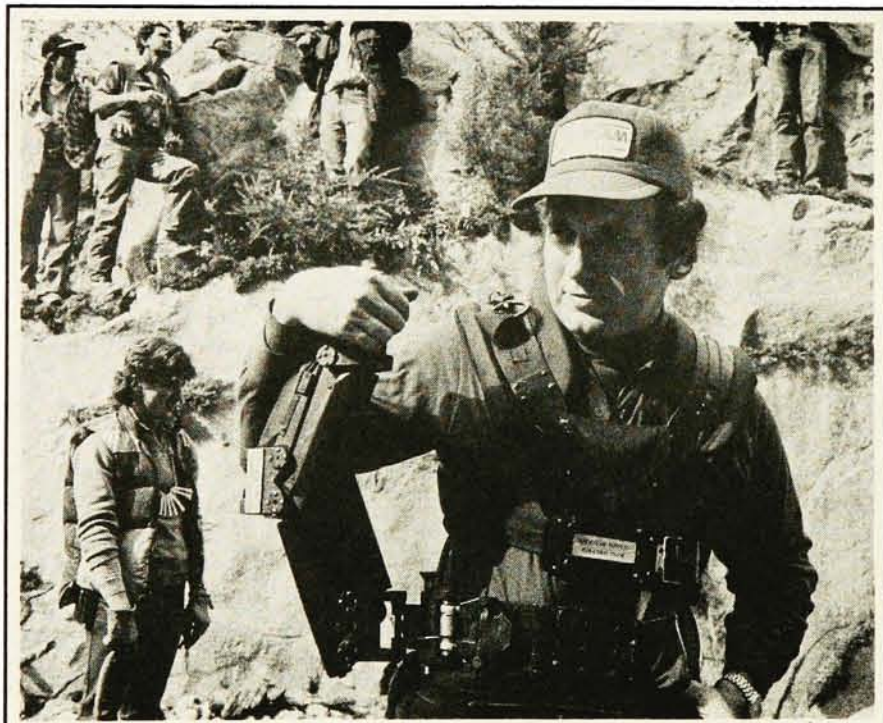
Bob Crone: Well, there are a lot of things on our system that make it different. When I was out at the factory over eight years ago, I tried on the very first Steadicam in its very rough form. At that stage I told Ed DiGiulio and Garrett Brown that I wanted the first one off the production line. They 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 encumbrance 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.



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

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*,

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

Photo: Robert Semeniuk

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?

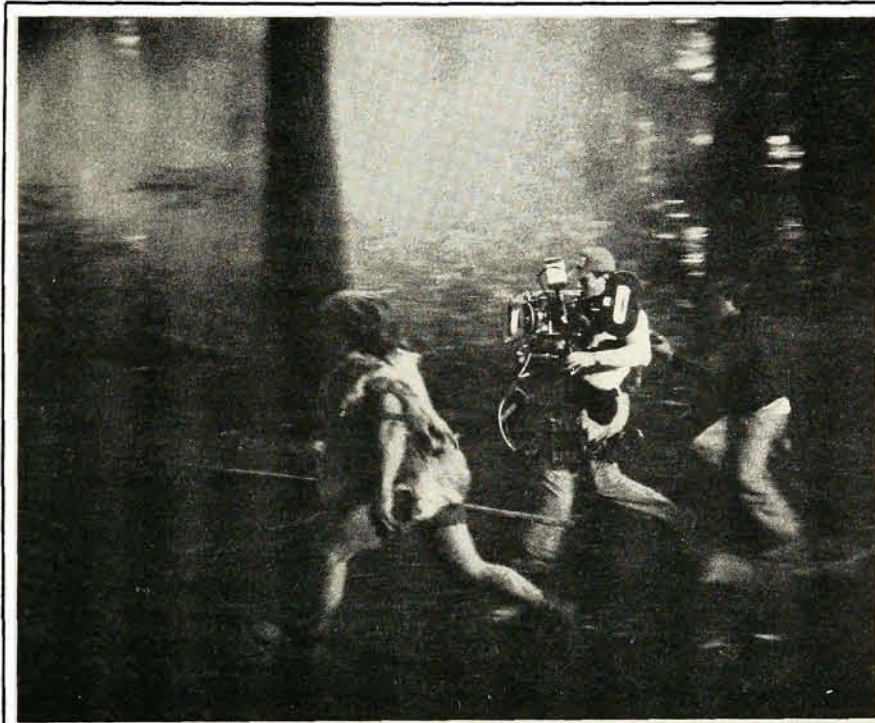
Bob Crone: Well, they'll often give me a copy of the script, show me what they want and describe it as they imagine it. I'll look at what they're planning and, if I can, add to that something out of my experience and skill that I think will enhance the picture. I'll make that suggestion. Often that means 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.



● 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.

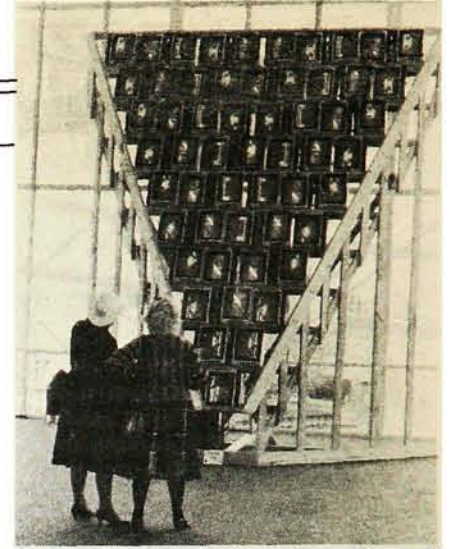
So I've learned to scan the peripheral area of vision, to scan the actual action and to scan the viewfinder in sequence, and sense my position in relation to upcoming obstacles, door jams, stairways, that makes it possible for me to fly that camera through tight situations, otherwise you'd be bumping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

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



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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?

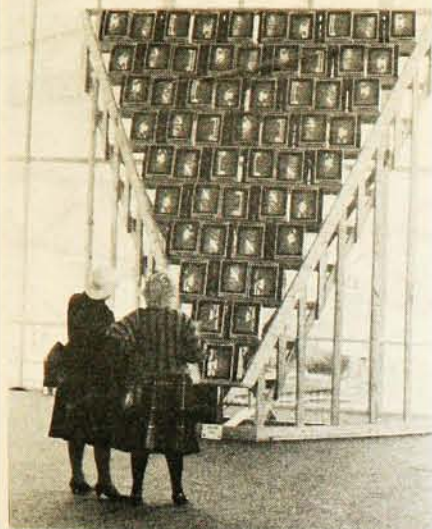
Bob Crone: A lot of stick-to-it-iveness, determination and a sensitivity to the composition and framing and a knack of handling people well. A willingness to criticise your own work constructively and to accept criticism from others and the time to learn to do it all well. I notice that the work I've 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.

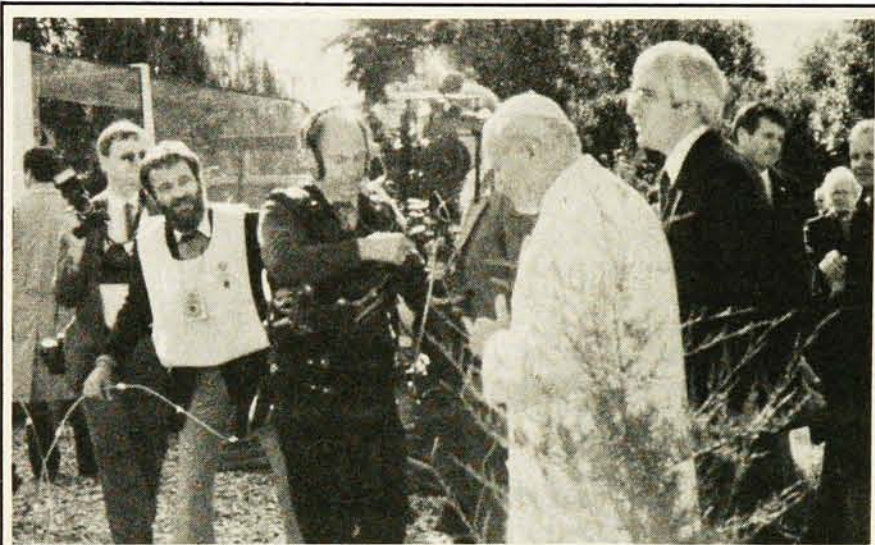
Cinema Canada: Do you consider the Papal Tour a highlight to your career?

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.

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 church. 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.



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

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