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, double-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 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 center 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...
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. His experience has since grown over 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 shooting, was Superior, a IMAX film starring Tom Selleck and realizaed a very good Superior. And it wasn’t long after that I saw the Steadicam and realized a lot more was involved that 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 Steadicamizing. 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 it. 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. He 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, critizicing 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 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 for the shoot. They were very pleased with the dailies and had David on for several days whenever there was 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
Cinema Canada: Do you video-tape at all your locations?

Bob Crone: Oh yes. Use the video tape so that you can then specifically discuss details of that picture with everybody, rightfully equipped, well-acquainted with the tools. What have we discovered, much as Wm. F. White in Toronto discovered when they had Steadicam for rent. They then wanted to have it on hand. So they thought the weight was that all 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; 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 Cucumbers, 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 have 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 so I can see 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. I also have to bring with me the camera and lighting and the Steadicam, and of course, the Steadicam operator.

Cinema Canada: What comments do you get after a shoot?

Bob Crone: There are many. I did a picture in Toronto and the Steadicam was called Seduced for C.B.S., starring Greg Harrison. In one scene in the Kensington Market area, here is a scene where a volunteer came up to me and complimented me on my Steadicam work. It was as if he had never seen a camera was out there—because you just have to look and the camera is there 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 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 make 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 Steadicam 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 learn how because they had a bad experience with it before.

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 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 good for you, it’s good for the others, but setting targets for yourself to move off one frame and on to another frame in a specific number of seconds without losing the square 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 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 and it’s a camera that’s mounted on a motor to move a camera to move at speeds up to 27 mph in any complex combination of straight lines, curves, elevation and speeds. It’s been used regularly on
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 role 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, forwards 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: 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 the Pope. As he got up to speak, he picked up the microphone and turned himself 180° right around so that his back was to the people world-wide. I knew that I was the only camera they had covering the Papal Tour, and if I 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.