Curt Schaller. June 2009.

Michiyo Funayama in the artemis booth at Showbiz Expo NY. 1998.

I first met Curt O. Schaller, BVK, SOA, in 1998. It was his first Showbiz Expo in New York. His booth was bare: no carpet, no electric, probably no sign. Michiyo Funayama, Steadicam agent from Tokyo was taking pictures (above right). I thought perhaps Curt was a Leica representative, because an M6 seemed permanently affixed to his face. (Curt is an accomplished still photographer and Leica fanatic.)

Within the booth, there was a camera stabilizer with a bright gray finish. This was his Ur-artemis.

That's artemis with the a lowercase "a" that makes it difficult to begin a sentence, as with cmotion and sachtler, but not ARRI.

So why in the world did the world need another camera stabilizer?

Ever since Garrett Brown, ASC, invented the Steadicam and Cinema Products first released working models in 1975, the camera operators who used them were a very innovative bunch. Steadicams almost cried out to be customized, modified and adapted to the individual styles of those who operated.

Of course, the "guiltiest" of these was Garrett himself, who not only was the "A" list Steadicam Operator on major shows (*Bound for Glory, Marathon Man, Rocky, The Shining*), but also kept on innovating. In between jobs, he was a Pied Piper Rock Star, constantly conducting classes and attracting a great cadre of talented new Steadicam Operators.

One of these superstars of stabilization was Curt O. Schaller in Munich. Over time, he figured out ways to make the vest more comfortable and form-fitting, the batteries longer-lasting and hot-swappable and the cabling HD-SDI compatible. And that is how artemis started.

The story really began at the Montreux 1996 trade show where Curt met Transvideo President Jacques Delacoux. Curt had his first prototype and Jacques showed him to the first Transvideo Rainbow Monitor. "It was the first flat panel monitor at a time when most Steadicam operators used bright green CRT displays and if it wasn't green, it wasn't good," said Curt. "The relationship with Jacques and his monitors was win-win from the beginning."

Curt started out working as a camera assistant at Bavaria Film Studios in 1984 in Munich. From 1988, he was shooting international documentaries, TV dramas and comedy series. He grew tired of handheld, found the tripod boring, the dolly too big. In 1994, a German DP and first generation Steadicam Operator coached him on the Steadicam 2 and gave him an old vest. Curt explained, "There was one problem. I'm a small, skinny operator and I didn't fit into the vest. I needed a lighter and smaller rig. So I started playing around with bits and pieces and eventually made a complete unit, as did George Paddock in the US.

"I was shooting ENG and film at that time. If you were shooting film, you used the film version of Steadicam. Video required the EFP version. I wanted something to do both: to balance a film camera with magazine or a TV camera with a zoom lens. It would be good to be modular, come apart, fit into one Pelican case. Also, the Steadicam used Imperial screws and fittings and you had to go to the Harley Davidson store to get those in Germany. I wanted metric screws.

"In 2000, Sachtler asked me to join their company in Munich. They made tripods and they wanted something different. At NAB in April 2001, we introduced sachtler artemis with an already-patented gimbal, an HD wiring harness, tuning and dynamic balance to accept almost any camera at any weight. This was the first stabilizer with 3 video signal wiring for HD RGB. You could switch from SD to HD and 24 to 12 volts. The artemis system got HD SDI wiring soon after. This was important for the Japanese market, where I had visited NHK in 2002.

"Vitec took over Sachtler management. I learned a lot from the English designers and engineers working at Vinten headquarters in Bury St. Edmonds. I flew there every two weeks. I joined ARRI in 2016 when they acquired the artemis line. We have had a good run; it's been a good year. I'm happy to keep the business running."

Curt is hard to miss at trade shows. When they return, you can identify him as the man who appears to be a Leica street photographer among the exhibits. His other signature characteristic is the way he almost appears to be like a bespoke tailor in the way he fits camera operators with the highly adjustable artemis vest and adjustable components.

Curt Schaller at ARRI 2021

2008. artemis carbon fiber vest modular 7-segment design.

2010. Curt Schaller with ALEXA on artemis Cine HD Pro stabilizer system from Sachtler, with ACT2 Vest, artemis ACT2 Spring Arm, Transvideo CineMonitorHD 6" SBL, and Anton/Bauer Dionic-HC Li-Ion batteries.

2008. RED ONE on artemis with Transvideo monitor.

2016. Curt Schaller and Jessica Lopez with ARRI artemis Trinity.

20 years of artemis camera stabilizer systems

Curt O. Schaller, BVK, SOA dancing with TRINITY. Photo by Yves Krier.

by Mark Hope-Jones

In 2021, artemis celebrates 20 years in the field of camera stabilization. For the past five of those 20 years, artemis has been part of the ARRI product family, advancing new technology and being used by some of the world's top filmmakers. The flagship product is TRINITY, a 5-axis hybrid camera stabilizer that combines classic mechanical design with advanced active tilt-and-roll axis electronic stabilization. Complementing TRINITY are artemis vests and spring arms—all part of a complete and ever-growing system.

The inventor of artemis is Curt O. Schaller, BVK, SOA, who is now Product Manager for Camera Stabilizer Systems at ARRI in Munich. It all began in 1998 when Curt was tinkering with his first artemis model and trying to generate interest in the industry. A key moment came when he took his handiwork to Showbiz Expo in New York that year, and was approached by Michiyo Funayama, who today, by a twist of fate, also works for ARRI as a Local Business Development Manager at ARRI Japan.

"It was a great turning point in my life when I talked to Curt at his small booth at Showbiz Expo," said Michiyo. "I convinced him to bring artemis to Japan, partly because the vest was able to fit the smaller body frames of Asian operators, and partly because all the parts were metric, making it easier to service in Japan—American stabilizers offered neither of these advantages. Curt has always listened to operators, focusing on how usability and service could be done quickly and simply. The fact that TRINITY is now recognized worldwide, with artemis as its foundation, is a testament to his great work."

In 2000 artemis was acquired by the Sachtler Corporation, based in Munich. With the help of Sachtler engineers, the artemis system was made ready for a full market launch at NAB 2001. It was a complete system of arm, vest, and rig, manufactured in Europe. The breakthrough was that it was the first stabilizer designed for HD digital cinematography, using a patented HD-SDI wiring loom. Efficient battery management was critical, since an HD camera drew around four times the power of a 16 mm film camera.

This HD capability, as well as the attributes Michiyo had recognized at Showbiz, helped artemis establish itself in the Japanese broadcast market, which was at the forefront of HD capture. In collaboration with Japanese broadcaster NHK, artemis rigs were used at the 2004 Olympic Games in Athens.

That same year, with the system gaining greater traction in Europe, a DP/camera operator named Igor Savatovic took notice: "In 2004 I went to IBC to buy my first big stabilizer rig," he said. "I saw Curt at his booth with the artemis and asked if I could try it out, and immediately he started putting the vest on me. The thing I remember is that he completely disassembled it first, and then adjusted it strap by strap as he helped me put it on. Nobody else had done that before, and for the first time in my life I felt completely comfortable carrying a rig.

"So, I bought the artemis and it still works well today. I stayed in touch with Curt and would call him a friend; he has introduced so many new and useful innovations for operators. That's what makes artemis stand out—not just its modularity and ease of use, but it is a system that has been regularly updated over the years. It was the first rig to be designed for HD-SDI, the first with hot-

Igor Savatovic with TRINITY.

Frédéric Chamberland, SOC with an early model artemis.

swap batteries, the first to use carbon fiber."

Reflecting on these incremental technological improvements, Curt said, "All of this was only possible in a team and with the support of other companies. One company that was there for artemis from the very beginning has been Transvideo. It was Jacques Delacoux who provided me with a monitor at my first trade show in 1996, starting a decades-long collaboration developing the specifications and applications of monitors. To achieve such a high industry standard, you need top engineers and CAD designers. Without the great work of the international design and service team, and the support of regional dealers over the past 20 years, none of my ideas would have been implemented in a product."

ESPN was the first major broadcaster in the United States to produce sports programming in HD, and artemis started to establish itself on the East Coast. An early adopter in this market was operator Frédéric Chamberland, SOC. In fact, he was the first North American to buy the complete artemis system. "It was my very first rig and one of the biggest purchases of my life at that point," said Frédéric. "Naturally, I was anxious about making such an investment without having seen the artemis in action, but I remember speaking to Curt on the phone and he answered all my questions. I bought the rig and am still operating an artemis TRINITY system today, with beautiful results. Curt has always stood by his products and I have to thank him for creating a system that evolves with the operator, and not the opposite."

At IBC 2015, the new artemis TRINITY stabilizer, developed in cooperation with FoMa Systems, caught ARRI's attention and Curt found himself hosting a crowd of ARRI senior managers and engineers at the Sachtler booth. At the same show, ARRI was showcasing its new ALEXA Mini camera, which was an excellent companion for TRINITY, so the timing was serendipitous.

ARRI entered into negotiations with Sachtler to acquire the artemis product line, and the deal was finalized in time for ARRI to display TRINITY as an ARRI product at NAB 2016. Thanks to the partnership with FoMa, products such as the SRH-3 and the 360, as well as the high-performance external wireless modules ERM, have emerged over the past five years. The cooperation between ARRI and FoMa focuses on function, compatibility and ease of use to address the increasingly complex requirements of the Cine and Broadcast industries in the future.

Work behind the scenes was intense. Curt's team was taken on by ARRI, and together with ARRI engineers, they meticulously migrated the artemis technology, re-tooling every component from new drawings to meet ARRI's tolerances and specifications.

"The artemis philosophy is, and has always been, focused on ease of use," said Curt. "We don't want operators to waste a single second on set; it's better for the storytelling if they can spend time speaking to the director and observing the way actors move, instead of fiddling with equipment or stressing about balance. Many productions can only afford one camera, so artemis equipment was always designed to allow fast transitions from the rig to a tripod or dolly and back again, with no delay. Having a TRINITY on set brings so much production value."

In residence at ARRI, artemis has influenced other developments, such as the ARRI SAM (Stabilizer Adapter Mount) plates and the decision to construct ARRI Signature Prime lens housings from magnesium to make them as lightweight as possible. Expertise in efficient battery management has also benefitted ARRI's wider product line. All in all, the move of artemis to ARRI has been constructive for both parties. "ARRI has brought artemis to a level that few could have done," said Curt. "We're part of a bigger team here—a collection of smart people with whom you can talk and collaborate."

This cross-pollination and its contribution to advances in cinematic storytelling was exemplified by the combination of ARRI products used by director Sam Mendes and cinematographer Sir Roger Deakins CBE, ASC, BSC on the film *1917*. An ALEXA Mini LF camera and Signature Prime lens worked on a TRINITY rig to capture the longest take in this masterclass of long takes, operated by Charlie Rizek.

From its earliest days, artemis has been committed to education, not just sales, and ran about six training sessions per year. The 20th anniversary is a celebration of the results of that training and assistance as much as of the products themselves. Many operators were helped into the industry by artemis, and have stayed loyal to the brand throughout their careers.

Happy anniversary, artemis.