

# As The Industry Re-Tools: New Cameras And Cine-Style Shooting Tilt The Camera Support Vendors Towards Bigger Profits

Get a grip: George Jarrett talks to three of the major players in the camera support market – Vinten, OConnor and Miller – and wonders if there are many technical and functional advances still to find, and what impact the new 4K cameras have made.

Most of us probably think that every shoot begins at the lens. This used to be a given because a key grip and his grips will have rigged the camera, facilitated any crane and dolly operations and put in the lighting controls. The grip head mounts for attaching the flags and cutters that keep light from parts of any set would also be waiting for the director, DOP and his operator. When you look at the camera support market today, especially now in the digital age, and consider that production crews are much smaller, production times are shorter and budgets are often insulting, it makes sense to think that everything starts ground upwards. Think optimal balance and drag control.

## Sophisticated drags

In what is a very big market sector, the VITEC Group has a massive spread through its subsidiaries Vinten, Sachtler and OConnor. When initially formed, the group continued to run the brands as competitive businesses, particularly Vinten and Sachtler; OConnor was and remains very much cinematography specific. "Over the years this evolved into a dual brand strategy where we offered broadcast studio, pro-video, mobile production, and ENG users in each payload bracket or application the choice of a Vinten or Sachtler product. In cine we offered the choice of Sachtler or O'Connor," said Andrew Butler, strategic planning & product manager at Vinten.

"Essentially Sachtler is quicker to set up and more portable but offers less sophisticated functionality in use performance than Vinten, or OConnor for film applications," he added. "The attributes of each brand has led to their dominance in certain applications where those qualities are most important: Vinten dominates sports OB because those operators benefit most from the ergonomics of perfect balance and sophisticated drags to control large lenses and cameras used over extended periods."

What has been the effect of the gradual demise of film and the arrival of so many digital cameras, in terms of multiplying the size of the market?

"Interestingly, the latest high end digital cine cameras - when fully accessorised - require very similar supports to the 35mm film cameras they replace. However, the substitution of film for digital has driven a change out of quite a lot of equipment in the cine industry. Supports have been part of that change out, and we have seen an increase in business driven by the new

camera types," said Butler.

"Digital cinema has also brought the price point for entry into the 'cine look' right down, making it accessible for other types of programming. Because of this price point shift and the convergence in workflows between digital cinematography and - for example - episodic production for TV, we are seeing OConnor products being deployed in applications that used to be the preserve of Vinten or Sachtler," he added. "There is a real demand for products which have that cine heritage and feature set, but in a much smaller and lighter product to work with: the smaller camera and lens combinations, such as the C300 and EF lenses, will produce that film look."

"You only have to spend ten minutes with someone working independently with a tripod on a film, and trying to get lots of shot coverage, to realise that all tripods - in general - are inadequate for the task" - Steve Turner, product manager, OConnor

In his strategic role Butler will have seen so much automation and robotic domination in studios. What advances in terms of technical design and functional advantage are left to provide there? "Robotics is a very fast moving frontier of camera support," he said. "Originally the proposition was based almost entirely on cost savings in the



Sachtler's Ace L Tripod System

production of very simple, formulaic programming such as news. The ROI for broadcasters making that investment was and remains excellent. Full show automation, where all the events in a program are essentially driven from a timeline, takes this to a logical next step, but requires robots that are more 'situational' aware." Vinten showed a system at NAB that scans the room with an invisible IR laser and builds a map of the environment to help robots navigate.

"As technology moves forward the capability of the robots to perform more and more sophisticated moves - and particularly advancements in the user interfaces and programming capability of the devices - means we will see robots move out of the news studio to provide not just cost savings but new and previously impossible shots in applications like sports OB, with much less human supervision than even the best automation systems of today," said Butler.

## Hands on pan bars for two hours

OConnor product manager Steve Turner had a high-rev take on Vitec group market shares. "Essentially it is like a 4X4, a sports car, and a city run around.

"Each vehicle has four wheels, brakes, a steering wheel, but each is particularly good in certain applications," he said. "Sachtler is portable, fast and robust, and so good for newsgathering and documentary-style production. Vinten is so ergonomically good when you are at a sports match with hands on pan bars for two hours! OConnor, versatile and robust, is good in rental houses when working on a variety of different shoots with different cinematographers and the choices of cameras, lenses and filters."

"OConnor is used in movies, high end TV productions and drama, and commercials - anything where there is a story being created from print rather than real life being documented and re-broadcast," he added.

Apart from lighter/stronger structural materials and keen pricing, is it possible to keep advancing camera heads in terms of new technology and new functionality?

"Yes. You only have to spend ten minutes with someone working independently with a tripod on a film, and trying to get lots of shot coverage, to realise that all tripods - in general - are inadequate for the task," said Turner.

OConnor 60L Tripod with 2575D and Sony F65



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Production crews are getting smaller and production schedules are compressing: are the key grips and grips of the unionised past still the guys who set up the camera platforms, the dolly tracks, cranes, etc., or are times changing in the way people service sets? "Not at the high end O'Connor currently works at," Turner said. "Certainly the budget is a major constraint, but the types of shot needed to create the director or cinematographer's vision would not be changed due to budget. "Technology change is what will bring this pricing down," he added. "For example, a small indie movie where a smooth straight tracking shot may be done with a slider rather than a dolly. We were fearful and prepared for the digital cinema cameras driving the payload of everything down, but actually with the complete dominance of the Alexa - heavier than a film camera body - and with big lenses, two onboard monitors, power, RF system and EVF being as heavy as the mag of film, we have actually seen the payload go slightly up." This may well change soon, but right now everything traditional seems to be OK. "This means that we cannot fully replace the long dolly shot with a slider, or the Steadicam shot with a

Movi10, etc. Acceptance of smaller form factor cameras and technologies removing glass from lenses may mean we can change down on physical support equipment," said Turner. "Electronic intelligence, animation improvement, CGI and automation are bigger threats to current working patterns. The main impact digital has had on us is that in general it has made 'cine-style' shooting more globally accessible, and has vastly increased our market as our products are particularly good for shooting cine style," he added. "Digital has been a relatively slow disruption actually and in the early days quite unnerving. 'Phantom Menace' was shot digitally, and here we are 12 years later with 'True Detective', 'Wolf of Wall Street', 'Boardwalk Empire', '12 Years a Slave' and others still being shot on film." When Turner talks digital cameras with core users it is basically the Alexa they currently favour. "All the camera supports we make care about is what sits above them in terms of technology - the mass of the setup and the height of this mass at a basic level for controlling the inertia with smooth drag. Then at the next level the positioning of controls for ergonomic comfortable use," said Turner.

"When Turner talks digital cameras with core users it is basically the Alexa they currently favour"



Miller celebrated its legacy with the '54 Classic at this year's NAB

"Therefore a reduction or increase in camera setup may affect us, or a changing mode of operation. If people stop using eyepieces and use remote rear mounted monitors, then perhaps the placing of the controls would need to move to a more optimal position. This kind of thing," he added. "What is good for O'Connor out of NAB is that more cine-style, 4K, global shutter, PL mount cameras were launched, proving that the camera manufacturers also see a trend to cine style shooting in more non-live environments."

**Sufficient drag to stop overshoots**  
Charles Montesin, global marketing and sales manager with Miller Camera Support Equipment settled one question; do fluid heads contain any fluid, or by magic are they just friction free? "Definitely every fluid head Miller makes contains fluid. We have refined this fluid over the years to make it the right viscosity, and this viscosity is maintained over a wide range of temperature from -40 to +60 degrees centigrade. This fluid is very expensive - over \$1000 per litre," he said. What advances in terms of technical head design and new/improved functionality have been required by the rush of digital and HD/SLR cameras? The Miller Cinline 70 must reflect many of the positive changes. "The fundamentals here are smoothness of pan, tilt and diagonals, hence the new Miller slogan: 'The Right Feel'."

HD/SLR cameras and the declining size of all cameras has created the need for a larger range of counter balance and camera plate sliding range, due to varying loads; say a Canon C300 just fitted with prime lens to the same camera fully rigged with a 30-300mm lens, Matt box and rails," said Montesin.

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"Suddenly the weight and centre of gravity has totally change and balance has shifted. To correct for the new set up, the camera has to be

rebalanced, the correct counter balance selected and sufficient drag applied to stop overshoots." Miller is seeing smaller budgets resulting in lower cost shoots. "Speed and ease are the key factors these days. And bearing in mind that most shoots are going to be one man operations, Miller pays a lot of attention to ergonomics; for example, the Cinline 70 has a quick side-loading platform which enables the camera to be taken off, remounted after re-rigging and rebalanced very easily. The pan, tilt drag controls are all at the back of the head in one location and all the locking levers are made long so they can easily be flicked on or off when required," said Montesin. Rental houses are key customers for Miller, but TV stations are by far its largest user group. How does R&D manifest itself given that we now have cameras like the AJA CION and the many and varied Sony 4K offerings: cameras get smaller but they will use a lot of glass? "We totally acknowledge that camera weight is becoming negligible and lenses make the bulk of the weight. The frequent changes in lenses cause balance and COG shifts which we have to cater for. Our heads can support these changes now however," said Montesin. "Our R&D is always looking for ways to enable quicker re settings."

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