

## **Movie Industry Moving Towards All-Electronic Cinematography**

**By Douglas I. Sheer**

**In the wake of the just completed NAB Show in Las Vegas it is possible to assume that the industry is rapidly approaching the tipping point in cinematography where film will be all but abandoned and in its place an all-electronic workflow will emerge taking us from conception to screens. This was inevitable, but it has taken almost a half century since the idea first glimmered in the corridors of production, back in the 1960s. Being myself and early adopter of the Sony CV Portapak, was the moderator of a panel held in 1970 which I called “Video is the answer, what’s the question?” and featuring a panel of film and video protagonists dueling over which was preferable. That video has won today is undisputable.**

**How this progressed, however, is pretty interesting. First, video was used as a mirroring device along side dailies and called ‘video assist’ used to capture what was essentially a security master that would be instantly reviewable before film could possibly be developed. Then came SMPTE time code and non-linear editing and that eroded the use of film editing tables like KEM and Steenbeck, giving way to Digital post. Probably the last phase has been to adopt the use of video cameras and camcorders. Among the first step in that direction was the deployment of those featuring 24 frames as a choice instead of 30 fps. But those early models lacked the sensitivity and latitude of image making that film stock offered, so they did not succeed completely. But, as HDTV proliferated and 3D started to make inroads, filmmakers demanded to have electronic alternatives for movie-making. Simultaneously, graphics and effects were increasingly becoming the exclusive province of computers and software programs.**

**A variety of changes in the industry have forced the issue. Among them, that distribution, now called Digital Cinema, has transformed most theaters into electronic cinemas, bringing in the signals – instead of film cans – via satellite feeds to servers and video projectors. With video camcorders and cameras**

becoming so much more high resolution – HD giving way to 2K, then 4K and now 8K – the industry has plunged in to Digital Cinematography feet first.

Perhaps the latest, but by no means the exclusive solution, is the Sony F65 electronic cinema camera shown at the Las Vegas convention.

The F65 CineAlta Digital Motion Picture Camera builds upon the proven CineAlta™ platform, and represents the next generation technology from Sony for Digital Motion Picture acquisition. It's the Industry's first 8K 20M-Pixel CMOS imager. From this imager, the F65 will derive HD, 2K, True 4K resolution, and can go higher. It uses a 16bit Linear RAW output and adheres to 1.9:1 aspect ratio, DCI Projection standard (4096 x 2160 or 2048 x 1080). There is a choice of picture composition as needed: 1.85:1, 1.78:1, 1.66:1, 1.33:1, 2.35 spherical, 1.3x anamorphic, or 2x anamorphic cropped plus features a wide dynamic range, low S/N ratio, and high sensitivity, with optional SR-R4 on board SRMemory recorder. And, HD-SDI Monitoring outputs with viewing LUT's are provided. The camera can shoot from 1 to 120 fps and offers 16 bit-RAW recording in SRMemory™ card although they are sold separately. With its normal ability to capture in 4K and its further ability to go up through 8K, the F65 is a true cinema product and its footage shows that.

Other well-known 4K cameras include: ARRI, Dalsa, RED, Phantom, Olympus, NEC, Panasonic, Canon, JVC and Hitachi.

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