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Jerry's Crazy Tool

How Video Assist Came To Be

By Mark Adler, Owner, VAIdigital

The tool I use today in the business of making commercials and feature film has an interesting history. It was originally called "Closed Circuit Television Applied to Motion Pictures". Amazingly it was conceptualized by entertainer by Jerry Lewis in the year after I was born (1956).

It was engineered and perfected by the Paramount Technical Departments in concert with Ampex Corporation under the supervision of a man named Bruce Denny.

Like all aspects of the invention of television, the innovation of this devise may have been accomplished some time before 1956 by others either in Europe or elsewhere in the United States. Indeed, there are references to this affect by ASC member Linwood Dunn who said he recalled that a British filmmaker had such a machine before 1960. Ah, but we find that Jerry Lewis holds a patent on the machine - not the concept.

The literature tells us that Jerry Lewis thought that it would be useful to be able to see in advance of rolling film, if cues and comic entrances were working.

He had his chance to experiment with this notion in his directorial debut on his film "The Bellboy" made in Miami Beach, Florida in 1960.

There are pictures of the machine but this is how it was described: A closed-circuit industrial type RCA Vidicon Camera mounted on the BNC film camera used as the production "A" camera.

The television camera was equipped with a variable focal-length "zoom" lens that permitted it to match the scene content of all the BNC lenses except the 18mm wide-angle lens.*

In the early 80s when I came into the business, the video assist camera was an engineer's nightmare. The small black box was a tightly packed mess of wires surrounding the same sort of tube mentioned earlier, only updated slightly with a plumbicon but still black and white.

The technology has evolved dramatically since then. At this writing, the video assist pickup is integrated into most 35mm film cameras, including models made by Arriflex and Panavision and some 16mm film cameras.

In 1960 it was basically a Parallax view; that is, a video camera strapped next to the film camera saw something similar but not exactly what the D.P. viewed.

Aside from the integration of the systems, video assist imaging is now essentially a tiny video camera that sees the same image the camera operator sees by means of a beam-splitter.

The beam-splitter then "sees" the film camera's ground glass and takes the image coming from the lens and essentially

splits the image into 2 parts -- one going to the eyepiece of the camera and the other going to the video assist image module.

Video assist technicians are able to attach a cable to the video assist image module and plug it into a TV/ monitor which allows everyone to see a video representation of what the camera operator sees.

Most current video assist image modules produce a color image that looks far superior to the black & white images predominant less than a decade ago.

Interestingly, as with most terms that become common, the phrase video assist has also become quite a generic term. It's now used to describe the module attached to the film camera, the picture the video assist image module generates and even the medium on which the image is captured.

Back in the 80's, I would occasionally be asked to provide an image only for the clients and director. There was a fear (by A.D.s and producers) that misuse of the medium would cause overtime. Directors or agency creatives would sometimes look back at every take.

In fact, I once saw a formula in Backstage Magazine that read simply, VA = O.T.. However, the learning curve was short and commonly, for the last 20 years we have recorded images onto a tape format such as VHS, 8mm, Hi-8, DVCAM, or Mini-DV. Sony developed a tape recording devise which became popular, called the Combo 8 (PVM 8041), an 8mm or Hi 8 version was often found on shoots because it conveniently combined the recorder and the display in one battery operated unit.

Video assist technicians in some markets like Detroit discovered that it stole work from them, placing the task of pressing record in the hands of the camera assistant (who surely didn't need the additional responsibility). It was coined the 'Mombo Combo' by Detroit camera assistant Dave Brush.

In 1995 I began researching new devises and heard about stable nonlinear systems for video assist recording. For all the years I have been in the business I dreamed of having the ability to randomly select takes for playback.

I knew that to get there, the most advanced way to record the video assist image would be with non-linear software recording on a PC or MAC based computer's hard drive.

Recording the video assist image to a computer hard drive instead of,or in addition to tape offers directors and producers a wide range of benefits. The most basic improvement being that the "recorded" image can be selected and played back without the need for rewinding.

If the image needs to be seen again, it's a click away and of course it can be "looped" over and over again for critical evaluation.

The benefits become apparent when the video assist technician is asked to playback a scene from hours, days, or even months ago by simply opening the appropriate file on huge portable drives, never having to rewind a tape or even search through dozens of tapes to find a scene.

This saves the director, and essentially the whole production lost time by eliminating wait time for tape to rewind or having to search for a particular take among several tapes.

As an example, lets say it takes an average of 1 minute to cue a take for playback, if the director or the client ONLY wanted to see 10 to 15 playbacks in any given day, we are talking about almost a QUARTER of an HOUR in REWINDING time.
Additionally, all departments benefit from playback as 'continuity confidence for script, effects, transpo... a quick review of a scene confirms placement a vehicle, person or object.

Another wonderful innovation is the ability playback takes at variable speeds such as 48, 60, or 96 frames per second. For example, a take filmed at 48 fps will be seen at 50% of the speed it was originally filmed, and one at 96 fps will be seen at 25% of the original speed.

Advanced video assist technicians may also be asked to take several camera angles or takes and roughly edit them together to show the director or client how the scene will cut together. There are many times a director will make several rough cuts to show a client different ways a commercial may be cut together or check to see that scenes shot months apart are working.

The video assist technician's job has obviously changed significantly since Jerry Lewis began directing. I find myself engaged on more and more video projects using non-linear functions for edits as well as protecting tape on playback.

As HD television permeates the market, new challenges will be met with more innovations by video assist technicians. We will still; as always, have to provide fast and efficient service for our clients.