

LEONARDO'S DREAM

The Showscan Format Makes Its Dramatic Motion Picture Debut

By Stuart Allan

Leonardo's *Dream* opens in a very dark room. A single candle sends flickering waves of soft orange light into the shadows. Glimpses of a 15th century setting are revealed as the light dances through the dark corners of the room in apparently random fashion. There is a lone man hunched over a table.

As the camera moves in closer, the audience recognizes Leonardo da Vinci sketching plans for one of his inventions.

It is an exquisite sensory experience, almost tactile. The details in the fabric of Leonardo's clothing are so realistic you can almost feel the texture. The imagery and sound demand the total attention of

the audience. It's like being in Leonardo's lab some 500 years ago: there is no sense of the flat screen, no feeling of separation between the audience and on-screen imagery. That's because *Leonardo's Dream*, which debuted in Milan last May as the centerpiece of a festival celebrating the genius of da Vinci, is the first dramatic film shot in the Showscan format.

Showscan cameras record moving images on 65mm film at 60 fps; the projectors run 70mm film at 60 fps, accompanied by six channels of full spectrum magnetic sound. At 60 fps, there is virtually no flicker, offering instead a seam-

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less image. Also, with the film moving through the projector this fast, a brighter light source can be used, resulting in pristine image quality and lush color saturation. These images fill a ceiling-to-floor, wall-to-wall screen in a specially designed theater which puts everyone in a choice seat.

In the past Showscan was used to send viewers on breathtaking roller coaster rides; on heart-stopping jaunts in



▲ DP Giuseppe Rotunno (right) supervises the shooting of *Leonardo's Dream* in Showscan.

speeding cars winding through twisting mountain roads; and on sightseeing tours past roaring waterfalls and steep mountain chasms. But *Leonardo's Dream* is Showscan as it's never been seen before. It has a story with humor and emotional content, and was shot almost entirely on soundstages with dramatic lighting, graceful camera movement and larger-than-life characters. In other words, it's everything Showscan pioneer and *Leonardo's Dream* director Douglas Trumbull promised the format could be.

Principal photography was shot by Giuseppe Rotunno, AIC, ASC, during three weeks of production last March. Peter Beale, president of Showscan Productions in Century City, Calif., declares, that Rotunno "is one of the world's greatest cinematographers. We worked together years ago on *Five Days One Summer*. Giuseppe was a natural choice to shoot the first Showscan movie made and shown in Italy."

Rotunno brought a unique perspective to the shooting of *Leonardo's Dream*. As a young man, he served as an assistant cameraman and operator for some of the top cinematographers in the world, including Leon Shamroy, ASC (*The King and I*, *Planet of the Apes*), Claude Renoir (*The Spy Who Loved Me*, *The French Connection II*), R.G. Aldo (*Othello*, *Senso*) and Robert Krasker (*Henry V*, *Romeo and Juliet*). As a DP himself, he has shot for such luminaries as Federico Fellini (*Amarcord*), John Huston (*The Bible*), Stanley Kramer (*On the Beach*), Fred Zinneman (*Five Days One Summer*), Mike Nichols (*Carnal Knowledge*), Arthur Hiller (*Man of La Mancha*), Bob Fosse (*All That Jazz*) and most recently Terry Gilliam (*The Adventures of Baron Munchausen*) [*F&V*, April '89].

"I learned something from every picture and from every director," Rotunno emphasizes. "I shot three pictures in one year without a day off. It is a passion for me. The most fantastic thing that can happen to a cinematographer is to work with a director you admire on a picture that challenges you."

The challenge on *Leonardo's Dream* was to maximize the full visual impact of the Showscan format by using the entire stage, or frame, available to tell the story, says Rotunno. "You need depth of field, because the audience can see everything. I shot every scene at stop T 5.6. On bigger sets you need even more depth of



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field. If you are shooting on a small set, or perhaps in a small room at a practical location, you could get away with using a bigger aperture." Also, since film was traveling through the camera at 60 fps instead of the standard 24, each frame received proportionately less light. To compensate, the DP used about four times as much keylight as he would have if he was shooting the same movie in 35mm.

Rotunno notes that the craftsmanship of everyone involved in making a Showscan movie must be faultless, from the costumes to the acting to the photography. "Everything must look authentic," he acknowledges, "so there must be very close cooperation between the director, cinematographer, production designer, costume designer and also the makeup artist."

Other than those considerations, there were no technical constraints. Most production was done on stages at Rome's Cinecittà Studios, with a few exterior shots lensed around Milan. Rotunno set his lights exactly the same as he would with 35mm, and made the same kinds of moves with the camera on cranes and dolly tracks. The camera itself was the new CP65, recently developed by Cinema Products. "Ed DiGiulio [Cinema Products president] deserves a lot of credit," Beale notes. "We told him exactly what we needed in a more compact and mobile 65mm camera, with a wider choice of modern optics, and he gave it to us within six months."

Rotunno points out that the 65mm format was abandoned by the big studios about 20 years ago. David Lean's *Ryan's Daughter*, shot in 1970, was the last 65mm movie. But that was when color negative film had an exposure index of only 50, and 65mm cameras were very bulky and heavy compared to 35mm equipment. Film technology has come a long way since then. The CP65 camera Rotunno used on *Leonardo's Dream* possessed a full complement of lenses, ranging from 28 to 600mm, and was sufficiently compact enough to provide all the mobility he needed for dramatic storytelling. Couple that with the film used to shoot the movie, Eastman 5294, which has a recommended exposure index of 400 — three stops faster than the best emulsion available 20 years ago — and many of the most limiting constraints that stymied 65mm production no longer apply.

There have been even more advances since the completion of *Leonardo's Dream*. "About the time we were starting production, I tested the new Eastman EXR 5245 and 5296 films," Rotunno says. "It's hard to believe how superior the grain is. I shot a night scene [with EXR 5296] outside the Colosseum using only available light. The colors were beautiful, and there was very little grain apparent in the exposed negative after it was processed. Unfortunately, the film was very new at the time, so it would have taken us up to six months to get a sufficient quantity of 65mm negative. However, if I was shooting another Showscan movie in the future, I would use the 5296 film."

Aesthetically, Rotunno approached the shooting of the movie the same as he would any film. "My real work is based on the contributions I can bring to the movie by helping the audience visualize the story and feel emotions," he remarks. "I read the script and talk to the director to get a picture in my mind of what the movie should look like and what emotions the images should make the audience feel. Some writers can make you see what the script means, but usually you have to depend on your own imagination. Everything can change, based on the atmosphere when you are shooting; maybe there is a particular quality of light at a location that you want to use when you see it. You have to be sensitive to everything happening around you. You have to see opportunities and take advantage of them."

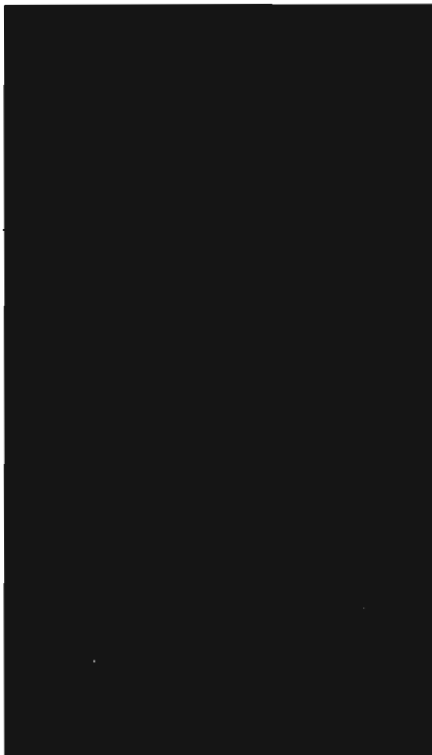
Does Rotunno see Showscan and other 65mm formats as a viable form of mass entertainment for the future? "I hope so," he replies. "We talk a lot about improving the quality of the theatrical experience, but we haven't done a lot about it. Now I think we must, because we will need theaters that offer a better experience than high definition TV."

Rotunno is actually one of the few — if not the only — DPs in the world who has shot a movie with both Sony's 1125-line, 60 Hz HDTV system and Showscan. He used the 1125/60 system to shoot Peter Del Monte's 1987 feature, *Julia and Julia*. About that experience, he says: "I kept the art and the technology separate. There is nothing that I couldn't find a way to do. However, the HDTV camera does have some limitations. For example, it took about an hour for the camera to warm up



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and for us to balance colors. Then every time we changed lenses, it was the same thing. I used that time to set my lights, so it wasn't wasted."

A bigger technical constraint was the HDTV camera's limited sensitivity to light. Rotunno estimated that the sensitivity of the camera is the equivalent of an 80-speed film used with flat studio lighting. He needed more sharply defined contrast, which required him to light for the HDTV camera the same way he would light for a 50-speed film — which is how he worked with film 20 years ago. "It's not just a question of using less light," he explains. "At the lower light level, half-shadows gradually fade into black. At the 250 foot-candle level, contrast is intensified and half-shadows tend to disappear if the cinematographer doesn't intervene."

Having a live video monitor on the set offered no advantages, either, Rotunno adds. "I know what is going to happen when I light a particular way. I know where I want the light to be and how I want it to fall. I don't have to see that in a monitor. My job is to light for emotional content. It could compromise the art of cinematography if people learn to rely on looking at the images on a monitor."

Compromising art was never an issue on *Leonardo's Dream*. "In the end, it turns out that Leonardo is dreaming about a new art form which finally happens 500 years later," Rotunno says. "I think it gives the audience a very strong sense of Leonardo. They also learn something about the power of the Showscan format."

And that — showing off the dramatic potential of Showscan — was one of the filmmakers' objectives all along. The Italian government is planning to open four additional Showscan theaters in Rome, Bologna, Naples and Palermo to support a movement advancing cinema as a culturally significant art form. If *Leonardo's Dream* does well, there will be more Showscan films in Italy.

What about Rotunno's dreams? "There are many things I want to do," he states. "For instance, I would like to make a big Western movie in the United States. That's been one of my ambitions for many years." Who knows? Maybe he'll even shoot it in Showscan. ■