

Creating the video documentary on the making of *Dune* was a trial by fire (and dust and heat)—and a success story for the Panasonic Recam system.

A half-inch behind-the-scenes view

Despite a budget already exceeding \$45 million, it made sense to document the making of the most ambitious film production of recent times. *Dune*, based on the classic novel by Frank Herbert, was shot in Mexico City's Churubusco Studios, and required extraordinary technical logistics to execute, hundreds of speaking parts, over 70 intricately designed, magnificent sets, and a shooting schedule of almost half a year. A documentary would record the production as it evolved day by day and, beyond that, offer some insight into the unusual sensibility of director David Lynch.

Dune is Lynch's third feature film, his first in color. *Eraserhead* (1977) and *The Elephant Man* (1981), were both shot in stark black and white. Both films not only deal with the darker, more vulnerable recesses of the imagination, but both possess a dream-like quality that tends to render even their methods of production a mystery.

And that mystery was something that Lynch—until *Dune*—deeply cultivated and guarded. For example, when asked about the relationship between the sights and sounds of his films, he replied, "It has to do with symbols and intuition, and picture and sound combinations." A documentary might reveal a little bit more.

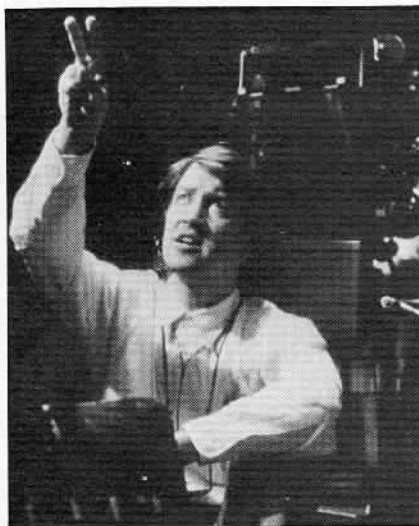
The idea first came out of Universal, and Lynch, over time and with a little arm-twisting, finally concurred. The documentary would promote the film, the reasoning went, and the preparation for all those incredible special effects, legions of extras, and exquisite sound stages could be preserved—a kind of monument to the four-year effort.

Lynch maintained two stipulations. First, that the presence of the documentarists would remain unobtrusive; he had to work without interference or accommodation. Secondly, the documentarists had to be craftsmen he knew and trusted.

Achieving the latter was easier. As director-cameraman, Lynch selected Anatol Pacanowski, a Polish-Russian im-

ALL ABOUT DUNE

By Ric Gentry



Director Lynch on *Dune* set: unlocking the "guarded" sense of mystery.

migrant whom Lynch had first met in the early '70s at the American Film Institute. Pacanowski was also one of the crew members on *Eraserhead*, so he already had insight on what to look for with *Dune*, as well as what margins not to transgress.

"David's concern was perfectly understandable," Pacanowski says. "It was a zoo down there. Photographers and reporters were everywhere. At times, it looked as though he was threatened with becoming a ring master or an MC rather than a filmmaker. I knew it was important to stay out of the way.

"Plus, he wasn't very excited about showing how everything was made, how the tricks work. I respect that. Fortunately, since we'd known each other for many years, he trusted me."

As production associate and eventual writer of the documentary, Lynch chose English-born K. George Godwin, whose critical analysis of *Eraserhead* had attracted considerable attention. "Through David," Godwin recalls, "I was

contacted by Gordon Armstrong at Universal. It was Armstrong's idea to do a record of the whole principal photography from beginning to end, instead of just sending a crew down sporadically to shoot it piecemeal."

From the outset, then, *Dune* was to become the best and most exhaustively documented production ever attempted. It would match the epic stature of the film it traced.

The Format

But as the idea was still hatching, and the personnel delegated, there still remained the question of format. 16mm film, though portable and lightweight, was quickly disregarded as too expensive and not versatile enough. There would be frequent night shoots and, on the set, Lynch has an aesthetic preference for extreme darkness that, while compensated for in his 35mm cameras with the Arriflex Liteflex, would not tolerate an ancillary camera glaring into the production arena from a distance. Pushing the film stock was out of the question, as the highest visual quality for the images was paramount.

In March of '83, as Pacanowski flew into Los Angeles from San Rafael, California and Godwin from Neepawa, Manitoba, this decision had yet to be made. Finally after protracted research, and talks between Lynch, Armstrong, and even executive producer Dino DeLaurentiis, Panasonic's Recam half-inch M-format camera/recorder was selected.

Lynch cites the criteria for this decision. "It had to be mobile enough to go

just about anywhere," he says, "simple enough for a single person to operate, tough enough to function consistently under brutal conditions, and good enough to record broadcast-quality images. The B-100 combination, comprised of an AK-100S camera and an AU-100 in-camera recorder, fit the bill on all points."

So Armstrong got in touch with Panasonic's Morris Washington in Secaucus, New Jersey, the company's New Technology national sales manager. Panasonic agreed to donate the M-format Recam for the documentary, and, in turn, Washington contacted Paul Carey, currently president of Component Video in Van Nuys, California and Los Angeles area representative of Panasonic. Carey, with a background in electrical engineering and computer science, was assigned the task of outfitting Pacanowski and Godwin in the week prior to their departure for Mexico City.

Around the production nucleus of the Recam, Carey worked with the Bexel Corporation, a full service broadcast equipment rental facility, headed by president David Trudeau in Burbank. "We put together a full production package," Carey says. "This included a Lowel-Light kit, Sennheiser microphones (a 416 and an ME kit, with an assortment of cartridges, one of which converted into an abbreviated shotgun), a Sachtler Video 20 tripod, and a Canon J13 X 9." The VHS cassettes were by Fuji.

"We also did something unique," Carey says. "We used a battery operated time code reader to take the time code output of the Recam and simultaneously record on a 20-minute VHS cassette—a window dub of what was going on in the M-format. They rolled a VHS workprint at the same time they were taking pictures with the Recam."

"I shot tests in Los Angeles," says Pacanowski, "and the whole thing was surprisingly easy to get the hang of. I'd never seen the Recam before. I'm primarily a filmmaker. I knew from Video Expos in San Francisco that it was supposed to get excellent results, but I didn't really know how good. It turned out that we got what everybody agreed was the best video image and sound quality available to us. Some people in fact, the old pros, looked at our images and couldn't believe what they saw. There are no scan lines. It's crisp. They were comparing it to the quality of 16mm."

Salamayuca Desert shooting (below). Inset: Pacanowski and Ocampo (left and center) at Azteca Stadium.



"I understand that it takes about 150 hours for a video camera to get broken in, but our Recam was brand new, and from the start it worked extremely well—even under the severe conditions we were about to find ourselves in."

Tests of Endurance

Mexico City has an elevation exceeding 7,800 feet above sea level, creating a considerable respiratory strain for visitors, not to mention what it does to heart rate and blood pressure. Beyond that, the skies of Mexico City make those of Los Angeles seem positively empyrean by comparison. "The pollution is so bad," Pacanowski remarks, "that one day the atmosphere down there may ignite, there's so many toxic gases. That is, if everybody doesn't choke to death first."

From the very start the documentarists worked in such an environment—six and sometimes seven days a week, 10 or more hours a day, for six months. "The camera was a kind of electronic vacuum cleaner," Pacanowski says. "We just shot everything."

Besides the daily production schedule at the studios, Pacanowski, Godwin, and later Pablo Ocampo, an award-winning Mexican filmmaker, taped a series of profiles. They covered various production departments, such as animation, art, costumes, props, set decoration, and mechanical, physical and motion control special effects. They also held interviews



photo by K. George Godwin

DUNE

with the principal performers, including Kyle MacLachlan (the protagonist), Max Von Sydow, Francesca Annis, Jürgen Prochnow, Jack Nance (of *Eraserhead* fame), Sting, and Sean Young, in addition to David Lynch, cinematographer Freddie Francis, and producer Raffaella De Laurentiis.

Equal to the demands put upon the documentarists were those put upon their equipment. In six months, however, only routine maintenance was required, administered by local technician Arturo Garcia Rubio. "He would come in and tinker with the camera now and then," says Godwin, "as a kind of precautionary measure. But nothing ever really went wrong. Because of the kind of camera it is, made for going to remote places, you don't need parts and accessories that are specialized. Whatever we needed we could just pick up instantly in this electronics store in Mexico City. It was a tremendous advantage. Imagine if we had to call L.A. every time we needed something."

But the real endurance tests were yet to come. Together with the *Dune* production company, the documentarists traveled to the dry, torrid region of the Salamayuca desert near the city of Juarez in northeastern Mexico, where the battle scenes and rituals of the Fremen nomads of Ar-

rakis (the *Dune* planet) were to be enacted. In August, temperatures in the region fluctuate from an insufferable 120° in the day to about 50° at night.

"We were on call at 7 in the morning," Godwin recalls. "The first day went on until 5:30 in the afternoon, and it just about killed everybody. After that, they were wrapping at 1 or 1:30 because of the heat. The camera never broke down at all—it lasted better than we did. We kept it under umbrellas to shade it, or a space blanket, but that's all."

The portability of the camera was also an asset. "We had it in just about every strange situation you can imagine," Pacanowski adds. "Up trees, hanging over cliffs, out the back of trucks, belly down in the sand."

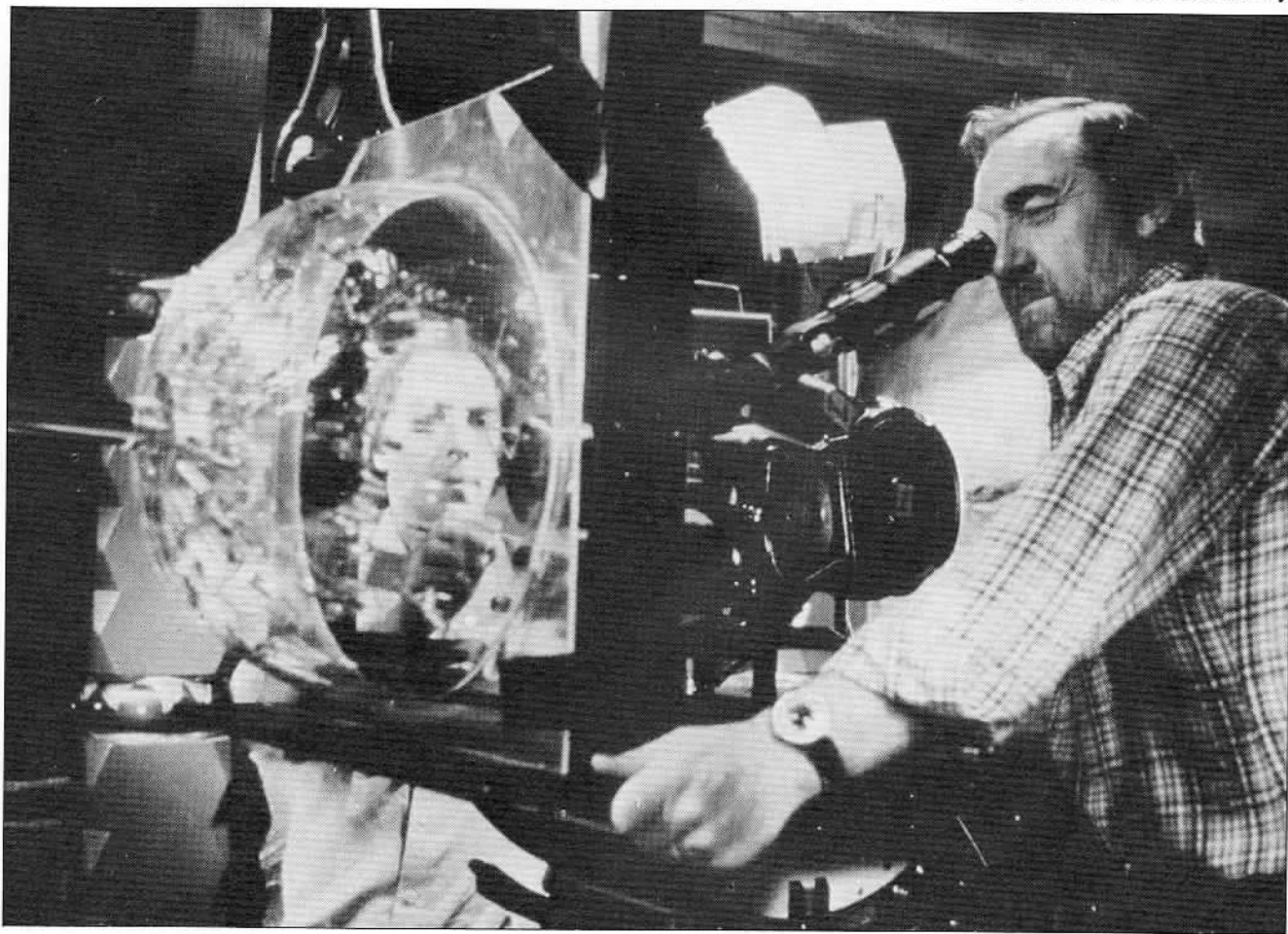
A more perilous situation developed for camera and company at Aguilas Rojas, a volcanic ravine situated outside the purlieus of Mexico City, where other battle scenes, with hundreds of extras, were filmed. The vicinity is difficult to maneuver in, with jagged rocks punishing your steps and undermining your footing. A natural thick red dust is everywhere, but to boost the creation of an Arrakis sandstorm, tons of Fuller's earth—a fine,

granulated powder—were tinted red and blown into the air by large fans positioned strategically around the set. The *Dune* crew personnel wore protective goggles and face masks to guard against toxic inhalation.

"The temperature rose from the high 30s at dawn," says Godwin, "to maybe 70 or 80 by mid-day. The dust was extremely noxious stuff. At one point, they were lining up the extras to charge across this bridge over the crater during a battle and turning on smoke machines. The wind was in the wrong direction and blowing back. After they fixed that, we wound up with a thick cloud of black smoke (largely comprised of burning tires) over the extras and ourselves. Just as they were about to start shooting, the extras broke and ran. They couldn't breathe in there. It was really that bad." The Recam proved a real trouper throughout, though, and never stopped running. Pacanowski has nothing but praise for the system's performance. The camera survived all that with no maintenance at all during those two weeks," he reports. "We had dust in our hair, eyes, nose, throat, clothes—everything. So did the Recam. It was unavoidable. But the heads stayed amazingly clean. The camera was very tight, but just to change tapes meant a little leakage. But we cleaned it often and had no problems."

There was yet another test of durability.

Documenting the creation of the many special effects in the film (below) was one of the main purposes of the tape.



DUNE

Moving in for a closer view of some of the simulated weapons exchanges by pyrotechnical wizard Kit West, a burst of flame nearly reached Pacanowski and seared the camera for several seconds. "Nothing happened," Pacanowski remarks, "at least not technically. The camera never flinched. As for me, I quickly retreated back to safer turf."

Part of the reason for the well-behaved, sturdy equipment, Pacanowski suggests, is the relatively simple design of the M-format recorder, which uses standard VHS cassettes. Furthermore, Pacanowski and Godwin both credit the Fuji cassettes with superior running quality. Of the 1,400 delivered by Bexel, only three malfunctioned in any way, despite the heat, the altitude and other meteorological extremes. "It was good going," Godwin says.

Back at Churubusco, an air-conditioned editing and storage room was provided on the third floor beside the motion control special effects department for the videomakers.

For editing the VHS workprint with visible time code, two Panasonic NV-8500 VTR's and an NV-A500 edit controller

Battle of the Freman nomads at Arrakis, shot in 120-degree heat in the Salamayuca desert in northeastern Mexico.



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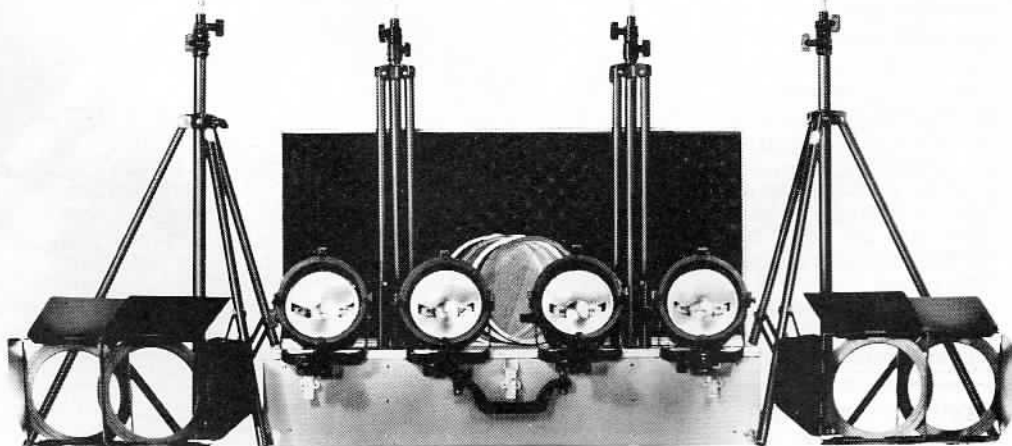
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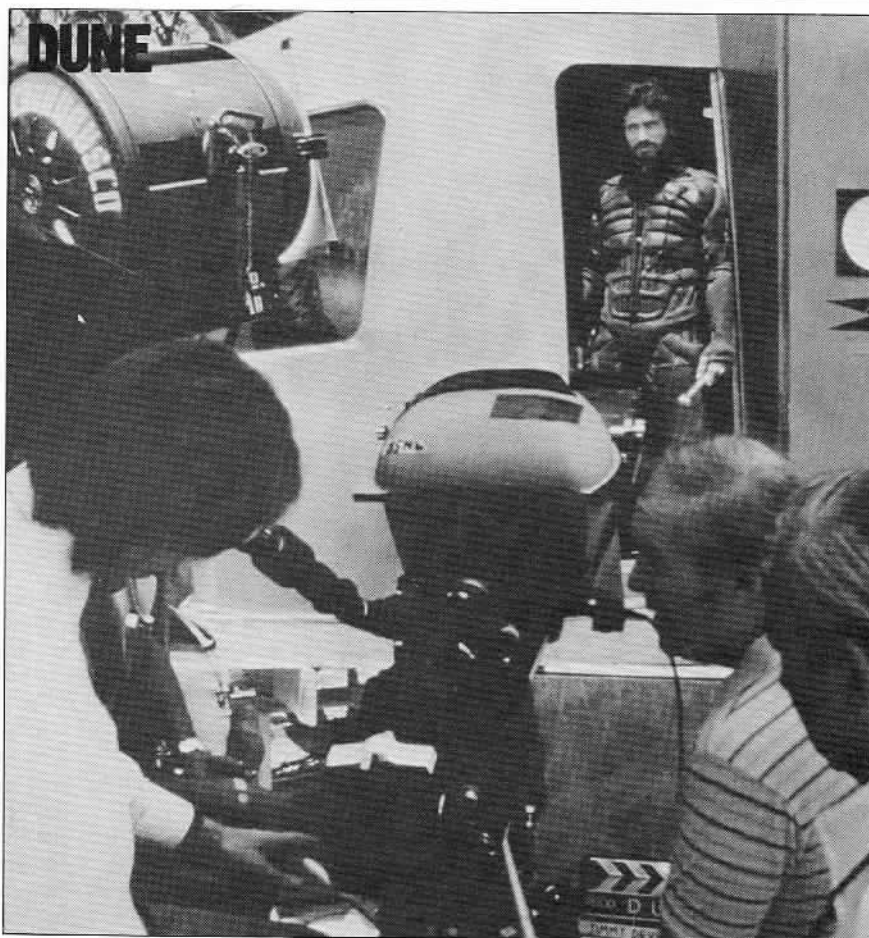
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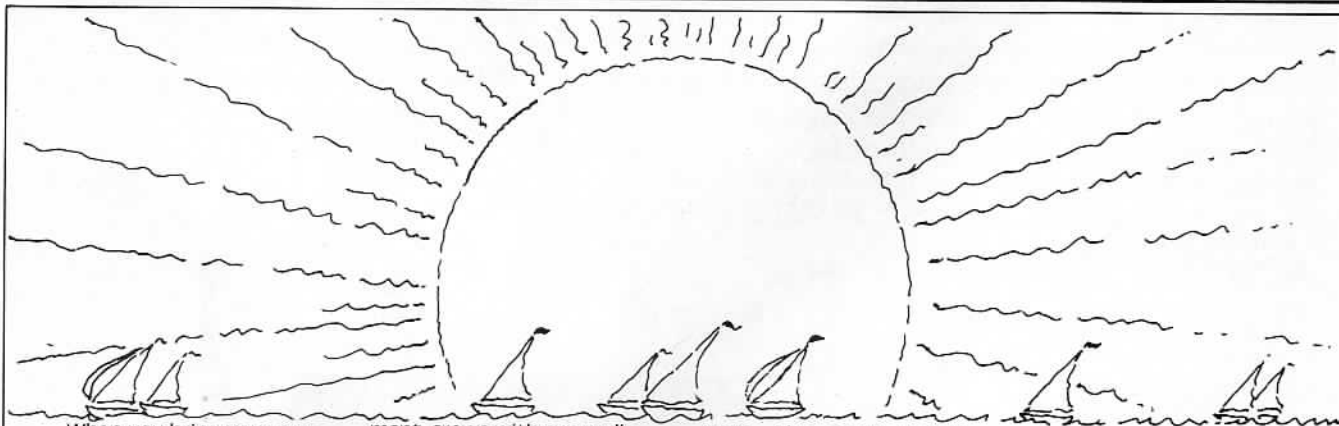
were used. Other equipment included a Panasonic AU-300 edit deck, Sony audiocassette deck, a 13-inch Panasonic and JVC five-inch color monitor. There was also a 10-inch Hitachi black-and-white monitor, and a Hitachi waveform monitor.

The edited VHS workprint, original M-format cassettes and editing equipment were shipped to Los Angeles, where the M-format original elements are being conformed. The hour-long program is tentatively entitled "The Road to *Dune*." Throughout, Pacanowski noted another advantage of the M-format. "The signals are of such quality that there is no problem running five or six generations without signal deterioration," he says. "This gives me a lot of latitude. If I want to insert a segment in the middle of an edited sequence, I don't have to re-assemble all prior segments. I can just run off another generation."

Whether or not the *Dune* documentary will illuminate the creative well-spring of director Lynch remains to be seen. What is certain is that the documentary ought to compete with the feature for drama and fascination. Says George Godwin: "You'll probably get the feeling that you're shuttling back and forth from a film set to another planet." □

Lynch (left) looks into camera as Jurgen Prochnow (Leto Atrides) steps out.

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