Putting Space Skills to Work in Digital Cinema

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Defense contractors routinely cart their wares to faraway hot spots such as Kosovo or Somalia, but two Boeing Co. executives recently wound up in a different type of foreign theater:

The Cannes International Film Festival.

In May, Fred Medina and David Baker of Boeing braved the collagen and swizzle sticks of the French Riviera to promote the company's gaudiest new effort to commercialize its aerospace technology — digital cinema.

Boeing is hoping its experience as a maker of satellites for science and spy craft can translate into success as a Hollywood film distributor. It wants to zap digital movies straight from studios to theaters via satellites and fiber optics, eliminating the slow, expensive process of shipping reels of celluloid film.

As odd as it may seem for the contractor building the National Missile Defense system to also host the world premiere of the movie "Spy Kids" at a Disney theme park, which Boeing did in March, the company is not alone among defense contractors in courting Tinseltown. TRW Inc., Boeing's partner in missile defense, has joined with Warner Bros. in a joint venture called Picture PipeLine.

The TRW venture uses the Internet — as well as the company's experience processing top-secret images for nameless government agencies — to enable directors, producers and editors to work together from remote sites on daily footage shot for movies or television shows.

"It really, really changes things," said Brooke Kennedy, who uses Picture PipeLine as co-executive producer of the NBC television series "Third Watch." She shoots in New York and a day later can be online reviewing footage with an editor in Los Angeles. "I get calls constantly from colleagues who have heard I have it and want to see it," Kennedy said.

It makes a certain sense for companies with experience serving the Pentagon to turn to Hollywood for new profits — after all, both industries spread U.S. influence around the globe and spend millions of dollars blowing up stuff. If a product works in one field, defense analyst Paul Nisbet said, why not use it in the other?

"I mean, if they are already involved in the making of satellites and the technology involved with that and any other satellite services, this is . . . just another way of making money," said Nisbet, of JSA Research in Newport, R.I.

In Boeing's case, the company views distributing movies as the first step in a larger plan to create a "space-based communications strategy [of] global media distribution," said Medina, who along with Baker is co-director of Boeing's digital cinema operation in Los Angeles.

Because movies are costly, high-visibility products, he said, any system good enough for them has an advantage in winning other types of media business, such as delivering pay-per-view entertainment services directly to customers' homes.

Boeing picked up the satellite services business last year when it acquired Hughes Space and Communications, which is where Medina and Baker worked. The company premiered its system last fall in New York with a showing of the movie "Bounce" attended by star Ben Affleck, whom Boeing touted as a "renowned technology enthusiast."

The company estimates that distributing a movie digitally — bouncing an encoded signal off a satellite and relaying it to thousands of theaters simultaneously — would cut about three-quarters off the $1 billion that studios spend each year to mail out hard copies of their films.

Of course, each theater would have to convert to digital projection, at a cost of up to $150,000 per screen. Currently, only 34 screens in the world are equipped for digital cinema, out of a total of more than 100,000.

The National Association of Theatre Owners (NATO) is skeptical of the digital cinema movement, which is being advocated by studios such as Walt Disney Co. and other potential providers such as a partnership of Qualcomm Inc. and Technicolor.

"Our members in my association are very split on whether or not we can make any money on this stuff," said John Fithian, president of NATO. "The studios stand to save a lot of money, so that would suggest they're the first ones that need to step up to the plate in paying for these systems."

While digital film distribution may be a few years away, TRW's Picture PipeLine service is already gaining acceptance. It was used in the making of the movie "The Perfect Storm," the company said, is being tested for the upcoming "Matrix 2" and was used in an upcoming Jerry Bruckheimer and Castle Rock Entertainment film called "Down and Under."

Filmmakers shooting "Down and Under" on location in Australia used the system to collaborate with colleagues back in Los Angeles, a Castle Rock spokeswoman said.

For Kennedy, at "Third Watch," the system has speeded up the creative process and made it more flexible, she said. It works like this: The show shoots on location in New York and ships

the film overnight to Los Angeles for processing.

Ordinarily, it would be two days before Kennedy saw the shots back in New York. With Picture PipeLine, the footage is loaded into the computer system and she can see it the next morning. Linked on a Web site and using a standard modem to watch streaming images, the show's producers, director and editor can confer on opposite ends of the continent.

"You can literally get on with the editor and see exactly what he's doing coming to you from his machine," Kennedy said. "You can speak to him about, 'That's not what I really intended' or 'Let's trim this,' and you can watch your ideas being executed in real time."

The technology grew out of work TRW has done for military and intelligence customers, said Gerard Roccanova, chief executive of Picture PipeLine.

"The connection between Hollywood and government is not as strange as you might imagine," Roccanova said. "They're both paranoid about security because both have valuable information that cost a lot to create."

As an engineer with 21 years of experience at TRW, Roccanova said he has little personal interaction with Hollywood types, preferring the role of the technical whiz who can get things done behind the scenes. He envisions a wide range of possibilities for the technology; the National Football League, he said, is evaluating the use of Picture PipeLine for sending in-house game films to coaches each week as they prepare for their next opponent.

And the company is looking ahead to joining Boeing in the film distribution market, but with a different approach. Instead of transmitting a movie to theaters, Roccanova said, Picture PipeLine could send it out on encrypted DVDs that could only be played if the theater logged onto a secure Internet site.

"You don't have to install broadband to do that, you can do it with a cheap phone line," he said. And because of TRW's work on classified government programs, he added, "we can guarantee that no one can decrypt it. . . . That's what we're about."