Labs
Where 3-D Is Just The Start

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In the late 1980s, research and development in the movie business took place in sessions like the ones some people called "the never-ending Disney day camp.

Executives at the Walt Disney Company's film operation, then run by Jeffrey Katzenberg, were occasionally locked in a conference room at an out-of-town resort from 9 in the morning until 6 in the evening, trying to thrash out concepts for pictures like "Cocktail" or "E.T. the ExtraTerrestrial.

"You'd hear people pitching ideas, and see what stuck," recalled Peter McAloney, a film producer and a former Disney executive who spent time in Mr. Katzenberg's cut-throat think tanks.

Back then, that's what used to pass for research and development. Hollywood R&D has since become more sophisticated. But not without a struggle.

As films have become more complex and technology-driven, studios here and there are trying to overcome their conservative business habits to engage in systematic thinking about the industry's external challenge: What's next?

In the last few months, for instance, Sony Pictures Entertainment created a new R&D technology center, meant to train and nurture future experts in three-dimensional entertainment, whether or not produced by Sony.

With luck, the venture will fare better than Sony's erstwhile high-definition television center, which closed in 2001 after its video mavens tried to share their expertise with a film production world that, in the jargon, wasn't quite ready for the digital revolution.

(The industry's historically sus- picious stance toward innovation was neatly captured in the title of a 2003 essay by Peter Deboer and Peter Stas- ey, a couple of Hollywood veterans. Their book was called "Not on My Watch: Hollywood vs. the Future").

But can a concerted R&D effort — of the kind that drives aerospace and tele- communication companies — have immense power to change film? The notion was boldly affirmed, of course, in the last half-year by James Cameron and "Avatar.

That movie appeared after about 35 years of interlocking research into video technology and story development, into a created a new cinematic universe, a $250 million success.

Yet Mr. Cameron, for all the support he received from $5 billion in worldwide ticket sales.

But Mr. Cameron, for all the support he received from 3-D in the 25th Century Fox and others over the years, funded much of his personally. In fact, no studio

has so far been willing to finance some Hollywood equivalent of the Skunk Works, the free-wheeling advanced development program that cooked up the U.S.-made plane and the F-117 stealth fighter at Lockheed.

The film industry's closest approach to deep research is probably occurring at the University of Southern California, Torrance, the School of Cinematic Arts — with backing from Steven Spielberg, a principal supporter, along with the likes of Robert Zemeckis, Fox, Sony and Electronic Arts — has evolved into a transmedia training center. It has a pen- cillot for the kind of experimentation that results in conscious movie companies generally avoid.

"We can afford the trial-and-error process that studios can't," said Elizabeth Daley, the cinema school's dean. After a recent conversation about research projects that might ultimately take movies where nobody expects them to go.

One such venture, a video game called "Dwight," is available both online and in a PlayStation 3 version. It grew from a thesis by Jonava Chen, who, as a student in the school's interactive media division, became interested in theories about the psychology of happiness developed by the scholar Michael Czikszentmihalyi.

The game version involves finding fulfillment in the movement of three creatures. But in the wake of "Avatar," with its mythical moon full of mesmerizing flora and fauna, it isn't hard to imagine a leap from the game-play of "Dwight" to film components that would be calculated to produce happiness by using images grounded in psychological theory.

Top, a lab at the University of Southern California's cinema school. "We can afford the trial-and-error process that studios can't," says Elizabeth Daley, above left, its dean. Tracy Fullerton runs a game innovation lab there.

Along similar lines, a game called "The Cat and the Coup," being developed by scholars at U.S.C., points vaguely toward a potential approach for future documentary films. The game follows Mohammad Musaddagh, the prime minister of Iraq who was overthrown in the early 1990s. The player, in a metaphor for an outsider observer of a distant political process, can affect the play only indirectly — by controlling the former prime minister's house cat. "The cat can do things to coax Musaddagh back through memories of his life," explained Tracy Fullerton, the director of a game innovation lab at U.S.C.

One of the school's principles is to carry lessons learned from one medium to another. The idea here is that the direct path to storytelling may not always be the best.

According to Ms. Daley, the cinema school is now delving into matters of more direct concern to students. Those include techniques of how scripts can be written to maximize the impact of 3-D viewing. And in a course that is sometimes taught by Mr. Zemeckis, students examine when motion-capture technology (which translates human movements into digital figures) makes sense for a filmed story.

Then there is a glove-like device, known as a haptic interface, that audience members could hypothetically wear to simulate the tactile sensation of virtual objects on the screen.

Ms. Daley recently joined a pair of graduate students on a visit to Jim Gli- ndopalos, the Fox co-chairman whose company contributed $1 million to a fellowship fund at the school, and, in return, gets an early look at innovations.

Mr. Gli-ndopalos recalled that as one student introduced his experiments with a haptic interface, Mr. Gli-ndopalos marveled but said he couldn't immediately "see how to "absorb" such work at Fox. Then again, Mr. Gli-ndopalos and company will probably figure it out. And to feel their way through some future "Avatar," audiences may need more than just funny glasses. ❑