

# Style

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BY SCOTT TRAM ALCOHEN FOR THE WASHINGTON POST

"Entertainment people think in a totally different way from conventional business and scientific thinking," says Richard Lindheim, left, with James Korris, both of the ICT.

## Thinking Outside the Tank

Calif.'s Institute for Creative Technologies Puts Tinseltown Talent to Work on Military Defense



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An image from "The Incident at Brcko Bridge," an "animatic" sequence of still photographs taken outside Pasadena, Calif., based on a real-life Army action.

By SHARON WAXMAN  
Washington Post Staff Writer

**A** MARINA DEL REY, Calif. few years back, some military officials got together and wondered whether Hollywood could play a part in the U.S. defense effort.

They weren't looking for propaganda films that would win the hearts and minds of the Arab world, or for talent to entertain the troops, or for free DVDs to send to remote aircraft carriers. They were looking, strangely enough, for fresh ideas in designing the Army of the future. Stranger still, it turned out that Hollywood had plenty of ideas, some of them good ones.

So it happens that inside a drab, '70s-style office building here, one of Hollywood's hottest screenwriters, a production designer from

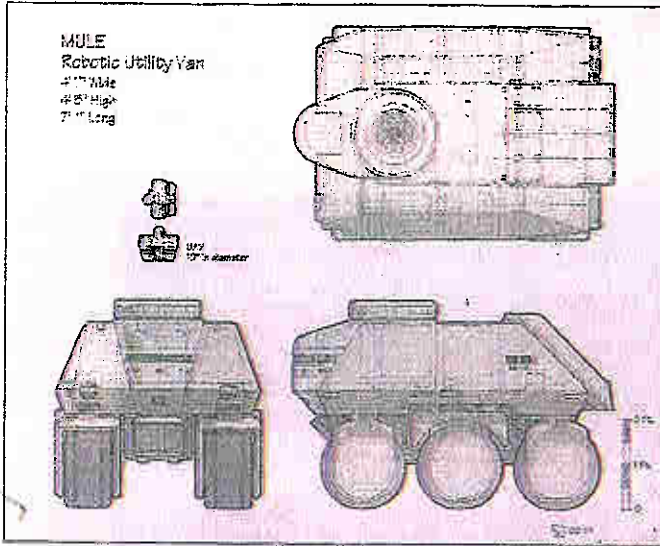
"Alien" and "Back to the Future," the co-writer of "Apocalypse Now" and the director of "Grease" have gotten together with some of the U.S. Army's leading academics and computer scientists to brainstorm about the next generation of weaponry and equipment.

The meetings, with these and other Hollywood figures, have been going on once or twice a month for more than two years, taking on extra urgency after the events of Sept. 11, 2001. Even as opposition mounts in Hollywood to Washington's plans for war with Iraq, a small group of entertainment-industry recruits continues to grapple with combat-related questions, including:

How do you remove wounded soldiers from the battlefield under fire? What kinds of communication tools will officers need to make bet-

See DEFENSE, C2, Col. 1





Production designer Ron Cobb's sketch for a robotic "mule," above, which the Army has asked Boeing to build; ICT's Marina del Rey, Calif., headquarters, right.



A screen shot from ICT's games project "Full Spectrum Warrior," a light-infantry training simulator developed for use by the Army.

# Hollywood, Pitching Ideas To the Defense Department

DEFENSE, From C1

decisions on the ground? How do you conduct military operations in crowded urban centers?

"Entertainment people think in a totally different way from conventional business and scientific thinking," explains Richard Lindheim, executive director for the Institute for Creative Technologies (ICT), at Marina Del Rey. They think tank where the Army and Tinseltown collaborate.

"In science you have a problem, and a hypothesis for a solution, then you build it," says Lindheim, a former executive at Paramount Pictures. "The entertainment approach is the opposite. It's: What's our vision? What do we want it to do? They'll break it down and work backwards to figure out how to get it done."

The ICT's few dozen Hollywood recruits are a somewhat random representation of the entertainment industry, a tiny fraction of the thousands who labor there. They offer some ideas in the form of short films that illustrate proposed new equipment, or video games for training. Other proposals come as drawings and mock-ups of futuristic tanks, uniforms and helicopters.

Among the ideas they have proposed—and even designed—as possible solutions to problems posed by military planners:

- Modular tanks that come apart for transport by plane and can be reassembled on arrival.

- Roman-style shields mounted on skateboards and stored on the sides of tanks, to be used to conceal a soldier crossing an urban street while under fire.

- Lightweight uniforms with inner reinforcement to create exoskeletal armor.

- Insectlike electronic sensors that can move around and relay information.

- Robotic "mules," or unmanned ground vehicles, that carry soldiers' equipment and sense enemy movement.

While the buglike sensors sound like something straight out of Steven Spielberg's "Minority Report" (in which mechanical spiders set out to detect a cowering Tom Cruise), not all of these ideas remain in the realm of the imagination.

Production designer Ron Cobb's sketch for the robotic mule was at first greeted with skepticism by Army brass. So he was surprised (and not a little flattered) to learn a few months ago that the Army had asked Boeing to figure out how to build a vehicle that looked exactly like his design.

"It's exciting to see something being developed in the real world," Cobb says from his home in Australia. "The idea was simply that the soldier increasingly needs to be agile and mobile, and the state of robotics is such that it might be possible to take a load off the soldier and have his equipment follow him like a dog, or a mule."

To be sure, the ICT program is a small cog in the vast military apparatus of research and technology. It's a \$9 million-a-year undertaking within an overall effort funded at \$1.6 billion this year. Two other Army-funded labs undertake similar futurist research, at MIT and the University of Texas. But even within the Army hierarchy, the Hollywood project stands out for the unusual nature of its participants, and their unusual mandate.

"We don't do 'story.' We don't know how to do story. And how do people learn? From storytellers," says Mike Andrews, the scientist who oversees the Army's entire research program. "These people have creative talents that we have to tap into to move into the future."

Within the Army, Andrews said, the ICT "is taken very seriously in terms of its opportunity to help us."

Of that there seems little doubt. In the aftermath of 9/11, the Army drew on its pool of Hollywood experts to come up with possible terrorism scenarios to help with training and preparedness.

And the ICT has an enthusiastic booster in Chief of Staff Gen. Eric K. Shinseki, who keeps close at hand a five-minute ICT training video depicting futuristic soldiers with stealth uniforms and robotic vehicles, eager to show it at the least spark of interest.

## 'Molecular Change'

If the idea of using Hollywood dream-weavers to solve real-life military problems sounds a bit batty, the Army says you're way behind the times.

"The Army is a lot more open-minded than Hollywood tends to portray us," says Michael Macedonia, chief scientist for the Army's

we're very serious about being the best army in the world. We'll do anything. If that means trying to learn from Hollywood and the gaming industry, then I think that's the way to go."

Still, collaboration is not exactly what one might have expected between two mutually skeptical organizations. The last time the entertainment industry really worked in partnership with the military was during World War II, when directors and actors were drafted to make propaganda movies.

But then came Vietnam, and the age of "Catch-22" and "M\*A\*S\*H." Since the late 1960s, largely-liberal Hollywood has frequently treated the military with scorn. For its part, the military has carefully scrutinized even patriotic epics like "Pearl Harbor" for a critical undertone.

The terrorist attacks on New York and Washington seem to have changed entrenched attitudes, motivating more than one former skeptic to reconsider. "After 9/11, some molecular change happened to me," says writer David Ayer, whose screenplay about a corrupt cop, "Training Day," propelled Denzel Washington to an Oscar last year. "I never want to see that happen again. I felt so helpless. I had to do something."

Ayer, a Navy veteran, has been working steadily with ICT for more than a year on a command and communication system, earning a five-figure government-level salary for his work while he continues his screenwriting career.

The attacks, and the subsequent collaboration, seem to be provoking change on the military side, too. "They're making a big impact—they've made a big impact," says Macedonia, who happily reads an e-mail from an Army major now in Bagram, Afghanistan, thanking him for an ICT-developed training video about working in foreign cultures.

"It's heretical for an organization like the Army to have its colonels running around discussing their problems," Ayer says. "But it's cool: They want to save lives. They want stuff to work better and cheaper."

The White House made a vague attempt to foster cooperation with Hollywood in the wake of the 9/11 attacks, heralded in a glossy photo op between senior Bush aide Karl Rove and Hollywood power brokers Sherry Lansing, Robert Iger and Jack Valenti. Despite the hoopla, that effort amounted to little. Instead, it is the ICT that has quietly won enthusiastic adherents in the

"I'm not a Bush supporter," Cobb says. "But the plight of the Army, and its use in humanitarian roles, in Kosovo or Afghanistan, the rising desire to use nonlethal weaponry... that is worth supporting."

Cobb is well known in Hollywood for designing the canteen scene in the first "Star Wars" movie and the time-traveling DeLorean in "Back to the Future." He's also a Vietnam veteran and a former underground cartoonist.

He finds working for the Army a good fit. "I'm kind of a frustrated engineer. And I'm very interested in the ideas in problem-solving engineering," he says. As for the Army, he observes: "They thought we were all going to be lunatics because we're from the film business—and some of us were. But they ended up being impressed with us."

## Going Outside the Culture

The idea of tapping Hollywood for military input has been around for several years. A 1997 study by the National Academy of Sciences identified a nexus between Army simulation technology and video gaming, and recommended calling on Hollywood to help the government's efforts.

After a visit to the Walt Disney Co.'s Imagineering facility, a future-oriented ideas lab, four-star Army Gen. Paul Kern explored the idea of collaboration. But talks broke down over intellectual property rights—who would own the joint research—and Disney's reluctance to work too closely with government bureaucracy.

Instead Kern turned to Andrews, the Army's deputy assistant secretary for research and technology, who looked into the possibility of using a broader, less official Hollywood pool. Andrews and Mace-



back with plots such as: Four children wander into a minefield in an area where American soldiers are on a peacekeeping mission. How should they respond? Another contributor suggested a scenario in which Muslim fundamentalists in Jerusalem mine the sacred sites in the ancient city. Another suggested: China invades Taiwan. How does the U.S. Army react?

Many such conflict scenarios are debated in war game seminars within the Army bureaucracy already. But, says Korris, "The question was—is there any value in getting ideas from a group of people who have no conditioning in the system?"

"We probably came up with different solutions than the Army came up with," says Milius. "From Roman shields with skateboards that come off the sides of tanks, to tunnels made of foam that you spray that dissolve in 12 hours. I'm not going to say these things exist, but if you see any foam in Baghdad absorbing tank rounds, you'll know we developed it."

Tunnels made of foam—what next? An enormous French baguette that doubles as an amphibious landing unit?

Rapidly, the ICT project mushroomed in size and scope. The penchant for making small training and demonstration films has developed into an in-house production facility called ICT Productions. Korris is looking to spin off some of his ideas into television pilots. The institute now has about 55 employees.

Meanwhile, the computer experts are developing training videos that use "synthespians," virtual actors that are almost indistinguishable from human ones. And ICT's project to conceive a future combat system is well underway.

## 'Starship Troopers'

The film unspooling across the huge screen in the ICT office building is called "Incident at Brcko Bridge." It was shot somewhere in the hills outside Pasadena. In the film—actually an "animatic" sequence of 3,000 still photographs—a handful of Army soldiers defend the bridge in the face of an angry mob.

The incident really did occur, in Bosnia. Seven young soldiers were instructed to hold the bridge against an angry throng who'd been sent by Serb authorities to create an international incident. The soldiers had been instructed to inflict no casualties; they endured eight hours of being poked with glass shards by the mob, but held the bridge.

The film suggests what future technology might do to make them better equipped for their jobs. In the film, the soldiers—outfitted in rented uniforms once used in "Starship Troopers"—wear helmets with goggles that electronically display their geographic coordinates. Their uniforms have built-in equipment to monitor the soldiers' vital signs in case they are wounded.

The soldiers have with them Cobb's robotic mule; a small disk detaches from the top of the mule, flies ahead to reconnoiter, and relays information back to the troops. When the mob approaches, a soldier warns them to halt, and his words are amplified and translated into Serbian.

Will anything besides the mule be designed and built in the real world? The Army won't confirm, and the consultants at ICT don't know.

"We just put it in the hopper," says Milius.

But clearly some things are trickling through. "I've seen our stuff show up on posters, plans, on briefing slides," says Korris. "It's very gratifying for me. If you'd have told me three years ago I'd be doing this, I'd say you were on drugs. But it's been endlessly fascinating."

Says Andrews: "We don't know the full potential of what we'll get from ICT. There's an opportunity here that's just starting to be recognized."