"Virtual Humans" Raise Legal Issues and Primal Fears

Steve Ditlea | June 19, 1996

Within a few weeks, Marilyn will be chatting with visitors on the World Wide Web, responding to typed questions with speech and facial expressions as emotive as those of her human inspiration, Marilyn Monroe.

This Marilyn is a virtual human — a silicon-generated personal facsimile at the frontiers of virtual reality and artificial life — that raises legal issues and rouses primal fears.

Today, Marilyn is scheduled to be one of the stars of the first professional conference devoted to creating more of her kind. The two-day conference, Virtual Humans '96, is being held in Anaheim, Calif., where more than 200 researchers and analysts are expected to gather to demonstrate and discuss developments in "humanoid technologies," including computer animation, real-time simulation and avatars, the latest buzzword on the Net.

The event's sponsors include two computer industry pioneers — EDS and Silicon Graphics (the latter's Web site features the Virtual Humans '96 agenda).

Marilyn will appear at the conference in a composite video clip of the real Jody Foster presenting the virtual Marilyn with an award at a recent film festival in Berlin.

Virtual Marilyn received an award at a recent German film festival.

Marilyn's creator, Nadia Magnenat Thalmann, will moderate the first day's sessions, devoted to modeling human appearance and motion on computers.

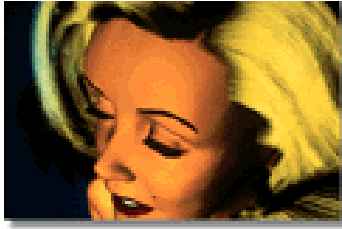Thalmann said she aims to do more than synthesize a pretty face.

"My dream is to have a clever virtual assistant, someone that I can talk to, and have as a virtual teacher or a virtual friend," says the University of Geneva computer science professor and Director of MIRALab, the university's center for virtual reality computer animation and telecooperative work. With her husband, Daniel Thalmann of the Swiss Federal Institute of Technology, she has been perfecting Marilyn since 1986. Recent improvements, she says, include autonomous behavior and perception, allowing Marilyn to respond with virtual emotions that are conveyed by appropriate facial animations.

Mrs. Thalmann chose to synthesize Marilyn Monroe "because she was a creative, charming person who was born too early." The computer scientist said she is convinced that the real Marilyn would have been fascinated by the lab's latest research on facial and cloth animation. The MIRALab Web site illustrates these research topics with additional stills of Marilyn. Soon, Java-based animations at the site will let her interact with visitors on the Web.

This fall, Virtual Marilyn software will be released commercially, allowing anyone with a Silicon Graphics workstation to create a virtual human. And it won't have to be a Marilyn Monroe knock-off: MIRALab has already synthesized Naomi Campbell, Cyndi Crawford, and Madonna. Users will likely design their own pop icons and artificial actors, raising thorny legal questions.

The first short film starring computer-generated Marilyn, "Rendezvous a Montreal," drew complaints from lawyers for Humphrey Bogart's estate. The film co-starred a virtual human modeled on the legendary actor who had never appeared in a Hollywood movie with Monroe. "We told them we made no money from this and we haven't heard from them since," Magnenat Thalmann recalls. The estate of Marilyn Monroe has never objected, she said, but other celebrities' lawyers are sure to question developers who seem to profit from their clients' likenesses.

To many humans, the very notion of trying to simulate people can be unsettling. Every culture has its nightmare vision of virtual humans running amok: the Golem, Frankenstein's monster or the menacing brooms re-animated by the Sorcerer's Apprentice in "Fantasia."

"We're not playing God," says Norman Badler, director of the Center for Human Modeling and Simulation (HMS), and Professor in the Computer and Information Science Department at the University of Pennsylvania. "We're not trying to do better than humans. We have a long way to go just to do as well." As co-moderator of Virtual Humans '96, he will preside over the conference's second day of presentations, on creating virtual humans with their own behaviors or controlled by real people.

"The hardest problems are communicating with virtual humans so we can have meaningful dialogues, and making them smart enough to be worth having dialogues with," Badler said. Jack 5.9, the latest version of HMS' virtual human software, has a Web page of its own, with the newest features of what Badler calls "virtual everyman" — a programmable crash-test dummy/Calvin Klein model with less attention to personality than Marilyn.

Jack 5.9's various roles include his work as a virtual crash-test dummy.

Scheduled for commercial release this fall, Jack has already proven his mettle on the virtual battlefield, simulating paramedic emergencies over the NPS Net, the computer-simulation network at the Naval Postgraduate School in Monterey, Calif. Jacks other roles include work on more than 100 projects, ranging from vehicle accident analysis to hazardous waste treatment simulations.

The Contact Consortium features coverage of a virtual wedding between Tomasi and janka.

For the Web-minded, Virtual Humans '96 will conclude with three sessions on avatars.

"The greatest number of virtual humans will be avatars in cyberspace," said Mike Bevin, editor and publisher of VR News and the organizer of this conference. Often fanciful (to compensate for their lack of realism), avatars are already thriving in dozens of virtual worlds, accessible from the The Contact Consortium.

As computing power grows, machines will be able to play host to vast communities of virtual humans. "In the future we'll be able to conduct massive social experiments on bits and bytes to see if they work before subjecting them on human society," Bevin said. In one real-world case, he said, engineers used virtual humans to simulate crowd movements during the planning process for the new National Stadium in Paris.

Will today's human actors be put out of work by simulations of classic stars like Marilyn and generic models like Jack? Bevin predicts that virtual humans will actually spark new employment opportunities for real people.

"People will want to be helped and guided by a range of virtual humans," he said. "There will be a wide variety of people chosen whose sole profession will be as samples for virtual humans' appearance and personality."