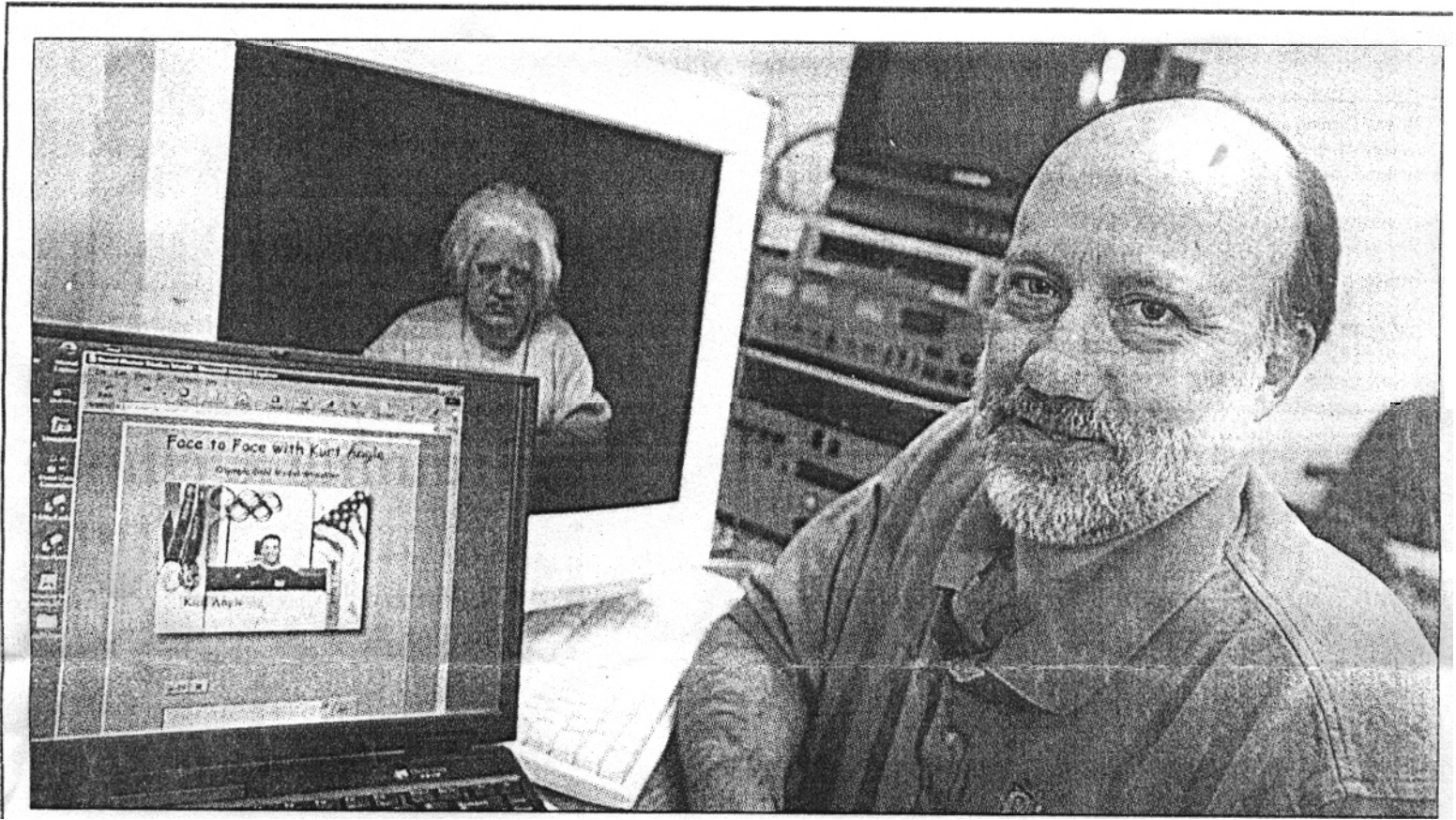


## EDUCATION &amp; TRAINING

## SPECIAL REPORT



Scott Stevens, CMU professor and co-founder of Grand Illusions Studios in Oakland, displays the 'synthetic' Albert Einstein on the large monitor. Mr. Stevens said the university spin-off firm is working with several major corporations, including an auto maker, to employ virtual training.

# RELATIVELY EINSTEIN

*Training technology could aid employers, medical firms*

By Ethan Lott

OAKLAND - The chance to ask Albert Einstein direct questions and receive instant, video responses is a cool and fascinating use of recently patented technology from Carnegie Mellon University.

But a more practical business application allows employees to undergo the kind of intensive, one-on-one training usually reserved for seminars. And they can get this training anytime in front of any computer monitor.

Scott Stevens, CMU professor and founder of Grand Illusions Studios, said the university spin-off company is working with several

major corporations to employ this virtual training.

The company's recently approved patent calls it a "synthetic interview."

Here's how it works:

A database of video answers to a host of questions is created. Grand Illusion's technology is able to take typed or voice activated questions in natural language then match them to the most appropriate response, which a videotaped person then gives on the monitor.

Potential uses of the technology cross a wide spectrum, from improving Internet celebrity chat and creating a video history of

people from the past to allowing an interactive biography to be created on famous living persons such as former president Jimmy Carter or Microsoft's Bill Gates.

The business application for employee training means a salesperson's techniques not only can be drilled in a uniform, systematic fashion, but responses can be recorded and ranked.

A major automotive company is an example of a client Grand Illusions has begun a business relationship with.

"They want their salespersons to treat someone who comes in blue jeans the same

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## EINSTEIN: *Medical education is potential. use*

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as someone with a \$5,000 Armani suit,' Mr. Stevens said.

Normally, the company has a trainer at a seminar role play with a salesperson, while others are an audience.

"It takes lots of time," Mr. Stevens said. "Not everybody gets one-on-one; some just watch. We're going to create an environment where we can model different customers and have a sales experience;"

The company has four founders, the CMU professors who developed the technology. The other three founders are computer-oriented Mike Christel and Alex Hauptmann and Don Marinelli, who hails from the drama department and helps insure the realism behind the Einstein.

The president of Grand Illusions is Greg Thomas, who came to the company from WRS Motion Picture and Video Lab in Coraopolis, which owns equity in Grand Illusion. Grand Illusion won a \$90,000 Ben Franklin grant last year and hopes to renew the grant when it expires this summer through Innovation Works, Ben Franklin's successor organization.

Mr. Stevens recalls part of the inspiration behind creating the technology. In the early days of the Internet, he heard a pundit make a sweeping claim that the new medium would allow every student to have access to any expert.

"That's crazy," he said. "If every student started throwing questions at the leading physicist ..."

But any student could ask any question they want to Grand Illusions synthetic Einstein. To create Einstein, a range of people from elementary school kids to physicists were polled as to what they would ask the great scientist if they had the chance. Records of things Einstein had said or written were then researched to come up with possible answers. An actor who had done a one-man show on Einstein was hired to play the lead and answers were filmed.

Because answers are largely Einstein's own words through a skilled actor, even when an answer misses the mark - because the question was poorly written or there was no perfect answer to match - the error is often masked by the Einstein's brilliance.

Mr. Stevens said the drama department's involvement in the project helps mask those imperfections.

"It's not going to be perfect," he said. "

You want to deal with the imperfections so it still entertains;"

The best historical possibilities for the technology come not from reanimating the dead, but through getting to people while they are still living.

Mr. Stevens regrets possible interviews that have been missed.

"If we could have gotten Carl Sagan," he mused. "We'd love to do presidents. When we started this, Reagan was lucid and Nixon was alive:"

Medical educational opportunities are also a strong potential use. The company has databased former Allegheny General neurosurgeon Dr. Julian Bailes, whose virtual expertise could be used as a teaching tool or at a community hospital when an expert can't always immediately be reached. And parents could be reassured by their child's own pediatrician, or rather a close facsimile, when they have one of those stock questions doctors hear over and over from protective parents.

Virginia Pribanic, director of marketing and operations, joined the company in October, marking the beginning of the company seriously pushing for sales opportunities. Rather than look for venture capital and unleash a huge sales force, the company is going slower, looking to grow through "bootstrapping" on other businesses.

"We're establishing working relationships with marketing groups," Ms. Pribanic said. The hope is that marketers who see the potential uses for this product will push it to their clients.

The technology also allows questions to be posed and answers to be given in different languages - the company plans to add Pirates outfielder Jose Guillen to its database with the answers in Spanish with English subtitles - a plus for companies needing to deal with bilingual workers.

Mr. Stevens said this works because the natural language technology that strips context from the questions is basically language insensitive.

It also apparently is age insensitive, something proven by a demonstration of the product in Nebraska where both college scientists-to-be and fourth-graders took a shot at Einstein.

"We've seen kids ask wonderful questions," Mr. Stevens said. "Fourth-graders did more research and asked great questions."

