The voices on the audiotape were muffled, nearly inaudible, yet there was little doubt; a murder-for-hire was in the making.

On this Friday evening, with no time to lose, police locate Bob Howell. The mild-mannered photography professor hurries to his makeshift lab in the University Police Department, where he meticulously dissects the evidence, stopping a murder before it occurs.

Seems unlikely, but this soft-spoken Cal Poly professor fights crime with a mouse — the computer kind.

With his film and digital cameras, video and audio equipment, a high-powered laptop, and software he’s likely written himself, Howell has become something of a celebrity cyber-sleuth on the Central Coast.

As high technology becomes more readily available, its dark side is emerging, Howell says. “Like the sophisticated weapons used by street gangs in major cities, criminals are now using sophisticated technology to commit crimes.”

Howell uses his skills and whatever spare time he can muster to help local law enforcement agencies solve crimes ranging from identity theft and computer infiltration to drug dealing and murder.

He approached the University Police Department about six years ago, when he realized he could help solve crimes. The police were skeptical at first.

But time has turned their skepticism into admiration. Last summer the Criminal Justice Administrators Association honored Howell for his work in extracting information from audio and videotape to help solve crimes.

Howell’s investigative powers lie in his ability to clarify and restructure — not enhance — information or evidence. He’s the man to call when you can’t identify a robbery suspect from a bank surveillance tape, or have trouble deciphering the audio portion of a dialogue recorded during the commission of a crime.

Frame by frame, he painstakingly “breaks down” the video or audiotape, clarifies details, and reconstructs it. Background noise can obscure a conversation, he says. With specialized software that he often creates himself, he digitizes the tape and removes irrelevant sounds, revealing an audible conversation.

“Much like karaoke drops out the voice and leaves just the music, I take out the ‘music’ and leave the voice,” he explains.

His efforts helped identify and send to jail an individual who had shot and wounded a man during a store robbery. The act was caught on videotape, but the quality was so poor, the suspect could not be identified — until Howell stepped in.

Howell is also called on to “virtually” recreate crime scenes. Using this technology, police can examine details as minute as carpet fibers.

The technology available today, though, is expensive and complicated to use, says Howell, who is on a mission to create an inexpensive, easy-to-use system that small law enforcement agencies can afford.

He is, apparently, the man for the job. A computer programmer, who often builds equipment from the ground up, Howell says he is fascinated by just about everything. “If I can’t get it, I build it,” he claims.

He says combining his programming with photography results in “a perfect blend of imaging solutions. Getting the image is the art; processing it — extracting the data — is the science.”
LAST SUMMER THE CRIMINAL JUSTICE ADMINISTRATORS ASSOCIATION HONORED HOWELL FOR HIS WORK IN EXTRACTING INFORMATION FROM AUDIO AND VIDEO TAPE TO HELP SOLVE CRIMES.