



Technology Goes to Court

Over the past decade, the criminal justice community has been introduced to such technology advancements as DNA analysis, automated fingerprint information systems, computer-aided dispatching, in-car video, and complex information management and communication systems. These advancements have made police officers far more efficient and safer on the job and have streamlined many law enforcement and corrections operations. However, in many cases, the new technology has had to receive the approval of its harshest critic—the courts.

One police officer in California recounts when his case was dismissed just minutes after it was called: “We had our experts lined up who would testify about the technology. We brought the district attorney over and showed him the technology, how it worked, and had our experts explain the science. But when it was time to go to court, the D.A. apparently didn’t think we needed our experts. At the preliminary hearing he decided to wing it and explain it on his own. The judge disagreed. He listened for about 5 seconds, and threw the case out.”

“Winging it doesn’t work,” says Jim Falk, a former White House counsel who now practices law in the Washington, D.C., area. “If it does, and if you manage to blow it by the judge, you will probably get reversed at the court of appeals. You can’t dazzle them with your fancy footwork. You have to offer them solid information and have your scientific team ready to take the case to court.”

According to Falk, the admissibility of the evidence or the arrest that is the result of using new technologies involves two general considerations: the acceptance of the science itself, called scientific validity, and the qualifications of expert witnesses.

Scientific Validity

Before *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the most often cited test of scientific validity was the Frye test, the result of an almost 80-year-old decision regarding the admissibility of expert opinion testimony about what was then a new scientific procedure. In *Frye v. United States*, 293 F.1013 (D.C. Cir. 1923),

the defendant based his claim of innocence on the results of a lie detector test that purportedly showed he was telling the truth. The court ruled that the evidence was inadmissible because the scientific principles upon which the procedure was based were not “sufficiently established to have gained general acceptance in the particular field in which it belongs.” This so-called “Frye general acceptance test” remained the standard employed in Federal and State courts for many years.

Then in 1975, the Federal Rules of Evidence were adopted, which gave judges more latitude in determining admissibility. Rule 104(a) gave them the responsibility of making a preliminary determination whether to allow a given expert to testify or not. Rule 702 guided this decision by requiring that the judge determine whether the admission of the testimony would help the court understand evidence or determine a fact at issue. Rule 403 suggested that the judge could exclude evidence if it was more likely to prejudice than increase understanding.

Although the Federal Rules of Evidence gave judges more discretion in determining admissibility, there were those who questioned whether the rules would make the Frye standard obsolete. In 1993, the U.S. Supreme Court answered in *Daubert*. The Court held that Rule 702 did in fact supersede the Frye standard, giving judges new guidance in their role as judicial “gatekeepers.” This approach had judges analyzing the reliability and relevance of potential testimony. In determining reliability, judges were instructed to do a “. . . preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts at issue.”

In determining admissibility, judges were to consider four things:

- Whether the information in question could be or had been tested.
- Whether the theory or technique was subjected to peer review and publication.

- The known or potential rate of error.
- Whether the theory or technique had gained general acceptance in the relevant scientific discipline.

Although making room for only a handful of guidelines that can be used when ruling on admissibility, the Frye standard, the Federal Rules of Evidence, and the Court's ruling in *Daubert* together created a more precise test for scientific testimony.

Qualification of Experts

As has been obvious in a number of high-profile trials, the courts are putting increased emphasis on the importance of an "expert's" credentials. Says Falk, "Courts are now focused on the next generation of how you qualify an expert. Every time you look at new technology, the focus is not so much on the technology as it is the qualification and scientific background of the individual presenting it. It is an expert's expertise issue probably much more than a technology issue. If there is someone who has a list of credentials from, say, the Society for Professional Optical Engineers and who's got 20 years of experience with electron microscopes, you'll probably be okay. If it's the local crime lab guy, you may not."

The U.S. Supreme Court in 1999 reaffirmed in *Kumho Tire Co., Ltd., et al. v. Carmichael et al.*, 526 U.S. 137 (1999), the trial judge's role as a gatekeeper of the admissibility of evidence and the elimination of experts whose work is not truly scientific, peer reviewed, published, tested, or subjected to normal scientific scrutiny.

In *Kumho*, the plaintiff argued that the tire on his vehicle blew out, resulting in one death and a number of injuries. The plaintiff intended to use a tire failure specialist, who would testify that the problem with the tire was the fault of the manufacturer, Kumho Tire Co. As the case wound its way toward the U.S. Supreme Court, it focused on the use of *Daubert* as a guide to the admissibility of scientific evidence and the specialist's credentials and experience in determining the cause of the tire's failure. The Supreme Court ultimately ruled that Federal Rule of Evidence 702 does not differentiate between expert testimony that is "scientific" versus "technical."

The Court also held that *Daubert* should be applied flexibly; that its factors of testing, peer review, error rates, and acceptability were simply illustrative; and that other factors could argue in favor of admissibility. *Daubert's* gatekeeping obligation applies not only to "scientific" testimony, but to all expert testimony, the Court said. The Court did not, however, find the tire failure expert's

testimony reliable given those same guidelines. Although the testimony was characterized by the Court as skill or experienced based, the expert did not use a methodology that was widely accepted. According to the Court, the expert's methodology did not have a scientific foundation, nor had it been tested, published, or peer reviewed.

Court Preparation

"First, education is an important part of the [court preparation] process," Falk says. "Get with your prosecutors. Show them the technology during its testing stages. Make sure they understand the science that runs it . . . the methodology. Get your scientific and technical experts in to work with you. This will give the prosecutors the knowledge they need to lay the proper foundation for admissibility. Expertise is not an abstract concept. It is a quantifiable commodity that is part of the team effort required to take a technology-based case to court—a team that consists of police, prosecutor, and expert witnesses."

"Second," Falk says, "be sure your expert witness is qualified. Is the person a true expert or someone who has only peripheral experience but lots of opinions? Has he or she done a scientific analysis of the evidence? Is there a solid scientific or technical foundation for the technology in question and for the expert's conclusions? Has your expert formulated opinions in this kind of case before? Is the prosecutorial staff clear on the guidelines and requirements in *Frye*, *Daubert*, and Rule 702? Are they willing to use experts and not try to go it alone?"

"Third," Falk adds, "having a well-qualified expert is an important and often crucial matter, but the expert and the prosecutors must work together. Everyone needs to be involved so that the judge can readily grasp the why and how of the technology and so that the expert witness will be able to convince the court he or she has the ability and knowledge to testify. Although the underlying methodology must be sound and convincing, it often comes down to the qualifications of the expert testifying to that methodology."

"With new and increasingly complex methodologies, it is even more important that the expert be qualified not only in the eyes of the law, but a true expert in his or her field, credible to all of the people in the courtroom."

[Editor's Note: When it comes to the admissibility of evidence relating to technology or the use of expert witnesses, it is essential that departments and agencies always check with their district attorney and U.S. Attorney offices first.]

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This article was reprinted from the Spring 2001 edition of *TechBeat*, the award-winning quarterly newsmagazine of the National Law Enforcement and Corrections Technology Center system, a program of the National Institute of Justice under Cooperative Agreement #96-MU-MU-K011, awarded by the U.S. Department of Justice.

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