



E18 The Use and Admissibility of Sense-Enhanced Technologies in Criminal Cases

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After attending this presentation, attendees will understand the prescient analysis of the legal issues involved in the use of sense-enhanced technologies.

This presentation will impact the forensic community and/or humanity by identifying key issues regarding the admissibility of scientific evidence; reviewing the history of sense-enhanced technology; and providing understanding of the legal conditions for the use of sense-enhancing technologies.

The Fourth Amendment of the United States Constitution governs all searches and seizures conducted by government agents. It provides that *The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrant shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched and the person or thing to be seized.*

In 1886, the United States Supreme Court first considered the Fourth Amendment threshold question of whether the conduct of government agents constitutes a “search” or a “seizure” that interferes with an individual’s rights. During the 80 years that followed, the Court has continued to re-evaluate the reach of Fourth Amendment protections in the context of advances in more sensitive scientific investigative methods. In 1967, in *United States v. Katz*, the Court provided the backdrop to subjective notions of privacy versus the government’s use of electronic or sophisticated sense-enhancing technology (an electronic listening and recording device attached to the outside of a phone booth) to perform informational searches on an individual. In 1983, in *United States v. Place*, the Court determined that drug sniffs by trained canines did not constitute a search. The Court stated *in dicta* that government agents may supplement their senses, without constituting a Fourth Amendment search, by using a narcotics detection dog to indirectly examine the concealed contents of an individual’s container. The Court stated that this limited disclosure “ensures that the owner of the property is not subjected to the embarrassment and inconvenience entailed in less discriminate and more intrusive investigative methods.” The Court has not articulated whether or how this principle may apply to subsequent sense-enhanced technologies. However, in 2001, in *United States v. Kyllo*, the Court fashioned a new standard for determining the admissibility of such scientific evidence. Justice Scalia held that “where government uses a device that is not in general public use, to explore details of a private home that would previously have been unknowable without physical intrusion, the surveillance in a Fourth Amendment ‘search,’ and is presumptively unreasonable without a warrant.”

As technology advanced, law enforcement agents gained the ability to conduct searches using sense-enhanced technologies to obtain information that once required actual physical invasion. Law enforcement use of “pen registers” to record numbers dialed from a telephone, “beepers” to track a suspect’s movements, high altitude aircraft to photograph facilities on the ground, or a thermal infrared imaging system to measure escaping heat and “see” through walls, have usually been deemed by the Supreme Court as measures not generally requiring a warrant, due to their level of intrusion. As a result of *United States v. Kyllo*, however, courts may deem the warrantless use of novel advanced technologies (such as an Ion Mobility Spectrometer (IMS) an unconstitutional search. However, there has been little case law regarding the use and intrusion of IMS (a particle sampling device for detection of drugs and explosives) as a drug field testing method by law enforcement agents.

In 2003, in *McGee v. State of Alaska*, the court addressed the issue whether the police must have reasonable suspicion to temporarily remove McGee’s package from the normal flow of commerce and test it with an IMS. The State conceded that, until the police tested McGee’s package with the IMS, the police did not have reasonable suspicion that McGee’s package contained or constituted evidence of criminal activity. In citing *Gibson v. State*, the court ruled that the police needed reasonable suspicion of criminal activity before they could temporarily detain a package and subject it to sniffing by a drug detection dog. In applying this earlier decision to McGee, the court held the same rule applies when the police temporarily detain a package to test for controlled substance with the IMS. The United States Supreme Court has not addressed this issue.

This presentation will examine law enforcement history and use of sense-enhanced technologies in light of the Fourth Amendment’s reasonable expectation of privacy and the varying levels of intrusion involved.

Fourth Amendment, Sensory Enhancing Technology, Ion Mobility Spectrometry