

DISTRICT COURT OF APPEAL OF THE STATE OF FLORIDA
FOURTH DISTRICT

SAMUEL M. WALKER,
Appellant,

v.

STATE OF FLORIDA,
Appellee.

No. 4D19-3289

[December 9, 2020]

Appeal from the Circuit Court for the Fifteenth Judicial Circuit, Palm Beach County; Joseph Marx, Judge; L.T. Case No. 50-2013-CF-003226-CXXX-MB.

Antony P. Ryan, Regional Counsel, and Louis G. Carres, Assistant Regional Conflict Counsel, Office of Criminal Conflict Regional Counsel, West Palm Beach, for appellant.

Ashley Moody, Attorney General, Tallahassee, and Melynda L. Melear, Senior Assistant Attorney General, West Palm Beach, for appellee.

LEVINE, C.J.

In this trial, a detective testified to the area of cell site coverage which placed appellant's cell phone in the area of the crime during the time of its commission. Over objection, the trial court found that the detective's testimony satisfied the standards of *Daubert* and permitted the detective's testimony. We find that the trial court did not err and that the detective satisfied the rigors of *Daubert*. The trial court found that the detective could testify as to the cell site mapping in this case even without having knowledge of the underlying algorithms, or how the system works in every technical detail, to generate the output of information. We thus affirm appellant's conviction for first-degree murder with a firearm while wearing a mask and six counts of robbery with a firearm while wearing a mask.

On January 4, 2013, six individuals, including the owner and her boyfriend, were in a restaurant that had recently closed for the evening. When the boyfriend went to let one of the individuals out the back door, two men rushed into the restaurant with their guns pointed. The robbers

yelled at everyone to get down and took the victims' property, including the owner's Chopard watch. The robbers fired shots, killing the boyfriend.

A few hours after the robbery, the two codefendants and a third man, later identified as appellant, entered a convenience store and sold the Chopard watch to a man who buys jewelry for cash. The man who purchased the watch later contacted the police and provided them with the codefendants' names and phone numbers. During an investigation, the police learned that appellant was an acquaintance of the codefendants.

The police recovered a 9mm bullet and casing at the crime scene as well as a 9mm pistol from a codefendant's residence. DNA from the 9mm pistol and the Chopard watch matched appellant's DNA.

Phone records from appellant's and the codefendants' phones were admitted into evidence without objection. The records showed the dates and times of phone calls as well as the cell phone tower ID number for those calls. During voir dire, a detective testified that he used a cell phone mapping and analytical program, TRAX, to diagram the estimated location of the mobile devices. The detective explained there is no such thing as a standard or average range for a cell tower; instead, there are gradual diminishing signal strengths. Once a device travels outside the beam with the coverage area, there is an estimated coverage or estimated handoff area represented by a horizontal plane. The program creates an illustration using data from the phone records.

The detective stated that cell phone towers use directional antennas that are affixed to the cell site or cell tower. The detective had participated in drive testing or field scans to test the program's accuracy. During such testing, they take radio frequency measurement equipment out into the field and conduct network scans that capture the signal strength and quality of the cell site. The detective had done this two or three months prior to trial. The detective testified that "it's extremely accurate." He did not know the error rate because "you have to have an understanding of how the technology works."

The detective explained that the program creates an illustration based off an algorithm "using field scans or radio frequency coverage and other field tests that are used to provide a cellular network pattern based off handoffs, subscriber density, tower density, network capacity, elevation and terrain." The detective did not know the algorithm.

The defense moved to exclude the detective's testimony because it was unknown how the TRAX system works and there was no known rate of

error. The trial court treated the motion as a *Daubert* challenge and ruled to admit the testimony.

The detective then testified that he had over 100 hours of training in cell phone mapping and analytics and had been involved in over 200 cases involving cell phone mapping and analytics. He had testified in more than ten cases in Palm Beach County.

The detective testified that cell phone companies provide law enforcement the location of cell phone towers and the direction from the tower of the antenna being used to facilitate the transmission. The detective received cell phone records from three different cell phones belonging to appellant and the codefendants to conduct mapping. The detective concluded that appellant's and the codefendants' cell phones placed them in the area of the restaurant during the timeframe of the crime and in the area of the convenience store during the timeframe the watch was sold. The detective emphasized that cell site information does not give an exact location but rather an approximate geographical area or region. On cross-examination, the detective testified that he has been using TRAX since 2016 and that before TRAX, he would do the mapping manually.

In a statement to police, appellant confirmed his phone number, stated he knew the codefendants, admitted he had his phone with him on the night of January 4, and identified himself in the convenience store surveillance video.

The jury found appellant guilty as charged.

Appellant argues that the trial court erred in admitting the detective's testimony regarding the cell site tower coverage because the detective's testimony did not meet the standard for admissibility under *Daubert*. Appellant claims that the detective lacked sufficient knowledge to testify about the computer-generated map which connected appellant's cell phone to cell towers near the scene of the crime during the period of time when the crime was committed.

The state argues that the detective had sufficient familiarity and understanding of cell phone analysis and mapping to be able to testify to the output of the computer-generated cell site map. We agree.

We consider a trial court's ruling on the admissibility of expert testimony under section 90.702, Florida Statutes (2019), under the abuse of discretion standard of review. *Kemp v. State*, 280 So. 3d 81, 88 (Fla. 4th DCA 2019).

Section 90.702, Florida Statutes, codifies the *Daubert* standard as follows:

If scientific, technical, or other specialized knowledge will assist the trier of fact in understanding the evidence or in determining a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify about it in the form of an opinion or otherwise, if:

- (1) The testimony is based upon sufficient facts or data;
- (2) The testimony is the product of reliable principles and methods; and
- (3) The witness has applied the principles and methods reliably to the facts of the case.

A trial judge has the role of gatekeeper under *Daubert*. The judge is to “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” *Daubert*, 509 U.S. at 589. As a gatekeeper, the trial judge must make “a preliminary assessment of whether the reasoning or methodology . . . properly can be applied to the facts in issue.” *Id.* at 592-93. *Daubert* lists relevant factors for the trial court to consider when determining the reliability of expert testimony, such as whether the theory or technique can be and has been tested, whether the theory or technique has been subjected to peer review and publication, the known or potential rate of error and the existence and maintenance of standards controlling the technique’s operation, and general acceptance in the scientific community. *Id.* at 593-94. The *Daubert* list of “factors neither necessarily nor exclusively applies to all experts or in every case.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999). The *Daubert* test of reliability is flexible. *Id.* “*Daubert* makes clear that the factors it mentions do not constitute a ‘definitive checklist or test.’” *Id.* at 150 (citation and emphasis omitted). The trial judge has “broad latitude” in evaluating expert testimony. *Id.* at 153.

In admitting the detective’s testimony, the trial court initially relied on *Gordon v. State*, 863 So. 2d 1215 (Fla. 2003), and *Perez v. State*, 980 So. 2d 1126 (Fla. 3d DCA 2008). In *Gordon*, the defendant argued the trial court erred in denying an evidentiary hearing on his claim that trial counsel was ineffective for failing to object to expert opinion testimony of two witnesses. 863 So. 2d at 1219. The supreme court found that the testimonies of the witnesses did not constitute expert testimony. *Id.* One

witness factually explained the contents of phone records that linked the defendant to the murder, and the second witness, a detective, factually compared the locations on the phone records to locations on the cell site maps. *Id.*

In *Perez*, the Third District found that testimony of records custodians from cell phone companies did not constitute expert testimony under section 90.702 and therefore was properly admitted. 980 So. 2d at 1131. “As in *Gordon*, the custodians factually compared the locations on the phone records to locations on the cell site maps.” *Id.* The court explained:

[The witness] testified that a typical cell site covered an area of one to three miles. She then stated that the record for a particular cell phone details the actual cell tower off of which the call bounces. This testimony constituted general background information interpreting the cell phone records which did not require expert testimony. It did not reveal the precise location within that one to three mile radius from which the calls were generated. It only served to explain the concept of a cell site and how it generally related to cellular telephone company records.

Id. (footnote omitted).

The trial court did not abuse its discretion in admitting the detective’s testimony. Both *Gordon* and *Perez* are generally like this case. The witnesses in *Gordon* and *Perez*, like the present case, all performed, or assisted, in the cell phone mapping. The only difference here is that the detective used a computer program to assist in the cell site mapping. Before the advent of that computer program, the witness would do the mapping by hand.

Both *Gordon* and *Perez*, which were decided before Florida adopted the *Daubert* standard, found the witnesses’ testimony to be non-expert testimony. Regardless of whether the detective’s testimony in this case is viewed as non-expert or expert testimony, the trial court got it right. The detective’s testimony also satisfied the *Daubert* standards. The detective had been involved in over 200 cases involving cell phone mapping as well as 100 hours of training in cell phone mapping. Further, the detective had testified in more than ten cases in Palm Beach County and had used this program since 2016. The detective’s testimony was that the program diagrams estimated locations of the mobile device, not an exact location. The program creates an illustration using data from the phone records.

The detective testified that the program creates an illustration based on an algorithm “using field scans or radio frequency coverage and other field tests that are used to provide a cellular network pattern based off handoffs, subscriber density, tower density, network capacity, elevation and terrain.” The detective did not know the underlying algorithm used to create the mapping output. An expert is not required “to have an in-depth knowledge of all the algorithms underlying their technological tools—such as hardware and software—to reliably testify about the outputs of those tools.” *United States v. Morgan*, 292 F. Supp. 3d 475, 485 (D.D.C. 2018).

Forensic investigation increasingly requires the use of computer software or other technological devices for the extraction of data. While an investigator must have specialized knowledge in the use of the particular software or device, it is not required—nor is it practical—for an investigator to have expertise in or knowledge about the underlying programming, mathematical formulas, or other innerworkings of the software.

Id. (citation omitted).

Today much of our technology has a computer-driven component. Each and every computer-driven item has a program and an underlying algorithm guiding the actions of that technology. It would be unrealistic and unworkable to expect every expert, who uses a technology with a computer component, to be able to testify as to the workings of the algorithm that is part of its software or every technical detail that is part of the underlying system.

As to the program’s accuracy, the detective testified that he participated in drive testing or field scan tests, that he had done such tests as recently as two to three months before trial, and that the technology was “extremely accurate.” Although he did not know the error rate, his testimony clearly included other indicia of reliability.

We find *Williams v. State*, 606 S.W.3d 48 (Tex. App. 2020), to be instructive. In *Williams*, the appellant claimed that the trial court erred in allowing the testimony of a police analyst about cell phone location tracking. The appellant argued that the trial court abused its discretion in admitting the testimony because the analyst did not know the error rate for the methodology the analyst was using. The court concluded that the “plotting software’s error rate did not impact the reliability of her opinions.” *Id.* at 57. The court further concluded “that the trial court did not abuse its discretion when it determined that [the analyst’s] opinion on the general

location” of the appellant and the victim’s cell phones was “reliable.” *Id.* Like in *Williams* where the analyst did not know the error rate, the trial court, as gatekeeper in the present case, did not abuse its discretion in admitting the detective’s testimony where the detective did not know the underlying algorithm.

Numerous other courts have determined that testimony based on cell phone data mapping programs is admissible. See *McMillian v. State*, 214 So. 3d 1274, 1288 (Fla. 2017) (“The basic principles of cellular technology have been widely accepted and admitted into evidence.”) (citation omitted); *United States v. Hill*, 818 F.3d 289, 297 (7th Cir. 2016) (“District courts that have been called upon to decide whether to admit historical cell-site analysis have almost universally done so.”); *United States v. Kemp*, No. 4:15-cr-00025-TWP-VTW, 2017 WL 2719328, at *4 (S.D. Ind. June 23, 2017) (finding officer’s methods of mapping using software programs reliable and admissible because the officer emphasized that the mapping technology provides only a radio frequency footprint, but does not give the exact location of the phone); *Morgan*, 292 F. Supp. 3d at 480-82 (admitting testimony from an agent who inputted data from a drive test into a software program to generate a map illustrating the likely coverage areas the target cellphones were in).

In summary, we find the trial court did not abuse its discretion, in its role as a gatekeeper under *Daubert*, by admitting the testimony of the detective. We affirm.

Affirmed.

WARNER and ARTAU, JJ., concur.

* * *

Not final until disposition of timely filed motion for rehearing.