STATE OF SOUTH CAROLINA

IN THE COURT OF APPEALS

THE STATE,

RESPONDENT,

V.

TYRONE ANTHONY WALLACE, JR.

APPELLANT

APPELLATE CASE NO. 2018-001242

Appeal from Beaufort County

Carmen T. Mullen, Circuit Court Judge

Opinion No. 2021-UP-029

PETITION FOR REHEARING

On January 27, 2021, this Court affirmed Appellant's convictions for murder and kidnapping in an unpublished opinion. State v. Wallace, 2021-UP-029 (S.C. Ct. App. filed Jan. 27, 2021). On appeal, Appellant challenged the trial judge's qualification of a member of the solicitor's office as an expert in historical cell site analysis where the solicitor's employee lacked the knowledge, skill, experience, training, or education necessary in order to render an opinion. Specifically, Appellant noted the witness had never been qualified as such an expert previously and he demonstrated knowledge, skill, experience, training, or education in this area. In fact, his most significant training provided him with a certificate stating the solicitor's employee's

completion of the course did *not* render the employee qualified as an expert. Nevertheless, this Court held the solicitor's employee was properly qualified as an expert because he was "the Director of the Fourteenth Circuit Solicitor's Office Intelligence Unit; ha[d] amassed seventy-two hours of training related to historical cell-site analysis; continue[d] his education in historical cell-site analysis in the form of yearly online trainings; and ha[d] reviewed over one hundred sets of cell phone records." State v. Wallace, 2021-UP-029 (S.C. Ct. App. filed Jan. 27, 2021). Pursuant to Rule 221(a), SCACR, Appellant respectfully requests this Court rehear the matter because this Court overlooked or misapprehended the evidence, which indicated the solicitor's employee lacked the requisite knowledge, skill, experience, training, or education necessary to render an opinion on cell-site location information.

The South Carolina Rules of Evidence govern the admissibility of scientific evidence. The applicable rule provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Rule 702, SCRE. "'All expert testimony must satisfy the Rule 702 criteria, and that includes the [circuit] court's gatekeeping function in ensuring the proposed expert testimony meets a reliability threshold for the jury's ultimate consideration.'" State v. Cain, 413 S.C. 508, 520-521, 776 S.E.2d 374, 380 (Ct. App. 2015) (quoting State v. White, 382 S.C. 265, 270, 676 S.E.2d 684, 686 (2009)).

Thus, several criteria must be met prior to the admission of expert testimony. First, the trial court must determine that such evidence will assist the jury in understanding the evidence or determine a fact in issue. Second, the witness must be qualified as an expert due to experience or training. Third, the trial court must determine whether the proposed expert testimony satisfies a reliability threshold for the jury's ultimate consideration. State v. White, 382 S.C. 265, 269, 676

S.E.2d 684, 686 (2009). The party offering the expert testimony has the burden of showing the witness possesses the necessary learning, skill, or practical experience to enable the witness to give the opinion testimony. State v. Von Dohlen, 322 S.C. 234, 249, 471 S.E.2d 689, 697 (1996).

The first criterion requires the trial judge to determine whether the proffered testimony, which is based upon specialized knowledge, will assist the jury in understanding evidence or determining a fact. A matter understood without any specialized knowledge does not require the witness to be qualified as an expert. Additionally, if the testimony will not assist the jury's understanding of a relevant matter, then no expert testimony is needed. See Manning, 297 S.C. at 453-454, 377 S.E.2d at 337 (holding that "[t]o qualify as an expert, a person must have acquired by study or practical experience a special knowledge of a subject matter about which the jury's good judgment and average knowledge is inadequate"); Honea, 295 S.C. at 531, 369 S.E.2d at 849. The third criterion requires the trial judge to ensure the proffered testimony "meets a reliability threshold for the jury's ultimate consideration." White, 382 S.C. at 270, 676 S.E.2d at 686. As explained by the South Carolina Supreme Court, "[r]eliability is a central feature of Rule 702 admissibility." Id.

The second criterion, which is at issue in Appellant's case, requires that the expert's proffered testimony be based upon "knowledge, skill, experience, training, or education." In order for a witness to be competent to testify as an expert, the "witness must have acquired by reason of study or experience or both such knowledge and skill in a profession or science that he is better qualified than the jury to form an opinion on the particular subject of his testimony." O'Tuel v. Villani, 318 S.C. 24, 28, 455 S.E.2d 698, 701 (Ct. App. 1995). Qualification as an expert "depends on the particular witness' reference to the subject." Gooding v. St. Francis Xavier Hospital, 326 S.C. 248, 253, 487 S.E.2d 596, 598 (1997); Suess, 318 S.C. at 285, 457 S.E.2d at 346. "'[A]n expert is not limited to any class of persons acting professionally.'" Gooding, 326 S.C. at 253, 487

S.E.2d at 598 (citing Botehlo v. Bycura, 282 S.C. 578, 586, 320 S.E.2d 59, 64 (Ct. App. 1984)). In addition, our courts place no exact requirement regarding how that knowledge or skill must be acquired by the witness. Honea, 295 S.C. at 531, 369 S.E.2d at 849. In fact, "[e]ven where the problem presented may be one that usually requires some scientific knowledge or training, a person with long experience may testify as an expert although he or she did not pursue a special study of the matter." Id.

In McDill v. Mark's Auto Sales, 367 S.C. 486, 491, 626 S.E.2d 52, 55 (Ct. App. 2006), this Court held the trial judge did not err in refusing to qualify a state trooper as an expert in accident reconstruction. Although the trooper had experience in investigating accidents and took a six-week accident reconstruction course along with updating courses, the trooper was not a member of the Highway Patrol's accident reconstruction team. The trooper did not use any particular reconstructive techniques in making his determination of the car speeds; rather, he relied upon statements from the drivers as to their speeds. The trooper had testified in federal court previously concerning his opinion as to accident investigation, not reconstruction. Id. As this Court noted, "if investigating an accident qualified an officer as an expert in accident causation, then every highway patrolman would qualify as an expert." Id.

In State v. Ellis, 345 S.C. 175, 177-178, 547 S.E.2d 490, 491 (2001), the Supreme Court held a police officer, who was qualified to testify as an expert in crime scene processing and fingerprint identification exceeded the scope of his expertise when he testified as to his conclusion drawn from the measurements and observations he made. In Ellis, the victim was found dead as a result of gunshot wounds near his bicycle and a knife. The defendant admitted to shooting the victim, but claimed he acted in self-defense when the victim dropped his bike and approached the defendant with the knife. When the victim refused to stop, the defendant shot the victim. The

prosecution's theory of the case was that the defendant shot the victim while the victim remained on the bike. Id. at 176, 547 S.E.2d at 491. The police officer testified that the victim was on his bike when he was shot based upon his measurements and observations of the crime scene. Id. at 177-178, 547 S.E.2d at 491. Further, the Court held the error in allowing the officer to testify was not harmless in light of the defendant's contention that he was acting in self-defense. Id. at 178, 547 S.E.2d at 491. The Court held the prosecutor was free to argue that the evidence supported an inference that the victim was on the bicycle at the time of the shooting, and the jury could have concluded as such, but the officer "was not qualified to give such an 'expert' opinion." Id.

A pretrial hearing revealed that Dylan Hightower, who had never been qualified as an expert witness, had limited knowledge, skill, experience, training, or education in the field of historic cell-site location information. R. 6, ll. 22-25; R. 9, ll. 18-20. In 2010, Hightower graduated from the University of South Carolina with a degree in sociology. R. 11, ll. 2-4. After graduation, he "served an internship with the South Carolina Law Enforcement Division, and ultimately obtained a position at the Fourteenth Circuit Solicitor's Office" as "the director of the Intelligence Unit." R. 5, ll. 9-14; R. 11, ll. 4-7. In this role at the Solicitor's Office, Hightower performed "historical cell phone analysis for the actual records that were provided from the providers." R. 10, ll. 9-11. Upon receipt, from the providers, of "call detail records," "a realtime tool," and "any other incoming and outgoing calls," Hightower would analyze the information and "do a geo spacial mapping." R. 10, ll. 12-19.

As a favor to the Solicitor, SLED agreed to allow Hightower to "do a four-week, on-the-job training in the Fusion Center" to develop "a knowledge for basic criminal intelligence analysis." R. 11, ll. 7-13. This four-week program "encompasse[d] everything," including "a basic knowledge of cell phone forensics, as well as cellular analyses." R. 11, ll. 14-19. In

December 2011, he took a "one-week course" at SLED called "PenLink" for "call analysis training." R. 11, l. 20 – R. 12, l. 1. That course taught "how to read the records," "map the records," and "how to use their software," which does the analyses. R. 12, ll. 1-5.

Three years later, he took a two-day course called "Fundamentals of Call Detail Records Analysis" in North Carolina. R. 12, ll. 7-9. This class primarily dealt with "manual searching, [and] manual analyses." R. 12, ll. 9-12. Then, he attended a "one-day course in Myrtle Beach" on "mobile forensics." R. 14, ll. 11-13. For this class, he obtained "a certification" and his work was "peer reviewed by someone" with more knowledge in the system or someone who had been using the system longer. R. 14, ll. 14-18. Finally, in May 2018, one month before the hearing to determine his qualifications and the admissibility of his testimony, he attended "the FBI CAST class." R. 14, ll. 18-21. This class concerned "historical cell site analysis." R. 14, ll. 19-21. In total, Hightower had 72 hours of training in "actual" courses. R. 24, ll. 23-24; R. 33, ll. 1-5.

When asked if he were certified or if anyone tested him, he responded that the instructors at the classes he took did so. R. 12, l. 25 – R. 13, l. 9. He also claimed that "after all these classes" he was certified in "an understanding of how to read records, as well as an understanding of how cell site towers work, as well as sectors[, and a]ll entities of call detail records." R. 14, l. 22 – R. 15, l. 6. Later, he revealed he had received a certification only from "FBI CAST, Cell Site Analysis Course." R. 25, ll. 7-12; R. 33, ll. 19-25. He was certified in "[h]aving the ability to analyze and interpret data … from the different cellular providers." R. 35, ll. 1-5.

Hightower had never conducted any experiments to test the accuracy of the information he received from his instructors. R. 28, l. 21 – R. 29, l. 10. He simply accepted the word of his instructors. R. 29, ll. 11-19. "[I]n the beginning," Hightower reached out to his instructors to

have "them peer review [his] work to make sure what [he] was doing was correct and was going along with what [he] learned in the class." R. 30, ll. 2-6.

During the hearing, the state explained Hightower would testify that Appellant's "cell phone [was] pinging off of the towers on the way to and from the murder location." R. 19, l. 25 – R. 20, l. 2. Hightower received Appellant's phone records. R. 37, l. 24 – R. 38, l. 6. He then conducted "a cell site analysis" on the records for the time period of October 25, 2015, at 7 p.m. until October 26, 2015, at 5 a.m. R. 40, ll. 7-16. Hightower created a report of his analysis because the records received from the cell phone provider were "very tough to understand and comprehend." R. 40, ll. 17-25. He also created "an overview of all the towers that were utilized by that phone during a specifically time frame, along with the location of the residence at XXX Greene Street, and the location of the burned remains off of Pea Patch Road on Saint Helena." R. 41, l. 18 – R. 42, l. 4. He generated the map using "the CASTViz system," software from one of the conferences he attended. R. 42, ll. 5-7. He claimed he "also did a manual search, a manual analysis through Microsoft MapPoint." R. 42, ll. 7-8.

Hightower informed the judge that the Greene Street house was "approximately 327 yards from the tower." R. 20, ll. 21-25. Hightower further asserted that "the location of the remains was 2.67 miles from that tower on that same sector," and from this, he concluded "it would be in that direction the phone was utilized." R. 21, ll. 5-7. When asked how he could "get that specific," Hightower responded that he "just measure[d] the difference between the location of the remains and the distance … where the tower is located" using latitude and longitude. R. 21, ll. 8-17.

According to Hightower, on October 25, 2015, from 7:11 p.m. until 8:37 p.m., the phone was using a tower that was 327 yards from the area where Steve was killed. R. 42, ll. 11-24.

Hightower claimed that between 8:08 p.m. and 8:37 p.m., the phone called Smith five times. R. 46, l. 23 – R. 47, l. 2. At 9:09 p.m., the phone used a tower in Burton, South Carolina. R. 43, ll. 8-17. Then, at 10:55, the phone began using the tower close to the incident location again. R. 43, ll. 18-23. From 12:34 a.m. until 2:29 a.m. on October 26, the phone used a tower "off of Saint Helena." R. 43, l. 25 – R. 44, l. 3. This was near where the remains were found. R. 44, ll. 4-7. Hightower claimed the tower was "2.67 miles" from the remains. R. 44, ll. 8-9. According to Hightower, the location of the remains was "well within the tower's range." R. 45, ll. 23-24. Thereafter, the phone used several more towers until at 4:55, it arrived back in Burton. R. 45, ll. 2-10. Hightower claimed that over the course of the time period he analyzed, Appellant's phone called Lampkin seventeen times. R. 47, ll. 3-7.

Hightower claimed that "[i]n most cases, if the tower does get overloaded, it would bounce to the next closest tower." R. 46, ll. 1-8; R.47, l. 25 – R. 48, l. 3. However, in his opinion, this phone did not use a next closest tower due to the closest tower being overloaded because it was consistently using the same tower. R. 46, ll. 10-15.

At the conclusion of the hearing, Appellant argued Hightower should not be qualified as an expert. Specifically, Appellant noted that the certificate Hightower possessed contained a statement making it "very clear that in no way was the submission to and completion of th[e] course any basis to find that this individual was qualified as an expert." R. 69, ll. 1-12; R. 252, ll. 11-20. While the judge determined "the cell tower historical data and information" required "an expert witness," she found Hightower had "shown enough education, certainly, and experience and training in this triangulation technology." R. 70, ll. 17-20.

Hightower, and the state, relied primarily upon his attendance at a two-day course, which occurred two months before Appellant's trial and was sponsored by the FBI CAST Team, to qualify

him as an expert in historical cell site analysis. Yet, the certificate issued to Hightower for his attendance at the program had "a bright red notation" that read as follows: "The Basic Historical Cell Site Analysis course does not provide the requisite knowledge or experience to qualify students as experts in historical call detail record analysis. It is designed to provide a foundation of understanding of the records." R. 252, ll. 11-20. Hightower, who was "the director of the Intelligence Unit" at the Fourteenth Circuit Solicitor's Office, had never been qualified as an expert witness despite indicating that the entirety of his job at the solicitor's office focused on conducting historical cell phone analysis. Hightower had very little experience conducting such analyses, and he had even less experience as a law enforcement officer. No one reviewed Hightower's work. He conducted his own peer review by doing a manual analysis of the data after using the software he obtained from one of the seminars he attended.

Although Hightower had attended only a handful of meetings regarding historical cell site location analysis, had very little experience conducting the analyses, and had never been qualified as an expert previously, the trial judge qualified him as an expert in historical cell site location analysis. Thereafter, the state used Hightower to present very damaging evidence against Appellant, including that his phone was using towers located near the site of the killing around the time of the killing and that his phone was using towers near where the body was dumped later.

Hightower's lack of training, education, and experience showed when he told the jurors that cell phones connect to the closest tower. "Law enforcement experts regularly tell juries that cell phones only connect to the closest cell tower, but this assertion is false." Thomas J. Kirkham, Rejecting Historical Cell Site Location Information as Unreliable Under Daubert and Rule 702, 50 U. Tol. L. Rev. 361, 367 (2019). In fact, "[c]ell phones generally connect to the cell tower with the

strongest signal at that time, but the strongest signal will not always come from the closest cell tower. Countless factors affect which tower is chosen to connect a phone to a cellular network, and the network has its own methods for tower selection." Id. Cell phones "are constantly scanning the network [of towers] for the tower with the strongest available signal." Id. at 368. "A cell phone will relay its information to every available tower approximately once every seven seconds." Id.

Furthermore, "[e]ach cell tower is designed to cover a specific geographic area, but these areas are not uniform in size or shape." Id. at 369. "[T]he size and shape of a tower's coverage area is based on geography and various demands placed on the network. For example, some coverage areas are purposely designed to be long thin strips covering a stretch of busy highway." Id. Most cell towers have a range of six miles in rural areas and three miles in urban areas, but some can be larger than twenty miles. Id. "The wide range of towers creates overlapping zones, which allows for two phones in the same location to connect to two different cell towers." Id.

"The main problem with using [cell tower location information] evidence to pinpoint an individual's location is that numerous factors affect which cell tower will connect a particular phone to the network at any given time. This fact is either not understood by the 'expert' witness or is understood but not adequately explained to the judge and jury." Id. at 370. There is a "false assumption by many in the legal community" "that a cell phone connected to Tower X will be located somewhere inside of the cell phone company's stated coverage area for Tower X." Id. Additionally, "[w]hen evidence is presented in the forms of maps created based on the call detail records, the expert should not include diagrams that purport to show the specific coverage area of a cell tower unless those maps are generated by the wireless telephone company." Id. (internal quotation omitted). The "so-called coverage maps" produced by the cellular company "show the *probable* coverage area of each tower, not the *possible* coverage area." Id. (emphasis in original).

Historical cell site data must be handled with care as it often convinces a jury of an independent and neutral reason to believe a person was at a particular place at a particular time. There is a serious risk that a jury will "overestimate the quality of the information" provided by the analysis. United States v. Hill, 818 F.3d 289, 299 (7th Cir. 2016). The Seventh Circuit warned that "caution" must be exercised when presenting historical cell site evidence to ensure "the level of precision – or imprecision – with which that particular evidence pinpoints a person's location at a given time" is communicated to the jury. Id. According to the Seventh Circuit, admitting such evidence "that overpromises on the technique's precision – or fails to account adequately for its potential flaws – may well be an abuse of discretion." Id.

The trial judge failed to exercise the necessary caution here by qualifying a member of the solicitor's office as an expert in historical cell site location analysis when the employee lacked the requisite knowledge, skill, experience, training, or education to form an opinion about the records he reviewed. As a result, the jury heard very damaging evidence from Hightower, who claimed that Appellant's phone was using towers located near the site of the death around the time of death and his phone was using towers near where the body was found later. The damaging evidence was presented through a witness "imbued with the imprimatur of an expert witness," heightening the prejudicial nature of the judge's error. See State v. Chavis, 412 S.C. 101, 109, 771 S.E.2d 336, 340 (2015). This Court's affirmance of the erroneous ruling ignored the evidence in the record demonstrating Hightower's inadequacies. Appellant respectfully requests this Court rehear the matter to address these evidentiary matters that were overlooked and misapprehended.

Respectfully Submitted,

s/*Susan B. Hackett*
SUSAN B. HACKETT
Appellate Defender

This 11th day of February, 2021.

STATE OF SOUTH CAROLINA

IN THE COURT OF APPEALS

Appeal from Beaufort County

Carmen T. Mullen, Circuit Court Judge

THE STATE,

RESPONDENT,

V.

TYRONE ANTHONY WALLACE, JR.

APPELLANT

CERTIFICATE OF SERVICE

Pursuant to the Supreme Court's Order "RE: Operation of the Appellate Courts During the Coronavirus Emergency," dated March 20, 2020, the undersigned hereby certifies a true copy of the Petition for Rehearing in the above-entitled case has been served upon W. Joseph Maye, Esquire, at the primary e-mail address listed in the Attorney Information System (AIS), which is jmaye@scag.gov; and Tyrone Anthony Wallace, #376861, at Lee Correctional Institution, 990 Wisacky Hwy., Bishopville, SC 29010, this 11th day of February, 2021.

s/*Susan B. Hackett*
Susan B. Hackett
Appellate Defender
ATTORNEY FOR APPELLANT