UNREPORTED

IN THE COURT OF SPECIAL APPEALS

OF MARYLAND

No. 1437

September Term, 2014

STERLING HOLLIS

v.

STATE OF MARYLAND

Eyler, Deborah S.,
Meredith,
Leahy,

JJ.

Opinion by Eyler, Deborah S., J.

Filed: June 8, 2015

A jury in the Circuit Court for Montgomery County convicted Sterling Hollis, the appellant, of robbery with a dangerous weapon, use of a firearm in the commission of a felony, first-degree assault, conspiracy to commit robbery with a dangerous weapon, and fleeing and eluding police. He was sentenced to an aggregate term of 18 years in prison. On appeal, he presents three questions, which we have rephrased slightly:

I. Did trial counsel render ineffective assistance of counsel by failing to object to the State's use of lay testimony to explain cell phone tower data used to place the appellant near the scene of the crime?

II. Did the trial court commit plain error by allowing a lay witness to testify about cell phone tower data used to place the appellant near the scene of the crime?

III. Did the trial court abuse its discretion by improperly admitting unauthenticated cell phone data copied by an unknown individual at Apple who was not called to testify?

For the following reasons, we shall affirm the judgments of the circuit court.

FACTS AND PROCEEDINGS

On June 21, 2013, Bryon Clarke was alone in a basement level apartment on Quince Orchard Boulevard, in Gaithersburg, when two men entered the apartment and attacked and robbed him at gunpoint.[1] The apartment was leased to Clarke's girlfriend, Todzja Williams. The appellant and another man, one Ricardo Cunningham, were charged in relation to the robbery.

The case against the appellant was tried to a jury over three days. The State's case consisted of circumstantial evidence tying the appellant to Cunningham, to the area of the

[1]Clarke's name appears as "Byron" throughout much of the record. We use the spelling he provided at trial.

crime, and to the appellant's vehicle, which was abandoned shortly after the crime. Some of this evidence was derived from data from a cell phone that was in the appellant's possession when he was arrested and the call detail records for that cell phone. The appellant's defense was lack of criminal agency. He claimed to have been misidentified as a suspect and to have had no involvement in the crime and no relationship with Clarke or Cunningham. We summarize the pertinent evidence.

Around 8:30 a.m. on the day before the robbery, Williams and Clarke were asleep in her apartment when a woman named Bella called Williams's cell phone.[2] Williams knew Bella because she lived across the street in the same apartment complex. Williams spoke briefly to Bella and hung up. Half an hour later there was a knock at the door. Williams opened the door to find a man she knew as "Bishop" there. At the time, Bishop was Bella's boyfriend. Williams had met Bishop once before and had seen him around the neighborhood. Bishop asked Williams if she had any "weed." She replied that she did not and did not know anyone who did, but to let her know if he found any because she was "sitting on some bread," meaning that she had money to buy marijuana. Williams also asked Bishop for $10 she had loaned to Bella. He gave her $10 and left.

Later that afternoon, Bella called Williams again. Bella was angry that Williams had asked Bishop for the $10. She told Williams that it wasn't "[her (Williams's)] place to . . . tell [Bishop] that [Bella] owed anyone any money."

[2]Bella's name is Alexia Hatfield. She did not testify at trial.

The following day, Williams left the apartment around 7:00 a.m., while Clarke remained there asleep. Around 10:30 a.m., he heard a knock at the door. He looked through the peephole and saw a man wearing a "fluorescent yellow" "worker vest" with a gray T-shirt underneath it. The man was African-American, and had a goatee. Thinking the man probably worked for Montgomery County, Clarke opened the door.

The man asked if Williams was home. Clarke replied that she was not. The man then asked if Clarke had any "weed." Clarke replied that he did not. The man said "he wanted 3.5," which Clarke understood to mean about "[a]n eighth of an ounce of marijuana." Clarke reiterated that he did not have any marijuana. The man said, "Okay." Clarke asked who had "sent [him]," and the man replied, "Bella." Clarke said, "okay."

Clarke shut the door, but before he could lock it, "it opened back up" and the man and a second man "rushed in the house." The second man was wearing a ski mask and a short-sleeve black T-shirt. Clarke could see that the second man was African-American and had shoulder-length dreadlocks.

The first man pulled out a gun, pointed it at Clarke's face, and demanded "all the weed or all the money." Clarke said he did not have any weed or any money. The first man handed the gun to the second man. That man told Clarke to "get on [his] knees." Clarke refused. The second man hit Clarke in the face with the gun about five times. Clarke fought back, striking the man on the chin. He then ran through the screen covering a sliding door at the rear of the apartment, knocking the screen to the ground.

Clarke stood in the backyard "in shock," and "bleeding everywhere." He realized he had left his cell phone inside the apartment on an ottoman about 10 feet away from the back door. He did not see the two men in the apartment, so he quickly ran back inside, picked up his phone, and turned to run outside. As he did so, the second man appeared and grabbed his arm to try to stop him. Clarke was able to "br[eak] away" and get back outside.

A few minutes later, the two men ran out the back door of the apartment and fled into an adjacent parking lot. Clarke immediately returned to the apartment, locked all the doors, armed himself with a knife from the kitchen, and called Williams. Williams was on her way home and arrived at the apartment within 20 minutes.

Williams walked through the apartment, which had been "trashed," and then called 911. By then, it had been nearly an hour since the robbery. She told the 911 operator that her boyfriend had been robbed by two men and that they had "beat him up with a gun." About $100 was missing from the apartment. She reported that Clarke was "bleeding badly from his head," and that neither she nor Clarke knew the identity of the perpetrators.

Paramedics and police officers from the Gaithersburg City Police and the Montgomery County Police Department ("MCPD") responded to the apartment. Clarke was transported to Shady Grove Hospital, where he received eight stitches to his head.

While police officers were on the scene, they learned that a State Trooper was involved in a nearby "car chase" that had begun on I-270 and had continued on I-495. The trooper had tried to stop a beige Ford Explorer The Explorer did not stop as directed and exited I-495 at Georgia Avenue, in Silver Spring. For safety reasons, the trooper stopped

pursuing the Explorer. He called in a description of the vehicle and its plate number to the MCPD. He had seen two African-American males inside the Explorer.

MCPD Officers Norman Brissett and Dominic Brissett, with the MCPD, were patrolling near Georgia Avenue when they observed a Ford Explorer matching the description given by the State Trooper.[3] Officer Dominic Brissett activated the siren and lights on his patrol car and attempted to stop the Explorer. The driver did not stop, and instead rammed into other vehicles and drove onto the sidewalk to elude the officers. Moments later, the two occupants abandoned the Explorer at the entrance to a nearby parking garage and fled on foot. Surveillance footage from the garage showed two men, one with long dreadlocks, running away from the parking garage.

Detective Bryan Dwyer, from the Major Crimes Robbery Section of the MCPD, ran the license plate for the Explorer and determined that it was registered to the appellant. There was no report of the Explorer having been stolen. The Explorer was towed to a police impound lot. After the police obtained a warrant, they searched it. They recovered a gray T-shirt with blood stains on it and a fluorescent vest like the one Clarke had described the first man wearing during the robbery. They also recovered five cell phones -- four Samsung flip phones and one Motorola phone -- none of which had any subscriber information associated with them. The blood on the T-shirt later was determined to be consistent with Clarke's DNA. Other DNA collected from the neck area of the T-shirt was run through the

[3]Officer Norman Brissett is Officer Dominic Brissett's father. Officer Norman Brissett was patrolling on a motorcycle and Officer Dominic Brissett was in a police cruiser.

combined DNA Index System, and was determined to be consistent with Ricardo Cunningham's DNA.

Detective Dwyer found a phone number for the appellant and called him twice.[4] The first time, the appellant answered, but hung up immediately after Detective Dwyer identified himself. The second time, Detective Dwyer left a voicemail. He told the appellant that he was calling in reference to his Ford Explorer. The appellant never called back and never reported the Explorer as having been stolen.

When Clarke was interviewed at police headquarters, he was shown a series of photographs. He identified a person in one photograph as "Bishop," but it was not the appellant. He also told the police that the man wearing the mask during the robbery was not the man he knew as Bishop.[5] On a subsequent date, he was shown a photograph of Cunningham and positively identified him as the man who had worn the fluorescent vest during the robbery. Williams told the police about "Bishop's" visiting her apartment the day before the robbery and that Bishop's girlfriend was named Bella. Williams identified the appellant as being the man she knew as "Bishop."

[4]The phone number was one the appellant had supplied to a 911 operator months earlier when he called to report that his estranged wife might be suicidal.

[5]He told the police that the man's voice did not sound like Bishop; that his dreadlocks were lighter in color than Bishop's; that his eyes, which were visible through the eyeholes in the mask, were smaller than Bishop's; and that the man was at least 20 pounds lighter than Bishop.

The appellant was arrested on July 29, 2013. The police seized an Apple iPhone 5s ("the iPhone") that was in his possession and obtained a search warrant for its contents. The phone was password-protected, however, so the MCPD Electronic Crimes Unit ("ECU") could not unlock it to obtain the data from it. Consequently, the iPhone was sent to Apple for it to extract the data.

Seven months later, on the eve of trial, Apple sent Detective Dwyer a thumb drive containing the data from the iPhone. Detective Michael Yu, in the ECU, uploaded the data from the thumb drive and used software to create a report for Detective Dwyer. At trial, Detective Yu testified as an expert in forensic examinations of cellular phones. We shall discuss his testimony in detail *infra*.

Several photographs taken with the iPhone on the day of and the day before the robbery were introduced into evidence at trial. A photograph of the appellant taken on June 20, 2013, showed him with shoulder-length dreadlocks. (When he was arrested on July 29, 2013, his hair was short.) Photographs taken on the day of the robbery, shortly after the Explorer was found abandoned in Silver Spring, appeared to have been taken on the Washington D.C. Metro. A telephone contact in the iPhone was labeled "Ric."

The police subpoenaed from the wireless carriers the call detail records for the iPhone and the phone number associated with the contact labeled "Ric." The records for the iPhone showed that it was registered to one Tiffany Young. They also showed that immediately after the Explorer was abandoned, numerous calls were made between the iPhone and the phone with the number associated with the contact for "Ric." As we shall discuss, Detective

Scott Sube, of the Electronic and Technical Support Unit ("ETSU") of the MCPD, testified about the cell towers that were "pinged" by the iPhone and "Ric's" phone on the day of the robbery. The "pings" were consistent with the phones being in the vicinity of Quince Orchard Boulevard at the time of the robbery and in the vicinity of Silver Spring at the time the Explorer was abandoned.

Williams testified at trial that the appellant and "Bishop" were the same person.

In his case, the appellant called William Folson, who was accepted as an expert in digital forensics, and recalled Detective Yu. Both were questioned about the process for extracting data from cell phones.

We shall include additional facts in our discussion of the issues.

DISCUSSION

I. & II

The appellant's first two contentions pertain to Detective Sube's testimony about the cell phone tower pings. First, he contends his trial counsel rendered ineffective assistance by not objecting to Detective Sube's testimony about the cell phone tower pings on the ground that expert (not lay) opinion testimony was required. Second, he contends the court committed plain error by admitting this testimony and the related documentary evidence. The following facts are relevant to these issues.

As discussed, the appellant's iPhone had as a contact a cell phone number for "Ric." The wireless carrier for the iPhone was T-Mobile and the wireless carrier for "Ric's" number was AT&T. The police subpoenaed the subscriber information and call detail records for

each phone number for the period from June 20 to June 22, 2013. The "raw" call detail records were in the form of an Excel spreadsheet with 26 columns providing different data points for each call made or received by the cell phone during that three-day period. Some of these data points included the date and time for the call; the ID number for the cell phone tower through which the call originally was routed; and the latitude and longitude for that tower. These records were disclosed to the appellant during discovery.

On February 25, 2014, the State moved for a continuance. At that time, the trial was scheduled to commence on March 3, 2014. The prosecutor explained to the court that her office still was awaiting the data report for the iPhone from Apple. She stated that the appellant's "calls for the day of the crime [had] been plotted" and a "graph" of the cell tower locations for the calls had very recently been provided to defense counsel.

Defense counsel opposed the request for a continuance. The court permitted him to discuss the new cell phone evidence with the appellant off the record. The appellant advised defense counsel that the cell phone number associated with the plots prepared by the State were not for his cell phone. On this basis, defense counsel reiterated his opposition to the State's motion. The court denied the continuance request.

A few hours later the prosecutor contacted defense counsel by email, advising him that he was correct that the cell phone data plots she had provided were not associated with the iPhone. Rather, they were associated with "Ric's" cell phone. She further advised that she was in the process of preparing a plot of the appellant's cell phone data and planned to

call an MCPD detective as an expert at trial to testify about the plotting with respect to the iPhone and Cunningham's phone.

The next morning, the prosecutor provided defense counsel a map showing the cell phone plotting pertaining to the appellant. In response, the appellant filed a motion to exclude the evidence and the expert testimony about it or, in the alternative, to continue the trial date. In his motion, he argued that until two days prior, the State had not disclosed any expert testimony it intended to offer at trial with regard to cell phone location data, and until that day, it had not disclosed the cell phone data plotting evidence concerning the appellant. He complained that the untimely disclosures had prejudiced him.

The court held a hearing on the appellant's motion the day it was filed. The prosecutor represented that she had "inadvertently" referred to the introduction of expert testimony in her email to defense counsel and that the detective actually would be testifying as a lay witness. She explained that the detective's sole testimony would be that the GPS coordinates associated with the cell towers through which the appellant's incoming and outgoing calls were routed "put[] him at the location of the crime and then the eventual bailout down in Silver Spring."

Defense counsel countered that any "significance" of the cell phone tower pings had to be "founded on expertise about the radius in which these phone calls ping off proximate towers." Thus, in his view, the evidence could not be admitted without expert testimony to explain it.

The prosecutor responded that the detective would be testifying to "simple GPS coordinates." She explained that the call detail records disclosed in discovery included the latitude and longitude coordinates for the cell tower through which each call had been routed. The MCPD detective simply had "put [those coordinates] into Google Maps" and printed out a map showing the tower location.

The court denied the motion to exclude the cell phone evidence. In light of the State's proffer that it did not intend to qualify the detective as an expert, the court did not rule on whether that testimony should be excluded as a sanction for a discovery violation. It suggested that it would have found a discovery violation. It reserved on the issue whether an expert witness was necessary for the cell phone ping evidence to be admissible. It stated that if it determined at trial that expert witness testimony was required, and if the State did not have an expert, the evidence would be excluded. The court granted defense counsel's motion for a continuance. The trial was reset for April 28, 2014.

Trial began as scheduled. The presiding judge was not the same judge who made the pretrial rulings. The State called Detective Sube as a witness on the second day of trial. In response to questions about his experience, he testified that he had been assigned to the ETSU for 14 years. In that capacity, he handled telephone intercepts, tracking cell phones, wire taps, and covert video and audio surveillance. He had attended more than 4,000 hours of training classes, including more than 100 hours of training about "cell phones and the networks and how they operate" and another 100 hours of training about "cell phone analysis." His résumé was introduced into evidence, without objection.

Without seeking to qualify Detective Sube as an expert, the prosecutor began questioning him about "cellular tower plotting." He explained that ordinarily each cell phone tower is "divided into three sectors," each one covering a 120 degree wedge. When served with a subpoena, a wireless carrier will provide the police with the location of the tower and, for some carriers, the "side of the tower that [the cell] phone communicated with for that particular call." Defense counsel did not object to any of this testimony.

Detective Sube testified that he had been asked to review the data for the iPhone activity on June 21, 2013, between 10:00 a.m. and 12:00 p.m. The wireless carrier for the iPhone did not collect data on the side of the tower that communicated with a particular phone.

The prosecutor showed Detective Sube a map depicting an area southwest of I-270 in Gaithersburg with a cell tower marked on Quince Orchard Road. (This location is just east of Williams's apartment on Quince Orchard Boulevard.) He testified that at 10:38 a.m., a call to or from the iPhone was routed through that tower.[6] Defense counsel did not object to any of this testimony.

The prosecutor then showed Detective Sube a map depicting an area of Silver Spring just south of I-495, near the location where the Ford Explorer was abandoned. That map depicted three cell towers. At 11:40 a.m., 11:42 a.m., and 11:44 a.m., calls made or received

[6]Detective Sube explained that the call detail records, which were already in evidence, showed whether each call originated from the phone or terminated at the phone; but he did not have that data in front of him.

by the iPhone were routed through the northernmost tower on the map, which was on Georgia Avenue at its intersection with Thayer Avenue. A call at 11:43 a.m. was routed through a tower just east of Georgia Avenue, south of the first tower. Finally, a call at 11:53 a.m. was routed through a tower farther east of Georgia Avenue and farther south of the other two towers.

The prosecutor showed Detective Sube three other maps depicting cell towers through which calls made or received by "Ric's" cell phone were routed on June 21, 2013. Those maps show that a call made to or from Cunningham's cell phone at 10:43 a.m. was routed through the west-facing side of a cell tower located just north of I-270, in the vicinity of Quince Orchard Boulevard. A call to or from his cell phone at 11:36 a.m. was routed through the southwest facing side of a tower located just east of Georgia Avenue, near its junction with I-495 in Silver Spring. A call to or from his cell phone at 11:42 a.m. was routed through the southeast-facing side of a tower located south of the prior tower and west of Georgia Avenue, also in Silver Spring.

Although defense counsel did not object to any of Detective Sube's testimony about the cell phone plotting data, he did object to the introduction of the maps into evidence, based on the State's late disclosure of the maps to the defense, and to the maps showing calls made by "Ric's" phone because the State had not laid a sufficient foundation to show those calls were made by Cunningham. These objections all were overruled and the maps were admitted into evidence.

On cross-examination, defense counsel established that Detective Sube had not earned a bachelor's degree in college (he had earned an associate's degree) and that much of his training and experience was not "germane" to cell phone data plotting. He asked Detective Sube if any of the cell phone data could show who was in possession of the cell phone when each call was made or received; for example, could he determine from the data whether Tiffany Young was in possession of the iPhone at the relevant times.[7] Detective Sube replied that he could not. He also acknowledged that he could not determine from the data "the distance from a particular tower to a location where the telephone was used."

In her summation, the prosecutor argued that the cell phone plotting data was one piece of a "plethora of circumstantial evidence" that proved that the appellant was the masked man who robbed and assaulted Clarke.

A. Ineffective Assistance of Counsel

"The benchmark for judging any claim of ineffectiveness must be whether counsel's conduct so undermined the proper functioning of the adversarial process that the trial cannot be relied on as having produced a just result." *Strickland v. Washington*, 466 U.S. 668, 686 (1984). Ordinarily, a Maryland appellate court will not consider a claim for ineffective assistance of counsel on direct appeal. *See Tetso v. State,* 205 Md. App. 334, 377 (2012). This is so because "the trial record rarely reveals why counsel acted or omitted to act." *Mosley v. State*, 378 Md. 548, 560 (2003). In contrast, post-conviction proceedings "allow

[7]There was no evidence introduced at trial explaining who Tiffany Young was or her relationship, if any, to the appellant.

for fact-finding and the introduction of testimony and evidence directly related to allegations of the counsel's ineffectiveness." *Id*.

There are, however, "exceptional cases where the trial record reveals counsel's ineffectiveness to be 'so blatant and egregious' that review on [direct] appeal is appropriate." *Id.* at 562 (quoting *Johnson v. State*, 292 Md. 405, 435 n.15 (1982)). An exceptional case is one where "the critical facts are undisputed, the record is sufficiently developed, and/or the legal representation is so egregiously ineffective that it is obvious from the trial record that a defendant was denied his Sixth Amendment right to counsel." *Id*. at 564.

In re Parris W., 363 Md. 717 (2001), is a good example of such an exceptional case. There, trial counsel for a juvenile in a delinquency proceeding subpoenaed five alibi witnesses to appear for the hearing but mistakenly put the wrong hearing date on the subpoenas. On the day of the hearing, defense counsel requested a continuance, explaining his mistake, but the request was denied. The delinquency hearing went forward with the juvenile able to call only his father as an alibi witness. The juvenile was adjudicated delinquent.

On appeal, the juvenile argued that his trial counsel had rendered ineffective assistance by subpoenaing the other five alibi witnesses for the wrong hearing date. The Court of Appeals agreed and reversed the judgment. It explained that "none of the critical facts surrounding counsel's conduct [were] in dispute," counsel's performance "was deficient even under the highly deferential standard of *Strickland,*" and the juvenile was prejudiced

by the deficient performance because he lost the opportunity to call five alibi witnesses, none related to him, when each of them would have corroborated aspects of his father's testimony. *Id*. at 727.

The Court of Appeals also took the unusual step of reviewing an ineffectiveness claim on direct appeal in *Austin v. State*, 327 Md. 375 (1992). There, Austin and Wise were charged with together committing drug offenses. They were represented by two partners in the same law firm. Wise agreed to plead guilty and to testify against Austin at trial. The trial court, recognizing that this created a conflict of interest between the law partners, entered a gag order preventing Wise's lawyer from discussing the case with Austin's lawyer. Austin's lawyer attempted to have the gag order lifted, without success. At trial, Wise testified against Austin and Austin was convicted.

On appeal, the Court of Appeals reversed, holding that once Wise entered into a plea in exchange for her testimony against Austin there was an actual conflict of interest and Austin's counsel could not effectively represent him in light of the gag order. The Court emphasized that the conflict of interest and the prejudice flowing from it were evident from the trial record and a post-conviction proceeding was not needed to develop the record further.

We return to the case at bar. The appellant contends his case also is an exceptional one that warrants review of his ineffectiveness claim on direct appeal because the "[c]ase law is clear" that expert testimony is required to "interpret . . . cell phone tower data"; defense counsel was aware of this "well-established law"; defense counsel argued "vehemently" in

pretrial hearings that the State needed an expert to testify about the cell phone tower data; and yet defense counsel failed to object to Detective Sube's lay testimony at trial. The appellant maintains that, had defense counsel objected, Detective Sube's testimony would have been precluded; therefore, there was "no possible strategic reason" why defense counsel would not have objected to it. Moreover, the appellant was prejudiced by Detective Sube's testimony, which was "critical" to the State's case because no other evidence placed him near the scene of the crime.

The State responds that we should decline to review the ineffective assistance claim on direct appeal because "the decision not to object may have been strategic" and, in any event, the appellant has not shown that he was prejudiced by his counsel's failure to object. It further asserts that at the time of the appellant's trial the law was unsettled on the need for expert opinion testimony and therefore it was not unreasonable for defense counsel to choose to attack the reliability of the cell tower evidence rather than to seek to have the evidence excluded.

In *Wilder v. State*, 191 Md. App. 319, *cert. denied*, 415 Md. 43 (2010), we reversed a defendant's convictions because, over objection, a police detective was permitted to give lay opinion testimony about how he had been able to track the defendant's movements "through GPS or cell tower hits." *Id*. at 354. We opined that "the better approach is to require the prosecution to offer expert testimony to explain the functions of cell phone towers, derivative tracking, and the techniques of locating and/or plotting the origins of cell phone calls using cell phone records." *Id*. at 365. We held that the detective could have and

should have been qualified as an expert before he was permitted to testify, and that the trial court's error in allowing him to give lay opinion testimony was not harmless beyond a reasonable doubt.

Three months later, we decided *Coleman-Fuller v. State*, 192 Md. App. 577 (2010). There, the defendant was charged with murder. Before trial, defense counsel moved *in limine* to preclude the State from introducing cell tower data through a police detective "instead of an expert witness." *Id*. at 580. The motion was denied. Using cell phone records of two cell phones recovered from the defendant when he was arrested, a police detective testified about how those records placed the defendant in the vicinity of the crime before, during, and after its commission. On appeal, we reversed, based on *Wilder*. We opined that the detective had "rendered an opinion on [the defendant]'s location at the time of the calls," that it was "clearly error" for this testimony to be admitted through a lay witness, and that on remand the evidence only could be introduced through a witness who was qualified as an expert. *Id.* at 619.

Finally, a little over a year before the appellant's trial, we decided *Payne & Bond v. State*, 211 Md. App. 220 (2013). Payne and Bond were tried jointly and were convicted of first-degree felony murder, kidnapping, and use of a handgun. The victim had been shot in the head and neck three times, set on fire, and left in the woods. A man who lived near where the body was found reported having heard gunshots around 10:00 p.m. Around 2:00 a.m. the following day, the fire department and police responded to a call for a "body on fire." *Id.* at 223. They were able to identify the victim, spoke to his family members, and

searched his bedroom. There they found a handwritten note with names and phone numbers written on it. The police subpoenaed the call detail records for cell phones belonging to Payne, Bond, and several of their associates.

At trial a police detective testifying as a lay witness stated that he had focused in on calls made by Payne and Bond the day before and the day of the murder. Defense counsel objected to all of the detective's testimony on the basis that expert testimony was required on cell tower data. The prosecutor responded that the detective was not going to testify about the location of the *cell phones* but about the location of the *cell towers* through which the relevant calls had been routed, based on the longitude and latitude of each cell tower. The court overruled the objection, concluding that testimony about cell tower locations was within the ken of an average person.

The detective testified that he was able to determine from the call detail records which cell tower each call had been routed through and the precise location of those cell towers. He explained that Bond had received one phone call around the time that the gunshots were heard that was routed through a cell tower two miles from where the body was found; and that he received a second call around the time of the 911 call reporting the body on fire that was routed through a cell tower located a mile from the crime scene. The call detail records for the three days before and the three days after the murder showed that no other calls made or received by Bond were routed through the cell tower within a mile of the crime scene. With respect to Payne, the detective testified that an incoming call made to his cell phone

around 10:00 p.m. on the night of the murder was not answered, but the call "activated off" that same cell tower within 1 mile of the crime scene. *Id.* at 225.

On appeal, this Court reversed under the holdings in *Wilder* and *Coleman-Fuller*. We rejected the State's argument that because the detective was testifying only about the locations of the cell towers, not about the locations of the cell phones, he did not have to be qualified as an expert. On September 20, 2013 -- seven months before the appellant's trial in this case -- the Court of Appeals granted *certiorari* in *Payne & Bond*. 434 Md. 311 (2013). The case still was pending when the appellant went to trial.

On December 11, 2014, the Court of Appeals filed its opinion in *Payne & Bond* affirming this Court's holding that the cell tower evidence should not have been admitted through a lay witness. (The court vacated our judgment on other grounds.) *State v. Payne*, 440 Md. 680 (2014). After a detailed discussion of cell phone technology, the Court held that the detective's testimony that he had determined that Payne's and Bond's cell phones "communicated through" particular cell towers "was beyond the ken of an average person." *Id*. at 700. The raw call detail records were comprised of a "string of data unfamiliar to a layperson [that] is not decipherable based on 'personal experience.'" *Id*. at 701 (quoting *State v. Blackwell*, 408 Md. 677, 692 (2009)). Based upon his "knowledge, skill, experience, training, or education," the detective had been able to "hone in" on the relevant call detail records and eliminate the irrelevant data and calls. *Id.* (quoting *Ragland v. State*, 385 Md. 706, 725 (2005)). The Court reversed and remanded for a new trial at which the detective could be qualified as an expert.

In this case, the appellant asserts that, in light of *Wilder*, *Coleman-Fuller*, and *Payne & Bond*, there could have been no strategic reason for defense counsel not to object to Detective Sube's lay testimony about the cell phone tower pings. He further asserts that he was prejudiced, because had defense counsel objected on the basis that expert testimony was required, the court "most likely would have excluded [that testimony,]" as the State had not disclosed that it was going to offer expert testimony on the cell phone tower data. And, if the court had overruled the objection and permitted Detective Sube to testify as a lay witness, he could have challenged that ruling on appeal, with success.

In our view, this is not one of the rare "exceptional cases" in which an ineffective assistance of counsel claim properly is addressed on direct appeal. The law was not quite as firmly established as the appellant contends, given that the Court of Appeals *Payne & Bond* opinion was not issued until after the appellant's trial. Nevertheless, defense counsel indeed moved pretrial to exclude Detective Sube's testimony on the basis that expert testimony was required; but he did not object to that testimony at trial. The trial record does not reveal the reason defense counsel did not object at trial.

The circumstances are not such as to rule out trial counsel's having not objected for strategic reasons, however. Had he objected, the court might have agreed that Detective Sube needed to be qualified as an expert *and* allowed the State to qualify him as an expert based upon the hundreds of hours of training in cell phone technology he already had testified to and his years of experience in the ETSU. Had that happened, the sole issue on appeal would have been whether the trial court abused its discretion by permitting the State

to call an undisclosed expert witness at trial. An appellate argument on this discretionary issue would not be likely to succeed. Defense counsel reasonably could have decided that the risk that the trial court might qualify Detective Sube as an expert -- which could have resulted in jurors giving special credit to his opinions -- outweighed the potential benefit of objecting to his testimony. As the record stands, however, it is devoid of any evidence about trial counsel's thought processes, including strategic decisions he may have made regarding the cell tower and cell phone ping evidence.

In a post-conviction proceeding, the record can be fully developed to determine defense counsel's strategy and the reason he did not lodge an objection to Detective Sube's lay witness testimony at trial. The present posture of the case is not such as to allow direct review of the appellant's ineffective assistance of counsel claim.

B. Plain Error Review

For the same reasons advanced in support of his argument that trial counsel's representation was deficient, the appellant contends the trial court committed plain error by allowing Detective Sube to testify as a lay witness with regard to the cell phone tower data. The State responds that we should decline to exercise plain error review because defense counsel's decision not to object could have been strategic; the need for an objection was not "clear and obvious"; and the cell phone location testimony was but one piece of a substantial amount of circumstantial evidence linking the appellant to the robbery.

"The failure to object before the trial court generally precludes appellate review, because '[o]rdinarily appellate courts will not address claims of error which have not been

raised and decided in the trial court.'" *Martin v. State*, 165 Md. App. 189, 195 (2005) (quoting *State v. Hutchinson*, 287 Md. 198, 202 (1980)); *see also* Md. Rule 8-131(a). "Plain error is 'error which vitally affects a defendant's right to a fair and impartial trial.'" *Richmond v. State*, 330 Md. 223, 236 (1993) (quoting *State v. Daughton*, 321 Md. 206, 211 (1990)). It is reserved for the rare and extraordinary case. *See, e.g., Morris v. State*, 153 Md. App. 480, 507 (2003) (review for plain error "1) always has been, 2) still is, and 3) will continue to be a rare, rare phenomenon").

Plain error review is not warranted in the instant case and we decline to exercise it. For the reasons already explained, defense counsel may have chosen for strategic reasons not to object to Detective Sube's lay witness testimony. *See Stanley v. State*, 157 Md. App. 363, 375 (2004) (declining to exercise plain error review where the unobjected to error may have resulted from a "strategic trial decision"), *rev'd on other grounds by*, 390 Md. 175 (2005). The caselaw was not firmly settled at the time of the appellant's trial. Moreover, the appellant was not deprived of a fair or impartial trial by reason of the admission of the cell tower ping evidence. He already had been tied to the Explorer, in which there was clothing covered in Clarke's blood; he matched the general description of the masked man given by Clarke; he had been placed at the scene of the crime the day prior by Williams's testimony that he and Bishop were the same person; and he had reason to know there was money in the apartment.

III.

The appellant contends the trial court abused its discretion by permitting the State to introduce into evidence data obtained by Apple from the iPhone that was not authenticated. He asserts that the iPhone data only could have been authenticated by testimony of the Apple employees who obtained it. In particular, he complains that the State should not have been permitted to use the picture capture dates to show that he was in possession of the iPhone (which, as mentioned, was registered to another individual) on the day of the crime, thus giving significance to the cell phone tower data, and to show that he had long dreadlocks at the time of the crime, consistent with Clarke's description of the second assailant and with the parking garage surveillance footage.

The State responds that it met its "slight" burden to authenticate the data extracted from the iPhone. Alternatively, it asserts that any error in the admission of the data was harmless beyond a reasonable doubt.

On the first day of trial, defense counsel moved to suppress the data Apple extracted from the iPhone. He argued that the data had been turned over to the defense only one business day before the trial and that the defense had been unable to consult with an expert to "figure out the dates of the pictures." The court asked if defense counsel was seeking a continuance; he replied that he was not. The court denied the motion to suppress.

Detective Dwyer's direct examination began later that day. He testified about the photographs stored on the iPhone and the capture dates and times that appear on those photos (*i.e.*, the dates and times the photos were taken). Defense counsel objected for the reason already raised in his motion to suppress, *i.e.*, late disclosure, but his objection was again

overruled. Detective Dwyer testified that he had "personally review[ed]" the pictures stored on the iPhone after they were "downloaded," and was "able to determine when [each] photograph was captured." He described a photograph of the appellant with dreadlocks that was taken the day before the robbery. He also described several photographs taken on the day of the robbery around "11:30 a.m., 12:00 p.m., 12:30 p.m." that appeared to depict the Washington D.C. Metro. None of the photographs were introduced into evidence at that time. The court recessed for the day in the middle of Detective Dwyer's direct examination.

At the start of the second day of trial, defense counsel made additional arguments as to why the iPhone data was inadmissible. He took the position that only a witness from Apple could properly authenticate the data because only Apple knew the methodology employed to extract the data and how that methodology might have corrupted the data. Defense counsel proffered that he had spoken to the State's expert, Detective Yu, the night before and had learned that Detective Yu did not know "what Apple [did] in order to break in to the phone to see what the contents are." He argued that this had "[p]articular importance" with respect to the "capture dates on the cell phone pictures."[8]

The prosecutor responded that all of Apple's

> software to unlock these passwords is proprietary. No law enforcement agency can unlock an Apple iPhone 5. Everything gets sent to Apple from the device to be unlocked. It is then sent back to the agency. Detective Yu took the phone, took the information received from Apple. Unzipped it. Unencrypted

[8]Defense counsel also argued that the appellant would be deprived of his Sixth Amendment confrontation right if no one from Apple appeared in court for cross-examination. He does not make this argument on appeal.

> it. Downloaded it in to [sic] a processing program that spits the data out in to [sic] the extraction report, which was provided on the disk on Friday [to defense counsel].

She maintained that "Apple not being here . . . would go to the evidence's weight, and not the admissibility of the evidence."

The court decided to reserve on the admissibility of the data until after Detective Yu's testimony. It noted that, based on the State's proffer, it seemed that Detective Yu's testimony would "provide the sufficient foundation for its admissibility."

Detective Dwyer's direct examination resumed. He answered additional questions about the photographs stored on the iPhone. The court sustained defense counsel's objections to questions about capture dates for those photographs. Detective Dwyer also testified that after Detective Yu advised that ECU would be unable to unlock the iPhone, he (Detective Dwyer) had communicated with employees at Apple to determine how to unlock it. Per Apple's instructions, in August of 2013, he mailed a search warrant, the iPhone, and a "32 gig[abyte] thumb drive," which was twice the storage capacity of the iPhone, to Apple headquarters in Cupertino, California. On March 16, 2014, Apple mailed the iPhone and the thumb drive back to him. He attempted to review the data on the thumb drive, but it was encrypted, so he turned the thumb drive over to Detective Yu at ECU.

Detective Yu testified later that day. He was accepted as an expert in forensic examinations of cell phones. He recounted that in July of 2013, Detective Dwyer had asked him to try to extract the data from the iPhone recovered from the appellant, which was a model 5s. He could not do so because the iPhone was password-protected and locked. He

testified that "[n]o one in the world" can unlock an iPhone 5s because Apple has designed it in such a way as to make that impossible. For that reason, the iPhone was sent to Apple for its technicians to extract the data.

After Apple returned the "USB thumb drive" containing the data from the iPhone, Detective Yu "followed the instructions Apple provided" to access that data from the USB thumb drive. The data was "encrypted and compressed." Detective Yu decrypted and decompressed the data and then "[t]ook that raw data and . . . put it into Cellebrite Physical Pro," a mobile forensic tool that he is certified to use. This software permits the raw data to be converted into an electronic "report format" that categorizes it. The categories include text messages, contacts, calls made or received, and photographs.

Detective Yu was asked to identify a printout of 25 contacts extracted from the iPhone. Defense counsel renewed his earlier objection to the admissibility of the data. The court overruled the objection. Detective Yu testified that the list of contacts had been stored on the iPhone and included a contact for "Ric" with a phone number. He also testified, over objection, about the photographs on the iPhone and the capture dates and times for them. As discussed, the State argued that these photographs were probative of the appellant's having had long dreadlocks on June 21, 2013, and of his having been on the D.C. Metro shortly after his Explorer was abandoned in Silver Spring. The list of contacts and the photographs were admitted into evidence over objection.

On cross-examination, defense counsel questioned Detective Yu about how Apple extracts data from a locked iPhone. Detective Yu testified that he has "some training in how

Apple does it." He was asked whether the "capture dates" for photographs could be "manipulated." He replied that the "original capture date" could not be altered unless someone intentionally did so by "go[ing] into Hexadecimal lighting of the computer language itself down to ones and zeros and tediously, theoretically change data." He explained that each photograph taken by the camera on the iPhone will have an original capture date and time; but images sent to the phone by text message or email might not reflect a capture date or time.

On redirect examination, Detective Yu testified about his knowledge (obtained from trainings in his field) of the process that Apple uses to extract data from an iPhone that is locked, and therefore cannot be extracted by others. He explained that Apple does not actually break into the phone to obtain the data. Rather, for every iPhone, Apple owns the user's account information, and has all the data for that iPhone stored on its servers. So, Apple obtains the data for a particular iPhone from its servers and downloads the data onto a USB thumb drive.

As the Court of Appeals very recently explained,

> Authentication has been defined as "the act of proving that something (as a document) is true or genuine, esp[ecially] so that it may be admitted as evidence". Black's Law Dictionary 157 (10th ed. 2014). Authentication of a matter prior to its admission "is not an[ ] artificial principal of evidence, but an *inherent logical necessity* ", (7 J. Wigmore, Evidence § 2129 (Chadbourn Rev. 1978)), and is integral to establishing its relevancy. *See* 2 McCormick on Evidence § 221 (7th ed. 2013) ("The proponent's assertion as to why the writing is relevant determines what the proponent claims the writing is, typically that it has some specific connection to a person or organization, whether through authorship or some other relation. It is this connection that must be proved to authenticate the writing.").

Sublet v. State, ___ Md. ___, slip op. at *20-21, Nos. 42, 59, 60, Sept. Term 2014 (filed Apr. 23, 2015).

Rule 5-901 governs the authentication of evidence. At subsection (a), it provides that the "requirement of authentication or identification as a condition precedent to admissibility is satisfied by evidence sufficient to support a finding that the matter in question is what its proponent claims." """The bar for authentication of evidence is not particularly high."" *Sublet*, slip op. at *33 (quoting *United States v. Vaynor*, 769 F.3d 125, 130 (2d Cir. 2014), in turn quoting, *United States v. Gagliardi*, 506 F.3d 140, 151 (2d Cir. 2007)). Authentication may be satisfied by "[t]estimony of a witness with knowledge that the offered evidence is what it is claimed to be," "[c]ircumstantial evidence, such as appearance, contents, substance, internal patterns, location, or other distinctive characteristics, that the offered evidence is what it is claimed to be," or "[e]vidence describing a process or system used to produce the proffered exhibit or testimony and showing that the process or system produces an accurate result." Md. Rule 5-901(b). The court "'need not find that the evidence is necessarily what the proponent claims, but only that there is sufficient evidence that the *jury* ultimately might do so.'" *Dickens v. State*, 175 Md. App. 231, 239 (2007) (quoting *United States v. Safavian*, 435 F. Supp. 2d 36, 38 (D. D.C. 2006) (emphasis in *Safavian*).

Once the proponent of the evidence has satisfied this "slight" burden, the evidence is sufficiently authenticated to be admissible. *Id.* at 239. Ultimately, the reliability of the evidence is a jury question. *Sublet*, slip op. at *35. The opposing party may challenge the

reliability or the significance of the evidence, but those challenges "go to the *weight* of the evidence – not to its *admissibility*." *Id*. (citations omitted) (emphasis in original).

The appellant relies upon *Washington v. State*, 406 Md. 642 (2008), to argue that the State did not meet its burden to authenticate the data from the iPhone. In that case, the defendant was charged with crimes arising out of a shooting outside a bar in Baltimore City. At first, the victim told the police he did not know the identity of the shooter. Later, he identified the defendant, whom he had known for several years, as the shooter.

At trial, to prove the defendant was present at the bar at the relevant time, the State introduced into evidence a videotape recording derived from footage taken by surveillance cameras located inside and outside the bar. The owner of the bar testified that the surveillance system used eight cameras -- six inside and two outside -- and that the cameras recorded 24 hours a day. The day after the shooting, the police requested the surveillance footage from the night before. The owner called a "technician" who came to the bar and "print[ed] a CD with surveillance footage" "compiled from the various cameras." *Id*. at 646. The CD later was transferred to a VHS tape. Defense counsel objected to the admission of the VHS tape and to still photographs printed from the video, arguing that the State had failed to lay a proper foundation to establish the authenticity of the CD. The court overruled the objection.

On appeal, this Court held that the court erred by admitting the videotape into evidence, as it was not authenticated, but that the error was harmless. *Washington v. State*, 179 Md. App. 32 (2008). The Court of Appeals granted *certiorari* and reversed on harmless

error alone. It emphasized that the VHS tape was not a "simple videotape," but a compilation of footage from eight cameras that was created by an unknown person, through an unknown process. 406 Md. at 655. It noted that there was no testimony about the "process used, the manner of operation of the cameras, the reliability or authenticity of the images, or the chain of custody of the pictures." *Id*. The testimony by the owner was insufficient to authenticate the VHS tape because he only viewed it after the technician had edited it.

We return to the case at bar. We are satisfied that the State met its "slight burden" to authenticate the data from the iPhone. In *Washington*, the only witness who testified about the surveillance footage (the bar owner) did not know how the cameras worked, how the data was stored on the cameras, what process had been used to create the compilation of surveillance footage that came to comprise the VHS tape, or the chain of custody of the surveillance footage. No expert witness was called to address any authentication issue.

Here, by contrast, Detective Yu, an expert in forensic examinations of cell phones, testified about the process Apple uses to obtain the data from an iPhone, which is simply that it downloads from its servers the data for the particular account in question. He further testified about how photographs and other data are stored in iPhones; how capture dates are created; and how difficult it would be to modify an original capture date. He also explained the process he used to decrypt, decompress, and convert the data received from Apple on the thumb drive into an electronic report that categorized all of the data. This testimony about the processes that were used to generate the iPhone data evidence was sufficient to satisfy

the State's "slight" burden to show that the evidence it was seeking to introduce was what the State was claiming it was -- data from the appellant's iPhone.

In addition, Detective Dwyer's testimony sufficiently established chain of custody. He testified that he recovered the iPhone from the appellant and, pursuant to instructions from Apple employees, mailed it to Apple headquarters along with a thumb drive and the search warrant. After Apple obtained the data from the iPhone and put it on the thumb drive, both items were mailed back to Detective Dwyer, with instructions from Apple. Chain of custody evidence of this sort was lacking in *Washington*. Finally, the testimony of Detective Dwyer and Detective Yu about the actual photographic content of the data received from Apple was circumstantial evidence that supported a reasonable inference that the data on the thumb drive received from Apple was the data extracted from the iPhone that had been found in the appellant's possession.

The appellant's argument that an Apple employee needed to testify about the precise process used to obtain the data from the iPhone goes to the reliability, not the admissibility, of the extracted data. The possibility that the metadata was corrupted, thus reflecting an incorrect capture date for a particular photograph, was properly the subject of defense counsel's lengthy cross-examination of Detective Yu. This issue also was addressed by the appellant's expert witness in digital forensics, William E. Folson, and in the appellant's direct examination of Detective Yu, whom he recalled to the stand. The ultimate determination of the authenticity of the data obtained from the iPhone properly was a

question for the jury. The State met its initial "slight" burden of authentication, under Rule 5-901(a).

JUDGMENTS AFFIRMED. COSTS TO BE PAID BY THE APPELLANT.