

NOTICE: This opinion is subject to motions for reargument under V.R.A.P. 40 as well as formal revision before publication in the Vermont Reports. Readers are requested to notify the Reporter of Decisions by email at: JUD.Reporter@state.vt.us or by mail at: Vermont Supreme Court, 109 State Street, Montpelier, Vermont 05609-0801, of any errors in order that corrections may be made before this opinion goes to press.

2015 VT 89

No. 2014-121

State of Vermont

Supreme Court

v.

On Appeal from  
Superior Court, Addison Unit,  
Criminal Division

Leo Paul Pratt II

March Term, 2015

Robert A. Mello, J.

Dennis M. Wygmans, Addison County Deputy State's Attorney, Middlebury, for  
Plaintiff-Appellee.

Allison N. Fulcher of Martin & Associates, Barre, for Defendant-Appellant.

PRESENT: Reiber, C.J., Dooley, Skoglund, Robinson and Eaton, JJ.

¶ 1. **DOOLEY, J.** Defendant appeals his conviction in Addison Superior Court on the grounds that the court erred by: (1) admitting the victim's out-of-court statements under Vermont Rule of Evidence 804a; (2) admitting expert testimony under Vermont Rule of Evidence 702; and (3) coercing a jury verdict. We affirm.

¶ 2. Defendant was charged with aggravated sexual assault of a minor under the age of thirteen in violation of 13 V.S.A. § 3253(a)(8). The victim, T.B., was twelve years old at the time of the incident that gave rise to this case. Evidence presented at trial demonstrates the following. On November 14, 2012, T.B. arrived home from school and was alone in the house with defendant, her uncle, with whom she lived. Defendant followed T.B. into her bedroom and

asked her for a “hand job.” He then asked T.B. to come sit in the living room where he again asked for a hand job. When she refused, he slapped her across the face and on the back of her head and forced her hand down his pants. He then told her that he wanted her to watch a video on his cell phone of a girl giving a man a hand job so that she would know how to do it. Eventually, defendant told T.B. to go in the bedroom where he forced her onto the bed, fondled and performed oral sex on her, and forced her to perform oral sex on him. After the incident, T.B. left the house and waited in the farm store across the street until her aunt came home. Later that night, T.B. wrote a letter about the incident and about how she no longer felt safe in her home. The next morning on the bus, she showed the letter to a friend, who encouraged her to tell the school principal. T.B. showed the letter to the vice principal, and the school officials called the police and a Department for Children and Families case worker.

¶ 3. Prior to trial, the parties submitted two motions in limine that are the focus of this appeal.<sup>1</sup> The State moved to admit T.B.’s letter under Rule 804a, which allows admission of out-of-court statements made by a child of age twelve years or under, if several factors are met. Defendant moved to exclude the testimony of the State’s expert witness regarding the extraction of data from defendant’s cell phone. The court held motion hearings on October 8 and 9, 2013, and ruled both the letter and expert testimony admissible. The findings and conclusions of the court with respect to these motions, as well as the arguments of the parties, are discussed in more detail in the opinion below.

¶ 4. After a three-day trial, the jury found defendant guilty. Defendant appeals his conviction and raises three claims of error: (1) the trial court erred in admitting T.B.’s letter under Rule 804a because the State failed to establish that the time, content, and circumstances of the statements provided a substantial indicia of trustworthiness; (2) the trial court erred in

---

<sup>1</sup> Defendant also submitted a motion to exclude evidence of his prior bad acts under Vermont Rule of Evidence 404(b), but the decision on that motion is not part of this appeal.

admitting the expert testimony regarding the extraction of data from defendant's cell phone because the State failed to establish that the software and methods used are sufficiently reliable under Rule 702; and (3) the trial court coerced a jury verdict by telling the jury that if they did not reach a verdict by the end of the day they would have to stop deliberating and return Monday. We find no error and affirm the judgment of the trial court on all three points.

¶ 5. We turn first to defendant's Rule 804a claim. We review the trial court's evidentiary rulings for abuse of discretion. State v. Breed, 2015 VT 43, ¶ 46, \_\_\_ Vt. \_\_\_, \_\_\_ A.3d \_\_\_. "We uphold the trial court's conclusion that hearsay statements are trustworthy under Rule 804a(a)(4) if it is supported by the findings, which must be supported by credible evidence in the record." State v. Reid, 2012 VT 65, ¶ 20, 192 Vt. 356, 59 A.3d 711.

¶ 6. Vermont Rule of Evidence 804a(a) allows admission of out-of-court statements made by putative victims of aggravated sexual assault if "the time, content, and circumstances of the statements provide substantial indicia of trustworthiness." V.R.E. 804a(a)(4).<sup>2</sup> Essentially, defendant argues that the court's conclusion as to the trustworthiness of the letter is not supported by credible evidence in the record. Specifically, defendant maintains that T.B. fabricated the entire story and that the letter was the start of that fabrication. He emphasizes that the "only evidence presented in support of admission of the letter was the letter itself, and the testimony of [T.B.'s friend and the detective]," and that "[n]o one witnessed T.B. write the letter." Defendant's argument appears to be that the circumstances surrounding T.B.'s disclosure of the letter are not relevant here for establishing the letter's trustworthiness, but that the circumstances surrounding the actual writing of the letter must prove it to be trustworthy. The State, on the other hand, explains that "it is the disclosure of the note relative to the occurrence of the assault that provides indicia of trustworthiness." Defendant relies on one case, State v. Reid,

---

<sup>2</sup> Rule 804a(a) provides other factors that must be met for the testimony to be admitted, but those factors are not at issue here.

2012 VT 65, which provides a nonexclusive list of factors relevant to determining the trustworthiness of Rule 804a statements.

¶ 7. The factors outlined in Reid provide a starting point for our analysis and help us establish a framework for reviewing the trial court's conclusion. As explained in Reid, courts may consider such factors as: the circumstances of the initial disclosure, including the setting and person to whom the disclosures were made; internal consistency and detail of disclosures; timing and conduct of interviews, including whether nonleading questions were asked; freshness and spontaneity of disclosures; appropriate body language; risk of fabrication; evidence of coercion or manipulation; accuracy of peripheral detail; the child's affect, intelligence, memory, and concern for the truth; and corroboration by medical and other evidence. Id. ¶ 24; see also State v. Tester, 2006 VT 24, ¶ 17, 179 Vt. 627, 895 A.2d 215 (mem.); State v. LaBounty, 168 Vt. 129, 136-38, 716 A.2d 1, 7 (1998); State v. Fisher, 167 Vt. 36, 40-41, 702 A.2d 41, 44 (1997); State v. Lawton, 164 Vt. 179, 190, 667 A.2d 50, 59 (1995); In re M.B., 158 Vt. 63, 69, 605 A.2d 515, 518 (1992); State v. Gallagher, 150 Vt. 341, 348, 554 A.2d 221, 225 (1988). As Reid states, and the cases cited therein make clear, this list is not exhaustive, and the court need not consider all the factors in finding the testimony admissible. For example, in State v. Lawton, we affirmed the trial court's admission of a child's statements as trustworthy because they were made in response to the first time the mother asked the child about incidents involving the father and were therefore not a product of repeated interviewing, coercion, or manipulation. 164 Vt. at 190, 667 A.2d at 59.

¶ 8. Here, the court found T.B.'s letter trustworthy because she wrote the letter to the vice principal—a trusted adult—expressing her need to tell someone about the incident and her fear of going back home. The court also found the language, spelling, and writing of the letter all age appropriate, indicating that T.B. was not coached or prompted by anyone. Furthermore, the court found that when T.B. and her friend were discussing the letter on the bus—right after

the friend read the letter—the statements were made spontaneously at a time when T.B. and her friend were not otherwise talking about sexual issues or abuse; the statements were made to a trusted friend in a safe place; T.B.’s body language was consistent with that of someone alleging sexual abuse; and T.B.’s statements were consistent with those she made to the police. The court’s findings here reflect many of the factors discussed in Reid, 2012 VT 64, ¶ 24; see supra, ¶ 7.

¶ 9. Defendant maintains, however, that these findings are not sufficient to alleviate concerns that the contents of the letter were fabricated because, as defendant stresses, “[n]o one witnessed T.B. write the letter.” We find no case—and defendant cites no case—where such statements have been held inadmissible merely because the putative victim penned the letter in private where nobody was around to attest to the circumstances surrounding its creation; in fact, it is likely that most letters of this nature, particularly those written by children, are written in private and later disclosed to a trusted peer or adult.

¶ 10. Courts generally consider written statements equally as trustworthy as oral statements when reviewing such statements under hearsay exceptions like Rule 804a or under residual hearsay exception rules. See, e.g., State v. John G., 837 A.2d 829, 837 (Conn. App. Ct. 2004) (“[T]he dispositive factor in deciding whether a victim’s statement properly is admissible as constancy of accusation evidence is not whether such statement is written or oral.”); Commonwealth v. Lanning, 589 N.E.2d 318, 323 (Mass. App. Ct. 1992) (“[W]e can think of no reason why the admissibility of [the victim’s statement] should turn on whether the [statement] was written or oral.”).

¶ 11. In fact, a handful of courts have discussed the trustworthiness of written statements and admitted the statements for reasons comparable to those given by the trial court here. The most instructive of these cases is United States v. Morgan, 385 F.3d 196 (2d Cir. 2004). There, the defendant appealed her conviction for conspiracy to import, importation, and

possession with the intent to distribute controlled substances. She argued that an inculpatory letter written by her co-defendant to the co-defendant's boyfriend was hearsay that the court erred in admitting at trial. The letter was admitted under Federal Rule of Evidence 807, the residual hearsay exception, which requires that evidence be "particularly trustworthy." *Id.* at 208 (quoting United States v. Bryce, 208 F.3d 346, 350-51 (2d Cir. 1999)).

¶ 12. In affirming the trial court's admission of the letter, the circuit court looked to precedent that recognizes an exception to the general prohibition on the admission of an accomplice's inculpatory hearsay statement to prove the guilt of the accused when "the statement is made to a person whom the declarant believes is an ally rather than a law enforcement official" and the inculpatory portions of the statement are as trustworthy as the portions incriminating the accomplice. *Id.* at 208-09 (quoting United States v. Matthews, 20 F.3d 538, 546 (2d Cir. 1994)). The circuit court found the letter sufficiently trustworthy because it "was not in response to police questioning"; "was not written in a coercive atmosphere"; "was not addressed to law enforcement authorities"; and was written "to an intimate acquaintance . . . in the privacy of her hotel room." *Id.* at 209.

¶ 13. As noted above, the court found that T.B. wrote this letter to a trusted adult for help in a matter that concerned and frightened her and that there was no evidence of coercion. Like the letter in Morgan, the letter here was written in private. While defendant seems to argue that private letter-writing somehow undermines the trustworthiness of the contents, the circuit court found the act of writing in private to be an indicator of trustworthiness—likely because it demonstrates absence of outside influences. We agree with the Morgan court's analysis and conclude that the trial court's finding of trustworthiness is supported by the record and that the court did not abuse its discretion in admitting T.B.'s letter.

¶ 14. We turn next to defendant's Rule 702 claim, again keeping in mind our deferential, abuse-of-discretion review. See USGen New Eng., Inc. v. Town of Rockingham,

2004 VT 90, ¶ 21, 177 Vt. 193, 862 A.2d 269 (reviewing trial court’s decision to admit expert testimony for abuse of discretion); see also Gen. Elec. Co. v. Joiner, 522 U.S. 136, 141-42 (1997) (holding that, although liberal standard exists for admissibility of expert testimony, appellate review must remain consistent with that for other evidentiary rulings).

¶ 15. As to this issue, defendant argues that the court erred in admitting the forensic expert’s testimony regarding his use of the Cellebrite software for retrieving the contents of defendant’s cell phone.<sup>3</sup> Defendant’s primary claim is that, while the forensic expert had a “general understanding of how the program works[,] . . . he did not have any understanding of the programming behind the software.” Defendant also challenges the reliability of the testimony, arguing that the State was unable to satisfy any of the factors outlined in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). Specifically, defendant contends that the forensic expert’s responses were “conclusory”; that he self-tested the program “using other software equally under scrutiny”; and that he read some periodicals about the program and is aware of its capabilities, but has no knowledge of its error rates and believes the program is reliable merely “because it [is] the most popular program used to examine cell phones and because he was told it was reliable.”

¶ 16. We start with the law governing the admissibility of expert testimony. Vermont Rule of Evidence 702 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, 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.

---

<sup>3</sup> The search of defendant’s cell phone revealed URLs from a pornographic website, including one linking to a video involving a teenage girl.

As the Reporter’s Notes explain, Rule 702 is identical to its federal counterpart, as originally drafted and as amended in response to a trilogy of United States Supreme Court cases, beginning with Daubert, that expound the limits of admissibility for expert testimony and create workable standards for use by trial judges in assessing the qualifications of experts and the reliability of the methods by which they reached their proffered opinions. The Daubert Court held that Federal Rule of Evidence 702 superseded the traditional “general acceptance” test established in Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), by removing the barriers to admissibility inherent in the general acceptance test and instead instituting a flexible standard guided by the dual principles of relevance and reliability. 985 Assocs. v. Daewoo Elecs. Am., Inc., 2008 VT 14, ¶ 6, 183 Vt. 208, 945 A.2d 381 (citing Daubert, 509 U.S. at 588-89).

¶ 17. To assist trial judges in determining whether an expert’s opinion is sufficiently rooted in scientific knowledge, the Daubert Court delineated four nonexclusive factors a judge may consider when assessing admissibility: (1) whether the theory or technique involved is capable of being tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential error rate associated with the scientific technique; and (4) whether the theory or technique has been generally accepted in the scientific community. State v. Streich, 163 Vt. 331, 343, 658 A.2d 38, 47 (1995) (citing Daubert, 509 U.S. at 591-94). We adopted those factors in State v. Brooks, 162 Vt. 26, 30, 643 A.2d 226, 229 (1993), to “promote more liberal admission of expert evidence.” State v. Scott, 2013 VT 103, ¶ 12, 195 Vt. 330, 88 A.3d 1173. Following Daubert, trial judges “must now act as gatekeepers who screen expert testimony ensuring that it is reliable and helpful to the issue at hand before the jury hears it.” USGen, 2004 VT 90, ¶ 19. Although courts have diverged on how exacting the Daubert inquiry must be, we have focused on the “liberal thrust” of Rule 702, stating that “the trial court’s inquiry into expert testimony should primarily focus on excluding ‘junk science’—because of its potential to confuse or mislead the trier of fact—rather than serving as a



preliminary inquiry into the merits of the case.” Daewoo, 2008 VT 14, ¶¶ 8-10 (“We adopted the Daubert decision precisely because it comported with the ‘liberal thrust’ of the rules of evidence and broadened the types of evidence that could be considered by the jury at trial.” (quoting Daubert, 509 U.S. at 588)).

¶ 18. The United States Supreme Court issued a subsequent decision that provides guidance here. Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999), expanded the applicability of Daubert to nonscientific expert testimony—i.e., testimony relying upon “technical” and “other specialized knowledge,” as termed in the amendments to Rule 702. Prior to Kumho, the question of Daubert’s reach remained unanswered, with states taking either a liberal or conservative approach to the admissibility of nonscientific testimony. See 1 K. Broun, McCormick on Evidence § 13 (7th ed. 2013). The Supreme Court resolved this issue in Kumho, holding that the trial judge’s gatekeeping obligation applies equally to testimony based on “technical” and “other specialized knowledge.” 526 U.S. at 141. In so holding, the Court explained that Daubert is not a one-size-fits-all analysis, but rather the trial judge may consider one or more of the factors “when doing so will help determine the testimony’s reliability.” Id. It further explained that the factors are not a “definitive checklist or test” and “neither necessarily nor exclusively appl[y] to all experts or in every case.” Id. at 141, 150 (quotations omitted). “[T]here are many different kinds of experts, and many different kinds of expertise,” the Court observed, and in some cases “the relevant reliability concerns may focus upon personal knowledge or experience.” Id. at 150. The Court further emphasized that “Rule 702 [does not] create[] a schematism that segregates expertise by type while mapping certain kinds of questions to certain kinds of experts.” Id. at 151. In light of this expanded view of Rule 702 and the Daubert inquiry, the Court rearticulated the objective of the gatekeeping requirement as “ensur[ing] the reliability and relevancy of expert testimony” and “mak[ing] certain that an expert . . . employs in the courtroom the same

level of intellectual rigor that characterizes the practice of an expert in the relevant field.” Id. at 152.

¶ 19. We have endorsed this approach, stating that the Daubert factors “are not exhaustive, and a trial court has broad discretion to determine, on a case-by-case basis, whether some or any of the factors are relevant in evaluating the reliability of expert evidence before it.” Scott, 2013 VT 103, ¶ 10 (quotation omitted). We further explained in State v. Kinney, 171 Vt. 239, 762 A.2d 833 (2000), that a mechanical application of the Daubert factors to expert testimony is not necessary where the scientific or technical evidence is not novel and its reliability otherwise can be established. Id. at 249-50. Notably, we concluded that the State was not obligated to present independent evidence, nor was the trial court required to make independent findings, on each of the Daubert factors because the reliability of the expert testimony could be established through other means, particularly through analogy to comparable technical evidence we have allowed trial courts the discretion to admit and through evaluation of the same type of evidence by other courts. Id. at 250.

¶ 20. Having established the flexibility with which we apply Rule 702 and the Daubert factors to nonscientific expert testimony, we must determine what type of foundation for reliability is required for the admissibility of the testimony here, particularly keeping in mind defendant’s argument that the forensic expert’s lack of knowledge about the underlying programming of the Cellebrite software is fatal to his testimony’s reliability. Although we can find no case from this Court directly on point, several other courts have taken a liberal approach in admitting testimony regarding computer software and other technical devices upon reliability foundations similar to that laid by the State here.<sup>4</sup>

---

<sup>4</sup> We note that some of these courts still rely on a version of the Frye “general acceptance” standard, or some hybrid of Frye and their own common law standards. We do not believe that this alters the applicability or persuasive value of these cases because the analyses

¶ 21. Closely on point is United States v. Chiaradio, 684 F.3d 265 (1st Cir. 2012). In Chiaradio, an FBI agent testified to his investigatory technique of using an enhanced peer-to-peer (EP2P) file sharing program to identify Internet Protocol addresses where child pornography has been downloaded. The defendant objected to the court’s admission of the agent’s testimony under Federal Rule of Evidence 702 because the EP2P technology was “too untested to form an adequate foundation” for the agent’s testimony. Id. at 277. In affirming the judgment of the trial court, the circuit court concluded:

Although [the agent] was not a programmer, did not know the program’s authors, and had never seen the source code, he had significant specialized experience with both EP2P and the manual re-creation of EP2P sessions. He testified that the program, with respect to identifying the source of particular files, had no error rate. He also demonstrated how the results of an EP2P investigation could be independently verified and made it clear that EP2P had never yielded a false positive.

Id. at 278.

¶ 22. Also on point is Krause v. State, 243 S.W.3d 95 (Tex. App. 2007). In Krause, the court considered the qualifications of a forensic examiner using specialized software called I-Look to create an exact duplicate of the defendant’s computer hard drive in order to search for evidence of child pornography. The forensic examiner testified that the hard drive was an exact copy because the “Hash value”—or “fingerprint”—of the copy matched that of the original. He conceded that he was “not sure exactly how the formula or algorithm works” and did not know “from where the mathematical formula for the Hash values came.” Id. at 101. He stated, however, that the formula had “been approved by our headquarters and it’s the formula that we use to get that value” and that the program “was industry standard and generally accepted in the scientific community.” Id. The defendant objected that the testimony was “not sufficiently reliable” because the forensic examiner did not know how the program reproduced the copies of

---

conducted by those courts comport with the flexible principles of Daubert as applied by this Court.

the original hard drives. Id. In approving the trial court's admission of the testimony, the appellate court discussed the forensic examiner's qualifications; his experience in data recovery and analysis and computer investigation; his work with the FBI; his 200 hours of training in forensic examination, including training in software programs like I-Look; and his experience conducting around 150 forensic examinations for the FBI, half of which involved I-Look. Id. at 109. With respect to the reliability of the software, the court stated:

Regarding the clarity with which the underlying scientific theory and technique can be explained to the court, [the expert] explained that he had used I-Look on computer files taken from [the defendant's] external hard drive and computers. I-Look indexed the files, and [the expert] was able to retrieve files containing child pornography from [the defendant's] hard drives. When [the examiner] took a hard drive from a computer, he used a program like I-Look to automate the task of searching and finding the files on it. An image of the drive was taken; the files were copied; and I-Look validated the copy by a "Hash value," an algorithm that verifies the image. [The expert's] testimony established I-Look's reliability.

Id. at 109-10.

¶ 23. In reaching its conclusion, the appellate court relied on an earlier decision that we also find instructive here. In Williford v. State, 127 S.W.3d 309 (Tex. App. 2004), the court considered a detective's testimony regarding a program called EnCase, which copies data from one computer hard drive to another. The defendant objected to this testimony "on the ground that [the detective] was not qualified as an expert to testify about the theory or technique in developing the EnCase software or its reliability." Id. at 311. In approving the admission of the testimony, the appellate court concluded the it was reliable because the detective was knowledgeable about using EnCase and had used it in the past; the software was generally accepted in the computer forensic community worldwide, had a low potential error rate, and had been reviewed in publications; and the accuracy of the software had been verified by the detective and, because of its commercial availability, could be tested. Id. at 312-13; see also

Sanders v. State, 191 S.W.3d 272, 277-78 (Tex. App. 2006) (approving admission of expert testimony on use of EnCase where detective had training and experience using software, discussed periodicals writing about software, and testified that software was “field standard” for forensic computer examination).

¶ 24. 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. See, e.g., United States v. Springstead, 520 F. App’x 168, 169-70 (4th Cir. 2013) (approving trial court’s admission of computer forensic examination software, against defendant’s objection that agent “lacked the requisite knowledge and training to explain how the [forensic] software used in this case was designed and functioned,” because agent testified to his training and experience with software); State v. Roberts, 2015 UT 24, ¶ 55, 345 P.3d 1226 (approving trial court’s admission of computer forensic examination software, against objection from defendant that software “relies on undefined scientific methods,” because software was “readily available” and “fairly common” and officers were well trained in its use); cf. Moorman v. State, 574 So. 2d 953, 958-59 (Ala. Crim. App. 1990) (approving admissibility of toxicology technician’s testimony regarding testing of defendant’s blood sample to determine blood-alcohol content, against defendant’s objection that technician’s knowledge of how machine worked was not based on her personal knowledge but on manufacturer’s manual, because evidence demonstrated that blood sample was “analyzed by an instrument generally accepted in the medical community” and “commonly employed by hospitals for both ‘legal and medical purposes’ ” and that “instrument was operated

by a qualified technician who followed standard operating procedure in performing the test” and “was in proper operating order at the time of the test”).<sup>5</sup>

¶ 25. Returning to the testimony presented by the forensic expert, we conclude that the trial court did not abuse its discretion in admitting the testimony. Our conclusion is supported by the principles discussed above: our deferential, abuse-of-discretion review; the liberal admissibility under Rule 702 and Daubert; and the flexible, nonmechanical application of the Daubert factors, specifically to nonscientific testimony.

¶ 26. As to the forensic expert’s qualifications, he testified that he had over 800 hours of training in the forensic examination of computer hard drives, digital media, and cell phones and a week of specific training in Cellebrite with a company that specializes in training and assistance to law enforcement. He also testified that he has used the program to extract data from hundreds of phones since 2010. He conceded that someone in his position would not be able to speak about the underlying programming, stating, “[W]e’re actually trained . . . to be very careful about how we talk about how the software and hardware works . . . we’re not experts on

---

<sup>5</sup> A handful of courts have considered testimony regarding the use of the Cellebrite software and have ruled the testimony admissible where the witness had no knowledge of the programming behind the software. For example, in In re D.H., No. A140779, 2015 WL 514336 (Cal. App. Feb. 6, 2015), the court explained that

[t]he testimony was not for the purpose of explaining how the Cellebrite technology worked, and [the detective] did not opine about the technological means by which the transfer occurred. Instead, he essentially testified to his experience that attaching a phone to his machine resulted in a display of photographic and other information that was contained in the phone, and identified the type of machine he used to download the material from [the phone].

Id. at \*6. Although this case supports our reasoning above, we do not find it entirely applicable because the court there held that the detective’s testimony was not expert testimony because data extraction is merely an “investigative technique.” Id. We consider the forensic expert’s testimony here to be expert testimony because he has “specialized knowledge” about the use of Cellebrite that is helpful to a jury.

that.” He testified, however, that he read about the program, what it can do, what information it can reveal, and how he can search and sort through the data.

¶ 27. As to the reliability of the program, the forensic expert testified that “numerous agencies use the software” and that it is “the most popular hardware and software solution for examining cell phones.” He testified that the program is routinely tested in the forensics community; the results are tested in his agency by defense experts and through peer review of data reports; and that because the program is commercially available, it is subject to testing. He also stated that he self-tests his extraction results by comparing the computerized results to the results of a manual examination to verify the data that has been extracted and that he compares the results of his extraction with results from other forensic programs that overlap with Cellebrite. He further stated that he has learned of the program’s reliability in the forensic industry through his trainings, correspondence with colleagues, and email lists. He testified that, although the program’s error rate never was expressly discussed in his training, the program’s limitations were.

¶ 28. The trial court concluded that the testimony was sufficiently reliable to meet the requirements of Rule 702. The court focused specifically on the forensic expert’s training and experience with Cellebrite, the software’s widespread use by law enforcement nationally, and that the expert verified the accuracy of the data extraction through testing against manual extraction and other software programs. In response to defendant’s specific concern about the forensic expert’s lack of knowledge at the “programmable level,” the court explained that such programming information is rarely understood by its users because it is “typically highly proprietary information known only to the manufacturer of the product.”

¶ 29. As the above-cited cases demonstrate, this is precisely the type of inquiry that establishes the reliability of such technical evidence. A computer program for extracting cell phone data is hardly novel. While this particular program has not been the subject of many court

decisions, its reliability clearly has been established through the forensic expert's foundational testimony, and his qualifications to present such testimony, and through evaluation of similar technical evidence by this Court and others. And as discussed above, the State was not obligated to present evidence on each Daubert factor. The forensic expert's testimony is not about basic scientific principles, and he is not drawing inferences from the facts. He merely is explaining how he extracted the data from the cell phone and how he read that data—specialized knowledge that he acquired through his training and experience. Many of the Daubert factors—and the heightened scrutiny given to scientific evidence—are impractical here and would do little to draw out the reliability of Cellebrite. See Broun, supra, § 13 (explaining that when testimony summarizes or describes experience in field, rather than drawing inferences from facts based on scientific theories or techniques, foundation that demonstrates expert's experience in field may be sufficient).

¶ 30. Furthermore, any deficiencies in the program should be drawn out through the adversarial process, including “vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.” Daewoo, 2008 VT 14, ¶ 16 (quoting Daubert, 509 U.S. at 596). “So long as scientific or technical evidence has a sound factual and methodological basis and is relevant to the issues at hand, it is within the purview of the trier of fact to assess its credibility and determine the weight to be assigned to it.” Id. As the trial court here noted, the fact that the Cellebrite software did not extract all the data from defendant's cell phone does not affect the admissibility of the testimony but instead goes to the weight of that testimony. Counsel for defendant had access to the cell phone and had the opportunity to have it scanned by his own computer experts. The trial court here properly exercised its discretion as gatekeeper; the software used by the forensic expert hardly can be characterized as “junk science.” It is left to the fact finder to weigh its credibility.



¶ 31. Finally, we note that, although the State argued this issue based on Rule 702, and the trial court conducted its analysis on that basis, defendant’s claim that the forensic expert’s testimony is unreliable because he lacked a general understanding of the programming behind the software also can be framed as a Vermont Rule of Evidence 703 issue not requiring Daubert analysis at this point in the case. Rule 703 permits experts to base their opinions on facts or data “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject,” V.R.E. 703, and “the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.” Id. The Reporter’s Notes to Rule 703 explain that the rule is identical to the federal rule and is intended, in part, to allow admission of data presented to the expert “outside the trial and not reflecting his personal experience.” Reporter’s Notes, V.R.E. 703. The Reporter’s Notes to the concomitant federal rule further explain that “the rule is designed to broaden the basis for expert opinions . . . and to bring the judicial practice into line with the practice of the experts themselves when not in court.” Advisory Committee Notes, F.R.E. 703.

¶ 32. For example, in In re Jam Golf, LLC, 2008 VT 110, 185 Vt. 201, 969 A.2d 47, we permitted a wildlife expert to rely upon topographic features and wildlife movement that he had not observed firsthand because they are “the type of facts and data with which wildlife experts are familiar.” Id. ¶ 10. Courts have applied similar reasoning when considering the admissibility of expert testimony on the use of computer software. See, e.g., McReynolds v. Sodexho Marriott Servs., Inc., 349 F. Supp. 2d 30, 36-37 (D.D.C. 2004) (admitting expert testimony under Federal Rule of Evidence 703 where expert was not personally familiar with computer programming but relied upon assistant’s knowledge of programming). We note the possible application of Rule 703 only to explain that there may be an alternative route to the same holding, but we ultimately ground our decision on Rule 702.

¶ 33. Defendant makes one final argument as to the admissibility of the expert testimony. He contends that the State failed to establish a sufficient chain of custody for defendant's cell phone, specifically that the forensic expert could not account for its whereabouts at all times before it reached his office and acknowledged that the phone was stored improperly for some period of time. We note that this is not a Rule 702 issue, State v. Tester, 2009 VT 3, ¶ 18, 185 Vt. 241, 968 A.2d 895, but merely one of admissibility and authentication of evidence generally, State v. Muscari, 174 Vt. 101, 107, 807 A.2d 407, 413 (2002). “[T]he test for authenticating evidence is not a demanding one, and . . . some questions regarding a piece of evidence's origin or chain of custody are permissible.” Id. We do not require absolute certainty in laying a foundation for admissibility but require that “the evidence be of demonstrable relevance and of sufficient meaningful substance to be justifiably relied upon” and not “an insubstantial invitation to conjecture.” Id. (quotation omitted). Furthermore, a chain of custody need not be established perfectly; imperfections go to the weight, not the admissibility. State v. Mercier, 138 Vt. 149, 153, 412 A.2d 291, 294 (1980). Rather, the circumstances need to establish only a “reasonable assurance” that the evidence is authentic and has not been tampered with. State v. Stevens, 137 Vt. 473, 477, 408 A.2d 622, 625 (1979).

¶ 34. The forensic expert testified that the cell phone was sent from defendant's home to the barracks in New Haven and then to his office where it was stored in the evidence room. He acknowledged that he did not know exactly what happened to the phone between leaving defendant's possession and arriving at his office and also acknowledged that it had been stored improperly (turned on) at some point before reaching his office. He also testified, however, that the fact that the phone was left on had no effect on the data he subsequently extracted from the phone. There is no evidence of a break in the chain of custody, and other than the phone being left on, there is no other evidence to suggest tampering.

¶ 35. We therefore conclude that the trial court did not abuse its discretion in admitting the forensic expert's testimony regarding the extraction of data from defendant's cell phone.

¶ 36. Lastly, we turn to defendant's claim that the jury verdict was coerced. Defendant argues that the trial court improperly coerced a jury verdict when it informed the jury that they would have two hours that day to deliberate and then added: "but if you don't have a verdict by 5:30 that's fine, but we will then suspend and have you back on Monday." The court also advised the jury "to take all the time you need." Defendant's complaint is that the court should have given the jury a choice to start deliberations that day or wait until Monday. Defendant bears the burden of presenting facts sufficient to support his claim that the verdict was coerced. State v. Hudson, 163 Vt. 316, 324, 658 A.2d 531, 536 (1995).

¶ 37. In support of his argument, defendant cites a litany of cases that stand for the proposition that a court cannot place time limits on a jury's deliberations or in any way indicate that speed is more important than thoughtfulness. None of those cases support a finding of coercion here. In Hudson, we rejected the defendant's claim that the court improperly coerced a jury verdict by informing the jurors that they would be sent to a hotel if they did not reach a verdict by 10:00 p.m. Id. at 323, 658 A.2d at 535. We explained that the court already had advised the jurors to be prepared to stay overnight and "made it clear that it did not intend to suggest that it was imposing a time limit for reaching a verdict." Id. at 324, 658 A.2d at 536; see State v. James, 499 So. 2d 721, 727 (La. Ct. App. 1986) (finding no error where jurors were informed they would spend night in hotel if verdict was not reached because "the jury members were entitled to know . . . what would happen if they could not reach a verdict that night").

¶ 38. Here, we see no coercion in the trial court's statement to the jury. The court never told the jury that it must reach a decision that night. The court merely was explaining the fact that it was the end of the week and that deliberations would resume on Monday if necessary—this is something the jury members were entitled to know. Further, the court stressed that it was

“fine” if the jurors did not reach a decision by the end of the day and told them to “take all the time you need.” We also fail to see how explicitly giving the jury a choice of starting deliberations on Friday or waiting until Monday would make any practical difference in how the jury approaches deliberations. We therefore find no error in the trial court’s statement to the jury.

Affirmed.

FOR THE COURT:

---

Associate Justice