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May 5, 2020

VIA E-COURTS
Honorable Patrick J. Arre, J.S.C.
Superior Court of New Jersey
Hudson County
595 Newark Avenue
Jersey City, New Jersey 07306

Re: **State of New Jersey v. Corey Pickett, Jonathan Ferrara, William Conyers**
Indictment No.: 17-07-0470
Prosecutor File: 17-1928

Dear Judge Arre:

Please accept the following letter in response to the defendant's submission of April 21, 2020 in lieu of a more formal submission.

In State v. Gighiolotty, Docket No. A-0938-19T3, our Appellate Division considered the admissibility of expert testimony submitted by the State which involved untested three-dimensional computer modeling technology known as BULLETRAX which was used to compare ballistics evidence with test bullets in a murder prosecution. The State's expert ultimately concluded that bullet fragments obtained from a murder victim likely came from a handgun which was seized from the defendant.

The prosecution involved the 2004 murder of Taji Pile, who was found on the side of the road with a bullet wound to the head. No weapons were recovered, but law enforcement recovered three bullets from the victim's body. The defendant, who acknowledged an association with the victim and admitted to seeing him on the day he died, was charged with and convicted of unlawful possession of a weapon. A forensic analysis of the firearm recovered from the defendant and ballistic evidence obtained from the victim utilizing microscopic analysis yielded "negative results," or an "elimination." The defendant was not charged in connection with the homicide.

The case was re-opened in 2015. Investigators attempted a comparative analysis using BULLETRAX, a computer program which creates 2D and 3D images of a bullet's surface. The program models different portions of a bullet and using a computer algorithm "stitches" them together to create a single image. The images are then viewed using Matchpoint, a program which essentially aides in a more dynamic visual comparison, supplanting manual microscopic analysis, and allowing for manipulate images and allowing for more thorough review. Utilizing these techniques, the State's expert conducted a forensic examination of the ballistics evidence, relying in part on BULLETRAX, and concluded a positive identification.

Following indictment, the defendant moved to limit or preclude the proposed expert testimony under Frye. The court scheduled an N.J.R.E. 104 hearing, and ordered the State to produce any and all manuals, policies and procedures for the BULLETRAX software. The hearing focused not on the admissibility of tool mark identification analysis, but on the reliability of BULLETRAX and Matchpoint software. The court noted that the record lacked "any validation studies or indeed any records concerning the testing [BULLETRAX] has undergone to determine the accuracy and reliability of the images it produces [and/or] the [Matchpoint] software permits examiner interaction with those images." The court ordered the production of the pertinent algorithms, subject to a protective order, the terms of which were not discussed. The Appellate Division granted the State's leave to appeal.

The Appellate Division, in pertinent part, remanded the case to the trial court for further hearings on the defense request for the disclosure of certain elements of the software, finding that the trial court's ruling was premised upon a defense request with no supporting materials.

The Appellate Division's decision in Ghigliotty provides helpful guidance with regard to the defendant's motion to compel the disclosure of the source code in this case. First, it is important to note that the defense in Ghigliotty sought algorithms, not source code. An "algorithm" is a set of instructions for carrying out a particular task. "Source code" is a computer program written in a computer language. A computer programmer who understands an algorithm can write it in a computer language as a computer program. Cybergenetics has disclosed its TrueAllele algorithms. See Declaration of Dr. Mark W. Perlin, September 2019; Perlin MW, TrueAllele methods: statistical model. Cybergenetics, March 2016; Perlin MW, Legler MM, Spencer C., Smith JL, Allan WP, Belrose JL, and Duceman BW. Validating TrueAllele® DNA mixture interpretation. Journal of Forensic Sciences, 56(6):1430-47, 2011.

Assuming arguendo that the disclosure of algorithms are somewhat analogous to source code, there is are additional important distinctions to be acknowledged between BULLETRAX/Matchpoint and TrueAllele. BULLETRAX/Matchpoint is a truly novel approach to ballistics analysis. Its development and availability for use is relatively recent. It is wholly untested: as the Appellate Division notes, it has not been the subject of any validation study and there are no legal rulings from other jurisdictions to provide guidance with regard to its reliability or any related issues.

TrueAllele is different: it has been thoroughly tested and validated. The record before the court is replete with validation studies, legal opinions, peer review and other scientific and scholarly articles which demonstrate that TrueAllele is reliability because it has withstood the test of legal and scientific scrutiny. The State's position with regard to the defendant's motion to compel discovery of the source code is that the source code is not required because it is unrelated to validation. All of the authoritative materials on the record

demonstrate that the source code is not required in discovery because TrueAllele has been validated. Indeed, crime laboratories that use TrueAllele or other commercial software do not have access to the source code: the reliability of TrueAllele is demonstrated through testing, not source code review. This is an important distinction from BULLETRAX/Matchpoint.

In addition, the Appellate Division remanded Ghigiliotty for further factual findings to determine whether or not there is good cause for the discovery of the algorithms, noting that the court's Order was premised upon a mere defense request and failed to constitute a definitive showing. Contrary to defense counsel's submission addressing Ghigiliotty, this case has a similar posture. As the State has reiterated, the defendant's showing, consisting only of an affidavit of their expert and legal filings is wholly insufficient. Unlike the State's expert, the defendant's expert has not appeared before the court to provide sworn testimony regarding the necessity of the source code. Mr. Adams' qualifications, positions, and the reasonableness of his reliance on principles set forth in his affidavit leave the court with a wholly deficient record and the failure of the defendant to carry the burden of his motion for production. The defendant's failure to make a meaningful showing in support of their motion should be held in a regard similar to the Appellate Division's position in Ghigiliotty.

Finally, defense counsel submits that unlike the defendant in Ghigiliotty, they have set forth terms of a protective order which is appropriate under the circumstances and corrects the deficiency identified in the Appellate Division. I respectfully disagree. As set forth in previous filings, the State is willing to make the source code available for expert review. In consultation with our expert, we have removed many of the requirements typical of TrueAllele source code review, including cost, travel, and expert pre-qualification. This means that the defense expert is welcome to come to the prosecutor's office, view the source code on a provided device, and take notes. We object to any photographs, copying, or any procedure which amounts to taking the source code. What the defense has proposed is unfettered access, copying, and sharing of proprietary information with no meaningful consequence, and in doing so has

dismissed legitimate concerns about trade secret protection. To this date, the defense has failed to provide a reasonable explanation of why this is unacceptable. Equally as important, they have failed to provide a reasonable explanation as to why their expert refuses to test TrueAllele in the manner set forth in previous filings.

For the reasons aforementioned, the Appellate Division's decision in State v. Ghigiliotty supports the State's position with regard to Mr. Pickett's motion to compel production of the TrueAllele source code. Consequently, the defendant's motion should be denied.

Thank you for your courtesies.

Respectfully submitted,

ESTHER SUAREZ
Prosecutor of Hudson County

BY:/s/ *Kevin W. Roe*

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Via E-Courts