STATE V. TOLLARDO, 2003-NMCA-122, 134 N.M. 430, 77 P.3d 1023

STATE OF NEW MEXICO, Plaintiff-Appellee, v. MANUEL TOM TOLLARDO, Defendant-Appellant.

Docket No. 22,562

COURT OF APPEALS OF NEW MEXICO

2003-NMCA-122, 134 N.M. 430, 77 P.3d 1023

August 26, 2003, Filed

APPEAL FROM THE DISTRICT COURT OF TAOS COUNTY, Peggy J. Nelson, District Judge.

Certiorari Denied, No. 28,282, 2003-NMCERT-001, October 8, 2003. Released for Publication October 21, 2003.

COUNSEL

Patricia A. Madrid, Attorney General, Joel Jacobsen, Assistant Attorney General, Santa Fe, NM, for Appellee.

John B. Bigelow, Chief Public Defender, Vicki W. Zelle, Assistant Appellate Defender, Santa Fe, NM, for Appellant.

JUDGES

MICHAEL D. BUSTAMANTE, Judge. WE CONCUR: JAMES J. WECHSLER, Chief Judge, A. JOSEPH ALARID, Judge.

AUTHOR: MICHAEL D. BUSTAMANTE.

OPINION

BUSTAMANTE, Judge.

{1} Trial lawyers are acutely aware that one picture is worth a thousand words. Studies show that jurors retain more information from visual presentations or presentations that are both verbal and visual than from verbal presentations alone. Jack A. Weinstein & Margaret A. Berger, **Weinstein's Federal Evidence** § 900.07[7][b], at 900-101 n.172 (2d ed. 1997) (**Weinstein's Federal Evidence**). A witness can illustrate his or her testimony by drawing diagrams on paper for a jury, as long as the diagram is not

misleading. **Zemke v. Zemke**, 116 N.M. 114, 122, 860 P.2d 756, 764 . This case concerns the use and admission into evidence of images generated by a computer, rather than drawn by a person. We hold that under the circumstances of this case, the trial court correctly required the proponent of the images to establish the validity of the computer programs used to generate the images. We further hold that the trial court did not abuse its discretion in determining that the programs were valid. Thus, we affirm.

FACTS AND PROCEEDINGS

{2} The events that were the subject of the trial took place in the early morning hours of July 20, 2000, near Taos, New Mexico. Shortly after midnight, Rosalee Kisto, Robert Miera, and Jeremy Trujillo went to Miera's mobile home in a mobile home park outside of Taos. What happened at the mobile home was disputed at trial. The prosecution's theory was that Miera and Kisto had an argument over the proceeds from a drug deal. Kisto's brother, Manuel Tom Tollardo (Defendant), testified that Kisto told him that she had been beaten and raped by Miera. Defendant, Kisto, and a third person drove back to the mobile home park, where they encountered Trujillo, who was driving out of the park to the road. Both cars stopped and their occupants got out. What happened next was the subject of conflicting testimony at trial. However, it was undisputed that Defendant, Kisto, and Trujillo argued loudly, that Miera joined them at some point, and that Miera and Kisto's car and shot Trujillo and Miera. Both victims died as a result of their wounds. The testimony at trial indicated that at least four shots were fired in rapid succession.

(3) At some point before trial, the State contacted the Federal Bureau of Investigation (FBI) for assistance. Carl Adrian, a visual information specialist examiner in the Investigative, Prosecutive and Graphic Unit, which is part of the FBI laboratory, was assigned to the case. Using information gathered by others investigating the case and computer programs described in more detail below, Adrian set out to determine whether, given the physical evidence found at the scene, a shooter in a fixed location could quickly fire three shots that would create the wounds found in Trujillo's chest, in Miera's chest, and in Miera's thigh. The result was a series of computer images that showed three figures against a checked background. Two of the figures represented the victims, with dotted lines through their bodies indicating the trajectory of the bullets that caused the three wounds. The third figure was a shooter holding a gun. The computer programs allowed Adrian to move the figures of the victims so that the dotted lines of the bullet trajectories intersected with the muzzle of the gun. Using these images, Adrian determined that a person standing in one place could have fired all three shots. Because the images were to scale and were shown against a checked background in which each check represented a square foot, the images also showed the relative distances between the figures. In addition, the images showed Trujillo was crouched down and facing forward and that Miera was turning at the time they were hit by the bullets.

{4} Before trial, Defendant filed a motion in limine asking the trial court to exclude the images. Among other things, Defendant argued that the computer-generated images did not meet the standards of validity and reliability required by **State v. Alberico**, 116 N.M. 156, 165, 861 P.2d 192, 200-01 (1993), for the admission of scientific testimony. **See also Daubert v. Merrell Dow Pharms., Inc.**, 509 U.S. 579, 594-95 (1993).

(5) The trial court held an evidentiary hearing on Defendant's motion. At the hearing, Adrian testified in detail and was subject to cross-examination concerning the information he used to construct the images shown on the exhibit, the nature and accuracy of the application programs he used to create the images, and the process he went through to create the images. At the close of the hearing, the State argued that the images were demonstrative evidence that would be used as visual aids to assist the jury in understanding the evidence. Therefore, in the State's view, the images were not scientific evidence and **Alberico** did not apply. The trial court held that **Alberico** applied to all expert testimony. In addition, it held that Adrian's testimony was sufficient to establish the validity of the programs used to generate the images. Accordingly, the trial court held that the exhibit could be admitted into evidence and the images on it shown to the jury during Adrian's testimony, subject, of course, to the requirement that the State lay a proper foundation for the admission of the evidence.

(6) During trial, there was considerable testimony from the various law enforcement personnel involved in investigating the crime. New Mexico State Police Agent Joe Shiel, who was the crime scene manager for the incident, testified to what he saw when he first arrived at the scene of the shooting. In addition, Shiel identified photographs taken at the scene. Those photographs were admitted into evidence and shown to the jury. Agent Shiel also made a video of the scene that was admitted into evidence and shown to the jury. Defendant made no objection to the photographs or videotape. Forensic pathologists from the Office of the Medical Investigator testified concerning the autopsies of Miera and Trujillo. Both pathologists made written reports and took photographs that were introduced into evidence. The pathologists testified to the location of the entrance and exit wounds and the path each bullet took through the body. New Mexico State Police Agent Wesley La Cuesta testified that he made a diagram of the scene of the shooting. He then took measurements of the various objects found at the scene from a fixed point and noted the measurements on the diagram. Although the diagram was not drawn to scale, La Cuesta testified that the measurements used to locate objects on the diagram were accurate. William Hubbard, an investigator for the district attorney's office, testified about shell ejection and powder residue tests he performed on the weapon used in the shootings. All of these witnesses were cross-examined.

{7} The State's last witness was Adrian. Adrian was recognized as an expert in several areas. First, Adrian was recognized as an expert in crime scene reconstruction, or, as Adrian calls it, "reverse engineering of crime scenes." Reverse engineering of crime scenes involves using known information, such as the locations of objects at the scene or the trajectory of a bullet as described in an autopsy report, to determine unknown information. Adrian was also recognized as an expert in Computer Assisted Design

(CAD) programs, a program referred to as MAYA, and in three-dimensional bullet trajectory analysis in computer systems. Defendant did not object below and does not challenge Adrian's expertise on appeal.

{8} The jury convicted Defendant of voluntary manslaughter for the killing of Miera, and murder in the second degree for the killing of Trujillo. Defendant appeals. On appeal, Defendant argues (1) that the evidence is not sufficient to support the convictions, and (2) that the trial court erred in admitting the exhibit into evidence and allowing the images to be shown to the jury. The use and admission into evidence of computer-generated images is an issue of first impression in New Mexico.

The Trial Court Did Not Err in Admitting the Computer-Generated Evidence.

(9) Defendant and the State dispute the nature of the evidence and the standard used to determine its admissibility. Defendant argues that the images were not demonstrative evidence but real evidence used to prove his guilt. In addition, he argues that the **Alberico** standard applies because the evidence is scientific in the broadest sense of that term. The State argues that the images were simply demonstrative evidence used to illustrate Adrian's testimony and therefore the **Alberico** standard does not apply. Whether the **Alberico** standard applies is a question of law that we review de novo on appeal. **See State v. Torres**, 1999-NMSC-010, ¶ 28, 127 N.M. 20, 976 P.2d 20.

The Computer-Generated Exhibit Must Meet the Alberico Standard.

{10} Evidence used in court is generally broken into three broad categories: testimonial evidence, documentary evidence, and demonstrative evidence. 2 McCormick on Evidence § 212 (John W. Strong et al. eds., 5th ed. 1999) (McCormick on Evidence). New Mexico cases define demonstrative evidence, also sometimes referred to as real evidence or evidence by inspection, as "such evidence as is addressed directly to the senses of the court or jury without the intervention of the testimony of witnesses, as where various things are exhibited in open court." Holloway v. Evans, 55 N.M. 601, 607, 238 P.2d 457, 460-61 (1951), quoting 32 C.J.S., Evidence, § 601 (internal quotation marks omitted). When used in this broad sense, demonstrative evidence includes a wide variety of things. See, e.g., State v. Nelson, 63 N.M. 428, 434, 321 P.2d 202, 206 (1958) (clothing and other personal effects); Mott v. Sun Country Garden Prods., Inc., 120 N.M. 261, 269-70, 901 P.2d 192, 200-01 (trailer involved in vehicular accident); State v. Gallegos, 115 N.M. 458, 459, 853 P.2d 160, 161 (Ct. App. 1993) (tattoos on a person's body). There is no question that the images are demonstrative evidence in this sense.

{11} The fact that something is demonstrative evidence in this sense does not, however, determine the standards for admitting the evidence because "not all tangible exhibits are offered for the same purpose or received on the same theory." 2 **McCormick on Evidence** § 212, at 3. In this case, Defendant argues that the images were used as substantive evidence, while the State contends that the images were simply visual aids used to illustrate Adrian's expert opinion. The State points out that

visual aids are often used to illustrate the trajectory of a bullet fired into the human body. **See, e.g.**, **State v. Rose**, 79 N.M. 277, 279-80, 442 P.2d 589, 591-92 (1968) (referring in passing to the county sheriff using a pool cue to connect apparent bullet holes to determine the trajectory of the bullet). Moreover, courts in other jurisdictions have affirmed the use of mannequins and dowel rods as visual aids to illustrate the trajectory of a bullet. **See Moss v. State**, 559 S.E.2d 433, 434-35 (Ga. 2002); **People v. Cummings**, 850 P.2d 1, 38 (Cal. 1993) (en banc).

{12} Both parties direct our attention to decisions of other courts that have considered the admissibility of computer-generated evidence. Some courts divide computergenerated exhibits into two categories: computer animations and computer simulations. An "animation" is a computer-generated exhibit that is used as a visual aid to illustrate an opinion that has been developed without using the computer. On the other hand, a "simulation" is a computer- generated exhibit created when information is fed into a computer that is programmed to analyze the data and draw a conclusion from it. See, e.g., State v. Farner, 66 S.W.3d 188, 208 (Tenn. 2001); Clark v. Cantrell, 529 S.E.2d 528, 535 n.2 (S.C. 2000); People v. Cauley, 32 P.3d 602, 606-07 (Colo. Ct. App. 2001). When the image is used as a visual aid, the courts do not require a showing that the exhibit was produced by a scientifically or technologically valid method. Clark, 529 S.E.2d at 536 (discussing criteria for admission); see also Cauley, 32 P.3d at 607 (adopting the Clark criteria); Harris v. State, 13 P.3d 489, 495 (Okla. Crim. App. 2000) (adopting the **Clark** criteria). Instead, the critical issue is often whether the visual aid fairly and accurately represents the evidence or some version of the evidence. See, e.g., Clark, 529 S.E.2d at 535-38 (affirming trial court's exclusion of images because they did not accurately depict any version of the testimony concerning the accident); Farner, 66 S.W.3d at 209 (holding trial court erroneously admitted an animation of a drag race because the animation did not accurately depict the relative positions or speeds of the vehicles engaged in the race); Sommervold v. Grevios, 518 N.W.2d 733, 737-38 (S.D. 1994) (affirming trial court's ruling excluding computer- generated images because the conditions illustrated by the images were not supported by any version of the events at issue); see also State v. Trahan, 576 So. 2d 1, 6-8 (La. 1990) (excluding a videotaped "reenactment" of the crime using live actors because it did not accurately reflect the location of the victim's body). On the other hand, before admitting a simulation, in which the computer has been used to analyze data, the courts require proof of the validity of the scientific principles and data. **Clark**, 529 S.E.2d at 535 n.2; Farner, 66 S.W.3d at 208; Cauley, 32 P.3d at 606-07. At least one commentator has noted, however, that courts are not always consistent in applying these labels to the particular exhibit at issue. Fred Galves, "Where the Not-So-Wild Things Are: Computers in the Courtroom, the Federal Rules of Evidence and the Need for Institutional Reform and More Judicial Acceptance," 13 Harv. J.L. & Tech. 161, 256 (2000).

{13} The State asserts that the computer-generated evidence in this case was used merely to illustrate Adrian's opinion and thus should be treated as an animation. However, as we understand the testimony, Adrian used the computer to help him form his opinions, not simply to illustrate opinions reached in another manner. On the other

hand, the testimony also indicated that the computer did not "analyze" data fed into it; instead it created a visual image based on the same data that would have been used to create paper and pencil drafts on a drafting board. Thus, it does not fall squarely into either category espoused by those cases.

{14} Nevertheless, we think those cases are helpful because they focus attention on the central question: who (or what) is the source of the opinion. When the computergenerated evidence is used to illustrate an opinion that an expert has arrived at without using the computer, the fact that the visual aid was generated by a computer probably does not matter because the witness can be questioned and cross-examined concerning the perceptions or opinions to which the witness testifies. In that situation, the computer is no more or less than a drafting device. See, e.g., People v. McHugh, 476 N.Y.S.2d 721, 722 (N.Y. Gen. Term 1984) ("Whether a diagram is hand drawn or mechanically drawn by means of a computer is of no importance."); Galves, supra, at 180-185, 255-60. Cf. State v. Wildgrube, No. 21,956, slip op. at ¶¶ 12-15 (N.M. Ct. App. June 23, 2003) (holding that court had discretion to admit computer-generated exhibits offered in connection with the opinion testimony of lay witness under Rule 11-701 NMRA 2003). However, when an expert witness uses the computer to develop an opinion on the issue, the opinion is based in part on the computer-generated evidence. See, e.g., Pierce v. State, 718 So. 2d 806, 808 (Fla. Dist. Ct. App. 1997) (indicating that when an expert uses a computer to develop an opinion, the courts require that the technique be shown to be reliable under the applicable test); Kudlacek v. Fiat S.p.A., 509 N.W.2d 603, 617-18 (Neb. 1994) (discussing admissibility of expert opinion when expert used a computer program to reconstruct the path of the vehicle on the roadway). In that situation, the proponent of the evidence must be prepared to show that the computer-generated evidence was generated in a way that is scientifically valid. See Weinstein's Federal Evidence § 900.07[7][d][ii] & [iii], at 900-103, -104; Gregory P. Joseph, "A Simplified Approach to Computer-Generated Evidence and Animations," 43 N.Y.L. Sch. L. Rev. 875, 885-86 (2000); Galves, supra, at 256-61. We think that this approach is consistent with our Supreme Court's opinion in Alberico. which emphasizes the importance of making an initial determination of how the evidence will be used. Alberico, 116 N.M. at 172, 861 P.2d at 208 (indicating that the initial inquiry for the admissibility of any evidence is the purpose for which it is being offered).

{15} In this case, Adrian used the computer to help him supply missing information based on the physical evidence available. Thus, the images were not visual aids used to illustrate an opinion developed by other means. Instead, they were used to develop the opinion to which Adrian testified. Thus, we agree with the trial court that the **Alberico** standard applies to the images.

The Trial Court Did Not Abuse its Discretion in Determining That the Computer Programs Used Were Valid.

{16} We turn next to the application of the **Alberico** standard to the images at issue in this case. We review the trial court's application of the **Alberico** standard only for abuse of discretion. **Torres**, 1999-NMSC-010, ¶ 27.

{17} In **Alberico**, our Supreme Court, following the lead of the United States Supreme Court in **Daubert**, adopted a new test for determining the admissibility of expert opinion evidence under Rule 11-702 NMRA 2003. Before Alberico, opinions based on scientific evidence were admissible only if the science was generally accepted in the relevant scientific community. Alberico, 116 N.M. at 165, 861 P.2d at 201. Alberico rejected that standard in favor of a more flexible inquiry in which the general acceptance of the theory or technique was considered but was not controlling. Alberico 116 N.M. at 167, 861 P.2d at 203. Thus, the focus of the inquiry shifted from general acceptance in a particular field to "the validity and the soundness of the scientific method used to generate the evidence." Id. In making this determination, the Court indicated that in addition to considering whether the technique was accepted in a particular field, the courts should examine the relationship between the technique used to generate the evidence and established scientific techniques and the availability of specialized literature addressing the validity of the technique. Id. at 168, 861 P.2d at 203. Alberico defined validity as "the measure of determining whether the testimony is grounded in or a function of established scientific methods or principles, that is, scientific knowledge." Id. Thus, the Court opined, a technique grounded in traditional principles of psychology would be considered valid, while a technique grounded in principles of astrology would not. Id. at 168, 861 P.2d at 203-04. In Alberico, the Court held that psychological testimony concerning post-traumatic stress disorder was grounded in valid scientific principle because it was grounded in basic behavioral psychology. Id. at 173, 861 P.2d at 209. "Reliability is akin to relevancy in considering whether the expert opinion testimony will assist the trier of fact." Id. at 168, 861 P.2d at 203. The Court held that testimony that the alleged victim suffers from post-traumatic stress disorder was reliable in this sense because it had a tendency to show that the victim might have been sexually abused. Id. at 172-73, 861 P.2d at 207. Defendant does not challenge the reliability of the images in this appeal. Thus, we focus on the validity of the method used to generate the images.

{18} Before discussing the scientific validity of a method, we think it is important to identify the specific scientific field involved. Alberico involved the validity of psychological evidence concerning post-traumatic stress syndrome. Post-Alberico cases have adopted specific factors that are considered in determining the validity of certain scientific tests. See, e.g., Torres, 1999-NMSC-010, (Horizontal Gaze Nystagmus (HGN) test); State v. Stills, 1998-NMSC-009, 125 N.M. 66, 957 P.2d 51 (DNA test); State v. Morales, 2002-NMCA-052, ¶ 8, 132 N.M. 146, 45 P.3d 406 (field test used to determine if a substance was heroin); State v. Lasworth, 2002-NMCA-029, ¶ 12, 131 N.M. 739, 42 P.3d 844 (HGN test); State v. Anderson, 118 N.M. 284, 881 P.2d 29 (1994) (DNA test). Other cases have held that the Alberico standard does not apply when the legislature by statute has made other provisions for determining the validity of the equipment or testimony at issue. See State v. Onsurez, 2002-NMCA-082, ¶ 10, 132 N.M. 485, 51 P.3d 528 (holding that the state is not required to show that

a Breathalyzer machine meets the **Alberico** standard because the legislature has provided by statute other ways to insure the accuracy of the machine); **Banks v. IMC Kalium Carlsbad Potash Co.**, 2003-NMCA-016, ¶ 2, 133 N.M. 199, 62 P.3d 290 (holding that testimony of treating physician in workers' compensation case is not required to meet the **Alberico/Daubert** standard because the legislature has provided different standards for who may testify in compensation matters), **cert. granted**, 133 N.M. 7, 57 P.3d 861.

{19} In this case, we are concerned with the techniques used to generate computer images. We agree with the trial court that computer-generated images are more properly characterized as technical rather than scientific. **See State v. Clark**, 655 N.E.2d 795, 812 (Ohio Ct. App. 1995) (suggesting that computer-generated images raise questions concerning technical, not scientific, knowledge). However, the critical inquiry is whether the method used to generate the images is a valid application of the principles of computer technology.

{20} In the trial court, Defendant argued that the computer applied the laws of physics to the data entered into it. Adrian specifically testified that this was not the case. Thus, the fact that Adrian was not qualified as an expert in physics does not matter. Adrian, however, was qualified as an expert in the use of both computer programs involved as well as an expert in three-dimensional analysis of bullet trajectories using a computer.

(21) Defendant argues that Adrian was not competent to establish the validity of the computer programs he used to create the images. We disagree. As the trial court observed, we are long past the days when computers and computer programs were outside the ordinary experience of jurors. This is particularly true for the types of programs at issue here. We think many jurors have had experience with CAD programs used to design a house, a room, a landscape, or a host of other things. Indeed, at least one court has held that crime scene reconstruction through computer-generated images has become so common that it should be considered generally accepted. **Id.** at 813. Computer-generated figures that move the way a human being moves are also common.

{22} In this case, Adrian used two "off-the-shelf" programs, meaning programs that can be purchased by anyone with the money to buy them and a computer capable of running them. The first was a CAD program. Adrian testified that he had used CAD programs for many years. CAD programs have generally replaced hand drafting. The CAD programs that Adrian uses, Auto-CAD and GES, are accurate within 1/100,000 of an inch. Indeed, CAD programs generally are more accurate than drafting by hand. The second off-the-shelf program is referred to as MAYA. MAYA includes a feature called kinemation, which is the feature that Adrian used to animate the figures and move them around. MAYA was developed by the film industry and has been widely used to generate animated figures and special effects. Adrian testified that he had found some discrepancies in other facets of the MAYA program and so he cross-checked the MAYA images against the CAD images. We think this was all that was necessary to establish the validity of the method used to generate the images. Thus, we hold the trial court did

not abuse its discretion in determining that the methods used to generate the images were valid uses of computer technology.

{23} Defendant expresses concern about the accuracy of the images because Adrian was not present at the crime scene or the autopsy but used information recorded by others in their reports. We note, however, that the people who created the information used by Adrian testified at trial and were subject to cross-examination concerning the accuracy of their information. In a similar vein, Defendant contends that Adrian interpreted the raw data, thus increasing the margin of error. This contention is not supported by the record. Adrian testified that the process he used did not involve any scientific calculations or procedures; he fed the information into the computer and the computer created images that could have been created by hand-drafting techniques. Defendant argues that the State was required to bring in a witness to testify concerning the range of motion of the human body. However, Defendant did not make this argument below and therefore we will not consider it on appeal. In re Aaron L., 2000-NMCA-024, ¶ 10, 128 N.M. 641, 996 P.2d 431. Finally, Defendant argues that the trial court should have given a limiting instruction concerning the computer-generated images shown to the jury. However, Defendant did not ask for such an instruction below and therefore we will not consider the issue on appeal. Id.

Sufficiency of the Evidence to Support the Convictions.

{24} Defendant argues that the convictions are not supported by substantial evidence because the jury should have believed his testimony that he shot Trujillo and Miera because he thought they were going to kill him. We note, however, that in determining the sufficiency of the evidence to support the verdict, we view the evidence in the light most favorable to the verdict. **State v. Apodaca**, 118 N.M. 762, 765-66, 887 P.2d 756, 759-60 (1994). "[T]he jury is free to reject Defendant's version of the facts." **State v. Rojo**, 1999-NMSC-001, ¶ 19, 126 N.M. 438, 971 P.2d 829.

{25} In this case, the jury was instructed that the killing of Miera was in self-defense if it found, in essence, that Defendant heard statements that indicated that Miera had a knife and was coming after him, that Defendant was put in fear by the apparent danger of great bodily harm to himself from Miera and killed Miera because of that fear, and that a reasonable person in the same circumstances would have acted as Defendant acted. However, viewed in the light most favorable to the verdict, the evidence showed that the shot that killed Miera was the shot fired into his mouth from a distance of ten inches. The evidence further showed that this shot was fired while Miera was lying on the ground. Based on this evidence, we think that the jury could reasonably have determined that a reasonable person in the position of Defendant would not have killed Miera. Thus, we hold that the evidence is sufficient to support the conviction of voluntary manslaughter for the killing of Miera.

{26} Similarly, the jury was instructed that the killing of Trujillo was in self-defense if there was an appearance of immediate danger of death or great bodily harm to defendant based on Trujillo's actions as testified to by Defendant. Those actions

included Trujillo saying he was going to kill Defendant and then going to his vehicle and reaching into it to get something. The jury was further instructed that the killing was in self-defense if Defendant was in fact put in fear by the apparent danger of immediate death or great bodily harm and killed Trujillo because of that fear and a reasonable person in the same circumstances would have acted as the Defendant did. The evidence was that Defendant shot Trujillo once through the chest, a shot that killed Trujillo within minutes. We believe the jury could reasonably have determined that a reasonable person in Defendant's position would not have killed Trujillo. Thus, we hold that Defendant's conviction for murder in the second degree for the killing of Trujillo is supported by substantial evidence.

CONCLUSION

{27} In summary, we hold that the trial court correctly determined that computergenerated images were required to meet the **Alberico** standard of validity. We further hold that in the circumstances of this case, the testimony of Adrian was sufficient to establish the validity of the computer programs used to generate the images. Finally, we hold that the evidence was sufficient to support the convictions.

{28} Defendant's convictions are affirmed.

{29} IT IS SO ORDERED.

MICHAEL D. BUSTAMANTE, Judge

WE CONCUR:

JAMES J. WECHSLER, Chief Judge

A. JOSEPH ALARID, Judge