10-1-2011

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ABSTRACT

In driving under the influence (DUI) cases, prosecutors habitually rely on the results from breathalyzer tests as proof of the defendant's blood alcohol level at the time of arrest. In response, DUI defendants often attempt to compel discovery of the source code contained in the test device, which can reveal whether the breath test at issue was performed accurately. Despite the popularity of this strategy, nearly all states to consider the issue have denied the defendant's motion for discovery of breathalyzer source code. The majority of courts construe state and federal rules of criminal procedure to limit discovery orders to information within the "possession, custody or control" of the prosecution and summarily hold that breathalyzer source code is not in the State's possession or control. Absent a contractual agreement granting the State proprietary rights to the code, the courts have failed to articulate a clear definition of what it means to be in possession, custody, or control of breathalyzer source code. This Article explores the classification of breathalyzer source code, the discovery rules surrounding its disclosure, and the implications of its protected legal status.

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INTRODUCTION

Breathalyzer[1] test results commonly provide critical evidence in cases involving charges for driving under the influence (DUI) or driving while intoxicated (DWI). Accordingly, defendants facing DUI or DWI charges routinely attempt to suppress breath-test results by arguing that their individual breath test was inaccurate. Although defendants may challenge the accuracy of breath test results in a variety of ways, demanding access to breathalyzer source code has become a popular defense strategy. Defendants often argue that expert analysis of the code could reveal flaws or inaccuracies in the breath test, which could refute the presumption that the device accurately measured the defendant's blood-alcohol level at the time of arrest. If the defendant could prevail on this argument, the court would likely suppress the breathalyzer test results as inaccurate and irrelevant, severely undermining the prosecution's case.

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[1] Note: The term "breathalyzer" hereinafter refers to the various brands of breath test machines employed by state agencies. These include Intoxilyzer, Intoximeter, AlcoTest, and Breathalyzer, among others.

In criminal cases, discovery is governed by the state's rules of criminal procedure. Despite variation in their respective rules, state courts have arrived at similar results regarding the applicability of the rules of criminal procedure to the discovery of breathalyzer source code. Most states that have considered the issue rely on a provision that generally limits discovery orders to material within the "possession, custody, or control" of the prosecution or the State[2] and have denied defendants' motions for discovery of breathalyzer source code on the grounds that the prosecution does not "possess" the code.[3] However, the courts have not articulated a workable standard for determining when the source code is in the prosecution's possession, custody, or control. Instead, most courts reason that breathalyzer source code is the proprietary information of the manufacturer and cannot therefore be in the possession, custody, or control of the State.[4]

A recent decision by the Minnesota Supreme Court provides a rare example of a court holding that breathalyzer source code was in the State's possession or control.[5] In *State v. Underdahl*, the Minnesota Supreme Court upheld an order compelling discovery of breathalyzer source code based on the district court's findings that the defendant met his statutory burden, including proving that the source code was within the State's possession or control and relevant to his defense.[6] The Court held that a contractual

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[2] *See, e.g.*, N.D. R. CRIM. P. 16(a)(1)(D)-(F); NEB. REV. STAT. § 29-1914 (2010).

[3] *See, e.g.*, State v. Berini, 207 P.3d 789 (Ariz. Ct. App. 2009); Hills v. State, 663 S.E.2d 265 (Ga. Ct. App. 2008); State v. Kuhl, 741 N.W.2d 701 (Neb. Ct. App. 2007); People v. Robinson, 860 N.Y.S.2d 159 (N.Y. App. Div. 2008); City of Fargo v. Levine, 747 N.W.2d 130 (N.D. 2008); State v. Tindell, No. E2008-02635-CCA-R3-CD, 2010 WL 2516875 (Ten. Crim. App. June 22, 2010). To date, state courts that have addressed the issue include Arizona, Georgia, Florida, Minnesota, Nebraska, New Jersey, New York, North Dakota, and Tennessee.

[4] *See, e.g.*, *Hills*, 663 S.E.2d 265; *Levine*, 747 N.W.2d 130; *Tindell*, 2010 WL 2516875.

[5] State courts in Florida have also allowed criminal defendants access to breathalyzer source code. For a discussion on these cases, *see generally* Charles Short, *Guilt by Machine: The Problem of Source Code Discovery in Florida DUI Prosecutions*, 61 FLA. L. REV. 177 (2009).

[6] State v. Underdahl, 767 N.W.2d 677 (Minn. 2009), *rev'g* 749 N.W.2d 117

agreement between the breathalyzer manufacturer and the State granted the State ownership of the code, supporting the district court's finding that "the State had possession or control of the source code."[7]

Nearly all courts to consider the issue distinguish *Underdahl* on the basis of this contractual agreement, treating possession of the source code as the dispositive factor in compelling discovery. This is true even in those states that afford the court some discretion in allowing discovery if the information is deemed relevant to the criminal defendant's case. While variations in the state rules of criminal procedure could allow some courts to compel discovery of breathalyzer source code regardless of whether the State possesses the code, the cases arrive at the same result. The courts largely hold that, absent an agreement similar to the one at issue in *Underdahl*, breathalyzer source code is not within the State's possession and is therefore not subject to a discovery order.

This Article examines the unique facts underlying the *Underdahl* decision, including the copyright agreement between the State of Minnesota and the breathalyzer manufacturer, which form a basis for distinction. This Article next analyzes how courts have interpreted the federal and state rules of criminal procedure to prohibit the discovery of breathalyzer source code and concludes with best practices for guarding breathalyzer source code.

I.   THE RELEVANCE OF BREATHALYZER SOURCE CODE

The source code in breath test machines provides a mechanism for proving the accuracy of an individual breath test. Source code is a programming technology that controls the operation of the software in the test machine, providing instructions on how to analyze a breath sample and calculate the blood alcohol level of the subject.[8] Reading the source code after performance of a breath test could show flaws in how the software operates, revealing

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(Minn. Ct. App. 2008), *rev'g* No. K2-06-897, 2007 WL 7067544 (Minn. Dist. Ct. Nov. 2, 2007).

[7] *Underdahl*, 767 N.W.2d at 687.

[8] *Id*. at 688.

whether the machine was functioning properly on a particular occasion.[9]

Defendants facing charges for DUI or DWI often move to compel discovery of breathalyzer source code in order to confront and refute the evidence against them.[10] Indeed, breath test results are often the only evidence relating to the defendant's blood alcohol level, which in turn supports the presumption of a *per se* violation of the DUI or DWI statute.[11] If analysis of the source code reveals a flaw in the operation of the machine, the defendant can move to suppress the evidence relating to his or her blood alcohol level. However, states often have other procedures in place to ensure the reliability of breathalyzer machines and the accuracy of breath test results, including routine calibration checks, operator licensing and training requirements, and operational checklists.[12] Therefore, the criminal defendant may challenge the results of a breath test by utilizing other evidence to demonstrate the inaccuracy of the machine.

Breathalyzer manufacturers have a countervailing interest in restricting access to the source code. Skilled programmers can understand source code language, so if the code was distributed or published, it could be "understood, altered or misappropriated" by a competitor.[13] Breathalyzer manufacturers have a strong interest in preventing public access to the code in order to prevent the information from being misused,[14] and they may attempt to prevent such misuse through the use of copyright laws, trade secret laws, licensing agreements, and non-disclosure agreements.

II. *STATE V. UNDERDAHL*: UPHOLDING DISCOVERY OF BREATHALYZER SOURCE CODE

In *State v. Underdahl*, two defendants individually facing DWI charges sought discovery of the source code from the "Minnesota

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[9] *See* State v. Chun, 943 A.2d 114, 125-127 (N.J. 2008).

[10] *See Underdahl*, 767 N.W.2d at 685.

[11] 4 AM. JUR. PROOF OF FACTS 3D 229 (1989).

[12] *Id*.

[13] MELVIN F. JAGER, 2 TRADE SECRETS LAW § 9:11 (14th ed. 2010).

[14] *Id*.

model" of the Intoxilyzer 5000EN.[15] Although the District Court had ruled in defendant Underdahl's favor and compelled discovery of the source code,[16] the Court of Appeals reversed and denied the discovery motion (in a consolidated opinion).[17] In reaching its decision, the Court of Appeals examined Minnesota Rule of Criminal Procedure 9.01, subdivision 2(3), which allows a trial court the discretion to require the prosecuting attorney to disclose "any relevant material and information" not subject to mandatory disclosure, "provided, however, a showing is made that the information may relate to the guilt or innocence of the defendant."[18] After finding that the defendants failed to prove the relevance of the source code to their guilt or innocence, the court held that the trial court had abused its discretion and reversed the decision.[19]

On appeal, the Minnesota Supreme Court affirmed the Court of Appeals' decision as to defendant Underdahl but reversed the decision as to the other defendant, Brunner.[20] Although Underdahl "argued that challenging the validity of the Intoxilyzer was the only way . . . to dispute the charges against him," the court held that Underdahl "made no threshold evidentiary showing whatsoever" to demonstrate the relevance of the source code to his defense.[21] The court noted in dicta that Brunner provided a memorandum and nine exhibits to support the argument that an analysis of the source code could "reveal deficiencies that could challenge the reliability of the Intoxilyzer."[22]

The Court then rejected the State's contention that breathalyzer source code was not discoverable under Minnesota Rule of Criminal Procedure 9.01, which limits discovery to items in the prosecution's "possession or control."[23] The court based this ruling

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[15] U*nderdahl*, 767 N.W. 2d at 679.

[16] State v. Underdahl, No. K2-06-897, 2007 WL 7067544 (Minn. Dist. Ct. Nov. 2, 2007).

[17] State v. Underdahl, 749 N.W.2d 117 (Minn. Ct. App. 2008).

[18] MINN. R. CRIM. P. 9.01, subd. 2(3).

[19] *Underdahl*, 749 N.W.2d 117 at 123.

[20] *Underdahl*, 767 N.W.2d 677.

[21] *Id*. at 686.

[22] *Id*.

[23] MINN. R. CRIM. P. 9.01, subd. 2(1), 2(3).

on the district court's finding that the State was the owner of the source code for that model.[24] In a preceding case, the Supreme Court ruled that the proposal submitted by the manufacturer of the Intoxilyzer, CMI, Inc. ("CMI"), granted the State possession of the breathalyzer source code because it included an agreement which gave the Commissioner of Public Safety access to the code.[25] Furthermore, in its contract with Minnesota, CMI assigned "all copyrightable material that CMI conceived or originated and which arose out of the performance of the Contract" to the State.[26] This contractual agreement in turn became the basis for other courts to distinguish *Underdahl* and sidestep an inquiry into the relevancy or availability of the evidence in the absence of such a contract.

III. DISCOVERY OF BREATHALYZER SOURCE CODE UNDER THE FEDERAL RULES OF CRIMINAL PROCEDURE

The provisions of the Federal Rules of Criminal Procedure governing discovery do not expressly refer to source code, but federal courts have held that a catch-all category incorporating data, documents, and test results encompasses source code.[27] Rule 16 requires the State to permit a criminal defendant, upon request, to inspect and copy "documents, data, . . . tangible objects," and "results or reports of any . . . scientific test or experiment" if the requested item is within the "government's possession, custody, or control" and the information either belongs to the defendant, is material to the defense of the accused, or is intended for use by the prosecution at trial.[28]

Although Rule 16 contains a materiality requirement arguably similar to the relevance test in the Minnesota Rules of Criminal Procedure, at least one federal court has stated that a discovery order may be denied based on the State's lack of possession

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[24] *Underdahl*, 767 N.W.2d at 687.

[25] *In re* Comm'r of Public Safety, 735 N.W.2d 706 (Minn. 2007).

[26] Minnesota v. CMI of Ky., Inc., No. 08-603 (DFW/AJB), 2009 WL 2163616 at *2 (D. Minn. July 16, 2009).

[27] *See* United States v. French, 2010 WL 1141350 (D. Nev. March 22, 2010).

[28] F. R. CRIM. P. 16(a)(1)(E)-(F).

alone.[29] As the Ninth Circuit held in *United States v. French*, "even if Defendant could make a prima facie showing of materiality," the court will not uphold a motion for production of breathalyzer source code if the defense cannot show that the government is in possession, custody or control of the source code.[30] In essence, the court's holding in *French* signifies that information material to the defense must be disclosed only if it is in the government's possession.

IV.   STATE APPROACHES TO THE DISCOVERY OF BREATHALYZER SOURCE CODE

State rules governing discovery of breathalyzer source code largely fall into two categories. Some state criminal procedure rules—mainly those modeled after the federal rules—generally hold that the prosecution is only required to produce information in the State's "possession, custody or control," even if the information is "material" or intended for use at trial.[31] Conversely, other states permit the discovery of material evidence that is not in the State's possession, but only in limited circumstances, such as when the prosecution has better access to the information.[32] Despite these divergent approaches, the majority of state courts that have applied discovery rules to breathalyzer source code have reached the same result. In effect, these courts treat "possession or control" as a threshold requirement which precludes the discussion of relevancy or access. Contrary to *Underdahl*, these cases deemphasize the relevance of source code and instead emphasize ownership—or "possession and control"—of the code.

Like the federal courts, various state courts have assumed that breathalyzer source code fits within one or more evidentiary categories covered by the discovery rules. At least one court has analyzed the nature and purpose of source code in order to expressly classify it as a "written scientific report" or "written

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[29] *French*, 2010 WL 1141350 at *6.

[30] *Id*.

[31] *See, e.g.*, N.D. R. CRIM. P. 16(a)(1)(D)-(F); TENN. R. CRIM. P. 16(1)(F).

[32] *See, e.g.*, ARIZ. R. CRIM. P. 15.1; N.Y. CRIM. P. LAW § 240.20 (McKinney 2011).

document,"[33] while other courts refer to source code more generally as "material" or "evidence" for the purposes of the discovery rules.[34] The states that have considered the issue thus hold that discovery rules apply to source code.[35]

A. *State Rules Treating Possession as a Threshold Requirement for Discovery*

As previously explained, the Federal Rules of Criminal Procedure treat possession of requested evidence as dispositive for purposes of compliance with a motion for discovery.[36] In effect, if the prosecution does not possess or control the requested evidence, the government is not mandated to comply with the defendant's discovery motion. This interpretation of Federal Rule of Criminal Procedure 16 influences state court decisions in states where the rules of criminal procedure are derived from the federal rules. As the North Dakota Supreme Court explained in *City of Fargo v. Levine*, "when a state rule is derived from a federal rule, [the state court] treat[s] the federal interpretation of the rule as persuasive authority."[37] Thus, those states with rules derived from Federal Rule 16 also treat possession as a threshold requirement for discovery.

For example, in *Levine*, the North Dakota Supreme Court upheld the lower court's denial of a DUI defendant's motion to compel discovery of breathalyzer source code because the defendant "failed to show that Fargo had possession, custody, or control of the code."[38] The court interpreted North Dakota's Rule 16, derived from Federal Rule 16, as requiring the defendant to

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[33] *See, e.g.*, People v. Robinson, 860 N.Y.S.2d 159 (N.Y. App. Div. 2008) ("written document").

[34] *See, e.g.*, State v. Kuhl, 741 N.W.2d 701 (Neb. Ct. App. 2007); State v. Berini, 207 P.3d 789 (Ariz. Ct. App. 2009).

[35] *See, e.g.*, City of Fargo v. Levine, 747 N.W.2d 130 (N.D. 2008); State v. Tindell, No. E2008-02635-CCA-R3-CD, 2010 WL 2516875 (Ten. Crim. App. June 22, 2010); *Berini*, 207 P.3d 789; *Robinson*, 860 N.Y.S.2d 159; Hills v. State, 663 S.E.2d 265 (Ga. Ct. App. 2008); *Kuhl*, 741 N.W.2d 701.

[36] F. R. CRIM. P. 16(a)(1)(E)-(F).

[37] *Levine*, 747 N.W.2d at 133.

[38] *Id*. at 131.

make a "prima facie showing" that the code was within the possession, custody or control of the government, and noted that the district court considered possession the "dispositive question" in such cases.[39] The court distinguished *Underdahl* based on the evidence in *Underdahl* that "the code was created exclusively for Minnesota and on an 'ownership or copyright' provision in Minnesota's contract."[40] Absent such circumstances, the court held that Levine "offered no evidence that the Intoxilyzer software was created for Fargo or that Fargo owned the code. Nor did he provide evidence that Fargo was otherwise in possession or control of the computer code."[41] As a result, the court denied Levine's motion for discovery of the code.[42]

Other state rules similarly treat possession as a dispositive requirement for discovery, even when the rule is not expressly modeled on Federal Rule of Criminal Procedure 16. For example, Nebraska's Rule 29-1914 states that a discovery order shall "be limited to items or information within the possession, custody or control of the State or local subdivisions of government."[43] In *State v. Kuhl*, the Nebraska Court of Appeals denied a DUI defendant's motion for discovery of breathalyzer source code because the defendant failed to show that the code was in the State's possession.[44] Like the *Levine* court, the court in *Kuhl* expressly distinguished the case from *Underdahl* based on the unique factual circumstances in the latter case.

These cases reflect the trend of courts considering the applicability of criminal procedure rules to the discovery of breathalyzer source code. As these courts hold, unless the breathalyzer manufacturer expressly grants the State proprietary rights to breathalyzer source code, the prosecution does not "possess or control" the source code and is therefore not required to comply with the defendant's motion for discovery of the code.

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[39] *Id*. at 133.

[40] *Id*. at 134.

[41] *Id*.

[42] *Id*.

[43] NEB. REV. STAT. § 29-1914 (2010).

[44] State v. Kuhl, 741 N.W.2d 701 (Neb. Ct. App. 2007).

B. State Rules Permitting Discovery Regardless of Possession

In contrast to the federal approach, some state rules of criminal procedure provide that the state may be compelled to produce breathalyzer source code even if the code is not in the State's possession, custody, or control. For example, in Arizona, the State is not generally required to "disclose material that it does not possess," but Arizona Rule of Criminal Procedure 15 does create an obligation for the State to disclose material information not in its possession or control in limited circumstances.[45] Specifically, the defendant must show that the State has "better access to the information" and that the defense has made a "good faith effort to obtain the information without success."[46] While this rule seems more lenient than the rules in other states, the Arizona Supreme Court has applied it narrowly. For example, in *State v. Berini*, the court held that the defendants failed to show the State had "better access . . . to CMI's source code" when the government was unable to obtain the code by requesting it from the manufacturer and securing an order compelling discovery.[47]

Similarly, the New York criminal procedure laws require the prosecution to make a "good faith effort" to obtain material requested by the defendant even if the material is not within the prosecution's possession, custody or control.[48] Yet, like Arizona, New York courts have not utilized this provision to allow discovery of breathalyzer source code. Instead, courts have reiterated the majority rule that the prosecution is generally "not required to obtain documents from sources beyond [its] control."[49]

As these cases illustrate, states with seemingly flexible criminal procedure rules invariably arrive at a similar result as the majority: breathalyzer source code is generally not subject to discovery because it is not in the state's possession, custody, or

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[45] *See* ARIZ. R. CRIM. P. 15.1 cmt. Committee Comment to 2003 Amendments.

[46] *Id*.

[47] State v. Berini, 207 P.3d 789, 791 (Ariz. Ct. App. 2009).

[48] N.Y. CRIM. P. LAW § 240.20 (McKinney 2011).

[49] *See, e.g.*, People v. Robinson, 860 N.Y.S.2d 159, 167 (N.Y. App. Div. 2008).

control, and the state is not better-positioned to acquire the proprietary information.

V.   COURTS FAIL TO ARTICULATE A CLEAR STANDARD FOR ANALYZING POSSESSION

Recent state court decisions have established that to prevail on a motion for discovery of breathalyzer source code, the defendant must prove that the State is in possession, custody, or control of the code. Despite reiterating this rule, some courts have neglected to undergo a detailed analysis as to what constitutes "possession, custody, or control" of source code. Instead, various courts have insinuated that the State is not in possession of breathalyzer source code absent a contractual agreement granting the State proprietary rights to the code.[50]

Many states have referred to the contract in *Underdahl* as the paradigmatic example of an agreement sufficient to bring the source code under the State's possession. For example, in *Levine*, the Supreme Court of North Dakota noted that the holding in *Underdahl* was "based on evidence that the code was created exclusively for Minnesota and on an 'ownership of copyright' provision in Minnesota's contract documents with the manufacturer."[51] The court then noted that, in the case at issue, the defendant "offered no evidence that the Intoxilyzer software was created for Fargo[,] . . . that Fargo owned the code, . . . [or] that Fargo was otherwise in possession or control of the [source] code."[52] Similarly, in *State v. Tindell*, the Tennessee Court of Appeals held that the defendant failed to prove that the State was in possession or custody of the source code because the record at issue did "not indicate that Tennessee acquired ownership of the copyrights to all copyrightable material in the [breath test] device."[53] Alternatively, some courts have merely articulated the

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[50] *See, e.g*, State v. Tindell, No. E2008-02635-CCA-R3-CD, 2010 WL 2516875 (Ten. Crim. App. June 22, 2010); City of Fargo v. Levine, 747 N.W.2d 130 (N.D. 2008).

[51] *Levine*, 747 N.W.2d at 134.

[52] *Id*.

[53] *Tindell*, 2010 WL 2516875 at *17-18.

possession requirement and summarily concluded that the State was not in possession of control of the code.[54]

Absent a contract granting the State proprietary rights to breathalyzer source code, the requirements for meeting the definition of "possession, custody or control" remain unclear in the current case law.

CONCLUSION

Despite the *Underdahl* court's concern with the relevancy of breathalyzer source code to the criminal defendant's case, other courts have sidestepped this question in favor of analyzing whether the prosecution possessed the code. In theory, variations in state rules of criminal procedure could allow some courts to compel discovery of breathalyzer source code regardless of whether the State possesses the code. However, the majority of courts hold that breathalyzer source code is not subject to a discovery order if it is not within the State's possession, custody or control and the State is not in a better position to acquire the information. In the absence of a contract granting the state proprietary rights to the source code, the current state of the law holds that source code is not discoverable. This trend in turn favors the proprietary rights of breathalyzer manufacturers by sheltering access to breathalyzer source code.

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[54] *See*, *e.g.*, State v. Kuhl, 741 N.W.2d 701, 709 (Neb. Ct. App. 2007) (holding, without discussing the record, that "the record is clear that the source code is not in the State's possession and that the manufacturer of the machine in question considers the source code to be a trade secret and the proprietary information of the company").