

GUILT BY MACHINE: THE PROBLEM OF SOURCE CODE  
DISCOVERY IN FLORIDA DUI PROSECUTIONS

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I. INTRODUCTION

Breath testing results stand at the core of most driving under the influence (DUI) prosecutions.<sup>1</sup> Florida law provides that an individual is guilty of driving under the influence when he drives, or is in actual physical control of a vehicle, while under the influence of alcohol or a controlled substance, such that his normal faculties are impaired.<sup>2</sup> To obtain a conviction, the state must prove the element of impairment beyond a reasonable doubt.<sup>3</sup> A breath alcohol level of 0.08 grams of alcohol per 210 liters of breath satisfies the element of impairment.<sup>4</sup> It comes as no surprise, then, that many DUI cases hinge on these results.

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\* J.D. expected May 2009, University of Florida Levin College of Law. This Note is dedicated to my fellow Shorts (Paula, Ed, and Alex) and Kali Feinman. Without their endless support and love, none of this would have been possible.

1. See, e.g., Paul Schop, Comment, *Is DWIDOA?: Admissibility of Breath Testing Evidence in the Wake of Recent Challenges to Breath-Testing Devices*, 20 SW. U. L. REV. 247, 251 (1991) (“The major tools used to enforce the legislation aimed at reducing the occurrence of DWI’s are various breath alcohol testing devices.”); see also Todd Ruger, *Ready to Open Up On Breath Test: Firm’s Refusal to Disclose Software ‘Source Code’ has Stalled DUI Cases*, SARASOTA HERALD TRIB., Oct. 6, 2007, at B1 (“A blood-alcohol content reading is the most powerful piece of evidence against a drunken driver . . .”).

2. FLA. STAT. § 316.193 (2008).

3. FLA. BAR, FLA. STANDARD JURY INSTRUCTIONS IN CRIMINAL CASES, CH. 28.1 (4th ed. 2002).

4. FLA. STAT. § 316.1934(2)(c). If a defendant’s blood alcohol level is tested, the ratio is 0.08 grams per 100 milliliters of blood. FLA. STAT. § 316.193(1)(b).

Breath testing machines,<sup>5</sup> however, often malfunction, leading to incorrectly high blood alcohol readings, sample volume irregularities, and unexplained readings.<sup>6</sup> False positives can result from diabetes, exposure to paint thinners, and even being on the Atkins Diet.<sup>7</sup> Glitches have afflicted the Intoxilyzer 5000<sup>8</sup> and the Intoxilyzer 8000,<sup>9</sup> the two breath testing machines currently used in Florida.<sup>10</sup> Given the centrality of breath test results to many DUI prosecutions, these malfunctions provide concern. Further concern arises from the fact that the reliability and accuracy of these machines cannot be independently verified. Florida courts and the Florida Legislature have foreclosed all attempts by defense counsel to obtain discovery of technical information about the breath testing machines.<sup>11</sup> As a result of their highly deferential treatment from the state, the Intoxilyzer models have become “mystical machine[s].”<sup>12</sup> The manufacturer has assured the State of Florida that the Intoxilyzers work, and law enforcement has determined, to its satisfaction, that the machines produce accurate results.<sup>13</sup> However, defense counsel is unable to independently verify any of these propositions. Thus, the outcome is truly circular: the machine is reliable because it produces results; the results are right because the machine is reliable.

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5. In this Note, I refer to what are commonly termed “breathalyzers” as breath testing machines. The Breathalyzer® is a specific machine produced by National Draeger. Draeger, About Us, <http://www.draeger.com/ST/internet/US/en/Aboutus/History/history2/history2.jsp> (last visited Nov. 11, 2008).

6. Ken Strutin, *An Examination of Source Code Evidence*, N.Y. L.J., Nov. 13, 2007, at 5.

7. *State v. Bastos*, 985 So. 2d 37, 41–42 (Fla. 3d DCA 2008).

8. *See, e.g.*, Stefan Rose & Kenneth G. Furton, *Variables Affecting the Accuracy and Precision of Breath Alcohol Instruments Including the Intoxilyzer[sic] 5000*, [http://www.hudson-law.net/Variable\\_Affecting\\_Accuracy\\_Precision\\_of\\_Breath\\_Alcohol\\_Instruments\\_Including\\_Intoxilyzer\\_5000.pdf](http://www.hudson-law.net/Variable_Affecting_Accuracy_Precision_of_Breath_Alcohol_Instruments_Including_Intoxilyzer_5000.pdf) (noting variances of  $\pm 27\%$  and false-positives up to 23% in error).

9. *See, e.g.*, Todd Ruger, *Breath Testing Under Scrutiny: Attorneys Plan Legal Attack on State DUI Machines over Glitch*, SARASOTA HERALD TRIB., Oct. 22, 2006, at B1 (noting that the Intoxilyzer 8000’s first software glitch came to light in September 2006, just about six months after the introduction of the machine). The glitch resulted in the dismissal of 224 DUI cases throughout Florida. *Palm Beach County Refuse to Overturn*, AP ALERT-FLORIDA, June 14, 2007.

10. *See Palm Beach County Refuse to Overturn*, *supra* note 9; Ruger, *supra* note 9.

11. *See* FLA. STAT. § 316.1932(4) (2008) (stating that the full information about scientific tests that a defendant is entitled to request does not include “manuals, schematics, or software of the instrument used to test the person or any other material that is not in the actual possession of the state”); *see also* *Moe v. State*, 944 So. 2d 1096, 1097 (Fla. 5th DCA 2006) (holding that the source code of the Intoxilyzer 5000 was a protected trade secret not in the State’s possession, and thus the State had no obligation to disclose it).

12. *See* *State v. Muldowny*, 871 So. 2d 911, 913 (Fla. 5th DCA 2004) (“It seems to us that one should not have privileges and freedom jeopardized by the results of a mystical machine that is immune from discovery, that inhales breath samples and that produces a report specifying a degree of intoxication.”).

13. *See infra* notes 165–70 and accompanying text.

This Note explores the issue of source code discovery by DUI defendants. Part II of this Note examines the case law and statutes used to shield breath testing machines from scrutiny. It examines both the approach taken by Florida and the approaches adopted in other states. Part II also discusses the application of trade secrets protection to the source code of breath testing machines. Part III further examines the problem of source code discovery through the lens of the Confrontation Clause of the Sixth Amendment to the United States Constitution. Finally, Part IV concludes by posing a solution to the problem that more properly balances the important rights of the accused with the trade secrets concerns of the breath testing machine's manufacturer. Florida should allow a DUI defendant to review the computer source code of a breath test machine if impairment is at issue in the case. Barring that, the state should negotiate for source code access to allow defendants to verify the machine's accuracy.

## II. SOURCE CODE DISCOVERY

Breath testing machines are no more infallible than any other machine. "Source code litigants have identified a litany of potential errors that can be uncovered by a forensic expert's examination of the [breath testing machine] software."<sup>14</sup> Defendants may wish to show that the machine has been modified from the version approved by the state, that software changes have made the machine unreliable and inaccurate, or that there are flaws in the way the machine calculates one's breath alcohol level.<sup>15</sup> To effectively mount such a defense, counsel needs technical information about the machine. Discovery of the machine's source code,<sup>16</sup> which defines how the machine calculates results, proves particularly important in mounting a technical challenge.

Consider, for instance, the example posed by defense attorneys Stuart Hyman and Joerg Jaeger.<sup>17</sup> Given that "the longer an individual blows into

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14. Strutin, *supra* note 6, at 5.

15. As defense attorney Stuart Hyman put it, "we have guilt by machine in Florida. And if you don't examine the machine to determine whether it's working properly, then people can go to jail and lose their jobs." *Channel 9 News* (ABC Orlando 9 WFTV-FL television broadcast Nov. 17, 2006).

16. Source code is the version of computer software as it is originally written in human readable alphanumeric characters. See Linfo, Source Code Definition, The Linux Information Project, [http://www.linfo.org/source\\_code.htm](http://www.linfo.org/source_code.htm) (last visited Nov. 11, 2008). In contrast, object code is machine language consisting of a sequence of instructions, usually presented as a series of '1s' and '0s' that a computer processor can understand, but would be extremely difficult for a human to read or modify. *Id.* As a result, "[l]ogic and reason dictate that it is more difficult to obtain trade secrets from object code." 2 MELVIN F. JAGER TRADE SECRETS LAW § 9:11 (2002).

17. See Stuart Hyman & Joerg Jaeger, How to Attack the Intoxilyzer® 8000: A Dissertation on the Multitude of Problems that Have Arisen with this "New and Improved" Breath Testing

the breath testing machine the higher the breath test results can be[.]”<sup>18</sup> defense counsel may seek source code discovery to determine at exactly which point the Intoxilyzer 8000 measures the breath alcohol content of an individual blowing into it.<sup>19</sup> This determination may be especially important because variations in the length of time that an individual blows are affected by physiological variables such as sex, physical condition, and lung capacity.<sup>20</sup>

Another issue arises as to whether software changes in a breath testing machine render the instrument unapproved. Florida law requires that a person submit to an “*approved*” alcohol test<sup>21</sup> “if the person is lawfully arrested for any DUI offense.”<sup>22</sup> Failure to submit to an approved test results in a driver’s license suspension of one year for a first refusal, or eighteen months for a subsequent refusal.<sup>23</sup> Florida law vests the Florida Department of Law Enforcement (FDLE) with the sole authority to “approve or disapprove breath test instruments.”<sup>24</sup> A modification made to an approved breath testing machine may require reapproval or recertification.<sup>25</sup> Defense counsel may point out that when the FDLE approved the Intoxilyzer 8000 for use in Florida on May 29, 2002, the software version was 8100.10.<sup>26</sup> As of this writing, the software versions in use in Florida are 8100.26 and 8100.27.<sup>27</sup> The failure to reapprove the Intoxilyzer 8000 after these software updates seems particularly troubling given that changes in the analytical software of the machine require its recalibration.<sup>28</sup> Can such a machine still be called an *approved* alcohol test? Such concerns underscore the need to obtain source code discovery in order to critically analyze the testing instrument.

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Method (Sept. 27–28, 2007) (outline on file with the Florida Law Review).

18. *Id.* at 13.

19. *Id.* at 15.

20. *Id.*

21. FLA. STAT. § 316.1932(1)(a)1.a. (2008) (emphasis added).

22. *Id.*

23. *Id.*

24. § 316.1932(1)(a)2.

25. *State v. Polak*, 598 So. 2d 150, 153–54 (Fla. 1st DCA 1992) (holding that the bypass of a sensor in an Intoximeter 3000 by the police department was a substantial modification of the device requiring recertification or reapproval); *see also State v. Flood*, 523 So. 2d 1180, 1181 (Fla. 5th DCA 1988) (concluding that “modification of a component part of a previously certified breath-testing instrument requires *re*-certification of that instrument”).

26. *See Hyman & Jaeger*, *supra* note 17, at 4–5.

27. *Id.* at 5.

28. *See* Letter from Toby S. Hall, Applications Engineering Manager, CMI, Inc. to Laura Barfield, Program Manager, Alcohol Testing Program, Florida Department of Law Enforcement (Dec. 9, 2005), *available at* [http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI Correspondence.pdf](http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI%20Correspondence.pdf).

A. *Florida's Approach to Source Code Discovery in  
DUI Prosecutions*

Initially, Florida courts proved receptive to attempts to discover the technical aspects of the Intoxilyzer. In *State v. Muldowny*,<sup>29</sup> the Fifth District Court of Appeal held that the defendants were entitled to inspect and use at trial the operator's manuals for the Intoxilyzer 5000, its maintenance manuals, and its schematics.<sup>30</sup> The defendants moved for the State to produce such technical material, seeking to "determine whether the [I]ntoxilyzer actually used to establish their driving impairment had been substantially modified by the inclusion of parts that were not on the schematics."<sup>31</sup> When the State refused, the county court suppressed the results of defendants' breath tests and certified the question to the court of appeals.<sup>32</sup>

In holding that the defendant was entitled to obtain discovery about the technical aspects of the Intoxilyzer 5000, the court relied primarily on Florida Statute § 316.1932(1)(f)(4),<sup>33</sup> which provided, at that time, "full information concerning the test taken at the direction of the law enforcement officer shall be made available to the person or his or her attorney."<sup>34</sup> The court concluded that operating manuals, maintenance manuals, and schematics were necessarily part of the full information to which a defendant is entitled.<sup>35</sup> As a result of the State's refusal to comply with the discovery order, the court affirmed the suppression of the breath test results.<sup>36</sup>

This pro-defendant trend did not last. In *Moe v. State*,<sup>37</sup> the same court decided that *Muldowny* did not require the State to produce the source code of the Intoxilyzer 5000.<sup>38</sup> Here, similar to the defendants in *Muldowny*, the defendant sought production of the source code to determine whether the machine had been modified from the approved version.<sup>39</sup> The county court declined to enter an order compelling the State to produce the code.<sup>40</sup> The Fifth District Court of Appeal noted that

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29. 871 So. 2d 911 (Fla. 5th DCA 2004).

30. *Id.* at 913.

31. *Id.*

32. *Id.* at 912.

33. *Id.* at 913 (citing FLA. STAT. § 316.1932(1)(f)(4) (2002)).

34. FLA. STAT. § 316.1932(1)(f)(4) (2002).

35. *Muldowny*, 871 So. 2d at 913.

36. *Id.* at 914.

37. 944 So. 2d 1096 (Fla. 5th DCA 2006).

38. *Id.* at 1097.

39. *Id.*

40. *Id.*

*Muldowny* had not reached the question of whether the State had an obligation to produce the source code of the Intoxilyzer 5000.<sup>41</sup> Rather, it narrowly construed *Muldowny* as holding “that the lower court did not abuse its discretion when it imposed sanctions because the State had disobeyed a discovery order requiring that it produce the operator’s manual, maintenance manual and schematic for the Intoxilyzer 5000.”<sup>42</sup>

In *Moe*, it was apparently without dispute that the State did not possess the Intoxilyzer 5000 source code,<sup>43</sup> because it was the property of the machine’s manufacturer and was a protected trade secret.<sup>44</sup> The court further noted that because manufacturer CMI, Inc. had invoked statutory and common-law trade secrets protections, the State could not obtain the technical information sought.<sup>45</sup> Nothing in the statutory language requiring full disclosure “manifests a legislative intent that the State must furnish information that cannot be obtained by it.”<sup>46</sup>

However, one can also read *Moe* in a narrower sense. The court seemed to limit its holding, noting that “[u]nder the facts of this case” the State could not be required to produce the source code of the Intoxilyzer 5000.<sup>47</sup> The court also noted, “[n]o challenge has been advanced pertaining to the accuracy and reliability of Appellant’s particular test results.”<sup>48</sup> This suggests that a defendant should assert a particularized challenge to his results in order to increase his chances for obtaining source code discovery.<sup>49</sup>

While *Moe* was being litigated, the Florida Legislature even more clearly limited a defendant’s ability to discover technical information relating to breath testing machines.<sup>50</sup> Florida Statute § 316.1932 provides that defendants are still entitled to “full information” concerning their test results.<sup>51</sup> In a feat of verbal gymnastics, the legislature defined “full information” as the type of test administered and procedures followed, the time the sample was analyzed, the type and status of any permit issued to the person who performed the test, and, in the case of a breath test, the date

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41. *Id.*

42. *Id.*

43. Nor does the state possess the source code for the Intoxilyzer 8000. *See infra* notes 165–71 and accompanying text.

44. *Moe*, 944 So. 2d at 1097.

45. *Id.*

46. *Id.*

47. *Id.* at 1096.

48. *Id.* at 1097.

49. As did the defendant in *In re Commissioner of Public Safety*, 735 N.W.2d 706, 710 (Minn. 2007).

50. The court’s opinion noted, “[t]he statute was subsequently amended to limit the disclosure requirement to enumerated items.” *Moe*, 944 So. 2d at 1097 n.2.

51. FLA. STAT. § 316.1932(1)(f)(4) (2008).

of the machine's most recent inspection.<sup>52</sup> "Full information" does not include, however, "manuals, schematics, or software of the instrument used to test the person or any other material that is not in the actual possession of the state."<sup>53</sup> In addition, "full information does not include information in the possession of the manufacturer of the test instrument."<sup>54</sup> Thus, the legislature rejected the holding of *Muldowny* and codified the court's ruling in *Moe*.<sup>55</sup>

Lower courts in Florida have shown more sympathy for the defendant seeking to obtain discovery about the technical details of the Intoxilyzer. At least one judge in Orange County has ordered the State to provide the defendant with discs containing the Intoxilyzer 8100.26 and 8100.27 software.<sup>56</sup> County judges in Sarasota and Manatee counties<sup>57</sup> have ordered the release of the source code to defense counsel.<sup>58</sup> When the manufacturer CMI, Inc. refused, the judges imposed fines for non-compliance, which now total more than \$100,000.<sup>59</sup> These financial disincentives have prompted CMI to agree to limited disclosure of the source code and CMI stated that it will agree to a "controlled viewing," with a protective order and non-disclosure agreement, when ordered by the court.<sup>60</sup> Of course, CMI maintains that "[a]ll rights in software, including both source code and object code, used in association with the INTOXILYZER® brand of breath alcohol instruments are considered confidential, proprietary or a trade secret."<sup>61</sup>

It remains unclear exactly what such a controlled viewing would entail,<sup>62</sup> and, as a result, these conditions will likely not satisfy defense

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52. *Id.*

53. *Id.*

54. *Id.*

55. One Florida court also held that the uniform law to secure the attendance of witnesses from within or without a state in criminal proceedings cannot be used to compel production of the Intoxilyzer source code because such information is not "material" as required for the application of the uniform law. *See State v. Bastos*, 985 So. 2d 37, 42 (Fla. 3d DCA 2008) (citing FLA. STAT. § 942.03).

56. *See Hyman & Jaeger, supra* note 17, at 12 (citing *State v. Bledsoe*, Case No. 48-2006-CT-16980-0 (Fla. 9th Jud. Cir. June 13, 2007)).

57. Interestingly, these counties are not part of Florida's Fifth Circuit, which ruled in *Moe*. *See Florida Fifth District Court of Appeal, Frequently Asked Questions*, <http://www.5dca.org/faq.shtml> (last visited Oct. 9, 2008).

58. *See Todd Ruger, Fines Rise in DUI Software Fight*, SARASOTA HERALD TRIB., Mar. 9, 2007, at BCE1.

59. *Id.*

60. *See* Letter from Toby Hall, President of CMI, Inc., to clients (Sept. 25, 2007), *available at* [http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI Correspondence.pdf](http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI%20Correspondence.pdf).

61. CMI, Inc., Statement of Corporate Policy Concerning Intellectual Property Associated with INTOXILYZER® Brand of Breath Alcohol Instruments, *available at* [http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI Correspondence.pdf](http://www.fdle.state.fl.us/atp/I-8000CMICorrespMisc/CMI%20Correspondence.pdf).

62. In a letter to clients, CMI, Inc. President Toby Hall stated:

counsels. For such a controlled viewing to be useful to the defense, counsel must also have the opportunity to show the source code to an expert. Additionally, the term “controlled *viewing*” seems to imply that CMI would not allow counsel to possess a copy of the source code, but only to *look* at it.

This position departs from the previous position CMI articulated. In *State v. Burnell*,<sup>63</sup> CMI resisted source code requests by the defense, stating it was “obviously not required to provide . . . discovery in any case in which it is neither a party nor a witness nor, for that matter, a resident.”<sup>64</sup> CMI said it would “vigorously dispute” any order to disclose technical information about the Intoxilyzer 5000, citing “any number of reasons, including trade secrets.”<sup>65</sup> To be sure, an offer of a controlled viewing represents a substantial improvement from CMI’s prior position, but with so much of CMI’s voluntary “controlled viewing” scheme undefined, it remains an insufficient solution.

Apart from the reluctance of CMI to disclose source code, software problems that plague the Intoxilyzer 5000 also underscore the importance of allowing defense counsel to obtain discovery of technical details to challenge the machine’s reliability and accuracy. The first glitch of the Intoxilyzer 8000 was discovered soon after the machine was introduced in Florida in 2002.<sup>66</sup> State officials did not discover the error. Rather, defense counsels noticed the glitch in the way the machine measured alcohol.<sup>67</sup> The Intoxilyzer 8000 erroneously registered many test results as valid when, in fact, they should have been rejected because the individual being tested did not blow sufficient air into the machine.<sup>68</sup> Laura Barfield, program manager for the FDLE’s Alcohol Testing Program, acknowledged, “there are missing instructions in the Intoxilyzer 8000 software version 8100.26 dealing with the instrument’s ability to correctly identify certain breath

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Over the coming weeks, I intend to provide a means for the review of our most valued intellectual property in a way that will protect our property and interests and provide relief to you, our highly valued customers. As more information becomes available regarding this matter, I will be back in touch.

Letter from Toby Hall, President of CMI, Inc., to clients, *supra* note 60. As of March 8, 2008, no further relevant correspondence from CMI has been posted on the Florida Department of Law Enforcement’s Alcohol Testing Program’s Public Records website.

63. No. MV06479034S, 2007 WL 241230 (Conn. Super. Ct. Jan. 18, 2007).

64. *Id.* at \*3.

65. *Id.*

66. Todd Ruger, *Judge Tells Breath-Test Maker to Release Code*, SARASOTA HERALD TRIB., Aug. 15, 2007, at B1.

67. *See Breath Test Devices Backed*, S. FLA. SUN-SENTINEL, June 15, 2007, at B3.

68. *Judges Gather to Assess DUI Machine Accuracy*, S. FLA. SUN-SENTINEL, Apr. 28, 2007, at B1.



samples that do not meet a minimum volume of 1.1 Liters.”<sup>69</sup> To properly calculate a reliable breath test result, the Intoxilyzer 8000 requires “minimum time, slope, flow, and volume components.”<sup>70</sup> “Only when those minimally acceptable requirements are met, will the breath sample be scientifically reliable and the quantitative result accurately reflect[] the alcohol concentration circulating in a person’s body.”<sup>71</sup> Without obtaining a sample of sufficient volume, the Intoxilyzer 8000 also cannot determine whether interferents or mouth alcohol are present.<sup>72</sup> That volume-related glitch resulted in the dismissal of 224 DUI prosecutions statewide.<sup>73</sup> State officials later updated the flawed machines.<sup>74</sup> Other mysterious glitches have been noted as well.<sup>75</sup>

### B. *Source Code Discovery in Other States*

In other states, source code of similar breath testing machines also suggests that such devices may be seriously flawed.<sup>76</sup> Recently, defense counsel in New Jersey obtained a ruling granting discovery of the source code used in that state’s breath testing machine, the Draeger Alcotest 7110.<sup>77</sup> In that case, the New Jersey Supreme Court appointed a Special Master who ordered that the source code of the Alcotest 7110 be disclosed to an independent software house hired by the defendants.<sup>78</sup> The subsequent analysis of the source code of that device revealed that catastrophic error detection is disabled, meaning that the Alcotest 7110 could appear to run correctly while actually executing invalid code.<sup>79</sup> The machine measures the air flow at start-up and uses this number as a baseline for future calculations.<sup>80</sup> However, this baseline value is not

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69. Hyman & Jaeger, *supra* note 17, app. A at 5 (reprinting the county court’s order in *State v. Bledsoe*, No. 48-2006-CT-16980-0 (Fla. 9th Jud. Cir. June 13, 2007)).

70. Letter from Guy Tunnell, Commissioner, FDLE, to Bruce H. Colton, President, Florida Prosecuting Attorneys Association (Aug. 11, 2005), *available at* <http://www.fdle.state.fl.us/atp/I-8000FDLECorresp/FDLEI-8000Corres.pdf>.

71. *Id.*

72. *Id.*

73. *See Judges Gather to Assess DUI Machine Accuracy*, *supra* note 68.

74. Ruger, *supra* note 66.

75. *See, e.g.*, Hyman & Jaeger, *supra* note 17, at 9.

76. The problems of other breath testing machines, of course, do not necessarily relate to the Intoxilyzer. Yet, in the absence of discovery of the Intoxilyzer source code, such problems provide a glimpse of what may be under the proverbial hood.

77. DUI Blog, <http://www.duiblog.com/2007/09/04/secret-breathalyzer-software-finally-revealed/> (Sept. 4, 2007, 08:36 EST).

78. *State v. Chun*, 923 A.2d 226, 226–27 (N.J. 2007).

79. DUI Blog, *supra* note 77.

80. *Id.*

checked for quality or reasonableness,<sup>81</sup> which casts doubt on the validity of results. Furthermore, though the machine detects measurement errors, it ignores the errors unless they occur a consecutive number of times.<sup>82</sup> Ultimately, the New Jersey Supreme Court concluded that the Alcotest 7110 was generally scientifically reliable, though “certain modifications are required in order to permit its results to be admissible or to allow it to be utilized to prove a per se violation of the [DUI] statute.”<sup>83</sup>

Despite such reasons to believe that breath testing machines may be highly flawed, other states have kept technical information pertaining to breath testing machines from the defendant. Connecticut, for example, echoes Florida’s approach in *Moe*. In *State v. Burnell*,<sup>84</sup> a Connecticut Superior Court in New Haven held that the defendant was not entitled to inspect or use at trial the technical manuals, schematics, computer source code, and computer program of the Intoxilyzer 5000.<sup>85</sup> The court reasoned, as did the Florida court in *Moe*, that the State did not possess the requested items and thus had no affirmative duty to produce them.<sup>86</sup>

Georgia has also adopted an approach similar to *Moe*. In *Cottrell v. State*,<sup>87</sup> the defendant argued that the “full information” to which he was entitled included technical information such as the Intoxilyzer’s source code.<sup>88</sup> The court ruled that “full information” included “memos, notes, graphs, computer printouts, and other data relied upon by a state crime lab chemist in obtaining gas chromatography test results.”<sup>89</sup> It did not include the information the defendant requested, at least where defendant did not show that the information was relevant.<sup>90</sup> The court failed to address the question of whether the source code would have been discoverable had the defendant demonstrated its relevance. The question of the factual showing required to demonstrate the relevance of source code also remains unanswered. Would it be enough for the defendant to say “it’s relevant,” or would a defendant have to show that there may be software flaws in a given machine?

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81. *Id.*

82. *Id.*

83. *State v. Chun*, 943 A.2d 114, 120 (N.J. 2008).

84. No. MV06479034S, 2007 WL 241230 (Conn. Super. Ct. Jan. 18, 2007).

85. *Id.* at \*2.

86. *Id.*; see also *State v. Walters*, No. DBDMV050340997S, 2006 WL 785393, at \*1 (Conn. Super. Ct. Feb. 15, 2006) (holding that the source code for the Intoxilyzer 5000 was not within the State’s possession and thus disclosure was not required).

87. 651 S.E.2d 444 (Ga. Ct. App. 2007).

88. *Id.* at 445 & n.1.

89. *Id.* at 446 (quoting *Townsend v. State*, 511 S.E.2d 587, 590 (Ga. Ct. App. 1999)).

90. *Id.*

A New York court also held that the defendant had no right to discovery of the source code of the breath testing machine.<sup>91</sup> The New York City Criminal Court held that “the People do not actually or constructively possess the source code.”<sup>92</sup> New York’s approach in *Cialino*, however, does differ somewhat from the anti-defendant approach to source code discovery seen elsewhere. The court noted that the Intoxilyzer 5000 was a reliable machine and characterized defendant’s attempts to discover the source code as a “fishing expedition.”<sup>93</sup> Yet the court seemed to leave the door open to a possible discovery by the defense, holding that “[i]t is incumbent on the defendant to show that a software change has altered the reliability and accuracy of the machine.”<sup>94</sup> The court said the defendant had not provided a “reasonable basis” to believe that changes to the software of the Intoxilyzer 5000 had caused it to become unreliable.<sup>95</sup>

This holding suggests that if a defendant could provide New York courts a “reasonable basis” to believe that changes to the software of the Intoxilyzer 5000 had caused it to become unreliable, then perhaps the defendant would be entitled to discover such technical details. At the same time, though, this ruling presents a “Catch-22.” How will a defendant ever be able to show that technical changes to an Intoxilyzer caused it to become unreliable if a defendant can never access the technical details of the Intoxilyzer?<sup>96</sup>

Minnesota has been the friendliest in response to attempts by the defense to obtain discovery of breath testing machine source code. In *In re Commissioner of Public Safety*,<sup>97</sup> the Minnesota Supreme Court held that a DUI defendant was entitled to the “complete computer source code” of the Intoxilyzer 5000EN.<sup>98</sup> The procedural posture of the case, however, suggests that this holding should not be construed too broadly.<sup>99</sup>

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91. See *People v. Cialino*, 831 N.Y.S.2d 680, 681 (Crim. Ct. 2007).

92. *Id.* In contrast, the Georgia court in *Cottrell* did not discuss the potential constructive possession issue. 651 S.E.2d 444 (Ga. Ct. App. 2007). Similarly, the Connecticut court in *Burnell* did not address the issue of constructive possession, noting simply, “The state is not in possession of the items sought by the defense.” No. MV06479034S, 2007 WL 241230, at \*2 (Conn. Super. Ct. Jan. 18, 2007).

93. *Id.* at 681–82.

94. *Id.* at 682.

95. *Id.*

96. For an example of this “Catch-22” at work in Florida, see *State v. Bastos*, 985 So. 2d 37, 41–42 (Fla. 3d DCA 2008) which concluded that “[t]here would need to be a particularized showing demonstrating that observed discrepancies in the operation of the machine necessitate access to the source code.”

97. 735 N.W.2d 706 (Minn. 2007).

98. *Id.* at 708 (quoting and affirming the lower district court’s order).

99. *In re Commissioner of Public Safety* arose after a DUI defendant obtained a discovery order requiring the Commissioner of Public Safety to provide him “with an operational

This decision has resulted in further litigation: the state of Minnesota has now sued CMI to force it to turn over the source code.<sup>100</sup>

The underlying facts of the case also drove the Minnesota Supreme Court's pro-defendant decision. Unlike Florida<sup>101</sup> and New York,<sup>102</sup> Minnesota was in constructive possession of the Intoxilyzer source code.<sup>103</sup> The Court discussed that the express language of Minnesota's contract with manufacturer CMI, Inc. "requires CMI to provide the state with 'information . . . to be used by attorneys representing individuals charged with crimes in which a test with the [Intoxilyzer 5000EN] is part of the evidence.'"<sup>104</sup> Additionally, the Commissioner of Public Safety conceded that "the state owns and thus controls some portion of the source code."<sup>105</sup> As a result, the State of Minnesota could not assert, as was essential for the State of Florida in *Moe*, that it did not actually or constructively possess the source code defendant sought.<sup>106</sup> Because Minnesota had contractually provided for source code access, a writ of prohibition could not be granted because the State *did* have an adequate remedy at law.<sup>107</sup> If CMI did not turn over the source code as it was contractually obligated to do, Minnesota "could sue CMI to force it to turn over the complete computer source code."<sup>108</sup> The Minnesota Supreme Court concluded that the Commissioner's ability to enforce its contract with CMI constituted an adequate legal remedy.<sup>109</sup>

Thus, despite possible problems with the Intoxilyzer<sup>110</sup> and Alcotest 7110,<sup>111</sup> courts have generally opposed attempts to discover source codes.

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Intoxilyzer 5000EN instrument and 'the complete computer source code for the operation of the [Intoxilyzer 5000EN].'" 735 N.W. 2d 706, 708 (Minn. 2007). The Commissioner sought a writ of prohibition to prevent the district court from enforcing the order. A court of appeals denied the Commissioner's request and the Minnesota Supreme Court affirmed. In so ruling, the Minnesota Supreme Court pointed out that "[a] writ of prohibition is an extraordinary remedy and is only used in extraordinary cases." *Id.* at 710. The Court stated that a writ of prohibition would only be issued in four particular circumstances, none of which the Court found applicable in the instant case. *Id.*

100. Shannon Fiecke, *Flip-Flopping Courts Leave DWI Test Debacle in Limbo*, SHAKOPEE VALLEY NEWS, Oct. 31, 2008, available at [http://shakopeenews.com/news/general\\_news/flip\\_flop\\_ping\\_courts\\_leave\\_dwi\\_test\\_debacle\\_limbo-7497](http://shakopeenews.com/news/general_news/flip_flop_ping_courts_leave_dwi_test_debacle_limbo-7497).

101. *See supra* notes 43–46 and accompanying text (discussing *Moe v. State*).

102. *See supra* notes 91–95 and accompanying text (discussing *People v. Cialino*).

103. *See Commissioner*, 735 N.W.2d at 712–13.

104. *Id.* at 713 (omission and alteration in original).

105. *Id.* at 712–13.

106. *See supra* notes 43–46 and accompanying text (discussing *Moe v. State*).

107. *Commissioner*, 735 N.W.2d at 713.

108. *Id.* (internal quotation marks omitted).

109. *Id.*

110. *See supra* notes 8–9, 66–73 and accompanying text.

111. *See supra* notes 77–82 and accompanying text.

Courts in Connecticut,<sup>112</sup> Georgia,<sup>113</sup> and New York<sup>114</sup> have joined Florida in rejecting attempts by defense counsel to obtain the source code of breath testing devices. Though Minnesota permitted source code discovery in *In re Commissioner of Public Safety*, that ruling is at least partly the result of the unique facts and procedural posture of that case.<sup>115</sup> While New Jersey allowed examination of the Alcotest 7110's source code, the machine was ultimately found to be reliable, despite a number of flaws.<sup>116</sup> Overall, the outlook for DUI defendants seeking to obtain source code discovery is bleak.

### C. Trade Secrets and the Intoxilyzer

Breath test machine manufacturers may invoke the trade secrets privilege to shield source code from discovery. The trade secrets privilege operates to shield certain proprietary information from discovery in legal proceedings. Trade secrets include information<sup>117</sup> that derives independent economic value from not being generally known to, or ascertainable by, others who can obtain economic value from its disclosure or use,<sup>118</sup> and is the subject of reasonable efforts to maintain its secrecy.<sup>119</sup> Florida Statutes provide that an individual who owns such information has the privilege of disclosing it, and may prevent others from disclosing it.<sup>120</sup>

Courts are willing to protect source codes as trade secrets.<sup>121</sup> As early as 1973, courts recognized that source code could receive intellectual property protections.<sup>122</sup> A decade later, courts began recognizing source

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112. *See supra* notes 84–86 and accompanying text.

113. *See supra* notes 87–90 and accompanying text.

114. *See supra* notes 91–94 and accompanying text.

115. *See supra* notes 97–108 and accompanying text.

116. *See supra* notes 76–83 and accompanying text.

117. Such information includes formulas, patterns, compilations, programs, devices, methods, techniques, or processes. FLA. STAT. § 688.002(4) (2008).

118. *Id.* § 688.002(4)(a).

119. *Id.* § 688.002(4)(b).

120. *Id.* § 90.506.

121. *See, e.g., Rare Coin-It, Inc. v. I.J.E., Inc.*, 625 So. 2d 1277, 1279 (Fla. 3d DCA 1993) (holding that the source code of a Nintendo video game was a protected trade secret).

122. *See Telex Corp. v. Int'l Bus. Machs. Corp.*, 367 F. Supp. 258, 325–26 (N.D. Okla. 1973), *rev'd on other grounds*, 510 F.2d 894 (10th Cir. 1975) (holding that copyright protections applied to computer source code despite the widespread distribution of the object code).

code as a protected trade secret.<sup>123</sup> In many cases, the form of computer code dictates the level of protection it receives.<sup>124</sup> Because source code is written in programming language comprehensible to trained personnel, it can be “altered or misappropriated by unauthorized personnel.”<sup>125</sup> Thus, it stands in contrast to machine-readable object code, which is “very difficult, if not impossible” to comprehend visually.<sup>126</sup>

The source code of breath testing devices, however, may not even fit the definition of a protected trade secret at all. Consider once more the example of the Draeger Alcotest 7110.<sup>127</sup> After the Supreme Court of New Jersey ordered the manufacturer to produce the source code, defense counsel had an independent software house analyze it.<sup>128</sup> The resulting examination of the code revealed that it consisted primarily of *general* algorithms and, as a result, was arguably not unique or proprietary.<sup>129</sup>

If a breath testing machine’s source code is a patchwork of general algorithms, it cannot be a trade secret. As Florida law requires, information protected by the trade secrets privilege must not be generally known, or readily ascertainable by others who can obtain economic value from its disclosure or use.<sup>130</sup> It is true that “the fact that several competitors each independently use a process that each has independently discovered would not necessarily mean this undisclosed information is no longer a trade secret.”<sup>131</sup> However, a finding that competitors independently used a process might be relevant to the assertion that certain information is not generally known.<sup>132</sup> Further, if the algorithms used are generally known, then they cannot truly be independently discovered and independently used. Thus, courts should not allow manufacturers of generically-coded breath testing machines to hide behind the shield of trade secrets.

Is the Intoxilyzer’s source code, like the Alcotest 7110’s code, full of general algorithms? At this point, the public cannot know. Significantly,

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123. *See* Q-Co Indus., Inc. v. Hoffman, 625 F. Supp. 608, 617 (S.D.N.Y. 1985) (“Computer software, or programs, are clearly protectible under the rubric of trade secrets . . .”); *see also* Hyman & Jaeger, *supra* note 17, app. A, at 8 (reprinting the county court’s order in State v. Bledsoe, No. 48-2006-CT-16980-0 (Fla. 9th Jud. Cir. June 13, 2007)) (noting expert testimony that “one cannot interpret what a binary code says and reverse engineering is not commonly performed, except perhaps within the intelligence community, because it is not accurate”).

124. *See* 2 JAGER, *supra* note 16.

125. *Id.*

126. *Id.*

127. *See supra* notes 77–82 and accompanying text.

128. DUI Blog, *supra* note 77.

129. *Id.*

130. FLA. STAT. § 688.002(4)(a) (2008).

131. *Bestechologies, Inc. v. Trident Env'tl. Sys., Inc.*, 681 So. 2d 1175, 1176 (Fla. 2d DCA 1996).

132. *Id.*

however, the machine's manufacturer does not guarantee that its source code is entirely original.<sup>133</sup> After all, the license agreement for the Intoxilyzer software provides that "CMI MAKES NO EXPRESS, IMPLIED OR STATUTORY WARRANTY, THAT THE LICENSED SOFTWARE OR ITS USE, SHALL BE FREE FROM INFRINGEMENT OF PATENT, COPYRIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT CLAIMS."<sup>134</sup> The silence, as they say, is deafening.

But even if one presumes that the Intoxilyzer source code is a protected trade secret, the privilege may not bar defense counsel from obtaining discovery of it. Several safeguards allow the court to order production of a trade secret without imperiling the business interests of the producer. A court cannot haphazardly order production; rather, it must first conduct an *in camera* review.<sup>135</sup> If after an *in camera* review,<sup>136</sup> the court does determine that the source code is a protected trade secret, it should then "require the party seeking production to show reasonable necessity for the requested materials."<sup>137</sup> In an order, the court can also enact a variety of protective measures. Florida statutes provide that "a court shall preserve the secrecy of an alleged trade secret by reasonable means,"<sup>138</sup> including *in camera* hearings, granting protective orders in connection with discovery, sealing records, and ordering any person involved not to reveal the trade secret without prior court approval.<sup>139</sup> A court willing to use these measures can more than adequately protect the manufacturer's interests in ensuring their trade secrets remain secret. There is no reason grounded in the trade secrets doctrine to presumptively bar a defendant's request for discovery of the source code—other than, of course, a legislative motive to appear "tough on drunk drivers."

Furthermore, Florida law provides that the aegis of the trade secrets privilege is available only if its allowance will not conceal fraud or otherwise work injustice.<sup>140</sup> In each case in which an individual asserts the

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133. See CMI, Inc., Standard Software License Agreement—Restricted, available at <http://www.fdle.state.fl.us/atp/I-8000OtherMaterials/Intox8000SoftwareLicAgreement.pdf> (last visited Nov. 11, 2008).

134. *Id.*

135. See *Beck v. Dumas*, 709 So. 2d 601, 603 (Fla. 4th DCA 1998) (holding that a lower court abused its discretion when it compelled production of source code and other technical information without first conducting an *in camera* review and holding an evidentiary hearing).

136. *Sheridan Healthcorp, Inc. v. Total Health Choice, Inc.*, 770 So. 2d 221, 222 (Fla. 3d DCA 2000) (holding that it was error to order production without *in camera* review).

137. *Id.* Given the presumption of impairment that Florida law creates when one has a breath alcohol level of 0.08 grams or more, this showing would seem to be relatively easy in the DUI context.

138. FLA. STAT. § 688.006 (2008).

139. *Id.*

140. *Id.* § 90.506.

trade secrets privilege, “the trial judge must weigh the importance of protecting the claimant’s secret against the interest in facilitating the trial and promoting a *just end* to the litigation.”<sup>141</sup> This calculation would not, of course, always fall in the defendant’s favor. Permitting source code discovery best promotes a just end to litigation in cases where the breath alcohol test stands as the primary evidence.

Consider a case in which a defendant refuses to perform field sobriety tests (or performs decently well) yet fails a breath test by a small margin. In such an instance, the test result essentially stands in the shoes of a witness, and therefore ensuring its reliability and accuracy is paramount in reaching a just end. In contrast, the release of source code is probably not necessary to promoting a just end to litigation when a defendant failed this breath test by a spectacular margin, admitted to drinking heavily, or where an officer’s dashboard camera clearly recorded evidence of intoxication.

In the case of a criminal prosecution, achieving a just end is vitally important. An individual convicted of DUI faces multiple penalties that an ordinary misdemeanor would not. In Florida, for example, an individual convicted of DUI faces a possible prison sentence of six months,<sup>142</sup> a fine, and the suspension of his or her driver’s license.<sup>143</sup> The severity of punishment also increases depending on whether an individual has prior DUI convictions.<sup>144</sup> A third conviction for DUI within a ten-year period is a felony.<sup>145</sup> A fourth DUI conviction is always a felony, regardless of when the offenses occurred in relation to each other.<sup>146</sup> Furthermore, intoxication is an element of far more serious crimes such as DUI manslaughter,<sup>147</sup> and concerns about the reliability and accuracy of breath test results apply to those offenses as well.

In addition to the multitude of criminal penalties faced by a defendant convicted of DUI, many collateral penalties exist. For example, a drunk driver’s license will be suspended.<sup>148</sup> Drunk drivers face scorn because the social stigma associated with drunk driving is tremendous.<sup>149</sup> Finding

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141. See CHARLES W. EHRHARDT, FLA. PRACTICE SERIES—EVIDENCE § 506.1 (West 2008) (emphasis added).

142. Assuming that the DUI in question is the defendant’s first. See FLA. STAT. § 316.193(2)(a)(2).

143. *Id.* § 322.28.

144. See *id.* § 316.193.

145. *Id.* § 316.193(2)(b)(1).

146. *Id.* § 316.193(2)(b)(3).

147. See *id.* § 316.193(3)(c)(3).

148. *Id.* § 322.2615.

149. Shaming punishments mandated by the courts have also been upheld. See, e.g., *Lindsay v. State*, 606 So. 2d 652, 653, 657 (Fla. 4th DCA 1992) (upholding a probation condition requiring defendant to place and pay for a newspaper ad consisting of defendant’s name, mug shot, and the



employment is substantially more difficult, given that many potential employers require applicants to divulge whether they have ever been arrested or convicted of any crimes.<sup>150</sup> A criminal record may impact other economic opportunities.<sup>151</sup> A DUI conviction may also imperil a driver's professional license as well.<sup>152</sup> Engineers and others in the defense contracting field who require a Department of Defense Security Clearance may also find their positions jeopardized.<sup>153</sup>

In contrast to the important liberty interests of a DUI defendant, the interests of the breath testing machine's manufacturer are relatively light. A criminal defendant seeking source code discovery does not raise the same alarm as a business competitor seeking equivalent discovery. The fear that the defendant might use the source code to damage the manufacturer's business interests seems infinitesimal. Nor should a manufacturer reasonably fear that opposing counsel will use the source code to damage the manufacturer's business. The lawyer already has a job, and it does not deal with inventing breath testing machines. Lawyers are also officers of the court and not likely to violate a court order governing discovery of source codes by leaking the source code. Even if such an unlikely scenario came to pass, the manufacturer already has an adequate civil remedy: a cause of action in tort for the misappropriation of trade secrets.<sup>154</sup>

Applying the trade secrets privilege to protect breath test machine source code is also inappropriate because the policy objectives it serves are not present in a criminal prosecution. The U.S. Supreme Court has noted, for example, that the encouragement of invention and the cultivation of commercial ethics are the policy considerations that underlie the trade secrets privilege.<sup>155</sup> Other courts have noted that the existence of the trade secrets privilege serves similar goals. The Pennsylvania Supreme Court, for instance, noted the importance of the trade secrets privilege in

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caption "DUI—Convicted").

150. See James B. Jacobs, *Mass Incarceration and the Proliferation of Criminal Records*, 3 U. ST. THOMAS L.J. 387, 419 (2006).

151. See *id.* at 408–09.

152. Pilots, for example, may find their licenses in jeopardy. See Federal Aviation Administration, Reportable DUI/DWI Administrative Actions or Convictions, [http://www.faa.gov/about/office\\_org/headquarters\\_offices/ash/ash\\_programs/investigations/airmen\\_duidwi/duidwi\\_reporting/](http://www.faa.gov/about/office_org/headquarters_offices/ash/ash_programs/investigations/airmen_duidwi/duidwi_reporting/) (last visited Nov. 11, 2008).

153. The Department of Defense may revoke or deny security clearances as a result of a DUI arrest or conviction. See, e.g., DOD Indus. Sec. Clearance Decision, *In re Applicant for Security Clearance*, ISCR Case No. 07-01608 (Sept. 28, 2007), available at <http://www.dod.mil/dodgc/doha/industrial/07-01608.h1.pdf>.

154. See, e.g., RESTATEMENT (FIRST) OF TORTS § 757 (1939).

155. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 481 (1974); see also *Water Servs. Inc. v. Tesco Chems., Inc.*, 410 F.2d 163, 171 (5th Cir. 1969).

subsidizing the research and development efforts of large companies.<sup>156</sup> Allowing a DUI defendant the opportunity to scrutinize a breath testing machine's source code to determine its reliability and accuracy in no way hampers the interests of spurring development and promoting good commercial behavior. Arguably, allowing the defendant to discuss the source code promotes these interests. Knowing that their product may be scrutinized carefully by defense counsel for fatal flaws provides manufacturers incentive to create reliable source codes to drive their devices. It would not be, after all, good "commercial ethics" to sell flawed products to the government for use in law enforcement.<sup>157</sup> Because the trade secrets privilege serves interests not implicated in the context of DUI prosecution, it is an inappropriate way of resolving manufacturer's concerns.

Commentators have criticized the invocation of the trade secrets privilege in matters of the public sphere. David Levine, for example, argues that while trade secrets serve important policy objectives in the private sector, "their use in the public infrastructure context is inappropriate, unexpectedly powerful, and doctrinally unsound. When private firms provide public infrastructure, commercial trade secrecy should be discarded (at least in its pure form) and give way to more transparency and accountability."<sup>158</sup> Trade secrets law, developed with the commercial context in mind, seems particularly inappropriate in the public sphere, especially given its "democratic values of transparency and accountability."<sup>159</sup>

Levine explored the tension between trade secrecy and the values of an open, democratic society through the example of Diebold Election Systems, Inc.<sup>160</sup> Diebold refused to comply with a North Carolina law mandating that a vendor of electronic voting machines place the software of such machines, including source code, with an independent escrow company so that the state could use the software to support and test the voting machines.<sup>161</sup> Diebold sought a temporary restraining order and preliminary injunction against the enforcement of the statute, asserting that such information was protected by licensing agreements.<sup>162</sup> Though the State of North Carolina won the initial case, "the power of trade secrecy

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156. See *Wexler v. Greenberg*, 160 A.2d 430, 434–35 (Pa. 1960).

157. Application of trade secrets law sometimes creates incentives for other bad or inefficient commercial behavior. See, e.g., David S. Levine, *Secrecy and Unaccountability: Trade Secrets in Our Public Infrastructure*, 59 FLA. L. REV. 135, 174 (2007).

158. *Id.* at 140.

159. *Id.* at 158.

160. *Id.* at 180–83.

161. N.C. GEN. STAT. § 163-165.9A(a)(1) (2008); Levine, *supra* note 157, at 180.

162. Levine notes that Diebold has compared this information to trade secrets in other contexts. Levine, *supra* note 157, at 180–81 & n.206.

principles presumably remained, because protection of secrets was not overruled or overridden by the concerns of the public as manifested by the laws of the state. Thus, Diebold could focus on states where trade secrecy law is completely impermeable to public-law overrides.”<sup>163</sup> One lesson of the incident, Levine notes, is that “the notion that a government-controlled or designated entity could adequately protect the interests of the general public is dubious.”<sup>164</sup>

It is no great leap from voting machines to breath testing machines. Surely, the activities of law enforcement constitute part of the public sphere. So, too, does the invocation of trade secrets privileges stand at odds with the value of an open society. Without knowledge of the source code, the public simply has no way of knowing whether a breath testing machine functions properly.

Florida, however, has made no effort to obtain the source code itself so that it can ensure the reliability of the Intoxilyzer’s source code.<sup>165</sup> Indeed, when the state had the opportunity to write some form of source code access into its contract with the manufacturer CMI, Inc., it declined to do so.<sup>166</sup> In negotiating the purchase of Intoxilyzer 8000 units, the FDLE “had the chance to renegotiate its deal with CMI and require the company to give up the source code[,]”<sup>167</sup> as at least one other state did.<sup>168</sup> At that time, the FDLE official in charge of the FDLE’s Alcohol Testing Program stated that the machines were reliable and that she did not need the source code to demonstrate the machine’s reliability.<sup>169</sup> This assertion came despite the fact that defense attorneys had already been clamoring for discovery of the Intoxilyzer 5000’s source code.<sup>170</sup>

As a result the State can conveniently assert that it neither actually nor constructively possesses the source code.<sup>171</sup> Further, Florida has enacted a statutory barrier to source code discovery.<sup>172</sup> The decision by Florida to

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163. *Id.* at 181–82.

164. *Id.* at 183.

165. See Rene Stutzman, *Breath-Test Glitch Sets Free 700 DUI Suspects: Source Codes of Machine Not Available*, S. FLA. SUN-SENTINEL, Sept. 11, 2005, at B6.

166. *Id.*

167. *Id.*

168. As part of its contract with Minnesota, manufacturer CMI “must provide ‘information’ to be used by ‘attorneys representing individuals charged with crimes in which a test with the proposed instrument is part of the evidence.’” Declan McCullagh, *Police Blotter: Defendant Wins Breathalyzer Source Code*, CNET News.com, Aug. 9, 2007, [http://www.news.com/Police-Blotter-Defendant-wins-breathalyzer-source-code/2100-7348\\_3-6201632.html?tag=nl.e777](http://www.news.com/Police-Blotter-Defendant-wins-breathalyzer-source-code/2100-7348_3-6201632.html?tag=nl.e777) (quoting Minnesota’s bid proposal). The Minnesota Supreme court ruled that this included the source code. *Id.*

169. See Stutzman, *supra* note 165.

170. See *id.*

171. See, e.g., *Moe v. State*, 944 So. 2d 1096, 1097 (Fla. 5th DCA 2006).

172. See FLA. STAT. § 316.1932(1)(f)(4) (2008).

avoid possession of the source code<sup>173</sup> may have “helped” the prosecution by providing grounds on which to rebuff defense discovery requests, but it also works a detriment to ensuring the efficacy of a law enforcement device at work in the public sphere.

The trade secrets rationale articulated by cases such as *Moe* does not justify withholding the source code from the defendant in a DUI prosecution. If the source code of a breath testing machine consists largely of general algorithms, then it may not fit the statutory requirement that a trade secret not be “generally known to, and not be[] readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.”<sup>174</sup> Additionally, the manifold protective measures that can accompany an order to disclose already provide adequate protections for the manufacturer’s interests. Few means would work injustice as much as allowing a defendant in a criminal case to be convicted largely on the basis of a potentially inaccurate machine.

### III. A CONFRONTATION ISSUE

It is unjust to convict a defendant largely on the breath test result issued by a machine whose technical details are undiscoverable. A discussion of the defendant’s rights under the Confrontation Clause of the Sixth Amendment to the United States Constitution<sup>175</sup> makes clear the constitutional problem of undisclosed source code.

The Confrontation Clause provides that a defendant has the right to be confronted with the witnesses against him.<sup>176</sup> Similarly, the Florida Constitution states that the accused has the right to confront adverse witnesses.<sup>177</sup> In *Crawford v. Washington*,<sup>178</sup> the Supreme Court held that for testimonial evidence to be admitted when an adverse witness was unavailable, the defendant must have had a prior opportunity to cross-examine the witness.<sup>179</sup> The Court restricted its holding to “testimonial” evidence, but declined to offer an exact definition of testimonial.<sup>180</sup> However, it noted that the Confrontation Clause applied to more than just in-court testimony.<sup>181</sup> The Court also specifically listed some evidence that the category of “testimonial evidence” would definitely encompass, such

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173. See *supra* notes 37–46 and accompanying text (discussing *Moe v. State*).

174. FLA. STAT. § 688.002(4)(a).

175. U.S. CONST. amend. VI (“In all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him . . .”).

176. *Id.*

177. FLA. CONST. art. 1, § 16.

178. 541 U.S. 36 (2004).

179. *Id.* at 53–54.

180. See *id.* at 51–52.

181. *Id.* at 53.

as “affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements” that the declarant would expect to be used in prosecutions.<sup>182</sup>

In its pre-*Crawford* cases, the Court stated that ensuring reliability was the primary concern of the Confrontation Clause.<sup>183</sup> In *Ohio v. Roberts*,<sup>184</sup> the Court phrased the Confrontation Clause’s underlying concern as augmenting accuracy in the fact-finding process by ensuring that the defendant can effectively test adverse evidence.<sup>185</sup> In *Crawford*, the Supreme Court moved away from these rationales of reliability and accuracy. The Court noted “the Confrontation Clause was directed [at] the civil-law mode of criminal procedure, and particularly its use of *ex parte* examinations as evidence against the accused.”<sup>186</sup>

Even post-*Crawford*, Florida courts still interpret the Confrontation Clause as addressing the issue of reliability. In *Shiver v. State*,<sup>187</sup> the court stated “[t]he ultimate goal of the Confrontation Clause is to ensure reliability of evidence. This is a ‘procedural rather than a substantive guarantee’ and ‘commands . . . that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.’”<sup>188</sup>

An examination of the role of source code in DUI prosecutions suggests that the codes fit within the *Crawford* definition of testimonial evidence. Breath test results are admitted as evidence to prove a defendant’s guilt; they are gathered solely for the purpose of prosecution. Moreover, given the presumption of impairment created by a breath alcohol level of 0.08 grams or more,<sup>189</sup> such results are per se evidence of guilt, and powerfully persuasive to a jury. Thus, the use of breath test results implicates the same concerns that arise in Confrontation Clause cases.

Consider a “close call” hypothetical: an anonymous tipster calls the police to report a possible “drunk driver” swerving on the road and failing to proceed in a single lane. An officer then pulls over the driver, who refuses to answer questions about whether he has been drinking. The driver also refuses to perform a field sobriety test. After being arrested, the driver decides to cooperate (or perhaps to “press his luck”) by performing a breath test. The machine indicates that the defendant’s breath alcohol level is 0.08 grams. On this basis, the driver is charged with DUI.

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182. *Id.* at 51.

183. *See, e.g., Kentucky v. Stincer*, 482 U.S. 730, 739 (1987) (“[T]he right to confrontation is a functional one for the purpose of promoting reliability in a criminal trial.”).

184. 448 U.S. 56 (1980), *abrogated by Crawford*, 541 U.S. at 36.

185. *Id.* at 65.

186. *Crawford*, 541 U.S. at 50.

187. 900 So. 2d 615 (Fla. 1st DCA 2005).

188. *Id.* at 617 (internal citation omitted) (quoting *Crawford*, 541 U.S. at 61).

189. FLA. STAT. § 316.1934(2)(c) (2008).

Without the breath alcohol evidence, the prosecution would have a weak case against our hypothetical defendant. The swerving noticed by the anonymous tipster, by itself, is not indicative of anything more than careless, or perhaps reckless, driving. Even if the officer can testify to observable signs of intoxication such as an odor of alcohol or bloodshot eyes, the case remains weak without the breath test evidence. In such an instance, the test result stands in the shoes of a witness, and provides the most powerful evidence of guilt. Unlike a witness, whose reliability could be challenged by defense counsel on cross-examination, the breath test machine cannot be “confronted” by a defendant unless the defendant understands how the machine actually works. While defense counsel might be able to challenge results based on improper administration of the test, or improper maintenance of the machine, there is simply no way of knowing if the machine actually calculated its results properly without access to the source code. Without the source code, a defendant cannot truly scrutinize the evidence against him for reliability—an underlying concern of the Confrontation Clause.

Florida’s Fourth District Court of Appeal has dealt with the Confrontation Clause in the context of DUI prosecutions. In *Belvin v. State*,<sup>190</sup> the court discussed whether a breath test affidavit was testimonial evidence under *Crawford*.<sup>191</sup> Such breath test affidavits are used by the State to show that a person trained to conduct the test administered it in an approved manner on an approved machine that was tested and inspected.<sup>192</sup> The *Crawford* court held that the breath test affidavit was testimonial because it was admitted to prove the key element of the crime—intoxication.<sup>193</sup> Indeed, law enforcement generates breath test affidavits for use at later criminal trials or at driver’s license revocation proceedings.<sup>194</sup> Because the breath test affidavit was testimonial evidence, *Crawford* requires that the defendant have an opportunity to cross-examine.<sup>195</sup>

In *Pflieger v. State*,<sup>196</sup> the same Florida appellate court held that the Confrontation Clause permitted introduction of the Intoxilyzer’s annual reports because such evidence is not testimonial.<sup>197</sup> The court compared such annual reports to medical reports, stating “like the hospital record of a blood test, [the Intoxilyzer annual report] is intended for the

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190. 922 So. 2d 1046 (Fla. 4th DCA 2006).

191. *See id.* at 1050–51.

192. *Id.* at 1048.

193. *Id.* at 1054.

194. *Id.* at 1050.

195. *Id.* at 1054.

196. 952 So. 2d 1251 (Fla. 4th DCA 2007).

197. *Id.* at 1254.

non-testimonial purpose of making sure the machine is working properly.”<sup>198</sup> The court suggested that it was important that the evidence was merely a technical review of the Intoxilyzer<sup>199</sup> undertaken in accordance with administrative requirements.<sup>200</sup> The evidence was not offered “against any particular defendant.”<sup>201</sup> The court stated that “[d]ocuments establishing the existence or absence of some objective fact, rather than detailing the criminal wrongdoing of the defendant, are not ‘testimonial’” such that they would implicate the Confrontation Clause.<sup>202</sup>

The source code of the Intoxilyzer is more like the breath test affidavit that triggered the Confrontation Clause in *Belvin* rather than the annual report in *Pflieger*, which did not. Just as the breath test affidavit spoke to an element of the crime of DUI, so too does the source code. It provides the definitive explanation of exactly how the Intoxilyzer calculates a defendant’s breath alcohol level. The source code directs the breath test machine’s processing of the defendant’s data and produces the crucial number for breath alcohol level. Thus, the source code, unlike the annual report, details the criminal wrongdoing of the defendant. It is, as *Pflieger* proposed, offered against a particular defendant. The presumption of intoxication created by Florida Statute § 316.1934(c) further dictates the tremendous weight that breath test results, and the source code that drives them, have on a defendant’s guilt.

A defendant cannot critically analyze and confront a breath test result without knowing how the result was obtained. Central to this knowledge is the source code. Trying to analyze a breath test result without the source code from which it was obtained is like trying to analyze a football game by looking at a final score, without watching any of the game. By simply looking at a final score, one cannot evaluate the result. Did one team dominate the game from the beginning? Did the referee “give the game away” with a horrendous call? Did the winning team come from behind in the game’s waning moments to cobble together a longshot win? Similarly, without knowledge of the source code, a defendant is left with numerous questions. Did his breath test follow from a legitimate process? Or was the code heavily flawed and “buggy”? Did the breath test machine account for all pertinent variables? Without knowledge of the breath test machine’s source code, a defendant simply cannot know. Depriving a DUI defendant of source code discovery makes him unable to effectively confront the primary evidence against him: his breath test result.

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198. *Id.*

199. *See id.* at 1253.

200. *See* FLA. ADMIN. CODE ANN. r. 11D-8.003 (2008).

201. *Pflieger*, 952 So. 2d at 1253 (citing *Bosancurt v. Eisenberg*, 129 P.3d 471, 477 (Ariz. Ct. App. 2006)).

202. *Id.* at 1254 (quoting *Michels v. Commonwealth*, 624 S.E.2d 675, 668 (Va. Ct. App. 2006)).

#### IV. CONCLUSION AND PROPOSED SOLUTION

Florida's approach to the question of discovery of the Intoxilyzer source code is unacceptable. To date, the legislature and the courts have failed to show concern about the flaws of breath testing machines,<sup>203</sup> leaving the defendant no method by which he can truly evaluate whether such a machine correctly calculates one's breath alcohol level. While this posture serves the politically motivated end of appearing tough on DUI, it also ensures that no party can independently verify the reliability and accuracy of the Intoxilyzer.

Courts should reject the trade secrets argument advanced by manufacturers of breath testing machines. There are questions regarding whether the source code of such devices should truly be considered proprietary. Who can say whether such source codes are not generally known to others, and thus even appropriate for trade secrets protection in the first place? Even if breath testing machine source codes qualify as trade secrets, there is no justification why the trade secret should not be disclosed subject to a protective order. Courts have a plethora of tools that they can use to curb potential abuses.<sup>204</sup> The interests of breath test manufacturers in ensuring that their source code remains hidden from public view pale next to the interests of justice in ensuring a fair trial for DUI defendants.

Florida's statute excluding technical information from discovery ignores potential Confrontation Clause issues.<sup>205</sup> Even if breath test machine source code cannot be considered testimonial evidence, withholding it from the defendant raises constitutional concerns. Breath test provides the most persuasive evidence of an element of DUI, impairment; thus, the defendant should have an opportunity to "confront" it and evaluate its reliability. In many cases, a breath test result stands in the shoes of a witness. To adapt a phrase from *Davis v. Washington*,<sup>206</sup> the breath test machine is "acting as a witness."<sup>207</sup> Failing to allow examination of its source code to determine accuracy of the result is failing to allow cross-examination of a prosecution witness.

In light of these concerns, Florida should change course and adopt a different approach. The legislature should amend Florida Statute § 316.1932(4) to allow a DUI defendant to obtain discovery of the Intoxilyzer's source code if impairment is at issue. Such an amended

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203. See *supra* notes 37–61 and accompanying text.

204. See *supra* notes 135–39 and accompanying text.

205. See *supra* Part III.

206. 547 U.S. 813 (2006).

207. *Id.* at 828.



statute could provide for appropriate protective measures to accompany the release of this information, including the threat of contempt. Additionally, such a statute would eliminate potential judicial inconsistency regarding disclosure.

Failing such a legislative course, the State of Florida should bargain, as Minnesota did, for access to the source code of any breath testing machine used in Florida. There is no legitimate reason why Florida could not apply its substantial bargaining power to ensure that the manufacturer supplying the state with breath testing machines also provides the source code to DUI defendants in certain instances. With full knowledge of the source code, the defendant would have the ability to adequately prepare a defense addressing the Intoxilyzer's reliability and accuracy, and the uncertainty surrounding this mystical machine would disappear.