
HALBERG
Criminal Defense

July 8, 2010

The Honorable Donovan W. Frank
United States District Court
District of Minnesota
316 North Robert Street
St. Paul, MN 55101

The Honorable Jerome B. Abrams
Scott County District Court
200 Fourth Avenue West
Shakopee, MN 55379

The Honorable Arthur J. Boylan
United States Magistrate Judge
334 Federal Building
316 North Robert Street
St. Paul, MN 55101


Re: *State of Minnesota v. CMI of Kentucky, Inc.*
Court File No. 08-CV-603 (DWF/AJB)
In re: Source Code Evidentiary Hearings in Implied Consent Matters
Consolidated File No. 70-CV-09-19459
In re: Source Code Evidentiary Hearings in Criminal Matters
Consolidated File No. 70-CR-09-19749

Dear Judges Abrams, Frank and Boylan:

The State Court matters are scheduled in State Court for a status conference on Friday, July 9, 2010 at 1:30 p.m. I am enclosing a copy of two affidavits from Matt Willis and me that are being filed in that action. These affidavits address several concerns that have developed in the last few days regarding the analysis of the code.

The Coalition believes that these are very significant issues which will need to be addressed by Judge Abrams and/or the Federal Court in the very near future. In addition, these issues will cause significant delays in the ability of our experts to complete their analysis and the Coalition will need to schedule a motion for a continuance of the scheduled State court trial date. By separate correspondence, Attorney Chuck Ramsay will be filing a motion on behalf of the Coalition to preserve the existing master and slave chips in Minnesota Intoxilyzers.

Sincerely,



Marsh J. Halberg
Attorney for Source Code Coalition
MJH/ta
cc: Liaison Counsel

STATE OF MINNESOTA

DISTRICT COURT

Consolidated File No. 70-CV-09-19459

In re: Source Code Evidentiary Hearings in
Implied Consent Matters

Consolidated File No. 70-CR-09-19749

In re: Source Code Evidentiary Hearings in
Criminal Matters

**AFFIDAVIT OF
MATTHEW J. WILLIS**

MR. MATTHEW J. WILLIS, being first duly sworn upon oath, deposes and states as follows:

1. I am one of the experts conducting the analysis of the source code on behalf of the Source Code Coalition ("Coalition"). My *curriculum vitae* is already on file in this case. I am currently working with Dr. Karl Schubert, another expert employed by the Coalition to conduct source code analysis.
2. On June 14, 2010, I removed the Slave EPROM (also known as the 8051 EPROM) from an Intoxilyzer leased by the Coalition (serial #612). I extracted the code from the EPROM and reviewed its contents.
3. It was readily apparent that the code loaded on the Slave EPROM was significantly different from the code supplied by CMI. Specifically, text present in portions of the Slave EPROM code is clearly intended for the Master EPROM (also known as the Z-80 EPROM). Examples of those strings are "DATA ENTRY?" and "OUT OF PAPER".

4. I removed the Master EPROM, copied its contents, and positively confirmed that the text was present in the Master EPROM.
5. As further validation, on July 6, 2010, I directed Dr. Karl Schubert to verify that the text was not present within the Slave EPROM Source Code available in Kentucky. He verified that the text was not present within the Slave source code and that it was present in the Master source code.
6. It is my belief that the Slave EPROM provided by the State to the Coalition mistakenly contains unintended code potentially due to an error in the way the code was written to the EPROM. Out of the 56,712 bytes written to the EPROM, the last 22,301 bytes (39% of the total machine code) appear to be extraneous.
7. Per the file "Usage & maintenance report 68-010612.pdf" supplied by the state covering the leased Intoxilyzer containing the Slave EPROM with "unintended code", the Slave EPROM was installed May 12, 2004 by Patrick B. Pulju.
8. Per the letter from Kristi Nielsen on July 7, 2010 entitled "Re: Source Code Discovery Requests", in her third paragraph she states that a further Intoxilyzer in use by the BCA contains both a Slave EPROM and a Master EPROM with unintended code. The Coalition intends to request these EPROMs, referred to as from the "Otter Tail instrument", to see if they are flawed similarly to the leased Intoxilyzer EPROMs.
9. Kristi Nielsen further states in her third paragraph that the BCA has advised that the "remaining 263 instruments" (out of the 264 in the state)

have identical masters and slaves that have been validated. Given the time required to analyze and physically remote nature of the Intoxilyzers in Minnesota, it is highly unlikely that the BCA has pulled the Intoxilyzer EPROMs from all 264 Intoxilyzers and compared them with the code they intended to deploy. Also given the fact that both the Master and the Slave EPROMs are incorrect in the "Otter Tail" Intoxilyzer, I strongly suspect additional instruments are similarly affected.

10. "Unintended code" may be present in other Intoxilyzers in both their Slave and Master EPROMs. As "unintended code" is clearly on two known Intoxilyzers, it is likely that more Intoxilyzers could have the same or similar issues.
11. If the Intoxilyzer executes this "unintended code", the Intoxilyzer would experience potentially random and unintended consequences. The frequency, probability, and ultimate severity of those consequences are points of further study.
12. I have requested an additional EPROM from CMI to verify CMI's intended content of the Slave EPROM. CMI has volunteered to provide an EPROM to the State, but I have not yet been provided with that EPROM. With the State's revelation that they have discovered an incorrect Master EPROM, I am further requesting an additional Master EPROM from CMI.
13. I have requested additional EPROMs from the State of Minnesota to help identify the cause and magnitude of the error within the Intoxilyzers in use in Minnesota. My request includes that the State should provide a random

sampling of EPROMs from in-service Intoxilyzers. I have not yet been provided with those EPROMs.

14. Kristi Nielsen further states in her letter that our requests may be unrelated to the source code. As these EPROMs contain the final compiled source code in use in Minnesota, they reflect the actual code in use for the Intoxilyzers as certified and deployed by the BCA. Without an understanding of what is on the EPROMs in question, it is impossible to determine the code that is actually being executed by the Intoxilyzers.
15. As a separate and significant issue, CMI has notified the Coalition that the source code provided did not match the source code in use in Minnesota. CMI provided changes to the source code on July 7, 2010 that we have been reviewing in Owensboro, Kentucky. These changes will require our experts to compare portions of the changed code, re-generate documentation, and analyze the changes effect on the code and the impact to the Intoxilyzer.
16. In addition to the code changes provided in Owensboro, we will require updated replacement printed volumes for our use in both Minnesota and Owensboro.
17. William McNabb has stated that only "two lines of code" have been modified by CMI. However, the impact to the source code (since these enable and disable a number of sections of code in several files) is far greater.

18. CMI's changes presented halfway through our analysis will incur additional expenses and impact our overall timeline to a deliverable. The extent of the delays and expenses resulting from these changes will have to be assessed onsite in Owensboro, Kentucky.

FURTHER AFFIANT SAYETH NOT.

Matthew J. Willis

Matthew J. Willis

Subscribed and sworn to before me this 8th day of July, 2010.

Benjamin Thomas Green
Notary Public



Consolidated File No. 70-CV-09-19459

In re: Source Code Evidentiary Hearings in
Implied Consent Matters

Consolidated File No. 70-CR-09-19749

In re: Source Code Evidentiary Hearings in
Criminal Matters

AFFIDAVIT OF MARSH J. HALBERG

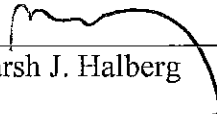
Marsh J. Halberg, being duly sworn upon oath, states as follows:

1. I am one of the lead attorneys representing the Source Code Coalition (“Coalition”) in regard to the above-entitled matter.
2. I have filed prior pleadings with this Court outlining the issues and problems which the Coalition has experienced in obtaining prompt and effective cooperation from CMI and/or the State in completing our analysis.
3. Significant issues have arisen in the last few days regarding the information/source code previously provided to the Coalition by CMI and the State.
4. There are two separate problems that the Court should be aware of:
 - Incorrect files were provided by CMI to the Coalition in Kentucky.
 - There is a problem with the source code on the slave chip of the leased intoxilyzer provided to the Coalition by the State.
5. In a letter dated July 1, 2010 (attached hereto as Exhibit A) William McNab, on behalf of CMI, wrote to this Court identifying the problem of incorrect source code in Kentucky. In a second letter dated July 2, 2010 (attached hereto as Exhibit B), Mr. McNab represents that there are only two lines of source code that are different from the Minnesota model and appearing to down play the significance of this matter.
6. While Mr. McNab’s recent correspondence to this Court may simply be CMI’s desire to update the Court on matters, I do have a concern with Mr. McNab writing letters to this Court regarding substantive technical issues. CMI is not a party to the State litigation and Mr. McNab does not have expertise regarding computer code. As such, he is passing along technical hearsay information to this Court and asking the Court to rely on that. Information regarding the technical issues should be supplied by affidavit from the appropriate experts. The Coalition is filing an affidavit of Matt Willis giving this Court qualified information under oath as to this issue.

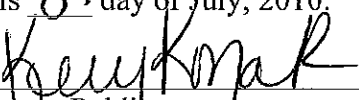
7. As Mr. Willis's affidavit sets forth, this is a serious problem and not just "two lines of code". These two lines of code (if it is in fact confirmed to be only two lines) affects greater sections of the code and the interplay with other code sections is not yet known.
8. CMI has pledged its immediate efforts to work with our experts in Kentucky to point out these errors and promptly resolve those issues. I have no doubt at this time that that will occur, but it is important to recognize that we now learn for the first time that the Coalition has been working with the wrong code since the beginning. This error will cause the Coalition significant expenditure of additional time and money. The extent of delay and expense is not known, but the Coalition will need additional time to rework its analysis and will seek a delay of the scheduled trial date. The Coalition will also need a new printed version of the code from CMI.
9. The second issue is that the Coalition has discovered that the slave chip in the machine leased from the State has substantial extraneous code on it.
10. Immediately upon learning of this slave chip/eprom issue, the Coalition notified the State of its concern in an email from Mr. Orwig to Ms. Nielsen dated June 28, 2010 (attached hereto as Exhibit C). This problem is also addressed in Mr. Willis's affidavit.
11. We are now faced with what appears to also be a very significant problem. Minnesota has only approved very specific source code for use in Minnesota intoxilyzers. That source code is set forth in Minnesota Rule 7502.0420. The machine provided to the Coalition is not the code approved for use in Minnesota intoxilyzers. It is a variation of the approved code intertwined with extraneous code.
12. That problem now causes many questions to be asked. Do all intoxilyzers have this defective code? If not, which machines have the same code as the code in the leased machine? Which machines have other code? How many variations of the code are out in the field? How did this happen? And one of the most important questions yet to be answered, how does this additional code affect the operation of the machine?
13. As is set forth in Mr. Willis's Affidavit, this is a significant problem and appears to affect 39% of the total machine code (compiled source code). In Exhibit C, Mr. Orwig proposed the State either stipulate that all machines have the same code as the leased machine or agree to a random testing of machines across the state. Ms. Nielsen has sent me the enclosed correspondence dated July 7, 2010 (attached hereto as Exhibit D) addressing that issue.
14. Assuming Ms. Nielsen's letter is correct, we now know that the defective eproms are in at least two machines, the leased unit provided to the Coalition and one unit in Otter Tail County.

15. We don't know how the State can represent that this additional code is not a problem in other machines without physically pulling the eproms in each machine and examining the chips for extraneous code.
16. Again through no fault of the Coalition, for the first time the Coalition is learning it was provided incorrect source code causing us now to have to rework extensive portions of our analysis. This will cause extensive delay and additional expense. The Coalition will need additional time to perform its analysis and will be seeking costs against the State.
17. Mr. McNab, on behalf of CMI, has previously offered to provide a new slave eprom to the Coalition, which would be of some assistance in helping to resolve these issues. Mr. McNab indicated that CMI would only release that slave eprom with the consent of the State. Ms. Nielsen informed the Coalition that she would get back to us regarding that issue and in her July 7th letter she is now informing me that the State will not agree to provide the slave eprom being offered by CMI. We know of no reason why that should not be produced.
18. Ms. Nielsen's letter also for the first time now notifies the Coalition that there are problems in the master chip in Otter Tail County. This now generates the same questions previously posed for the slave chip. The Coalition will now request a new master chip from CMI as well. I assume the State will also oppose CMI providing this master eprom. The Coalition cannot continue to conduct an analysis of moving targets. We need numerous questions answered regarding the reasons and nature for multiple master and slave eproms.
19. We have returned several times before Federal Judge Boylan to resolve issues. We can again ask Judge Boylan to quickly hear these issues and ask for guidance from him. However, since we are scheduled before the State District Court this Friday, July 9, 2010, we wish to notify Judge Abrams and potentially address these issues.
20. We will likely need to return to Federal Court to address discovery issues with CMI. We need to know the process for transferring eprom information to the State, how the "two line error" occurred and other related matters. We also will be seeking the awarding of costs against the company for our increased expenses. This Court can choose to deal with the State specifically on discovery issues and awarding of costs against the State or we can also put that back before Judge Boylan.

FURTHER YOUR AFFIANT SAYETH NOT.


Marsh J. Halberg

Subscribed and sworn to before me
this 8th day of July, 2010.


Notary Public

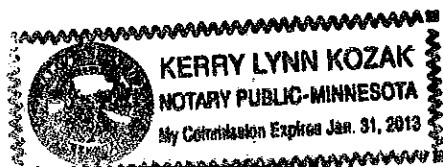


EXHIBIT A


WINTHROP WEINSTINE
ATTORNEYS AND COUNSELORS AT LAW

July 1, 2010

William A. McNab
Direct Dial: (612) 604-6652
Direct Fax: (612) 604-6852
wmcnab@winthrop.com

VIA FACSIMILE

The Honorable Donovan W. Frank
United States District Court
District of Minnesota
316 North Robert Street
St. Paul, Minnesota 55101

The Honorable Arthur J. Boylan
United States Magistrate Judge
334 Federal Building
316 N. Robert Street
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The Honorable Jerome B. Abrams
Scott County Courthouse
200 Fourth Avenue W.
Shakopee, Minnesota 55379

RE: *State of Minnesota v. CMI of Kentucky, Inc.*
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Consolidated File No. 70-CR-09-19749

Dear Judges Frank, Boylan and Abrams:

As the Courts may recall, the Intoxilyzer 5000EN breath-alcohol test instrument contains two memory chips (EPROMs), which contain software that performs distinct functions within the instrument. One EPROM, often referred to as the “master,” contains software identified as “1408.62.” The other EPROM, sometimes called the “slave” or “side processor,” is loaded with different software, identified as “7502.40” or “75_0240.”

In accordance with the July 16, 2009 Consent Judgment and Permanent Injunction, CMI has been providing Authorized Minnesota litigants access to all Source Code files for the current version of Intoxilyzer 5000EN software (1408.62 and 75_0240) in both native electronic and printed, hardbound (redacted) book format.

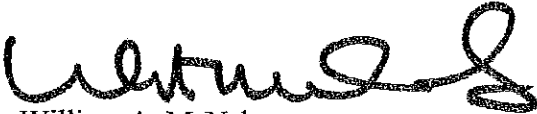
July 1, 2010
The Honorable Donovan W. Frank
The Honorable Arthur J. Boylan
The Honorable Jerome B. Abrams
Page 2

However, it has recently come to CMI's attention that the software that is presently installed in the side-processor EPROMs in the Intoxilyzer 5000EN instruments in service in Minnesota does not identically match the 75_0240 software that was preserved at CMI at the time it was created for use in Minnesota.

At present, neither CMI nor the State is certain of the cause of this difference, or of its impact, if any, on the Source Code review currently underway. I assure the Courts that CMI and the State are working cooperatively and diligently to resolve this issue as quickly as possible.

Very truly yours,

WINTHROP & WEINSTINE, P.A.



William A. McNab
WAM/lm

cc: Counsel of Record/Liaison Counsel (via e-mail)

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13956.2

EXHIBIT B



WINTHROP WEINSTINE
ATTORNEYS AND COUNSELORS AT LAW

July 2, 2010

William A. McNab
Direct Dial: (612) 604-6652
Direct Fax: (612) 604-6852
wmcnab@winthrop.com

VIA FACSIMILE

The Honorable Donovan W. Frank
United States District Court
District of Minnesota
316 North Robert Street
St. Paul, Minnesota 55101

The Honorable Arthur J. Boylan
United States Magistrate Judge
334 Federal Building
316 N. Robert Street
St. Paul, MN 55101

The Honorable Jerome B. Abrams
Scott County Courthouse
200 Fourth Avenue W.
Shakopee, Minnesota 55379

RE: *State of Minnesota v. CMI of Kentucky, Inc.*
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Dear Judges Frank, Boylan and Abrams:

I write to follow-up on my letter to the Courts dated July 1, 2010. I am pleased to report that CMI has resolved the issue raised in that correspondence.

CMI has determined that in preparing the Source Code for on-site review, CMI inadvertently substituted two files (out of the 194 files that make up the Source Code). Each of those files contained one line of Source Code that differed from that which was used to create the software for the Intoxilyzer 5000EN currently in use in Minnesota. In other words, two lines of Source Code from an alternate revision (out of approximately 70,000 total lines of Source Code) were inadvertently made available to the Coalition's and Mr. Patrin's consultants.

July 2, 2010
The Honorable Donovan W. Frank
The Honorable Arthur J. Boylan
The Honorable Jerome B. Abrams
Page 2

CMI will replace the two inadvertently included files in the Source Code Review facility and will work directly with the Coalition's and Mr. Patrin's consultants to identify for them the two files and two lines of Source Code at issue. Thank you.

Very truly yours,

WINTHROP & WEINSTINE, P.A.

A handwritten signature in black ink, appearing to read 'William A. McNab', with a stylized flourish at the end.

William A. McNab
WAM/lm

cc: Counsel of Record/Liaison Counsel (via e-mail)

5333863v1
13956.2

EXHIBIT C

Marsh Halberg

From: Lee Orwig
Sent: Monday, June 28, 2010 5:00 PM
To: Kristi Nielsen
Cc: Marsh Halberg; Charles Ramsay; Jeff Sheridan
Subject: EPROM / Master Chips

Dear Ms. Nielsen,

As you know we had previously requested the State provide us with the slave EPROM. As we have informed you there appears to be some unusual/different code on the slave chip we were provided. This raises the question of whether this slave chip is a "unique/one-of-a-kind" slave chip or it is typical of the slave chips on all Intoxilyzers. The existence of the additional code on the slave chip also makes us question the integrity of the code on the master chip.

Our concern is that if we do all of our research off of the chips that have been provided the State would attempt to impeach our experts at trial by saying they conducted our research off of the wrong information. It appears there are two ways to resolve this concern:

1. The State can stipulate that the provided slave and master EPROMs contain the same machine code (compiled source code) as all other Intoxilyzers in the State of Minnesota.
2. We will agree to have the State randomly pull twelve slave and master chips from Intoxilyzer units across Minnesota. At least six of these should be from out-state Minnesota. In this way we can verify what chips are being used across the state. We will also need the serial numbers for the units involved. Please advise how you will determine the random selection.

I think it would be best to bring this concern before Judge Abrams tomorrow to simply let him know that this issue still exists.

Please feel free to contact me or Marsh Halberg with any questions.

Lee M. Orwig
Halberg Criminal Defense
(952) 224-4848: main office
(952) 844-3333: direct
(952) 224-4840: fax
lorwig@halbergdefense.com
www.halbergdefense.com

EXHIBIT D



STATE OF MINNESOTA

OFFICE OF THE ATTORNEY GENERAL

LORI SWANSON
ATTORNEY GENERAL

July 7, 2010

SUITE 1800
445 MINNESOTA STREET
ST. PAUL, MN 55101-2134
TELEPHONE: (651) 297-2040

Marsh Halberg, Esq.
Halberg Criminal Defense
3800 American Blvd W, Suite 1580
Bloomington, MN 55431

via e-mail

Re: *Source Code Discovery Requests*

Dear Mr. Halberg:

This letter is in response to the Coalition's series of e-mails requesting numerous items. Note that many of your requests have nothing to do with source code or your experts review of the source code. In any event, I will attempt to respond to your inquiries, however, any additional requests should relate to the source code.

First, the Coalition requested from CMI an EPROM of the current slave version of the Intoxilyzer in Minnesota. The Coalition has already been provided with an EPROM as part of the settlement in the federal case. In fact, your experts have access to the EPROM in Kentucky pursuant to Judge Frank's Order. In addition, I note that the Intoxilyzer that was leased to the Coalition from the BCA contains the version of software currently in use in Minnesota (1408.62 and 75_0240), which is the version relevant to the consolidated proceedings before Judge Abrams.

For your information, there are 264 Intoxilyzers in the state. Of these, 258 were purchased directly by the BCA, the remaining six were purchased individually by county or city law enforcement, but were certified for use by the BCA. During certification, software was updated in five of the six instruments. The most recent purchase was by Otter Tail County in 2008 (the "Otter Tail instrument"). The master (1408.62) in the Otter Tail instrument has different filler in the unused space as compared to the other 263 instruments, however the software is identical. The slave EPROM contained in that instrument was labeled by CMI to be 75_0240 and the instrument passed the certification process. The BCA is now aware that the slave EPROM has a different checksum than the 75_0240 validated by the BCA. The differences in the slave are being reviewed by CMI. The BCA has advised that, with the exception of the Otter Tail instrument, the remaining 263 instruments have identical masters and slaves that have been through the validation process conducted by the BCA. The Otter Tail instrument has performed tests on thirteen subjects, none of whom are involved in the source code litigation for either criminal or civil matters.

Marsh Halberg, Esq.
July 7, 2010
Page 2

In response to your request regarding calibration of the Intoxilyzer and maintenance records, this well exceeds discovery as it relates to the source code. In any event, the calibration and maintenance of the Intoxilyzers in Minnesota are done pursuant to manufacturer requirements by BCA personnel who completed factory training from CMI. The calibration and maintenance are performed pursuant to CMI's service manual. The manual is available for review at CMI's headquarters in Kentucky. Finally, the usage and maintenance reports are the complete listing of all calibrations and maintenance performed on a particular instrument. The reports extend back to the time a particular instrument was purchased and are updated whenever an instrument undergoes maintenance or calibration.

You have also requested acetone solution, apparently for use in the Intoxilyzer that the Coalition leased from the State. I refer you to the cover page of the lease agreement that identifies commercial vendors from whom you can obtain the solution.

The final issue is in regard to the so-called "on the shelf" patch. This issue was addressed at mediation with Magistrate Boylan on March 25, 2010. It is discussed on pages three and four of the transcript of March 25, 2010 entitled, "Separate Non-Court Contract Description Sealed Document."

Sincerely,



KRISTI NIELSEN
Assistant Attorney General
(651) 757-1284 (Voice)
(651) 297-4077 (Fax)