

**8/3/06**

## **The Fraud Behind Diebold's Touchscreen Certifications**

With the release of a declaration by Dr. Richard Lee PhD (attached), a trail of investigation lasting three years comes to an end. **NEW 8/16/06: APPENDIX A page 5 – more evidence.**

### ***EXECUTIVE BRIEFING***

The net result of this investigation is that Diebold's Federal certifications for their touchscreen "voting system" product line is revealed as having been obtained by Diebold's fraud. Therefore, their certification documents at the state level, commonly known as "NASED numbers", are worthless. It is a basic principle of US and prior English law that any document, contract, deed, diploma, certification or other credential obtained by way of fraud is legally valueless.

The chain of evidence includes the following:

- \* In 2003 a Diebold internal memo from 2002 was released in which the top technical officer for the elections division (Talbot Iredale) ordered underlings NOT to release customized Windows CE operating system code (found on all Diebold touchscreens) to Wyle Labs.
- \* In early 2003 Diebold specifically claimed Windows CE as "COTS" (Appendix A).
- \* On 3/29/06 Wyle testified before a California legislative hearing that they treated Windows CE as "COTS" (Commercial Off The Shelf) and hence did NOT do source code review as required of any customized code by the Federal Election Commission rules.
- \* A few months later a Wyle certification report for the latest Diebold touchscreens surfaced in a Utah public records stack, showing that nothing even remotely CE-related was listed in the "files examined" roster, proving that the testimony in California was no mistake.
- \* On 8/3/06 Dr. Richard Lee PhD released a declaration describing how Windows CE works – specifically to what degree it is customized for the hardware environment. Per Dr. Lee and all other published sources on Windows CE, this "Compact Edition" is sold by Microsoft as an unfinished "kit" that must be completed by a hardware vendor such as Diebold. Windows CE therefore cannot be treated as "COTS".

Once assembled, these three pieces of information lead to only one conclusion: Diebold defrauded the Federal certification process.

### ***AN EXPLANATION OF THE CERTIFICATION PROCESS AND LAWS***

37 US states require a "NASED number" on any voting machine prior to it being considered for state certification. The NASED number is considered significant in most of the rest.

NASED is the "National Association of State Elections Directors", a national body that until recently oversaw the actions of the three laboratories approved to test voting machines, collectively known as ITAs or "Independent Testing Authorities". NASED's functions are being taken over by the EAC (Election Assistance Commission) but we can ignore that in this instance – the documented fraud by Diebold involved one of the ITAs, Wyle Labs in Huntsville AL.

The ITAs certify systems to a "blueprint" by the Federal Election Commission known as the FEC 2002 "Voting System Standards".

### ***FACT SET ONE: FEC 2002 RULES***

These FEC rules have a definition of "COTS" as follows:

*Commercial, readily-available hardware devices (such as card readers, printers, or personal computers) or software products (such as operating systems, programming language compilers, or database management systems). These devices and software are exempted from certain portions of the qualification testing process so long as such products are not modified in any manner for use in the voting system.*

Source: [http://www.eac.gov/election\\_resources/vss.html](http://www.eac.gov/election_resources/vss.html) - Volume One, Appendix A

The FEC rules on how "COTS" is to be treated is clear:

Some voting systems use one or more readily available commercial off-the-shelf (COTS) devices (such as card readers, printers, or personal computers) or software products (such as operating systems, programming language compilers, or database management systems). COTS devices and software are exempted from certain portions of the qualification testing process as defined herein, as long as such products are not modified for use in a voting system.

Source: Volume One Section One under 1.6 [http://www.eac.gov/election\\_resources/vss.html](http://www.eac.gov/election_resources/vss.html)

#### 9.4.1.3 Focus of Software Evaluation

The software qualification tests encompass a number of interrelated examinations, involving assessment of application source code for its compliance with the requirements spelled out in Volume I, Section 4. Essentially, the ITA will look at programming completeness, consistency, correctness, modifiability, structuredness and traceability, along with its modularity and construction. The code inspection will be followed by a series of functional tests to verify the proper performance of all system functions controlled by the software.

The ITA may inspect COTS generated software source code in the preparation of test plans and to provide some minimal scanning or sampling to check for embedded code or unauthorized changes. Otherwise, the COTS source code is not subject to the full code review and testing. For purposes of code analysis, the COTS units shall be treated as unexpanded macros.

Source: Volume One Section 9 (entire subsection cited above)  
[http://www.eac.gov/election\\_resources/vss.html](http://www.eac.gov/election_resources/vss.html)

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## ***FACT SET TWO: DIEBOLD INTERNAL EMAIL***

Here is the internal Diebold Email on Windows CE certification:

\* To: <support@gesn.com>  
\* Subject: Re: Pennsylvania Certification  
\* From: "Talbot Iredale" <tiredale@gesn.com>  
\* Date: Mon, 15 Apr 2002 09:40:26 -0700  
\* References: <001501c1e269\$1fb16f10\$0e03a8c0@hirondelle>

Don,

We do not certify operating systems with Wyle. Therefore we do not need to get WinCE 3.0 certified by Wyle. What we need to get certified is BallotStation 4.3.2. We do not want to get Wyle reviewing and certifying the operating systems. Therefore can we keep to a minimum the references to the WnCE 3.0 operating system.

Tab

Source:

<http://www.sims.berkeley.edu/~ping/diebold/lists/support.w3archive/200204/msg00055.html>

(This is one of many online archives of 13,000 Diebold internal Emails – at this time they were still using Global Election Systems Email addresses.)

## ***FACT SET THREE: CALIFORNIA CERTIFICATION HEARING Of 3/29/06***

**Senator Debra Bowen:** I ask that question in part because of the, going back to a Pennsylvania certification in which Diebold wrote [aside: (who's the "Don" in this?)] :  
"We do not certify operating systems with Wyle." This is a Diebold employee.  
"Therefore we do not need to get Win CE (the Windows CE 3.0) certified by Wyle. We do not want to get Wyle certifying and reviewing the operating systems. Therefore keep to a minimum the references to a Win CE 3.0 operating system."

**Wyle (Joe Hazeltine):** I'm not familiar with the document that you're looking at.  
[Whisper between Wyle representatives: That's back when they were...]

**Senator Debra Bowen:** Oh, it's back when they were Global, GES, Global Election Systems.

**Wyle (Joe Hazeltine):** Is this some type of a hearing or testimony that they had done?

**Senator Debra Bowen:** I'll get you a copy of the e-mail. It's not something that I uncovered. But I think it goes to the fact that Windows CE requires significant customization to work on a voting machine, such as a Diebold touch-screen. It's not "Commercial Off The Shelf Software." It won't work without being customized.

Diebold has the source code for Windows CE and can modify core features and yet here they are basically writing saying "We don't want Wyle to be looking at the Windows CE

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3.0 system" even though it could only run on a Diebold touch-screen if it were customized.

**Wyle (Joe Hazeltine):** Well that's, you can read it that way, another way that you can read this is that Windows as a commercially off the shelf software does not require ITA certification.

Source:

Written transcript; this is part of a long discussion on COTS that starts at page 34 line 13:  
<http://www.bbforums.org/forums/messages/2197/California-ITA-hearings-27281.pdf>

Alternatively, you may refer to the audio recording of the session from a California legislative site starting some time after 1 hour and 10 minutes:  
[http://senweb03.senate.ca.gov/Audio/Committee/Elections/SenElectionsComm\\_060329.MP3](http://senweb03.senate.ca.gov/Audio/Committee/Elections/SenElectionsComm_060329.MP3)

#### ***FACT SET FOUR: WYLE CERTIFICATION DOCUMENTS FOR THE LATEST TSx***

The state of Utah responded to a Black Box Voting public records inquiry with a complete copy of a Wyle certification report for the latest Diebold touchscreen version. Windows CE analysis is NOT included, nor are files known to be connected to Windows CE listed among the "files examined" section. Note that the Richard Lee declaration makes mention of the standard name of the Windows CE "Kernel": "NK.EXE". None of the Wyle files match NK.anything, powerful evidence confirming both the Diebold memo (fact set two) and Wyle admissions to Sen. Bowen (fact set three): Windows CE wasn't studied in anything like the detail needed for custom code.

[http://www.bbforums.org/forums/messages/2197/Wyle\\_Lab\\_4\\_6\\_4\\_00001-32747.pdf](http://www.bbforums.org/forums/messages/2197/Wyle_Lab_4_6_4_00001-32747.pdf)

#### ***FACT SET FIVE: THE DECLARATION OF DR. LEE, PhD***

That document follows this in it's unedited entirety, or find it at:

<http://www.equalccw.com/rrlee-wincedeclaration.pdf>

### **CONCLUSION**

"Fraud vitiates everything" is an ancient legal maxim inherited from English law. Googled references to the phrase turn up in courts across the world. "Vitiates" is an old term for "corrupts" but it has a vicious connotation of "sexually corrupts", as in "to render someone impure due to sexual assault", a concept our culture has thankfully abandoned.

It shows the degree to which the courts react to any paper document obtained by fraud.

Diebold's Federal certification is unsupportable in any court, therefore in the 37 "NASED certification requirement states" the Diebold touchscreen product line doesn't meet the legal definition of "voting machine". The legal consequences of using them are serious.

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## APPENDIX A: Yet More Evidence Of Deliberate Fraud

A question can be raised as to whether or not Diebold deliberately defrauded the labs, specifically Wyle. The Iredale memo of 2002 orders underlings to withhold CE-related material, but that doesn't necessarily mean that was done. Global/Diebold may have later turned over the CE material to Wyle, who for some reason ignored it. This is unlikely but not ruled out above.

So far the case for Diebold committing "fraud" in purely legal terms is weak but not eliminated. Diebold paid for the testing, it was their responsibility to make sure the testing occurred and they would have known from the final certification documents that Windows CE was skipped.

A document has turned up that sheds some additional light on culpability.

It is dated Jan. 20<sup>th</sup> 2003, titled "AccuVote-TSx System Overview", in PDF form with Diebold letterheads and logos. It has a "version number" of 1.0 and can be seen here:

<http://www.equalccw.com/tsxoverview.pdf>

Two copies from two sources exist. Mine (linked above) was part of the stash of files copied from a Diebold Internet site by Bev Harris in late Jan. 2003. My copy has blocks of text in red.

Another copy with the same text in the blocks I will quote below came from a California Public Records Act query to the California Secretary of State's office by Mr. Jody Holder. Mr. Holder and I have communicated by phone and Email and thus far confirmed that the key text related to Windows CE on page 20 is identical.

That text is a listing of the "COTS" components of the TSx as stated by Diebold:

COTS hardware and software products used in the AccuVote-TSx include the following:

- Windows CE operating system
- Sharp TFT LCD LQ150X1DG11
- ELO LCD Panelmount touchmonitor 1567L
- TDK DC AC connector (inverter for display backlight)
- Socket Communication ethernet PCMCIA card 8510-00093C with CF to PCMCIA adapter 8520-00025
- Wireless LAN card Orinoco/Proxim PCMCIA Card
- Sankyo smart card reader Model ICM0A0-0130
- AT Flash Card (election media) Sandisk Industrial grade (Part# SDP3B-128-101-80 for the 128MB card)
- Headphones
- Printer engine Citizen MLT-289

This is the first evidence to date that Diebold specifically labeled CE as "COTS" in a report read by the California Secretary of State's office and (presumably) both NASED and Wyle Labs.

This suggests more stringent liability on Diebold's part than simply "withholding" code.

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