The DRE Tampering Challenge

I do not believe it is feasible in practice to tamper undetectably with a well-designed direct-recording electronic (DRE) voting machine. To demonstrate my conviction, I am willing to bet \$10,000 at 2:1 odds with anyone under the following conditions:

1. I put up \$10,000; you put up \$5,000. The combined \$15,000 is held in an escrow account.

2. I choose the DRE machine and lend it to you. You have one month to do anything you want to it. At the end of one month you bring it back to me.

3. I get one day (24 hours) to inspect it. I can do anything I want to it during that time. At the end of one day I will state either: (a) you have modified this machine and here is an example of what you changed; or (b) this machine will count votes correctly.

4. If I'm right, I get the \$15,000. If I'm wrong, you get the \$15,000. If I choose (a), I have to demonstrate at least one modification you made. If I can't do that, I lose. If I choose (b), you have to show me a sequence of votes, within the operating parameters of the machine, that will not be counted correctly. If you can't do that, you lose.

5. Determination of the winner will be by an independent observer agreeable to both parties. If we cannot agree in advance on such a person, the challenge does not take place. The observer will have control over the escrow account.

6. Rebecca Mercuri has claimed that this challenge is ineffective since you might have to engage in illegal activities to discover how the machine works. This is not correct since you will be operating under a letter of permission from the vendor of the machine granting you the right to disassemble, reverse engineer, or defeat copyright protection mechanisms (if any), etc. You will not be given plans, diagrams, schematics, flowcharts, or code.

7. The loser pays all costs of conducting the challenge, both sides to deposit \$5K in escrow to cover anticipated expenses.

8. Except for provisions 6 and 7, this challenge has been in effect since 1996 under the above terms and no one has accepted it.

Michael I. Shamos Pittsburgh, PA August 2, 2004