Testimony of Fernando Morales
Before the
Election Assistance Commission
Technical Guidelines Development Committee
Computer Security and Transparency Subcommittee
September 20, 2004

Mr. Chairman and honorable representatives of this subcommittee, thank you for the opportunity to testify today on computer security and transparency.

My name is Fernando Morales. I was born in Monterrey, Mexico. I have been an entrepreneur inventor since I obtained my bachelors degree in computer science in 1972. During that time I have been president of a number of companies, which I myself founded. More than twenty years ago I served as campaign manager for the opposition party in Mexico and learn first hand about the corruption within the Mexican electoral system that kept the government party in power, because they directly controlled the voting process, of course. Back in 1987, I founded a Delaware corporation to persuade the Federal Communications Commission to allocate spectrum for a service that I invented. In 1992 the FCC finally allocated the spectrum. That same year I filed a petition for an Immigrant Alien Entrepreneur visa and became a U.S. citizen in November of 1999.

As a result of the 2000 Florida election fiasco, I realized that our electoral system is not perfect and that there was room for improvement. This realization motivated me to invent a new paradigm, which would allow all citizens the ability to vote from anywhere with security, legitimacy, and in total secrecy (including those with disabilities). The U.S. Patent Office has granted me more than a dozen patents, the last one being this new paradigm for the election process, which is not only better in every aspect than any system in use today, but can also <u>save more than 2.5 billion American taxpayer dollars.</u>

This new paradigm is based on electronic smart card technology. This widely-accepted technology could provide each citizen with a foolproof ballot which is not only reusable for the life of the voter, but also contains encrypted voter information, as well as public and secure software which employs the use of secret codes for all its functions to advance the electoral process to the highest standards of excellence.

Any electoral process must assure that the vote cannot be sold or traded. Paper absentee ballots and/or machines that aid the blind (by obtaining a voice recorded receipt) cannot assure this and therefore, must be banned. Blind voters need audio aid to vote and verify their intentions. To protect against using the audio as receipt, <u>personal voting codes known only to the voter and by the computer must be used as a safeguard.</u> However, in order to assure this safety feature without revealing the voter's identity, one unidentified computer per voter must be used. <u>One personalized smart card per voter is the optimum computer for this task</u>.

This new paradigm improves the current electoral process by <u>assuring the following nine features:</u>

1- <u>That the vote cannot be sold or traded.</u> The **smart card** program must keep the voter's personal voting code secret at all times and use it to guarantee the voter's intention in total confidentiality.

2- <u>That the voter's identity is handled appropriately at all times.</u> The **smart card** program must reveal the voter's identity prior to voting (for identification purposes only) but protect the voter's identity and prevent it from being revealed along with the vote <u>after</u> the vote is cast.

3- <u>The total secrecy of each vote until it is counted.</u> The **smart card** program must keep a vote secret until access codes from the local election officials and representatives from each political party (here after "election reps") authorize the smart ballot to reveal the vote.

4- <u>That only the votes from legitimate voters be counted.</u> The **smart card** program must produce the previously stored verification codes to be verified by election reps before counting the votes, without revealing voter's identity.

5- <u>That votes be counted only once during each tally.</u> The **smart card** program must not reveal the vote unless a specific numeral provided by election reps when ordering a count, matches the **smart card** numeral generated by its internal output counter— this tracks the number of times a **smart card** has been counted.

6- <u>That a supreme court has the ability to remove impugned ballots from the ballot box.</u> The **smart card** program must allow a previously loaded supreme court code to serve as a means to reveal the voter's identity without revealing their vote.

7- <u>That the voter can verify their vote was received and counted.</u> The **smart card** program must generate a random number after the vote is cast which is then made available to the voter. This number must be stored in the **smart card** memory and recorded along with the vote tally. Subsequently, the voter must be able to use this number to verify their vote was counted after an election by viewing it when posted at the precinct or county election office web site.

8- <u>That the voter living overseas has access to cast a secure vote in a timely manner.</u> The overseas voter must be allowed access to their **smart card** via a telephone keypad or a personal computer in order to vote from abroad in total confidentiality.

9- <u>That the voter can vote from home with certainty in a securely handled process.</u> Election reps must generate the **smart cards,** which are mailed to the voters. Voters who have previously loaded their personal voting codes into their **smart cards** can cast a vote on any computer and mail it back to election reps. Voters with the need to load their personal voting codes into their **smart cards** must do so in secret at any precinct where

election reps will verify the voter's identity matches the personal data stored in the **smart card**.

By using one **smart card** per voter with a Universal Serial Buss (USB) interface, which is broadly available in today's marketplace, the estimated cost will be less than five dollars ($5.00) per unit. As a result, five hundred million dollars ($500,000,000.00) will serve as sufficient funding for the entire nation. As a case in point, the State of Oregon's Vote By Mail program proves that absentee voting is less expensive than the conventional precinct/poll system, once again showing us the way to further taxpayer savings.

Consequently, full implementation of a **Smart Ballot** system costs 80% less than the overall cost of replacing obsolete voting machines currently in use across the nation. Without a doubt, once a new paradigm shows us a simpler, less expensive, more secure and more reliable way to vote, there is no reason to keep employing **obsolete** ways of conducting elections.

In closing, I would like to express once again my gratitude to the TDGC for inviting a modest, foreign-born inventor as myself to testify on this important issue. All of you must recognize that the use of one **Smart Ballot** per voter is by far the "best practice" for our American democracy and in so doing must overlook my "broken English". The system described herein is protected by U.S. Patent # 6,607,137, which now is available to the public and may be acquired by state and local governments for few pennies per voter, while saving the equivalent of twenty-five dollars ($25) per voter.

For more information please visit www.sballot.com

Thank you very much.

Fernando Morales

cc: EAC Commissioner Paul DeGegorio
        EAC, TGDC
        David M. Thomas & Christopher A. Lopez of Representative Tom Davis' office
        Bob Dix & Ursula Wojciechowski of Representative Adam H. Putnam's office
        Matthew Petersen of Representative Robert Ney's office
        Paul Vinovich Staff Director Committee on House Administration

New Electoral Process Paradigm
U.S. Patent # 6,607,137
NOW MADE AVAILABLE
To the public
Entire Country, by State or by County

This patented "**Smart Ballot**" electronic voting process; is based on the use of smart card technology, with one Smart Ballot per voter. Its implementation cost is 80% less than the overall cost of replacing the scores of obsolete voting machines currently in use across the nation. It is therefore infinitely more cost-effective, **AND MORE SECURE**. It is also more convenient for voters because it allows voting from home and assures that:
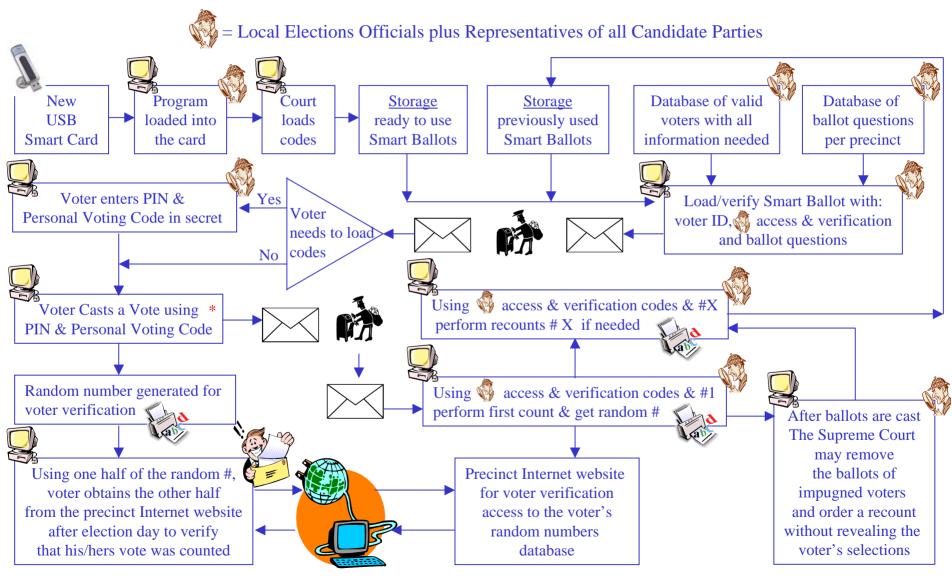
♦ only legitimate voters cast a vote
♦ votes are cast in total secrecy, even under observation by third parties
♦ each Smart Ballot can be added only once to the final vote tally
♦ the Smart Ballots can be recounted as many times as needed
♦ the vote is kept secret until election officials and party representatives agree to count it
♦ after a vote is cast the voter's identity is kept secret until a supreme court order is issued to remove impugned Smart Ballots from the ballot box before a recount
♦ voter's vote/identity is never revealed together
♦ voters abroad and the disabled are able to cast a secure/secret vote by phone
♦ voters have the post-election ability to verify their Smart Ballots were added to the final tally
♦ the Smart Ballot is reusable for the life of the voter.

This New Electoral Paradigm is bound to become the preeminent voting standard of the future. The owner of the patent (#6,607,137) rights is offering to sell those rights for use by the government or private industry supporting the electoral process at the federal, state or local level. This patent will satisfy the needs of the Help America Vote Act (HAVA). Use of this patented system will result in a 2.5 billion dollar savings to American taxpayers. The value to the owner should be viewed as a substantial portion of those savings.

Ownership and licensing of Patent #6,607,137 is available in total or in a specific market area, for (15¢ + 1¢ a day after 9-11) per voter.

For more information please visit www.sballot.com

New Paradigm Electoral Process is Better and Saves Billions of Taxpayer Dollars

= Local Elections Officials plus Representatives of all Candidate Parties

New USB Smart Card

Program loaded into the card

Court loads codes

Storage ready to use Smart Ballots

Storage previously used Smart Ballots

Database of valid voters with all information needed

Database of ballot questions per precinct

Voter enters PIN & Personal Voting Code in secret

Yes

Voter needs to load codes

No

Load/verify Smart Ballot with: voter ID, access & verification and ballot questions

Voter Casts a Vote using * PIN & Personal Voting Code

Using access & verification codes & #X perform recounts # X if needed

Random number generated for voter verification

Using access & verification codes & #1 perform first count & get random #

Using one half of the random #, voter obtains the other half from the precinct Internet website after election day to verify that his/hers vote was counted

Precinct Internet website for voter verification access to the voter's random numbers database

After ballots are cast The Supreme Court may remove the ballots of impugned voters and order a recount without revealing the voter's selections

* Overseas voters may cast a secure vote in total secrecy by calling the precinct to access their Smart Ballot by phone