Election Reform In Iowa

Notes on a talk to the
National Conference on Governance
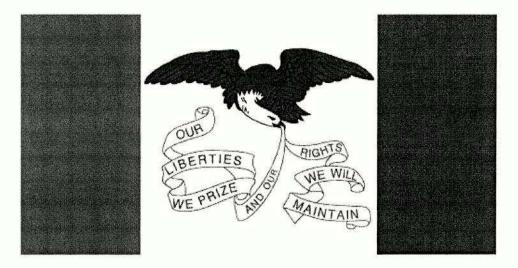National Civic League
November 17 2000, Washington DC

by
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- Background -- Regulatory Environment
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- Reforms Proposed
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Election Reform in Iowa

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- Chair, Iowa Board of Examiners for Voting Machines
  and Electronic Voting Systems
  -- member since 1994
  -- chair since since 1999

- Member, Iowa's Election Reform Task Force

- http://www.cs.uiowa.edu/~jones/voting/

Background

- **11 Voting Systems Used in Iowa**
  -- 2000 General Election, by county
  -- 99 counties, 2222 precincts

  O Precinct-count Optical mark-sense (17)
    -- Optech (10)
    -- Global (6)
    -- AIS (1)

  O Central-count Optical mark-sense (60)
    -- AIS (55)
    -- Global (3)
    -- Optech (2)

  O Direct Recording Electronic (14)
    -- Microvote (10)
    -- EV 2000 (3)
    -- AVC (1)

  O Lever machines (7)
    -- AVM (7)

  O Hand Counted Paper (1)

- **That Web Address Again**

  http://www.cs.uiowa.edu/~jones/voting/

Background

- **Regulatory Environment**

  O Federal Law
  -- Civil rights law
  -- Federal election commission voluntary guidelines

  O State Law
  -- Permits 5 voting methods listed above
  -- Sets law and rules for election administration
  -- Requires conformance with 1990 FEC guidelines
  -- Oversees canvassing in multi-county races

  O Board of Examiners for Voting Machines
  and Electronic Voting Systems
  -- Approves 10 vendors listed above

  O Counties
  -- Pay for and purchase machines
  -- Administer elections

- **That Web Address Again**

  `http://www.cs.uiowa.edu/~jones/voting/`

Pressure for Reform

- **Shortcomings of the 1990 FEC Standards**
    - -- Very apparent by mid 1990's
    - -- No reference to trusted computer system standards
    - -- Poor regulation of 3rd party components
    - -- No coverage of key human factors issues
    - `http://www.cs.uiowa.edu/~jones/voting/congress.html`

- **Proposed new FEC Standards**
    - `http://www.cs.uiowa.edu/~jones/voting/fec.html`

- **2000 General Election**
    - -- Florida
    - -- Iowa margin of 4,144 of 1,315,563 votes (0.3%)

- **Bush vs. Gore in Supreme Court**
    - -- A serious civil rights issue!

- **Federal Legislation**
    - -- 54 bills, 15 hearings!
    - -- HR 1165, Election Voting Systems Act of 2001
    - -- HR 2275, Voting Technology Standards Act of 2001
    - -- upcoming Help America Vote Act

Technological Constraints
(nothing is perfect!)

- **Hand Counted Paper Ballots**
  - -- Unwieldy for general elections
  - -- Subjective counting was widespread by 1880

- **Lever Machines**
  - -- Widely used for a century, no longer made
  - -- No independent record of count
  - -- Technicians can tinker
  - -- If it breaks, it'll break at 99 votes

- **Punched Cards**
  - -- Widely used for decades
  - -- Major chad problems recognized in 1970's
  - `http://www.cs.uiowa.edu/~jones/cards/chad.html`

- **Central Count Optical Scan**
  - -- Widely used for decades
  - -- Machines cannot interpret nonstandard marks
  - -- Machines cannot apply a uniform standard
  - -- Subjective counting problem re-emerges

- **Precinct Count Optical Scan**
  - -- Available for 2 decades
  - -- Machines can give voters second chance
  - -- Subjective hand recounts still a problem

- **Direct Recording Electronic**
  - -- Available for over a decade
  - -- No independent record of count
  - -- We're at the programmer's mercy
  - `http://www.cs.uiowa.edu/~jones/voting/taubate.html`

Reforms Proposed

- **Mark-Sense Scanner Regulation**
  -- Vendors must document "what is a vote"

- **Conduct of Elections**
  -- Give voters chance to correct overvotes
  -- Hand inspect all overvotes not corrected
  -- Routinely hand count 1 race in 1 precinct
  -- Canvass includes overvotes and undervote
  -- Canvass includes spoiled and challenged ballots

- **Hand Counting Rules**
  -- Do not rely on machine model
  -- Distinguish between required and acceptable marks
  -- Use other marks on same ballot to determine intent

- **Recounts**
  -- Allow recount if 1% margin
  -- Allow recount if 1% spoiled or challenged ballots
  -- Recount on a different machine from first count
  -- Hand count all overvotes and undervotes in race
  -- Hand count all ballots if 1% spoiled or challenged

- `http://www.cs.uiowa.edu/~jones/cards/optical.html`

Reforms Opposed

- **Remote Internet Voting**

Nothing that requires a web browser should be allowed until we can prove that the voting system cannot be subverted by the vendor of the web browser!

- **A Single Standard Voting System**

Put all your eggs in one basket, and when the flaw in that basket is found, you have nothing to fall back on.

- **Reliance on High Tech for Handicapped Access**

There are remarkably inexpensive low-tech methods for addressing the vast majority of handicaps.

- **Electronic Vote Transmission**

Until we have an open standard with a documented level of security, we are stuck with proprietary protocols.

- **Massive Spending on New Systems**

Technological fixes for human problems are not durable.
First we should fix the laws governing what we have!