Election Technology and Problems in the Field

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ACCURATE
Outline

• Punchcard/ Lever
• Optical Scan (CCOS, PCOS)
• DRE Voting Machines
  – Full-face vs. Scrolling, w/ VVPAT
• Ballot Marking Devices, Other Systems
• Registration Systems
• Problems You May Encounter
Punchcard Systems

• Two styles: Votomatic and DataVote
Lever Systems
Optical Scan

Precinct-based (PCOS)

Centrally Counted (CCOS)
InkaVote Plus

- Used in Los Angeles for most precinct voting
- Uses an inked stylus
- Can be precinct or central
DRE Voting Systems

• “full-face” vs “scrolling” machines

Sequoia  1242  MicroVote  Unilect
ES&S  Hart  Sequoia  Diebold
Ballot Marking Devices

AutoMARK

Populex

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Others

Vote-PAD: essentially a laminated template
• Has “nubs” next to holes
• Large page turning assists
• Can be used with existing optical scan

IVS Inpsire:
• Can be used on phone
• In precinct audio
• Verification of paper via bar code scanner
Registration/Activation Systems

• DESI’s e-pollbook
• Card Activators
• ES&S PEB
Problems (General)

• Tamper-evident Seals
  – Should not be broken unless witnessed
• Power outages, plug problems
  – Most have batteries, battery indicators
• Room configuration
  – Should protect privacy of voters
• Modem problems
  – If problem, don’t transmit
Problems (Opscan)

• Mis-calibration
  – Can be overly-sensitive or not sensitive enough
  – May require certain types of pen
• Central count does not provide feedback
  – problematic for elderly, poor, uneducated and language and ethnic minorities
• Have ran out of memory, started to count backwards in the past.
Problems (DREs)

- Screen/scroll calibration problems
- Sensitivity (low or high), fingernails/objects
- System crashes, reboots
- Audio ballot problems, alt. language problems, incomplete/wrong ballots
- Memory cards are ballot boxes
- Full-face: buttons can fail, cast vote button
- Paperless: may lose votes, error messages are important
Problems (DREs w/ VVPAT)

• People do not examine VVPATs
  – Any privacy guard, etc. should be off by default
• Printers can jam, misrecord, damage VVPAT
  – Certain systems allow votes to be cast even though there are paper problems
  – Loading paper wrong can mean no VVPAT
• Chain of custody problems
  – Paper records can be official records
Problems (BMDs)

• Newer, can be a bit more raw
  – Can crash, may take 10 mins. to reboot
• Ballots can be different size than opscan in precinct.
  – Ballots can be counted at another time.
• Keypad problems
  – Reports of AutoMARK keypads being bad
Problems (Reg. Systems)

• Crashes, reboots
  – Maryland had problems with syncing and frequent crashes.
  – With DESI e-pollbook, use the mouse, not the touchscreen.
• Voter not on rolls, already voted
  – May have to vote provisionally.