
End-to-End Voting Systems

A State Perspective



Presented at
The NIST End-to-End Voting Systems Workshop
October 14, 2009

Presentation to the NIST E2E Voting Systems Workshop – October 14, 2009

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Outline

Framing the Issue

What are the evaluation criteria?

Alternate Innovations

Where else might resources be applied?

Recent Innovations in North Carolina

What North Carolina has done and why?

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Primary Concern

Complete Election Process

Vs

Voting System

The real issue is having accurate, secure and trusted elections.

Voting systems are an important component but only a part of the picture.

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Contribution

Objective impact on election process

Vs

Subjective impact on public satisfaction

We must have accurate and reliable elections in fact AND in the public's perception.

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Public Satisfaction

Public confidence is a sub-topic of public satisfaction

Is public confidence the highest current priority or do other issues require attention first?

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Other Requirements

Resources required

What is it going to cost?

What kind of resources will be needed?

Source of those resources

Impact on areas losing resources

Transition issues

What will it take to make the change?

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What is the evidence that E2E systems will improve public confidence?

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Pure DRE Systems



I don't trust it!

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DRE System with VVPAT



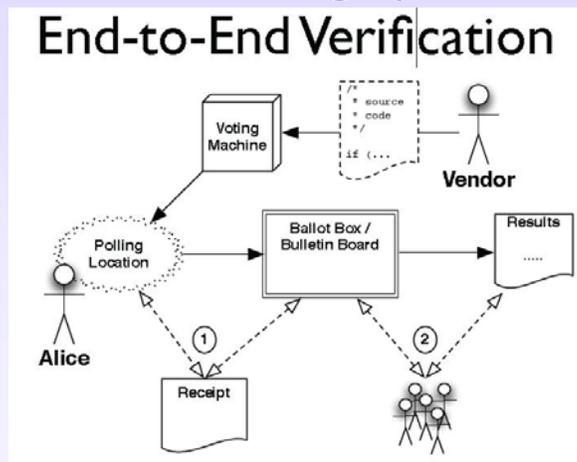
I still don't trust it!

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E2E Voting System

End-to-End Verification



Why would I trust it now!!!

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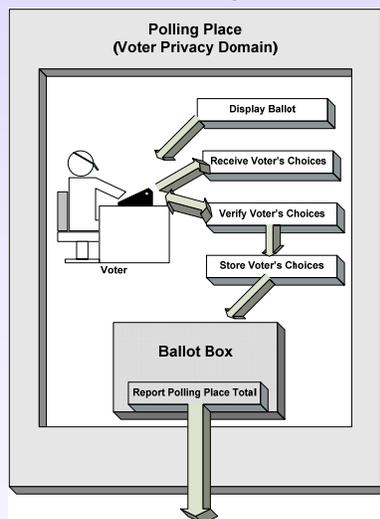
Borrowing from Archeology

*The best evidence is multiple,
contemporary, independent records*

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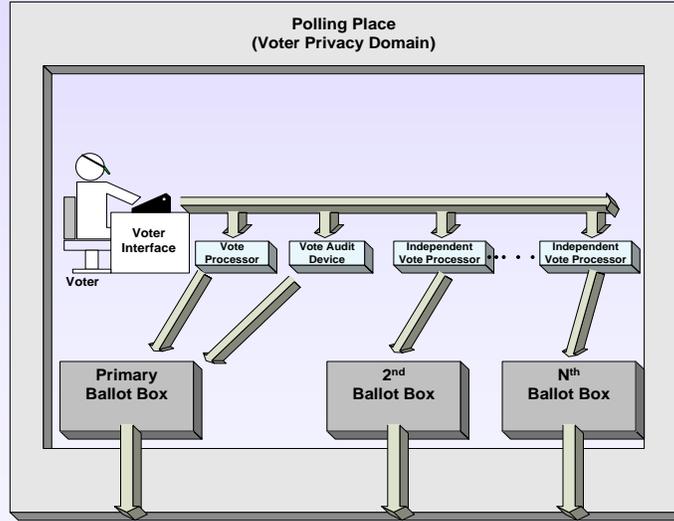
The Privacy Domain



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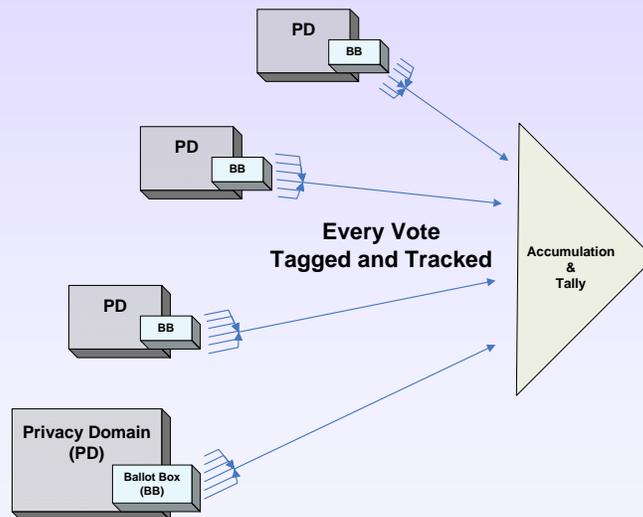
Multiple Contemporary Records



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The Public Domain



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Recent Innovation in North Carolina

North Carolina State Board of Elections

State Wide | Select County

SECOND PRIMARY 2008

Registered Voters: 4,108,644	Counties Partially Reported: 0 of 100
Ballots Cast: 75,069	Counties Completely Reported: 100 of 100
Website last updated: 7/15/2008 3:11:20 PM EST	Voter Turnout: 1.83 %

OFFICIAL RESULTS



- Alamance
- Alexander
- Alleghany
- Forsyth
- Franklin
- Gaston
- Onslow
- Orange
- Pamlico

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Recent Innovation in North Carolina

Wake County Board of Elections

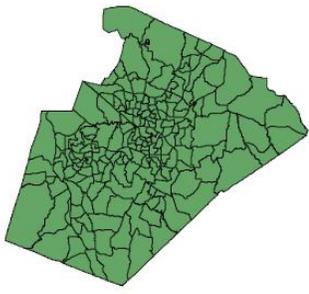
2008 Second Primary Election
June 24th, 2008

Registered voters: 365,203	Precincts Partially Reported: 0 of 198
Ballots Cast: 6,744	Precincts Completely Reported: 198 of 198
Website last updated 7/8/2008 11:13:25 AM EST	Voter Turnout: 1.83 %

OFFICIAL RESULTS

Precincts Reporting

Not Participating
 Completely Reported
 Partially Reported
 Has Not Reported



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Recent Innovation in North Carolina

Wake County Board of Elections

2008 Second Primary Election
June 24th, 2008

Registered Voters: 358,203
Ballots Cast: 6,744
Voter Turnout: 1.88 %

Precincts Partially Reported: 0 of 198
Precincts Completely Reported: 198 of 198

Website last updated: 7/8/2008 11:13:25 AM EST

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OFFICIAL RESULTS

SEARCH CONTESTS (1 of 1) Go To Page 1 Display 5

COMMISSIONER OF LABOR - DEM (Vote For 1) VOTE TYPE SUMMARY CONTEST DETAIL MAP

198 of 198 Precincts Reporting

	Percent	Votes
Mary Fant Donnan (DEM)	73.83%	4,974
John C. Brooks (DEM)	26.17%	1,763
		6,737

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