

# Humboldt County Election Transparency Project

Mitch Trachtenberg  
Volunteer with ETP

Creator of Ballot Browser Open Source Vote  
Counting Software

# Acknowledgements

Carolyn Crnich, Humboldt County Clerk and  
Registrar of Voters

Kevin Collins, Tom Pinto, all ETP volunteers

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# Key points

Ballots, after they are cast in secret, should be public documents, countable by anyone.

Scanning ballots enables redundant counting to be done off of the scanned images.

Open source counting software enables a small group of volunteers to do complete independent recounts.

# Simple is best.

It's not enough to report the results; people want to know how the results were obtained.

**NO MAGIC.** No reliance on “experts”.

# Some history

HumETP started in 2008.

In November 2008, we found 200 ballots had been dropped by Diebold's "Accuvote" software.

Sec. Of State Debra Bowen found major flaws in "Accuvote," and decertified the version used in Humboldt.

Volunteers have scanned every ballot cast in Humboldt in every election since.

# Easy as 1,2,3 (4,5,6)

1. Scan ballots, numbering them
2. Save “signed” images to disk
3. Spot-check saved images against paper  
...then...
4. Determine darkness of images at vote targets
5. “Dark enough” = Vote
6. Provide ballot-by-ballot results as spreadsheet

# Open source software

All requirements already exist, open and free:

Linux (Operating System)

GPG (Digital Signing)

SANE (Scanning)

Tesseract (OCR)

Python and PIL (Image Processing)

Open Office (Spreadsheet)

MySQL/PostgreSQL (Database)

# TEVS

(Trachtenberg Election Verification System)  
TEVS adds some ballot processing, but is mostly  
“glue” connecting together preexisting software.



Demo

# Now.

OCR builds ballot layouts from image.

Automates counting of 98+% of votes.

Shows ballots overlaid with votes as determined  
by the software.

Reports ballots/votes needing manual count.

Captures write-in images.

Real soon.

Documentation for users and extenders  
(programmers).

Bells, whistles.

# Further information:

[www.humetp.org](http://www.humetp.org)

[www.humtp.com](http://www.humtp.com)

[democracycounts.blogspot.com](http://democracycounts.blogspot.com)

[www.tevsystems.com](http://www.tevsystems.com)

[www.mitchtrachtenberg.com](http://www.mitchtrachtenberg.com)

Mitch Trachtenberg

PO Box 1352

Trinidad, CA 95570

[mjtrac@gmail.com](mailto:mjtrac@gmail.com)