

# Contractual Barriers to Oversight in Electronic Voting

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“if at any time [...] the Certified DRE: (i) is decertified for use in California by the Secretary of State or any other governmental agency, including any judicial authority, or (ii) fails to comply with any Election Laws and Regulations, then in either instance and upon County's election, Contractor shall, at no cost to County [...] provide to County a non-DRE System reasonably acceptable to County, including all the goods and services [...] necessary for County to conduct Elections.”  
(DESI/San Diego Co., CA, 2003)

# Overview

- Introduction
- Data and Methodology
- Analysis
- Recommendations
- Possible Future Work

# Introduction

- Contractual agreements are key to e-voting business relationships
- They specify in detail many aspects of elections cycle
- They directly affect oversight activities
- What can we learn from existing contracts about barriers to oversight?

# Data

- Convenience sample of 55 contracts
- Cover 18 states (25% from CA)
- 5 vendors (82% from big 3 vendors)
- Cover time period from 2000-2006
- Not all complete
- <http://accurate-voting.org/contracts/>

# Methodology

- Scanned each to 600dpi PDF w/ OCR
- Read each contract to develop a catalog of provisions of interest
- Used a key of terms for search-based extraction of provisions
- Sorted provisions for each contract by vendor and then date

# Analysis Overview

- Confidentiality/Trade Secrets
- Use Prohibitions
- Provisions for Public Records Laws
- Escrow Release Conditions
- Testing and Analysis
- Benchmarking
- Mandatory Upgrades

# Confidentiality/Trade Secrets

- In general, contracts restrict duplication, reverse engineering (decompilation) and translation.
- Some items explicitly not confidential
- Software output restricted in some instances
- Items protected when they shouldn't be

“Client shall not, under any circumstances, cause or permit the adaptation, conversion, reverse engineering, disassembly, or decompilation of any Software or Equipment.” (Hart/Yolo Co., CA 2006)

“Licensee shall not... Reverse engineer, disassemble, decompile, decipher or ***analyse*** the Software in whole or in part;”  
(Sequoia/Bergen, NJ 2001)

“It is expressly understood between the parties that [...] unit pricing constitute[s] proprietary information the nature of which is a trade secret, and that disclosure of this information may place [DESI] at a competitive disadvantage.” (DESI/Alaska, 2001)

# Use Prohibitions

- Restricted hardware
- Restricted locations
- Some third-party servicing allowed
- Modifications might have to be returned to vendor
- Carve-outs for “voters” and “individuals participating in an election”

“Customer shall not [...] Use the DESI Application Software outside of Customer’s jurisdiction [...]”  
(DESI/Solano Co., CA, 2003)

“Voters are also authorized to interact with the Sublicensed Software, in a manner consistent with voter instructions.”  
(Hart/Orange Co., CA, 2003)

# Public Records Laws

- Most contracts recognize open/public records act laws, and require notice
- However, sometimes the ***contract itself*** is considered confidential
- Some contracts limit liability for damages due to such disclosure

“[Confidential] Information includes the terms of this Agreement.” (ES&S/Bexar Co., TX, 2002; ES&S/Will Co., IL, 2003)

“this Agreement shall be subject to disclosure pursuant to the California Public Records Act.” (Hart/Yolo Co., CA, 2006)

“The Supervisor shall not be liable for any damages suffered by Sequoia as a result of any disclosure of Sequoia’s materials pursuant to [the Florida Public Records Act,]” (Sequoia/Palm Beach Co., FL, 2001)

# Escrow Release

- Escrow agreements are typically separate, don't have many of these
- Release conditions allow access to escrowed source (&c)
- Typical conditions:
  - Bankruptcy or going out of business
  - Ceases to support or maintain a product
- LA County's includes right of verification

- “(iv) Vendor ***makes the source code generally available*** to other users of the Licensed Materials (in which case Vendor shall make it available to the Secretary under similar terms and conditions);
- (v) Vendor ***is unable to correct a logic error or other bug*** in the software and such failure to correct constitutes an uncured breach of its obligations under Schedule E [the Software License Agreement]; or
- (vi) For ***purposes of temporarily auditing and/or testing the software source code*** held in escrow in accordance with the Escrow Agreement.” (DESI/Ohio, 2004)

# Testing and Analysis

- Jurisdictions don't have access to source code and technical materials
- State-level contracts have increasingly included such access (but varies)
- Alameda 2006 contract with Sequoia includes conditional access plus an “open source” provision.

“In addition, if requested, DESI will cooperate in order to enable a third party that is acceptable to the State to conduct an independent security review of its source code.”  
(DESI/Utah, 2006)

“In the event that “open source code” becomes a requirement of California law, Sequoia will work with the CA Secretary of State under the rules/regulations in effect at that time to comply with the law”  
(Sequoia/Alameda Co., CA, 2006)

# Benchmarking

- Some contracts restrict publication of benchmark testing results.
- “benchmark test” is not typically defined and could cover stress-testing, performance-testing and user-testing.

“Client shall not publish any results of benchmark tests run on any Software.”  
(Hart/Orange Co., CA, 2003)

“CUSTOMER is prohibited from publishing the results of benchmark test runs on the Oracle Software.”  
(ES&S/Bexar Co., TX, 2002)

# Mandatory Upgrades

- Older contracts included *mandatory* upgrade provisions.
- “[DESI] may provide the Customer with unsolicited error corrections or changes to the Firmware which [DESI], at its sole direction, determines are necessary for the proper operation of its APPLICATION SOFTWARE and/or tabulating equipment, and the Customer shall incorporate these corrections or changes into the System within ten (10) days of receipt from [DESI].”  
(DESI/Alaska, 2001)

# Recommendations

- Negotiate at the state level for better terms
- Contracts should be disclosed
- Should allow limited access to source code
- Should allow disclosure of ballot definitions, audit logs, vote data
- Other testing/evaluation should not be forbidden
- Should limit damages due to public records act disclosure and breaches of confidentiality

# Future Work

- Develop exemplar contract provisions and best practices for contracts (not just transparency... *e.g.*, decertification)
- A stratified sampling strategy would allow more quantitative conclusions
- Longitudinal analysis using historical contracts (before 2000)