VOTER INFORMATION WEBSITES STUDY
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INTRODUCTION

Section 245(a) of the Help America Vote Act (HAVA) mandates that the U.S. Election Assistance Commission (EAC) conduct a thorough study of issues and challenges presented by incorporating communications and Internet technologies. Section 245(a)(2)(C) indicates that the EAC may investigate the impact that new communications or Internet technology systems in the electoral process have on voter participation rates, voter education, and public accessibility. In addition, Section 241(b)(9) allows the EAC to periodically study election administration issues, including methods of educating voters on all aspects of voter participation.

Since the 1990s, pioneers in the election community have utilized the Internet to post voter and election information. Many of the approaches have produced impressive results and important insights, including making elections more efficient; but posting voter information on the Internet may have unintended consequences as well.

Early election websites focused on providing static information about the election process, voter registration, or election night results. Voters were often presented with a large amount of information and were expected to filter out inapplicable information themselves – a sometimes overwhelming task. As a result, these websites evolved from providing static election information to presenting dynamic and customized information for and about an individual voter.

This study is based on a review of active voter information websites in the fall of 2005 through 2006, from which 71 sites were identified as voter information websites and selected for in-depth analysis. Common functions of these websites were cataloged and quantified and presented to a panel of experts for discussion and review. The EAC's goal in undertaking this study is to provide guidelines that will assist election administrators in developing Voter Information websites that best serve voters.

Deciding *what* information to provide and *how* to provide it is the most important step in developing a voter information website because the information and method of delivery define the implementation process. The recommendations that follow outline key considerations that can be referenced when election officials consider constructing a voter information website. The suggestions can be used as a how-to guide to assist in developing new projects, or as a reference point for established projects.

SUMMARY OF FINDINGS

In interviews with election officials and the information technology (IT) professionals working for election jurisdictions, some distinct patterns emerged in the development of voter information websites. Projects that were developed with dedicated time and thoughtful consideration stood out. Likewise, projects that came together as add-ons to existing sites rarely received high marks. Many of the projects at the focus of this study were created as a result of use of the Internet and associated technologies in daily operations. The development of computerized voter registration lists and the software to

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maintain them, removed the barrier to creating a database that a Voter Information website can query.

This change lent itself to the development of voter information websites that were primarily voter registration look-ups. These provided election officials with state-wide access the basic utilities for per-voter reporting required so that election officials could answer the basic question, "Am I registered to vote?" from the authoritative database. A natural progression was to provide voters with the ability to use their Web browser to answer the question themselves.

Several officials commented that voter information websites have reduced calls to the election department on Election Day. Increase in traffic and frequency of lookups against the voter registration database were also cited as evidence of the popularity of the website. Many websites that provided voter registration took the next step to provide voters with ballot information specific to their jurisdiction. Those that did provide voters with information on candidates and contests increased usage of their website.

As voter information websites progress from voter registration lookup to interactive sample ballots, the complexity of the website and its relevance to the voting public increases. Growing public acceptance of these websites as a main source of voter information increases demand and raises expectations.

Additional features make a website more complex, and with complexity challenges that arise. As websites become more popular, there are greater possible usability or privacy issues that arise. A popular website can also strain under heavy usage during high-profile races, performance issues can occur when election officials can least afford them, and planning is required to anticipate spikes. Once voters have grown accustomed to the voter information website, and have integrated it into the routine they follow at each election, election bureaus may have to field calls about uptime and availability.

Well designed and implemented websites can bring in many more users. More users mean more voters will find answers online. If a regular visit to the election jurisdiction’s website is part of a voter's routine, voters are more likely to assist in the maintenance of voter rolls by checking their registration. A popular and informative voter information website can be an invaluable tool for a jurisdiction to inform voters of changes to election procedures, voting equipment, polling locations, and to encourage informed participation.

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SECTION 1: UNDERSTANDING THE AUDIENCE

OVERVIEW
Understanding voters' interests is critical to effectively communicating with the voting public. A voter information website's utility may be tied to successfully pairing the information election administrators wish to distribute with information voters seek.

To better provide the most useful information, election administrators must understand the different concerns and common interests of the audiences that use voter information websites. Though some questions and concerns apply to all voters, there are concerns specific to subcategories of users. Key audiences break into seven common constituencies: Six categories of voters and two organizational categories.

The seven identified voter information website audiences to consider are:

VOTERS:
- First-time voters
- Infrequent voters
- Consistent voters
- Voters with special circumstances
- UOCAVA voters
- Absentee voters

ORGANIZATONS:
- Advocacy organizations and Campaigns
- The Media

First-Time Voters
First-time voters require the whole gamut of election information, including any peculiarities of the election or registration process (e.g. first time voters must vote in person, etc.).

Infrequent Voters
Infrequent voters are generally unfamiliar with the election process, and may be concerned that their inactivity will result in de-registration. This group of voters may need to be refreshed on where to vote and whether or not they are still registered.

Voters with Special Circumstances
This group typically uses voter information websites to obtain contact information for local election officials. Accordingly, it is always important for these voters to have easy access to information like phone numbers, mailing addresses, and email addresses.

Consistent Voters
Because of their high interest in the voting process, consistent voters often rely on sources other than official voter information websites to obtain information on upcoming

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elections. When consistent voters do use an information website, they are usually looking for additional information about an election, such as proposals and sample ballots.

UOCAVA Voters

UOCAVA voters' main concern is typically registration since these voters need to vote from their last official residence. In addition, UOCAVA voters need the ability to check sample ballot information and look for additional candidate information that may not be available from an overseas location. UOCAVA voters also have increased interest in the turnaround time for processing absentee ballot applications. Consequently, this group of voters may find utilities that track absentee ballot processing very useful.

Absentee Voters

Absentee voters want to participate in the election but cannot do so in person on Election Day. These voters need to know how to obtain and fill in an absentee ballot. Usually this can be done with static information (footnote def). In-country absentee ballot voters are often consistent voters, but because the absentee balloting process often takes place weeks before major media coverage, many absentee ballot voters may vote with less detailed information on the election. Absentee voters who hold their ballots until closer to the election greatly benefit from voter information websites that help them access local election information from distant locations.

Voter information websites can also assist absentee voters through the ability to remotely track the absentee ballot process, from application, to delivery, and final processing in order to quickly resolve postal or processing problems.

Organizations

Advocacy Organizations and Campaigns:

Advocacy organizations and campaigns typically seek information such as bulk registration lists. Real-time access to such lists allows advocacy groups to verify new registrations as they progress. Advocacy groups may also use voter information websites to verify individual voter registrations—this study uncovered two websites that were specifically created to screen for irregularities in voter registrations. [1]/[2]

Media:

Media outlets are generally eager to add voter information features to election coverage, but they are hesitant to allow users to leave their own websites. The benefit of partnering with media outlets is that it allows election administrators to reach a larger audience, but media outlets may prefer to display data differently than election administrators.

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[1] "Voting in Memphis", (*www.shelbynet.com/voting* - organization's main page, *www.shelbynet.com/wconnect/vhistfile.htm* - voter registration look-up page) was launched to check voter registration in three Tennessee counties against death records (SSID confirmation).

[2] "Sound Politics", (*www.soundpolitics.com* - organization's main page, *www.soundpolitics.com/voterlookup.html* - voter registration look-up page) was launched with the intention of monitoring reported inaccuracies in King County voter registration.

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SECTION 2: COMMON VOTER CONCERNS

OVERVIEW

After reviewing the websites listed in APPENDIX D, several voter questions consistently emerged as important common voter concerns[3]:

- Am I registered to vote?
- Where do I vote?
- Who/What is on the ballot?
- How do I use voting equipment?
- Did my vote count?

Am I registered to vote? Voter registration lookup:

The information returned by a voter registration lookup includes items located on a voter registration card, such as name, voting district, and party affiliation. Some lookup tools also include a history of attendance at the polls (but not a record of how they voted). Typically, a voter is required to process a voter registration lookup before a voter information website can display polling place location or sample ballots.

Where do I vote? Polling place lookup:

Some polling place lookup utilities link the address of a polling place to a public mapping service such as Google Maps©, Yahoo! Maps© or MapQuest©. Several election departments also reference maps generated by internal Geographic Information Systems (GIS) departments.

Who/What is on the ballot? Sample ballots:

A sample ballot presents voters with information that includes only those contests in which the voter will vote. Sample ballots can either be displayed as web pages or as documents (e.g. downloadable Microsoft Word or Adobe PDF format). These documents and/or Web pages represent the actual ballot style that the voter will see at the polling location.

Candidate Information:

There are three main ways to supply candidate information: (1) official candidate statements collected by election administrators, (2) links to official candidate websites, and (3) links to third-party information sites, such as the League of Women Voters.

Candidate Statements:

Collecting candidates' statements allows voters equal access to candidate messages and provides a benefit to candidates. As voter information websites become more widespread, it is likely that candidates will welcome the opportunity to provide statements on such sites.

[3] For purposes of this study, the question: "Who won?" was excluded because it does not require tying results to a voter registration lookup utility.

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Links to Candidates' Official Websites:
One concern about linking to a candidate's website is that it may appear as though election administrators are endorsing one candidate or another. However, this can be alleviated by alerting users when a link takes them to an independent website.

Links to Third-Party Information:
Similar to linking to candidates' official websites, election administrators should clearly alert users when they are being directed to websites hosted by third parties to avoid confusion concerning endorsements.

Other Ballot-Related Information:
Many elections include initiatives, amendments, or referenda which are required to be worded as they would appear if adopted. Consequently, they often include official legal wording that may pose a challenge to voters with low literacy levels. To help clarify what a legal clause means or what effect it would have, voter information websites may want to provide links to explanations of the official language.

How do I use voting equipment?
Poll worker outreach and training campaigns are typically more effective tools for teaching voters how to use voting equipment than voter information websites. Voters commonly expect that voting equipment is either self-explanatory or someone at the polling place will assist users.

Provisional Ballots: Did my vote count?
HAVA requires states to provide voters with provisional ballots in certain circumstances. When elections are contested, one of the first areas contenders target are provisional votes. Consequently, it is advisable to create a utility where voters can verify that provisional ballots have been counted.

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SECTION 3: PRELIMINARY PLANNING

OVERVIEW

Much of the information voters seek online is static and does not need to reference a database. For example, voter registration forms, absentee voting procedures, election dates, and results are critical components of election information websites, but they do not change over time and are not specific to the voter. Adding information specific to voters requires consideration of several factors that are not presented by static sites.

The first step in creating a voter information website is to decide what information will be posted on the site and how it will be displayed. The project outline for developing and implementing a voter information website will vary depending on these factors and the amount of information each site seeks to convey.[4]

RECOMMENDATION 3.1: Answer the question "Am I registered to vote?"

This is one of the key questions voters ask on Election Day. Websites that do not attempt or are currently unable to answer this question will have limited efficacy. In addition, failing to answer this question may lead to third party organizations creating their own utilities to answer the question, reducing election administrators' ability to control accuracy.

RECOMMENDATION 3.2: Review legal considerations.

Consider relevant laws and administrative rules that pertain to public access to voter information. If the law does not currently anticipate public access to voter information online, consult with legal counsel and legislators during the planning stage to ensure continued compliance with laws and rules.

RECOMMENDATION 3.3: Update voter records as often as possible.

Due to security concerns outlined in detail in SECTION 6: SECURITY AND PRIVACY, the registry of record should not be exposed to the Internet. However, as a general rule to ensure accuracy, online records should be updated as often as they are changed on the registry of record. The frequency of updates will be dictated by volume, capacity, and proximity to Election Day. For example, in a jurisdiction with Election Day registration, having pre-existing registrations online on Election Day can greatly increase efficiency and decrease duplicate records

RECOMMENDATION 3.4: Adopt a neutral voice.

The most useful voter information website is the one that is updated and maintained regularly during the campaign season by election administrators themselves. Voter information websites should be presented with a neutral voice, and should be absolutely free of candidate promotion.

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[4] This section assumes that the voter information website's primary audience will be individual voters.

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RECOMMENDATION 3.5: Use effective design principles.
Some of the websites reviewed in this study provided useful information, but the designs made accessing information complicated.[5] A good website will present useful information in a simple and consistent format. This area of planning may be enhanced through the use of an expert consultant who can advise on industry standards. Further discussion on this subject can be found in SECTION 5: ACCESSIBILITY.

RECOMMENDATION 3.6: Contract out work as needed.
Depending on a jurisdiction's resources, IT staff may not have the breadth of knowledge or time to develop a web application internally. Reports from the websites studied indicated that in-house development hours were not regularly documented, and some cost estimates were under reported.[6] Deciding whether to contract out work also requires consideration of the availability of internal staff during peak website usage times.

RECOMMENDATION 3.7: Review contractors' prior work.
Although voter information websites are a relatively new specialty, it may be useful to consult experts when planning one. Some things to consider when selecting an expert are quality of service, average time websites are inoperable, availability of technicians, cost, and quality of work-product. For many of the websites reviewed in this study, election administrators and internal IT staff worked in concert, so that administrative, technological, and legal concerns could be integrated in the planning.

RECOMMENDATION 3.8: Consider commercial off-the-shelf (COTS) and open source solutions.
None of the websites in this study used COTS or open source, but many used components of each. Reviewing available options will help ensure that whatever design method adopted conforms to state policy goals.

RECOMMENDATION 3.9: Establish clear goals before development.
Determine the features of your voter information website during the planning process. Define your desired feature set before you begin development. Have a clear understanding of how you're going to collect the information necessary to build your voter information website before dedicating resources or hiring contractors.

RECOMMENDATION 3.10: Inventory data sources.
Investigate current data sources and document their location, current file format, frequency of updates, and duplication. This will allow election administrators to coordinate information gathering and aggregating data from disparate sources.

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[5] City of Chicago website (prior to November 2006 revision).
[6] *Example of cost accounting challenges:* CanIvote.org sponsored by the National Association of Secretaries of State was widely reported at cost of under $10,000, but the actual cost accounting for the functionality of an aggregated website like CanIvote.org requires acknowledgement of the costs of the systems that actually provide the functionality. Although CanIVote.org can be advertised as "being able to provide registration information," its cost is the cost of creating a site that links to that service, not the service itself.

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RECOMMENDATION 3.11: Plan for high capacity peaks.
Promoting a voter information website will increase the site's popularity, especially as Election Day approaches (See SECTION 5: MARKETING AND PROMOTION). Determine in advance if the bandwidth currently available will accommodate increased activities immediately before, during, and after Election Day. In addition, assess IT resources to enable emergent problems with the website to be efficiently resolved.

RECOMMENDATION 3.12: Consider intellectual property and copyright issues.
Research websites that provide the capabilities each jurisdiction wishes to implement and determine if any of the products currently online are patented, copyrighted, or licensed. Consult with legal advisors to ensure compliance with applicable intellectual property and licensing laws.

RECOMMENDATION 3.13: Document project development and system functionality.
At each stage of user interface design, project planners should develop and document context-sensitive helpful hints for users. Documenting this information will allow users to self-diagnose problems with the interface and can also serve as technical guidelines for election call center staff, who may be required to assist callers with the website. Documentation also serves to inform potential future staff and contractors who may be hired after the voter information website is developed.

RECOMMENDATION 3.14: Budget for development, hosting, capacity, and promotion.
It is important when planning a voter information website to account for all resources involved, including production, design, bandwidth, maintenance, programming, data collection, and staff hours. Costs associated with sites that initially start as add-ons to preexisting voter registration databases must take into account changes and maintenance to systems over time. Sites that are built in-house should use time tracking tools to accurately assess staff hours involved. Further, although outside contractors generally track their own hours, election jurisdictions should also incorporate internal staff hours used to supplement contractor work.

In addition to planning and design costs, promotion can be a significant cost. Creating a voter information website and failing to promote it may leave it unused by the public. Investment in a voter information website should include a promotion campaign. The more a voter information website is promoted, the more voters will use it (correspondingly, it should be noted that the more traffic a website receives, the more it will cost to host). General guidelines and promotional considerations are discussed in SECTION 5: MARKETING AND PROMOTION of this report.

RECOMMENDATION 3.15: Track usage patterns.
Using site-monitoring tools to observe usage patters is an indispensable tool in keeping a voter information website reflective of voter concerns and relevant. For example, site-monitoring tools can track how long users spend on each page, how they navigate the

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site, and how often files are downloaded. These patterns can change over time, so continual monitoring is advisable.

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SECTION 4: FEATURES

OVERVIEW

The following list of features has been collected from various voter information websites across the country.[7] The features listed below answer questions outlined in SECTION 2: COMMON VOTER QUESTIONS.[8]

RECOMMENDATION 4.1: Provide voters with the answer to the question "Where do I vote?"

Websites that do not attempt to answer "Where do I vote?" have limited efficacy and will result in all voter questions concerning where to vote being routed to a state or local call center. In addition, not answering this question on a voter information website may encourage third party organizations to create their own websites, which can limit accuracy.

When answering this question, include the street address of the polling place. Some voter files do not provide complete street addresses for polling locations. Websites built on voter files that reference a polling location at a church or a school but do not include the address can make it difficult to plot on a map. If polling places change frequently between elections and the information is not always available, inform voters when the information will be available again.

RECOMMENDATION 4.2: Add map links to polling locations.

Maps are a useful addition to the polling location identification information provided to voters. This is especially beneficial to new residents and when polling places are somewhat obscure. There are many competing services that provide great mapping services for free.[9]

RECOMMENDATION 4.3: Do not provide voters with driving directions.

Driving directions pose a potential privacy and liability risk and could be an unnecessary distraction. Voters wishing to access directions to polling place locations would be better served to use dedicated mapping websites.

RECOMMENDATION 4.4: When including mapping programs, use the simplest versions available.

Many of the websites reviewed in this study included mapping functions that did not seem directly relevant to polling place location. For example, the ability to zoom in and out of a map may not be necessary and could provide a distraction to voters looking for a general geographic orientation. In addition, more features mean more potential for confusion and technical difficulties. The scale of polling place identification maps should

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[7] See Appendix D for a list of websites reviewed in this study.

[8] This section assumes that websites will reference an online voter registration file to answer the question, "Am I registered to vote?"

[9] Such as Google Maps© and Yahoo Maps©

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be relatively consistent. Despite features that may be available (zoom-in, city view, 3D, etc.) through state geographical information systems (GIS), highlighting map capabilities over functionality is unnecessary. Be sensitive to avoid providing too much information or too many features.

RECOMMENDATION 4.5: Provide voters with a sample ballot.
A Sample ballot is the most significant section of voter information website when measured by the time a voter spends reviewing information online. Polling location and registration data can be reviewed quickly; however, sample ballots, especially if linked to additional reference information, can take time to review. Jurisdictions contemplating a voter information website should consider including sample ballot display functionality in its site.

RECOMMENDATION 4.6: Display sample ballots exactly as they will appear on Election Day.
Including information about races in multiple jurisdictions on a single sample ballot may confuse voters. The goal should be to provide voters with an exact replica of what they will see on Election Day. Voters can react negatively when presented with too much information

RECOMMENDATION 4.7: Link sample ballots to helpful information.
The most popular feature of the more mature voter information websites studied were "interactive sample ballots."[10] An interactive sample ballot is a ballot that has been tailored to a specific voter, and provides links to additional information about candidates and proposals. In many cases, these links are to pre-existing published non-partisan voter guides, but they can also be links to campaign websites, campaign finance information and other non-partisan sources. The few sites across the country that have built interactivity into sample ballots have tracked strong user popularity.

RECOMMENDATION 4.8: Do not link to incumbent government websites on a voter guide.
Linking a sample ballot to an incumbent's official government-funded website may persuade voters that election administrators are biased or that incumbents are using shared resources to their benefit.

RECOMMENDATION 4.9: Give voters the ability to track absentee ballots online.
A few voter information websites reviewed in this study included the ability to check the status of an absentee ballot application.[11] The ability to follow the absentee ballot process is especially critical to overseas and military voters.

RECOMMENDATION 4.10: Allow users to check the status of provisional ballots online.

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[10] *www.publius.org (1996-present)*
[11] *Macomb County, MI: http://itasw0aep001.macombcountymi.gov/AbsenteeBallot/faces/SearchAbsentee.jspx*

The websites in this study were primarily focused on delivering voter-specific information prior to an election. The ability to verify the status of a provisional ballot is one voter-specific post-election function that few websites performed.[12] Given the provisions in HAVA that require notification of the status of a provisional ballot, voter information websites provide an easy solution to communicating with voters concerning provisional ballots while lessening the burden on election administrators.

RECOMMENDATION 4.11: Provide instructions for how to use voting equipment.
Providing information on how to use voting equipment is valuable when there are changes to voting equipment. In addition, providing instructions allows new voters and voters new to the jurisdiction with information that can help alleviate wait times on Election Day. In addition to static files, (word, PDF), interactive examples and videos are good resources as well.

RECOMMENDATION 4.12: Post Election Day times and polling location hours prominently.
While a single election calendar can cover an entire voting population, do not miss any opportunity to remind voters of these important dates and times.

RECOMMENDATION 4.13: Provide other readily-available information neatly and in a logical manner.
This list of features is not exhaustive, and there have been many instances of other information presented through a voter registry lookup, such as candidate specific campaign finance information, and disability access. Present other information where it makes sense.

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[12] *State of Indiana: http://www.indianavoters.com/PublicSite/Public/PublicProvisional.aspx*

SECTION 5: MARKETING AND PROMOTION

OVERVIEW

There is a direct relationship between how much promotion a voter information website receives and the capacity such a site has to accommodate immediately prior to Election Day. In nearly every website studied that tracked usage patterns, basic voter usage remained consistent, but a marked increase was noted on or around Election Day. Accordingly, election administrators must address the following issues:

1) How much will the website be promoted?
2) How much traffic should each jurisdiction anticipate?

In the course of reviewing websites for this study, two patterns emerged. First, voter information websites were part of a larger outreach campaign, such as a public service announcement. The other approach used the voter information website as the central point of distribution for election information. The second approach likely maximizes traffic to voter information websites.

RECOMMENDATION 5.1: Consider different user audiences in promoting a voter information website.

Understanding the audience of voter information websites is a key to the success of your voter information website. See SECTION 1: UNDERSTANDING THE AUDIENCE Understanding the Audience, for a breakdown of voter interest categories. There is limited demographic information available concerning usage of voter information websites. However, general trends showing the demographics of the users of the Internet indicate that Internet use shoots up in younger Americans.[13]

RECOMMENDATION 5.2: Repetition equals reinforcement.

The single most effective way to promote a voter information website is to reinforce the connection between voter questions and relevant information on a jurisdiction's voter information website.

RECOMMENDATION 5.3: Use traditional media to promote voter information websites.

While it is possible to advertise on the Internet, the same principles that apply to political campaigns can help promote voter information websites. Traditional media- radio, television and print advertising can be critical to increase awareness of your services and drive users to your website.

RECOMMENDATION 5.4: Include your voter information website address on all voter outreach and election materials.

[13] "… while total usage in the United States is now at 71.1% of the population, among those in the 16-24 age group it is 90.8%." from the UCLA World Internet Project (2004) http://www.international.ucla.edu/bcir/research/article.asp?parentid=7488

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Any form of voter outreach by election officials and staff should include reference to a voter information website. In addition, it is a good idea when giving interviews to mention the website's address whenever possible.

RECOMMENDATION 5.5: Encourage election staff to direct voters to the voter information website.
Encourage election staff (and Secretaries of State or chief election officials) to mention the voter information website as a resource to anyone who asks for information. The amount of traffic you get on the website will vary depending on how much you promote it and how effective your promotion is

RECOMMENDATION 5.6: Adjust your capacity to account for your promotion.
The amount of traffic on a voter information website will vary depending on how much promotion it receives and how effective the promotion was. During peak times, voter information websites can become inundated with users, while off-peak times may result in few users. Election jurisdictions should plan to meet the high demand times as necessary, without taxing resources too heavily during low demand times.

RECOMMENDATION 5.7: Identify and consider factors that may increase traffic.
Examples of some factors that may increase traffic are voting age population, popularity of the Internet, and the presence of a college or university within a jurisdiction. As each jurisdiction is different, election administrators should take into account who might be using the site and how demographics may influence usage.

RECOMMENDATION 5.8: Make voter information website addresses simple and easy to remember.
Many states still have complicated Web addresses. This can be a problem when working a quick reference into an interview, or when a voter tries to recall a voter information website they've heard on the radio. Whatever website address an election jurisdiction chooses should be easy to remember.

There is not enough empirical data to conclusively recommend for or against using a distinct URL. There is an obvious communication advantage to *"statevotes.com"* over *"www.state.st.us/departments/elections/vote"* but *statevotes.com* can also easily be confused with *"statevotes.org"* which could be a website set up by spammers or spoofers. A ".gov" address may help clarify ownership, but as a precaution, any site that uses domains other than .com address should also purchase the corresponding .com and .org addresses. In order to avoid voters accessing incorrect or deliberately misleading information created by outside parties.

RECOMMENDATION 5.9: Build promotion around a single website address.
Some proposed models of voter information website design include modular components of statewide systems that are available for use by local jurisdictions. While this allows local jurisdictions flexibility, exposures to multiple official website addresses is also confusing.

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RECOMMENDATION 5.10: Allow official voter information websites to be used as a tool for local voter outreach programs.

Don't underestimate the value a voter information website can have for third party organizations preparing voters for elections, and the benefit such partnerships may present to election jurisdictions. A Web address that is shared across multiple jurisdictions can be especially useful to third-party organizations that often operate in multiple jurisdictions.

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SECTION 6: SECURITY AND PRIVACY

OVERVIEW

Voter information websites allow access to potentially sensitive information and should be carefully constructed to avoid jeopardizing privacy voters or the integrity and security of the records. Voter information can be compromised by falling into the wrong hands or by being modified to the detriment of accuracy. This section is divided into a discussion of concerns of the privacy of a voter and the security of the website.

The Privacy of an individual voter's record sparked debate during workgroup discussions. There are two schools of thought on the distribution of public information. Because voter registration records are public, it is legal to distribute this information without considering individual privacy. Still, few voters consider the first name, last name, middle name, city of residence, street address and birthday "public" information. Privacy on the Internet is a high-profile concern in the public consciousness. The fear of exposure to fraud and identity theft inhibits many people from supplying what appears to be personal information.

A voter information website assumes a single voter as the target user. Website language was directed at "you" the voter and the information supplied, registration status, polling locations, disability access, sample ballots, etc, are intended to promote an efficient election day voting experience. When voter information websites begin to combine purposes it is often at the peril of a voter's personal privacy and security.

In general, a succinct transaction seems to be the most secure and efficient method of distributing information about an individual voter. This approach requires voter information websites to ask only for information absolutely needed to complete the request and return only the information a voter absolutely needs. The total information exchanged on a voter information website, input and output, should be as brief as possible, to protect the integrity of the election and the interests of individual voters.

Recommendations in this section are followed by what is threatened in parenthesis.

6.1 EAC RECOMMENDATION: Do not expose the official registry file to the Internet. *(official voter registry file security)*
Information that is available on the Internet is exposed to threats of tampering; computers exposed to the Internet are exposed to denial of service attacks and the threat of intrusion. Create a copy of your authoritative database to use for your voter information website and regularly update it from the authoritative database. No one should ever be able to change a voter's official status by compromising a website.

Security of a voter information website should be maintained and revisited over time. If a voter information website is tampered with, a voter may receive inaccurate information. Regular verification of the accuracy of the data in your exposed database is advised.

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6.2 EAC RECOMMENDATION: Do not expose data to the Internet that is not used by your voter information website. *(unused registry data security)*
This recommendation applies to the security of information that may be in the exposed registry file, but not used in the online transaction. Sensitive data such as driver's license numbers shouldn't be exposed on the Internet if they are not necessary to the function of the website, and application developers should work to avoid using such information. When creating the database that will be accessed online, unnecessary information should be removed completely, not left in place.

6.3 EAC RECOMMENDATION: Avoid asking for too much information. *(online transaction security)*
Online voter searches should be as efficient as possible. Determine and use the absolute minimum amount of information necessary to accurately identify a voter record. Unnecessary information uses resources. Consider the wasted time, computational cycles, database queries and user attention it takes to input and process six data points for every voter if three will suffice.

Websites that ask for excessive information can deter usage for other reasons. If a website asks too many question end users may avoid it because it seems onerous. Given the increase in identity related crime, users may also be apprehensive about divulging "personal[14]" information over the Internet and asking for too much information may seem invasive to the user and deter use. Election administrators should be judicious when asking for information. Even if information is technically not private, it is not safe to assume that all voters consider their name, address, and birth date open to anonymous online consumption as a matter of public record.

Asking for too much information poses another potential risk. While it seems logical that the more information that can be verified, the greater the accuracy, the possibility exists that identity thieves could set out to collect information about a voter by creating a fake voter information website. [15]

6.4 EAC RECOMMENDATION: Review and comply with your jurisdiction's security policies on encrypting data. *(online transaction security)*
Review your web policies on passing data through an encrypted connection. When asked, many of the web administrators cited that the information "was public anyway." If a voter information website limits the amount of data requested and granted, the necessity of encryption in this context is arguable, but does not appear to be harmful.

6.5 EAC RECOMMENDATION: Make sure you know who is working with your voter information. *(web development security and individual voter privacy)*

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[14] In this case, information that is perceived as "personal" such as name address and birth date regardless or official public record status.
[15] A theoretical fake website could be an exact duplicate of the official site, but collects information a voter submits then indicate that "the database is unavailable please check back later." If the official government website asks for first name, last name, date of birth and zip code or unique voter ID (or middle name, address, social security number or driver's license number) up front, before demonstrating any functionality voters could submit significant personal information before, if ever, they discover a scam.

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Chain of custody is important when dealing with voter registry data. Determine if you will use contractors and who within your organization will spearhead the project. Establish clear boundaries between tasks required of your internal IT department and those of your contractors. Know the chain of custody of your data. If contractors are going to be handling sensitive information, make sure they understand the liability and have a proven track record of security. Review policies on the use of outsourced and overseas contractors when handling sensitive voter data.

6.6 EAC RECOMMENDATION: Use increased security if you set out to vet the voter registry for accuracy, and avoid doing so at the expense of voter security. *(online transaction security and individual voter privacy)*
This recommendation applies to the security of the online transaction and voter privacy. One side of the privacy discussion contends that since voter registration information is public, people are safer if they know that it is available. In addition, the integrity of the voter registration file is enhanced when voters can verify and correct information in the file. This perspective has additional weight when viewed through the lens of states that rely heavily on mail-in balloting. Correct addresses in a mail-in ballot system may affect whether a voter receives a ballot without soliciting one. Advocacy groups have also expressed interest in the publication of addresses to aid in voter registration activities. Address verification required to maintain accurate registration files should be conducted as securely as possible, separate from the ability to verify registration on a voter information website. Unless effort has been made to authenticate a user, it is impossible to keep information about voters in one locality from being accessible everywhere. If a voter information website is designed to be a tool for vetting voter addresses to increase accuracy, it can be at the expense of voter privacy.

Although this school of thought raises important and legitimate concerns, they are not necessarily the provenance of voter information websites. Public access to voter records is necessary as a check on the integrity of the election, but anonymous public access to all data in a record is not necessary to prepare an individual voter for an election. Concern for the safety of voters through unregulated anonymous access to voter records is considerable, as is the potential damage done by identity theft. [16]

6.7 EAC RECOMMENDATION: Display as little information as possible about the voter - just enough to answer the voter's question. *(online transaction security and individual voter privacy)*
A voter registration website should reveal as little as possible about individual voters. While a voter information website can serve as a tool to check the accuracy of voter records, the public right to inspect voter records can be achieved through official documented request, and therefore does not need to be a primary design consideration.

The goal of limiting disclosure is to provide the voter with accurate information while limiting access to information useful to potential wrongdoers. Make sure you review your

[16] *"We have taken the approach that [information available online to the public] is for the functionality of what you need to do to vote." (David Tom, San Mateo County - June 2006 EAC Working Group meeting)*

website to determine if it poses a threat to voters, or the election process. The key to protecting voters and the integrity of the election when creating a voter information website is to carefully review the questions to be asked and the answers received.

6.8 EAC RECOMMENDATION: Avoid disclosing a voter's birth date or current address. *(individual voter privacy and security)*
A voter information website that displays a voter's birth data or address can inadvertently facilitate criminal activity because it is anonymous, and available anywhere, anytime. Although voter addresses and birthdates are public, entering a government office and documenting a request for an individual voter's information is more involved and can be traced. Most voters recognize if a polling location is near a current or former address, and can confirm "is this in your neighborhood?" Allowing unfettered access to names, addresses and birth dates, is an invitation to abuse them.

6.9 EAC RECOMMENDATION: Make sure your website is not a stalking tool. *(individual voter privacy and security)*
A stalker uses any means available to locate a target, and an anonymously accessible online voter registration file can be a valuable resource. Many states offer stalking victims the option to redact their personal information from publicly accessible registration lists[17], but to use these programs the voter must opt-in. Since individuals must be aware of potential threats before they can request participation in a redaction program relying on this approach alone leaves voter information exposed for anyone who does not know he or she has been targeted. It is safer to avoid exposing address information.

6.10 EAC RECOMMENDATION: Review you website to make sure it is not useful for identity theft. *(individual voter privacy and security)*
This recommendation applies to voter privacy and security. Every voter is a potential target of identity theft at any time. Examine how much voter information is disclosed and hypothetically consider if an identity thief used your website, how much information could they obtain and what could be done with it? Armed with a name, address and a birth date, a criminal could easily pursue further information for purposes of obtaining financial records or other information. Name, address and birth date alone may not be sufficient to cause harm, they are starting points for "phishing[18]" and "pretexting[19]," or other social engineering schemes.

6.11 EAC RECOMMENDATION: Make sure your website does not facilitate election fraud. *(election security)*
Anonymous access to the names, addresses and birth dates of infrequent voters could be the basis for sophisticated Election Day fraud.

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[17] As in the "Safe at Home" Address Confidentiality Program employed by several states
[18] Fighting Back Against Identity Theft, US Federal Trade Commission: *www.ftc.gov/bcp/edu/microsites/idtheft/consumers/about-identity-theft.html#Howdothievesstealanidentity*
[19] Fighting Back Against Identity Theft, US Federal Trade Commission: *www.ftc.gov/bcp/edu/microsites/idtheft/consumers/pretexting.html*

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6.12 EAC RECOMMENDATION: Use implied information when possible.
(individual voter privacy and transaction security)
A valuable method of supplying information without exposing excess information is implied information. Election authorities have all the information in a voter's record so it is possible to design website queries to leverage the information on file without divulging it. An example of implied information: if a voter's identity is confirmed and matches a registration record, that voter's polling location is displayed; if the voter's identity does not match a registration record, the voter is informed that he or she is not registered. The voter is never told explicitly that he or she is registered, but may deduce from the result of a polling location search whether or not that is the case. This approach can be described symbolically as:

if *registered = true* then display = *polling location*
if *registered = false* then display = *not registered*

The scenario: *if registered = true then display = registered* does not need to be displayed. (*Registered* is a characteristic of a voter, whereas *polling location* is an independent data object, generally considered "public" information.) Registration is implied, and by eliminating its display, fewer characteristics of the actual voter are divulged, while the voter still has the necessary information to vote.

In another example, data itself can be confirmed without exposure to the user. A jurisdiction's registrar's office already possesses each voter's name, address and birth date. An address can be verified by the user supplying a street address number, rather than the site displaying the entire address for the user to select. If the street numbers submitted match the registrar's record, then the address can be verified:

if *input = 12345 Street* and *record = 12345 Street* then display = *polling location*
if *input = 12345 Street* and *record = 56789 Street* then display = *contact your registrar*

In this case the address record is validated and no additional information about the voter is displayed to the user who inputs the data. There may be special circumstances that apply to specific voters, such as a requirement to vote in person. Take care when displaying information about voters. Depending on the sensitivity of the information, you may want to consider a separate authenticated login.

6.13 EAC RECOMMENDATION: Avoid displaying information about more than one voter. *(individual voter privacy and transaction security)*
The opposite of a limited disclosure approach might be termed a "multiple disclosure" approach. Multiple disclosures go beyond limited and full disclosures to expose information about more than one voter per query. An example of this type of voter information website implementation would be identifying all voters in residence at a specific address. The site might request the input of an address and display information on the names of the registered voters at the input address:

if *input = 12345 Street* then display = *voter 1 name, voter 2 name, voter 3 name*

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Thus, a user in possession of only an address can find information about multiple voters. An entire apartment building could be exposed in such a case.

6.14 EAC RECOMMENDATION: Avoid using lists *(individual voter privacy and transaction security)*
This recommendation applies to voter privacy and transaction security. There is no need to expose more than one voter's information to anyone using the site. Refer to the section in this document on Privacy for more details.
Similarly, using a list to confirm a voter's identity should be discouraged:

if *input = John Smith* then display = *did you mean:*

- *John Smith at 12345 Street in City X*
- *John Smith at 56789 Street in City X*
- *John Smith at 45678 Street in City Y*
- *John Smith at 54321 Street in Town Z*

Here, information for all John Smiths in this particular jurisdiction is exposed.

6.15 EAC RECOMMENDATION: Avoid information over-exposure. *(individual voter privacy)*
This recommendation applies to voter privacy and transaction security. Secondary clarification prevents the need to manually filter multiple results. A secondary question like: *"What city town or village do you live in?"* or *"What is your middle initial?"* can clarify a voter's identity without exposing it.

if *input = John Smith* then display = *What city, town or village do you live in?*

if *input = City X* and *record = City X* then display = *polling location*
if *input = Town Z* and *record = City X* then display = *contact your registrar*

6.16 EAC RECOMMENDATION: Avoid asking for obscure information. *(online transaction security)*
This recommendation applies to transaction security. Sites can disrupt the flow of a smooth user experience by asking for information outside of what is expected. Election administrators should be careful to keep the information requested within the end user's understanding of the transaction. Requesting obscure information can be impractical for two reasons: if the information requested is difficult to immediately recall, a user may get frustrated and stop. It is not uncommon for sites to ask for a driver's license number, zip+4 , voter ID, DMV ID, or even a specially requested PIN personal identification number; however, doing so forces the user to search for that information before they can obtain information they seek. You may only get one chance at delivering information to a voter online; you don't want to turn them away.

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SECTION 7: DESIGNING A POSITIVE USER EXPERIENCE

OVERVIEW

Websites must take into account the flow of information from page to page—the "user experience". A good user experience is critical to the success of a voter information website as it will encourage repeat users and positive word-of-mouth advertisement. A positive user experience is designed with the end-user in mind.

Poor design and complicated layout can deter usage. Common functions should be grouped in high visibility locations, and more obscure or detailed information can be in lower profile locations deeper into the site for committed users, or users seeking answers to very specific questions. In general, simplicity is the key. Voter information Websites should use pictographic artifacts wherever possible to avoid excessive reliance on text.

Crafting the user experience is one of the areas where outside design experts may be a valuable resource. There is also a wealth of user interface research available online, detailing good design practices for page layout and navigation. Two U.S. Government sites that have already addressed Web design and usability for government-related applications are the U.S. Department of Health and Human Services' *www.usability.gov* and the General Services Administration's *www.webcontent.gov*.

RECOMMENDATION 7.1: Move users quickly from general to specific information.

Move from the general to the specific in your information architecture. Different users will access voter information websites for different reasons. It is imperative that voter information websites move users quickly to the information they require so that users don't navigate elsewhere.

As an example, not every voter will be a first time voter, so a voter information website should avoid asking every visitor if they are a first time voter. Most website users will not belong to a specialized category, so emphasize these options as alternate branches off the main path a voter will navigate through, not as obstacles. No one wants to fill out a detailed questionnaire before they begin to use the system.

RECOMMENDATION 7.2: Employ industry standard graphic design principles and highlight the most popular features.

Graphic design, layout and intuitive flow of the user experience are in their respective industries scientific disciplines. There are experts in the field that can advise election jurisdictions about the most effective way to display material. Awkward design and layout were very common among the websites studied. While there is no one standard format for voter information websites, voters should easily see what information they will be able to access on a voter information website.

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RECOMMENDATION 7.3: Review design to ensure simplicity.
User interface design can take place parallel to the database and software development. The key concern is whether or not information is logical and available where users expect it. Watch people use the site – often small assumptions at this stage can result in major user frustration in the end product. The user interface should be tested for use on multiple browser platforms and operating systems. Usability testing should be run on static mock-ups of the website.

RECOMMENDATION 7.4: Use broad and simple language; link to legal detail as necessary.
Election laws can be complicated especially when every variable and scenario is fully documented. Voter information websites need only display broad concepts and do not need to be presented in full legal detail. When complicated concepts are unavoidable, consider whether an interactive narrated experience can help users navigate. For example:

Are you a first time voter? YES > Are you a student? YES > Did you register in person? etc.

Review the section on ACCESSIBILITY in this document for a summary of reading comprehension levels and simple, clear and accessible language.

RECOMMENDATION 7.5: Encourage voters with complex questions to contact election administrators.
Even when a voter's question cannot be anticipated, it is still possible to provide voters with the means to ask those questions directly. Besides phone numbers, providing email addresses and Web forms for voters to submit questions in their own words can assist election administrators in effectively addressing voters' needs.

RECOMMENDATION 7.6: Use clear and consistent menus and icons.
Graphic elements can assist with website legibility and usability. Development of a set of "common language icons" consistently used throughout the site, will contribute to users' sense of familiarity while researching information.

RECOMMENDATION 7.7: Use simple and recognizable visual language.
Decreasing text and emphasizing easily identifiable graphics can help users establish *where* and *how* to obtain information and/or move to the next step. Buttons or similar elements that enact a behavior, such as visually depressing when clicked, enhance users' understanding. An excess of graphics, however, can slow response times considerably during peak usage. Where graphics are not required for navigation or other essential uses, text-based alternatives should also be made available. Also, all graphics should make use of alt text for compatibility with speaking browsers (a Section 508 requirement).

RECOMMENDATION 7.8: Avoid excessive graphic design.
Poor or awkward design can be a hallmark of an underused website. Because election administrators cannot pre-determine what equipment is used to visit a voter information

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website, the design and layout should be simple and readable by as many computer and software variations as possible. Confusion or discomfort with voter information websites not only limits what the voter gains by using the site, but may deter further use.

RECOMMENDATION 7.9: Use "Frequently Asked Questions."
To address multiple scenarios without overwhelming voters, using "Frequently Asked Questions" pages and links that move from general questions (e.g. "Are you a first-time voter?", "Do you have a drivers' license or state ID?") to more specific is helpful.

RECOMMENDATION 7.10: Avoid asking voters for information that is not readily-available.
Many people don't have their driver's license number or Zip +4 memorized, for example. Asking such questions may deter users from further navigating on a voter information website.

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SECTION 8: ACCESSIBILITY

OVERVIEW

Accessibility addresses compliance with Section 508 of the Rehabilitation Act of 1973. It also encompasses emerging technologies intended to enhance user experiences, designing clear user interfaces, designing for people whose first language isn't English, and designing for people with limited literacy or Internet experience. For example, voters who access the Internet through a public library or community library may not have the permission or ability to install special software or browser plug-ins such as Flash or Adobe Reader.

RECOMMENDATION 8.1: Establish Section 508 as a minimum requirement for usability.

Section 508 of the Rehabilitation Act of 1973 requires that federal agencies make their websites accessible to persons with disabilities. Subpart B, 1194.22 of Section 508 sets out standards for website compliance, which are located at: *www.section508.gov*. The United States Access Board is the federal agency that developed the accessibility standards; a standards guide, frequently asked questions, and other resources are available on the Board's website at: *www.access-board.gov*.

Although Section 508 dictates accessibility for users with disabilities, 508 requirements still may not address usability for all users. Therefore, it is advisable that election jurisdictions implement usability testing, which aims at designing the most practical and easy to use website.

RECOMMENDATION 8.2: Follow foreign language requirements for printed materials on the website.

Many jurisdictions have significant populations for whom English is a second language. In designing a voter information website, election jurisdictions should apply federal, state, and local laws regarding printed material translation equally to online content.

RECOMMENDATION 8.3: Ensure that content is written at a basic or intermediate literacy level.

Functional literacy is measured in gradations by The National Assessment of Adult Literacy (NAAL). NAAL was conducted in 2003 by the U.S. Department of Education to measure English literacy in American adults.[20] The 500 point NAAL scoring system was separated into four ranges: Below Basic, Basic, Intermediate and Proficient. In 2003, the average Document Literacy score for all adults fell within the Intermediate range. More resources are available at: www.nces.ed.gov

Except where specific wording is legally required, written material should not exceed a standard appropriate for the Intermediate level. In addition, since roughly 1 in 5 adults read at the Basic level and 1 in 7 read at Below Basic, use of "short, commonplace prose text" wherever possible is appropriate.

[20] The National Assessment of Adult Literacy (NAAL) *http://nces.ed.gov/Pubs2007/2007480.pdf*

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RECOMMENDATION 8.4: Ensure that website design encompasses users of below-average Internet literacy.
To accommodate users who may not be familiar with the Internet or have regular access to it, voter information websites should make user interfaces as open as possible so that access to information does not require changes to browser settings or personalization. Voter information websites should not require specific browsers, restrict usage by requiring specific software, or depend on browser features such as cookies or JavaScript to operate properly.

RECOMMENDATION 8.5: Ensure compliance with new technologies when designing a voter information website.
As access to the Internet continues to grow, users may access voter information websites from PDAs or cell phones. Some of these other forms of access require new considerations such as how their browsers render sites, and what sorts of input mechanisms they allow. Voter information websites should plan for compatibility with different Internet-ready devices because variously-sized display areas, limited input devices, and proprietary browsers will pose an ongoing design challenge to voter information websites.

RECOMMENDATION 8.6: Use simple technologies.
To guarantee access to voters who use shared computers, limit the use of plug-in technologies that require administrative privileges to install. In addition, election jurisdictions should limit website features that require frequent browser upgrades or special software to operate correctly.

As an example, Adobe Reader is a common browser plug-in used to read Adobe PDF files, but it may not be installed on every computer. If a sample ballot is presented only in PDF format and a voter is using a shared computer without the appropriate software, he or she may not be able to view the ballot. On the other hand, if a voter information database can provide a HTML representation of the ballot, all users will be able to view the ballot.

RECOMMENDATION 8.7: Display pages in printer-friendly formats.
Printable sample ballots, legible maps of polling places, and short biographies or statements by candidates (in districts where those are supplied) can be saved and/or printed by users who do not have ready access to the Internet, increasing their efficacy. In addition, creating Web pages in printer-friendly formats further allow third party organizations to help election jurisdictions inform voters by passing out information directly from a voter information website.

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APPENDIX A: STUDY BACKGROUND AND METHODOLOGY

HAVA MANDATE

In June of 2005, staff at the U.S. Election Assistance Commission (EAC) undertook a survey of public access portals available online to determine trends in voter questions and what entities were sponsoring online portals. The EAC found that there were several public access portals in operation for the 2004 Presidential election. Sponsorship ranged from locally-based governments to the independent sector and private corporations. Many of the websites were found to be duplicative, disorganized, and often erroneous. The EAC also found that voters primarily wanted two questions answered on Election Day: (1) Am I registered? and (2) Where do I vote?

Section 245(a) of the Help America Vote Act (HAVA) mandates that the U.S. Election Assistance Commission (EAC) conduct a thorough study of issues and challenges presented by incorporating communications and Internet technologies. Section 245(a)(2)(C) indicates that the EAC may investigate the impact that new communications or Internet technology systems in the electoral process have on voter participation rates, voter education, and public accessibility. In addition, Section 241(b)(9) allows the EAC to periodically study election administration issues, including methods of educating voters on all aspects voter participation.

To assist with collecting data, the EAC contracted Publius, a non-partisan non-profit organization to organize and conduct a voter information website design study and workgroup. This study is the aggregation of expert opinion at the time the study was conducted. It is ultimately exploratory in nature. The recommendations contained herein outline the current development, function and usefulness of voter information websites. As election officials define, refine, design and utilize the recommendations to build and maintain voter information websites a more accurate sense of the utility of the recommendations presented and uncovered in this study. Field experience, combined with these initial reference recommendations, and the emergence of controls should result in the possibility of a more quantitative study in the future.

At some point, the time will come to revisit voter information website design and see how well these recommendations hold up.

OVERVIEW:

Preliminary research was conducted online and over the phone. Findings were compiled and presented to a panel of experts to spark comment and discussion. The resulting expert opinion was reviewed and compiled to produce the recommendations in this document.

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ONLINE RESEARCH

In November 2005, the EAC began a comprehensive survey of voter information websites. This study reviewed hundreds of election information websites from various jurisdictions across the county. Seventy-one voter information websites[21] chosen for detailed study at a minimum could answer the question: "Am I registered to vote?" This distinction meant that the site itself had to be able to reference a voter registration file in order to qualify for in-depth study.

From November 2005 through February 2006 the selected voter information websites were reviewed and documented in three stages:

1) A thorough examination of information available online was categorized and distilled as discrete answers to anticipated voter questions. These anticipated questions were categorized in order to extrapolate the answer to the question: "What questions did the author of this website anticipate answering?" This extrapolated data was averaged across the studied websites and a distinct pattern emerged that substantiated the initial survey research: "Am I registered to vote?" and "Where do I vote?" were found to be the two most anticipated questions from voters.

2) New vectors were introduced to the aggregate data, focusing on the websites that offered the most detailed information and those that had been in existence the longest. The goal was to see what features may have been anticipated and which features had been added as service expanded. Many of these features indicated that newer full-featured websites are already building on the functionality of more established sites. Features of these more robust sites were categorized and averaged, and the most common question extrapolated from feature-rich websites was: "What is on the ballot?"[22]

3) Finally, information delivery methods were categorized and averaged to understand how the information was delivered, and extrapolate what concerns were considered in the development of the delivery method. Categories were developed and delivery methodologies cataloged, which resulted in the detailed study of privacy discussed in this document.

PHONE INTERVIEWS

The study then conducted follow-up phone interviews with the election administrators responsible for the websites identified above to gather further data about the policy and political motivations and execution of these projects. Administrators were asked a variety of questions, such as:

- How did your project come into being?
- Was it done in house?
- What were the obstacles you encountered in setting up your site?
- What went right?
- What would you do differently?

[21] Listed in Appendix D.

[22] Publius, Washington State, King County Washington, Johnson County Kansas

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- Do you have future plans for changing or expanding the site?
- How much did it cost to create the site?
- How popular is your site with your constituency?

Many interviewees were asked other follow-up questions as new issues emerged.

As part of the study, the contractor requested detailed website log-file information. However, few of the sites in the study could furnish log-file data, resulting in too few data to generate an accurate sample.

GENERAL DEVELOPMENT PATH

Phone interviews with the administrators who were responsible for the voter information on their websites revealed that there was no uniform path to voter information website development. Some election jurisdictions developed their websites through supplementary riders to their voter registration database development contracts. Some projects also started as add-on functionality to a voter registration file that displayed more information than is recommended in this study. Some of the most user-friendly voter information websites were done in-house, as were some of the most unwieldy ones. Some election jurisdictions contracted out the development of their websites while others hired consultants to assist in development, assessing user experiences and marketing.

PROJECT CONCLUSION

From April to June 2006, additional websites, many newly created for the 2006 midterm election, were reviewed and added to the study. All 50 state election websites were reviewed for changes at this time.

On June 27, 2006, the EAC hosted the voter information website design workgroup of technology experts, election administrators, advocacy organizations and other stakeholders. Participants were presented with the results of the second research study. A number of discussions that focused on voter education and website design resulted from that meeting and the research study. Feedback and recommendations from that meeting have been documented and are cited throughout this best practices document.

Edgardo Cortés, Election Assistance Commission
Karen Lynn-Dyson, Election Assistance Commission
Tamar Nedzar, Election Assistance Commission

Vince Keenan, Director, Publius, Voter Information Website Study Primary Investigator
Kenneth Paulus, Publius
Sherif Abushadi, Technical consultant
Erika Aust, Office of the Secretary of State of Washington, Assistant Director
Mark Backus, CyberLogic Consulting, Network Security Engineer
Julia Bauler, Office of the Secretary of State of Indiana
Jo-Anne Chasnow, Project Vote
Maria Delvalle-Koch, State of New Jersey, Division of Elections
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Andy Rivera, Advancement Project
Ari Schwartz, Center for Democracy and Technology
Cindy Southworth, National Network to End Domestic Violence
Janice Winfrey, City of Detroit, City Clerk
David Tom, San Mateo County
Cheryl O'Donnell, National Network to End Domestic Violence, National Field Director

Additional Reviewing Experts
Doug Chapin, Pew Center on the States

From July through September 2006, results for the research study and the workgroup comments were reviewed and preliminary findings were developed for presentation to the EAC. On September 21, the preliminary findings were presented to the EAC at a public meeting in St. Louis.[23]

The best practices final report was compiled through October and November 2006, and revised in early 2007. Online comments from workgroup participants were solicited and a third review of all 50 state websites was also done at this time. EAC staff and Publius have worked together to edit the document for final release.

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[23] *http://www.eac.gov/Public_Meeting_092106.asp*

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APPENDIX B: DEFINITIONS

Dynamic Data: Data that is tailored to the individual viewer based on the registration information supplied. For example, dynamically generated ballots make use of a voter's registration information to provide a list of contests exclusive to the individual voter.

> Examples of dynamic data include: (1) registration status, (2) polling place location on interactive maps, (3) type of voting equipment specific to each polling place, (4) type of ballot used at a specific polling place, (5) initiatives and amendments specific to each ballot, and (6) calendars of upcoming elections.

Election Information Website: A website that provides information about elections and the election process.

Static Data: Information displays that are the same for each viewer. For example, static voter information websites display generic sample ballots that may or may not resemble the actual ballot voters will see on Election Day.

> Examples of static data include: (1) how to apply for an absentee ballot, (2) election dates, (3) polling place hours of operation, (4) registration deadlines, (5) district maps and boundaries, (6) how to become a poll worker, and (7) instructions and/or frequently asked questions.

Voter Information Website: A website that provides information specific to an individual voter by referencing the current voter registration file. Voter information websites are distinct from election information websites in that they utilize public access to official voter registration records.

Voter Registration Look-up Mechanism: A utility that determines a voter's identity in order to display voter-specific registration information. Such a utility may require that the user enter identifying information; or information may be retrieved by drilling down through several menus.

Voters with Special Circumstances: Voters with special circumstances include voters who recently moved to a new jurisdiction, voters who have had their voting rights restored following a felony, deceased voters, and voters with limited reading comprehension.

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APPENDIX C: INDEX OF EAC ADVISORIES IN THIS DOCUMENT

The following are the EAC Recommendations that were presented in this document. Following each recommendation is the page number where it can be found.

Preliminary Planning - Recommendations

3.1: Answer the question "Am I registered to vote?" (P.9)
3.2: Review legal considerations. (P.9)
3.3: Update voter records as often as possible. (P.9)
3.4: Adopt a neutral voice. (P.9)
3.5: Use effective design principles. (P.10)
3.6: Contract out work as needed. (P.10)
3.7: Review contractors' prior work. (P.10
3.8: Consider commercial off-the-shelf (COTS) and open source solutions. (P.10)
3.9: Establish clear goals before development. (P.10)
3.10: Inventory data sources. (P.10)
3.11: Plan for high capacity peaks. (P.10)
3.12: Consider intellectual property and copyright issues. (P.11)
3.13: Document project development and system functionality. (P.11)
3.14: Budget for development, hosting, capacity, and promotion. (P.11)
3.15: Track usage patterns. (P.11)

Features - Recommendations

4.1: Provide voters with the answer to the question "Where do I vote?" (P.12)
4.2: Add map links to polling locations. (P.12)
4.3: Do not provide voters with driving directions. (P.12)
4.4: When including mapping programs, use the simplest versions available. (P.12)
4.5: Provide voters with a sample ballot. (P.13)
4.6: Display sample ballots exactly as they will appear on Election Day. (P.13)
4.7: Link sample ballots to helpful information. (P.13)
4.8: Do not link to incumbent government websites on a voter guide. (P.13)
4.9: Give voters the ability to track absentee ballots online. (P.13)
4.10: Allow users to check the status of provisional ballots online. (P.13)
4.11: Provide instructions for how to use voting equipment. (P.14)
4.12: Post Election Day times and polling location hours prominently. (P.14)
4.13: Provide other readily-available information neatly and in a logical manner. (P.14)

Marketing and Promotion - Recommendations

5.1: Consider different user audiences in promoting a voter information website. (P.15)
5.2: Repetition equals reinforcement. (P.15)
5.3: Use traditional media to promote voter information websites. (P.15)
5.4: Include your voter information website address on all voter outreach and election materials. (P.15)

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5.5: Encourage election staff to direct voters to the voter information website. (P.16)
5.6: Adjust your capacity to account for your promotion. (P.16)
5.7: Identify and consider factors that may increase traffic. (P.16)
5.8: Make voter information website addresses simple and easy to remember. (P.16)
5.9: Build promotion around a single website address. (P.16)
5.10: Allow official voter information websites to be used as a tool for local voter outreach programs. (P.17)

Security and Privacy - Recommendations

6.1: Do not expose the official registry file to the Internet. *(official voter registry file security)* (P.18)
6.2: Do not expose data to the Internet that is not used by your voter information website. *(unused registry data security)* (P.19)
6.3: Avoid asking for too much information. *(online transaction security)*(P.19)
6.4: Review and comply with your jurisdiction's security policies on encrypting data. *(online transaction security)* (P.19)
6.5: Make sure you know who is working with your voter information. *(web development security and individual voter privacy)* (P.20)
6.6: Use increased security if you set out to vet the voter registry for accuracy, and avoid doing so at the expense of voter security. *(online transaction security and individual voter privacy)* (P.20)
6.7: Display as little information as possible about the voter - just enough to answer the voter's question. *(online transaction security and individual voter privacy)* (P.20)
6.8: Avoid disclosing a voter's birth date or current address. *(individual voter privacy and security)* (P.21)
6.9: Make sure your website is not a stalking tool. (P.21)
(individual voter privacy and security)
6.10: Review you website to make sure it does not facilitate identity theft. *(individual voter privacy and security)*(P.21)
6.11: Make sure your website does not facilitate election fraud. *(election security)*(P.22)
6.12: Use implied information when possible. *(individual voter privacy and transaction security)*(P.22)
6.13: Avoid displaying information about more than one voter. *(individual voter privacy and transaction security)*(P.22)
6.14: Avoid using lists *(individual voter privacy and transaction security)* (P.23)
6.15: Avoid information over-exposure. *(individual voter privacy)* (P.23)
6.16: Avoid asking for obscure information. *(online transaction security)* (P.23)

Designing a Positive User Experience - Recommendations

7.1: Move users quickly from general to specific information. (P.25)
7.2: Employ industry standard graphic design principles and highlight the most popular features. (P.25)
7.3: Review design to ensure simplicity. (P.26)
7.4: Use broad and simple language; link to legal detail as necessary. (P.26)
7.5: Encourage voters with complex questions to contact election administrators. (P.26)
7.6: Use clear and consistent menus and icons. (P.26)
7.7: Use simple and recognizable visual language. (P.26)
7.8: Avoid excessive graphic design. (P.26)

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7.9: Use “Frequently Asked Questions.” (P.27)
7.10: Avoid asking voters for information that is not readily-available. (P.27)

Accessibility – Recommendations

8.1: Establish Section 508 as a minimum requirement for usability. (P.28)
8.2: Follow foreign language requirements for printed materials on the website. (P.28)
8.3: Ensure that content is written at a basic or intermediate literacy level. (P.28)
8.4: Ensure that website design encompasses users of below-average Internet literacy. (P.29)
8.5: Ensure compliance with new technologies when designing a voter information website. (P.29)
8.6: Use simple technologies. (P.29)
8.7: Display pages in printer-friendly formats. (P.29)

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APPENDIX D: LIST OF WEBSITES REVIEWED IN THIS STUDY[24]

State	Jurisdiction	Website
Alabama	Mobile	http://www.mobile-county.net/probate/
Arizona	SOS	https://servicearizona.com/webapp/evoter/select_language.do
Arkansas	SOS	https://www.voterview.ar-nova.org/
Arkansas	Pulaski	http://www.pulaskiclerk.com/
California	San Mateo	http://www.shapethefuture.org/voters/default.asp
California	Sacramento	http://www.pollingplacelookup.saccounty.net/LookupPollingPlace_SearchByDOB.aspx
Colorado	Adams	http://webapps.co.adams.co.us/ElcPoll/VoterSearch.cfm
Colorado	Boulder	http://www.co.boulder.co.us/webapps/voter_reg/promptforname.html
Colorado	El Paso	http://car.elpasoco.com/VoteRegQuery.asp
Colorado	Larimer	https://www.co.larimer.co.us/elections/voter_inquiry.cfm
Colorado	Weld	https://www.co.weld.co.us/departments/clerkrecorder/voter_lookup/index.cfm
Connecticut	Southington	http://registrars.southington.org/voterlist/voters.php
Connecticut	Vernon	http://www.vernonelections.org/voterlookup.php
Delaware	SOS	https://registertovote.elections.delaware.gov/VoterRegistration/controller?TransName=VOTERREG_MAINMENU
District of Columbia	SOS	http://www.dcboee.org/voterreg/vic_step1.asp
Georgia	SOS	http://www.sos.state.ga.us/cgi-bin/locator.asp
Illinois	City of Rockford	http://www.voterockford.com/voters/regStatus.aspx
Illinois	DuPage	http://cms.dupageelections.com/pages.asp?pageid=984
Illinois	Kane	http://www.kanecountyelections.org/VoterInformation/VoterInfo.asp
Illinois	Lake	http://www.co.lake.il.us/cntyclk/elections/voterservices/regvoter.asp
Illinois	Vermilion	http://www.co.vermilion.il.us/ctyvoterReg.asp
Illinois	Will	https://www.willcountydata.com/voternewinquiry/voter_lookup_input.htm
Illinois	City of Chicago	http://chicagoelections.com/voterinfo/default.aspx
Illinois	Champaign	https://www.champaigncountyclerk.com/elections/registration_status.html
Illinois	Cook	http://www.voterinfonet.com/sub/am_i_registered.asp
Illinois	Madson	http://app1.co.madison.il.us/CountyClerk/VoterPolling/VoterRegistration.cfm
Indiana	SOS	http://www.indianavoters.com/PublicSite/Public/PublicVoterRegistration.aspx?AspxAutoDetectCookieSupport=1
Kansas	SOS	https://myvoteinfo.voteks.org
Kansas	Johnson	http://voter.jocoelection.org/search.aspx
Kentucky	SOS	https://cdcbp.ky.gov/VICWeb/index.jsp
Louisiana	SOS	http://sos.louisiana.gov/polllocator
Maine	City of Portland	http://www.portlandmaine.gov/voter/voterlook.asp
Maine	SOS	http://www.maine.gov/sos/cec/elec/votreg.htm
Maryland	SOS	http://mdelections.umbc.edu/voter_registration/v2/vote_prod.php
Massachusettes	City of Boston	http://www.cityofboston.gov/elections/voter/
Michigan	Publius	http://www.publius.org

[24] Websites reviewed in this study were active as of the study dates: October 2005 through April 2007

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Michigan	Detroit	http://detroitvoter.info
Michigan	SOS	https://www.mcgi.state.mi.us/mivote/
Missouri	Kansas City	http://www.kceb.org/electioninfo/electioninfo.php
Montana	Yellowstone	https://secure.co.yellowstone.mt.us/elections/secure/rvoterinfo.asp
Nebraska	SOS	https://www.votercheck.necvr.ne.gov/
Nevada	Clark	http://www.accessclarkcounty.com/election/home.asp
Nevada	Washoe	http://www.co.washoe.nv.us/voters/regsearch.php
North Carolina	SOS	http://www.sboe.state.nc.us/votersearch/seimsvot.htm
North Dakota	SOS	http://www.nd.gov/sos/forms/pdf/votereg.pdf
Ohio	Butler	http://www.butlercountyelections.org/index.cfm?page=voterSearch
Ohio	Hancock	http://66.194.132.88/search.aspx
Ohio	Warren	http://www.co.warren.oh.us/bdelec/search/where_to_vote/index.htm
Ohio	Wood	http://www.co.wood.oh.us/boe/VoterSearch.htm
Ohio	SOS	http://www.sos.state.oh.us/sosapps/elections/voterquery.aspx
Ohio	Franklin	http://www.co.franklin.oh.us/boe/apps/voter/index.asp
Ohio	Hamilton	http://www.hamilton-co.org/BOE/votersearchs.asp
Pennsylvania	SOS	http://www.dos.state.pa.us/voting/cwp/view.asp?a=1206&Q=446253
Pennsylvania	Allegheny	http://www.county.allegheny.pa.us/votedistricts/
Rhode Island	SOS	http://www.sec.state.ri.us/vic/
South Carolina	SOS	https://webprod.cio.sc.gov/SCSECVoterWeb/voterInformationSearch.do
Tennessee	City of Memphis	http://www.shelbynet.com/wconnect/vhistfile.htm
Texas	Montgomery	http://www.co.montgomery.tx.us/election/vrlookup.asp
Texas	Collin	http://www.collincountytexas.gov/elections/voter_registration/voter_registration_card_voter.jsp
Texas	Dallas	http://dalcoelections.org/voters.asp
Texas	Denton	http://elections.dentoncounty.com/go.asp?Dept=82&Link=292
Texas	Fort Bend	http://vote.co.fort-bend.tx.us/WebVoter/default.asp
Texas	Harris	http://www.harrisvotes.org/non_frames/geninfo.htm
Texas	Midland	http://www.co.midland.tx.us/elections/VoterDatabase/input.asp
Texas	Nueces	http://www.co.nueces.tx.us/countyclerk/elections/search/
Texas	Tarrent	http://inet.tarrantcounty.com:8010/ElectionCGI/gac1fw1p
Texas	Travis	http://www.traviscountytax.org/showVoterSearch.do
Utah	Utah	http://www.co.utah.ut.us/Dept/ClerkAud/Elections/VoterSearch.asp
Utah	Davis	http://www.daviscountyutah.gov/clerkauditor/elections/registered_voter_search/registered_voter_search.cfm
Virginia	SOS	http://www.sbe.virginia.gov/cms/Voter_Information/Where_Do_I_Vote/Polling_Place_Lookup_request.asp
Washington	SOS	https://www.secstate.wa.gov/elections/lookup.aspx
Washington	King	https://www.metrokc.gov/elections/pollingplace/voterlookup.aspx
Washington	Whatcom	http://www.whatcomcounty.us/auditor/election_division/general_information/voter_lookup/IE6/Index.asp
Washington	Sound Politics	http://www.soundpolitics.com/voterlookup.html
West Virginia	SOS	http://www.wvvotes.com/voters/am-i-registered.php

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