

**From:** [Jeff Barrett](#)  
**To:** [Gina Anderson](#)  
**Subject:** 200-45 Review - Polling/Secure Voting System  
**Date:** Thursday, February 17, 2011 3:00:52 PM

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Hello Gina,

We'd like to invite the Academic Senate to participate in the following review under the 200-45 Administrative Computing Policy:

Project: Polling/Secure Voting System

Sponsors: School of Law

Details: <http://admincomputing.ucdavis.edu/projects/law-polling.cfm>

Overview:

- Polling means different things to different people. At its core, a polling system provides the ability to ask a population of users a predefined set of questions. The goal is to collect a useful set of data that can be manipulated and reviewed in some meaningful way.
- The polling system presented here was initially designed to meet the needs of the Law School Community as a secure voting system. It was quickly determined that with some additional effort the system could serve as the basis for all online survey, voting and RSVP needs at the school. As other campus units began to demonstrate similar needs, it was determined that the system could be made available campus-wide with little increase in programming effort.

Status:

- We are just now initiating the conceptual 200-45 review process for this project, and we are seeking a brief statement summarizing the Academic Senate's feedback/position. You can send any Senate feedback directly to me, in whatever electronic format (Word, PDF, etc.) is most convenient for you.
- As with other projects, 200-45 provides a venue for ongoing review and discussion. In addition to a formal Academic Senate response, direct comments from Senate members are always welcome. (As previously discussed, we are careful to distinguish between individual comments and the official positions of campus organizations.)

Best Regards,

Jeff

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If members wish to comment directly, we have established a SmartSite for 200-45 project reviews. For those who have not yet joined, directions for signing up and participating are as follows:

To access the 200-45 Review SmartSite

1. Go to SmartSite (<http://smartsite.ucdavis.edu>) and select the Log In button in the top right corner.
2. Enter your UC Davis LoginID and password.
3. The first time you access the site, you will need to join the 200-45 Review site so you can participate in the discussion forum.

- To join, click Membership under the My Workspace tab in the top left corner.
- Select Joinable Sites at the top of the Membership window.
- Select Join under the 200-45 Review entry. (The site list is alphabetical, so it should be near the top.)
- You now should see a 200-45 Review tab to the right of the My Workspace gold tab (or in the More pull-down menu in the upper right corner).

4. Click on the 200-45 Review tab to enter the site.

To provide feedback or ask questions regarding a project under review

1. Within the 200-45 SmartSite, choose Project Forums.
2. Select the specific project (called a Topic in SmartSite) that you would like to discuss.
3. Within a Topic, you can choose Post New Thread to add new comments or questions.
4. To contribute to an existing discussion or respond to a question, select the item of interest and choose Reply.

You can also pose questions directly to the project contacts; they are listed on the project page referenced above.

(For examples of previously submitted projects and feedback, please see <http://admincomputing.ucdavis.edu/projects/>.)

Be green - please print only when necessary

# Polling/Secure Voting System

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## Policy 200-45 Conceptual Review

**Prepared by: Jamie Butler**  
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**02/01/2011**

**Polling / Secure Voting System  
Policy 200-45 Conceptual Review**

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## **Polling / Secure Voting System Policy 200-45 Conceptual Review**

### **Overview**

Polling means different things to different people. At its core, a polling system provides the ability to ask a population of users a predefined set of questions. The goal is to collect a useful set of data that can be manipulated and reviewed in some meaningful way.

Expanding on the core concept of polling, many administrative tasks can be accomplished. The central concepts of the polling system can be translated into a voting/ballot system, RSVP system, and a group scheduling tool. Leveraging the campus authentication and some basic information on affiliations, the system can provide secure polls to specific subsets of the campus community.

The newly designed polling system will be made available as a hosted service offering. The hosted service will also include jQuery plugin and a web services API for enhanced access. Users from all schools, colleges, and administrative units will be encouraged to utilize the system.

The polling system was initially designed to meet the needs of the Law School Community as a secure voting system. It was quickly determined that with some additional effort the system could serve as the basis for all polling and voting needs at the school. As additional programming effort was being discussed to make the system robust enough to meet all of the various polling needs of the Law School, other campus units began to demonstrate similar needs. After some review, it was determined that the system could be made available campus-wide with little increase in programming effort.

### **Business Need**

Initially, this project was started to address a critical need for secure electronic voting by the Law School's Student Government. In an effort to reduce user error, reduce vote tally times, and increase student involvement with the Student Government, the President requested an online voting system for elections.

While the original intent was to provide secure voting, during the planning phases it was determined that the system could serve a variety of needs within the Law School community. The initial system was designed to be flexible enough to provide secure voting, polling, and RSVP functionality. Some of this functionality is available in online systems such as SurveyMonkey. However, a lot of the polling and voting that is conducted on campus collects sensitive information that should not be delivered to a third-party system with little expectation of privacy or data security.

Additionally, ADMAN has identified "Online Confidential Voting" as one of their top three IT priorities. This system could meet the needs of all secure online voting for the entire campus.

### **Value and Impact**

Leveraging the Law School's existing system will minimize the additional development effort needed to create a full featured enterprise ready system. Incorporating the different response types will further expand the benefits of such development efforts by allowing the system to serve multiple functions.

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The system will be available as a hosted solution to all of campus. Users will be able to make polls on an ad-hoc basis without the need to involve technical support. The system will integrate with existing campus resources such as LDAP and CAS to identify and authorize access to individuals and polls.

The system can be used for all confidential voting across campus, thus eliminating the need for departments to invest resources to develop or purchase their own systems. The system can also be integrated with the Campus Content Management System (CMS) to enable public/anonymous polling, thus eliminating the need to spend money on SurveyMonkey.

### **Opportunities and Constraints**

The existing system that will become the basis for this new system is currently written in .NET. While platform and language aren't as important as sound design and programming techniques, it is important to mention that this project will be written in C#. The system will also include a mix of authenticated and unauthenticated web services for data access and manipulation.

Ongoing funding for this project could potentially be an issue. It is our intent that this process helps flush out some of the ongoing costs for maintaining this system and helps develop an equitable distribution of those costs.

This project is a priority for the Law School and helps us solve some organizational needs. However, our priorities can change based on external factors.

### **Initial Ideas and Assumptions**

The system will be developed and hosted initially by the Law School. Once system adoption becomes campus-wide, the system should be transferred to a virtual server farm at the Campus Data Center. All initial costs of development will be covered by the Law School.

The system will be developed using C# and CA&ES's ASP.NET MVC framework UCDArch.

Polls will be created through an administrative interface on the hosted polling server. Users will be able to choose between anonymous or authenticated polling. Access to authenticated polls can also be limited, based on username, using specific roles from LDAP or uConnect. A predefined set of templates will be available to assist in the creation of poll types such as public polls, RSVPs, or secure voting.

A robust set of reporting options needs to be available for each poll. Furthermore, the results should be available for export for additional statistical analysis.

Anonymous polls will be truly anonymous, even if the user is authenticated. The system will record that the user has submitted a response, but the specific response will not be tied to the user. There have been discussions of using a one-way hash to provide the user with a response receipt. The hash could then be used to audit their response within the system. Unless this is identified as a specific need by a unit on campus it will not be designed into the system.

To empower the poll creators to deploy the poll wherever they wish, the system will include a web services API and a jQuery plugin. The jQuery plugin will enable non-authenticated polls to be displayed

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on any public facing website without the need for custom programming. The web services api will enable customized user interfaces such as departmental intranets to leverage the polling system.

Additional information is needed to determine the onboarding process for users. Perhaps everyone within the university should automatically have access. Alternatively, department administrators can provision access based on demonstrated need and training. This area needs to be addressed in subsequent planning documents based on input from the community.

While our business processes are well understood internally, many departments may handle things differently. It is important to understand these differences so they can be handled by the system. If the system is not flexible enough to handle these nuances, lower adoption rates would negate the development costs.

### **Assumptions:**

- These issues for the Law School are similar to issues at other departments/colleges.
- Our solution will meet the needs of other units.
- An ongoing funding model can be developed to reduce the support costs to the Law School.
- This project will take roughly 6 months to complete.

## Polling / Secure Voting System Policy 200-45 Conceptual Review

### Possible Use Cases:

#### As a replacement for SurveyMonkey

Instead of going to an outside service to create polls campus community members will be able to create surveys and run them on the central campus polling server with a .ucdavis.edu address and a look and feel that complies with campus standards. Surveys can be either anonymous, e-mail verified, or authenticated with CAS.

#### RSVP for events

A department wants to have a form on their server integrated with their existing web technologies that will let them collect RSVP responses for an event. By adding a jQuery module they can connect to a form they have designed on the polling server. Responses can be either e-mailed one at a time, e-mailed in digests, or await collection by download from the polling server.

#### For use with the Faculty Merit process and other elections

A department can use either the central polling server or the API to host a CAS authenticated voting system that provides truly anonymous voting. Votes are stored separately from voting rolls and reporting can be set to not respond until a minimum number of votes have been cast, or the vote is over.

### Possible Polling/Voting Scenarios

