Part I

The External Environment

Chapter 2

E-Democracy

Opening Case Study

Maryland's New Social Media Campaign Rule

A new law enacted in 2010 in Maryland shows the influence new social media technologies have on political campaigns (Wilkinson, 2010). Maryland now requires political candidates to identify their online campaign material. This legislation passed by a 11-1 vote by the state General Assembly's Joint Committee on Administrative, Executive and Legislative Review after a hearing last month. Proponents argued that by passing this law early it allows candidates for the fall 2010 election to know the rules up front. The law expands the current campaign material law to include electronic media such as social media sites, microblogs, and online ads created by a political committee, making them subject to "authority line" requirements. This authority line is a declaration of approval listing the committee that paid for the space and the campaign treasurer's name. This has been previously placed on broadcast in print, television, and radio advertisements. These ads typically read "I'm Candidate Joe Smith, and I approve this message" or "paid by the Committee to Elect Joe Smith."

With this new law, Maryland is the first state to extend the rule to cover the online realm. Facebook applauded the new law, viewing it as providing clarity on the legal use of social media in campaigns. Other states such as Wisconsin, California, and Texas are expected to follow and produce similar legislation.

Most states have ignored social media such as Facebook and Twitter when it comes to political communication.

Social media is just appearing on radar screens in state campaign finance and has been only minimally addressed. The penalties for not posting the tag lines on social media or other electronic communication depend on the depth of the violation but can include a $1,000 fine or the inability to hold public office for 4 years. In addition, the federal government is also constrained by the Hatch Act of 1939, which generally forbids federal workers from participating in political activity while in the workplace on government time, but social media adds a new dimension to this law (Lipowicz, 2010). Federal agencies posting on Facebook or Twitter may not post web links to political candidates' websites or to online newspaper articles on the political activities of any federal executive, according to a new guidance issued by the Office of Special Counsel.

Chapter Objectives

There are six primary objectives of this chapter on e-democracy:

1. To understand the most important theories of e-democracy in public administration
2. To discuss declining trust in government and how information and communication technology is expected to influence trust
3. To discuss the role that information and communication technology plays on politics and political campaigns
4. To discuss electronic voting or e-voting, examining support for and opposition against this technology
5. To discuss the role of social media technologies on e-democracy
6. To discuss the role of the Internet in the 2008 general election in the United States

Introduction

In this chapter we discuss the role electronic democracy, or e-democracy, has on governments. The first part of this chapter presents some of the most important theories of e-democracy. This is followed by a discussion of trust in government, something that has declined precipitously in the United States since the mid-1960s. The role of information and communication technology (ICT) in politics is also examined. Political campaigns have been influenced by ICT by, for example, the use of websites as a tool politicians can use to provide information to the public. Another important issue of e-democracy is that of electronic voting. We discuss some of the pros and cons of this method of getting citizens more engaged in elections. Social media technologies can be used in e-democracy; their role is discussed as well as

some common technologies currently used. Finally, this chapter illustrates the use of ICT in the 2008 campaign for president of the United States.

Framework for Conceptualizing E-Democracy

One framework used to examine e-democracy has four main components, namely stakeholders and policy, methodology, ICT, and environment (**Figure 2-1**). All these components have an impact on creating a more sustainable e-democracy system (Funilkul and Chutimaskul, 2009). This chapter uses this framework to understand the scope of e-democracy in contemporary governments.

Stakeholder and Policy

Stakeholders are citizens, the government, the private sector, and political parties. These stakeholders can be both participants in the system and supporters. Policy for e-democracy involves the regulations written by government to achieve the intended objectives of e-democracy development. To achieve in the development of e-democracy there must be a clear aim to increase transparency and openness in policy development.

Methodology

This provides the right direction of e-democracy development and the guidelines for controlling and monitoring its progress. There are five stages of e-democracy development. The *initiation stage* determines the feasibility, emphasizing the design and implementation of an e-democracy system in accordance with citizens' needs. The *defined stage* is concerned

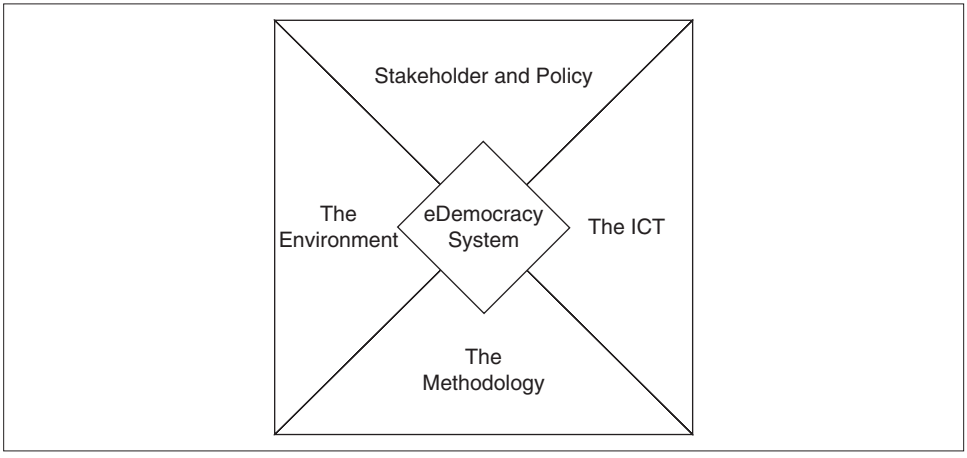

Figure 2-1 *E-Democracy Framework* (From Funilkul and Chutimaskul, 2009)

with clearly defining the personnel involved in its development and understanding the objectives of the e-democracy system. The *repeatable stage* involves the development of e-democracy that has a systematic plan that can be examined. The *management stage* involves the collection of related documents and analysis of strengths and weaknesses of the e-democracy system. The *optimizing stage* is the correcting of the development in a continuous process of the e-democracy system.

Information and Communication Technology

ICT gives citizens the ability to communicate with each other to access and participate in the political process. Internet technology, mobile and wireless technology, collaboration technology, and enterprise applications are examples of common technologies used to facilitate e-democracy. To facilitate e-democracy, the benefits and costs of each of these technologies must be understood to promote its further development.

Environment

The environment in e-democracy development consists of such issues as security and privacy, collaboration, quality, and ethics. These issues all have an impact on the outcome of e-democracy development. Consistent with the sociotechnical perspective, the environment has a tremendous influence on the outcomes of e-democracy. This chapter uses this framework to understand the scope of e-democracy and the issues associated with its development.

E-Democracy Theories

E-democracy is the use of communications devices to enhance the degree and quality of public participation in government (Kakabadse et al., 2003). The Internet can enable citizens to vote electronically in elections and referendums, and it can be used to facilitate opinion polling. Several different perspectives on e-democracy are presented in this chapter.

There are four primary objectives to applying ICT to the democratic decision-making process (Macintosh, 2008, p. 91):

1. Reaching a wider audience to enable broader participation
2. Supporting participation through a range of technologies to cater to the diverse technical and communicative skills of citizens
3. Providing relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed contributions
4. Engaging with a wider audience to enable deeper contributions and support deliberation

E-democracy is a way of broadening political participation by enabling citizens to connect with one another and their elected public officials through ICT (Chadwick, 2006). Information technologies can be used instead of, or in conjunction with, traditional practices of democracy. ICT can have a role in enhancing community cohesion, deliberation, and participation in the democratic process.

One way of assessing the relevance of ICT for democracy is to ask the following four important questions (Anttiroiko, 2003, pp. 125–126):

1. *Institutions:* To what extent are the ICT-based citizen-centered solutions and applications integrated in the practices of existing political institutions and how do they affect actual decision-making processes?
2. *Influence:* Are the e-democracy experiments or practices such that people involved truly influence the issues of interest?
3. *Integration:* Is the potential of technology used optimally in integrating the basic elements of the entire e-democracy process, including agenda setting, planning, preparation, decision making, implementation, evaluation, and control?
4. *Interaction:* Is the potential of technology in disseminating information, facilitating interaction, and conducting political transactions used so as to increase the transparency, efficiency, flexibility, cost-effectiveness, and inclusiveness of a democratic system?

The role of ICT in public sector organizations in relation to e-democracy can be examined in four stages: electronic bureaucracy, information management, direct democracy, and civil society (Kakabadse et al., 2003). Each of these stages of e-democracy can proceed in a linear step-wise fashion, where it is possible for a government to progress from one stage to the next. However, it is possible for governments to combine stages or skip stages to reach higher development.

First, the *electronic bureaucracy* model is the electronic delivery of government services. The focus on this model is to improve efficiency in the operation of delivering government services. Through electronic bureaucracy there is outreach to citizens through simple service delivery improvements, which helps to provide more trust and confidence in government and its institutions. The focus on electronic bureaucracy is outreach to citizens through public service delivery.

The second model is *information management,* which provides electronic information to citizens. For example, presidential speeches, as well as bills introduced by Congress, can be posted online. This involves creating more transparency in government by placing information online. The focus on information management is to improve transparency to citizens, which enables more trust and confidence in government and enhances democracy.

The third model is *direct democracy*, the populist one that enables citizens to register their views on current issues. This model is most often equated with direct democracy of citizens in their government. For example, Web 2.0 technology

enables citizens to have a greater influence on government decisions. The focus on direct democracy is that citizens are able to influence policy decisions through the use of ICT.

The final model is the *civil society,* where there is a transformation of the political culture brought about by ICT. There is a strengthening of the connections between citizens and their government (Milward and Snyder, 1996). This is the most difficult stage to achieve because of the dramatic change that needs to take place.

Another perspective by Jaeger (2005) is that e-government and democracy have three main approaches: individualist, communitarian, and deliberative. The *individualist* perspective is that e-government will promote individual empowerment and direct participation in the political process. The individual will be able to make informed decisions because of enhanced access to information. The *communitarian* approach is that e-government will create a community virtually through networks and online town halls. Social network technologies have the potential to drive this approach. The third approach is the *deliberative* approach of e-government by creating a form for democratic interaction through open dialogue and creating a consensus through debate and discussion. E-government in the deliberative view can move citizens toward understanding the issue and coming to some sort of conclusion.

There is a downside of e-democracy, according to Kakabadse and colleagues (2003). E-democracy is mainly an expression of the individual providing input into the government system by digital means. The difficulty lies in aggregating the preferences of these individuals in a meaningful way. Excessive participation can lead to government paralysis. E-democracy can extend the influence of democratic decision making into government responsibility, which is especially problematic in times of crisis in which not being able to reach a decision can have very adverse consequences. Another issue with e-democracy is that ICT is not equitably distributed; therefore, a minority of individuals generally have access. Therefore, information-poor individuals will not be able to influence the political agendas of politicians. ICT can provide better access to individuals who are well equipped, well educated, and well organized, bringing large-scale lobbying to a whole new dimension. The most serious problem of e-democracy is that of the separation of responsibility from accountability. Citizens will be responsible for influencing political decisions but will not be held accountable for the results of these decisions. Therefore, they are free to pursue their own self-interests without thinking about the interests of the collective. As a result, elected representatives would be held accountable for policies over which they had little influence. Essentially, these elected officials would not have any bargaining power, and agreements may be undermined (Kakabadse et al., 2003).

Through focus groups of chief information officers in 37 large local governments, Norris (2007) found that e-government efforts operated principally to deliver government information and services and provide greater access for citizens to government officials. Essentially, Norris found evidence for stages one and two of the Kakabadse et al. (2003) e-democracy model. However, e-government does not operate to enable

more citizen participation in government programs, decision making, e-voting, or e-democracy. E-government at the local government level is largely informational and is consistent with Kakabadse et al.'s (2003) model. In the focus group discussions of e-government, Norris (2007) found that none of the participants gave e-democracy as a reason for adopting e-government. Essentially, Norris argued that e-democracy is not on the radar screens of most American local governments as a priority for future implementation.

As an overview, most of the e-democracy models argue for the stages of its development, where governments start initially with providing information for citizens online. They then move to more advanced stages of development, more directly involving citizens in policy development, until they finally reach direct democracy through the use of ICT. Most of these models take a sociotechnical perspective, arguing for the importance of the environment influencing technology adoption.

Trust in Government

One of the often-studied areas of information technology and politics is that of the ability of technology to increase the trust citizens have in their government. Trust in government in the United States has taken a steep decline, especially since the mid-1960s. Trust in government is a measure of whether institutions perform according to expectations. With a decline in political trust there is also declining political participation and turnout at elections. When citizens are more trusting of their government they are more likely to obey laws and regulations. An increase in political trust enhances a democracy. Reversing the decline in public trust of American government is one of the major issues in modern governance, which has been a focus of much research in political science (Tolbert and Mossberger, 2006).

Research shows that e-government may have an impact on citizens and their trust of government. For instance, users of local government websites are more likely to trust local governments, controlling for other demographic factors, and use of these websites was associated with more positive feelings. Research shows that e-government is worth pursuing as a means of enhancing a trusting relationship between citizen and government (Tolbert and Mossberger, 2006). Research shows that e-government satisfaction is positively associated with trust in government (Welch et al., 2004). In the offline world, an individual who is frustrated and disappointed with government services is likely to report lower levels of confidence in government services and less trust; research indicates the same finding for the online world (Welch et al., 2004; Tolbert and Mossberger, 2006).

The primary reasons for citizens distrusting government are government inefficiency or misallocated tax dollars. Some view e-government as a tool for improving efficiency of the government and quality of service delivery as well as enhancing public participation. Research shows that those citizens most likely to gain trust in the government as a result of conducting online transactions are those with existing

high levels of trust, not those who just received a positive service experience. Therefore, governments should engage individuals with a high level of trust if their online efforts are to succeed. The overall message is that governments that want to increase trust should devote more resources to non-web-based courses of action (Parent et al., 2005). As a result, the message is clear that e-government does not represent a panacea of increasing trust and confidence in government. E-government may enhance the trust of individuals who are already trusting, but it will not bring trust to those who do not trust government in the first place.

ICT and Politics

ICT and its impact on politics and public administration can be divided into two camps, optimists and pessimists (Bimber, 2003; Pole, 2005). The *optimists* believe ICT has the ability to improve democracy. The idea is that the United States is becoming an "electronic republic" where citizens become directly involved in the decision-making process of government. This view was especially enhanced because of the Internet, which could increase citizen participation in the decision-making process. This view shows the potential of the ICT for issues such as voting, campaigns, and advocating issues. The *pessimists* argue that technology will not necessarily improve political participation and democracy because the Internet provides another mechanism that can be used by the media and interest groups to dominate discussion. This view holds that technology might be undemocratic because it can potentially restrict conversation depending on those who have access to the technology compared with those who do not have access.

Bimber (2003) examined four different phases in information revolution and the political system in the United States. The first phase, between the 1820s and 1830s, was when national political information was available for the first time to the public. This phase had a centralized, hierarchical distribution of political information. The second phase, between the 1880s and 1910s, was when more decentralized, specialized bureaucratic organizations distributed political information. The third phase, from the 1950s until the 1970s, led to the ability of campaigns to influence a mass audience. The fourth and final phase was from the 1990s to the present, with the Internet providing another means of reaching a large audience. Bimber showed that information dissemination has moved from being centralized and controlled to being decentralized as a result of ICT such as the Internet. This decentralization of information is especially seen with the use of social media technology such as Facebook and Twitter, discussed more thoroughly later in this chapter.

According to Bimber (2001), the rational approach is the most common method that political actors use to acquire information. In this approach, (1) political actors seek information to reduce uncertainty, (2) the cost of information is an indicator of how much new information is acquired, (3) if information is costly there is political activity to arrive at a solution, and (4) there is a point where diminishing returns set

in and more information has less of a return. The idea behind the rational approach and information is that the Internet and other ICTs make it much easier for citizens to participate and be engaged in the political process. However, existing research does not support this correlation between political participation and Internet use (Bimber, 2001).

Research by Musso and coworkers (2000) showed that ICT applications government provides tend to focus heavily on information and service provision functions rather than on facilitating communication between residents, policymakers, and democratic discourse. Municipal governments in particular tend to focus on service provisions rather than enhancing the democratic process for their residents. Municipal websites in California demonstrated they tended to improve management through entrepreneurial and managerial reforms rather than improve democracy by enhancing participatory reform (Musso et al., 2000).

Two political factors noted in the literature, which were shown to predict innovation in e-government, were legislative professionalism of a state government and political party affiliation (McNeal et al., 2003). State government leaders involved in professional associations such as the National Governor's Association and the National Conference of State Legislatures were more innovative in e-government. This empirical research also showed that republican-controlled legislatures were more likely to embrace e-government compared with democratic-controlled legislatures. The presumption from this finding was that republicans were more predisposed to small government, and they viewed e-government as providing cost savings. This research essentially shows differences in political parties and the use of ICT, but there is little research on this area and therefore no definitive conclusions can be drawn at this point.

Political Campaigns

The Internet has become an important tool for political campaigns. For instance, the 2004 presidential campaign demonstrated that the Internet could have an important impact on a candidate's ability to raise resources and organize activists. The campaigns of Howard Dean and John Kerry raised tens of millions of dollars from small online donations. They used websites such as Meetup.com to help candidates recruit campaign volunteers. Therefore, the Internet has become crucial to campaign politics. It has the advantage of being a very cost-effective method of communication for candidates with limited resources. However, as with most technology, there is a digital divide, as discussed in Chapter 3, between those with access to the Internet and those without access; this will impact political engagement (Herrnson et al., 2007).

There are four important functions of political campaign websites (Davis et al., 2009). First, the Internet allows the campaign to gather useful information such as background material on an opponent, polling information, and so forth. Second, campaign websites can be used for communication purposes, such as informing voters on the policy positions and biographies of the candidates. Third, campaign websites can

be used to mobilize supporters. For instance, blogs can connect supporters with the candidate, providing them with an arena to voice their opinions. Finally, campaign websites can be used for fundraising, with online donations becoming increasingly important because campaign finance laws encourage small donations.

The evolution of the Internet and political candidates indicates that in the mid-1990s, presidential candidates constructed websites and used them to promote their agendas (Greengard, 2009). However, in this Web 1.0 world these websites were merely brochures, allowing candidates to post campaign news and positions on issues. There was no targeting of groups of voters in the Web 1.0 environment. However, in 2004 Howard Dean solicited donations through the Web for his run for the Democratic nomination. In 2008 there was the emergence of Web 2.0 technologies, which are changing how candidates communicate with the public through blogs, wikis, social networking sites, and more sophisticated analytical tools, which has made it easier to target individuals and generate vast amounts of money. The Obama presidential campaign knew well the value of this outreach through Web 2.0 technologies and was able to use the Internet in ways that were not used before, targeting specific audiences for donations.

Online forms such as YouTube, Flickr, MySpace, and Facebook have centralized self-publishing and brought large audiences into campaigns (Davis et al., 2009). A major problem with social networking sites, however, is that the demographic audience may not have a large impact on election outcomes. Typically, these sites attract the least participatory group in an election, with an age range of 18 to 24 years. However, these social networking sites can be used for recruiting volunteers for campaigns. These individuals often become the foot soldiers for the campaign. Overall, the Internet has not changed political campaigns as television has, because the reach is not nearly as great. Websites generally attract a relatively small audience compared with television. However, campaign websites and social media have become just another means to reach voters. Bimber and Davis (2003) wrote that use of the Internet for political campaigns may be capable of performing some functions well, such as reinforcing political attachments and mobilizing supporters to donate and volunteer, but will not revolutionize campaigns and politics as some have predicted. This remains to be seen, and current evidence is very substantial. It is difficult for political candidates to ignore these new social media platforms.

Websites have allowed voters and the media to obtain a more comprehensive picture about the candidate. But with more sophisticated websites, there are increased costs. For example, Howard Dean's presidential campaign made use of a campaign blog, an online updated journal; blogging has been used by other campaigns. Research shows that online campaigns merely reinforce the existing messages found in traditional media and they preach to the converted; therefore, campaigns may not be getting additional voters as a result. Online campaigns did allow for small donations, which substantially impacted fundraising abilities for Barack Obama. Essentially, there has been little research that examines the role of the Internet in campaigns, and much more can be done (Herrnson et al., 2007).

One study of online campaigning found this has less to do with the digital divide than with strategic and structural factors. The incumbency of the candidate, campaign spending, electoral competitiveness, the number of people who live in the district, and the professionalism of the legislature for which the candidate is campaigning for provided the best explanations of why candidates invest in online campaigning. These findings reinforce the existing political science literature, which argues that campaigning is related to strategic factors on which candidates compete (Herrnson et al., 2007).

Digital political information, a relatively new information product, makes it possible for political campaigns to use this information to create strong political messages (Howard, 2005). The market for digital political information is more open in that people can buy and sell this information very readily. A market has opened up for political information about the personal identity and opinions of individuals to allow researchers to draw inferences. Information from individuals can be collected from credit card purchases, Internet activities, surveys, and government information that are readily available. From this, political campaigns can infer political preferences of individuals based on gender, race, and consumer activity.

E-Voting

Electronic voting, or e-voting, is the use of ICT that tries to minimize the human element in the vote collection and tabulation process (Smith and Clark, 2005). The closing case study at the end of this chapter provides an example of how the Internet has changed voting in the county of Honolulu. E-voting can use online information gathering and retrieval technologies to expand the reach of voting. There are two models of e-voting: voting at an official polling place, with votes transmitted through the Internet to election officers, and voting at a remote location with any Internet connection and sending the vote into election officials. With the latter method there is some sort of digital signature to verify the identity of the voter. E-voting has the potential to reduce the cost of staffing polling places and reduce the errors of voters and election officials and allow for more uniform standards of ballot format. There are potential risks of security and privacy, especially as it relates to securing the identity of the voter.

There are both proponents and opponents of Internet voting (Alvarez and Hall, 2004). Proponents of Internet voting offer several arguments. First, Internet voting is thought by proponents to make it easier for voters to participate in elections because every computer that has an Internet connection becomes a potential polling site. Internet voting lowers the cost of participation because voters can do this from the comfort of their own home or at work. Voters who do not have an Internet connection can vote in public places such as libraries or Internet cafes. Second, voters who are disabled and not able to get to a polling place can vote remotely with Internet voting. For example, a study found that more than 80% of polling places had some sort of barrier that prevented disabled voters from getting access. Third, individuals

with work schedules or family commitments that prevent them from getting access to the polling place would benefit from Internet voting. A single parent or someone who travels frequently may not have access to a polling place on Election Day. The final reason for Internet voting is that this might attract the hardest to reach voters, between the ages of 18 and 25, to participate in the political process. Internet voting for this group might increase voter turnout because this group has historically low rates of participation. For example, younger voters may be attending college, which means they would not be in their district to vote at election time. In addition, younger voters are much more likely to be online, which should increase participation.

Opponents to Internet voting have their views as well (Alvarez and Hall, 2004). The most commonly cited opposition to Internet voting is the issue of online security. The Internet is vulnerable to viruses and attacks from hackers (discussed in Chapter 10). These attacks can be staged from anywhere in the world. The second major criticism of Internet voting is that the system may favor some voters over others. There essentially is a digital divide in Internet access, where some groups, especially those with greater income, have more access. A third criticism of Internet voting is that this technology could further disintegrate civic life. One of the major issues that the United States faces is decreased civic involvement, with fewer people engaging in political or civic activities. Some argue that if there were no polls on Election Day this would not enable people to participate together in one of the most important functions of citizen engagement.

Using Rogers' (2003) diffusion of innovations theory, Liptrott (2007) examined e-voting issues and its adoption in local governments in the United Kingdom. When comparing local governments that did trial adoption of e-voting to nonadopters, Liptrott found the factors of continuity, security, time, resources, and kudos influenced their decision to adopt e-voting. As far as continuity is concerned, local government may be more willing to adopt e-voting if they do not feel overwhelmed by the central government denying them the opportunity to continue with their e-voting system. Essentially, governments that believe they can continue using the technology after the trial may be more willing to invest time and resources in its successful implementation. Second, local governments were concerned about security of e-voting systems of the vote and voter. Security as previously mentioned is a common issue that impedes the adoption of e-voting systems. Third, many local governments were concerned about the lack of time they faced in establishing a fully functional e-voting system. Fourth, many local governments were concerned about resource issues in the adoption of this new technology, such as who would essentially pay for new systems and updates. Finally, kudos had an impact on adoption; local governments could demonstrate to the public and other stakeholders that they were being innovative by adopting e-voting systems; this would have an impact on some governments adopting this technology.

Results in a field study of e-voting systems indicated that major voting systems used by U.S. governments were viewed favorably by voters (Herrnson et al., 2008). Voters were able to negotiate their way through the systems. However, voters found

some of the design features to be annoying, perplexing, and disconcerting. Voters expressed varying levels of confidence that their votes would be accurately recorded. Voters often found the need to ask for help when completing the voting process. This was particularly the case for voters with little computer experience, senior citizens, and individuals whose predominate language was not English. This suggests that voting machine design should take into account usability when testing their machines. Another solution would be to use more poll workers where there is a concentration of those groups that need assistance.

Moynihan (2004) argued that the failure of e-voting technology has profound consequences for the confidence of citizens in the electoral process. This author argued that there is no more central public administration task than administering elections that accurately reflect voters' intentions. The administration of the Florida 2000 presidential election recount had a number of serious implications for public administration and ICT. First, it showed the influence of election board officials and their role in the process of administering elections. Second, the Florida recount showed the importance of voting technology in determining the number of votes counted, with problems most acutely associated with punch-card machines. Third, this recount spurred the development of the Help America Vote Act (HAVA) of 2002, which provided federal funding to replace the antiquated punch-card system and created the Election Assistance Commission to help with information on the running of federal elections (Moynihan, 2004).

How Managers Deal with E-Voting

Public managers have to deal with the operational aspects of e-voting. To provide voting equipment at polling places for elections involves two major tasks (Montjoy, 2008). First, the equipment used at the polling place must be purchased from a vendor according to the standards set by the officials, technology department, and attorneys. The second task is to prepare and deploy the equipment at each election, and this requires vendor support. HAVA 2002 provides incentives for jurisdictions using lever machines and punch cards to replace these systems. This Act also requires that each polling place have at least one device that allows disabled voters, including the visually impaired, to cast their votes without assistance.

HAVA affects nearly every aspect of the voting process, from voting technology to provisional ballots and from voter registration to poll worker training (U.S. Government Accountability Office [GAO], 2007). In particular, the Act authorized $3.86 billion in funding over several fiscal years for programs to replace punch-card and mechanical lever voting equipment, improve election administration and accessibility, train poll workers, and perform research and pilot studies. HAVA also established the Election Assistance Commission to assist in the administration of federal elections and provide assistance with the administration of certain federal election laws and programs. HAVA also established minimum election administration standards for the states and units of local government responsible for the administration of

federal elections. The Act specifically tasked the Election Assistance Commission to serve as a national clearinghouse and resource for compiling election information and reviewing election procedures. For example, it is to conduct periodic studies of election administration issues, including electronic voting system performance, and to promote methods of voting and administration that are most convenient, accessible, and easy to use for all voters. Other examples of Election Assistance Commission responsibilities include the following:

- Developing and adopting voluntary voting system guidelines and maintaining information on the experiences of states in implementing the guidelines and operating voting systems
- Testing, certifying, decertifying, and recertifying voting system hardware and software through accredited laboratories
- Making payments to states to help them improve elections in the areas of voting systems standards, provisional voting and voting information requirements, and computerized statewide voter registration lists
- Making grants for research on voting technology improvements

Technical Aspects of E-Voting

In the United States most votes are cast and counted by one of two types of e-voting systems: optical scan and direct-recording electronic (DRE) (GAO, 2007). For the November 2004 general election, optical scan was the predominant voting method for more than half of local jurisdictions nationwide. In contrast, DREs were used as the predominant voting method by an estimated 7% of jurisdictions, although they were the predominant voting method for large jurisdictions. **Figure 2-2** shows the estimated use of predominant voting methods for small, medium, and large jurisdictions in the 2004 general election.

Optical scan voting systems use electronic technology to tabulate paper ballots (GAO, 2007). For the 2004 general election, 51% of all local jurisdictions predominantly used optical scan voting equipment. An optical scan voting system is made up of computer-readable ballots, appropriate marking devices, privacy booths, and a computerized tabulation device. The ballot, which can be of various sizes, lists the names of the candidates and the issues. Voters record their choices using an appropriate writing instrument to fill in boxes or ovals or to complete an arrow next to the candidate's name or the issue. The ballot includes a space for write-ins to be placed directly on the ballot.

Optical scan ballots are tabulated by optical-mark-recognition equipment, which counts the ballots by sensing or reading the marks on the ballot. Ballots can be counted at the polling place. If ballots are counted at the polling place, voters or election officials put the ballots into the tabulation equipment, which tallies the votes. These tallies can be captured in removable storage media that are transported

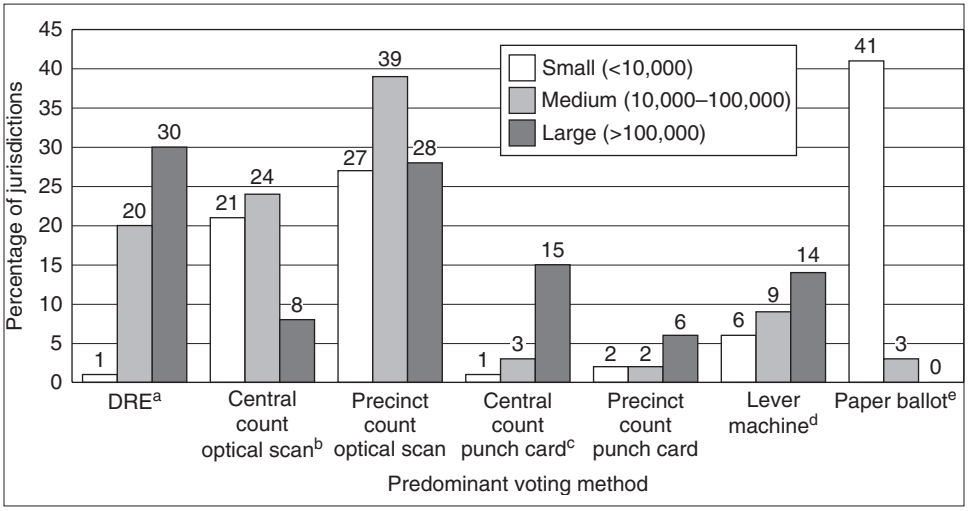

Figure 2-2 *Estimated percentage of jurisdictions using predominant voting methods in 2004 by jurisdiction size* (From GAO, 2006)

to a central tally location, or they can be electronically transmitted from the polling place to the central tally location. If ballots are centrally counted, voters drop ballots into sealed boxes and election officials transfer the sealed boxes to the central location after the polls close, where election officials run the ballots through the tabulation equipment.

DREs capture votes electronically without the use of paper ballots (GAO, 2007). For the 2004 general election, an estimated 7% of all local jurisdictions used DREs predominantly, although 30% of all large jurisdictions used them as the predominant voting method.

DREs come in two basic types: push button (the older technology) or touch screen (GAO, 2007). Push-button and touch-screen units differ significantly in the way they present ballots to the voter. With the push-button type all ballot information is presented on a single "full-face" ballot. For example, a ballot may have 50 buttons on a 3 × 3 foot ballot, with a candidate or issue listed next to each button. In contrast, touch-screen DREs display ballot information on an electronic display screen. For both push-button and touch-screen types, the ballot information is programmed onto an electronic storage medium, which is then uploaded to the machine. For touch screens, ballot information can be displayed in color and can incorporate pictures of the candidates. Because the ballot space on a touch screen is much smaller than on a push-button machine, voters who use touch screens must page through the ballot information. Both touch-screen and push-button DREs can accommodate multilingual ballots.

Social Media Technologies Used for E-Democracy

Social media technologies such as blogs and wikis have the potential to promote openness and transparency in government (Bertot et al., 2010). The opening case study provides an example of how social media technologies have changed political campaign rules. Some essential tools for promoting e-democracy should be outlined. First, blogs represent the Internet's democratization of the publishing industry. Second, wikis are collaborative drafting systems that allow many people to work together on a shared document. Wikis is a website that uses collaborative web-based software that allows users with access to add new edited content to existing content. With Wikis users can collaboratively work together to accomplish this goal of creating a document. Wikis are different from websites because users can add or edit content. Third, collaborative filtering and data mining tools allow for the filtering of news and information into categories that can be pushed out to users. Finally, open government initiatives provide both transparency and accountability of government to citizens. All four of these tools have the potential to allow the inclusion of citizens and to promote e-democracy.

Data mining is a set of automated techniques used to extract buried or previously unknown pieces of information from large databases (Tavani, 1999). Data mining is a technique for the efficient discovery of valuable, nonobvious information. The use of data mining can provide important patterns and relationships that were previously unknown. These data can then be used to make better and more informed decisions. A data warehouse is a highly integrated database, which is typically used to process information. The issue with data mining and data warehouses becomes the invasion of private information of individuals.

Two of the most important technologies for e-democracy that should be discussed further are blogs and political data mining. A blog, particularly important for e-democracy, is essentially a website that has content formatted through a series of postings, often displayed in chronological order. Blogs are often used to share personal information, opinions, and news about a particular subject with others. Blogs are often textual in nature, but they may also have multimedia content such as video and audio embedded in the text. Readers of blogs are often allowed to provide feedback and comments; therefore, content is very open and interconnected. Governments that want to promote transparency and openness of information can use blogs to accomplish this task (Coleman and Wright, 2008).

Political blogs can be individualized, such as a blog of a politician and his or her accomplishments and views on issues. Blogs can also have multiple authors and can represent the views of groups. According to Coleman and Wright (2008), blogs enhance political communication in four key ways:

1. They reduce the distance in communication between messenger and receiver.
2. They can enhance interactive dialogue because the receiver can respond directly to the blog.

3. They present an appearance of being responsive to listeners because their content can be changed in response to comments and criticisms.
4. They can give rise to more grassroots movements, enabling anyone with access to the Internet the ability to comment on news.

Blogs can increase overall accountability of elected officials. Blogs can also reverse political communication by challenging the traditional ways citizens receive information. Blogs can increase public debate and may even reach a consensus from the opinions of citizens and groups on the blogosphere.

Political data mining firms have become commonplace and are used by U.S. legislators and presidential candidates to look for information on electoral behavior (Howard, 2005). Lobbyists, for example, also can use political data mining to target supporters, generate awareness, and solicit contributions. These data mining techniques allow them to reach audiences based on demographic, geographical, and political criteria. Some of the political databases are derived from companies that provide free e-mail service and require subscribers to fill out questionnaires. The initial information collected is basic, containing demographics such as age, gender, income, and education. This information is supplemented using spyware and tracking members' patterns of Internet use. Howard showed that the largest political databases have information from 150 million registered voters in the United States, and this information is taken from state and local boards of elections, departments of motor vehicles, municipal licensing agencies, and social science survey data. Most of these firms compile the digital information without the explicit or informed consent of the individuals in the database. In addition, most of the data is readily available or available by request to the appropriate agency.

Survey Evidence for Social Media Technology Use

During July and August 2010, the National Association of State Chief Information Officers conducted a survey of social media use of all 50 state governments, of which 43 states responded to the survey (NASCIO, 2010). According to state government chief information officers, the primary drivers for social media use are citizen engagement, public information and awareness, and open government (**Table 2-1**). Only one state responded to the survey that did not use any social media technologies.

The five most frequently used social media technologies for state governments were Facebook, Twitter, YouTube, Flickr, and blogs (**Table 2-2**) (NASCIO, 2010). From the survey data it appears states are using very similar social media technologies to engage their citizens.

The greatest concerns for the potential risks associated with social media technology are security, terms of service (legal) issues, records retention issues, and privacy (**Table 2-3**) (NASCIO, 2010). There were not a high number of states that believed lack of management support and resources were an impediment to social media adoption.

Table 2-1 *What Are the Primary Reasons for State Government Adoption of Social Media Technologies?*

Reasons	Response (N = 43)
Citizen engagement	42
Public information, outreach, and awareness	40
Open government	29
Business engagement	23
Government engagement	19
Reduced need for agency resources (e.g., less e-mail, phone calls, open records/freedom of information [FOI] requests)	15
Process improvement	12
State government employee engagement	11
Not using social media technology	1

As one can see from the survey evidence, states do use social media technology to engage citizens in government. But they used a limited number of technologies such as Facebook and Twitter, and security is a major concern for them when they adopt social media technologies.

Open Government

President Obama on his first full day of office issued a memorandum on Transparency and Open Government (Office of Management and Budget, 2009). In this memorandum the Obama Administration called for a system of transparency, participation, and collaboration (McDermott, 2010). According to the Obama Administration, government should be *transparent* and provide information for its citizens on what it is doing. The administration called for executive departments and agencies to use new information technology to put information about their operations and decisions online and make it readily available to the public. Federal agencies should also seek feedback from the public on important issues. The second pillar of open government is *participation*. The idea here is that public engagement in government enhances the quality of decisions. Executive departments and agencies should provide, to the public, knowledge developed by their agencies. This enables citizens to participate in the policymaking process. The third pillar is that government should be *collaborative*. Executive departments and agencies should use innovative tools, methods,

Table 2-2 *What Social Media Tools Are State Governments Using?*

Technology	Response Count (N = 43)
Facebook	37
Twitter	36
YouTube	33
Flickr	20
Blogs	19
LinkedIn	9
Vimeo	5
Ning	4
MySpace	3
Digg	3
Delicious	3
Foursquare	3
Second Life	1
GovLoop	1

and systems to enhance collaboration with all levels of government, nonprofits, and individuals.

Some examples of open government are said to increase transparency, collaboration, and participation (Jaeger and Bertot, 2010). The federal government has developed a website as a way to provide direct access to a substantial amount of government data online (see www.data.gov). This site, it is hoped, will allow users to find new uses for the data and be able to provide unavailable insights into government activities by mining the data. Also, the Obama Administration uses social media such as blogs, wikis, social networking sites, really simple syndication (RSS) feeds, cloud applications, and virtual worlds to make government information available for citizens to have direct contact with their government. The U.S. Department of Health and Human Services contest for the best H_1N_1 flu prevention YouTube video is an example. The federal government created a website (see www.recovery.gov) intended to promote public monitoring of federal spending for the stimulus program. Holding online meetings and soliciting comments to get public feedback on proposed policies and regulations is another example. Mandating that agencies

Table 2-3 *What Are High Concerns Constraining Broader Use of Social Media Representing Potential Risks?*

High Concern	Response Count (N = 43)
Security	25
Terms of services (legal) issues	21
Records retention issues	18
Privacy	18
Employee use/misuse	16
Lack of resources to monitor/control	14
Lack of control over providers	13
Work culture and perceptions	13
Lack of quantifiable business benefit	11
Lack of resources to support	9
Lack of governance framework	9
Lack of executive/management support	6
Accessibility	4

create their own open government plans and web pages has been implemented at the federal level as well.

Dawes (2010) discussed two important principles of information transparency, namely stewardship and usefulness. *Stewardship* is the conservative principle acknowledging that government information has some of the same qualities as clean air and safe streets. Stewardship focuses on ensuring the accuracy, validity, security, management, and preservation of information holding by government. All public officials are responsible for handling information with both care and integrity. There are two important components of being good stewards of information: protecting government information from damage, loss, or misuse and making information fit for use. The principle of information *usefulness* recognizes that government information is valuable and can generate social and economic benefits through its use and innovation. Policies that promote usefulness of information provide agencies with guidelines and incentives to share information to benefit a wide variety of public and private users. They encourage investment in information management to support information sharing. Both principles can check each other: being good stewards of

information prevents misuse, and providing useful information enables its use for the betterment of society by providing for greater transparency in government (Piotrowski and Van Ryzin, 2007).

ICT enables countries to promote transparency and reduce corruption in public agencies (Bertot et al., 2010). Many nations have implemented transparency laws that have been tied directly to ways of using ICT to promote transparency. ICT can reduce corruption by promoting good governance, strengthening reform initiatives, reducing potential corrupt behaviors, enhancing relationships with citizens and employees, allowing citizen tracking of activities, and monitoring and controlling behavior of employees and contractors. India provides some examples of ICT used to promote transparency; India put rural property records online, greatly increasing the speed at which records are accessed and updated while removing the opportunities for local officials to accept bribes. In the United States the federal government has created websites that allow access to data of government expenditures (see www.usaspending.gov) and information technology funds (see www.IT.usaspending.gov), thereby promoting more transparency. These websites are intended to promote public monitoring of government spending for elimination of government waste and inefficiencies.

The Internet and the 2008 Presidential Campaign

As an example of ICT in democracy, a case study is provided on the impact of the Internet on the 2008 U.S. presidential campaign. Many believe this election was a turning point in the use of the Internet in electoral politics in America. The 2008 race for president was inspired by factors such as a lengthy contested race in the Democratic primary of Barack Obama and Hillary Clinton and a general election featuring the first African-American Democratic Party candidate and a well-known Republican senator. This general election was especially interesting because it coincided with the collapse of the housing market, banking sectors, and widespread disappointment with the former President George W. Bush. The culmination of these factors makes it an interesting case study of the impact of the Internet on political campaigns.

According to a Pew Internet and American Life 2009 survey, for the 2008 election season more than half (74%) of the entire adult U.S. population went online to learn about the campaigns or the political process (Smith, 2009) (**Table 2-4**). Nearly three-fourths of Internet users can be labeled online political users. Of this percentage, 60% went to get news online about campaigns and politics, 38% communicated with others about politics using the Internet, and 59% shared and received campaign information using specific tools such e-mail, instant messaging, text messages, and Twitter (not shown).

Table 2-5 shows the differences in online political users by demographic characteristics. Online political users are similar in their demographic characteristics

Table 2-4 *Online Participation by Demographic Groups*

	Percent of Internet Users in Each Group Who Are Online Political Users	Percent of All Adults in Each Group Who Are Online Political Users
Total	74	55
Gender		
Male	75	58
Female	73	53
Age		
18–29	77	72
30–49	77	65
50–64	71	51
65+	60	22
Race/ethnicity		
White, non-Hispanic	76	58
Black, non-Hispanic	66	40
Hispanic	64	52
Education		
Less than high school	—	18
High school grad	62	42
Some college	78	67
College grad	87	81
Annual household income		
Less than $30,000	56	31
$30,000–$49,999	70	57
$50,000–$74,999	79	73
$75,000 or more	87	84

Source: Smith (2009).

Table 2-5 *Demographic Profile of the Online Political User Population*

	All Adults (%)	Internet Users (%)	Online Political Users (%)
Male	49	50	51
Female	51	50	49
Age			
18–29	19	24	25
30–49	37	42	43
50–64	26	25	24
65+	17	8	7
Race/ethnicity			
White, non-Hispanic	70	71	73
Black, non-Hispanic	11	9	8
Hispanic (English-speaking)	11	12	11
Education			
Less than high school	13	6	4
High school grad	36	32	27
Some college	23	27	28
College grad	27	34	40
Annual household income			
Less than $30,000	26	19	15
$30,000–$49,999	17	19	17
$50,000–$74,999	14	17	18
$75,000 or more	24	32	37
Geography			
Urban	30	29	29
Suburban	53	55	58
Rural	18	15	13

Source: Smith (2009).

Table 2-6 *How Voters Communicated About Campaign 2008*

	Ever (%)	Daily (%)
Mail	69	17
E-mail	40	12
Text messaging	15	3
Instant messaging	10	2
Twitter	1	
Margin of error is ±2% based on all adults (n = 2,254).		

Source: Smith (2009).

to other groups with respect to gender, race, and geography. Online political users tended to be younger and had a greater level of income and education than the population as a whole. **Table 2-6** shows that e-mail was the dominant form of online political communication, followed by text messaging and instant messaging. Twenty-four percent of online political users contributed to an online political debate by posting questions, comments, or commentary where others read them; this is called the online political participatory class (**Table 2-7** and **Figure 2-3**). The Pew survey also showed that young adults were more likely to use social networking sites in general and were also more likely to use these sites for political purposes.

Table 2-7 *Online Political Participatory Class*

	Among Online Political Users (%)	Among Internet Users (%)
On a social networking site	14	10
On a website of any kind, such as a political, campaign, or news site that allows comments and discussion	12	9
On a blog (your own or someone else's)	11	8
In an online discussion, listserv, or other group forum	10	8
Have done any of these	24	18

The percent within each group who have posted comments, queries, or information about the campaign or election online.

Source: Smith (2009).

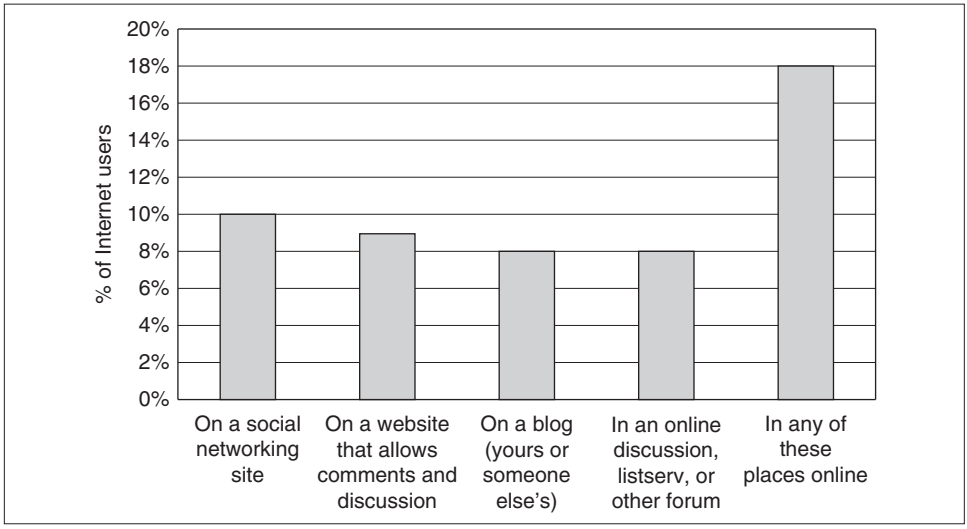

Figure 2-3 *The online participatory class: 1 in 5 users posted political commentary online* (From Smith, 2009)

Summary

In this chapter we discussed e-democracy. ICTs such as the Internet are seen as one way to reach a wider audience and to engage citizens more in the political process (Shane, 2004). Trust in government has declined since the mid-1960s in the United States, and ICT is a way to increase trust and confidence in government. Empirical evidence does not indicate that ICT will enhance trust of individuals who already distrust government. ICT and politics indicate that there are two views on its impact. One view holds that it will enhance citizen participation in a democracy, and the second view holds that it will reinforce existing power structures and just become another mechanism used to not include individuals in the political process. Websites have allowed greater visibility of political campaigns by the public and the media. E-voting is one area that ICT could potentially influence, but the issue of privacy and security of the individual's vote must be addressed before wider acceptance of this technology occurs. Blogs and political data mining are two important social media technologies that can be used in e-democracy. Both of these technologies allow for greater reach to get citizens involved in the political process. Nearly three-fourths of Internet users went online to get information about the 2008 presidential campaign. Therefore, the Internet has provided a valuable source of information for citizens during elections.

Discussion Questions

1. How do you think ICT has changed e-democracy? Has it changed it for the better?
2. Discuss what role ICT will have in enhancing trust and confidence in government?
3. What are some of the pros and cons argued for e-voting?
4. How has ICT changed political campaigns in the United States?
5. What role do social media technologies have on politics and political campaigns?
6. Examining the campaign for President of the United States, has the Internet changed the way a presidential candidate runs for office?

Closing Case Study

First All-Digital Election in the United States

In May 2009 the city and county of Honolulu used an all-digital election to elect members of its Neighborhood Boards (Vander Veen, 2009). Instead of e-voting machines, residents were allowed to vote either online or by phone. In this election no paper ballots were available. This first all-digital election came about not because of the desire to use this new technology but was driven by the need to cut the budget. The elimination of paper ballots reduced the election costs by half. The Neighborhood Commission Office worked with a San Diego–based company, Everyone Counts, which has been conducting digital elections for the last decade in the United Kingdom for military personnel and expatriates.

Security is an issue that has held back e-voting. E-voting, because of the lack of paper trail as well as proprietary code, has been seen as an easy target for hackers. Everyone Counts says its security protocol has a two-key system requirement that is very difficult to hack. When the election begins, voters vote and each ballot is encrypted and stored securely. At the end of the election the encrypted ballots are removed from the Internet and onto a clean personal computer. They are not accessible until election officials come together and provide the unique password to the system, which decrypts the votes. In addition, voters can verify their vote was received and counted by going to a special website and using the unique nine-digit password they received combined with the last four digits of their Social Security number.

The issue with the election was that voter turnout was down 83% from 2007 and the voter participation rate was only 10%. However, the all-digital election costs half of the a paper-based election at $90,000.

Secure web-based voting is not expected to occur for at least a decade, because perfecting the cybersecurity for such a system is a decade away as much more research and development needs to be done (Williams, 2010a). Furthermore, a test of the vulnerabilities of a Washington, DC, pilot system of online-only voting indicated a vulnerability: researchers could log on remotely and change the results.

This disclosure of new vulnerabilities for e-voting coincides with the new Military and Overseas Voter Empowerment Act passed by Congress in 2009. This law mandates that state and local governments put measures in place no later than November 2010 elections to make voting more accessible and reliable for U.S. military and oversees citizens. Under the Act, paper ballots must be mailed to overseas citizens no later than 45 days before an election. Several states, such as Delaware, West Virginia, Tennessee, Arkansas, and Idaho, have begun implementing technology that will digitally deliver the ballot to them and allow them to mail it back through the postal service.