

# **Innovations in Election Administration 12**

**The Electronic  
Transmission  
of Election  
Materials**





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# The Electronic Transmission of Election Materials

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# Introduction by the Clearinghouse

This report is another in the series on *Innovations in Election Administration* being published by the FEC's National Clearinghouse on Election Administration.

The purpose of this series is to acquaint State and local election officials with innovative election procedures and technologies that have been successfully implemented by their colleagues around the country.

**Our reports on these innovations do not necessarily constitute an endorsement by the Federal Election Commission either of any specific procedures described or of any vendors or suppliers that might be listed within the report. Moreover, the views and opinions expressed in these reports are those of the authors and are not necessarily shared by the Federal Election Commission or any division thereof.**

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# Introduction

The purpose of this report is to examine the issues and identify alternative means by which election materials might be electronically transmitted through current technology in a practicable, affordable, and acceptable manner.

For years, voters and election administrators alike have had to endure the problem of voters voting when they are away from their voting jurisdiction. While millions of voters successfully vote by absentee ballot, some voters are disenfranchised because of difficulties with requesting, receiving, and returning a voted ballot by mail within the time allowed by law.

Absentee voting is generally a three step process:

- The voter mails an application for an absentee ballot to the election official with all necessary identifying information. (If the information is incomplete, the voter may be required to re-submit information before receiving the absentee ballot or must complete the information and return it with the voted ballot).
- The election official verifies the voter's eligibility, determines the ballot to which the voter is entitled, establishes a file for the voter, and mails the appropriate absent voter ballot. (If the voter is not registered, the election official may, if law permits, mail a voter registration with the absentee ballot).
- The voter votes and mails the ballot to the election official who then validates the signature and prepares the ballot for tallying (With re-

gard to validation, most jurisdictions compare the voter's signature on the envelope containing the absentee ballot with the signature on the absentee ballot application or, better still, with the signature on the voter's registration form. With regard to preparing the ballot for tallying, some jurisdictions have to remake absentee ballots into a machine readable format).

Mail transit times for these three operations often cause voted ballots to be received after the deadline. And if there is any problem with the absentee ballot application, the likelihood of the voter being able to vote is further diminished.

While most voters applying for an absentee ballot from within the United States do not have a problem receiving and returning their ballots, those outside the country or in the military have had numerous problems. Occasionally, these problems have been solved by the Federal blank ballot. But electronic technology may provide a more satisfying solution.

During the Gulf War, for example, many military personnel were suddenly transported to the Middle East; and it was not possible for them to use standard absentee voting procedures to vote in the 1990 general federal election. The Department of Defense Federal Voting Assistance Program (FVAP) and election authorities in the States and territories therefore implemented a system to transmit facsimiles of absentee voting materials in order to ensure the enfranchisement of these personnel.

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While this served only a small number of voters, 1,675 according to the Federal Voting Assistance Program, there is some interest in extending this approach to other voters and for all elections.

This report is based in large part on responses to a survey of State and local jurisdictions who have had experience with the electronic transmission of election materials.

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# Background

## Federal Voting Assistance Program

The deployment of military personnel for Operation Desert Shield during the 1990 general federal election was the initial motivation for electronically transmitting voter materials to voters. The program, conducted by the Federal Voting Assistance Program (FVAP) in the Department of Defense, worked effectively for a small number (1675) of voters over a long-period, two months, of time. In the 1992 presidential general election, 699 transmissions were re-transmitted to local election officials in forty-nine (49) states.

For these operations, the FVAP employed a private contractor serving as a central data collection and transmission center, in the United States, to receive data from local election offices and to re-transmit the material overseas. The same contractor received data from overseas and retransmitted the data to local election officials in the States. This provided the expertise and staffing in data communications that may not be available to local election officials for a round-the-clock operation.

Since this initial effort by the FVAP in 1990, several States have enacted legislation to provide this service — and in at least one instance, to expand the service to other than military and overseas electors. See Appendix C, “Electronic Transmission of Election Materials as an Alternative Voting Technique” prepared by FVAP, for more information on these operations.

## The State of Indiana

The State of Indiana Election Code provides that, “The county election board may transmit and receive absent ballots by FAX machine to voters covered under the Uniformed and Overseas Absentee Voting Act (42 U.S.C. 1973ff) under the following circumstances:

- (1) if an emergency is declared by the President of the United States, the Congress of the United States, or the presidential designee under the Uniformed and Overseas Absentee Voting Act (42 U.S.C. 1973ff).
- (2) if otherwise mandated to do so under federal law.”

In November 1994, members of the Indiana National Guard were deployed to the crash site of American Eagle flight 4184 in Newton County. County Election Boards with assistance from the State Election Board acting under the provisions shown above were able to improvise applications and procedures as they went along. This action was triggered by a emergency declaration by Ms. Phyllis J. Taylor, Director, Federal Voting Assistance Program.

The members of the National Guard were thus allowed to vote, although there were some problems and frustrations owing to the limited time and faxing services available at the receiving end of the process.

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## **Other Jurisdictions**

It is difficult to determine exactly how many other jurisdictions have transmitted voter materials electronically. The FVAP indicated that forty-nine states or territories have participated in transmitting election materials. Yet, the responsibility for maintaining voter registration lists and for providing voters the opportunity to vote absentee rests with over 8,000 local election jurisdictions throughout the United States. We were, unfortunately, unable to determine how many of these local jurisdictions currently transmit election materials electronically.



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# Benefits and Costs

## Benefits

The principal benefit of transmitting election materials electronically is, of course, speed. Instead of relying on national or international mail services, voters and election officials can communicate more or less instantaneously thereby ensuring that distant voters have an opportunity to cast their votes in time to be counted. This is especially important in remote corners of the globe where faxes or computers may be more readily available than mail services.

Moreover, in contrast to (say) the federal blank ballot which contains only federal offices, electronic transmission would ensure that the distant voters would receive **all** the choices on the ballot to which they are entitled under State law.

And finally, some proponents believe that expanding the electronic transmission of election materials might:

- facilitate voting by the disabled (especially by providing the visually impaired with a means of casting a truly secret ballot)
- facilitate voting by persons in transit on election day, and
- increase voter participation generally.

## Costs

Unfortunately, respondents to our questionnaire were unable to provide any detailed information

on the costs they incurred in electronically transmitting election materials. Moreover, costs will naturally vary depending on the volume of material and the number of voters to which transmissions must be sent and received. And too, costs would vary according to exactly how the process is designed to operate — whether directly from the election official to the voter or through an intermediary, and whether directly from the voter to the election official or through an intermediary.

### Election Administrator Costs

Although exact cost figures are unavailable, it **is** possible to identify certain administrative cost **factors**.

In their report “FEDERAL VOTING ASSISTANCE PROGRAM, OPERATION: OVERSEAS”, for example, the Chicago Board of Election Commissioners described their procedure as follows:

- “1. Obtain a separate fax machine for this program. Keep it in a secure room where there is access by authorized personnel only.
2. Designate one or two key people to fax out the ballot and receive the returned faxed ballot. Since transmission may take as long as 15 minutes to fax out and 15 minutes on the return, make sure employees are alert until transmission is complete.
3. Lock room where fax machine is located when unattended to prevent access by unauthorized persons.

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4. Place each returned faxed ballot in a special envelope and secure with ballot application until election day.”

Such a straightforward procedure suggests that minimum costs would include a fax machine, telephone line, locks to ensure a secure room, long-distance calls, including overseas calls, of up to 15 minutes duration, and staff to monitor the equipment.

Different or more elaborate procedures might incur additional costs. And in large jurisdictions it might be necessary to have several fax machines (or computers) on a rotary phone line to ensure timely transmittal of material — especially if the service were expanded to include absentee voters other than military personnel.

Election officials who are contemplating an expanded and routine system for electronically transmitting election materials may therefore want to consider that such a system would include most of the costs of processing a mailed absentee ballot (except for postage) as well as some or all of the following cost factors:

- a fax machine (or computer) and supplies
- dedicated telephone service
- long-distance telephone service
- copying faxed materials to more permanent media
- remaking faxed voted ballot into machine readable format
- additional staff, overtime and possible night shift pay
- computer network subscription fees.

### **Voter Costs**

Depending on how it is designed and who is entitled to employ it, a system for electronically transmitting election materials may entail some costs to the voter. If, for example, the system requires direct communications from the voter to

the election official (without an intermediary free service provider) then voters would have to bear the long distance communications costs. And if the system were available to (say) disabled voters or all voters temporarily away from the jurisdiction, then such voters would have to own or otherwise gain access to the requisite fax machine or computer.

### **Diminishing Returns**

While no monetary value can be placed on any individual's vote, there may be a point of diminishing returns on trying to facilitate every individual's right to vote. The procedures currently in place for absentee voting work effectively for the vast majority of the millions of persons who are away from their polls on election day. It might be prohibitively costly to facilitate those relatively few voters who fail to act in a timely manner or who, through no fault of their own, are thrust into circumstances that make their ability to vote very difficult. There is no getting around the fact that the cost to the taxpayer of electronically transmitting election materials would increase dramatically — possibly into hundreds of dollars per voter.

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# Important Issues in Electronically Transmitting Election Materials

In addition to the costs, there are a number of other important issues that need to be addressed when designing any system for electronically transmitting election materials. These issues include:

- Who should be entitled to the service?
- What materials should be transmitted?
- When should materials be transmittable?
- How should materials be transmitted?

## Who Should be Entitled to Electronic Transmission Services?

The electronic transmission of election materials was originally intended for members of the military who were temporarily engaged in a special mission. But some have suggested an expansion of the service to include such other categories of voters as:

- all overseas members of the military
- all members of the military
- persons with disabilities (especially the visually impaired)
- all overseas civilians
- all persons who qualify as absentee voters.

But with the addition of each category, the numbers as well as the problems compound.

The extension of electronic transmission services to all overseas members of the military would seem to cause the fewest problems. This is because transmission facilities (whether fax machines or computers) are likely to be readily available to the voter through the military command.

Indeed, the same could be said of nearly all members of the military stationed at home as well as abroad, although there seems less of a justification for extending electronic transmission services to those stationed within the United States.

The extension of electronic transmission services to persons with disabilities is more problematic. The problem lies in the availability of the equipment to the voter. Electronic transmission does, however, hold some potential for solving a problem for at least some persons who are visually impaired or blind: namely, the ability to cast a ballot in complete privacy. It may be feasible, for example, to transmit a ballot to a blind person and have the ballot printed in braille from the blind voter's computer. While only about 20% of the blind are able to read braille this might be one way to ensure the privacy of the vote to at least to those blind persons who have or can gain access to computers and braille printers. Another option is the possibility of developing an audio ballot for the blind and others with reading problems with such services being provided at a central location (the central election office) of the jurisdiction.

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Civilians residing or visiting abroad generally have a more difficult problem with postal services than overseas military voters. It might therefore seem reasonable to extend electronic transmission services to them. Yet, by the same token, they are likely to have a more difficult time gaining access to the necessary equipment. Although it is conceivable that U.S. embassies, consulates, and corporations might make their facilities and equipment available for the purpose, there are many overseas Americans, especially those in remote locations, who would find it impractical to reach such facilities.

Finally, it has been suggested that **all** persons who qualify as absentee voters should be extended electronic transmission services. But such sweeping coverage might well create problems at both ends of the transmission process. The burden on the election office (and the possible need for 24-hour service and additional equipment) would make this proposition both expensive and challenging. At the same time, voters might have difficulties gaining access to the appropriate election office.

In deciding who should be entitled to electronic transmission services, it is important to keep in mind both the numbers of individuals involved and the availability of the necessary equipment to voters. Moreover, in order to avoid establishing a special class of voters (those who have access to or who can afford to own the necessary equipment), election administrators will have to continue providing election services to absentee voters by traditional means. They would therefore be operating at least two absentee voter systems and procedures rather than one.

## **What Materials Should be Transmitted?**

### **By the Election Official to the Voter**

There are basically four types of documents that might be transmitted by election officials to voters:

- ballot information

- a blank voter registration application
- a blank absentee ballot application, and
- an unvoted absentee ballot.

Of these four items, transmitting ballot information electronically seems to present the fewest difficulties. In fact, in 1992, the State of California made their statewide Voter Information Pamphlet available on the Internet to any voter who had a computer and an Internet server subscription. Making county or more local ballot information available in the same way would require a well coordinated effort to ensure easy access to the information appropriate to each voter. It might be possible, however, to provide ballot information by contest on a subscription computer network. The information for the contests could group candidates and issues by State and by local election jurisdictions within states. When the voters receive their ballots they could look up information for the contests on their ballot, provided, of course, that they have access to the network.

There are at least two problems in transmitting blank voter registration applications to prospective voters. The first of these is that, regardless of how the registration application is returned, it is unlikely to be on the same paper stock and size as other registration applications. It will therefore not file easily. Nor is this as trivial a concern as it sounds when the physical files contain thousands of documents. Moreover, some fax machines produce copies on a paper stock that degenerates fairly rapidly. This creates a problem in light of the federal law that requires the retention of documents requisite to voting for a period of 22 months past their effectiveness. Voter registration applications might remain valid for decades — well past the lifetime of some fax paper. Yet photocopying such documents would inevitably lose any original signature.

Transmitting absentee ballot applications (if these are required) presents fewer problems than voter registration applications since the files of these documents need be retained for only 22 months — well within the lifetime of any fax paper.

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The idea of transmitting unvoted ballots, however, raises a different kind of problem. For regardless of how the ballot is returned, it would be clearly distinguishable from other ballots and may therefore threaten the secrecy of the voter's ballot. This is all the more true in the case of faxed ballots which would contain the date and time of the outgoing transmission which could be checked against the transmission log.

### **By the Voter to the Election Official**

There are only three types of documents that might be transmitted by the voter to the election official:

- a completed voter registration application
- a completed absentee ballot application or request, and
- a voted ballot.

In addition to the above cited problems associated with transmitting these documents from the election official to the voter, the idea of the voter transmitting any of these documents to the election official raises the same important problem in each case. Each of these documents requires the signature of the voter, and a transmitted signature is not an original signature that may be required by State law, by investigative authorities, or by the courts.

Furthermore, the transmission of a voted ballot would certainly preclude its secrecy at least at the receiving end and perhaps even at the sending end. The only suggested solution to this problem is the use of a Waiver of Secrecy Form — if such a procedure would be acceptable under State law and to the courts.

### **How Should Materials Be Transmitted?**

The type of equipment that might be used in transmitting election materials varies widely. The equipment could range from a simple fax machine for transmitting fax-to-fax up to a mainframe

computer transmitting to personal computers or public subscription computer networks.

None of the respondents to our survey indicated using anything other than fax machines to date. Yet there is the possibility of using a fax modem in a personal computer to transmit election materials. Fax machines or modems should be compatible with CCITT Group 3 facsimile machines.

One advantage of a fax modem on a computer is that transmission can be faster — with transmission speeds of 14,400 baud compared to 300 baud for older inexpensive fax machines. However, telephone line quality in many areas, while acceptable for voice, may not successfully transmit and receive at these higher transmission speeds. And this consideration is especially important in overseas communications.

When a fax is received by a computer with a fax modem the material can be printed on a computer printer using plain or xerographic quality paper, rather than thermal paper as many fax machines use. Thermal paper can be obliterated with heat and the printing deteriorates rather rapidly over time, therefore it is necessary to copy the fax onto plain or xerographic quality paper to provide a more permanent record.

### **From Where and To Where Should Election Materials Be Transmitted?**

There are two possible arrangements for electronically transmitting election materials:

- to and from the voter's local election office, and
- to and from a national intermediary office.

A majority respondents to our survey favored having election materials transmitted from local election offices, directly to the voter's personal facility or to a facility designated by the voter. Most felt that the fewer hands through which the materials must pass, the easier and more secure the process would be. And too, election officials

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feel more confident when they exercise direct control over a process for which they are, after all, legally responsible.

But the direct transmission of materials to and from local election offices requires that all local election offices (both registration and voting offices when these duties are divided) be equipped with the necessary fax machine or computer. And this may not be the case any time soon. Large jurisdictions might need additional equipment dedicated solely to this purpose 24 hours a day. Smaller jurisdictions may have only one computer which they use for maintaining voter records, voice mail, faxing, transmission of files, and tallying ballots and would therefore need to take special precautions to isolate these functions.

Finally, if voters are to communicate directly with their local election offices, a directory of local offices would need to be placed on worldwide computer subscription networks in order to make the information directly accessible to voters with computers. Voters that do not have computer access to the network would have to obtain the information through their military command, U.S. embassies, or through private businesses that would be willing to provide the lookup service.

An alternative to transmitting election materials directly to and from local election offices is to work through a national intermediary office (NIO).

A national intermediary office would operate in the manner pioneered by the FVAP where a private contractor acted as the intermediary. Basically, the process would work like this example involving an absentee ballot:

1. The NIO receives the absentee ballot request from a voter
2. The NIO retransmits the requests to appropriate local election jurisdiction.
3. The local election jurisdiction verifies the voter's eligibility, establishes a file for the voter, and transmits the absentee ballot to the NIO. If the

voter is not registered, the election official may transmit, if law permits, a voter registration application with the absentee ballot.

4. The local election jurisdiction transmits the unvoted absentee ballot (along with any related ballot information) to the NIO.
5. The NIO retransmits the materials and ballot to voter.
6. The voter votes the ballot and transmits it to the NIO.
7. The NIO retransmits the voted ballot to the appropriate local election jurisdiction.
8. The local election jurisdiction validates the voter's signature and prepares the ballot for tallying.
9. The local election jurisdiction remakes the faxed voted ballot into a machine readable format.
10. The ballot is tallied along with other absentee ballots.

Such a procedure offers several advantages such as:

- The NIO could provide expertise, staffing and equipment not available to local election officials.
- Only one phone number, that of the NIO, is needed, for any voter to perform the task.
- The NIO can provide secure communication lines that may not otherwise be available.
- Local election officials would only have to transmit election materials to one location.
- Local election officials would not need to deal with the problem of contacting people in all the different time zones around the world.

There are, however, some disadvantages to this process which include:

- It eliminates direct communication between the voter and the local election official.

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- All transmitted ballots for local jurisdictions throughout the United States, unvoted and voted, are placed in control of a single entity.
  - In the event of a challenged election or recount, evidence may be required from the NIO to prove that voted ballots received by the NIO are identical to those that were received by the local election official.
  - A serious bottleneck could be created if this service were extended to more and more categories of absentee voters.

### **When or During What Time Frames Should Materials Be Transmittable?**

The time frames for electronically transmitting election materials would have to be established in State law and would likely resemble those established for other absentee voting procedures. In most cases, materials should be transmittable as soon as they are available. And it is a fair question whether faxed requests for voter registration forms should be acceptable at all times.





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# Technical Problems in Electronically Transmitting Election Materials

No matter what decisions are made regarding the issues raised in the previous chapter, there are certain technical problems that underlie any system for electronically transmitting election materials. For some of these problems there is no easy solution; but those considering systems for electronically transmitting election materials should nevertheless be alert to them.

## Interference with Election Material Transmissions

There are two sources of potential interference with the electronic transmission of election materials. The first of these is the communication disruptions that may result from telephone service locally and especially telephone service abroad. These must simply be worked around and may cause unexpected delays and retransmission requests.

The second source of potential interference arises inevitably from widely advertising either a central fax number or else the election official's fax number (especially if this is done on a publicly accessible network). Either pranksters or those with malicious intent would be capable of keeping the fax line(s) busy with "junk mail", thereby preventing or delaying the receipt or transmission of election materials.

## Ensuring the Compatibility of the Systems used to Transmit and Receive Materials.

If a fax machine is installed on a dedicated telephone there should be few problems with compatibility within in the United States, although there is no guarantee overseas. If a fax machine is connected to an answering machine it may not be able to receive transmissions from all other fax machines.

If a personal computer with a fax modem is also being used for voice mail, than those calling fax machines that do not initiate a CNG tone, will not be recognized as a fax and the receiving machine will not allow transmission to proceed. Many of the less expensive fax machines do not initiate the CNG calling tone.

## Voter Identification

Signature comparison is currently the only viable method of determining voter identification. But unless an original signature is provided, it is fairly easy to copy a person's signature from any document (using copying or scanning equipment), "cutting and pasting" the copied signature to an election document, and then transmitting the document by fax. It would be impossible for the local election official to detect the fraud.

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Yet, if the election official must wait for the original signature before tallying the ballot or processing an application or request, much of the benefit of electronic transmission would be lost.

### **Interference With the Voter**

Although the electronic transmission of election materials might solve the problem of timeliness in absentee voting, it does not solve the enduring potential of interference with the voter casting such a ballot — whether electronically or by mail. Such interference might take the form of bribery, coercion, or any other undue influence over the voter which, by its nature, is beyond the control or observation of election authorities. And as with traditional absentee, voting, the potential for such interference expands with the extent to which the service is offered.

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## Alternatives to Electronically Transmitting Election Materials

Those who are uncomfortable with the idea of electronically transmitting election materials may want to consider alternative approaches to solving the “timeliness” problem.

One approach is to accept and honor any signed request for an absentee ballot by any qualified voter (rather than, as some States do, require that the request be on a prescribed request form).

Another approach is to allow voters who are temporarily residing outside their jurisdiction, or disabled voters who are unable to go to the polls, to register as absentee voters and automatically send them an absentee ballot request form at least 60 days before the upcoming election.

Yet another approach, in response to an absentee ballot request from a qualified resident who is not registered, is to enclose a voter registration application along with the absentee ballot and to honor both if received before the close of polls (or whatever other deadline State law may establish).

Still another approach is to employ a private delivery service such as DHL, FEDEX, UPS or others for delivering materials to overseas and especially to third world countries where the local mail and telephone systems are somewhat unreliable. For delivery in the United States and possessions, the U.S. Postal Services First-Class or Express delivery services should also be considered.

Finally, many States have extended the deadline for receiving absentee ballots from overseas to up to 15 days past the date of the election.



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## Conclusion

Experience has demonstrated that faxing election materials, as has been provided by the FVAP for emergency military operations, can be beneficial for small volumes of voters. Expanding this method of operation to all military voters, to all overseas voters, to disabled (especially visually impaired) voters, or to all absentee voters is far more problematic.

It may be that we need to await further technological developments to resolve the current issues and problems in the electronic transmission of election materials. To that end, it might be useful to have a study to determine the feasibility of developing a ballot transmission system that would:

- Allow election administrators to transmit ballots in a digital format, and to record when and to whom ballot was sent.
  - Provide an audio ballot that could be “read aloud” by a personal computer with a sound card and text-to-voice program, for use by the blind or others unable to read.
  - Allow the voters to record their votes, off-line, in a digital, transmittable format on a personal computer and then transmit the voted digital ballot to the election official.
  - Allow the transmission, when received by the local election jurisdiction, to be recorded and no further transmissions being accepted from that voter.
- Allow the election official, using a translator program, to reformat the transmitted ballot into a format for tallying with the existing tally system.
  - Identify methods that might be used to ensure the identity of the voter and the security of the transmission.



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# Appendix 1

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The following was provided by Ms. Phyllis Taylor, Director, Federal Voting Assistance Program, Office of the Secretary of Defense, Washington, DC 20301-1155.

January 4, 1995

## **ELECTRONIC TRANSMISSION OF ELECTION MATERIALS AS AN ALTERNATIVE VOTING TECHNIQUE**

### **Historical Background**

#### **Operation Desert Shield**

##### *1990 Results*

During a two month period in 1990, 1675 ballots were transmitted to Service personnel serving in the Middle East. Forty-nine states accepted the Federal Post Card Application request for registration and ballot and 43 states sent ballots by fax. A total of 33 states accepted return, voted ballots by fax.

##### *Electronic Transmission in 1993 & 1994*

As a result of the success of this alternative procedure during Operation Desert Shield, state officials and legislators have been motivated to change election laws and administrative procedures to allow for electronic transmission on a non-emergency basis. This procedure was first used in a Presidential election in the 1992 election and again during the 1994 Congressional election.

## **Technical Background**

### **The Concept**

The basic concept of electronic transmission or faxing of election materials calls for the secure, high-speed delivery of election materials to and from the voter and local election officials.

Under this system, the voter may use the service to:

- submit applications for registration and absentee ballot requests to the local election official in the voter's county, city, or town of voting residence.
- receive blank ballots from the local election official
- submit voted ballots to the local election official

The local election official may in turn use the system to:

- receive applications for registration and absentee ballot requests from the voter
- send blank ballots to the voter
- receive the voted ballot from the voter

### **Processing of Transmissions**

The FVAP administers the Electronic Transmission System (ETS) which provides the central control point for transmission of all materials. Using a secure 800 or Defense Switched Network (DSN)



number, both the voter and the local election official are able to transmit materials through the system at no cost to either of them. Upon receipt of these materials, the processing center routes the transmission to its appropriate destination.

Each transaction processed for either a voter or a local election official is automatically recorded on a transaction record. The documents from the voter and the local election offices are electronically stored in the system, thereby providing an audit trail to protect the integrity of the voting.

## Current Trends

### Progress since 1990

The ETS has been in continuous operation since 1990 and, since then, many states have implemented permanent, legislative and/or administrative changes in their codes to provide for this alternative method of transmitting election materials.

Presently, 33 states, American Samoa, the District of Columbia, Guam and the Virgin Islands allow the application for registration and/or ballot to be sent by fax. Sixteen states, the District of Columbia and the Virgin Islands allow blank ballots to be sent via fax to the voter, and eight states, the District of Columbia and the Virgin Islands allow the voted ballot to be returned to the local election official by fax.

### 1992 Results

In the 1992 Presidential election year, electronic transmissions were routed to 699 local election officials in 49 states, the District of Columbia, Puerto Rico and the Virgin Islands, including Nepal, Mozambique, Swaziland, Russia and Czech Republic.

An FVAP-conducted survey of citizens voting under the UOCAVA who utilized the system in the 1992 Presidential election concluded:

- 57% of overseas civilian citizens found the system easy to use
- 100% of federally-employed citizens overseas found it easy to use
- 77% of members of the armed forces found it easy to use

A similar survey of local election officials found:

- 66% of those who used the system cited a round trip transit time of one day or less
- An average of 91% of those using the system for some aspect of the process rated the system easy to use

In the future, the FVAP will continue to work with the states and the U.S. Congress in attempting to make the electronic transmission of election materials an effective, viable alternative for citizens voting under the UOCAVA.



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