An Introduction to eBoard Solutions
Introduction

Many organizations have come to the realization that a critical component of effective governance is communication. Eugene R. Smoley, Jr. lists connecting with the community as one of six categories of school board action in his book *Effective School Boards*. Open and ongoing communication between the administration, the board and the public provide the basis for true collaborative governance.

School boards, city councils, county commissions, and most public boards share a common set of requirements that can be enhanced by a collaborative electronic document system. These requirements include:

- Meeting Agenda creation and distribution
- Maintenance and publication of meeting minutes and voting records
- Right to know or open records requirements
- Maintenance and publication of policies and procedures
- A master calendar of meetings and events

Through this document, we will explore the steps needed to develop a truly collaborative electronic environment for public governance. While this document is targeted toward public organizations, private boards can also benefit from many of the ideas presented.

Planning

Before doing anything, careful consideration should be given to the users’ needs and abilities. Begin by identifying the groups of people who will be using the system and provide an interface that meets the usability and needs of each group. Keep in mind that users of public information systems are diverse with regard to computer expertise and computing platform. For most public organizations, three groups of people will need access to the system: administration, board members and the public.

All of the most successful eBoard implementations have one thing in common: they start the collaborative process early by engaging the board and the administration in selection or design process.
Administration

The administration of the organization often is responsible for the assembly, distribution, maintenance, and archiving of meeting agendas, minutes and policies. While these documents are usually created through a collaborative process between the board and the administration, it is usually the administration that keeps the official records. For this reason, in most organizations, the function of document publisher is assumed by the administration.

Administrators are often experienced computer users and are comfortable with word processing, spreadsheet, email, and Internet use. Internet-connected computers are usually supplied by the organization. Still, the publishing process should be intuitive and fit into the existing processes of the organization. Publishing an electronic document or assembling the electronic agenda should be easy and less time consuming than producing a paper version. If the process is cumbersome or time consuming there will be resistance to adopt and use the new system and reluctance will lead to failure.

Security should be addressed. The eBoard system will quickly become the main source of information regarding the actions and policy of the board. Unauthorized publishing or editing of documents can have a disastrous effect on governance. By limiting publishing to a select group of individuals and implementing advanced security measures, the potential for disaster can be avoided. Most often, organizations publish using a certificate-based, encrypted security model. Strict electronic and physical security will help limit the publishing and editing of documents to authorized users and prevent hackers and unauthorized users from tampering with the data.
The Board

The board typically needs access to the agenda and supporting documents well in advance of the meeting. Members also need access to the archived minutes, meeting agendas, supporting documents and an up to date copy of the policies and procedures. Board members are often elected or appointed officials with strong commitment to public service. As computer competency is not a prerequisite, computer skills range from expert to novice.

The eBoard system should be designed to be accessed via a web browser. Even the most novice computer user can navigate a well-designed web site. A web interface to the eBoard system will reduce the expense of managing custom application software on each user’s system.

Board members are critical users of the system, so care should be taken to provide an easy to use interface. The key for success with regard to the board member interface is simplicity. The most successful implementations provide a simple dynamic interface that reduces the number of mouse-clicks needed to access the agenda. Presenting meeting documents in agenda format allows board members to work with a familiar interface when accessing the agenda items. Avoid complex user interfaces, they often lead to confusion.

Since many board members will be accessing the eBoard system from home, a policy should be developed to address Internet access for board members’ homes. In practice, a policy for reimbursement for home Internet access varies depending on state law and the budget of the organization. Some organizations provide high-speed access and laptops, while other organizations leave it to the board members to arrange Internet access with no reimbursement. Here are some hints to reduce costs while providing quality access for board members:

- Design the eBoard system for low bandwidth internet use. Many organizations have excellent systems that operate well over 56k dialup lines.
- Consider partnering with a local ISP to donate the access for the board members in exchange for a link on the main eBoard screen.
- Since board members will be using the Internet connection for activities other than eBoard access, consider reimbursing half of what basic access would cost in your area.

Training is also a critical element. As competencies are varied, a training program should be developed that addresses basic computer use, Internet access, e-mail, legal issues concerning electronic communication, storage of documents and how to use the new eBoard system.

Infrastructure in the meeting place or boardroom is also critical. If a truly paperless system is to be implemented, each board member will need access an Internet connected computer to be able to view the electronic documents during the meeting.

Careful consideration must be given to every aspect of the board members’ experience both during the meeting and while away from the boardroom. Even with the promise of enhanced communication, conservation of natural resources, timesavings, cost savings and the ability to lead by example in the use of technology, many board members will be reluctant to adopt an electronic document system. For this reason the electronic document system should offer a better experience than the existing paper alternative and be extremely intuitive.
The Public

In most cases the public will need access to the agenda and supporting documents immediately prior to the meeting and after the meeting. The ubiquity of Internet-connected computers with browsers provide an excellent platform for access to electronic documents. It is critical that access by the public be provided via a web interface. All supporting documentation should conform to current Internet standards for publication of information to assure access by the greatest number of potential users. By providing a link to the electronic document system on the organization’s web site, the public will have access to information without the need for administrative assistance.

Many members of the public will continue to rely on news organizations as a primary source of information. For this reason, the press should also be considered a public user of the information contained in the eBoard system. The press is usually expert at conducting computer and Internet research and will quickly adopt the new electronic source as the primary source for information.

The interface will need to be intuitive, easy to use and readily accessible from the Internet. Help screens should be provided and email and phone contact information should be prominently displayed for those who wish more information or assistance.
Infrastructure

The infrastructures needed to support a paperless initiative include a central data store, a web server, connectivity in the boardroom, a video projector for the boardroom, computers for the board members and Internet connectivity. Many of these components already exist in most organizations. Internal competencies also exist for the application development for others and outsourcing is a good option for services that are not cost or time effective to implement.

The new eBoard system should be considered mission critical so every aspect of the infrastructure to support the new system should be designed and maintained to provide 24 by 7 availability. The eBoard system should be highly available, fault tolerant, redundant, proactively monitored, secure, and limit single point of failures.

Central Document Server

A critical component to any electronic document system is the concept of a central data store. For information to be accurate and easily accessible there should be a central official copy of all board documents. While it may be tempting to simply place files on a server in hypertext markup language (HTML) or portable document format (PDF) and have the served up by a web server, this model provides little control or security. With this model, links must be manually maintained and attached documents and files must be separately uploaded as static HTML and PDF files. Often publishing static files requires the intervention of overworked information technology support staff and can result in delays. Many organizations who adopted static eBoard solutions have quickly experienced the shortcomings of the model and have switched to an active solution.

A database of documents is preferable to static files. Document databases are specifically designed to support a collaborative electronic environment to share data. Such document databases provide user level security, the ability to dynamically generate navigation menus, allow replication of data and support advanced search options.

Board documents should exist in a database and work with an application and/or web server to present the information to the end user. The database server stores the documents in a secure database format that is easy to maintain and administer. The web/application server reads the documents from the database server and dynamically generates web pages and web navigation based on the content of the documents. There are two options to consider when implementing a document management system:

The first is to select a database server such as Oracle or Microsoft SQL and design a database to support the specific needs of board documents. Then implement a server side application using a scripting language such as JSP or ASP to dynamically generate web pages and serve them using a web server such as Microsoft IIS or Apache. Many times the database, application and web services can exist on a single server, though application complexity and high user load may require them to be separate.

Another option is to select a platform specifically designed to support electronic documents such as Lotus Domino or Microsoft SharePoint. The Lotus Domino Server platform provides a database designed to handle documents and dynamically generate web versions of the
documents and intuitive navigation pages based on database content. All of this is accomplished with a single server that is easily installed and configured.

In any case, the critical nature of the information suggests that a dedicated server infrastructure be allocated to the eBoard system. Some documents may contain sensitive information, and the public nature of the eBoard system will invite hackers to attempt to exploit security weaknesses.

Since the ability to access and the high level of accuracy of the documents is critical, special consideration should be taken in the design of the server hardware and connectivity. Several design aspects should be addressed:

- The server(s) should feature redundant power and disk subsystems. Include provisions for self and external proactive monitoring of critical processes and components with alerts sent to personnel able to quickly respond and react to service outages.
- A backup power supply should provide enough standby power to the server and critical networking components in the event of power loss.
- The server should be connected to the Internet via a high performance point-to-point network connection that is proactively monitored for performance and availability.
- The server should be secure. Nonessential processes should be shut down or removed; the operating system should be hardened to resist external attacks. Firewall technology should be in place to prevent unwanted access. File and printer sharing should be disabled and the server should be set apart from other internal and external servers. As eBoard servers have critical information including actions regarding personnel and legal matters, special consideration should be given to whom and how the system is administered.
- The physical location of the server should be secure.
- The server should be backed up each day. Special agents should enable the server to be backed up each night. The data on the backups should also be secured from unauthorized access and stored in a safe place in a different physical location. Quarterly tests of the backup restore process should be run to verify the validity of the backup and the ability to access the information from the backups in a timely manner.

Many organizations have found that outsourcing the hosting of such services is a viable option. Application Service Providers (ASP) can provide specific services to organizations. An ASP can use economies of scale to provide robust infrastructures, 24-hour technical support, high security and redundant hosting in a cost effective manner. With outsourcing there is often low or no up-front cost, automatic software upgrades, and little or no internal IT resources needed for a fixed yearly or monthly fee.

Note: When outsourcing any document storage, be certain for a provision of local replication of all data. Verify the ability for stand alone, local access of all data in the event of a network failure. Remember, organizations can outsource the eBoard document function, but the responsibility for document storage remains with the organization.
At Home

For any new eBoard document initiative to be successful, board members will need a way to access documents from home. This involves two elements, a computer and a reliable connection to the Internet. Many board members will already have access to an internet-connected computer, however; some organizations have found that providing a laptop to each board member the best solution. A laptop provided by the organization has several advantages:

- The computer can be configured by the organization’s information technology staff to the support standards and services of the organization. Email, virus protection, and access can be configured by IT staff to provide maximum usability.
- The laptop can be utilized exclusively to support the member’s activities as a member of the board. This isolates any private, non-board related documents from being discovered as part of discovery in any potential legal action.
- The laptop can be configured to support the infrastructure in the boardroom allowing the board member to use one system at home and at the meetings.

Another option is to allow board members to utilize existing personal systems to access the eBoard system. This option requires specific guidelines for storage of information and use to be setup by the organization, particularly with respect to the use of email. Limiting access to eBoard documents and email to a web interface may resolve any local file storage issues.

Note: Legal standards for document storage vary from state to state. Consult legal council prior to enacting a policy of organization supplied computers for board members.

A standard should also be determined for Internet access. Many organizations choose to provide reimbursements for some or all of Internet access for board members.

Note: As high speed Internet access is not universally available or cost effective, eBoard systems and other web services designs should provide for quick screen loads over 56k connections.

Most organizations have found the desktop systems using the Microsoft Windows 2000, Windows XP Professional or Apple OS/X operating systems work best. Properly configured, these operating systems allow the user to move the computers between a home and the boardroom with no user intervention or configuration changes.

The Boardroom

To implement a truly paperless eBoard solution, the boardroom should be fitted to allow the public and board members to access the agenda and supporting documents during the meeting. Most organizations find that installing an 802.11 wireless access point in the boardroom and fitting laptops with wireless adaptors works well. The 802.11 wireless system has become an excellent option to provide groups of users easy convenient access to network resources at a reasonable cost.

Wired solutions such as Ethernet that support 100 MBPS will provide better performance than wireless solutions, but require cables run to each computer. This can be expensive and in some boardrooms impractical.
Note: Special care should be made to restrict access to the network when using wireless technologies. Consider using access points that allow administrators to restrict connections by MAC address. This will restrict access to those systems that have been registered with the access point. Also use 802.11 products that support encryption, to limit eavesdropping.

The board secretary or other administration member should be present to make changes to the agenda, update documents, and record actions in the eBoard system. This will provide real time updates to the eAgenda and provide up to the minute accuracy of the documents and actions.

For the public to view the agenda and supporting documents, a projector and screen should be installed in the boardroom. The screen should be large enough and positioned so that all in attendance can clearly view the documents. The projector should have a high enough light output to provide a readable picture when the boardroom is lit.

Someone should be designated to run through the agenda using a computer connected to the projector during the meeting so that the public can see what agenda item the board is considering. This system will be connected to the projector and be up and running throughout the meeting.

If the meetings are televised, a feed from the public computer should be sent to the television production crew. This will allow the director to display parts of the agenda for the viewing public. Viewers can also log in from home and follow along with the meeting.

Provisions should also be made for loss of connectivity. If there were no paper copies of the agenda or supporting documents, network failure would make it difficult or impossible to conduct the meeting. A copy of the agenda should be replicated onto the public computer’s hard drive. This would allow the agenda and supporting documents to be displayed on the screen during the meeting and/or copies could be printed to a locally attached printer in the event of a network failure.

Administration
Most organizations provide Internet attached computers to the administration. In most cases a single person can be designated document publisher for the eAgenda. In some cases the responsibility is shared among a team of individuals who are responsible for the agenda, policies and procedure and the board calendar. In any case, the computers used to publish the documents should be secure, high performance and well maintained.

There should also be a laptop designated for the board meetings. This laptop will be present at all meetings with a complete replicated copy of the agenda and all supporting documents. The laptop will provide an important backup should there be a network failure and it will also provide a way to make instant changes to the agenda, record minutes and board actions.
Applications
To provide a complete communications solution for the board, administration and the public, a suite of applications are needed. Some of these applications such as email will already be in use by the organization others will need to be developed or acquired.

Meeting Agendas
A solution to manage, publish and access the agenda and supporting documents is the core of any successful eBoard solution. Three groups of users will need to access the information in the agenda, each with specific security and access needs.

- Document Publishers will need a secure and easy way to add and modify information in the document database.
- Board Members will need to have secure password protected advanced access to all documents in the agenda database. This access should be provided via a web interface.
- The Public will need access that satisfies the legal requirements for public access of records.

Most organizations find the presenting the meeting information in an agenda format meets the publics’ expectations and provides an intuitive interface for the board members. Provisions should also be made for the board members and public to access archived meetings and perform full text searches of the meeting agendas and supporting documents.

Some organizations find it useful to include a provision for board members to electronically add notes and comments to the agenda items. For government, this issue can be a legal Pandora’s Box. Most states have rules that define electronic meetings. If board members can post notes to agenda items and other members read those notes and post other viewpoints to the agenda item, it may fall under the definition of an electronic meeting. In this case the notes would have to be open to the public and minutes would need to be kept. To avoid the electronic meeting issue, organizations allow posting private notes on agenda items that can be read only by the author. Many organizations are uncomfortable with private notes as the information is stored and maintained by the public organization may also be subject to sunshine or open records laws. In any case these unchecked notes could become discoverable in any potential legal action. Most organizations have found that publishing documents in a read-only format to be the best solution as it closely replicates the paper packet.

It is important that electronic agenda application should have the provision to mark certain documents private. Public organizations have the obligation to maintain personal privacy of during the review of personnel and disciplinary matters. Documents pertaining to these matters need to be distributed and reviewed by the board members, but should be kept out of the public domain.

Note: As with any document management system, paper or electronic, review all procedures with legal council to assure compliance with federal, state and local laws.
Policies and Procedures

A key component to policy government is the adoption, distribution and maintenance of board policies. Publishing and providing access to carefully crafted policies extend the governance process throughout the organization. The public’s understanding of the policies further communicates the direction of the board and the organization.

Because of the amorphous nature of policies and procedures, frequent updates to paper policy manuals is necessary. This process often results in outdated copies and can lead to a lack of confidence in the policies. By leveraging the power of the Internet an eBoard solution can provide an excellent platform for the development, review and distribution of policies and procedures.

Much like board agendas, different groups of people need specific access to the policies and procedures.

- The publishers or administration need to be able to add policies to the database and maintain them.
- The board members and administration need to be able to review proposed policies and procedures while also having the ability to access active policies and procedures.
- The public and staff need access to the active policies and procedures to assure understanding and compliance.

When looking for a platform to publish policies and procedures many options are available. Most organizations find the same document publishing infrastructure used for the board agenda can be adopted for use in publishing and maintaining the policies and procedures. As compared to the board agenda, policies and procedures are more static and are updated less frequently. For this reason, static pages or even a PDF version posted to the web site may be a low cost and easy to implement solution. Policies under review can be posted as agenda items to the eBoard.

Email

Email has grown to become a primary and preferred means of communications for many organizations and individuals. As a board tool, email is best used to for communications between the individual board members and the administration. Public organizations feel email powerful communication conduit between the board and the public. Most organizations have mission critical email infrastructures that can provide the basis for board email communications.

For public organizations, it is recommended that board members utilize the email system of the organization and avoid using individual public email services. By the organization taking primary responsibility for maintenance and storage of email administration can respond to open records requests and provide copies of email in response to a court order.

Another advantage of organization maintained email systems is that the organization becomes responsible for the security of the electronic messaging. Most experts recommend using secure messaging protocols like that employed by Microsoft Exchange or secure IMAP.
Explicit procedures for the use of email as a communication tool among the board members should be adopted. These policies should take into account the laws that cover electronic communications between board members. Issues to be addressed should include:

- Should communications be limited to one to one or two parties?
- Avoid forwarding communications between two board members to a third member.
- Discussions of board business should be limited to meetings.
- How long electronic messages should be archived?
- Should electronic communications between board members be prohibited?
- In most cases, two-way communication between the administration and board members is permissible.

Don’t assume that board members know how to use email and are familiar accepted email etiquette. Take time to properly train the board members on a regular basis and use the training as an opportunity to cover the electronic messaging policies adopted by the board.
Agenda Preparation

Document Collection

Policies for the delivery of supporting documents should be set to ease the publishing process. Many organizations have existing document flow policies and deadlines to assure prompt delivery of board packets to the board members. Because an eAgenda can be published in parts, agenda items can be placed in the agenda as soon as they are ready. Real time publishing allows board members to view the documents as soon as they are available. Administration need not wait for all agenda items to be submitted before beginning the assembly of the agenda. Procedures should be amended to encourage delivery of supporting documents in electronic form from internal and external sources.

While many documents will be in electronic form, there will still be a need to add paper documents to the agenda. A high-speed document scanner with automatic sheet feeder should be available to the administration. A scanner that is able to scan directly to PDF format will save time and make the scanning process as easy as making a photo copy.

Open Document Formats

Publishing documents electronically can do much more than replicate paper versions. Using rich media such as audio, video, presentations and photographs can enhance the level of communication and can better illustrate ideas.

As tempting as it is to simply publish native word processing or spreadsheet files, proprietary file formats should be avoided. Publishing native files requires us to make broad assumptions as the end user’s system configuration and type of applications installed. While the vast majority of Internet-connected systems are based on Microsoft Windows and have Microsoft Office, there are users who use Macintosh or UNIX based systems. Use commonly accepted open document formats when publishing for the Internet.

<table>
<thead>
<tr>
<th>Type of file</th>
<th>Standard</th>
<th>Reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pictures and photographic quality graphics</td>
<td>JPEG or JPG</td>
<td>Internet Browser such as Microsoft Internet Explorer or Netscape Communicator</td>
</tr>
<tr>
<td>Simple Graphics and Line Art</td>
<td>GIFF or GIF</td>
<td>Internet Browser such as Microsoft Internet Explorer or Netscape Communicator</td>
</tr>
<tr>
<td>Sound</td>
<td>MP3</td>
<td>Any MP3 or Media player such as Microsoft Media Player or Apple QuickTime</td>
</tr>
<tr>
<td>Static Documents such as wordprocessing, spreadsheets or presentations</td>
<td>PDF</td>
<td>Adobe PDF reader</td>
</tr>
<tr>
<td>Video</td>
<td>AVI or Quicktime</td>
<td>Media player such as Microsoft Media Player or Apple QuickTime</td>
</tr>
</tbody>
</table>
Documents such as word-processing, spreadsheets and presentations should be converted to Adobe Portable Document Format (PDF). The PDF standard will assure quick load times, excellent fidelity and assure the public will be able to view the document regardless of the type of system they are using. For many organizations, this is the format of choice for most documents published.

*Note: Make provisions for the public to be able to download any players or plug-ins needed to support the various document types included in electronic document system.*

This will further speed the assembly of the agenda and provide a richer experience for the public and the board members.

**Publishing eBoard Packets**

As the person who is responsible for preparing and distributing the electronic board packet, the Document Publisher should be an organized and trusted member of the organization’s staff. The primary responsibility of the document publisher will be to take existing paper or electronic documents and publish them to eBoard system.

Organizations that rely on IS staff to publish documents often experience a lag from the time an agenda item is ready to be published and when the document actually is available to the board. Organizations that have successfully implemented eBoard systems have found the same person who was responsible for compiling the paper packets should maintain that responsibility in the electronic version.

Because document publishers may have little or no experience in creating or maintaining web sites, document publishing should be easy and require no prior web publishing experience. Consider creating a custom publishing application that provides secure access to the database and provides an intuitive interface for the publisher. While this can be accomplished via a web interface, most organizations prefer the security and richer experience of a custom client-based application for document publishers.

The process of moving to an electronic agenda provides an excellent opportunity to evaluate and if needed, change the structure of the board agenda. Many organizations change the agenda categories from meeting to meeting, the most successful organizations standardize on a single agenda format for each type of meeting. Take some time to plan out your agenda and try to leave room to accommodate a typical meeting. Most organizations simplify Special Called Meetings and Work Sessions with a single agenda category called Special Called Meeting or Work Session. Typical board meetings will have an agenda similar to the one below:
1. **Call to Order**
   1.0 Call to Order, Invocation, Pledge of Allegiance

2. **Executive Session**
   2.01 Executive Session: Legal Consultation
   2.02 Executive Session: Personnel Actions

3. **Welcome Guests**
   3.0 Welcome Guests

4. **Approval of Minutes**
   4.0 Approval of Minutes

5. **Adoption of Agenda**
   5.0 Adoption of Agenda

6. **Comments from the Public**
   6.01 Comments from the Public

7. **Consent Agenda**
   7.01 Approval of Personnel Actions
   7.02 Approval of Amended School Resource Officer Contract
   7.03 Approval of Reading Grant Application
   7.04 Approval of Records Destruction Notice
   7.05 Approval of Summer School Proposals and Budget
   7.06 Approval of New Course Proposals
   7.07 Approval of Field Trips

8. **Special Recognition**
   8.01 Student(s) of the Month
   8.02 Employee of the Month

9. **Financial Reports**
   9.01 Financial Report

10. **Special Reports**
    10.01 Saxon Math Report
    10.02 Marietta Schools Foundation Report

11. **Discussion Agenda**
    11.01 Approval of a Resolution for a Bridge Loan
    11.02 Legal Services
    11.03 Sawyer Road Project
    11.04 Approval of ROTC Program for MHS
    11.05 Approval of American Government and Reading Enrichment Courses
    11.06 Approval of the Purchase of Server for Department of Special Services
    11.07 Board of Education Directive to the Superintendent
    11.08 Review of Bids for a Compliance Investigation on the New High School Project
    11.09 State Health Benefit Plan for Board Members
    11.10 Approval of MHS Media Center Purchases

12. **Superintendent's Comments**
    12.0 Superintendent's Comments & Information Items

13. **Adjournment**
    13.0 Adjournment

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Devoting time to standardization will make it easier for board members and the public to quickly find information in the eBoard packet. It will also give a sense of familiarity to the agenda and the operations of the board.

The publishing process for paper-based board packets requires that all agenda items with supporting documentation be ready prior to the publishing of the agenda and creation of the packets. This can often delay the publication of the paper packets and reduce the valuable time the board members have to review the information. By using an eBoard Packet solution, agenda items and supporting documents can be published as they are submitted. As many of the agenda items are available far in advance of the meeting, review time for board members is extended. Board members can now review the information, research options, and poll discuss the issue with constituents prior to the meeting. The result is better-prepared boards with a greater understanding of the issues to be covered in the meeting.

Initially, most organizations use the eBoard packet solution to replace the existing paper-based packet. After about four to five months of publishing, document publisher start enhancing the experience by utilizing rich media types. Agenda items now can utilize color photographs.
In summary, the eBoard packet solutions should fit into the existing process while providing important enhancements that will lead to better-informed decisions and a richer picture of the issues to be covered by the board.

**Collaboration**

Technology provides many tools for communication and collaboration. Many organizations are expanding the use of communication and collaboration into the virtual domain of the Internet to move beyond the traditional meeting. Tools such as video conferencing, shared digital workspaces, chat rooms, and email challenge our ideas of what constitutes a meeting.

While these new tools are enhancing the productivity of ad-hoc workgroups in the private sector, they are usually not appropriate for boards of public organizations. The laws that govern the way public meetings are conducted were crafted based on the physical meeting. Many have been expanded to cover or limit virtual meetings but, for the most part, legislation is behind technology.

While laws vary from state to state, most organizations have limited the following activities:

- Telephone conference calls between board members
- Electronic document sharing such as shared document stores or shared email folders
- Broadcast or forwarded email among board members
- Electronic comments or annotation of agenda items
- The use of chat rooms

All of these activities allow discussion of board business out of the public domain and are usually not allowed under most states governance policies.

In the development and implementation of an eBoard solution, technology will provide many features and capabilities that, on the surface, will offer the promise of more effective communications. Always review the legal consequences of the adoption of such technologies and verify that they meet the letter and intent of the law.
Training

Proper planning, design, application development, and implementation are all critical to a successful eBoard system, but without adequate training key users will not be able to properly utilize the system. Good training consists of two important elements: user manuals and a training course.

Simple user manuals for the use of the system must be in place prior to the training either in paper form or on-line. The manuals should include the following:

- Table of contents that allows the user to jump quickly to the section of interest
- A definition of terms
- An introduction that describes the use and function of the system in an abstract or executive overview format
- Extensive use of tables, illustrations and screen shots
- Simple cookbook style descriptions of common tasks

Then training course should be developed based on the information in the user manuals. Training should be held in a classroom format with a knowledgeable and experienced trainer. Each user should have a configured computer to work with and the presenter/trainer should use a computer with a projector for demonstration. Training should cover:

- Basic use of the computer and Internet (if needed)
- Description and overview of the eBoard system
- Introduction to user interface
- Cover each function from the user’s perspective
- Allow the user to try each feature several times
- Stop for questions after each section

The best results are achieved when the training is broken down into two sessions. The first training session can be held for the administrators, who will be performing the publishing and a separate session for the board members. Optionally, you can hold a training session for the press, union officials or association representatives who may be heavy users of the public site.

Typical publisher training sessions take two to four hours depending on the complexity of the system and the competency of the publisher. Board member training is usually one hour unless the users need training on basic computing and Internet use.
Conclusion
The task of designing and implementing a successful eBoard solution should be driven by a commitment to improving governance through improved communications. This commitment should be shared by all parties, the administration, the board and the public. Only then will an organization fully realize the benefits improved communication through technology.

About the Author
Aristides (Artie) Ioannides has more than 20 years of experience solving computer problems. He started programming in high school as part of a pilot program where students taught each other programming. At the age of nineteen, he took his first professional position at Sears as a mainframe computer operator where he was the youngest computer operator employed at Sears. In 1988 Artie founded what is now Emerald Data Solutions where he has helped organizations operate fast and reliable computer systems. Recently Artie has been working with organizations throughout the United States enhance Governance by leveraging the power of the Internet.
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