



Technology Toolkit

~ brought to you by the
Technology Committee of the Virginia PTA

Helping you get in touch and **STAY** in touch
with your families and community.



November 2008

Dear PTA Leader,

When I assumed the position of Technology Chair after Convention in 2007, I had 2 goals in mind for my tenure.



My top priority was get approval to remove the password requirement for the VA PTA web site. After that my mission was to revamp the site to improve the user experience and the quality of the information and presentation. Improving navigation so that users could easily find what they needed and presenting the information in a 21st century design were important goals.

As a committee chair, you sometimes assume that it will be all up to you to achieve your objectives. This was not the case! Northern Virginia District Director Debbie Kilpatrick introduced me to a member of her district board, Alana Heng. Alana is a talented web expert who was interested in helping out on the Technology Committee. Alana quickly jumped in and did the lions share of the work in transferring all of our information from the old site to the new site. Her speed and accuracy was amazing! On July 25th, we were able to launch our new site at www.vapta.org. I hope you are all enjoying the new site and that you will send any comments that you have to webmaster@vapta.org. We are always looking for suggestions for improvement as we maintain the site and add new functionality. One enhancement that I am planning is online activity registration. This will allow registrants to fill out registration forms and submit them via the internet to our state office. This will not only help the state office with data entry, but will also provide an easier way to get your registration forms to the state office by deadline.

My second main goal was to create a Technology Toolkit for local units. This guide will provide all the information for units to research and build their own internet tools to help them keep in touch with 21st century technology. This guide is the fulfillment of my second objective and I hope that you will see the value in it as you build out your communications tools.

Please provide feedback on our toolkit to technology@vapta.org. We'd love to hear your suggestions as we will continue to evolve the toolkit for its second release in the LURG in the summer of 2009.

Thank you and enjoy!

Carla Rogers

Technology Chair ~ Virginia PTA

technology@vapta.org

webmaster@vapta.org



I. Committee

The Technology Committee is comprised of the following VA PTA Board of Managers members and Members at Large:

Alana Heng (member at large, secretary)
Beckey Gallamore
Phyllis Ayers
Denise Bowman-Scott
Dan Phillips
Robin Grove
Rick Higgins (member at large)

The Technology Committee is charged with the following responsibilities that mirror many of those at the local unit.

- A. Identify and implement technology applications that benefit and enhance the performance of the State Office, the Board of Managers and the local units.
- B. Provide assistance to the State Office, the Board of Managers and the local units in the utilization of technology applications approved for use by the Virginia PTA.
- C. At least two members of the committee will be trained and have the responsibility of maintaining the Virginia PTA web site and email system.
- D. Attend all scheduled committee meetings.
- E. Complete tasks as assigned by the chairman.
- F. Communicate with the chairman on matters of interest to the committee, which are brought to them by the membership and others.
- G. Promote the work of the committee and its purpose to the membership.
- H. Re-evaluate technology services each year.

The Technology Committee's approved plan of work states that creating a Technology Toolkit within the 2007-2009 tenure is an objective. This toolkit and its distribution fulfill that objective.



II. Glossary

A. Blog - Similar to a web site, a blog is more interactive. It usually allows people, associations, or businesses to post frequently updated information in an "article" format, and also allow for comments and discussion with other users.

B. Broadband - Broadband is a loose term for a fast internet connection. Early connection methods used your home telephone and were extremely slow. Cable modems and DSL use a different mechanism to connecting to the internet that is much faster.

C. Browser - A piece of software that allows you to view web pages. It typically comes built-in with your computer, although you can install other company's version as well. Popular browsers include IE (Internet Explorer), Firefox, and Opera.

D. Chat - Online chat can refer to any kind of communication over the Internet, but is primarily meant to refer to direct one-on-one chat or text-based group chat (formally also known as synchronous conferencing), using tools such as instant messengers.

E. CSV - Short for comma separated values. It is a file format that takes information and separates them with commas. Programs such as Word use these types of files as input for mail merges and to transfer data.

F. Domain - Similar to a url, it is the name of a web site. Domain names (like yahoo.com, famwise.com, etc.) are leased on a yearly basis. They are associated with a web host who will take all requests for information and pass that request to the proper computer. Domain names end in .com, .org, and several others. See *also* - URL.

G. Download - A download is any file that is offered for downloading or that has been downloaded from a web site.

H. Email - Electronic mail. Using the internet as a delivery mechanism, people can compose messages (including images, movies, songs, etc.) and send them to another person who can then read them on their computer.

I. Email Filters - Most email clients offer a program that will allow you to filter out unwanted email (or Spam).

J. Encryption - Normally, information on the internet is not secure, meaning it could be viewed by anyone with the right tools. Encryption packages information securely before transmitting it across the internet, where the receiving computer "un-encrypts" it for processing. See *also* – HTTP/HTTPS.

K. FTP - File Transfer Protocol (FTP) is a network protocol used to transfer data from one computer to another through a network such as the Internet.



L. Firewall - A firewall is a device that decides who can connect to a computer through the internet. It is typically used to prevent unwanted network traffic from entering a computer or group of computers. It can also be used to control how users of a computer can interact with the internet.

M. Host - A company that leases computer space from which to run your web site and/or email. Companies such as godaddy.com and ReadyHosting will rent preset amounts of computer space to individuals and companies for a set price, usually monthly or yearly. They often require you to lease your domain from them as well.

N. HTML - An acronym for HyperText Markup Language - HTML is the predominant markup language for Web pages. It provides a means to describe the structure of text-based information in a document — by denoting certain text as links, headings, paragraphs, lists, and so on — and to supplement that text with interactive forms, embedded images, and other objects. Files and URLs containing HTML often have a .html filename extension.

O. HTTP/HTTPS - When the URL of the page you are looking at starts with HTTP, the information is not secure. When there is an HTTPS in front of it that signifies that the information is being sent securely. Look for this when sending information such as social security numbers and credit cards. See also - *Encryption*.

P. Hypertext Link/Link - A hyperlink is a reference or navigation element in a document to another section of the same document or to another document that may be on or part of a (different) domain or web page.

Q. Often abbreviated to "link". Hypertext (meaning "more than just" text) is a form of text typically published on web sites that provides a richer functionality than simple text documents by enabling the reader to explore interesting links to other web pages linked to specific words or images within the page.

R. Instant Messaging - A computer program that lets people instantly send messages to another person. These messages are typically text-based, but can also include videos, images, and sounds.

S. ISP - Stands for Internet Service Provider and is a company that provides internet access to homes and businesses. This could be through Cable Modems, DSL, or dial up connections through the telephone.

T. Link - A word or image on a web page, than when clicked, takes you to another, predetermined page.

U. Mail Merge - Many programs like Word and Excel allow you to take files that contain information like names and addresses and "merge" them with templates for printing. This is most often used to create mailing labels or form letters.



V. Navigation - A navigation bar (also known as links bar or link bar) is a sub region of a web page that contains hypertext links in order to navigate between the pages of a web site. Since it usually appears on all or at least on several pages of a web site it is one of the key design-elements of web sites -- as well in terms of usability as for the visual attraction.

W. Open Source Software - Open source software (OSS) began as a marketing campaign for free software. OSS can be defined as computer software for which the source code is made available under a copyright license (or arrangement such as the public domain) that permits users to use, change, and improve the software, and to redistribute it in modified or unmodified form. It is very often developed in a public, collaborative manner.

X. Outlook - A computer program from Microsoft that allows you to manage your email, calendars, address books, and task lists. It is a part of the MS Office Product suite. A "thinner" version that only processes email is called Outlook Express and is shipped with Internet Explorer. *See also – Email.*

Y. PDA - A personal digital assistant (PDA) is a handheld computer also known as small or palmtop computers. Newer PDAs also have both color screens and audio capabilities, enabling them to be used as mobile phones, (smartphones), web browsers, or portable media players. Many PDAs can access the Internet, intranets or extranets via Wi-Fi, or Wireless Wide-Area Networks (WWANs). Many PDAs employ touch screen technology.

Z. PDF - Portable Document Format. It is a type of file that is readable on any type of computer, no matter what software created it. It comes from a company called Adobe and the reader is free to download and use.

AA. Search Engine - Several companies like Google and Yahoo have created tools that essentially index the internet. By entering a search phrase, you can have the tools present you with a list of web sites that match your request. Results are usually ordered by popularity, meaning the more "links" from other sites a site has to itself, the higher in the list of search results it will appear.

BB. Spam - Unwanted email that is usually trying to sell you something. Unfortunately it comprises a large amount of the email traffic that is being sent across the internet.

CC. Spreadsheet - A computer program that uses a series of rows and columns to manage data, usually financial.

DD. Text Message, TXT, SMS message - Text messaging, or texting is the common term for the sending of "short" (160 characters or fewer, including spaces) text messages from mobile phones using the Short Message Service (SMS). It is available on most digital mobile phones and some personal digital assistants with on-board wireless telecommunications. The individual messages which are sent are called text messages or, more colloquially, texts or SMS.



EE. URL - The address of a web site. It typically starts with <http://www>. and ends with .com. However there are many other formats that can be used. Com stands for company. You could also have .org (organization), .edu (education), .net (network), or one of many others. The www stands for world wide web. See *also - Domain*.

FF. Viruses - Programs that either cause damage to your computer or that are used to steal private information. Most computer users install anti-virus software to combat this threat, but it is an ongoing war between "good and bad". It is highly recommended that all computers install a good anti-virus program and keep it updated.

GG. VOIP - Voice over IP, or the ability to make and receive telephone calls through your computer.

HH. Web Mail - A way of reading and sending email from an internet browser. Typical examples are Hotmail, gmail, and Yahoo Mail. See *also - Email*.

II. Web Server - A computer program that is responsible for accepting HTTP requests from web clients, which are known as web browsers, and serving them HTTP responses along with optional data contents, which usually are web pages such as HTML documents and linked objects (images, etc.).

JJ. Web Site - A collection of information that is accessed through the internet, similar to an electronic magazine. Typically, a web site will show users a "home page", which is similar to the cover of a newspaper or magazine. The web site will allow users to navigate to other pages of information through hyperlinks, which are words or images that have been programmed to send the user to a specific place. See *also - Domain*.

KK. Wireless Router - A device that allows computers to connect to the internet without plugging in with wires. Typically used in homes and businesses, it is sometimes called WiFi.

LL. Word Processing - A computer program that allows users to create documents and other publications.

MM. WordPress - A computer program that allows web site owners to publish their own blog. See *also - Blog*.

III. Approach your Site like a Pro would

A. Assess your unit's goals for the site ~ your decisions for the site are based *on these questions*:

1. What is the purpose/goal of the web site?
2. What are the immediate & long term goals of the site?
3. What web-related steps will you use to achieve these goals?



4. How will you measure the success of the site?
5. Keep your audience skill level in mind ~ is your audience novice, expert or a mix?

B. Answer fundamental questions

1. Who is speaking/providing the information/content?
2. What content should be included on the site? What does my audience want?
3. How often will we update the site?
4. Will the navigation be clear? How will the audience know where they are on the site?
5. Why do we have a site? Explain this on the front page.

C. Follow basic web site design principles

1. Double-check internal site links as you grow the site
2. Remember bandwidth limitations, keep page size small
3. Choose a common theme
4. Use the same background on all pages
5. Use the same fonts and font size on all pages
6. Be consistent with text colors and link colors, all links should be underlined. Don't use underline text except for links
7. Import external content instead of linking to it when possible
8. Test your site in different or new browsers (Internet Explorer, Firefox/Mozilla, Safari)
9. Purge old, updated content frequently
10. Frequently check links to external content/sites

D. Site Content Suggestions

1. Homepage with letter from the PTA President
2. Committee Pages
3. Contact Info and Board Member List with email links



4. Budget, Audit Report, Bylaws
5. Calendar
6. Meeting Minutes
7. Links to other sites of interest including VA PTA and National PTA

E. Common Web Design Mistakes

1. Breaking the Back Button
2. Broken Links
3. Archives vs. Outdated Information
4. Internet Buzzword Marketing (such as guest books, free email, free chat,)
5. Slow Server Response Time
6. Under Construction Pages
7. Anything That Looks Like Advertising
8. Amateur Web Techniques

F. Amateur Web Techniques

1. Using too much color or too many colors within the web site
2. Underlining non-clickable text
3. Using overly cute graphics
4. Using non-relative graphics or too many graphics
5. Spelling and grammar errors!
6. Using blinking text
7. USING ALL CAPS IN A REGULAR PARAGRAPH (On the web, ALL CAPS is like shouting.)
8. Using too many frames or modules on a page
9. Changing the background color on each page
10. Having all text centered



11. Scrolling or Marquee Text

12. Using too many fonts and/or font sizes

IV. Steps in Building a Web Site

A. Determine an outline for your web site.

B. Develop the outline into web content organized in pages. Keep as much related content on the same page as possible to avoid requiring the user to click again and again to find what they want to see/read.

C. Determine what content within your outline will need to be updated or refreshed on an ongoing basis. Make sure your needs match your volunteer hours. Old content is worse than no content.

D. Assign the updates to a member of your board to either update themselves or provide to the webmaster. Make sure you make it clear what format to provide the updates.

E. Know the budget or cost your web site prior to the budget being prepared and approved. Research the costs, don't assume. Include costs for your domain, site host and webmaster fees, if you choose to pay a webmaster. There are webmasters who will host your site, set your site up for you and do minimal updates for a fee.

F. Research companies that provide hosting services and domain registration. Choose ONE company to do both. Keep accurate records of the administration user names, passwords and service agreements. The average hosting fee is \$10-20 per month, depending on the services that they offer. Domains usually cost between \$10-\$20 per year, in addition to the hosting fees.

G. Decide what you'd like your domain to be. Since PTAs are non-profits, try to get the .org extension for your site. Don't make your web address too long or complicated – it should be very easy to remember.

H. Decide how you will build your site. (More details on this in the 2009 version of the Technology Toolkit.)

1. Build it yourself or have volunteer do it

2. Hire a professional (an individual)

3. Have your domain and host company build your site

I. While it is very helpful to have a board member or parent build your site, be sure that you get at least one additional person involved that knows how to maintain it.



- J. Maintain accurate records of the administrative login for the webmaster of your site. This information should be kept with your domain and hosting registration information.
- K. If you lack a volunteer with programming skills, elicit a professional. There are many companies who have 'templated' sites that are available to you to personalize for your PTA.
- L. Decide the design of your site.
- M. Publicize your site address on ALL your PTA communications. Train your students, parents, administration and community to go to your site for information.

V. Quick Technology Tips

- A. Choosing an Email Service Provider (details will be provided in the LURG edition of the Technology Toolkit)
 - 1. Features you need and why you need them
- B. Setting up POP mail in Outlook (details will be provided in the LURG edition of the Technology Toolkit)
- C. Choosing a Web Site Host (details will be provided in the LURG edition of the Technology Toolkit)
 - 1. Features you need and why
 - 2. Costs
- D. Advertising on your Web Site

Allowing advertising on your web site is tricky.

Be sure that you set standards for any advertising that you expose to your membership. Insure that you maintain full control of the content of advertising. Reserve the right to approve all advertising and the right to reject any advertising. One issue that often arises is that when you have a particular company advertising on your site, it could show favoritism in some of your users' eyes. Watch out for conflicts of interest. If you do decide to sell advertising – think of it as a fund raiser and put the funds to an appropriate use.

Be certain to maintain a balance between site content, useful PTA and school information and advertising. You should always have MORE content than advertising. Think of the 3 to 1 rule of fund raising – it also applies here.

Remember that advertising adds work to the overall maintenance commitment of your site.



E. Images of people on your Web Site

When you utilize photos in your web content (or any PTA communication for that matter!) you must get permission to utilize the image. There are stand photo release forms available – or you can design your own. Make sure you get a guardian signature for any child you feature. Never caption photos with names of the people in the images.

F. Browser Bandwidth

From a browser's point of view, bandwidth refers to how much information can be received by the user per second. On an average phone modem connection, a browser can receive 6000 bytes (6K) per second, which means it would take 5 seconds to receive a 30K file. When a Web page is downloaded, the total size of all graphics and text on the page must be calculated to determine how long it will take to load the page. For example, a 10K Web page, which includes 10 graphics each 5K in size, is a total of 60K and will take 10 seconds to load. Web development programs like HomeSite call this document weight and do the calculations for you.

Recycling graphics can reduce total page size by using the same graphic more than once on the same page or on different pages. Since graphics are only downloaded from the Web once then stored in the browser's cache for subsequent uses, each time a graphic is reused; the load time is virtually free.

The graphics below total 19k in size (3 seconds), yet produce a result which equates to 250K+ in size (40+ seconds). Since the graphics are recycled, only 3 seconds of wait time is realized.

Reducing unneeded HTML code or other content can reduce total page size by more than you would expect. First, by building Web pages by hand, you can reduce the amount of HTML code by half. This is because HTML editors are very tag happy, thus the documents become very code heavy with no visual benefit.

Next, many Web sites will include lots of extras on a page with no real need or justification for using them. Every image, applet, or add-on that the Web site can live without should be removed to improve load time.

G. Image Optimization, Control Web Page Size

The faster a Web page loads, the more likely a user will stay. Outside of selecting a quality Web hosting company, the burden of building efficient Web pages falls on the Webmaster.

Content optimization is achieved by insuring that the content on all Web pages is as small as possible without affecting the look and feel of the final product. There are many techniques to accomplish this such as content reduction, content division, graphic recycling and graphic optimization.



H. Using Width and Height Attributes

A key way to reduce download time is to resize graphics to the desired display size. Too often Web developers will use the width and height attributes built into the tag to define the desired size. Because it then displays correctly, they assume the file will load faster. In fact the file is still the same size, and the only way to improve download time is to reduce the file with a graphics program.

Even if all graphics are correctly sized, it is still very important to use the width and height attributes. This is because if width and height are defined, the browser is able to reserve space where the graphics will load, and continue to load the rest of the page, leaving holes for the graphics to be filled in later.

The time to completely load all graphics and text is still the same; however the text will be viewable very early in the load process, while the graphics fill in later.

I. About Compressing Graphics

Optimizing graphics by using compression and choosing the best graphic format are the easiest ways to reduce the download time of a Web page. Most Web graphics can be reduced in size 30%-90% without affecting the look of the graphic. Unfortunately not many developers are aware that it is even possible to optimize graphics. Notice how much space can be saved by optimizing the below Web graphic.

J. Graphic Optimizer Programs

In the early days, optimization was achieved by trial and error methods, which was very time consuming, but did yield good results. These days you are likely to use a graphic optimizer program, where you can adjust the parameters of a graphic on the fly and immediately preview the final size and appearance of the compressed graphic.

The graphic optimizer program method is obviously the tool of choice. There are many programs out on the web. Photoshop, Coffecup.com (ColorPix converter) are some program options.

K. Web Graphic Formats

There are plenty of graphic formats that exist, however only GIF and JPG are compatible with all graphical browsers. For this reason, no other formats fall within the scope of this course.

It is important to mention the PNG (Portable Network Graphic) format which presumably has all the advantages of both JPG and GIF, and is compatible with the newest browsers. However, until PNG is supported by a large majority of the browsers in use, it will continue to sit on the back burner.



L. Accessibility Standards Overview

It is becoming increasingly important to ensure Web pages are accessible to users with disabilities. Fortunately there is the World Wide Web Consortium (W3C) which has in place an official Web Accessibility Initiative Standard. This section will address many of these design considerations, but you are encouraged to review the entire WAI standard.

Although there are many different groups to consider during page design, each accessible design choice generally benefits several disability groups at once and Web users as a whole. How much accessibility you provide can depend greatly on what groups the Web site will target.

We already know that consistent page layout, recognizable graphics, and easy-to-understand language benefit all users. In particular, they help people with cognitive disabilities or who have difficulty reading. The easier information can be digested, the more accessible it is.

M. Secure Web pages

Secure Web pages are just regular Web pages that live on a secure Web server. For the browser to know a secure server is being accessed, the "https://" protocol is used. So a Web site with secure pages has pages that reside on two separate Web servers: one server for the regular pages and one server for the secure pages.

All pages are not stored on the secure server for two reasons. First, a secure server is inherently slower than a regular server. Second, not all browsers support secure pages. If a browser can't handle secure pages, an error will occur. For this reason, you should always offer alternate payment methods like phone or fax.

N. Browser Compatibility

The only good answer is to Test, Test and Test again! HTML Features that may fail to work if your visitors are using a different browser

There are many interesting features which you can find for your web site. They will produce effects which are exciting, colorful, amusing, and engage the user. But unless the user is using exactly:

1. the same browser,
2. the same set-up and the same fonts and colors,
3. with the same plug-in options,
4. using the same display size and resolution, your beautiful gimmicks may not be seen or may even destroy the presentation of the rest of the material.



Therefore the rule should be to only use features that add to the presentation, and which leave the basic material on the page still working, however it is viewed. Be very careful when using content with:

1. cookie requirements
2. sound
3. animation
4. java
5. javascript
6. DHTML
7. background images
8. required plug ins
9. non-Windows-standard fonts

O. Why do you care about Browser Compatibility?

Web sites reflect the company's professional image. If your site renders improperly or not at all, your company's reputation can be tarnished. If your site has browser display problems, visitors and potential customers will leave your site and not look back.

In contrast, a professional looking site will make visitors feel more comfortable, stay longer and browse more pages. And because of this increased credibility, they are more likely to purchase the products and services that they are looking for from you.

Many problems are caused by browser quirks and bugs. In these cases you'll have to track down your HTML problem yourself. Be patient; you can expect this process to take anywhere from one to four hours. Try following these steps to track down the cause:

1. Make a copy of your Web page so you can restore it to its original form if you need to. Debug this page, not your original Web page.
2. Isolate the problem on your copied page. Do this by eliminating as much of the page as you can. Is the problem at the top of your page? Then throw away everything but the top section of the page.
3. View the pared-down page in the problem browser (use Browser Photo to do this if you need to). Is the problem still there? Then remove more of the page. Eventually you'll get to a point where the problem disappears. In that case, the last part of the page you deleted probably caused the problem.



4. Now go back to your original page (or create a fresh copy of it and work with that). Look at the section of HTML that may have caused your problem. Change it.
5. Now start a new Browser Photo session for your page. View the results and see if you've corrected your display problem. If so, congratulations!
6. After you've fixed the problem, be sure to review your Browser Photo snapshots for other browsers too. It's a common mistake for HTML coders to fix a problem under one browser, and in the process break the page under another browser.
7. Don't expect your first guess to solve the problem. More often you'll have to try a number of different things to see if they solve the problem. Again, be patient with yourself; this takes time.

P. Using PDF instead of Word

The standard for online documents is in PDF format. Going back to compatibility, not everyone is going to have MS Word or have various versions of MS Word. Therefore, PDF formats allow the majority of visitors to view your documents.

Documents that contain graphics, photos, and specialized formatting such as multiple columns are not easily converted to HTML, the programming language of the web. Use Adobe PDF to prepare documents that contain more than text for the web site. Reader converts documents to PDF images. PDF documents appear on the web in an identical format and appearance to printed documents. The current version of Reader is version 8.0. If you are unable to view certain charts or graphs, and you are using earlier version of Reader, please follow these instructions to upgrade your software to enable you to view these images. Web users need to have the free Adobe Reader program installed and linked to their web browsers to view PDF images.

There are many low cost (or free!) programs that convert to PDF from many programs like Word, Excel, PowerPoint. You don't have to spend a lot. Just do a search on the web and you'll find many programs. Below is a list of suggested sites:

1. <http://sourceforge.net/projects/pdfcreator/>
2. <http://www.tucows.com/preview/350107>
3. <http://www.pdf-to-html-word.com/pdf-to-text/>
4. <http://www.pdfdesk.com/products.html>
5. <http://www.win2pdf.com/?gclid=CP6Jlp6b6JUCFQuSGgodNEM0eQ>
6. <http://www.adobe.com>

One final reminder ...



Look for an updated version of the VA PTA Technology Toolkit in the 2009 LURG to be delivered to units in July/August of next year.

