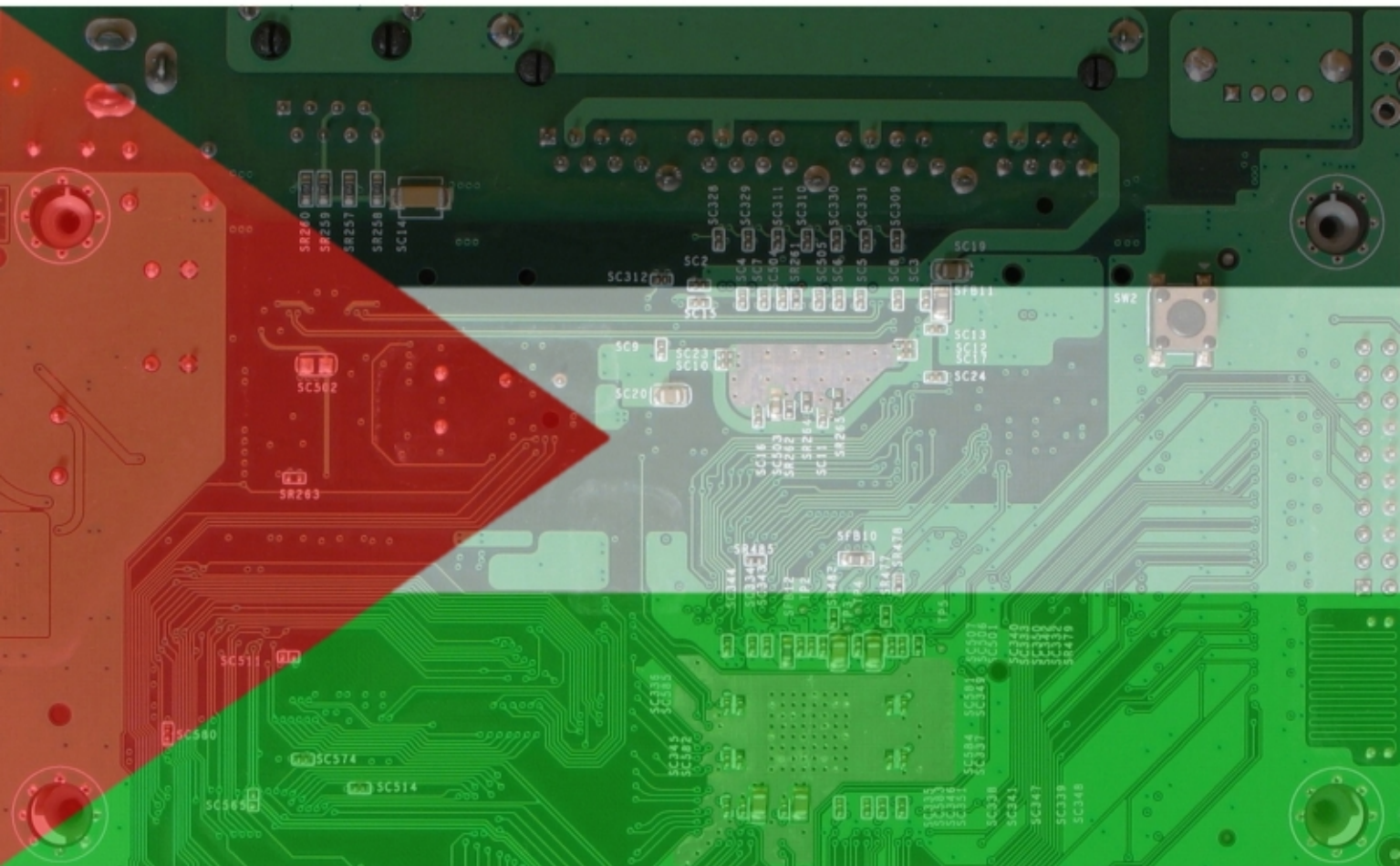


Putting **Technology** to Work for Palestine Activism

Version 1.0



The Palestine Freedom Project

Cultivating Peace, Empowering the Grassroots

www.palestinefreedom.org

Contributors

Saad Abdali, Munera Al-Fuhaid, Emily Channell, Tirtza Even, Abraham Greenhouse, Basem Hassan, Amanda Hood, Sophia Stamatopoulou-Robbins, and Richard Wark

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The Palestinian people themselves, for providing an example of how the human spirit can prevail under even the most trying of conditions – an example that shall endure long after our collective efforts to realize a vision of peace and equality for all the peoples of the Holy Land have succeeded

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What is the Palestine Freedom Project?

The Palestine Freedom Project (PFP) is an organization dedicated to providing grassroots Palestine solidarity activists with the tools and resources they need to become more effective advocates. Through these efforts, we are helping to close the vast infrastructure gap that exists between those who struggle for peace and equality, and those who seek to thwart it. Whether you are a church leader collecting information to support a drive for morally responsible investment or a college student confronting anti-Palestinian attitudes on campus, the Palestine Freedom Project gets you what you need and gives it to you in a form that you can use.

In addition to this first module of our comprehensive Palestine Activism Handbook, our current projects include:

- **Palestine Activist Database**

A critical backbone to our work, the Palestine Freedom Project has been compiling a database of the thousands of organizations engaged in Palestine-related activism throughout the world. This information will allow us to help those groups develop closer relationships in order to effectively coordinate activities and share resources. An interactive version of this database will be made available on the internet for use by the Palestine activist community.

- **Needs Assessment Surveys**

In early 2007, Palestine Freedom Project conducted an unprecedented survey of organizations engaged in Palestine activism, aimed at identifying common needs and trends within the movement. The results were exhaustively analyzed, and used to identify priority areas for resource and program development. We plan to conduct such surveys regularly, to guide the process of permanently establishing a logistical support structure to empower Palestine activists everywhere.

- **Speakers Bureau**

In an effort to make it easier than ever for activists to identify and secure qualified speakers and other guests for their events, PFP has launched the world's first full-service, professional Palestine speakers bureau. The bureau includes leading experts, activists, and performers, such as Diana Buttu, Norman Finkelstein, Afif Safieh, and the Philistines. Our bureau's roster continues to grow, expanding the options and easing the logistical burden of activists, while connecting qualified speakers and performers to the organizations who depend on them.

These projects would not be possible without the help of activists like you. Please consider making a financial or in-kind donation, or joining our team of volunteers. Details on how to do so are found on the next page, at the end of the "*What is this Handbook Module?*" section. To learn more about the Palestine Freedom Project, please visit our web site at www.palestinefreedom.org.

What is this Handbook Module?

The document you are reading is the first module in the Palestine Freedom Project's comprehensive Palestine Activism Handbook. The handbook project is an attempt to provide a central body of reference material to guide the efforts of Palestine solidarity activists throughout the world. The completed handbook is expected to comprise approximately one dozen modules covering every conceivable topic pertaining to the practice of Palestine solidarity activism. Inspired in part by handbooks released by the organized anti-Palestinian community over the past several years, this series of documents will far exceed anything yet developed by opposition actors, both in its scope and in the level of detail provided.

The vast majority of this document's contents was developed internally by our staff and volunteers. A small amount has been reprinted, with permission, from other sources. Future modules in the handbook series will incorporate more extensive contributions from a variety of organizations and individuals. In this way, we hope to draw upon the collective wisdom of the Palestine activist community to create a groundbreaking document that should sharply reduce the amount of time that activists spend learning the same concepts through trial and error.

If you encounter any content that is unclear or confusing, redundant, superfluous, or missing, or if you have any other suggestions as to how this document might be improved, please contact us. Each module in the handbook series will be subject to periodic reviews and updates after publication – a process simplified by the modular format used. Questions, submissions, and suggestions concerning the handbook may be directed to handbook@palestinefreedom.org.

If you find this module useful, please consider supporting our efforts. The Palestine Freedom Project relies entirely upon private donations to fund its work. Only with your help can we continue our mission of empowering Palestine activists everywhere with the tools and training they need to become more effective advocates. Donations may also be made through our web site at www.palestinefreedom.org. In-kind donations, particularly office supplies (including computers and other equipment), printing, legal, technical, and other services, and even free or discounted office space, are especially needed and sought at this time.

The Palestine Freedom Project is always seeking talented and motivated volunteers to join our team. Individuals with skills and experience in writing, editing, research, marketing, public relations, technology, visual arts, and grassroots organizing are strongly urged to volunteer. By joining us at this critical time in our organization's development, you can help to ensure that PFP will have the necessary human capital to continue developing groundbreaking resources that will help to revolutionize the practice of Palestine solidarity activism, bringing us closer than ever to a just and lasting peace. To volunteer, please email intern@palestinefreedom.org.

Section 1: Mailing Lists (AKA Listservs)

Most people reading this module will already be familiar with mailing lists, or listservs, which are mechanisms that forward incoming messages to an entire list of subscribers, making it possible to communicate with a large group by sending a single message. Listservs are omnipresent in the activist world, but they aren't always utilized as effectively as they can be.

The most common formats for listservs in the activist community are:

- 1) **Internal communication within the organization itself.** Access to these is most restricted.
- 2) **One-way communication from an organization to a subscriber list, often consisting of its supporters or media contacts.** Access is usually less restricted than internal lists.
- 3) **Moderated discussion lists of subscribers with a particular interest or based within the same geographic region.** This format varies more than any other in the degree to which access is restricted, but typically there is little or no restriction.
- 4) **Unmoderated discussion lists.** Access to these is typically unrestricted.

Each type of mailing list is subject to a different set of considerations:

Internal Lists

These lists may either be moderated or unmoderated, according to your organization's specific needs. These should be kept the most secure, assuming that you don't want just *anyone* to be privy to your organization's planning and decision making processes, as well as whatever interpersonal drama might unfold on such a list. The non-technical aspects of "security culture" will be addressed in a separate handbook module, but the security of your list also depends on several technical factors:

- Always configure your list so that only the moderator(s) can add subscribers.
- Never subscribe an address that hasn't been verified as belonging to the intended recipient.
- Use a secure mailing list provider whenever possible. These are discussed later in this section.
- Conduct regular audits of the subscriber list to make sure that no one is subscribed who shouldn't be, and periodically re-verify all subscribed email addresses.
- If a member leaves your organization or simply becomes inactive, remove him or her immediately. They can always be re-added later, if necessary.
- Disable any feature that archives the list's messages unless absolutely necessary.

One-Way Lists

- The chief advantage of these lists is that the owner or moderator has complete control over the content that reaches list subscribers. Subscribers without moderator or owner access are not able to post messages to these lists.

- It's best to include your organization's direct email address somewhere in the body of each message you post to such lists, or to include it in a *signature file* (see the Email section of this module) to be used when posting messages to the list.
- Depending on your organization's security needs, you may want to consider auditing these lists as well, in order to prevent advance information on your activities from reaching the opposition.

Moderated Discussion Lists

- Moderation can be time-consuming, and in addition to monitoring messages, moderators will sometimes have to deal with subscribers complaining about the rejection of their off-topic or otherwise inappropriate posts.
- Unless your organization has a specific need to maintain one, it's generally a better idea to avoid discussion lists altogether.

Unmoderated Discussion Lists

- These are a risky endeavor for activist groups. Unless the subscription process is tightly controlled, you'll never know when a member of the anti-Palestinian opposition, or member of a hate group seeking to co-opt the Palestinian cause might make their way onto your list and wreak havoc.
- Subscribers have carte blanche to pick fights with one another, creating drama that could spill over into the offline world and create serious problems for your organization.
- Unless your organization has a specific need to maintain one, it's generally a better idea to avoid discussion lists altogether.

Considerations that apply to ALL mailing list types:

- The moderator(s) should never be the same person or persons who control the organization's web site or other communications.
- If your organization contains multiple political or ideological tendencies, it's best not to put any one faction in complete control of even a single listserv. Use multiple moderators when possible, even if it sometimes seems cumbersome or redundant. It's worth it.
- Don't use the same password on multiple moderator accounts, and don't use the same passwords as you use for your web site, voicemail, or any other application.
- Have a clear policy on what can and cannot be posted to the list, and a clear process for responding to violations. All users should agree to this protocol upon subscribing, and periodic reminders should be sent out to the entire list.
- If a suspicious post appears on the listserv, check the originating IP address against the known IP addresses of individuals you think may have been responsible. While this might not help you pinpoint professional infiltrators, this works wonders for identifying amateur efforts at disruption. To learn more about tracing IP addresses, see the "*Encryption and Data Security*" section of this module.

Mailing List Hosts

- **Yahoo Groups** (www.groups.yahoo.com)
Yahoo is by far the most popular of the major mailing list hosts, and decent choice for large external or public lists. In addition, Yahoo Groups offers some interesting features such as file storage and

collaborative spreadsheets. Some potential uses of these are discussed further on, in the Project Management section of this module.

- **InterActivist** (www.interactivist.net/maillinglists)
InterActivist Network, a collectively-run organization which provides various technical services to the activist community, offers a mailing list system that is significantly more secure than Yahoo. List archives are available only to list members, and subscriber addresses are visible only to list administrators. To request a list for your group, send an email to info@interactivist.net with the name of your organization, a description of the work that you do, the estimated size of the list, and the email address of the list administrator.
- **RiseUp** (<https://lists.riseup.net/www/>)
RiseUp is another collective that provides a number of different technical services to activists. See their site for more information about their list services.

Using Others' Mailing Lists

Most organizations promote their events and make announcements not only on their own mailing lists, but on others to which they subscribe. Follow these rules to make the best use of such lists:

- **Always read and observe the posting policies.**
Guess what? Your list isn't the only one with rules. Many have clear guidelines about what types of messages may be posted – such as only announcements of events taking place in a particular geographic area, or only those that directly involve a particular issue. Take care not to run afoul of the boundaries set by lists on which you post.
- **Don't make duplicate posts.**
Never post the exact same thing twice. It's normal to post more than one (but absolutely no more than three) messages about a particular event, but be sure to change the subject line and update the content each time. Generally, all that's needed is a single post one or two weeks before the event, and a follow-up reminder when it is two or three days away. You can make exceptions for massive events such as conferences, but in such cases, focus your announcements on specific aspects of the event, such as the speakers roster, the opening of registration, and so on – without needless repetition.
- **Cross-post the easy way.**
Most listserv hosts allow subscribers to post by sending their message to a particular email address (although a few of them force users to fill out a form on the web). Take advantage of this by compiling the addresses of all the lists to which you'd like to post your message, and entering them into the "BCC" field of your email (separated by commas). Enter your own address into the "To" field. This method will allow you to post to a message to several lists by sending a single email. It's a good idea to check and make sure that your post made it onto each of the lists to which it was sent. Sometimes spam filters will block emails addressed to more than a certain number of recipients. You'll want to identify those lists which seem to be filtering out messages sent in this way, and either post to them individually, or determine the maximum number of addresses you can enter into the BCC field and still have the message reach all intended recipients.

Section 2: Web Sites

As information on web development is plentiful online, this section won't waste time detailing how to perform the actual work of building a web site. There is, however, other basic information regarding web sites that all activists should know. For more on the design principles that factor into web development, see the "Desktop Publishing" section of this module.

Domain Names

The first step in getting a web site online (even if all the files have been developed and just need to be hosted somewhere), is deciding what domain name(s) to use. Start by coming up with the part that goes between the "www." and the ".com" or ".org", or whatever you're using. This part is critical. Choose a name that is:

- **Short** (The shorter, the better.)
- **Distinct** (Avoid names that are similar to those of existing sites.)
- **Easy to type** (Avoid numbers and symbols.)
- **Memorable**
- **Consistent** (If the URL of your site is meant to coincide even partially with the name of your organization, make sure that all the shared elements are spelled the same way. If your organization's name is too long, has an ampersand (&) or other unusable symbol, or if someone else has already registered the most obvious domain name for your group, try to come up with a creative alternative. *Examples:* Barnes & Noble → bn.com.
Network Solutions → netsol.com
- **Relevant** (For example, let's say your organization specializes in distributing films from or about Palestine, and conducts its work under the name "Palestine Film Distribution Committee". What domain name will you choose? The full name is too long, and the acronym 'PFDC' is not memorable. Try a name that describes what you *are* instead of what you're *called*, like palestinefilms.org.)

See also: http://visibility.tv/tips/domain_names.html

Domain Name Registration

Once you have determined the name you want for your web site, you'll need to register it. Once obtained, a registration typically lasts one to two years before it must be renewed. Always remember to renew your registration on time, or you may risk losing it. The many companies that offer domain registration services are known as *registrars*, and their services vary significantly in both price and security features. Such features are an important consideration if there is a reasonable fear that an unauthorized person may attempt to wrest control of the domain away from you; this has happened to several Palestine-related activist groups.

Additionally, many registrars now offer a privacy feature (generally at additional cost) that prevents others from accessing the personal contact information that you are required to provide during the registration

process. Essentially, your registration is publicly listed in the name of a third party in order to protect your private information. This is a worthwhile investment to protect the person who registers your domain name from harassment on the part of opposition members who might obtain the publicly available registration information.

For added security, register the most common variations on your chosen name that might be typed in error. For example, if you are registering “lutheransforpalestine.org”, you should also register the “.com” and “.net” variations. Also note that the words “Palestine” and “Palestinian” are often confused by people trying to remember web addresses – so a group registering “palestineculture.org” should also register “palestinianculture.org” (plus the “.com” and “.net” variations). This not only prevents your site from losing traffic as a result of a mistyped address; but also prevents others from deliberately registering names similar to your own in order to redirect that lost traffic to their own sites.

Companies constantly compete to offer the lowest pricing for domain registration, which currently starts around \$8.00 USD per year. Some of the more notable registrars are:

- **Go Daddy** (www.godaddy.com)
An increasingly popular, low-cost choice, which also offers the ability to register many foreign domains such as .de, .jp, .uk, and many others.
- **Network Solutions** (www.netsol.com)
This is one of the most expensive registrars, at up to US\$35.00 at present. It’s also the most secure; it’s very difficult for an unauthorized person to gain control of a domain registered here.
- **Yahoo Small Business** (<http://smallbusiness.yahoo.com/domains>)
Yahoo used to have the cheapest service around – not anymore, but it’s still close at about US\$9.00 per year. It also has a solid reputation for ease of use.

Hosting

In order to be accessible on the internet, the files that make up your web site must be *hosted* on a web server. Many hosts also provide tools for creating your site. Types of hosts include:

- **Shared:** A service that stores your site on the same server as many other sites
- **Virtual Dedicated Server:** This type of hosting divides a single server into multiple “virtual” servers, so that each user has full control over their own virtual server while sharing the physical machine on which it exists.
- **Dedicated Server:** Users are given full control over a physical web server owned by the host.
- **Colocation:** Users are given full control over a server that they own, but is physically stored and maintained by the hosting provider. This is the most secure form of hosting, and also the most expensive.
- **Advertising-Supported:** A form of free (usually shared) hosting that forces sites to display pop-up or banner advertisements. Examples include AngelFire, Tripod, and Yahoo Geocities. For activist sites, the substantial annoyance to your site’s visitors isn’t worth the savings.

A number of organizations offer free or discounted (usually shared or virtual dedicated server) web hosting to activist groups, without forcing the display of advertisements. Many also offer email and mailing list services. These include the following:

InterActivist: www.interactivist.net/web
MutualAid: <http://mutualaid.org>
RiseUp: <http://hosting.riseup.net>

Creating Your Site

Essentially, there are four ways to go about creating your site:

Template-Based: Many hosting providers offer online template-based tools to construct your web site. This is certainly the easiest method. However, you will be limited to specific layouts and options, and the number of pages in your site may be restricted.

CMS: A CMS (Content Management System) is a software application, installed on a web server, that automates the backend work of creating and updating a web site. Sites that use a CMS are extremely easy to update – users essentially just plug in text and graphics, set a few parameters pertaining to layout, and the software does the rest. A CMS can be rather difficult to set up initially, and requires a person with significant computer experience. If you have access to such a person, however, this may be your best bet, as CMS-based sites offer far more options than their template-based counterparts, and are easier to maintain than any other type of site.

Examples (both are open-source): **Joomla** www.joomla.org
 Drupal www.drupal.org

DIY: You can also opt to take a completely do-it-yourself approach to developing your site, using an application like Macromedia Dreamweaver or NVU (a cross-platform, open source program) to create it from scratch. This allows you a great deal of flexibility in designing your site, but can also be extremely time consuming. For a good comparison of popular web development applications, see this article: <http://www.techsoup.org/learningcenter/software/page4746.cfm>

Hiring a Pro: Finally, you can enlist a professional web developer. For a fee, the developer will create your site from scratch, install an existing or custom-made CMS, or perform any number of other tasks related to developing your web site. Hiring a professional can be very costly, although many offer discounts to nonprofit and activist organizations.

Paths to Development



Maintaining Your Site

Once your site has been created, it must be maintained. Update it as frequently as possible, even if the update is as superfluous as a peripherally-relevant news blurb. Frequently updated sites help create the impression of a more active organization. Many people will use your web site as their primary source of information about your group, so it's critical to make sure that it stays up-to-date with all of the latest information. If your organization moves its site to a new address, you should both announce the move in advance and continue to renew the registration of the old one, setting it to redirect to your new page.

URL Redirection

The term “URL Redirection” refers to the technique of making web pages accessible via more than one URL, or web address. Some web hosts offer this as a service (usually for free) when you register multiple URLs with them. If you've registered multiple variations of your web address, you could easily set www.lawstudentsforpalestine.net to redirect to www.lawstudentsforpalestine.org. Besides handling variant addresses, redirection is also useful for redirecting traffic from an outdated address.

A number of URL redirection techniques are described here:

http://en.wikipedia.org/wiki/URL_redirection

Section 3: Desktop Publishing

Activists are constantly producing fliers, advertisements, brochures, stickers, buttons, t-shirts, and all manner of other printed materials – not to mention web sites, to which many of the same principles apply. Too often, however, these materials are created using only the most familiar software and the most basic approaches, even though the right software and techniques can greatly elevate the quality of the finished product, with little or no additional cost in time or energy. The goal of this section is to instruct activists in the best ways of balancing time, effort, and cost, to consistently produce the highest quality printed materials possible for any situation.

Content Development

- **Design Basics**

To create high-quality content, it's useful to have at least a general knowledge of basic design principles. You'll find a good overview of some basic elements, as well as tips on how to design specific types of documents, at this web site: www.allgraphicdesign.com

Quick Design Tips:

- 1) Immediately after viewing an image, the eye tends to scan **BELOW** the image, rather than to the side of it. Avoid placing important text to the left or right of an image.
- 2) Always think about the *flow* of your ads or others visual materials. Where do the viewers eyes start? Where do they move next? Why? Your layouts should reflect a careful plan to lead the viewers' eyes along a particular path, following a specific sequence of locations.
- 3) If you choose to superimpose text on an image, do so sparingly. Note that the text must contrast well with the background in order to be legible. Areas with less color variation are the best places to add text.
- 4) If you must use long bits of text (over 100 words):
 - a) Break it up into as many short paragraphs as possible. Consider adding visual elements between sections to provide breaks from the text, but only if the flow is maintained.
 - b) Consider using subheadings that can convey the general idea behind each section even if the viewer skips over the main text.
- 5) Don't split headlines into different areas of a page: this disrupts their "flow", and can become confusing.

- **Working with Color**

Color is a science unto itself. From the ways in which different colors are formed using different printing processes, to the psychological that various colors can trigger, there's a lot to learn. Check out this link for some useful information: www.colorsontheweb.com

Quick Tips on Color Psychology:

<i>Blue</i> = Trust, Loyalty, Tranquility	<i>Red</i> = Aggression, Energy, Passion
<i>Green</i> = Relaxation, Nature, Wealth	<i>Yellow</i> = Optimism, Concentration
<i>White</i> = Sterility, Innocence	<i>Purple</i> = Luxury, Sophistication
<i>Black</i> = Authority, Power	<i>Brown</i> = Genuineness

- **Next Steps**

Once you've familiarized yourself with the basics, you'll want to start learning about the specific techniques that professional designers employ to create effective print advertising. It's not as difficult as it sounds. The following link provides an amazing introduction to how design, imagery, and wording factor into successful print advertisements for social justice causes. All of the "tips" on the previous page are explained in detail, with many visual examples provided. The report, authored by Andy Goodman and entitled "Why Bad Ads Happen to Good Causes", also references many great books about advertising principles and theory. The concepts explored are key to effective print advertising, and we can't recommend it highly enough.

www.agoodmanonline.com/bad_ads_good_causes/

Goodman's report actually inspired another one, specifically involving the Israeli-Palestinian conflict. "Israel in the Age of Eminem" is written by Republican pollster-turned-anti-Palestinian-activism wunderkind Frank Luntz. It's a bit out of date now, but definitely worth reading:

www.acbp.net/pub/eminem.pdf

- **Thinking About the Final Product:**

It's important to consider the logistics of output and printing when constructing your design. If you're going to be using a word processing application to print copies of an image file (as described in the section on printing), you'll want to set your image file to the appropriate dimensions: the image's length and width should each be at least .5" less than the target paper size – so, if you're printing on 8.5" x 11" paper, you'll want to create an 8" x 10.5" image. Also, if your flier has text on it, you should set the resolution to at least 100 dpi (dots per inch). The text will be much easier to read this way.

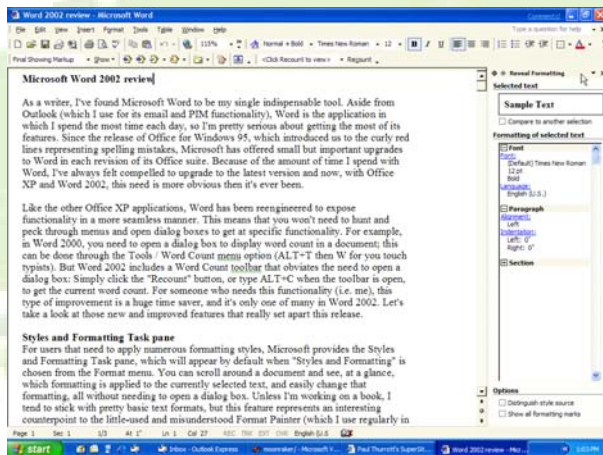
Bear in mind whether or not you'll be printing in color. It's often wise to prepare both color and grayscale versions of the same document – the grayscale documents will be faster and easier to print, but you'll have the color version on hand just in case you have a chance to use a color printer.

Applications

- **Microsoft Word (Estimated Retail Price: \$50 - \$200)**

<http://office.microsoft.com/word/>

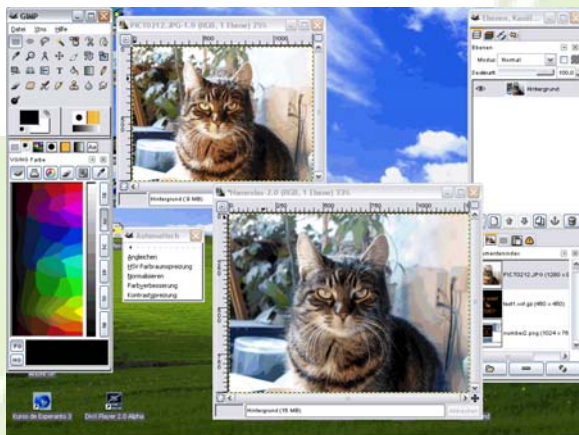
You'll find MS Word on nearly every public PC you encounter, and for this reason it's worth knowing how to use it. It is a part of Microsoft Office Suite, and available for both Windows and Mac OS operating systems. One of Word's major weaknesses is the lack of flexibility it provides in arranging graphical elements, making it a poor choice for creating fliers and other graphically-intensive documents. However, it is capable of quickly churning out decent-looking, text-focused output. It's also much easier to print from than many of the applications you may be using to create more graphically-intensive materials. Tips on printing from Word are found in elsewhere in the Desktop Publishing section, in the subsection titled "Printing". For a comparison of Microsoft Office Suite and OpenOffice.org, see this article: www.techsoup.org/learningcenter/software/page4382.cfm.



- **GIMP (Freeware)**

www.gimp.org

"GIMP" stands for "GNU Image Manipulation Program", and is essentially a free, open-source version of Photoshop. While it's a bit more difficult to learn for most people, and isn't quite as expandable (yet), it's every bit as powerful. It's not found on most public computers, which are much more likely to offer Photoshop, but it's free to download and worth learning to use.

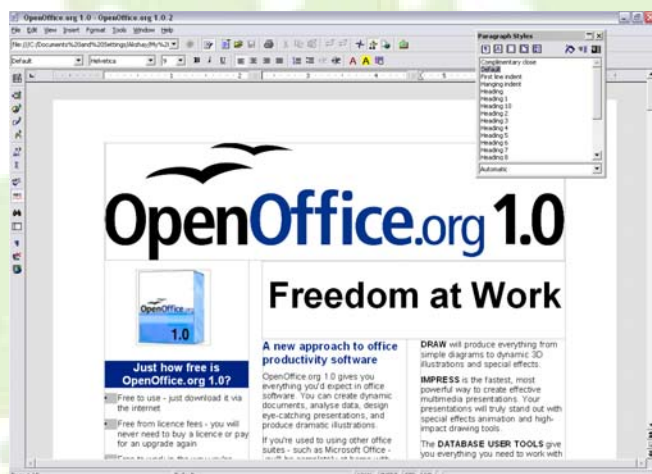


- **OpenOffice Writer (Freeware)**

www.openoffice.org/product/writer.html

OpenOffice.org is a free, open-source productivity suite that includes a set of applications similar to those offered in Microsoft Office. Writer is the suite's word processing utility, which is similar to Microsoft Word both in feel and in functionality. An additional advantage is that Writer is capable of exporting documents to Adobe Acrobat format (.PDF) with no additional software required. You won't find the OpenOffice suite on most public computers, but it's free to download if you care to use it. For a comparison of OpenOffice.org and Microsoft Office, see this article:

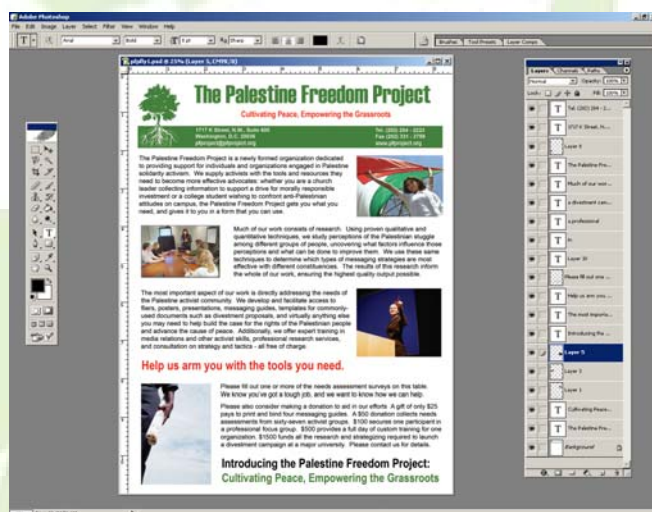
www.techsoup.org/learningcenter/software/page4382.cfm



- **Adobe Photoshop (Estimated Retail Price: \$250 - \$1000)**

www.adobe.com/products/photoshop

Photoshop is an image-manipulation utility – and much, much more. It gives you nearly unlimited ways in which to edit and manipulate images, and a good variety of options for working with text as well, particularly in terms of producing effects. A massive library of plugins expands the possibilities even further. Photoshop is ideally-suited for fliers and other documents that are graphically-intensive or feature unusual layouts.

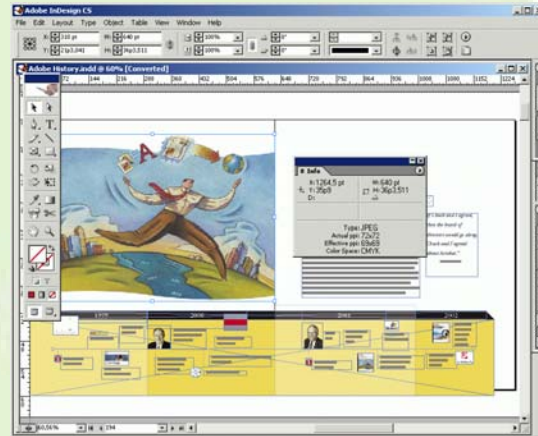
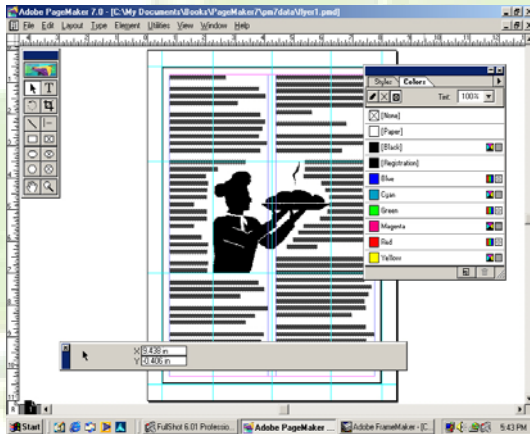


- **Adobe PageMaker and InDesign (Estimated Retail Price: \$400 - \$800)**

www.adobe.com/products/pagemaker

www.adobe.com/products/indesign

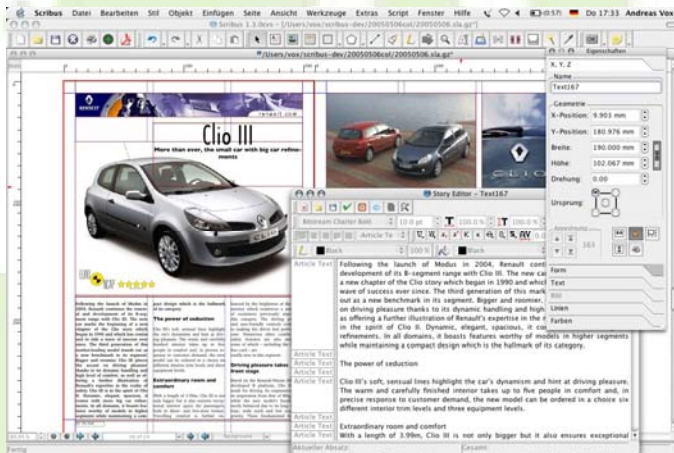
PageMaker and InDesign belong to a class of applications that straddle the fence between word processing and image manipulation programs – a category that's generally referred to as “desktop publishing” software, because it's an all-in-one solution. They don't offer the same degree of control over text or graphics as the preceding applications, but instead focus on making text and graphics flow together seamlessly in your documents. InDesign is essentially a higher-end version of PageMaker, providing more features and enabling users to produce more complicated layouts, but comes with a considerably sharper learning curve. Both of Adobe's desktop publishing applications are best for producing shorter documents such as articles or posters. Longer documents, such as full-length magazines, manuals, and books, are best created in another application not discussed here, Quark XPress: (www.quark.com/products/xpress)



- **Scribus (Freeware)**

www.scribus.org.uk

Scribus is an open-source desktop publishing application. It's more powerful than PageMaker, but not quite as robust as InDesign and Quark XPress. But hey – it's free!

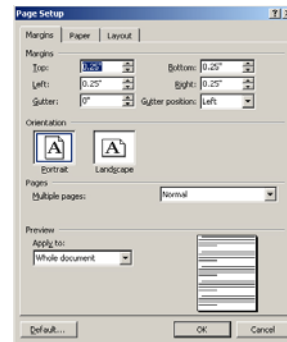


Printing

For most do-it-yourself print jobs, you'll likely be using public or commercial printers and copiers. This subsection provides a brief overview of ways to print quickly, cheaply, and in large volume.

Printing Single-Sided Documents

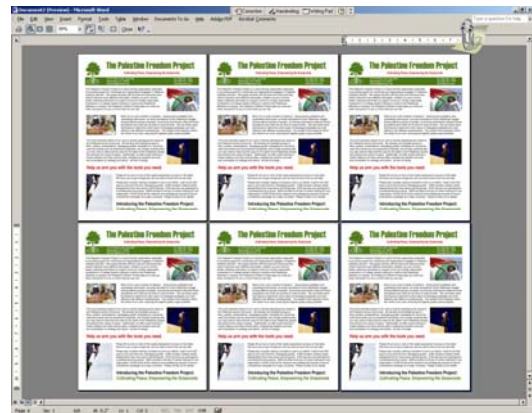
Single-sided documents – ideally consisting of a single page, are the easiest to print. As discussed elsewhere in this section, most printers will allow margins of 0.25" or less on each side, so this is a good baseline figure to work from. Once you've inserted an 8" x 10.5" image into a Word document, you can quickly and easily print large numbers of copies.



Dealing with Printing Restrictions

Some public printers, especially in university computer labs, limit the number of copies a user can make of each document, and/or the page count of each print job. Clever activists have often gotten around such restrictions by:

- Copying and pasting the entire document into itself repeatedly, until the maximum page count is reached, then printing out as many copies of the resulting meta-document as permitted.
- Constantly re-saving the document and printing it repeatedly under multiple names, so that filtering mechanisms designed to prevent more than x copies of a given document are circumvented (assuming these mechanisms work based on the file name, as most do)



Some universities employ queuing systems that force users to swipe their ID through a card reader in order to send documents to the printer, *after* they've already "printed" them from the computer. The ID swiped must match the user account from which the print job was sent. There's no easy way of getting around this, but if you have access to a valid university ID and associated account, it won't likely be a problem. Most universities that employ this type of system don't enforce additional restrictions.

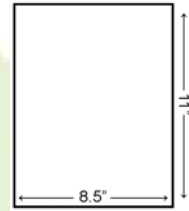
Many **commercial copy shops** offer self-service machines that generate an itemized invoice once users indicate that they have finished making copies. This invoice is then brought to the cashier for payment. Unscrupulous customers often split their work into multiple print jobs to generate several, *smaller* invoices – then discard or hide one or more of them before paying the cashier.

Paper Dimensions

There are three common paper sizes found in most commercial copying machines and printers. Be aware that the proportions are slightly different on each, meaning it's impossible to scale a full-page image up or down from one size to another and have it fit perfectly on the other type of paper. Regardless, it pays to be familiar with these formats and their applications:

- **8.5" x 11" (Letter)**

This is the most common paper size around, and thus, frequently the most convenient to use. When you want to maximize quantity while minimizing cost, it's probably your best bet. In addition to letters and other basic document types, it has several good specific uses:



- **Handbills**

4.25" x 5.5" handbills printed four to a sheet on this type of paper are just small enough to fit into most pockets without folding, and just big enough to incorporate a reasonable amount of text and graphics – perfect for quick handouts to passersby, and extremely economical to boot.



- **Booklets**

5.5" x 8.5" is a great size for a booklet, and that's what you get when you fold a bunch of 8.5" x 11" sheets in half. One advantage of using this size has to do with packing: if you're carrying a bunch of literature around in a box, two piles of booklets can be neatly stacked atop the pile of 8.5" x 11" documents you've likely got on the bottom.



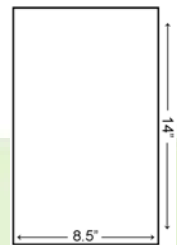
- **Brochures**

This is a perfect size for making six-panel, tri-fold brochures, with each panel coming out around 3.66" x 8.5". Such brochures are extremely common.



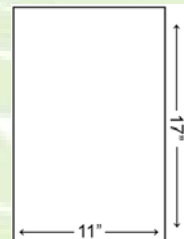
- **8.5" x 14" (Legal)**

This size is no longer as common as it once was. It's ok for fliers, but it's a slightly awkward shape. It's best used for booklets, which come out nearly square at 7" x 8.5", setting them apart rather well from the far more common 5.5" x 8.5" and 8.5" x 11" booklets. You're most likely to find copiers and printers supporting this size in offices, as well as in retail copy shops such as FedEx Kinko's or OfficeMax.



- **11" x 17" (Ledger)**

This size is best for fliers, which, if well-designed, look amazing at this scale. The dimensions will also help it stand out in areas that are heavily covered with other fliers, most of which are probably 8.5" x 11". When fliers of this size are grouped together in blocks, one can rapidly achieve an incredibly eye-catching, wallpaper-like effect.



Finding Graphics

Activists performing desktop publishing work have a constant need for graphics, and obtain them from a wide variety of sources. Before we discuss these, however, it's important to take a look at the basics of American intellectual property law as it pertains to the use of copyrighted images.

Using Copyrighted Images

It's not always possible to tell if an image falls under copyright protection, but if it comes from a commercial archive (see "Image Sources in the next section), odds are that it is protected. In the United States, the noncommercial use of copyrighted works is often allowable under the "fair use" exception, excepting cases in which the use adversely affects the copyright owner's ability to derive profit from the original work. As such, activists have very little to worry about when using copyrighted images in fliers and other limited-distribution, noncommercial documents. Most likely, the copyright owners will never even become aware of their use. However, it's good idea for activists to have a general idea of what's meant by the "fair use" exception, to avoid potential problems with the use of copyrighted images. Activists based outside the United States should check applicable laws in their respective jurisdictions.

The "fair use" clause is a part of the Copyright Act of 1976, 17 U.S.C. § 107, excerpted here:

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include-

1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
2. the nature of the copyrighted work;
3. the amount and substantially of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

Note that not all educational uses are protected, nor are all uses that may affect the "potential market" for the original work prohibited. For a more detailed look at what each set of considerations entails, see the article on fair use at Wikipedia: http://en.wikipedia.org/wiki/Fair_use

A handy checklist-style guide to what specific conditions favor or disfavor a fair use exception was produced by Purdue University, and serves as an excellent resource: <http://www.copyright.iupui.edu/checklist.pdf>

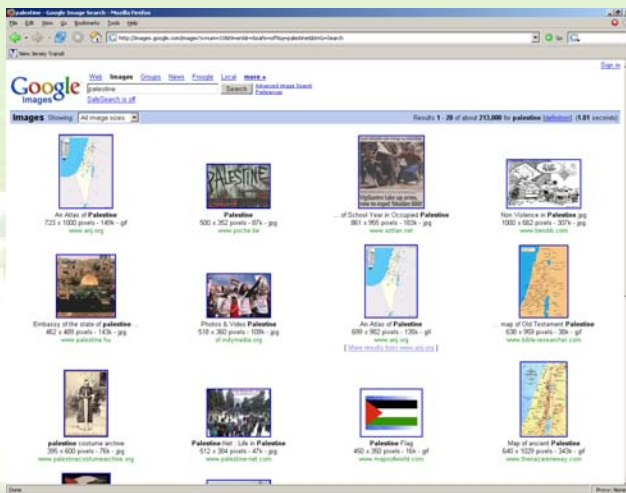
Image Sources

- **Original photographs and illustrations**

When scanning original images for use in print media, set the resolution to at least 300 dpi (dots per inch). TIFF (.TIF) is the best format for saving such images at maximum quality, but JPEG (.JPG or .JPEG) is compatible with a wider variety of applications.

- **Web Searches**

Web searches are useful for quick image-hunting, provided that the content you're seeking isn't too obscure. Most of these sites allow you to search only by limited criteria, such as keyword, format, coloration, and file size. You usually won't know the resolution until you save the image (though you can often guess based on the file size). Remember, print quality is best at higher resolutions. Most of the images you'll find on the web will be 72 dpi, not 300, but they should be okay for most print uses, provided you don't display the image at a larger size than it's intended for, which can cause pixilation and other ugly effects.



Google Images:

www.google.com/imghp?hl=en&tab=wi&q=

Alta Vista Image Search:

www.altavista.com/image/default

PicSearch:

www.picsearch.com/

- **Commercial Image Archives**

Dedicated image archive sites offer a much greater variety of search options, including spatial orientation, image type (photo or illustration), and other criteria that are invaluable for finding the perfect image. Unlike web searches, which simply scour the web for publicly-available content, these sites facilitate access to large, privately-owned archives, containing everything from iconic historical images to general stock photos and clipart. Most of the time, you'll need to register an account with the site in order to view (free of charge) "proof" images that don't contain digitally-added watermarks. The site administrators will usually ask for a company name, address, and phone number; however, this information generally isn't verified. With a registered account, you can pay to download higher-resolution versions of the images you find, and to gain limited legal rights pertaining to reproducing the image – but those perks come with a rather hefty price tag.



Corbis: www.corbis.com
 Getty Images: www.gettyimages.com

• Other Web Sites

A number of other web sites have archives of Palestine-related images in particular. Their search engines are a little clumsier, but the specialization of the subject matter makes up for it.

Palestine Photo Bank: www.sabellaphoto.com (licensing fees apply)
 Stop the Wall: www.stopthewall.org/news/photos.shtml
 Palestine Today: www.palestinetoday.org

Section 4: Contact Management

Keep tracking of your organization's growing network of contacts can be a daunting task, but the better you keep this information organized, the more effectively you'll be able to utilize it. There are many different categories of groups and individuals of whom you may keep track: members, email-list subscribers, donors, volunteers, allies, opposition, guest speakers, and vendors, to name a few. The list is extensive, and only becomes more complicated as your organization's work progresses.

*Many novice activists keep track of their contacts in simple spreadsheets. On the other end of the spectrum, large activist organizations utilize powerful CRM (**C**onstituent [or **C**ustomer] **R**elationship **M**anagement) applications that not only store all sorts of information about their contacts, but allow that information to be shared throughout the organization. Focus on finding a solution somewhere within that broad spectrum that will meet your organization's present, specific needs; remember, you can always upgrade later.*

Spreadsheets Versus Databases

The first step in implementing a contact management solution is to choose between two types of applications: *spreadsheets* and *databases*, both of which can be used for contact management. In the early stages of developing and maintaining a contact list, most activists utilize simple spreadsheet software. Although it is just as easy to enter data into database applications, most people are not familiar with them – or at least not with their contact management features. Furthermore, there's just something enticing about being able to see the contents of other records in the file as one enters data into a table. Most of the more advanced application types default to a different sort of interface for entering data, although there's usually a way to do so through a table-style interface as well.

Let's take a quick look at how each of these application types function.

A spreadsheet is a two-dimensional table, normally featuring a set of value descriptions across the X axis, and rows of value sets corresponding to those descriptions underneath. A *column* in such a spreadsheet consists of the value description – the column name - at the top, followed by a vertical series of *cells* containing values described by the column name – such as a series of email address in a column named "Email Address". A *row* in such a spreadsheet consists of a horizontal series of cells containing a set of values that all relate to one another – such as a particular person's name and contact information – which includes their email address.

	A	B	C	D	E	F
1	Organization	Org URL	1st Name	Last Name	Email	Phone #
2	Law Students for Peace	www.lsp.org	Ahmed	Masri	amasri@lawschool.edu	555-555-1948
3	Lutherans for Human Rights	www.lhr.org	Larry	Welton	larry@lhw.org	555-555-1967
4	WPAL News	www.wpal.com	June	Miller	june.miller@wpal.com	555-555-1982

A typical contacts spreadsheet

A database of the type used in the applications described here – that is, a *relational database* – consists of sets of tables, each one much like a spreadsheet. The database equivalent of a "column name" is a *field*.

The tables in a relational database have one or more fields in common with one another, referred to as *key* fields, which are used to connect a record from one table with one or more related records in a different table.

Table: Individual Contacts				
Organization	1 st Name	Last Name	Email	Phone #
Law Students for Peace	Ahmed	Masri	amasri@lawschool.edu	555-555-1948
Lutherans for Human Rights	Larry	Welton	larry@lhw.org	555-555-1967
WPAL News	June	Miller	June.miller@wpal.com	555-555-1982

Table: Organizations	
Organization	Org URL
Law Students for Peace	www.lsp.org
Lutherans for Human Rights	www.lhr.org
WPAL News	www.wpal.com

This relational database contains the same information as the above spreadsheet. The “Organization” field is used as a key to connect related records in the two tables.

If you choose to build a contacts spreadsheet, it’s important to do so in a way that makes it easy to convert the information and upgrade to a more powerful application as your needs evolve. The most important factor influencing one’s success or failure in this endeavor is a basic understanding of how spreadsheets work in relation to database-driven applications.

Building Flexible Spreadsheets

Spreadsheet applications understand data in terms of what value is contained within each cell on the two-dimensional coordinate system created by its columns and rows – like cell D32, located at the intersection of column D and row 32. Naturally, a spreadsheet user gets to see all of the data (or as much of it as will fit on the screen) at once, and understands it visually. Information in spreadsheets is primarily retrieved *visually* by the user - by locating the appropriate column, row, or cell - as opposed to through any automated process. As a result, spreadsheets are usually organized in ways that make more sense to the *user* than they do to the *computer*, making it slightly tricky to manipulate or export this information.

Here’s an example. Let’s say you have a contact, Joe Smith. You have two email addresses for him. In your spreadsheet, you probably went to the “Email Address” column in the row containing Joe’s record, and entered both of them, perhaps separated by a comma, like this: “joe@smith.com, joesmith@freepalestine.org”. It makes perfect sense to you when you look at it in the spreadsheet. But what happens when you import that data into a database-driven application? The program looks at the value in the “Email Address” field in Joe’s record, and thinks that Joe’s email address is “joe@smith.com, joesmith@freepalestine.org”. If you activate the function that allows you to send an email to the address in the cell (usually by clicking on it), the program will try to use *all* of the information in the cell. Not only do you have a useless “Email Address” field, but the field in the database you’re using now (which didn’t exist in your spreadsheet) called “Alternate Email Address” is just sitting empty. Now you need to go through all the records in your database and cut and paste every alternate email address you have for someone into the appropriate field. You’ve got hundreds of contacts! Ugh! If you had stored those two pieces of information in separate columns in the spreadsheet – creating one an additional column - you wouldn’t have this problem now.

	A	B	C	D	E
1	Organization	Org URL	1 st Name	Last Name	Email
2	Smith Printing	www.smith.com	Joe	Smith	joe@smith.com, joesmith@freepalestine.org

The wrong way: Joe Smith's record in the spreadsheet

Table: Individual Contacts				
Organization	1 st Name	Last Name	Email	Alternate Email
Smith Printing	Joe	Smith	joe@smith.com, joesmith@freepalestine.org	

The wrong way: Joe Smith's record after being imported into the database

	A	B	C	D	E	F
1	Organization	Org URL	1 st Name	Last Name	Email	Alternate Email
2	Smith Printing	www.smith.com	Joe	Smith	joe@smith.com	joesmith@freepalestine.org

The right way: Joe Smith's record into the spreadsheet, modified to include an extra column for "Alternate Email Address"

Table: Individual Contacts				
Organization	1 st Name	Last Name	Email	Alternate Email
Smith Printing	Joe	Smith	joe@smith.com	joesmith@freepalestine.org

The right way: Joe Smith's record from the modified spreadsheet after being imported into the database

Here's another example: you've got three different contacts at the same organization. In your spreadsheet, you've got three rows of records with "Law Students for Human Rights" in the "Organization" column, followed by the contact information for one of those three people. Let's say you import that into a database-driven application, which uses different tables to keep track of individuals and organizations. You perform the importing in the most efficient way possible, which places the information on individual contacts into one table, and the organization data from the same records into another table. Now you've got three duplicate records for the same organization, in addition to the records of your three individual contacts. All you wanted was one record for the organization, with your three contacts linked to it. If you had entered all of your contacts into the same row in the spreadsheet (a series of columns for Contact 1 and their contact information, then a series for Contact 2, etcetera), you wouldn't have to go back and fix things now.

	A	B	C	D	E	F
1	Organization	Org URL	1 st Name	Last Name	Email	Alternate Email
2	Law Students for Peace	www.lsp.org	Pankaj	Chandra	pankaj@studylaw.edu	
3	Law Students for Peace	www.lsp.org	Ahmed	Masri	amasri@lawschool.edu	amasri@lsp.org
4	Law Students for Peace	www.lsp.org	Sally	Weinberg	sallyw@lawschool.edu	sweinberg@lsp.org

The wrong way: three contacts for the same organization entered into the spreadsheet as three separate records

Table: Organizations	
Organization	Org URL
Law Students for Peace	www.lsp.org
Law Students for Peace	www.lsp.org
Law Students for Peace	www.lsp.org

The wrong way: the result of importing the same three contacts into the database

	A	B	C	D	E	F
1	Organization	Org URL	Contact 1 1 st Name	Contact 1 Last Name	Contact 1 Email	Contact 1 Alt. Email
2	Law Students for Peace	www.lsp.org	Pankaj	Chandra	pankaj@studylaw.edu	

The right way: the first few columns of a single record created for one organization with multiple contacts.
The information for Contact 2 and Contact 3 is found in columns G through N, not shown.

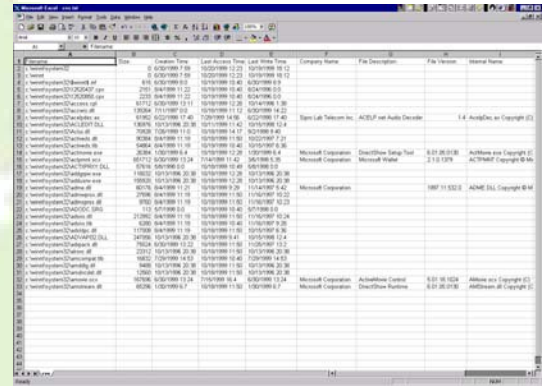
Table: Organizations	
Organization	Org URL
Law Students for Peace	www.lsp.org

The right way: the Organizations table of the database after the contacts are imported from the modified spreadsheet

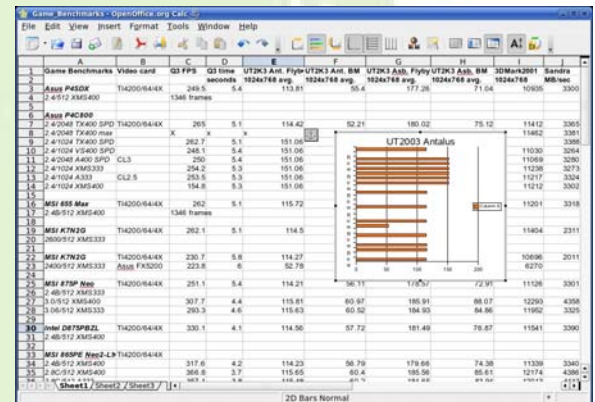
The more information you store about the individuals and organizations in your contacts spreadsheet, the more columns you'll need to add in order to keep the information well-organized and easy to import into another application (not to mention much easier to sort in the original spreadsheet application). This will likely become extremely annoying as once the columns begin to add up and you're forced to scroll fifty columns to the right in order to see the entire record. When this happens, it's a surefire sign that it's time to move on to a database-driven application.

If you opt to utilize a spreadsheet in the initial stages of developing your list of contacts, your options will include the following:

- www.techsoup.org/learningcenter/software/page4382.cfm



- OpenOffice.org is a free, open-source, cross-platform productivity suite that includes a set of applications similar to those offered in Microsoft Office. Calc is the suite's spreadsheet utility, which is similar to Microsoft Excel both in feel and in functionality. When managing very large spreadsheets (those containing 20,000 rows or 100 columns) it runs much slower than Excel, but this isn't a huge concern, as you're unlikely to be working with that amount of data. You won't find OpenOffice suite on most public computers, but it's free to download if you care to use it. For a comparison of OpenOffice.org and Microsoft Office, see this link: www.techsoup.org/learningcenter/software/page4382.cfm



One alternative to a spreadsheet application as a starting point for contact management is a personal information manager (PIM). Such applications utilize a relatively simple relational database to keep track of contacts, maintain calendars and to-do lists, and send and receive email. PIM databases vary substantially in complexity, but they are generally designed to simplify the import and export of data. Consequently, it is much easier to upgrade from a PIM to a more advanced database application than it is to upgrade from other spreadsheet applications. PIMs also tend to be compatible with handheld devices such as Blackberry, Palm, and Pocket PC products (see the section on Personal Digital Assistants), giving one the ability to transfer contact and other information back and forth between the application and the device. The distinctions between PIMs and CRM applications are discussed in more detail in the discussion of CRM software below, but they essentially boil down to multi-user support, the level of detail of stored information, and the ability to be integrated into every aspect of an organization's interactions its customers or constituents, regardless of the medium used for the actual communication. Major signs that it's time to upgrade from a PIM would be:

- 1) The application needs to be accessed by more users than it supports
- 2) You need to track information a greater degree of detail than your software allows
- 3) Your interactions with your contacts are becoming more and more complicated
- 4) You want to analyze these interactions to understand your contacts better

- **Microsoft Outlook (Estimated Price: \$0 - \$200)**

www.microsoft.com/outlook

Outlook is the PIM component of Microsoft Office Suite, and a scaled-down version is distributed for free as *Outlook Express*. It includes an email component, calendar, contact and task management features, and a journal. Prior to the release of the 2003 version, Outlook was infamous for having significant security holes which, along with its popularity, made it a choice target for malicious hackers. The current release, however, is much more secure than its predecessors, and additional security add-ons provide encryption and other useful features.

With the 2003 release, Microsoft began offering an optional Outlook upgrade called *Business Contact Manager*, which dramatically expands Outlook's contact management capabilities through the use of a relational database, enabling it to track far more information about each contact, and effectively transforming it into a low-end CRM application (see "CRM applications" later in this section).

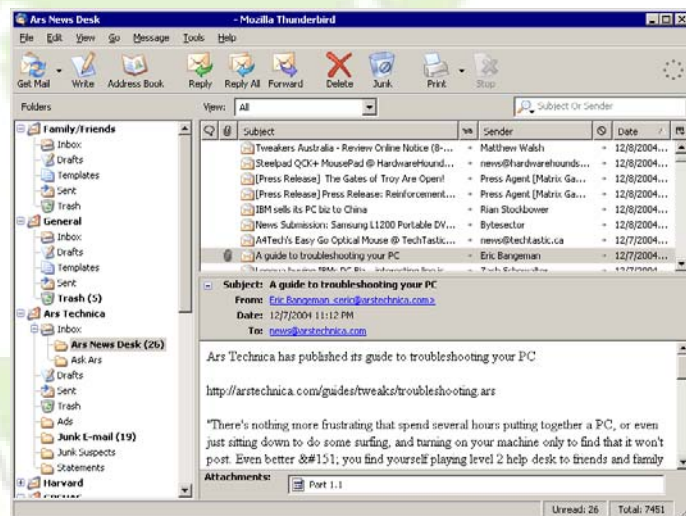


- **Mozilla Thunderbird (Freeware)**

www.mozilla.com/thunderbird

Thunderbird is an open-source, cross-platform email application with limited Personal Information Management features. Though not quite as powerful as Microsoft Outlook, it's a free download, and is bolstered by a growing library of add-ons that expand its functionality, including a number of important features not found in Outlook. Thunderbird allows you to synchronize your information with various PDA (see the section on "Personal Digital Assistants") devices. (Palm devices are supported, but this feature has not yet been perfected. Support for Pocket PC has yet to be implemented, but workarounds make it possible to synchronize data indirectly.)

Thunderbird supports an encryption add-on called Enigmail which allows users to implement powerful encryption technologies such as GPG (see the Encryption section of this module), making it a valuable tool for secure communications.



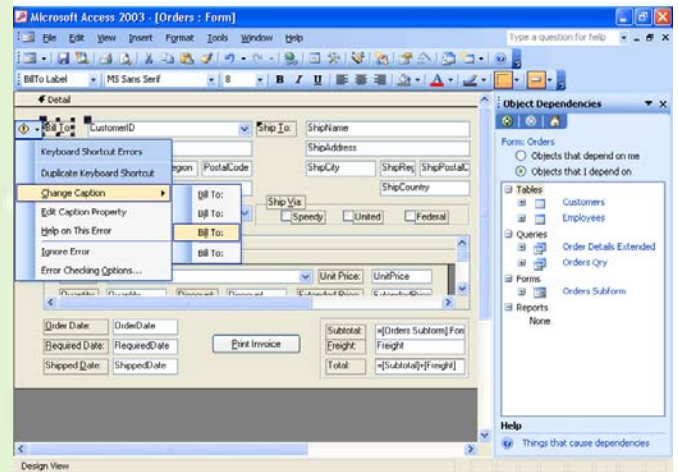
Generic Database Applications

Generic database applications can be used to create contact management databases tailor-made to one's own specific needs. Due to the time investment involved, this is practical only when one's needs are not met by an existing product. However, contact management templates and add-ons are available for a number of these applications. These are usually closer to PIMs than to CRM applications in terms of their level of functionality, but technically, a skilled programmer (or team of programmers) should be able to use such an application to develop a database that rivals even the best CRM programs available. Whether this would be worth the investment, however, is debatable.

- **Microsoft Access (Estimated Price: \$100-\$200)**

www.microsoft.com/access

MS Access is a relational database management application, part of Microsoft Office Suite. Its basic functions are relatively easy to use, but the application is powerful enough that skilled programmers can use it to develop complex databases and even standalone database-driven applications of their own. Due to its popularity, there are a great many training and support resources available for Access users.

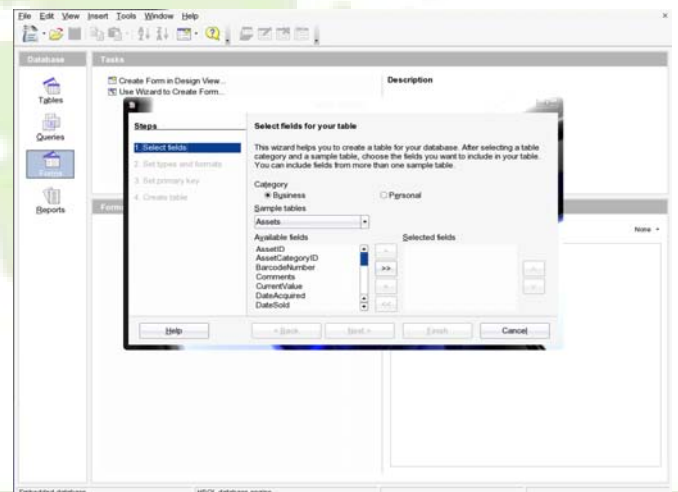


- **OpenOffice Base (Freeware)**

www.openoffice.org/product/base.html

Base is an open-source, cross-platform relational database management application, and has been a component of the OpenOffice.org suite since version 2.0. According to its developers, the version of Base that was released with OpenOffice 2.0 (Base version 1.8.0) is only 76% complete, with many more features still to come in later releases. As a result, the program is currently very limited compared to Microsoft Access; the big advantage is that it's open-source and therefore free. For a comparison of Microsoft Office Suite and OpenOffice.org, see

<http://www.techsoup.org/learningcenter/software/page4382.cfm>.



CRM Applications

“CRM” is variously interpreted as “Customer” Relationship Management and “Constituent” Relationship Management, depending on the target market of the application (commercial versus nonprofit or public sector). Essentially, a CRM application is a PIM on steroids. The distinction between the two categories traditionally hinges on two primary factors; one is that PIMs are intended for use by individuals, and CRM applications are designed for (often very large) organizations. The other is that CRM products track many more pieces of information about customers/constituents than do PIMs. However, the recent introduction of high-end PIMs has caused the old lines to become slightly blurred; these new PIMs promise (limited) multi-user capabilities and the ability to track more types of information that were once the exclusive domain of CRM applications.

Today, the primary distinctions separating PIMs from CRMs are really *scalability*, *integration*, and the *ability to analyze data*. PIMs may be adding multi-user functionality, but not on anything approaching the scale of CRM applications, which often support thousands of users. The second factor is integration: CRM products are intended to be integrated into every aspect of an organization’s interactions with and understandings of its customers/constituents, including sales, marketing, and customer service; not even the most advanced PIMs offer that level of functionality. Finally, CRM products (sometimes through the use of an add-on module) allow the data collected to be analyzed to develop a better understanding of customers or constituents; one example would be determining the most common subjects of incoming communications.

A more detailed discussion of CRM applications can be found in this article from Wikipedia:
http://en.wikipedia.org/wiki/Customer_Relationship_Management

Section 5: Email

Perhaps the most common of all technologies employed by activists is email. In addition to normal person-to-person communications, there are a number of ways in which email can be particularly useful to activists:

- **Newsletters:** More and more organizations are moving away from traditional print newsletters in favor of electronic publications distributed via email. Modern email technology allows most recipients to view HTML emails with text formatting, graphics, hyperlinks, and much more.
- **Action Alerts:** Many organizations send out “action alerts”: emails that encourage supporters to take a specific action, such as sending a fax or email, or making a phone call. Tools are available that enable recipients to send faxes or pre-written emails by simply clicking a link within the message.
- **Event Promotion:** Email is a great way for organizations to advertise their events. The ease of reaching a large audience and the ability to forward messages help such announcements spread rapidly.
- **Auto-Responders:** Most popular email clients, including many free web-based services, offer automatic response options. You can configure your organization’s email address to automatically reply to all incoming mail, letting the sender know that their message has been received even before it is read and replied to by a human being.
- **Fundraising:** Activist groups increasingly use email to solicit donations from supporters. A growing number of tools enable recipients to easily make donations by clicking a link within an email message. Many of these tools are integrated with additional software to track donations and manage your list of donors (see “Fundraising Applications” elsewhere in this module).
- **Mailing Lists:** Mailing lists can be used in any number of ways, and are described in detail in the “*Mailing Lists (AKA Listservs)*” section of this module.

Email Clients

Common email clients are discussed in the Contact Management section of this module under “Personal Information Managers”.

Web-Based Email

As web-based email interfaces have improved, individuals and organizations increasingly access their email through free web mail services such as Yahoo, Hotmail, or Gmail. Beyond the attractive price-tag, the chief advantages of these services is that they provide very large inboxes compared to most non-web-based email providers. Certain services, such as RiseUp, offer added encryption and security features, but are unable to match the massive amount of storage space that corporations such as Yahoo can afford to offer.

Web-Based Email

- **Gmail** (www.gmail.com)

Google's Gmail service is known for its advanced interface and vast amount of on-server storage (7 GB and counting). Gmail also provides a free POP3 server, making it easy to use email client such as Outlook or Thunderbird to manage your Gmail account. However, Gmail poses major problems for users concerned about privacy and security. Google automatically searches all messages (regardless of whether they are being sent *to* or *from* its users) for terms that could be used to deliver more precisely-focused advertising. Additionally, Google's privacy policy includes a clause stipulating that "residual copies of e-mail may remain on our systems for some time, even after you have deleted messages from your mailbox or after the termination of your account" and another stating that the company reserves the right to disclose the contents of messages to other parties if it has "a good faith belief that access, preservation or disclosure of such information is reasonably necessary to protect the rights, property or safety of Google, its users or the public".

Google further stipulates in its Terms of Use that all account holders consent to the company being allowed to disclose information in response to a "governmental request", regardless of the formality or legality of said request. When one also considers the fact that Google has the ability to cross-reference users' email information with records of their search and other activity, there's good reason to be alarmed. Even when configured to prevent messages from being stored in one's inbox, Gmail is not secure. For these reasons, it's probably not a good idea for activists to use Gmail. For more information, see www.gmail-is-too-creepy.com.

- **Yahoo Mail** (www.mail.yahoo.com)

Yahoo was the second major player to enter the free web mail market, a few months after Hotmail. Their free service currently offers 1 GB of storage and supports attachments as large as 10 MB. Yahoo typically offers free POP3 servers with addresses registered in non-US Yahoo domains, such as "de.yahoo.com", but US account holders will need to use a special utility, such as YPOPs! in order to access their account through their email client. See www.ypopsemail.com for more information.

Hotmail (www.hotmail.com)

Hotmail is the original webmail service, having started in 1996 and being purchased by Microsoft a year later. It offers 250 MB of storage (with a 10 MB attachment limit) to users in 25 countries, including the United States. Users in other countries typically start with 25 MB, which is usually increased to 250 MB after a certain amount of time. Hotmail does not provide a POP3 server, but simple workarounds are available. such as using a plugin like FreePOPs (<http://freepops.sourceforge.net>).

- **RiseUp** (www.riseup.net)

RiseUp.net, mentioned in several sections of this module, provides free and secure web-based email to activists. It provides 24 MB of storage and supports both POP3 and IMAP for users who wish to access their accounts through an email client. RiseUp is one of several tech collectives that provide secure email. A complete list of other providers is found in the subsection entitled "Email Security".

Large Attachments

Activists will frequently find themselves needing to send or receive files that exceed the maximum attachment sizes permitted by their email providers. There are a few different ways of doing this:

- 1) Transfer the file physically, via CD, DVD, flash drive, or another medium.
- 2) If you have access to a web server, upload the file to it and provide the recipient with a link
- 3) Utilize a commercial service such as Whalemail (www.whalemail.com)

Email Security

Email security is addressed in the “*Encryption and Data Security*” section of this module.

Signature Files

You can save time composing your emails by creating a signature to be automatically appended to all the email sent from a particular address. The means by which this is accomplished vary from one email client to another, but it’s normally very simple. A signature consists of a standard block of text, and can even include hyperlinks. Typically, signatures consist of the sender’s name and detailed contact information.

General Email Etiquette

- Address recipients appropriately. Use the proper salutation, such as “Dr.”, “Mr.”, “Ms.”, and so on. If the gender of the recipient is not known, use their full name.
- **DO NOT** send attachments to anyone you don’t know without permission.

Mass Mailings

Most of the email generated by activist organizations is sent in bulk. Such bulk mailings are subject to a unique set of considerations. The following guidelines will maximize the chances that your intended recipients will both receive your message and proceed to open it.

Subject Lines

- Subject lines should be restricted to no more than 50 characters, or there’s a chance that some recipients won’t be able to view the entire line.
- Spam filters, intended to prevent the receipt of unsolicited commercial email, can be triggered by the use of various words such as “free”, “sale”, or “teens”. For additional examples of what to avoid, scan your own spam folders to identify common terms in the subject lines.
- Filters can also be triggered by the use of characters such as “\$” and “!”, as well as by words or phrases typed entirely in capital letters.

CC and BCC Fields

The use of CC or BCC fields to send bulk email should be avoided unless the recipient list is limited to a half-dozen or so addresses. Many email providers automatically reject messages with more than a certain number of addresses contained within either of these fields. Mailing lists (listservs) or email blast services should be used instead. Also remember that recipients can see all addresses included in the “To:” or “CC” fields, so if you don’t want these addresses disclosed to all of your message recipients, don’t put them in those fields.

Email Blast Services

In addition to mailing lists/listservs (discussed in the “*Mailing Lists*” section of this module), another good way of sending bulk email is to use a hosted *email blast* service. By making special arrangements with major email providers, these services reduce the likelihood of your message being rejected by the system. Such services typically allow you to view statistics on how many recipients opened the message or clicked on a link contained within. Some of the more affordable services are:

- **GraphicMail** (www.graphicmail.com): A great entry-level service, GraphicMail allows nonprofit organizations to send 10,000 (total) emails for free via its email blast service (additional emails are priced at approximately one-half of one cent per email). When using this free option, GraphicMail branding is included in your messages. The branding can be disabled by upgrading to a fee-based service costing \$20/year). GraphicMail has good HTML support, and even includes an editor, as well as a decent set of reporting tools.
- **Groundspring Email Now** (www.groundspring.org): Another good entry-level service, with a strong reputation for deliverability, and some nice reporting features. If you want to send HTML-formatted email, they must be created in a different application, and then pasted into Groundspring’s software. The service is priced at \$19.95/ month for 10,000 emails and \$1 or less for each additional 1000.
- **Electric Embers NPOGroups** (www.electricembers.net): NPOGroups is rather similar to Yahoo Groups (discussed in the “Mailing Lists” section of this module), with the major distinctions being additional control and flexibility, as well as lack of advertising. However, the use of HTML formatting is hampered by considerable hassle. Pricing is on a sliding scale, beginning at \$10/month for 2500 subscribers, and \$5 for each additional 5000.

More advanced email blast services such as Emma and CampaignMonitor could be worth looking at if your subscriber list surpasses 1000. Additionally, several hosted, integrated nonprofit suites, such as Democracy In Action and GetActive offer email blast services, but these are high-cost and may suit only larger organizations. Finally, the open-source nonprofit suite, CivicSpace, offers an email blast utility, though deliverability may be an issue, since CivicSpace is not a hosted service like the others mentioned here. It’s also still under development, and the current version is rather limited – but the forthcoming release will provide additional features such as reporting tools and HTML support.

Hosted Nonprofit Suites

Emma:	www.myemma.com	GetActive:	www.getactive.com
CampaignMonitor:	www.campaignmonitor.com	CivicSpace:	www.civicspacelabs.com
Democracy In Action:	www.democracyinaction.org		

Section 6: Project Management and Collaboration

When more than two or three people work together to complete a project, as occurs constantly in the activist community, it can be difficult to keep track of logistics: who's doing what and when, what the status of individual tasks are, and what steps might be taken to keep things running as smoothly and efficiently as possible. Project management technology greatly simplifies these tasks, allowing you to focus on the substance of your work. As the work of your organization expands in scope, so does the potential benefit of employing a project management solution.

Another, related type of software, known as collaboration software or groupware, allows groups of users to electronically collaborate on projects through a common interface. The primary function of groupware is to streamline communication and coordination between group members, including the management of content created and modified by multiple users, typically through the use of customized, access-controlled mini-web sites. However, most groupware does include a basic project management component, at the very least. If your organization often finds itself internally juggling multiple versions of documents as they are developed and revised, a groupware solution may help simplify the process and allow you to work more efficiently.

Both project management software and groupware are available as retail products as well as free, open-source applications. Generally, these applications must be run on a web server in order to be fully functional, but if your organization already maintains a web site, your hosting provider may offer to install them on your server, usually for an additional fee.

Project management and collaboration applications vary significantly in functionality, cost, and ease of use. Fortunately, there are enough of them on the market that it is relatively easy to find the best solution to meet your specific needs.

Applications

- **Microsoft Project (Estimated Price: \$300-\$1000)**

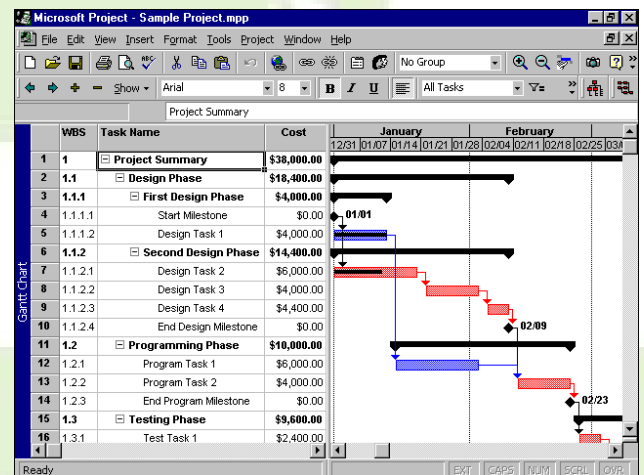
www.microsoft.com/office/project/

This is far and away the most popular and full-featured project management solution on the market, and is supported by numerous how-to books, training courses, and implementation consultants. It is available either as a stand-alone application to track project status on a single computer (in "Standard" and "Professional" versions), or in conjunction with Microsoft Project Server and Microsoft Project Web Access (the combined package is called Microsoft Enterprise Project Management, or EPM) so that its database can be accessed and updated by

authorized users via the internet. EPM features require a web server. As a stand-alone application, it can be used to develop project plans, manage budgets and workloads, and track progress.

Unless you already have access to it, however, it might not be worth purchasing a copy until your organization's needs surpass those that can be accommodated by the open-source and DIY solutions described below. A sixty-day free trial version is available here:

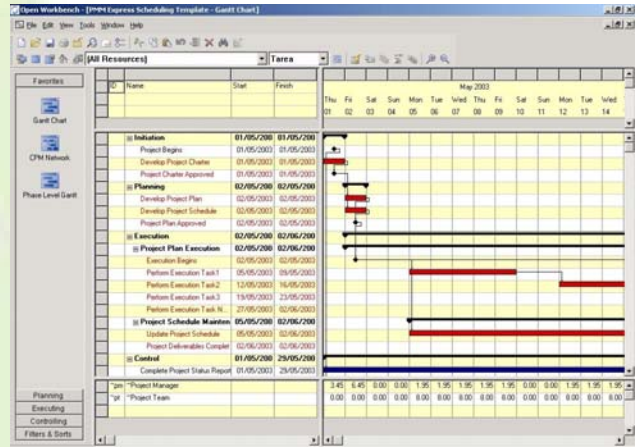
<http://www.microsoft.com/office/project/prodinfo/trial.mspx>



- **DotProject (Freeware)**

www.dotproject.net

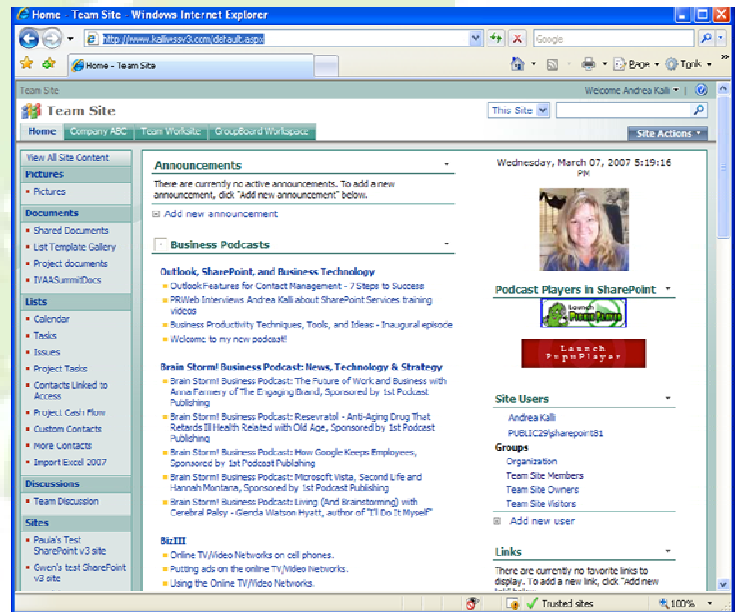
DotProject is an open-source (free) project management tool. It is compatible with MS Windows NT, 2000, and XP, as well as Linux. Its current release isn't as full-featured as MS Project, but these additional features are only necessary if your organization manages multiple complex projects simultaneously. Unlike MS Project, DotProject cannot function as an offline application, requiring a web server in order to run. The product's web site features a free demo.



- **Microsoft SharePoint (Pricing varies)**

www.microsoft.com/sharepoint

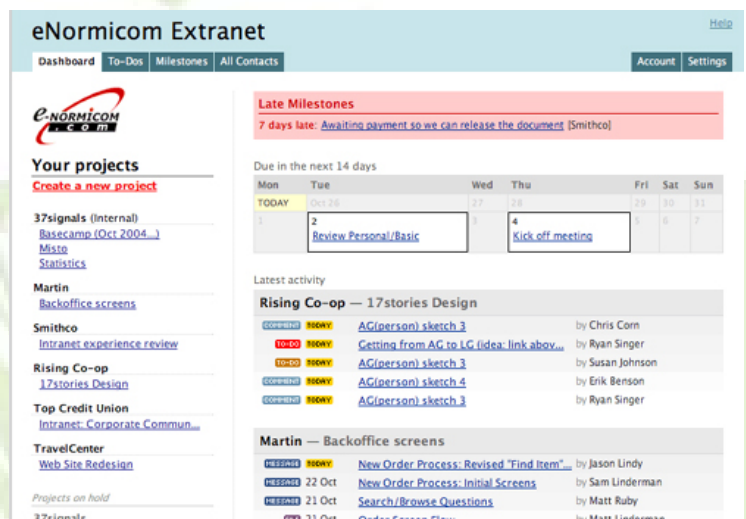
Microsoft Windows SharePoint Services is a free add-on to Microsoft Windows Server 2003. A commercial, enhanced version, Microsoft Office SharePoint Portal Server, is also available. Many web hosts offer SharePoint access for an additional recurring fee, without no additional software required. Its chief strength over competing products is its integration with Microsoft Office and extensive document versioning features, and its major weakness is a fairly complicated interface that can be intimidating to novices.



- **BaseCamp (\$0 to \$150/month)**

www.basecamp.com

BaseCamp is the major competitor to Microsoft SharePoint. It's been around longer, and as such, reflects years of fine-tuning which are evident in its simple, elegant, and user-friendly interface - its major advantage over SharePoint. BaseCamp runs on the company's own servers, as opposed to yours. The company offers a number of different service levels, currently priced between zero (for a very limited version) and \$150 per month. The \$50 and up packages include SSL, an important feature if you're concerned with data security. Its document versioning features are weak, but can be supplemented with additional freeware applications such as KnowledgeTree (www.ktdms.com) and Contineo (contineo.sourceforge.net).



DIY Project Management with Web-Based Spreadsheets

Yahoo Groups, mentioned earlier in this module, offers a very basic set of collaboration tools to mailing list owners and users, including a web-based spreadsheet application. Although the extraordinary popularity of Yahoo makes it somewhat less secure, these features may be a good starting point for many organizations seeking to explore project management and collaboration applications.

Another alternative to consider is Google Spreadsheets, which offers considerably more functionality than Yahoo's version. The tool is available at <http://spreadsheets.google.com>. Note that all the same security issues that apply to Gmail (see the Email section of this module) also apply to other Google services. Anyhow, let's take a look at the steps required to use Yahoo Groups for project management. Once you understand the basic concept, you'll be able to easily do the same thing with Google Spreadsheets, should you decide to do so.

1. Begin by establishing a group on Yahoo Groups, or logging in as the group owner to an existing *internal* group you've established using the service (for more on Yahoo Groups and mailing lists in general, see the Mailing Lists section of this module). If you need help doing this, see Yahoo Groups Help at <http://help.yahoo.com/help/us/groups/index.html>.
2. Once you have logged into your group page as the owner, click on "Database" on the left side.
3. Click on "Create Table" on the right.
4. Under "Choose a Template", click on "(empty)".
5. This brings you to the Table Edit screen. Here, you'll set a name, such as "Task Tracker", and a description for the table you're about to create. This is also where you will specify which types of users are allowed to modify different aspects of the table.

Create Table Create Table Help

Table Information

Name:

Description:

Change Policy

Who can add records?

Who can edit or delete records?

Who can edit the table?

Columns

1:

2:

3:

4:

5:

6:

7:

8:

9:

10:

6. Enter a name and description.
7. The next section asks you to specify which features will be available to different types of users. They can be set to “Anyone”, “Group Members”, or “Group Moderators or Table Owner”.
 - “Anyone” means precisely that – access to this feature will be granted to anyone who can find your group’s page, regardless of whether they are subscribed to the group (unless access to the group features is disabled by the Group Owner, by setting “Features and Options” in the “Settings” area to “Only Moderators” or “Off”). There are few, if any, situations in which you would ever want to grant access to “Anyone”.
 - Setting a feature to “Group Members” will restrict access to that feature to users who are subscribed to the group.
 - “Group Moderators or Table Owner” restricts access to only users with Moderator or Owner status, plus the user who created the table, if that person is not a group Moderator or its Owner.
8. Decide who will be able to add records to your table once it’s complete. In order for your organization’s members to take full advantage of this table, you’ll need to set this to “Group Members”.
9. Decide who can edit or delete records. In order for your organization’s members to post updated information on the status of the tasks to which they are assigned, this will also need to be set to “Group Members”. If you do so, you can adopt a voluntary policy permitting only certain individuals to delete records. If you see lack of enforcement as a potential problem, you may set it instead to “Group Moderators or Table Owner”, but subscribers will then need to provide their updates to someone who has the necessary access to edit the table.
10. Decide who will be able to edit the table itself – that is, to add, remove, or edit the column names, or even to delete the entire table. Set this to “Group Moderators or Table Owner”.
11. Enter the names of the columns in the order you want them to appear on the table, left to right. In our sample, we entered “Committee”, “Category”, “Description”, “Status”, “Person Assigned”, “Deadline”, “Last Revision”, and “Notes”.
12. Click on “Create Table” near the bottom of the screen.
13. Your table is now complete, and ready for records to be added to it.
14. You can now add or import records using the appropriate options at the bottom of the table. For help using these features, simply click on “Records Help” near the upper-right corner.

15. Here's an example of what a completed table looks like with several records entered:

Records Records Help

Search This Table: [Add Record](#) | [Printable Report](#) | [Import Records](#) | [Export Table](#) | [Edit Table](#)

1 - 2 of 2 First | < Previous | Next > | Last

Tables > Task Tracker								
<div>Committee</div> <div>▼</div>	Category	Description	Status	Person Assigned	Deadline	Last Revision	Notes	Actions
Events	Communication	Call Professor Zeller about speaking on 7/04	Incomplete	Sally	6/5/06	6/2/06	Left message on 6/1. Will call back on 6/3.	Edit Delete
Web	Development	Make Task Tracker Demo	Complete	Steve	6/5/06	6/3/06	Looking good!	Edit Delete

1 - 2 of 2 First | < Previous | Next > | Last

Search This Table: [Add Record](#) | [Printable Report](#) | [Import Records](#) | [Export Table](#) | [Edit Table](#)

16. That's it!

Section 7: Encryption and Data Security

In this era of greatly increased government surveillance and diminished privacy rights (particularly in the United States), it's more important than ever for organizations publicly opposing government policies to take steps to secure their data. The use of nearly every technology described in this module involves protecting data that could be used to disrupt your work and undermine your organization if it falls into the wrong hands. "The wrong hands" can include not only agents of your own government, but agents of the State of Israel, as well as nongovernmental opposition organizations, and even individuals.

The intention of this section is not to scare activists, nor to overstate the threats. To date, at least in the West, there has not been a widespread, targeted, and overt government effort to neutralize Palestine solidarity organizations. This does not mean that activists are not being tracked. Some groups active in Palestine solidarity activism have been the targets of federal harassment, such as agents visiting the homes and workplaces of members with the apparent goal of intimidating them out of publicly organizing. Additionally, organizations such as the Anti-Defamation League of B'nai B'rith (ADL) and even individual chapters of Hillel, the Foundation for Jewish Campus Life can and do collect and share intelligence concerning public critics of Israel.

This surveillance and intelligence gathering is a sad fact of life. However, despite the advanced tools and resources of many of those who conduct such surveillance, there are ways of undermining their efforts through adherence to a few simple rules and the use of additional technologies specifically designed to protect the security of your data. This section concerns itself with the specific technologies and procedures necessary to keep your data safe. Non-technical security topics will be addressed in another module.

Email Security

To understand best practices for email security, let's turn to the experts at the Red Cursor Collective, who have been providing activists with secure email through riseup.net for several years. The following article, "Simple Practices for Email Security", is adapted from a document posted on their web site (it can be seen in its original form at <http://help.riseup.net/security/measures/>). Some of the material applies specifically to the secure email services provided at riseup.net, but has been left in place to preserve the authors' intentions. However, the section on "public-key encryption" has been removed because the subject is treated in somewhat greater detail later in this section. The remainder of the edits are largely superficial formatting changes

See also "Anonymity on the Web" at the end of this section, which describes additional tools for securing internet communications, including instant messages.

Simple Measures for Email Security

Practice secure behavior!

These pages include a lot of fancy talk about encryption. Ultimately, however, all this wizbang crypto-alchemy will be totally useless if you do not act with awareness of the needs of security. A few simple practices will go a long way toward securing your communications:

1. **Logout:** make sure that you always logout when using web-mail. This is very important, and very easy to do. This is particularly important when using a public computer.
2. **Avoid public computers:** if you must use a public computer, consider changing your password often or using the **virtual keyboard** link (if you use riseup.net for your web-mail).
3. **Use good password practice:** you should change your password periodically and use a password which is at least 6 characters and contains a combination of numbers, letters, and symbols. It is better to use a complicated password and write it down than a simple password which is easy to remember. Studies show that most people use passwords which are easy to guess or to crack, especially for those who have some knowledge of the person. Never pick a password which is found in the dictionary (the same goes for "love" as well as "10v3" and other ways of replacing letters with numbers).
4. **Be a privacy freak:** don't tell other people your password. Also, newer operating systems allow you to create multiple logins which keep user settings separate. You should enable this feature, and logout or "lock" the computer when not in use.

Use secure connections!

What are secure connections?

When you check your mail from the riseup.net server, you can use an encrypted connection, which adds a high level of security to all traffic between your computer and riseup.net. Secure connections are enabled for web-mail and for IMAP or POP mail clients. This method is useful for protecting your password and login. If you don't use a secure connection, then your login and password are sent over the internet in a 'cleartext' form which can be easily intercepted.

How do I use secure connections?

In the web browser, if the location starts with <https://> then you have a secure connection. Your web browser should also display a little padlock icon either in the location bar or in the bottom corner of the window. In order to make best use of secure connections to riseup.net, you need to install the CACert root certificate (see <http://help.riseup.net/security/measures/certificates>): otherwise, someone could pretend to be riseup.net and you would be none the wiser. Also, installing the root certificate eliminates any annoying error messages when using secure connections with riseup.net. For POP and IMAP, your mail client will have the option of enabling **SSL** or **TLS**. For sending mail via SMTP (see <http://help.riseup.net/security/measures/SMTP>), both **SSL** and **TLS** will work, but some ISPs will block **TLS**, so you might need to use **SSL**. For more information (especially if these terms are unfamiliar), see our mail client tutorials ([http://help.riseup.net/security/measures/mail client tutorials](http://help.riseup.net/security/measures/mail%20client%20tutorials)) and SMTP FAQ (<http://help.riseup.net/security/measures/smtp>).

The limits of secure connections

The problem with email is that takes a long and perilous journey. When you send a message, it first travels from your computer to the riseup.net mail server and then is delivered to the recipient's mail server. Finally, the recipient logs on to check email and the message is delivered to his/her computer. Using secure connections **only** protects your data as it travels from your computer to the riseup.net servers (and vice versa). It **does not** make your email any more secure as it travels around the internet from server to server.

Use secure email providers

What is StartTLS?

There are many governments and corporations looking at general traffic on the internet. Even if you use a secure connection to check and send your email, the communication between mail servers is almost always insecure and in the open.

Fortunately, there is a solution! **StartTLS** is a fancy name for a very important idea: StartTLS allows mail servers to talk to each other in a secure way.

If you and your friends use only email providers employing StartTLS, then all the mail traffic among you will be encrypted while in transport. If both sender and recipient also use secure connections while talking to the mail servers, then your communications are likely secure over its entire lifetime.

We will repeat that because it is important: *to gain any benefit from StartTLS, both sender and recipient must be using StartTLS enabled email providers.* For mailing lists, the list provider and *each and every list subscriber* must use StartTLS.

Which email providers use StartTLS?

Currently, these email providers are known to use StartTLS:

- **Tech Collectives:**
riseup.net, resist.ca, mutualaid.org, autistici.org/inventati.org, boum.org, squat.net, tao.ca, indymedia.org, eggplantmedia.com
- **Universities:**
berkeley.edu, johnhopkins.edu, hampshire.edu, evergreen.edu, ucsc.edu, reed.edu, oberlin.edu, pdx.edu, usc.edu, bc.edu, uoregon.edu, vassar.edu, temple.edu, ucsf.edu, ucdavis.edu, wisc.edu, rutgers.edu, ucr.edu, umb.edu, simmons.edu.
- **Organizations:**
action-mail.org, no-log.org.
- **Companies:**
speakeasy.net, no-log.org, easystreet.com, runbox.com, hushmail.com, dreamhost.com, frognet.net, frontbridge.com, freenet.de, blarg.net.

What are the advantages of StartTLS?

This combination of secure email providers and secure connections has many advantages:

- It is very easy to use! No special software is needed. No special behavior is needed, other than to make sure you are using secure connections.
- As long as both parties are using it, the creation of a map detailing the identity of those with whom you are communicating is prevented.
- It ensures that your communication is pretty well protected.

It promotes the alternative mail providers which use StartTLS. The goal is to create a healthy ecology of activist providers--which can only happen if people show these providers strong support. Many of these alternative providers also incorporate many other important security measures such as limited logging and encrypted storage.

What the limitations of StartTLS?

However, there are some notable limitations:

- Your computer is a weak link: your computer can be stolen, hacked into, or have keylogging software or hardware installed.
- It is difficult to verify: for a particular message to be secure, both the origin and destination mail providers must use StartTLS (and both the sender and recipient must use encrypted connections). Unfortunately, it is difficult to confirm that all of this has happened. For this, you need public key encryption (see below).

Use public-key encryption

[Encryption is covered in greater detail in its own subsection below, so this part of the article as been deleted. – the Editors]

Email Encryption Applications

In addition to web-based email with built-in encryption, there are a number of programs and plug-ins (program add-ons) specifically designed to facilitate the use of encrypted email. These are based on more general encryption programs, which are described in greater detailed at the end of the “Encryption” subsection. Email-specific encryption plug-ins include:

Enigmail (Freeware)

Enigmail is a plug-in for Mozilla Thunderbird (see “Personal Information Managers” in the “Contact Management” section of this module). It is a free, open-source add-on, based upon the GNU Privacy Guard standard (GPG). See <http://enigmail.mozdev.org> for more information. GPG is described in greater detail at the end of the “Encryption” subsection.

Pretty Good Privacy (PGP)

PGP is the most widely-known encryption standard. A number of PGP-based products are available, including software suites, such as PGP Desktop, that include encryption plug-ins for Microsoft Outlook, Mozilla Thunderbird, and many other email applications and personal information managers (see “Personal Information Managers” in the “Contact Management” section of this module). See www.pgp.com. PGP is described in greater detail at the end of the “Encryption” subsection.

Encryption

Rather than needlessly rewrite existing content, we'll turn to another group of fine activists: the folks at NetAction, who produced a detailed guide to encryption several years ago. NetAction's guide, available in full at <http://netaction.org/encrypt/guide.html>, was published in 2001 and is not completely up-to-date. We'll provide key excerpts from the guide followed by our own supplementary material:

1. What is encryption, and how does it work?

Fundamentals

Encryption is a software tool that uses scrambling to make data unreadable to anyone other than the intended recipient. It is useful to ensure the privacy of data that you store on your computer, or that you want to email to someone else.

Encryption software programs use algorithms, or complex mathematical processes, to scramble and unscramble (or "encrypt" and "decrypt") the data. Algorithms work through the creation of keys, which are specific strings of data used for encryption. These keys consist of long strings of bits, or binary numbers. The more bits in the key, the greater the number of possible combinations of binary numbers, making the code more difficult to break. You may have heard of "56-bit" or "128-bit" keys, for example. With more bits, the 128-bit key is more difficult to break than the 56-bit key.

If you're curious, you can see what an algorithm looks like: IDEA is one of the algorithms used in Pretty Good Privacy (PGP). An encryption algorithm scrambles data by combining the bits in the key with the data bits; in decryption, the algorithm unscrambles data by separating the data bits from the key bits. In symmetric key encryption, the same key is used to scramble and unscramble data. In asymmetric key encryption, two different keys are required: one to scramble and one to unscramble. With either method, a recipient cannot access the original data without the correct key.

Here is an example of data that has been encrypted:

```
(((((0400ACHCLBGHEPIOFJJHPLJOFIJAPHOAIDBJEGBMIOHONGALJ
NFMFINKPNFBKJLCLCEHLPLBDDLJEMFHOMPHLCMDLNGILOECLFFI
CNH0EAODJMBLKCDCEBAEALAJLCEBBBFIGIOOHGBOPHBJDEPGDLOOBOJ
PBBCIHAJJOHLMHJIMJCGILHMCACKGNNPMAJKHGBGCNDLFDGMBKGGNJ
ODPDAEKKIPLALIKKPHDFIPOBBEDFMKKBLNMEEPNMMMOIDIPDBMG0EE
CDNMNKOIAIAHICOACNAGBDDPKPNKA0JPFPGPIFCGFDLLOCMEGIMNOHD
GMAAEOJEKJIDNIGBHBHNBKENNOGILFAMMOIJDBDAHNNIKBCCFEIPNJ
NMIGGCIMKDGACMGHFGKLMFDNAKOELAOHDJCGGDEEDAGDAJNHHA0BJME
KJKGMFGIKPCOJIFFDEHFONKAPHP))))
```

You can decrypt this data with ShyFile, a web-based encryption program. Go to <http://www.shyfile.net/d.htm>, paste the encrypted message into the appropriate box, and use this key to decode the message: netaction.org-encryptionfornonprofits

Software

Encryption software is available for many purposes. You may already be familiar with one form of encryption software: many e-commerce and donation Web sites use Secure Socket Layers (SSL). Whenever you visit any Web page with an address starting with "https" instead of "http," SSL will automatically encrypt anything you type into that page, such as passwords or credit card information, before sending it over the Web.

Our guide focuses on encryption software for email and files, which is considerably more complicated than SSL encryption. Encrypted files can be attached to an email message, uploaded to a Web server via File Transfer Protocol (FTP), or put on a floppy disk and passed by hand. Email messages themselves can also be encrypted. It is not necessary, however, for an email message to be encrypted in order to send it with an encrypted attachment. For example, an encrypted document can be attached to an unencrypted email message that says, "See the attached confidential document." Encryption software specifically intended for use with email is generally easier to use than software intended to encrypt files, because email encryption software integrates seamlessly into the email program. Some email encryption software, for example, adds buttons to your mail program's menu.

Different software programs have different strengths and vulnerabilities, and employ different ways of distributing the keys that scramble and unscramble data. Some software programs require the recipient of an encrypted document or email message to use the same software the sender used. Others simply require the recipient to possess the same key or password that the sender used.

2. Do I need encryption?

[This section has been removed to save space. In our opinion, Palestine activists should use encryption whenever possible. The more public attention your work generates, the more likely you are to be a target of surveillance activity by organized opposition or other entities. If you're worried that utilizing encryption will create a lot of extra work for you, don't be; as you read through this guide, you'll learn how limited a hassle it really is. – The Editors]

3. How does encryption software keep my information secure?

All encryption software programs choose an algorithm that they rely on to scramble and unscramble your data. Some programs use more obscure, proprietary algorithms, but others use widely available algorithms. The benefit of using an obscure algorithm is there is less likelihood that tools for cracking it are available. The benefit of using a well-known algorithm is that it has been thoroughly tested. If a vulnerability has not yet been discovered, finding one is probably very difficult.

(For more in-depth information on the various available algorithms, see Appendix B: What are the different kinds of algorithms that encryption software programs utilize?) *[Appendices have been removed to save space. View them in the full version of this guide at <http://netaction.org/encrypt/guide.html>. - The Editors]*

Software uses algorithms to encrypt your data in two ways: the symmetric key method, and the asymmetric key method. With either method, it is important to save a copy of your key on a floppy of zip disk, a CD, or another hard drive. Otherwise, if you lose or forget your key, or the key data gets corrupted, you will not be able to decrypt your encrypted data.

Symmetric Key

(Basic Model: encrypt and decrypt with the same password)

[This section has been removed to save space. We do NOT recommend using symmetric key encryption. To read more about it, see the full version of this article at <http://netaction.org/encrypt/guide.html>. See also http://en.wikipedia.org/wiki/Symmetric_key_encryption. – The Editors]

Asymmetric Key

(Public/Private Model: sender uses the recipient's public key to encrypt, and the recipient uses his or her corresponding private key to decrypt.)

Some software programs use the asymmetric key, or "public key/private key" model, which requires both the sender and the recipient to have the same software. With this model, the recipient makes a pair of keys, both of which can be unlocked with a single password. One half of the pair is a public key that anyone with the same software uses to encrypt a message to the recipient. The sender does not need the recipient's password to use his or her public key to encrypt data. The recipient's other key is a private key that only he or she can use when decrypting the message. The private key should never be distributed since the private key assures that only the intended recipient can unscramble data intended for him or her. The recipient can freely distribute the public key without worrying since it is only used to scramble the data.

You must meet two conditions before you can use asymmetric encryption software: 1) the recipient must have the same software and already have created a key pair, and 2) you must have the recipient's public key. There are many ways to distribute a public key: through text in an email, through text in a file on a floppy disk, or by posting it on special Internet sites known as key servers. For example, if the recipient's public key is available on a PGP server, your PGP software program can retrieve and store the key on your computer for use at any time.

Here is an example of how asymmetric encryption works: If Jack has Jill's public key, Jack can send encrypted files that Jill can unlock with her private key. Jack can't use Jill's public key to decrypt files intended for Jill (since decrypting a file intended for Jill requires Jill's private key), nor can he sign files pretending to be Jill. Even if Jack got his hands on Jill's private key file, he would need Jill's password to access it.

The biggest problem with this method of encryption is verifying that the sender is who he or she claims to be. The solution is called a "Web of Trust", which makes use of digital signatures. If Jill wants to verify that the Jack who sent her an encrypted file is really the Jack she knows, she confirms his identity by some non-electronic method, such as a personal meeting or phone call, or by an electronic method such as the AT&T Pathserver. If Jack has previously taken similar steps to confirm the identity of John Doe, Jill can also trust an encrypted file from John.

[Outdated links to samples were removed here. – The Editors]

4. What features are available in encryption software?

Some software programs are more useful for encrypting files, and others are more useful for encrypting text messages, like email and instant messages. It's possible to use a file-encryption program for both files and email. Some file-encryption programs, for example, encrypt email by transforming the message into a file, and then sending the encrypted file. However, some of the software specifically designed for email encryption is much easier to use than programs for file encryption. Other email encryption software programs convert plaintext to cipher text, which is useful for encrypting email or text documents, but useless for encrypting images or other non-text files. Other encryption software simply enables you to store encrypted files on your computer.

In addition to the different encryption algorithms and models, there are different software interfaces. Some programs require you to locate the file you want to encrypt through a regular "file-open" dialogue window. Others, including PGP, allow you to encrypt a highlighted section of text that you select from an open document. Some email encryption programs include plug-ins that add buttons to your program menu, so you can encrypt a message with literally the touch of a button. These interface alternatives can be important for first-time users since they can make the software easier to use. They are also important for anyone who uses encryption daily, since a cumbersome encryption and decryption process may deter use.

[The remainder of this subsection, dealing with specific features of encryption software, has been removed, because applications have evolved considerably since the time the guide was written. A guide to current, specific applications will be provided later in this module section. – The Editors]

5. What are the vulnerabilities in encryption, and how do I guard against them?

If you lock your door with a deadbolt instead of a chain, you make it more difficult for a burglar to get inside your home. Similarly, there are differences in the level of security that encryption software provides. Most of the well-known encryption algorithms that are considered "good" are mathematically complex enough to be difficult to break; otherwise, they wouldn't be so widely used. But even good algorithms are vulnerable to being broken if someone is persistent enough. In this section, we discuss the general vulnerabilities in encryption software, and offer tips that you can use to combat them. If you'd like more information on the vulnerabilities of a particular algorithm or software program, search the Web for reviews on its effectiveness.

General vulnerabilities include:

"Brute Force" Cracking

"Brute force" is another way of saying "trial and error." With this method, a "cracker" tries every possible key until he or she stumbles upon the correct one. No encryption software program is entirely safe from the brute force method, but if the number of possible keys is high enough, it can make a program astronomically difficult to crack using brute force. For example, a 56-bit key has 2^{56} possible keys. That's up to 72,057,594,037,927,936 – seventy-two quadrillion – keys that a cracker may have to try in order to find the correct one.

TIP: The more bits in a key, the more secure it is, so choose software with as many bits as possible. If you have a choice between 56-bit encryption and 128-bit encryption, for example, use the 128-bit encryption.

For more information on brute force cracking, please see Appendix A: "Brute Force" Cracking. *[not included in this reprinted version. Read it in the full article at <http://netaction.org/encrypt/guide.html>. – The Editors]*

"Back Doors"

A "back door" is a security hole in a piece of software. A "back door" may be present because someone created it in the software with malicious intent, or by accident. Whatever the reason, if a malicious "cracker" discovers a "back door" in a program, he or she may be able to discover your key or password.

TIP: Make sure that the encryption software you choose has been rigorously tested. Read online reviews, and consider how long the software has been available. Visit the software's Web site periodically to check for patches and updates, and install them.

Making Good Keys

In every kind of encryption software, there is some kind of password that must be created so that the intended recipients of the information can read it. Creating a password that "hackers" or other malicious parties cannot easily guess is just as important as choosing a good algorithm or strong encryption software.

TIP: Take care to make a strong key. Use a varied set of characters, including lowercase and uppercase letters, numbers, and symbols (like spaces, colons, quote marks, dollar signs, etc.). A good password should be longer than eight characters; the longer it is, the harder it is to crack.

If you're concerned about remembering a long password, don't be. Even a long password made up of different types of characters can be easy to remember. Instead of using your daughter's name, "sally," for example, use "S411y is: #1 i\ mY b00k!!!". (Many password-guessing programs (see "Brute Force" Cracking) employ a database of English words that guesses passwords from various combinations of words, so it's a good idea not to use passwords made up exclusively of English words. Note that in the example above, numbers and characters are interspersed with letters.) Even better is to use a series of random letters, numbers, and symbols, so that it can't be guessed easily.

TIP: If you forget your password, you will not be able to decrypt data that you have encrypted. Be sure to make a backup copy of your password and store it in a safe place, such as on a floppy or zip disk, a CD, or a separate hard drive. You can also copy and paste your password into a new document, print the document, file the paper somewhere safe, and delete the document from your computer.

[The remainder of the guide, mostly containing links to additional resources, has been removed to save space. View the full version of the guide at <http://netaction.org/encrypt/guide.html>. Thanks again to the folks at NetAction for making this resource available! Attribution information is below. - The Editors]

This guide was researched by Matt McCarthy and co-written by Matt McCarthy and Audrie Krause, with editorial assistance provided by Theresa Chen and Andrea Jepson.

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Encryption Software

As described earlier, there are two main types of encryption software: symmetrical key, and asymmetrical key. The former uses the same key, or password, for both encryption and decryption, while the latter uses two separate keys. For our purposes, we'll focus on asymmetrical key encryption software. Let's take a look at the two most popular programs in this category:

Pretty Good Privacy (PGP) (www.pgp.com)

PGP is by far the most well-known encryption program around. It was first released, free of charge, by developer Phil Zimmerman in 1991, and specifically intended for use by social justice activists coping with increasing government surveillance and repression. The United States government actually attempted to prosecute Zimmerman for releasing the program, but eventually abandoned the case. PGP is now a commercial program, but one that has inspired and paved the way for many noncommercial alternatives. Various application suites built around PGP are available from the developer. Many, such as PGP Desktop, include plug-ins that support encryption of email in Personal Information Manager applications (see Contact Management) and instant messaging. PGP eventually became the basis for the open standard "OpenPGP", which has allowed developers to build their own distinct products based on the same basic mechanisms as PGP.

More on PGP:

www.rossde.com/PGP/

http://en.wikipedia.org/wiki/Pretty_Good_Privacy

www.dtek.chalmers.se/~d97jorn/pgp (Guide to installation in Windows)

GNU Privacy Guard (GPG) (www.gnupg.org)

GPG is an implementation of the OpenPGP standard developed by the Free Software Foundation. It is a free, open-source program that is also compatible with current versions of PGP. The basic program uses only a command line interface, requiring users to type individual commands with a keyboard. A number of graphical user interfaces (or GUIs – basically, what most people are accustomed to using these days) are available as add-ons. The quality of the software is comparable to that of PGP, although it hasn't been in development as long. However, as an open-source product, it's able to evolve at a significantly faster rate than commercial software.

See also:

www.glump.net/dokuwiki/gpg/gpg_intro

http://en.wikipedia.org/wiki/GNU_Privacy_Guard

<http://dudu.dyn.2-h.org/nist/gpg-enigmail-howto> (Installation Guide)

Steganographic Tools

This is a category of tools, not a specific application. Steganography is the science of encoding content into alternate media, such as hiding encrypted text within the digital information stored in binary images or sound files, or even hiding one encrypted file within another without revealing the existence of the second. Examples include TrueCrypt (www.truecrypt.org) and Camera/Shy (<http://sourceforge.net/projects/camerashy>). For more information on steganography and related tools, see <http://en.wikipedia.org/wiki/Steganography>.

Telephone Security

While the telephone (particularly the cellular telephone) is an incredibly powerful tool for activism, Caution should be exercised in its use. Below you'll find some information concerning the anonymous purchase of a phone. This will be followed by some best practices to use once you've got one, whether it was acquired anonymously or not.

Purchasing mobiles anonymously (*adapted excerpt from FreeB.E.A.G.L.E.S.: A Guide to Mobile Phones*)
Used with permission: full article at www.freebeagles.org/articles/mobile_phones.html

To ensure anonymity, the law does not forbid you from doing the following when buying a mobile phone:

Purchasing

- Make your purchase in a shop away from where you live.
- Try to avoid town centres where there is a greater likelihood that you will be on CCTV. Small or second hand shops are less likely to have cameras or if they do have a camera, less likely to retain tapes for longer than a few weeks if at all.
- Remember that you are not necessarily required to provide accurate personal details or identification.
- Purchase simple phones without all the extra features now being made available.
- Only pay by cash.
- Do not register the phone – there is no legal obligation to do so.

Topping up credit

When setting up the mobile, use pay-as-you-go options only; this is a more expensive solution, but required for anonymity.

Unregistered pay-as-you-go phone calls can be paid for either by using top-up vouchers, or by a swipe card inside a shop. Only use top-up vouchers purchased with cash: using a swipe card to top up within a shop leaves a trail of evidence back to the shop where you could be identified by CCTV or eyewitnesses.

Best Practices for Telephone Security:

- 1) Many cellular phones can be programmed to automatically place or answer a phone call without any visual or auditory indication that this is happening, transforming them into primitive bugging devices. Phones can also themselves be bugged or tapped. When discussing sensitive topics, phones should have their batteries removed, or ideally be left in another location far out of earshot. Avoid phones without removable batteries.
- 2) Many of the latest phones include a feature that automatically broadcasts your physical location when on a call to anyone capable of intercepting it. In most cases, there is an option to set this feature to only be used during calls to emergency services, such as 911 in the United States. Check your phone's manual for details, and set the feature as desired.

- 3) Note that even with the aforementioned feature completely disabled (which isn't an option for most people), cell phones can be tracked even when they are not in use by service providers (or others) identifying the three closest cell towers, thus *triangulating* the signal and determining the phone's location to within (at *most*) 100 to 300 meters. If this is a serious concern for you, change phones constantly.
- 4) Cellular phones are still better than landlines if you wish to avoid being tracked down, because they don't tie you to a specific location for the duration of the call (plus, you have the ability to physically move while on the call, as well as to change phones. Israeli intelligence agencies can and do utilize both cell phone and landline transmissions to track targeted individuals.
- 5) When storing numbers and other contact information in phones, it's best to use at least a rudimentary code system. At a minimum, you should make up nicknames (don't use "real" nicknames by which the contacts are actually known) for all of your political contacts, *especially* those with Arab-sounding names. This will help protect your data in the event the phone falls into the wrong hands.
- 6) Most phones offer password protection on at least some features. Use it.
- 7) Periodically clear unnecessary data from your phone. This include photos you've taken, old contacts, appointments, and memos, and the SMS (text message) and call logs.
- 8) If possible, disable call and SMS logging entirely.
- 9) More sophisticated phones are often capable of hiding certain, pre-designated records (not just contacts, but also appointments, memos, and other records that may be stored on the phone) on demand, and then retrieving them by entering a password. If your phone supports this, you should definitely use this feature, and familiarize yourself with the process for activating it. The feature should be activated any time you are potentially exposed to arrest (such as at a public demonstration) or otherwise risky situation.
- 10) Use of such features may thwart the more casual and less-educated snoops, but not specialists in data security. If you are seriously concerned about information on your phone getting into the wrong hands, many phones also provide the ability to completely wipe the device's memory with as little as one or two steps. Familiarize yourself with this feature, if available.
- 11) The most sophisticated cellular phones, or "smart phones", which combine cell phones with Personal Digital Assistant (PDA) devices like those manufactured by Palm and Pocket PC (examples include the Palm Treo and the Motorola Q) are in effect miniature computers capable of running all manner of software. A wide variety of security and encryption applications are available for such devices. Lists of at least some of the available programs should be available on the device manufacturer's web site. Try searching with web search engines as well. Here are some features that may be offered. You may need to employ more than one application (if they'll work together) in order to get all the features you want:
 - Encryption (especially that which encrypts not only data stored on the phone, but on any memory cards used by the device)

- Automatic locking after a period of inactivity, at a set time, upon different forms of device resets, or upon removal of a memory card
- Remote locking via web, telephone, or SMS, if the device is out of your possession
- Ability to hide or destroy records or other data upon a certain number of failed password entries, or through remote activation of the feature
- Voice recognition-based security

12) If you utilize a phone based on Voice over IP (VoIP) technology (see the “Telephones, Teleconferencing, and Voice over IP” section), be sure to employ security software such as Zfone (<http://www.philzimmermann.com/EN/zfone/index.html>), which was developed by the creator of PGP, discussed earlier in this section.

13) None of the practices described here will ever make your phone completely secure. If absolute security is necessary for your project, don't use your phone at all.

Personal Digital Assistant (PDA) Security

Many of the same considerations described for phone security apply to PDAs (such as Palm and Pocket PC) as well. Specifically, item 11 in the preceding list of best practices describes security software that can potentially work with any PDA, not just “smart phones, except for the ability to remotely access the device via telephone or SMS. PDAs can be extremely valuable tools for activism, but they need to be treated as what they are: miniature computers, with all the same security considerations that apply to their big brothers.

For more information on telephone and PDA security, see:

[www.mobileactive.org/wiki/index.php?title=Security Guide for Mobile Activists: Checklist and Tips](http://www.mobileactive.org/wiki/index.php?title=Security_Guide_for_Mobile_Activists:_Checklist_and_Tips)
www.freebeagles.org/articles/mobile_phones.html
www.firewallguide.com/pda.htm

Instant Messaging Security

Instant messaging security is discussed in the “*Instant Messaging and Internet Chat*” section of this module.

Mailing List/Listserv Security

Mailing list security is discussed in Section One, “Mailing Lists (AKA Listservs)”.

Password Security

Although passwords have been discussed briefly in the preceding subsections, they are an important enough security factor to warrant more specific attention. What follows are a set of “best practices” and suggestions for both creating and managing passwords:

Creating Passwords

- Passwords should be at least eight characters in length.
- Avoid anything obvious: names of family members or pets, common phrases, or specific words like “password” and “admin”, which are common default passwords.
- The best passwords utilize a combination of upper and lower case letters, numbers, and other characters.
- To make your passwords easier to remember, consider using a word or phrase in which some characters are replaced by others that physically resemble them. For example, the phrase “into the left field corner” could become “int0 the Left fie1d c0r/VeR”.
- One good method is to utilize the first letter of a line memorized from a poem or song, again translating some of the characters into other visual similar ones. For example, the line, “Once upon a midnight dreary, while I pondered, weak and weary”, could become “0ua/\d,w1P,WaV\” – or the lyric, “I wish I was a little bit taller, I wish I was a baller”, could become “lw1\WalbT,iW1\WaB”.

Managing Passwords

- Avoid employing the same password for more than one email account, computer login, or other purpose. For the best security, use as many different passwords as you can remember.
- DO NOT write your password down. The best way to remember it is by using it repeatedly.
- Change all passwords several times per year.
- Avoid sharing your password with ANYONE unless absolutely necessary. If you do, change as soon as possible after it is used by the other person, no matter who they are.
- For some types of passwords, such as those for organizational email accounts and web sites, more than one person SHOULD know it. Avoid giving any one social clique, ideological faction, or other subgroup of your organization complete control over any technological function (email, web sites, listservs, etc). Make sure that relevant passwords are known to a diverse group of organization members, while restricting the total number of people entrusted with the passwords to the minimum necessary to ensure said diversity.

Dealing With Forged Email

In 2002, a number of prominent Palestine solidarity activists in the United States found themselves the victims of an electronic harassment campaign. Fake emails were sent in their names to huge lists of recipients, including co-workers and other key contacts of University of Illinois professor Francis Boyle and Yale University professor Mazin Qumsiyeh. In many cases, the emails contained anti-Semitic and other objectionable statements in an attempt to discredit the victims. Activists all over the United States, from New York to Iowa, were targeted. An investigation traced most of the attacks to an Israeli phone number (for more information on these events, including a list of some of the originating servers used to send the emails, see <http://qumsiyeh.org/emailspamandforgeries>).

Although this particular campaign of attacks ended in late 2002, once victims succeeded in tracing the emails and contacting the management of the originating internet service providers. However, this form of attack has been used repeatedly since this time. In a notable incident in 2004, two Duke University students who were helping to organize the Fourth Annual Conference of the Palestine Solidarity Movement (PSM) had their email addresses used to send fabricated, inflammatory messages to the Duke community.

These attacks are based on a technique known as *email spoofing*. Spoofing, which disguises the origins of a message to make it appear come from a different source, is accomplished by manipulating message elements, such as the *From*, *Return-Path* and *Reply-To* fields, through various means. A few common techniques are described at http://en.wikipedia.org/wiki/E-mail_spoofing.

What to Do in the Event of Email Spoofing

- 1) Examine the email message that you suspect was spoofed. Click on “Show Headers” or a similar-sounding option in your email client. Unless the spoofing was a very sophisticated effort, the headers will contain clues as to the email’s origin (note, however, that some of the header information may *also* be fabricated). Learn about the information contained in the headers at www.stopspam.org/email/headers.html and www.obliquity.com/computer/spambait/complain.html. Tools such as *Active Whois*, can provide even more information: www.johnru.com/active-whois/index.html
- 2) Contact the postmasters of domains involved in the incident. Keep a record of all of this correspondence. Include the complete email and header information. Suggest that the postmasters check the *tcp_wrapper*, *ident*, and *sendmail* logs on their systems to obtain more information. Postmasters may be contacted by sending mail to `postmaster@[host.]site.domain` (for example, postmaster@yahoo.com).
- 3) In many cases, it will also be necessary to contact other relevant officials, such as administrators of a university, company managers, or other individuals. Do so at the earliest possible opportunity. In some types of situations, your organization may need to issue a press release or media advisory concerning the matter, and these can sometimes be coordinated with the public relations departments at affected institutions.
- 4) Work with the officials to craft a response that will result in the recipients being informed of the incident, thus clearing the names of the victims.

- 5) If relevant officials are unwilling or unable to coordinate a response with you, you will need to contact the recipients yourself, using an address other than the one that was spoofed.

Anonymity on the Web

Normally, any use of the internet, browsing the world wide web, to sending email, causes the IP address of one's computer (a unique identifier), and potentially other personally identifiable information, to be made available to the maintainers of the sites one visits. However, advances in technology allow users to access the internet in relative anonymity.

The most common method for retrieving information from intercepted communications is *traffic analysis*, which works by identifying patterns in the pieces of information that are sent and received. This works even if the transmissions are encrypted and unable to be decrypted. In order to effectively provide a degree of anonymity, security applications must be able to prevent traffic analysis.

The most widely-used tool for thwarting traffic analysis is called Tor (<http://tor.eff.org>). Essentially, Tor works by encrypting information and transmitting it from point to point within a complex network of routers, before transmitting the information, now decrypted, to the final recipient. Tor can be used to help anonymize both web browsing and internet chat/instant messaging, and even help prevent the network location of web servers from being exposed. To provide a greater degree of anonymity when browsing the web, Tor is frequently used with a filtering proxy server called Privoxy (www.privoxy.org). Note that Tor is not without vulnerabilities: a team of researchers recently exposed a limited vulnerability to traffic analysis that will hopefully be fixed in future implementations. See this highly technical explanation: www.cl.cam.ac.uk/~sjm217/papers/oakland05torta.pdf.

For sending emails to specific recipients without revealing the original source, *anonymous remailers* are used. There are four types of remailers: Cypherpunk/Type I, MixMaster/Type II (<http://mixmaster.sourceforge.net>), MixMinion/Type III (www.mixminion.net), and Pseudonymous. Multiple remailers can actually be used together to provide even greater security. Although web-based remailers exist, they do not provide the same degree of security as genuine remailers, which require the use of a downloadable client. For a more detailed overview of remailers, see http://en.wikipedia.org/wiki/Anonymous_remailer.

Additional Resources on Encryption and Data Security

The Infoanarchist's Handbook: a collection of articles, still in development, intended to comprise a computer security manual for activists: www.infoanarchy.org/en/The_Infoanarchist%27s_Handbook

Informit.com's *Security Reference Guide*, an extensive collection of articles on many computer security topics: <http://www.informit.com/guides/guide.asp?g=security&rl=1>

The Electronic Frontier Foundation's *Top 12 Ways to Protect Your Online Privacy*:
http://www.eff.org/Privacy/eff_privacy_top_12.php

An activist security handbook from the Resist! Collective in Vancouver, containing extensive information on computer security, including topics not covered here: <http://security.resist.ca>

This book, *the Art of Deception*, by famed hacker Kevin Mitnick, describes methods used by hackers and others to solicit privileged information from unsuspecting sources – and how to guard against these techniques: <http://www.amazon.com/gp/product/0471237124/104-5804807-3101502?v=glance&n=283155>

Section 8: Fundraising Applications

Nearly all grassroots activist organizations engage in fundraising activities, but many fail to take adequate advantage of technologies that can make their work dramatically easier and more effective. There are two major types of fundraising applications: donor management and donation processing. The growth of the nonprofit sector has spurred the development of a host of software solutions for both of these types of applications. There are a number of high-end products, such as Kintera, that combine the two functions, but they are extremely expensive.

Donor Management

Donor management applications are focused on *tracking*. A key principle of fundraising is repeat giving: many, if not most individuals and organizations who donate to your group are likely to do so again if asked. For this reason, organizations should keep careful track of whom they've solicited, who donated, how much they donated, how they were approached, and so on.

In the earliest stages of your organization's growth, a simple spreadsheet or database might suffice. If you're using one of the more full-featured Personal Information Management applications, or better yet, a CRM application (see Contact Management), you can even integrate general donation tracking into your contact management system. However, until and unless your organization is using a full-fledged CRM application (which allow organizations to track virtually every aspect of their interactions with donors and other contacts), you should consider a dedicated fundraising application once spreadsheets and simple databases become cumbersome or inadequate.

TechSoup, a web site providing technology information for the nonprofit sector, has published some excellent articles on donor management applications. This article describes how best to choose one for your needs: www.techsoup.org/learningcenter/databases/page2190.cfm

This article specifically describes free and inexpensive (under \$500) products: www.techsoup.org/learningcenter/databases/page1642.cfm

The next three pages contain a detailed chart outlining the differences between some of the most popular applications on the market currently.

DONOR MANAGEMENT SOFTWARE COMPARISON	The Raiser's Edge Version 7	Best Software, Inc. MIP Fundraising Paradigm Version 4.0	DonorPerfect Version 7	NonprofitBooks Office Version 3.0	eBase Version 2.03	eTapestry (ASP)	Salesforce.com
CREATING AND MODIFYING RECORDS							
System has a "smart search" feature so user does not have to type in records full name.	•	•	•	•	•		•
Users can set up data entry defaults.	•	•	•		•		•
Separate recognition names (annual reports/honor rolls) so donors can be tracked	•	•		•	•	•	With Customization
System allows for joint and separate giving records for spouses.	•				•		•
Addressee/mailling name and salutations are auto-created based on a prefix and last name (i.e., Mr. Tom Jones).	•	•		•	•		•
User can overwrite auto-created addressee/mailling names.		•	•	•	•	•	•
Relationships can be tracked between records (employer/employee, board member/organization).	•	•	•	•		•	With Customization
RECORDS ADMINISTRATION							
System archives records.	•		•	•	•		•
System has global change feature.	•				•	•	•
System tracks updates to records.	•	•	•	•	•	•	•
FUNDING TASKS, ACTIONS AND COMMUNICATION							
System has calendar for grants and other deadlines.	•	•	•	•		•	•
A tickler feature reminds users of important deadlines.	•	•	•	•		•	•
User can track actions/tasks and their status.	•	•	•	•	•	•	•
User can track correspondence and communication with constituents.	•	•	•	•	•	•	•
GIFT TRACKING							
System tracks in-kind gifts.	•	•	•	•	•	•	•
System allows for soft crediting of gifts.	•	•	•	•		•	•
System tracks matching-gifts.	•	•	•	•	•	•	•
System tracks different funds.	•	•	•	•	•	•	•
System allows for splitting gifts between funds.	•	•	•	•			•
System tracks different campaigns.	•	•	•	•	•	•	•
System tracks different appeals.	•	•	•	•	•	•	•
System tracks tribute/honor gifts and their notifications.	•	•	•	•	•	•	•
System tracks anonymous giving.	•				•	•	•
System tracks individual gift acknowledgements and thank-you letters.	•	•	•	•	•	•	•
PLEDGE TRACKING							
System tracks pledges.	•	•	•	•	•	•	•
System tracks scheduling of pledge payments.	•	•	•	•	•	•	
System has a pledge reminder feature.	•	•	•	•	•	•	
MAILINGS							
Records have primary and alternate mailing address fields.	•	•	•	•	•	•	•
System has mailing restrictions option.	•	•	•	•	•	•	•
System generates automated thank-you letters.	•	•	•	•	•		With Customization
QUERIES AND REPORTS							
User can create custom queries based on the fields user selects.	•	•		•	•	•	•
System has a built-in report writer/custom report generator.	•					•	•
System links to an external report writer (e.g. Crystal Reports or Access).	•	•	•	•	•	•	•
System has "canned reports." How many?	50+	60+	40+		10+	10+	10+
DATA IMPORT/EXPORT							
Data can be exported to a spreadsheet or text file (e.g. for a mailhouse).	•	•	•	•	•	•	•
CODES							

DONOR MANAGEMENT SOFTWARE COMPARISON	The Raiser's Edge Version 7	Best Software, Inc. MIP Fundraising Paradigm Version 4.0	DonorPerfect Version 7	NonprofitBooks Office Version 3.0	eBase Version 2.03	eTapestry (ASP)	Salesforce.com
User can maintain/edit standard code tables (e.g. gender and address type look-up tables).	•	•	•	•	•	•	•
User can create/define fields for donor information.	•	•	•	•	•	•	•
User can create/define fields for gift information.				•	•	•	•
VOLUNTEER MANAGEMENT FUNCTIONS							
System has capability for identifying volunteers.	•	•	•		•	•	•
System tracks a volunteer's skills.	•	•			•		•
System tracks a volunteer's availability.	•	•			•	•	
System allows for scheduling volunteers.	•						
System tracks a volunteer's work time.	•	•	•		•		
EVENTS MANAGEMENT FUNCTIONS							
System has the capability for managing events.	•	•	•			•	•
System tracks event attendees.	•	•	•		•	•	•
System tracks event volunteers.	•	•			•	•	•
Strong Points	*Very sophisticated application *Interface to Blackbaud's accounting and registrar software *Various add-on modules including online interface are available *B680 offers competent customer support	*Intuitive interface and navigation **"Snapshot" reports and graphs summarize key data *One-Click Reporting *Track and improve campaign effectiveness *A built-in accounting interface	*Good help section *Lots of reports *Robust events management system *Screens tailored to each client	*Inexpensive and unique as a suite *Cash gifts are attributed to and post directly to GL accounts *Integrates with Quickbooks, popular accounting software	*Open Source software, free service *Improved and simplified version compared to the previous ones	*Exceptional support *Offer planned giving and research tools *Free for nonprofits with under 500 records	*Free up to 10 users *Infinitely customizable *Robust reporting engine
Things to note	*Expensive *May require dedicated server depending on configuration *Takes extensive and expensive training to use system to fullest potential *Not suitable for small nonprofits	*Many of the action, task, and communication functions are not very advanced *Expensive for more than one user	*Navigation may be confusing for some users *Training classes offered in limited timeframes to only those with a support contract	*Donor management module is bare-bones only *Company is relatively new to the market	*Should not be considered ready-to-use software *Support not very formal	*The lack of a smart search function can make looking-up records difficult *Queries & reports don't have much flexibility *Requires a lot of set-up, e.g., defining basic user fields	*Built as sales tool, donor management template is relatively new *Should not be considered ready-to-use software *To use to fullest capabilities, must invest in knowledgeable consultant to help customize
Volunteer Tracking Feature	Yes (optional)	Yes	Yes	Yes	Yes	No	Yes
Events Management Feature	Yes (optional)	Yes	Yes	No	Some	Yes	Yes
Initial Cost	\$6000 and up	Licenses Software 1 user \$2,900 2 user \$4,150 3 user \$5,400 4 user \$6,150 5 user \$6,900	\$2,995 for single-user license (\$1,500 for Multi-user upgrade) Note: Donor Perfect Online is also available as an ASP at \$100/month (1 user, 100-2,500 accounts) with a set-up fee of \$295	\$1299 for a 3 User License	\$50 annual membership. Optional modules available. Version with filemakerPro (recommended) \$149	Up to 500 Records : Free For more records : \$31/month and up	Up to 10 users free; each additional user \$1500/year
Documentation	User's guide provided with software	User's guide provided with software	Comes with manual and online help. Help button also in system.	User's guide provided with software	Available on the website (pdf or Microsoft word)	eTapestry offers online start guides and online help.	Currently, no donor management specific documentation.

DONOR MANAGEMENT SOFTWARE COMPARISON	The Raiser's Edge Version 7	Best Software, Inc. MIP Fundraising Paradigm Version 4.0	DonorPerfect Version 7	NonprofitBooks Office Version 3.0	eBase Version 2.03	eTapestry (ASP)	Salesforce.com
Minimum Hardware Requirements	Processor (CPU) Pentium III or Pentium III-class 733 MHz as a minimum; Pentium IV or Pentium IV -class recommended; memory (RAM) 128 MB minimum; 256 MB recommended; disk space 550 MB minimum for program and system files; plus 500 MB free disk space for processing activities.	IBM-compatible, Pentium-level processor with 64MB RAM (256 Recommended) CD-ROM	IBM-compatible, Pentium 266 or better with 64MB RAM (128 Recommended), 15 MB+ free hard disk for DonorPerfect Visual Edition	64MB RAM, 105MB HD, 300 MHZ or higher	None noted	PC's : Pentium II/266 minimum, Pentium III/600 recommended. 256 MB memory recommended. Mac's : OS X or later, Power PC 604e 266MHz G3,G4. 128 MB memory recommended. Access to the Internet through a modem or internal LAN connection. (min 28.8kb modem).	None
Minimum Software Requirements	Windows 2000 Professional, and Windows XP Professional (The Raiser's Edge version 7.02 and higher); For The Raiser's Edge 7.6 and higher: SP3 and higher is required for use with Windows 2000 Professional and SP1 is required for Windows XP Professional	Microsoft Windows: 98 SE, NT, 2000, XP Pro Video Adapter: 800 x 600 resolution with 256 colors	Windows 95, 98, NT, 2000, ME, XP or higher	Windows 98 SE/2000/XP, Quickbooks Pro 2003 or 2004, Internet Explorer 5.5 or higher	A registered copy of Filemaker Pro is required for advanced features	Most current version of Microsoft Internet Explorer or Netscape Navigator recommended	Most current version of Microsoft Internet Explorer or Netscape Navigator recommended
Web site	www.blackbaud.com	www.bestsoftware.com	www.donorperfect.com	www.nonprofitbooks.com	www.ebase.org	www.etapestry.com	www.salesforcefoundation.org

Donation Processing

Donation processing software consists of online tools for actually collecting donations via the internet. This type of software is useful no matter what the size of your organization. If you use the internet to communicate with your supporters via web sites, or even email, there are products and services available to help you collect donations in the process.

Donation processing tools come in a number of different varieties:

Donation Portals: This type of tool actually consists of a separate web site to which donors are directed in order to contribute to your group. Such portals make it very obvious to donors that they are leaving your web site and accessing another one. Portal providers typically charge a commission of roughly 3% per donation, with no additional fees. An example of a donation portal is Network for Good: www.networkforgood.org

Online Payment Systems: These systems support all manner of online payments, including donations, product sales, membership dues, subscriptions, and virtually anything else you can think of. Examples include Paypal (which also offers a special version more tailored to donations) and GiftTool. These tools are especially useful if your organization wants to collect additional kinds of payments beyond simple donations. Fees vary in substantially, but typically consist of a 3-8% commission per transaction, and/or a monthly fees, usually between \$20 and \$50.

GiftTool: www.gifttool.com

Paypal: www.paypal.com

Integrated Nonprofit Suites: There is a general trend in the nonprofit world toward integrated solutions that combine support for contact management, donation processing, web content management, bulk email, and more, all tied to a central, online database. Such suites are intended to be comprehensive solutions. Examples include Democracy in Action and GetActive, which are intended for activist groups in particular, as well as Convio and Kintera, more powerful (and expensive) products intended for those with bigger budgets and more complex needs. These products usually carry a monthly fee of anywhere between \$50 and \$1000, plus a commission on donations, usually 3 to 8%. Initial setup fees, which vary widely, are also common. CivicSpace, an open-source nonprofit suite currently under development but available to use “as-is”, also includes an online donation system called CiviContribute, the functionality of which may eventually rival its non-open-source competitors.

CivicSpace: www.civicspacelabs.com
Democracy in Action: www.democracyinaction.org
Kintera: www.kintera.com

Convio: www.convio.com
GetActive: www.getactive.com

Shopping Carts and Custom Systems: These options typically require some degree of web programming knowledge. Many web hosts offer pre-designed shopping carts systems, although the ease with which these can be integrated into your site may vary greatly (it could be incredibly simple, or incredibly complicated). If your organization has very specific needs or handles a very high volume of donations, it's worth looking into the possibility of developing your own system (typically an investment of several thousand dollars).

A detailed guide to selecting a donation processing solution, including individual reviews of a number of popular tools, is available at www.idealware.org/donations.

Section 9: Instant Messaging and Internet Chat

Instant messaging is a technology with which even most novice computer users are now familiar. To activists, it can be useful for the purposes of holding online meetings, discussions, and even real time collaboration. Unlike teleconferencing, using Internet chat automatically generates a complete transcript of the discussion, making it easy to edit and distribute notes to participants afterwards. In addition, it doesn't require the use of telephones, which can sometimes be expensive. There is also the additional advantage of being able to quickly and easily exchange hyperlinks and files. Many instant messaging clients even support audio and video conferencing. The chief downside of using Internet chat, as opposed to voice/video conferencing or in-person meetings, is that it can significantly extend the amount of time necessary to complete a discussion. For these reasons, organizations might consider using a mix of the technologies.

Check out this link for information on how some organizations have utilized instant messaging:
www.unites.org/html/resource/im/im0.htm

A wide variety of instant messaging clients are available. Some are interoperable, allowing users to communicate with users of other networks (such as how GAIM allows users to access AIM, MSN, Yahoo, and IRC). For a detailed comparison of features between major instant messaging clients, see this link: http://en.wikipedia.org/wiki/Comparison_of_instant_messaging_clients.

Security Considerations

For activists, the primary concern in choosing a client should be security. Messages sent to and from instant messaging clients can be intercepted just as easily as email. To protect your communications when using these programs, a number of plugins are available that add encryption features to various popular instant messaging programs. Let's take a closer look at the capabilities of each of these security plugins, according to which instant messaging application they are designed for:

AOL Instant Messenger (AIM) (www.aim.com)

AIM, in general, is considered to be riddled with security holes and should be avoided. If you insist on using it, several distributions of PGP (see previous subsection) include plugins for AIM. A plugin called SecureIM is also available, but is not currently considered to be secure.

MSN Messenger (<http://messenger.msn.com>)

Several encryption plugins are available for MSN Messenger. However, Microsoft products generally have a poor reputation for security, and should probably be avoided as well. To learn more about the plugins, see www.encrsoft.com, www.secway.fr/us/products/simplite_msn, and www.zonelabs.com/store/content/catalog/products/sku_list_imsp.jsp?lid=ho_imsecurepro.

Yahoo Messenger (<http://messenger.yahoo.com>)

There are at least one or two encryption plugins available for Yahoo Messenger, most of which are also available in versions that are compatible with some of the other major chat clients. See <http://solidlabs.com/chatencrypter> and www.secway.fr/us/products/simplite_yahoo (the latter address is the official site of SimpLite, which also works with MSN Messenger).

Trillian (www.trillian.cc)

Trillian includes built-in encryption with SecureIM, which, as mentioned earlier, isn't really all that secure (due to authentication issues). These types of issues are major problems on the networks to which Trillian connects (AIM, Yahoo, and MSN).

Pidgin (www.pidgin.im)

As an open-source instant messaging client, Pidgin has more potential for robust security. A number of plugins are available to support encryption on Pidgin. These include Off The Record, also known as OTR (www.cypherpunks.ca/otr), and Pidgin-Encryption (<http://pidgin-encrypt.sourceforge.net/>).

One lesser-known client with robust security built-in:

ScatterChat (www.scatterchat.com)

ScatterChat is an instant messaging client that, unlike the others mentioned above, has extensive security features built into the software. It is based on GAIM, and provides multiple forms of security, including encryption and protection against traffic analysis with Tor (see "Anonymity on the Web" in the "Encryption and Data Security" section). It is possibly the most secure instant messaging client available.

See also "Anonymity on the Web" in the "Encryption and Data Security" section of this module, for information on additional tools for securing Internet communications, including instant messages.

Section 10: Cameras and Video

Cameras, both video and still have become indispensable tools for Palestine solidarity activists. With the growth of image and video sharing web sites such as Flickr and YouTube, it is faster and easier than ever to disseminate these materials to global audiences. The potential uses extend far beyond promoting a group's own events. Extensive YouTube postings helped turn public opinion in the West against Israel's 2006 in Lebanon, and continue to play a vital role for activists seeking to document attacks by West Bank settlers on Palestinians and internationals. Because digital content is much easier (and safer) to transport out of Israel/Palestine than non-digital, our discussion will focus specifically on digital cameras.

Still Cameras

Modern digital still cameras come in two varieties: Point and Shoot, or (if you've got the budget) SLR. The latter are a good choice for experienced photographers, but beginners should stick to one of the former types. Generally speaking, digitals offer the best options for activists, who sometimes need to remove media from their cameras, or distribute their photos quickly, easily, and with little, if any, notice. Unless you're a professional photographer, it's generally best to avoid investing too much money in any camera that will be used at the scenes of protests or documenting human rights abuses, as there is a strong likelihood that your camera will eventually be confiscated or destroyed.



The key considerations when choosing a digital camera are:

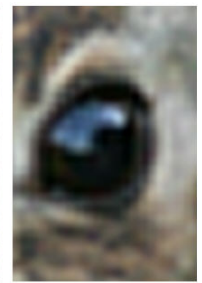
- 1) **Resolution:** Measured in megapixels, more is better. If you want your photos to look good in print, don't settle for less than four.
- 2) **Size:** The size of your camera can be a big deal if you need to quickly conceal it, or if you just prefer carrying as little weight as possible.
- 3) **Lens:** Most digital cameras do not offer interchangeable lenses.
- 4) **Zoom:** The zoom feature of a digital camera will be described in terms of both "optical" and "digital" magnification. Optical zoom is the magnification supported by the lens itself, and digital is the result of the camera's circuitry *simulating* a greater level by multiplying the pixels. The more you use this, the more pixelated the image becomes. When using your camera to document the activity of soldiers, settlers, or police, it's often best to be able to take your photographs from afar through a powerful zoom lens. When comparing cameras, focus only on the optical-zoom figure.



Original








10x Optical



10x Digital

- 4) **Batteries:** Consider the type, the weight, and their typical life.
- 5) **Memory:** Different cameras use different types of media to store photos, including:

	Secure Digital (SD) card (the most popular type by far, available up to 4 GB in storage capacity). Newer types, called SDHC, have capacities up to 16 GB, but are not compatible with older devices.
	MultiMedia Card (MMC) (up to 8 GB capacity, outwardly identical, yet internally distinct from SD cards - nearly all devices that support SD cards are also compatible with MMC)
	CompactFlash (CF) (up to 8 GB)
	xD Picture Card (xD) (up to 8 GB)
	Memory Stick (MS) (up to 2 GB)

Learn more about the different types of digital camera memory here:
www.photographyreview.com/memoryguide/crx.aspx

In choosing your camera, you'll also want to consider the ease, speed, and discretion with which the memory card can be removed or replaced should the need arise. As such, it is strongly recommended that you physically try out any given model of camera prior to purchasing it.

Video Cameras

Today's video cameras come in both analog and digital, with the latter format using either tape, card, or disc as recording media. As we did with still cameras, we will focus on the digital products because the ease of uploading content and quickly removing the media when necessary. Moving forward, analog video cameras will soon be completely replaced by digital anyhow.



Choosing a Video Camera

Important features to consider and to weigh against the camera's cost include:

- 1) **Lens Quality:** This applies mostly to prosumer (mid-range) or professional cameras.
- 2) **Sound Quality:** Is the audio input balanced or unbalanced? (details later in this section)
- 3) **Manual Audio Level Control:** Mainly found on prosumer or professional cameras.
- 4) **Low-Light Operating Capabilities:** If you are shooting at night, this is a must.
- 5) **Manual and Automatic Focus, Iris and Zoom Options:** (details later in this section)
- 6) **Number of CCDs:** A 1-chip camera (1 CCD) uses a single computer chip to process color. A 3-chip camera (3 CCD) has three separate computer chips for processing the colors red, green and blue (collectively known as "RGB"). Separating the colors increases the image quality. For home use or for a web site, a 1-chip camera will be good enough. But if you intend the video for broadcast or for public display, you'll want the higher quality of a 3-chip camera.
- 7) **Still Image Function:** Most digital video cameras can function also as still cameras. However, the resolution of still images taken with a video camera is generally vastly inferior to that of images taken with a still camera. Likewise, most digital still cameras can capture video, but also at a reduced resolution. Until the technology changes, it's necessary to use different cameras for videos and stills if you want both to be of reasonable quality.
- 8) **Optical Zoom:** As described in the subsection on still cameras, the digital zoom figure is irrelevant. Judge your camera based on the optical zoom figure only.
- 9) **Digital Effects:** Most consumer cameras offer a set of digital effects that can be applied during the recording (such as strobes, wipes, and color changes). If you have access to editing software, it is strongly recommended to avoid using the camera effects altogether. Instead, you should apply these and other, more sophisticated and fine-tuned effects during the editing phase, when you can control and shift their parameters carefully, and can reverse your selections if they prove ineffective. As with the digital zoom, the digital effects option should not determine your choice of camera.
- 10) **Portability:** Weight and size are important to consider. Generally, professional cameras are larger and weigh more than consumer and prosumer cameras. The professional camera not only produces higher resolution and detail; its weight allows it to produce a more stable image as well. In the field, however, where speed, spontaneity and flexibility of action are crucial, the camera's portability and the ease of handling it are often more important than the ability to capture maximum detail.

- 11) **Batteries:** Batteries typically account for the bulk of a camera's weight. Standard batteries weigh less, but on average last for no more than an hour (their life also diminishes over time). Extended-life (two, four hour, or nine hour) batteries weigh more, but also provide much more operating time. Read the manual carefully to insure proper maintenance and prolong the lives of your batteries. Most batteries need to be removed from the camera while the camera is not in use. Some batteries must be depleted before recharging, and others require constant recharging while not in use.

Media Features

Tape Formats

Tape formats differ in their ordering of tracks, in their level of endurance, their width in inches (generally, a wider tape implies a higher degree of resolution), in their color sampling ratio, and other respects. Analog (non-digital) tapes include VHS (1/2") and S-VHS, Hi-8, 3/4", 1", BetaSP and others. Digitally coded tapes include Mini-DV Tape with and without a memory chip (the chip provides more accurate capturing during editing); DVC-Pro, Digital Beta, DVCAM, HDV and others. Mini-DV tapes are the tapes used for most DV consumer cameras. Their recording capacity is typically between one and four hours. Note: with most media, you can set the camera to long-playing (LP) mode instead of standard mode (SP) to double the recording time. However, doing this greatly decreases the quality of the image.



Tape Maintenance:

Ensure that the tape is taught and equally stretched to allow a constant level of contact with the camera's play/record head by fast forwarding it all the way, and then rewinding it to the beginning, before you use it for the first time.

It is recommended that you do not reuse a tape, in order to prevent image dropouts (a result of the wear on the tape), unless you have means to degauss it first.

Keep your tapes, the used and unused ones, upright (like books) on a shelf, and far from any electro-magnetic equipment (such as speakers or a television)


You can lock the tape to avoid recording over it. To do this, look for the small white or red tab on the side of the tape, and slide it over to the lock position.

Equipment Media Standards

Cameras and playback devices are generally designed to comply with specific image standards. The NTSC standard calls for 525-line transmission and a frame rate of 30 frames per second (fps). NTSC is used in countries including the U.S., Canada, and Japan. The PAL standard, used in Europe and in the Middle East, has 625 lines, and therefore a higher picture resolution. Its frame rate is 25 frames per second (fps), which approximates (and can be more easily converted to/from) the 24 fps frame rate of film. NTSC DV cameras capture video at a resolution of 720 x 486 pixels. PAL DV cameras capture 720 x 756 pixels. Conversion of the image between NTSC and PAL standards is possible, but requires professional equipment and can be quite costly.

Connectors and Cords

Every camera has connectors leading in and out of it, for cables carrying audio/video signals of different types. One common type of input/output is known as composite, because it carries information all three colors (red, green and blue – known as RGB) in a single. Most higher quality cameras offer a component input/output, which splits the signal into four pieces, carrying information about each of the three colors, plus luminance. Some of the other common types of video connectors are RCA and S-Video. All of these are described in Section 14, which deals with projectors. Other common types found used with digital video cameras are the following:

	Firewire Carries both digitally encoded audio and video signals in and out of the camera, often to computer		BNC A connector used with the same type of coaxial cable used with most older televisions
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Operating a Video Camera

All digital video cameras have menus for adjusting the various settings on the camera. The menu settings should be thoroughly checked before shooting, in order to make sure everything is set to your needs. Standard menu settings to be verified and set before shooting include some variation of the following:

- 1) **Recording Mode:** make sure the camera is set to SP (standard play) rather than LP. LP stands for “long-playing” and will make extend the amount of recording time on your tape at the expense of severely degraded image quality. It's not worth it.
- 2) **Audio Mode:** This should be set to at least 16 bit/ 48 khz, equivalent to CD-quality.

- 3) **Mic/Audio Level:** Some higher end camera allow users to choose between automatic and manual control of recording level.
- 4) **Steady Shot:** Many cameras include a digital version of a “steadycam” (an external device used to stabilize a camera), designed to compensate for any jiggling of the camera. You might want to turn this option on if you are not yet experienced in handheld shooting, and are using a handheld camera with no external steadycam. If your camera does not include this feature, or its does not work to your satisfaction, a cheap homemade steadycam can be purchased through this web site:
<http://www.cs.cmu.edu/~johnny/steadycam/>



Auto Features: Many cameras will allow you to choose between manual or automatic control of settings such as zoom, focus, iris (aperture), and white balance (discussed later in this section).

Zooming

Nearly all video cameras allow you to zoom in or out between two poles – Telephoto (closeup) which is marked as “T”, and Wideshot (long shot), which marked as “W”. If you are using automatic zoom (the only option available on most consumer cameras), the speed of change between these poles is regulated by the camera, and responds subtly to the pressure of your finger on the zoom button. When using a manual zoom (available on professional cameras and on some prosumer cameras), the zoom is controlled by manually turning a zoom ring on the camera lens in one direction or another. The speed of the turn is flexible and variable, and depends on your own movement. Some cameras allow you to zoom further than the default limit of the camera’s zoom lens, by shifting the lens zoom ring past a point marked as “Macro”, into an alternative narrow zoom range, where detailed closeups can be recorded.

Terms for Common Shot Types

CU (Close Up)/**ECU** (Extreme Close Up)

MS (Medium Shot)

LS (Long Shot)

WS (Waist Shot)

FF (Full Figure)

Master Shot (establishing the scene)

POV (Point of View) / **OTS** (Over the Shoulder)

Pan (camera turning right and left from a stationary tripod location)

Tilt (camera turning up and down from a stationary tripod location)

Tracking (camera moving on a flat surface with the aid of a dolly or along tracks)

Crane (camera raised up and down by a crane)

Focus

All digital video cameras have built-in automatic focus features. It is crucial, however, to learn how to focus the camera manually, as the automatic focus can result in a very problematic, fluctuating, image. Manual focus should be used when you are shooting any scene that involves movement on the Z axis (between your position and the scene's "horizon". Since auto-focus adjusts the image in relation to whatever it detects at the image's center, it will keep changing and readjusting focus to any and every movement taking place between the foreground and background of the scene. Instead, you will want to remain focused on a single object, allowing movement to occur without impacting the focus. Most cameras will allow you to switch between manual and automatic focus either with a button, or by making a selection in the on-screen settings menu.

If you are using a professional camera, manual focusing is achieved by turning the focus ring on the camera lens in one direction or another. As with the zoom, the speed of the turn is flexible and variable, and depends on your own movement. It can thus be subtly adjusted to every shift in the subject's movement.

Manual Focus Practice Exercises

- Maintain a steady zoom degree on various objects while panning around the perimeter of a large room.
- Zoom from a far object to a nearby one abruptly, adapting the focus as you make the shift.
- Maintain an object at the same position in the frame (such as an object held by a person walking in front of you) as you move forward or backward.

Exposure and Light (Iris / Aperture)

Digital video cameras have built-in automatic exposure, or iris/aperture features. It is important, however, to learn how to iris the camera manually, as use of the automatic iris can result in fluctuating brightness. As with auto-focus, when the camera is set to auto-iris, the exposure/brightness level is adjusted to an internally calculated average. With any movement in the foreground of the shot (obstructing the light source), the amount of exposure is readjusted to meet this predefined average, and the image brightness level wavers. If the scene is too dark, and you need to open up the iris on the camera to let in the maximum amount of light, or if the background is too bright, and you need to close the iris to reduce the amount, you will need the manual iris control.

As with the focus, you may need to change a setting in your camera to switch from automatic to manual control of the iris. The exposure level is then adjusted by turning the iris dial in one direction or another. If you are using a professional camera, the iris is controlled manually by turning the iris ring on the camera lens in one direction or another. As with the zoom and the focus, the speed of the turn is flexible and variable, and depends on your own movement. It can thus be adjusted subtly to every shift in the subject's movement or the changes in the scene's overall light level.

Depth of Field

Depth of field is the area within the image which is in focus. Depth of field can be long or short, depending on the iris (exposure) level, the degree of zoom and the camera's distance from the object. If an object is far from the camera – the depth of field increases. Objects shot from near by would have a lesser range for movement within a focused field.

When the iris is closed down (i.e., when little light is let in) – the depth of field is increased. When there is less light, the iris needs to open up, and the depth of field decreases.

Wide angle zoom (zoom out) allows for a larger depth of field.

Narrow angle (zoom in) decreases the depth of field.

Even minute changes of movement along the Z axis of the shot at this point become very visible. If the subject is moving forward or backwards, it immediately moves out of the focus range. Constant adjustment of focus is thus necessary. On the other hand, figures shot with a narrow depth of field (if they are not moving forward or backwards) can be beautifully isolated against a (blurry) background and thus made more pronounced.

White Balance

The sum of the colors of light used to display the image you shoot (Red-Green-Blue) is White. When configuring what, exactly, your camera interprets as white, you are defining a base for interpreting all the other colors. Sunlight is rarely pure white, but rather takes on different shades (measured in temperature levels) such as yellow or red at sunrise and sunset, or blue in midday. The standard for “white” thus differs for each light setting on your camera (such as outdoors, indoors, tungsten light, neon light, cloudy day, and bright day).

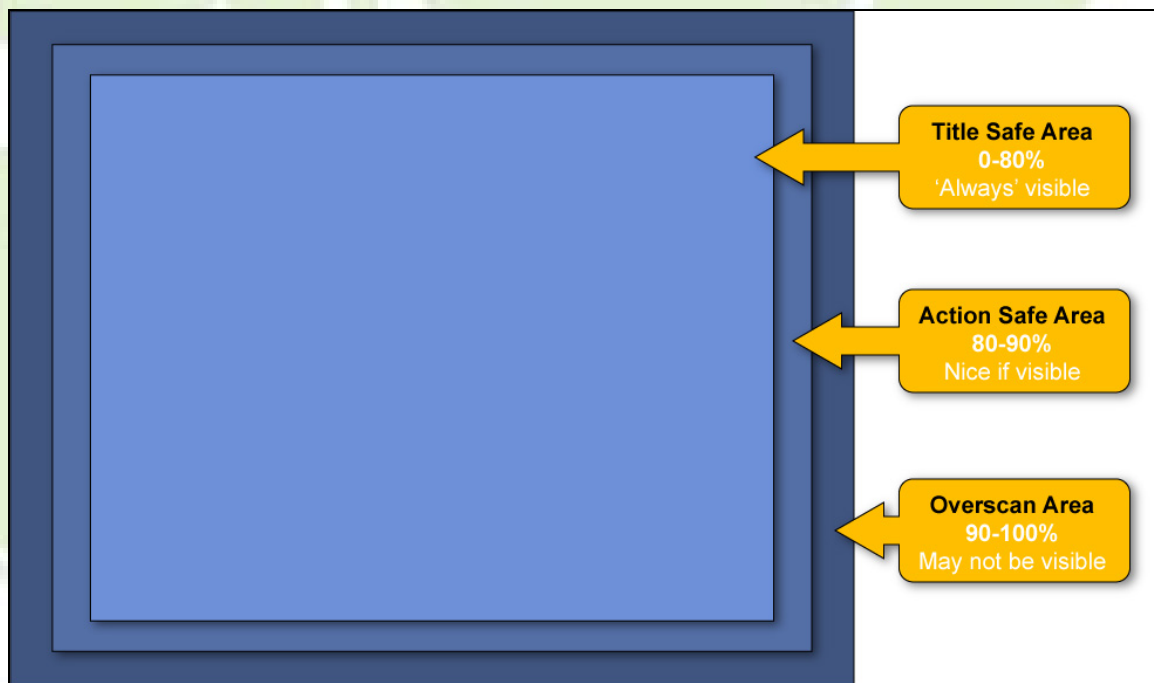
Digital video cameras come with a white balance meter that tells the camera the temperature of the white color in the specific scene. The rest of the colors in the spectrum are adjusted according to the quality of the white, in order to make the video read accurately. The camera often assigns one of two default standards for “white” to the scene: either “Indoors” or “Outdoors”. For the best results, it is important to learn how to set the white balance of the camera manually, rather than relying on the automatic settings.

Shooting Tip

Record an extra few seconds before and after the actual action in your shot, to allow flexibility in editing later on. These buffers are referred to as “heads” and “tails”.

Title and Action Safe Areas

Because some televisions and monitors may crop portions of your image, it is important to compose your shots with this possibility in mind. To this end, most videographers utilize certain standards for ensuring that the most important elements in their shots will not be cropped out.



The Title Safe Area comprises center 80 percent of an image. Beyond this point, there is a chance that any titles inserted in the editing stage may be cut off. Any elements that you wish to ensure will be visible should be kept within this area.

The Action Safe Area encompasses the center 90 percent of an image, including the Title Safe Area. There is a slightly higher risk of cropping here than in the Title Safe Area. Any elements beyond this margin will likely be cropped out when the image is displayed on a television (standard televisions crop about ten percent, and HDTVs about five percent). The area likely to be cropped out is known as the Overscan Area.

Using Microphones

All digital video cameras include at least an internal microphone, and some include a built-in shotgun mic. When using these, audio settings generally adjust automatically to the level of sound being recorded. If your camera supports it, attach an external microphone for best results. When doing so, adjust the audio recording level to correspond with the sensitivity of the microphone. Be sure to carefully select the appropriate microphone for the type of sound and location you are planning to work in. More information about microphones is found in Section 13 of this module.

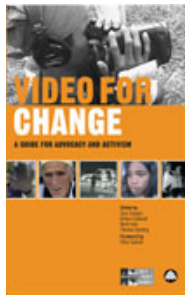


Filming in Palestine

Documenting the realities of life in Palestine is an important aspect of many activists' work, but it is often a dangerous undertaking. In the past, the Israeli military has, on occasion, specifically targeted people with cameras for arrest or worse. The way in which soldiers react to the presence of cameras may vary dramatically, and so it is best to be prepared for anything.

Here are a few basic tips to help you, your footage, and your subjects safe:

- 1) At actions, never film or photograph the faces of Palestinian men who have not already been identified by the IDF. This can have major repercussions for them later.
- 2) Outside of public demonstrations, where permission is generally assumed (save for the above cases), never photograph or film any activists without their explicit permission.
- 3) Avoid filming or photographing Palestinians engaging in any form of violent behavior.
- 4) Familiarize yourself with the means by which the media can be quickly removed from your camera. Plan how and where you might hide your media in a tense situation. Consider swapping in blank media, or media containing tourist images, so it's less obvious that you've removed the original.
- 5) Know the right way and wrong way to interact with soldiers and settlers. Refer to direct action organizations such as the International Solidarity Movement and the Palestine Solidarity Project for up-to-date guidelines and suggestions.



Recommended Resource: *Video for Change*

This collection of articles, published by Pluto Press, is billed as "the first ever comprehensive practical guide to human rights and video campaigning". Though not specific to Palestine, readers will find many valuable ideas worth exploring. The book is currently available at a 20% discount through the authors' web site at www.witness.org.

Getting Footage Out of Palestine

As mentioned above, you should always come prepared with extra media for your camera. The safest way to transport your footage out of the country is by uploading it to the internet at the earliest opportunity, and then deleting it from your media. It's good practice to shoot a certain amount of photos or footage of typical tourist sites, or whatever else would make sense in the context of your "cover story" for the authorities. When leaving the country, you can remove all "questionable" footage from your media, and have only innocuous tourist footage with you when dealing with airline security or border police.

Video Editing Applications

- **Adobe Premiere Pro (Est. Retail Price: \$250 - \$1000)**
www.adobe.com/products/premiere

Adobe Premiere Pro is among the most popular video editing applications. It is available for both Windows and Mac OS, and is used by many professional broadcasters. As a part of the Adobe Creative Suite, it boasts easy integration with related Adobe applications such as Photoshop and After Effects. It's also extremely powerful, and many say, fairly easy to learn.



- **Final Cut Studio (Est. Retail Price: \$500 - \$1300)**
www.apple.com/finalcutstudio

Final Cut, which is available only for Mac OS, is extremely powerful, and even more popular with professional broadcasters (and filmmakers) than Adobe Premiere. In particular, it offers support for podcasting, which is fairly uncommon, and more options than nearly any competing product for importing High Definition video.



- **Cinelerra (Freeware)**
<http://heroinewarrior.com/cinelerra.php3>

Cinelerra is a free, open-source video editing application originally designed for Linux operating systems, but now available for Mac OS as well. Its major drawbacks, as of the latest release, are the lack of a storyboarding mode, and support for only a limited number of audio tracks. Nevertheless, open-source software tends to advance very rapidly, so these limitations will likely be overcome before long. Did we mention that it's free?



Section 11: Telephones, Teleconferencing, and Voice over IP (VoIP)

Other than email, there is no tool in an activist's technological arsenal as invaluable as the telephone. Much like the growth of the internet, the advent of mobile phones on a massive scale in recent years has created countless new opportunities for activists. Recently, the Institute for Politics and Democracy on the Internet released a report on the emerging uses of mobile technology in politics: <http://www.ipdi.org/politicstogo/publication.htm>. For a more theoretical overview of the implications of mobile technology for social movements, see *Smart Mobs: The Next Social Revolution* by Howard Rheingold: www.amazon.com/gp/product/0738208612/ref=sr_11_1/104-5804807-3101502?ie=UTF8

Mobile Strategy

MobileActive (www.mobileactive.org), has developed a short strategy guide on mobile technology for activists, focused on conceptualizing and planning campaigns that utilize such technology: [www.mobileactive.org/wiki/index.php?title=MobileActive Strategy Guide to Using Mobile Phones in Civic Campaigns](http://www.mobileactive.org/wiki/index.php?title=MobileActive_Strategy_Guide_to_Using_Mobile_Phones_in_Civic_Campaigns)

Ringtones

A recently-developed activist technique has been to distribute specific (usually customized) ringtones, designed to promote a particular political message, to supporters. The normal day-to-day use of these tones in public helps disseminate the message, but activists have also used them to coordinate “ring-ins” at specific times and/or places to magnify their impact.

See these links for more information and a case study:

<http://mobileactive.org/wiki/index.php?title=Riot.tones>

[http://mobileactive.org/wiki/index.php?title=Main_Page#Case Studies: Innovative uses of mobile phones in campaigns](http://mobileactive.org/wiki/index.php?title=Main_Page#Case_Studies:_Innovative_uses_of_mobile_phones_in_campaigns)

Phone Jams

It is extremely commonplace for activists to encourage supporters to contact particular government or other officials to voice specific concerns. In some cases, however, activists attempt to magnify the effect of the calls by focusing them on a particular target, or timing them to occur within a particular period. When this occurs, there is a greater chance that the influx of calls will prove disruptive to the day-to-day operations of the targeted institution, creating a stronger impetus for the recipient to address the concerns over which they are being contacted. This type of scenario is often referred to as a *phone jam*, and should NOT be confused with the more common, less focused forms of telephone-based advocacy.

Uses of Phone Jams:

Discouraging venues from hosting particular events

Protesting a particular action, such as an institution's decision purchase Israeli bonds

Encouraging a particular action, such as the dropping of charges against an individual

Voicing concerns or opinions to specific individuals, such as officials who display unethical behavior

Best Practices for Phone Jams:

- 1) *Identify the most appropriate numbers to target.* Navigate any relevant bureaucracy to identify these before launching the coordinated phone jam. Don't waste time with individuals who aren't decision-makers.
- 2) If a local hotel is to host an objectionable event, such as a fundraiser for West Bank settlers, *the hotel itself will not be nearly as receptive to your concerns as the corporate office*, which likely had nothing to do with booking the event, but will now have to deal with the results of the poor judgment of their local employees. When contacting individual hotels, contact both the event booking department and general management.
- 3) *Corporate offices care about their bottom line.* If presented with a story that might involve a loss of business, such as a loyal customer being sufficiently offended by an action to consider withholding future business, companies are more likely to be responsive. When a customer threatens to encourage other customers to withhold business as well, the company is likely to become even more concerned.
- 4) *Keep them on the phone.* The longer the person on the other end needs to spend on the call, the greater the impact on the day-to-day operations of the institution.
- 5) If making repeated calls from the same phone, or if you otherwise prefer to remain anonymous, consider using *67 or other features that *block Caller ID*.
- 6) If calls are carefully timed so that the person answering receives multiple additional calls before the first one has been concluded, the effect can be more magnified than if the calls are received successively. *A mixed approach combining successive calls with short, intensive bursts, can be extremely effective.*
- 7) *NEVER use obscene or threatening language.* Your call is an exercise of your legal right to free speech. There is no need to engage in tactics that may jeopardize your ability to conduct such actions in the future.
- 8) *NEVER suggest that anyone else engage in such tactics, either.*
- 9) *Limit the number of targets to no more than three to five key telephone numbers.* Once the key numbers have been singled out, further diffusing the action over additional numbers diminishes the effect. Supporters are also more likely to respond positively to a short list of targets.

- 10) A person who answers multiple calls from the same person may recognize the voice as belonging to the same person, even if the caller claims to be someone else. *Take turns* with other activists. Consider using alternate voices/accents, but *only* if they are convincing (test them on friends first).
- 11) Brainstorm different stories to present. *Don't use the same approach over and over.* The impact will be greater if a targeted institution believes that different types of customers are upset over an action for different, yet related, reasons.
- 12) Although it might have all of the same effects as speaking to a live person, *leaving a voicemail can still be quite effective*, particularly as messages begin to accumulate.
- 13) Phone jams can be combined with email, fax, and other campaigns to maximize effects.
- 14) One common technique for uncovering specific numbers is to call the target office's main number after business hours and access the voicemail directory, which typically contains lists of employee names (as well as, in many cases, the mobile phone numbers of various employees left on their voicemail greetings).

Phone Trees

Although not as common a phenomenon as it was prior to the widespread growth of the internet, many activist groups still use “phone trees” to quickly distribute messages through the organization. The principle behind a phone tree is that each member of an organization is assigned two or more other members whom they are to call in the event a message needs to be communicated, rapidly spreading the message through a branching structure. The popularity of mobile phones, coupled with the fact that most people do not constantly check their email, has prevented email from completely replacing this technique.

SMS Messaging

One of the most important features of mobile phones, from an activist standpoint, is SMS (Short Message Service), commonly known as TXT messaging. This feature allows short messages to be sent to and from compatible phones. Among many other uses, SMS has been utilized to distribute action alerts, collect petition signatures, and keep protestors apprised of police movements and other real-time developments at large demonstrations.

SMS is also compatible with email, as well as many instant messaging systems, expanding the range of devices and applications that can exchange messages with mobile phones, and with it, the potential of SMS as an activist tool. Typically, the process by which a mobile phone user would send a message *to* such devices and applications differs substantially from the process by which messages are sent *from* them. This can also vary substantially from phone to phone.

Alternate Means of Sending SMS Messages

- Through *instant messaging clients* such as GAIM and iChat (check your chat client's documentation)
- Through *plug-ins* for popular applications. Examples include:
 - SMSMac (*Apple Dashboard and Yahoo! Widgets plug-in*) (www.smsmac.com)
 - Plug-ins for Microsoft Outlook, such as those listed at www.slipstick.com/addins/pager.htm
 - Linux applications such as those listed at http://tuxmobil.org/phones_linux_sms.html
- Through *web forms* hosted by the wireless providers themselves, such as:
 - Verizon: http://www.vtext.com/customer_site/jsp/messaging_lo.jsp
 - Sprint: <http://messaging.sprintpcs.com/textmessaging/compose>
 - Cingular: <http://www.cingular.com/sendamessage>
 - Tmobile: https://wmg.tmobile.net/customer_site/jsp/messaging_lo.jsp
- Through *email*, by addressing messages in a particular format. Examples include:
 - AT&T: number@mobile.att.net
 - Verizon: number@vtext.com
 - Nextel: number@page.nextel.com
 - T-Mobile: number@tmomail.com
 - Sprint: number@messaging.sprintpcs.com
 - Cingular: number@mobile.mycingular.com
 - Virgin Mobile: number@vmobl.com

More complete lists can be found at www.notepage.net/smtp.htm

SMS Messaging Tips

- Be prepared to use multiple means of sending messages. Different means may be suited to different situations and applications.
- Messages should always be short and direct.
- For large campaigns, encourage message forwarding in any way possible.
- Establish an opt-in/opt-out process for your message list. Don't send unsolicited messages.
- Limit messages to no more than 150 characters, the maximum supported by some phones.
- If more information must be conveyed, it can be split into multiple messages – but keep the number to the absolute minimum necessary.
- Avoid “modern” shorthand; i.e., using “u” instead of “you”, etc. Use only standard abbreviations that would be equally familiar to those new to SMS messaging.

TxtMob (www.txtmob.org)

The 2004 protests against the Republican National Convention in New York City were unique in many ways. One of the most interesting was that the weeklong series of protests marked the first widespread use of a tool called TxtMob, which had been released only two days before the preceding protests against the Democratic National Convention in Boston one month prior, where the tool was utilized on a far more limited scale.

TxtMob allows a group of mobile phone users to subscribe to the SMS equivalent of an email mailing list. Within these lists, a single message can be sent from a phone and be automatically distributed to the entire list. Like a mailing list, TxtMob groups can be moderated, allowing only the moderator to distribute messages to the entire group, or unmoderated, allowing any users to distribute messages.

The tool was used to keep protestors, and even networks of independent journalists, apprised of real-time developments on the ground, including police and protestor movements, arrests, and spontaneous actions. The use of TxtMob is widely believed to have contributed to the effectiveness with which the protests were coordinated and executed, which at times involved dozens of simultaneous actions around the city.

Because of the similarity to mailing lists/listservs, moderators of TxtMob lists should consult the “*Mailing Lists (AKA Listservs)*” section of this module, as many of the security tips and other suggestions will also be applicable to TxtMob.

Additional Resources on SMS Messaging

MobileActive, mentioned earlier in this section, has developed a helpful guide to SMS for activists, found at http://mobileactive.org/wiki/index.php?title=Guttertech_Guide_to_SMS

They also offer a more technical guide to sending bulk messages, available at http://mobileactive.org/wiki/index.php?title=Bulk_SMS_--_a_Primer

Teleconferencing

Frequently, activists need to hold meetings at times when not all participants can be physically present in the same location. In these situations, there are a number of technological solutions, including instant messaging/internet chat, videoconferencing, and teleconferencing. The chief advantage of the latter two is that they are most similar to face-to-face meetings. As a result, it's usually a quicker and easier process to facilitate a meeting using one of these technologies. Their main disadvantage is that they frequently cost money.

Beyond meetings, these types of technologies can also be used to facilitate question and answer sessions and other types of speaking events, all without any participant or attendee needing to occupy a particular physical space. It's often cheaper and easier to invite a speaker onto a conference call than to arrange an in-person event. A number of activist organizations have made use of teleconferencing in this way.

Although some telephones and service providers support teleconferencing, most do not. Typically, conference calls are accomplished by participants dialing a particular number to access a teleconferencing service, which in turn connects the callers to one another. Such services include:

FreeConference.com

This service offers free scheduled and unscheduled conference calls (scheduled calls offer more features), as well as paid services with even more features. Calls logs that indicate when each participant entered or exited a call are available for free. Call recording is available on the paid service, which also includes toll-free access.

Free Audio Conferencing (www.freeaudioconferencing.com)

This service offers similar options, including both free and paid calling. Call recordings, which can be made available for download, are available as a paid option.

The above services are designed for calls in which all participants are based in the United States. Other services, such as Envoy (www.bestrateconferencecall.com), AccuConference (www.accuconference.com), and InterCall (www.intercall.com) provide international calling options.

Voice over IP (VoIP)

Voice over Internet Protocol is the technology of transmitting voice conversations over the internet, or any other network (such as a Local Area Network, or LAN) that uses Internet Protocol. VoIP is typically far less expensive than traditional telephone services (Public Switched Telephone Networks, or PSTNs). Further, VoIP services frequently offer features, such as three-way calling and call forwarding, for free – while traditional telephone companies usually charge for these. VoIP can be integrated with other internet technologies such as instant messaging and videoconferencing to provide a multifaceted real-time exchange of information.

VoIP may be particularly useful to Palestine activists because it can facilitate international calls for the same price as domestic calls. This applies to teleconferencing as well: using VoIP, it's possible for activists all over the world to participate in the same conference call at an accessible price. For

activists engaged in international human rights causes, VoIP can become an indispensable communication tool.

VoIP Security

Because the majority of VoIP providers do not support encryption, VoIP calls are especially vulnerable to interception and disruption. Recently, the creator of PGP (see the “*Encryption and Data Security*” section of this module), launched a beta version of a product called Zfone (www.philzimmermann.com/EN/zfone), which can add powerful encryption to some of the VoIP systems currently lacking it. However, the most popular VoIP provider, Skype (www.skype.com), is incompatible with Zfone, claiming to implement its own encryption standard, but refusing to release any information to prove its effectiveness. Given this situation, activists concerned with security should avoid Skype and turn to other providers that are compatible with Zfone. The current, beta version of Zfone supports software VoIP clients such as X-Lite (www.xten.com), Gizmo (www.gizmo-project.com), and SJphone (www.sj-labs.com), and does not support hardware devices, such as VoIP routers, that are used to connect analog telephones to VoIP networks. This means that until a future release of Zfone adds additional capabilities, you can only make and receive calls on your computer.

VoIP Service Providers

Security is clearly not the only issue in choosing a VoIP service provider. Cost, and the availability of other features will also be major factors. Besides Skype, which is not recommended because of its unwillingness to prove the efficiency of its encryption, other major providers include Vonage, CallVantage (from AT &T), and VoiceWing (from Verizon). For a good guide to choosing a provider, see www.whichvoip.com/voip/articles/how_to_select_a_service_provider.htm.

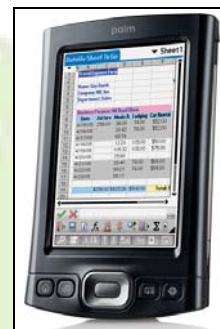
Facsimile Transmission (Fax)

Fax technology has been around for awhile, but recently, there has been an explosion of providers offering free or low-cost services that allow users to send faxes via the internet. Options and pricing plans vary dramatically, but one site (www.faxprices.com) offers an automated tool that will suggest which service best suits the needs you describe. A number of companies even offer fax services that can integrate with your web site. Many large activist organizations, such as Global Exchange (www.globalexchange.org) utilize this technology, which allows site visitors to fill out a form on the site that will automatically generate a fax to a targeted number, such as the office of a corporate CEO. Providers of this service include Data on Call (www.dataoncall.com), MyFax.com (www.myfax.com) and Venali (www.venali.com).



Section 12: Personal Digital Assistants (PDAs)

Although they have yet to strongly catch on within the activist community (largely due to the hefty price of most current units), Personal Digital Assistants (PDAs) have grown increasingly popular amongst professionals in all manner of disciplines, as well as in the general community. Although the earliest PDAs were largely limited to simple functions like contact management, today's units are essentially handheld computers, and are able to perform all of the same general functions, as well as more specialized tasks. Their most important feature is portability: PDAs provide users with access to important tools and information wherever they go, and unlike laptop computers, are small enough to fit in a pocket, and typically have a much longer battery life.



The two most popular types of PDAs on the market are defined by the operating system software used to power them. One is Palm, most of which are manufactured by Palm themselves (and all but one of which run the Palm operating system). The other is Pocket PC, which are manufactured by a number of companies, including Dell and Hewlett-Packard, and run a special version of the Windows operating system, called Windows Mobile). A third platform, Blackberry, is rapidly emerging as a major contender (specializing in email applications), but as it still lacks the abundance of third-party software available for the other two platforms, it's not a good choice for activists as of yet.

Over the past several years, devices that combine the features of a PDA with a cellular phone, known as "smart phones", have become increasingly popular. These will typically run any software designed for the particular operating system they use, as well as specialized applications designed to take advantage of the telephone capabilities. Examples of smart phones include the Palm Treo (www.palm.com) and Motorola Q (www.motorola.com).

Choosing Between Platforms:

Leaving Blackberry aside due to the relative lack of useful applications for activists, this decision ultimately comes down to individual taste. There used to be a significant price gap between Palm and Pocket PC handhelds, with Pocket PC (Windows)-based devices costing somewhat more than Palm-based units. However, the gap has been closing as of late. Palm has a reputation for being easier to use, and generally offers access to a greater variety of free and commercial software add-ons. Pocket PC units might be a better choice for people seeking a device that closely integrates with and mimics the feel of Windows. These two articles offer a bit more insight into the debate:

http://palmtops.about.com/cs/pdafacts/a/Palm_Pocket_PC.htm
www.mobiletechreview.com/tips/palm_vs_pocketpc.htm



Useful Handheld Applications for Palestine Activists:

<p><u>Travel</u></p> <p>Travel software, a particular specialty of PDA platforms, can often be highly useful for activists, who frequently travel to conferences and demonstrations. Noteworthy applications include:</p> <p>Tube 2, a Palm and Pocket PC program that provides interactive subway and train maps for major cities throughout the world: www.visualit.co.uk</p> <p>Israel In Your Palm (OS) provides maps and logistical information intended for travelers in Israel: www.jewishsoftware.com/products/Israel_In_Your_Palm_OS_864.asp</p>	<p><u>Translation</u></p> <p>A huge variety of language software, include translation dictionaries, phrasebooks, and instructing programs, are available on both major platforms. Many of the applications even “talk”, producing audio output to aid in conversations. The following web sites offer various translation programs for Arabic, Hebrew, or both:</p> <p>www.lingvosoft.com www.ectaco.com www.penreader.com www.informobility.com</p>
<p><u>Security</u></p> <p>Security is even more important on handhelds than on desktops, due to the ease with which they can be stolen. A wide variety of security applications are available for both Palm and Pocket PC, with many specialized programs for smart phones. For a list of features to look for (most of which apply whether your PDA is a smart phone or not), see item 11 under “<i>Best Practices for Telephone Security</i>” in the “<i>Telephones, Teleconferencing, and Voice over IP</i>” section of this module).</p>	<p><u>Project Management</u></p> <p>A number of project management tools, which are usually capable of sharing data with Microsoft Project and other popular desktop applications, are available on both major platforms. Examples include:</p> <p>Project@Hand 2 (Palm): www.natara.com/ProjectAtHand</p> <p>Project Professional (Pocket PC): www.grnconsulting.com/grnportable.htm</p>
<p><u>Productivity</u></p> <p>Although Pocket PC devices running Windows Mobile include programs that provide much of the same functionality, they must be added on to Palm devices. An excellent program called Documents 2 Go (www.dataviz.com), which is sometimes sold with new Palm devices, allows users to edit Word and Excel files, and view PowerPoint files. The program actually contains some advanced features that are not even available in the Pocket PC version, developed by Microsoft itself.</p>	<p><u>Miscellaneous</u></p> <p>A free program called Tamar is available on the Palm platform to convert between Hebrew and standard calendar dates: www.freewarepalm.com/clock/tamar.shtml</p> <p>Palmdinet is an Israeli law database in Hebrew and English: www.palmdinet.co.il</p>

Section 13: Sound Amplification Systems

From megaphones for rallies to a full public address system for panel discussions, sound amplification is a crucial component of many different types of programming. The range and power of an amplification device are determined by the Sound Pressure Level (SPL) it produces in comparison to the environment in which it is used. In noisier environments, you will therefore require a device with a higher SPL, which is measured in decibels (dB).

Note that an extra ten decibels will actually sound about twice as loud. To put this into context, here is a table of a few commonly-heard sounds and their average SPL levels:

Refrigerator	50 dB
Typical speech	70 dB
Loud speech	90 dB
Chain saw	110 dB
Jackhammer	120 dB
Loudspeaker rock concert	140 dB

Bullhorns



These are ubiquitous in the activist world, and are the most efficient all-in-one portable amplification devices you'll find. Bullhorns, sometimes referred to as megaphones, vary in range, weight, and price, but many of the ones you've probably encountered just aren't quite powerful enough to be effective.

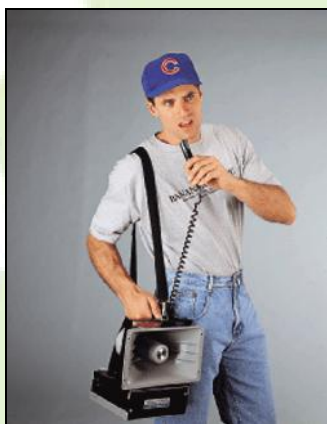
Because power handling can be described in a variety of different ways, the wattage of a megaphone isn't the best indicator of its actual effectiveness. Try to determine the maximum SPL of any bullhorn you plan to purchase. The noisier the environment in which you'll be using it, the higher SPL you'll need. Don't be surprised if you actually need to contact the merchant or manufacturer directly to ask, because few merchants advertise this aspect of a bullhorn's specifications.

Now, if you absolutely *can't* determine the maximum SPL, it's likely, though not always the case, that megaphones with higher wattage will have a higher maximum SPL. Don't bother with anything that has a maximum power handling below 15 watts; it simply won't be loud enough for your purposes. It's also advisable to choose a bullhorn with an external microphone connected by a wire, rather than a model with the microphone built-in behind the speaker. The former tend to have better sound quality, and it is easier for the audience to see the operator's face as he or she is speaking.

Finally, note that the maximum range cited by manufacturers tends to reflect the greatest distance from which the sound can still be heard at all, as opposed to the greatest distance from which speech can be easily understood. Take the maximum range cited by the manufacturer and divide it in half to get a better idea of the *effective* range. Remember that the louder the environment, the more your range will be reduced.

Although low-quality bullhorns are available widely and cheaply, you should expect to pay at *least* \$50 to \$100 for one you'll actually find useful, if purchasing it new. Retail prices for higher-quality models range up to about \$300. Used bullhorns are commonly available through web sites like eBay for half of what you'd pay for a new unit.

“Half-Mile Hailers”



This is the next step up from a bullhorn. You can't get any better than this for a rally or demonstration unless you have access to electrical outlets or a portable generator. Though still battery-powered like traditional bullhorns, these are more powerful than all but the most high-end units. They tend to have a maximum wattage of about 60, and a maximum SPL of about 110 dB. The Half-Mile Hailer is actually a specific product manufactured by a company called Amplivox (formerly known as Perma Power) (www.amplivox.com), although a few similar products are available from other manufacturers.

The amplifiers on these are considerably larger than on a traditional bullhorn, so they're typically carried with a shoulder strap or by a second individual standing next to the operator. Like megaphones with external microphones, these also have the advantage of making it easier for the audience to see the person speaking, which can make a significant difference in how engaging the audience find the speaker. They can also be mounted on tripods, or even onto cars.

They're pricey, at around \$350-\$450 for a basic model if purchased new. Additional options, like wireless microphones and additional speaker horns, are also available. Buy it used on eBay, though, and you'll probably pay closer to \$200 for a basic model. If your organization participates in a lot of rallies and demonstrations, you should strongly consider investing in one of these.

Portable Loudspeaker Systems

The next step up from a “Half-Mile Hailer” in terms of power is a portable loudspeaker system. These are pretty much the only way to go for very large demonstrations (500+ attendees) if you aim to address the entire audience at once. Although low-power models exist, you'll want at least a mid-range system, which will typically provide 75 to 500 watts of power, and a maximum SPL between 110 and 140 dB.



A loudspeaker manufacturer called Crown Audio provides the following guide on their web site, detailing the wattage required for different event applications:

- Folk music in a coffee shop with 50 seats: 25 to 250 W
- Folk music in a medium-size auditorium, club or house of worship with 150 to 250 seats: 95 to 250 W
- Folk music at a small outdoor festival (50 feet from speaker to audience): 250 W
- Pop or jazz music in a medium-size auditorium with 150 to 250 seats: 250 to 750 W
- Pop or jazz music in a 2000-seat concert hall: 400 to 1,200 W
- Rock music in a medium-size auditorium with 150 to 250 seats: At least 1,500 W
- Rock music at a small outdoor festival (50 feet from speaker to audience): At least 1,000 to 3,000 W
- Rock or heavy metal music in a stadium, arena or amphitheater (100 to 300 feet from speaker to audience): At least 4,000 to 15,000 W

This information is excerpted from the page, "How Much Amplifier Power Do I Need?" accessed on June 14th, 2006, at: http://www.crownaudio.com/amp_hm/amp_info/how_much_power.htm

Most powerful portable loudspeaker systems run exclusively on AC power, although some models exist that provide a rechargeable battery to increase portability. Generally speaking, any demonstration large enough to require this much power will have obtained some sort of permission through an official channel, which in many cases means free and ready access to an AC power source. Because it's unlikely that your organization will be holding many five hundred person rallies, your primary applications for such a unit would be speaking and cultural events, which are almost always cleared through official channels – and usually held indoors where AC power is readily available. Most better models provide multiple inputs as well as a built-in mixer for adjusting the relative volume of each channel – an absolute must for concerts, and a major plus for any speaking event, especially those featuring multiple speakers.

In most cases, activist organizations can borrow portable loudspeaker systems from other sympathetic groups in their area. In the case of concerts, many bands purchase their own equipment and bring it to their venues. Be sure you've exhausted all your options for borrowing a system before you plunk down the \$500-\$1000 required to purchase a substantially high-powered new system.

A buying guide to public address systems, much of which is applicable to portable systems such as those discussed here, can be found at:

www.musiciansfriend.com/document?doc_id=99523&g=home&s=articles&src=3SOSWXXA

Microphones

Unless you're using a bullhorn or half-mile hailer, pretty much any type of amplified speaking event you hold will require at least one microphone, often referred to simply as a "mic". These come in many varieties, but the most applicable types for activists are handheld and lavalier (lapel) mics. Many speaking events require multiple microphones, with one or two provided to the audience for questions, as well as one or more for the speaker or speakers. Although many inexpensive models are available, you can expect to pay a little bit more for decent sound quality – a significant factor in the way the audience perceives the content of the speech. It's worth investing in a few good microphones, because you'll probably be using them over and over again.

Handheld Mics



Handheld microphones are ideal for rallies and demonstrations, at which they can often even be used as props for various gestures and dramatizations. They can either be held in the hand or placed in mic stands, which are available in both full-height and tabletop models. The mics themselves may be either wired or wireless. Wired models require a cable (they are rarely sold with one) and wireless versions require a transmitter (usually included).

Try to purchase a mic that features an on/off switch. It's a valuable feature in activism-related applications, which can sometimes involve unwelcome people attempting to speak into someone else's live mic. The most popular, high-quality handheld wired microphone by far is the Shure SM58 – but if you opt for this model, be sure to purchase the version with the on/off switch – technically, an SM58S.

Lavalier (Lapel) Mics



Lapel mics are an excellent alternative to handheld models. These type of microphones are attached to the speaker's shirt or lapel, and they amplify a speaker's voice without obscuring his or her face behind a mic, making for a more engaging interaction with the audience. Like handheld mics, they come in both wired and wireless versions. Wireless versions are ideal if your speaker likes to walk around and/or gesture a lot.

Section 14: Projectors



Projectors are a key activist tool, used for such events as film screenings, presentations, and concerts. In many cases, venues secured by activists will come equipped with projectors, this is often the case with libraries and academic classrooms. It is important to always check well before the event to see if the required equipment is available and if any sort of deposit or additional paperwork is required. Projectors can frequently be borrowed from other organizations, particularly student groups. In an educational setting, many academic departments or other entities within the institution may have a projector available to lend.

If your organization conducts a large number of events at which projectors are needed, the constant need to borrow one can be cumbersome. If your budget allows for it, you can purchase a projector new or used. If you're broke but determined, you can construct your own out of spare parts:

*www.denguru.com/2004/11/13/supersize_your_tv_for_/index.html
www.tomshardware.com/2004/12/01/build_your_own_xga_projector_ii/*

If you elect to purchase a projector, you will need to consider the following:

- **Resolution and Aspect Ratio**

The sharpness and clarity of the projected image are determined by the resolution of the projector. The image is comprised of rows and rows of tiny *pixels*. The higher the resolution, the more pixels are used to form an image, and the smaller each individual pixel becomes. Resolution is typically expressed by a ratio (such as 1024 x 768): the number of pixels used horizontally across the image in proportion to the number used up and down vertically.

If you are projecting an image using a laptop or other computer as the source, you need to bear in mind that the image you see on your computer's display has its own resolution. Ideally, your projector's resolution should match the resolution used by the computer you'll be using as a source most frequently, in order to effectively recreate the image you see on the computer's display. Also, be sure that the source material itself utilizes large enough typefaces as to be clearly legible when projected onscreen.

Computers are capable of supporting a range of different resolutions, depending on their video card or chipset. The resolution to which a computer is set also depends on the size of the display used. Using a standard display (not widescreen) of 15" or 17", the setting is usually 800 x 600 (known as SVGA) or 1024 x 768 (XGA). On larger standard displays such as 19" or 21" models, the setting might be higher, such as 1280 x 1024 (SXGA) or 1600 x 1200 (UXGA).

The standard resolutions just described apply specifically to the most common *aspect ratios* for TV and computer display signals. All reflect aspect ratios of 4:3, with the exception of SXGA, which uses a ratio of 5:4. Aspect ratio is, quite simply, the proportion of the image's width to its height. Widescreen aspect ratios such as 16:9, 16:9.6, and 16:10 are used by many DVDs and widescreen display devices. Widescreen variants exist for most of the standards just described, plus some widescreen standards that do not have 4:3 equivalents. A table of all the most common standards is found on the next page. Widescreen standards are becoming more important due to the increasing popularity of widescreen laptop displays.

It is still possible to display widescreen images on standard displays and vice-versa. The computer or other device will typically scale the image to fit the display while preserving the proportions (known as the *aspect ratio*). This process creates those black bars you've probably seen when watching DVDs on standard displays. They are essentially just the unused space that results from preserving the proper aspect ratio.



Here is a table of common standard and widescreen display standards:

Standard	Resolution	Widescreen Variant	Resolution
SVGA	800 x 600	n/a	n/a
XGA	1024 x 768	WXGA	1280 to 1366 x 720 to 800
SXGA	1280 x 1024	WSXGA/WSXGA+	1440 x 900
n/a	n/a	WSXGA+	1680 x 1050
UXGA	1600 x 1200	WUXGA	1900 x 1200

Different applications require different resolutions in order to reproduce a clear image. While the typical PowerPoint-style presentation may only require a lower resolution such as SVGA, it is likely that your presentations will feature more photographs and small text, making a resolution of at least XGA desirable. Excel spreadsheets and other documents containing small text require a minimum of XGA. DVDs will also look good in SXGA, but contain enough detail to take advantage of higher resolutions as well.

The resolution of a projector is expressed as the “native resolution”. Many projectors are actually capable of using more than one resolution standard with the aid of *scaling* technology. Native resolution is whatever standard is supported by the projector *without* the use of scaling. This is important because scaling degrades the quality of an image. When a lower-resolution image source (let's say SVGA), is scaled up to the native resolution of a projector (let's say XGA), there is little, if any, actual increase in image clarity. Even when a higher resolution image (let's say SXGA) is scaled down to a lower native resolution (let's say XGA again), the resulting XGA image is not quite as clear as an image that was *originally* in XGA. This is because scaling usually involves some loss of image quality. Some projectors are much better at scaling than others. If you will be consistently using more than one image source of varying resolution, it's worth trying to find a projector known to have good scaling features. This information can be found in detailed product reviews found by searching the web.

- **Brightness**

In general, you want *the brightest projector you can afford*, but that there are some types of applications in which it's not quite as vital. There are a number of factors influencing how bright your projector will need to be:

- **Screen Availability**

Walls (even white ones) are poor reflectors of light, and thus your projector will need to be brighter if you don't have access to a screen.

- **Room Lighting**

If the room can be made completely dark, the image will not need to be as bright.

- **Room/Audience Size**

The larger the room and audience, the larger the image will need to be displayed. Because images become dimmer with increased size (as the same amount of light is spread over a larger area), larger rooms/audiences require brighter projectors.

- **Content**

If you frequently hold presentations that include a lot of detail or small text, the improved contrast of a brighter image will help your audience to see it more clearly. Brighter projectors also improve the appearance of films.

A projector's brightness is measured in ANSI (American National Standards Institute) lumens. Here is a breakdown of common brightness ranges:

- **Less than 1000 lumens**

These are the dimmest and least expensive projectors. They require a dark or very dimly lit room to prevent projected images from being washed out by ambient light.

- **1000 to 2000 lumens**

These projectors are brighter and more expensive, and reflect the mid-range of portable products. With these projectors, it is recommended to reduce room lighting for the best results, but it's not an absolute must as with the dimmer models.

- **2000 to 3000 lumens**

This is the high-end range of portable projectors, and suitable for large conference rooms and classrooms. They are bright enough to illuminate large screens with minimal loss of image quality, and a greater amount of ambient room light can be tolerated.

- **3000 lumens and up**










These ultra-bright projectors comprise a broad range, from 3000 lumens to over 12000. Products in this range are heavier and not as portable. They are suitable for large venues such as churches and auditoriums. If your organization holds a large event such as a concert or banquet, it may be worth renting one of these even if you already have access to a dimmer model.

- **Weight**

The brighter the projector, the heavier it tends to be. The dimmest projectors usually weigh less than five pounds. Mid-range models tend to weigh about ten to fifteen pounds. Ultra-bright commercial models can weigh over 1000.

- **Connections**

The following table outlines the most common types of ports you'll find on a digital projector:

	Type of port:	Description:	In Practice:
	Svideo In	Accepts higher quality video signal from most newer sources.	The most important port to have: compatible with the broadest range of devices
	RGB In	Connects to computer's primary video output	Vital if a computer source does not have alternate video output such as Svideo.
	RGB Out	Connects an additional display to projector	Allows video from your computer can be seen on the projector and on a monitor at the same time if not supported by your computer
	Composite In	Accepts video signal from both older VCRs and other sources	Useful for displaying video from older VCRs, camcorders, and even computers
	Component Video In	Set of three ports that accept highest quality signal from some newer sources	Many newer DVD players offer component video out. If yours does, you'll get the best image quality with this type of connection.
	RCA Audio In	Set of two ports that accept audio from your source	May require an adapter depending on your source.
	RCA Audio Out	Set of two ports that send audio to other devices	Allows audio to be played through an external sound system. Not needed unless audio can't be sent directly from your original source.
	1/8" Stereo Audio In	Single port that accepts audio from your source	May require an adapter depending on your source. 1/8" stereo outputs are most common on computers and portable devices
	1/8" Stereo Audio Out	Single port that sends audio to other devices	Allows audio to be played through an external sound system. Not needed unless audio can't be sent directly from your original source.

Guerilla Film Screenings

The increased availability of LCD projectors has led activists to begin thinking outside the box in developing new ways of communicating with them. Recently, a group of activists in New York City staged several successful "guerilla film screenings" of Palestine-related materials using a "mobilized" 4000 lumen LCD projector. The Electronic Intifada's Nigel Parry authored two articles on the subject, which the EI team has kindly granted us permission to excerpt and paraphrase (in the interest of conserving space) here. The original articles can be found at:

<http://electronicintifada.net/v2/article5524.shtml> and <http://electronicintifada.net/v2/article5616.shtml>.



As described in the first article, the projector was installed in the back of a rented facing outwards. The back door of the van was left open, and an improvised projection screen installed about one foot in from the door, using two expandable curtain rods with a sheet stretched between them. The projector was carefully placed in the center of the truck bed, and attached to a boat battery, which held approximately three hours worth of charge.

The video, fed from a laptop, was projected onto the rear of the sheet, using a *reverse image* function so that the image would appear normally when viewed from the opposite side of the screen. The projector's *keystone correction* feature was used to offset distortion that would have been caused by the projection angle (for more information on keystone correction, see this link:

www.projectorpeople.com/tutorials/keystone-correction.asp).



One activist remained in the back of the truck to operate the laptop and projector. A small gap was maintained between the bottom of the screen of the truck floor, both for ventilation purposes and to facilitate easier communication between the activists inside and outside of the vehicle. The visibility of the projected image was, predictably, much better at night than during the day. The amount of ambient light, and the type and thickness of the material used for the screen are clearly major factors as well. For best results, activists seeking to replicate this should utilize the most powerful projector they can find.

Parry's article credits the Graffiti Research Lab for providing "equipment and guidance". Their web site is found at <http://graffitiresearchlab.com>.

Section 15: Other Equipment

Power

Now you've got all this great equipment, but how are you going to power it? Much of it will probably run on batteries. Much of it won't – and you won't always have access to live outlets. And even when you do, you'll need to be prepared with all the necessary cables and adaptors.

Batteries



It's a good idea to maintain a full set of batteries as a part of an audiovisual accessories kit that you have on hand at all relevant events. You should have about eight each of 9-Volt, AAA, AA, C, and D batteries. 9-Volt and AAA's will mostly be used in remote controls (the TV you are using may require a remote for selecting an alternate video source through the remote). AA's will also be used in remotes, as well as walkmans, portable DVD players, and some bullhorns. C and D batteries are used by larger items which tend to run on AC power, such as boom boxes and more powerful bullhorns. You may want to consider rechargeable batteries both for reasons of cost and environmental protection.

Generators

Generators are essential for those times when your equipment needs AC power in order to run, but you don't have access to any working outlets. Examples of such situations include unpermitted rallies, and actions being held at remote locations. However, because a generator will cost hundreds of dollars and will probably not be needed very often, you should consider rental rather than purchase. They are available at most equipment rental outlets. Generators are gasoline-powered, and can power a variable number of outlets (built into the unit) for a finite period of time before needing to be refueled. Most will last for at least a few hours. Some units are quieter than others, but regardless, you'll want to position your generator as far away from any live microphones (and speakers) as is practical, to avoid drowning out your audio signal.



Extension cords



When using a generator, it's important to have a long, heavy-duty, outdoor extension cord on hand to keep the unit far away from any sound equipment. Make sure the one you purchase is heavy-duty (rated 15 AMP), and at least fifty feet long. Don't use an indoor model outside; the outdoor versions are specially designed and insulated for outdoor use. You may also wish to have additional, indoor or outdoor light or medium-duty (rated 13 AMP) cords, probably shorter in length, for general use as a part of your audiovisual accessories kit. When using extension cords, always secure them to the ground or wall using duct tape, to reduce the chances of anyone tripping over them.

Adapters

Along with common grounded-to-ungrounded (three-prong to two-prong) power adapters, it's a good idea to have one or two sets of international adapters of the type that adapt plugs from overseas to fit US outlets (NOT the other way around). They're also available in all-in-one models such as the one pictured here. These can be invaluable if you're hosting an international speaker who brings incompatible equipment and has forgotten their own adapter(s), and thus should also be a part of your audiovisual accessories kit.



Although some devices that are designed for portability, such as laptops, include built-in transformers to convert between the 110, 220, and 240 volt standards used around the world, other devices (which can be easily spotted, as they don't include physical switch to adjust the setting) will require the use of an external voltage converter in addition to an adaptor. [Learn more about voltage converters here: www.voltageconverters.com](http://www.voltageconverters.com).

Section 16: Hacktivism and Electronic Civil Disobedience

The advent of the Internet has helped to facilitate a number of modern adaptations of long-established activist concepts such as civil disobedience and direct action. Electronic civil disobedience is nothing less than an updated manifestation of the same type of nonviolent, yet disruptive protest techniques popularized by Henry David Thoreau. Hacktivism is the electronic equivalent of direct action. It uses hacking and related methodologies to achieve certain political goals, directly affecting the targeted actor, thus interfering with that actor's ability to perform a particular action or set of actions. Many people consider hacktivism to be a form of electronic civil disobedience. However, it is generally understood as involving the use of more direct and overt techniques, than those employed in electronic civil disobedience - techniques that are more likely to be illegal than those employed in other forms of electronic civil disobedience.

The information in this section is presented for educational purposes only. Palestine activists are frequently the targets of many of the tactics described within this text, so understanding these tactics is key to successfully defending oneself against them. The Palestine Freedom Project encourages readers to seek further education about these tactics by reviewing the many excellent resources cited within the text. The legality of these forms of activism varies. In many cases, the legality of these tactics may depend upon the type of targets chosen, and whether or not automated tools are utilized in the process.

Perhaps the most comprehensive general resource concerning the phenomena described here is Alexandra Samuel's doctoral dissertation, "Hacktivism & the Future of Political Participation". Her work is the first study of hacktivism to combine interview-based research with primary and secondary source material. Her dissertation covers the social, technological, and political aspects of hacktivist practices. It can be accessed through the author's web site at www.alexandrasamuel.com/dissertation/pdfs/index.html.

Virtual Sit-Ins/Distributed Denial of Service (DDoS) Attacks

Perhaps the most common form of electronic civil disobedience is the virtual sit-in. In a virtual sit-in, large numbers of activists, often assisted by automated tools, attempt to simultaneously and repetitively access a particular web site. This influx of traffic can overwhelm the site's servers, causing the site to run slowly, or even to become completely disabled. This is also referred to as a Distributed Denial of Service attack (DDoS).

One of the first virtual sit-ins took place on December 21st, 1995, when an organization called the Strano Network launched an hour-long coordinated attack against the web sites of various agencies of the French government to protest the government's nuclear and social policies. Activists from all over the world participated in this virtual sit-in, which temporarily disabled several of the targeted web sites.

In 1998, the Electronic Disturbance Theater (EDT) organized a series of coordinated attacks on the web sites of Mexican President Ernesto Zedillo, United States President Bill Clinton, the Pentagon, the School of the Americas, and the stock exchanges of Mexico and Germany. These virtual sit-ins were held in solidarity with Southern Mexico's indigenous *Zapatista* movement (www.ezln.org.mx). The action was facilitated by the use of an automated tool called *FloodNet*, which was developed and distributed by EDT. FloodNet not only automated the process of reloading a targeted web page

several times per minute, but allowed users to leave customized messages on the site's error logs. For example, when a user attempted to load a non-existent file called "*human_rights*", it generated an error message reading, "*human_rights not found on this server*". It is estimated that approximately 10,000 activists participated in the action, causing over 600,000 hits per minute to be delivered to each of the targeted sites.

Several of the sites struck back at the activists. The Pentagon responded by forcing participants' browsers to download a program called "HostileApplet", which forced them to endlessly attempt to reload a file until their computers crashed. Zedillo's site, which did not respond to the original attack, responded to a later sit-in by forcing browsers to open window after window until those participants' machines crashed. Although FloodNet and similar programs were highly successful when first introduced, advances in computer security since their initial release creates the possibility that they may no longer be as effective.

A wide variety of additional tools and techniques for DDoS attacks have been developed both prior and subsequent to the Zapatista FloodNet attacks. Among the most famous are the *ClogScript*, *FloodScript*, and *WebScript* tools developed by the electrohippie collective (www.fraw.org.uk/ehippies/tools.shtml). As software and hardware developers continue to enhance the security features of their products, old tools and techniques become less reliable, and new ones are developed to take their place.

One of the most up-to-date and comprehensive starting points for individuals wishing to learn more about this form of activism is Wikipedia article on DDoS attacks: http://en.wikipedia.org/wiki/Denial-of-service_attack. Additionally, computer security sites such as www.hackinthebox.org, www.zone-h.org, www.ddosworld.com, and www.hacktivist.net offer valuable tools and information.

Site Hacking



On many occasions, activists have gained access to the administrative features of numerous web sites allowing them to alter and disable the site as they please. Typically, sites are then defaced (often with key content replaced by political messages), or visitors redirected to another site (accomplished by tampering with the Domain Name Service). A typical incident took place in July of 2006, as Israel was carrying out massive bombing campaigns in Lebanon and Gaza, over 700 major Israeli web sites were temporarily disabled and replaced by a message expressing solidarity with the Palestinian people.

In yet another type of site hack, the control of the domain itself is stolen by various means, usually involving *social engineering* to affect a transfer of registration. Such actions are most effective when targeted against smaller organizations that are not equipped to respond appropriately. Palestine activist organizations have been the targets of such attacks in the past. These types of attacks have become less common as web registrars have begun offering "domain locking" and have taken other security measures to prevent a transfer of registration (Please see the "Web Sites" section for more information).

To learn more about site hacking as a political technique, please see:

www.zone-h.org, is a computer security site containing reports and analysis of specific hacks.

Israeli-Palestinian Cyber Conflict (IPCC), is a detailed report on the use of hacktivism, particularly site hacking, in the Israeli-Palestinian conflict published by the organization *iDefense* in early 2001: www.securitymanagement.com/library/Israeli_pales0401.pdf (this link is to an abridged, version of the document; the full version is not available to the public).

A similar and more recent article about hacktivism by Markku Jokisipilä can be found at: http://www.soc.utu.fi/polhist/vaihtuvat/jokisipila_Interfada.pdf

Site Parody

Although technically not a form of electronic civil disobedience or hacktivism, site parody as an activist technique merits a brief discussion in this section. Parodies of popular web sites, often featuring closely-matched graphics and text, have been around nearly as long as the web itself. A well-known example is www.whitehouse.org.



Parody sites are not only used for humor, but as a form of activism. Activists, Jacques Servin (AKA Andy Bichlbaum) and Igor Vamos (AKA Mike Bonanno) are widely credited with popularizing the idea of parody websites as a unique tool for activists by acquiring the web address www.gatt.org in early 2000. GATT stands for General Agreement of Tariffs and Trade, the predecessor of the World Trade Organization. The site that Servin and Vamos created at this address was a parody of the official WTO web site (www.wto.org). It quickly became evident that by using the address www.gatt.org, the parody site was drawing a substantial amount of traffic from users attempting to access the *official WTO web site*. The site's creators received many emails from individuals attempting to contact the WTO, including actual international trade officials, some of whom offered speaking engagements, which Servin and Vamos eventually decided to begin accepting. The activists thus began attending official conferences in character as WTO officials, delivering satirical presentations designed to mock the WTO while exposing what they saw as its true agenda of helping to widen the global gap between rich and poor. Vamos and Servin's exploits are described on their web page, at www.theyesmen.org.

Gatt.org demonstrates the ability of parody websites to draw attention to an issue and to capitalize upon the web traffic intended for the web sites of the official organizations. Although this and related techniques may never before have been applied to Palestine solidarity activism, it is likely to take place in the future.

Web site parodists often begin by downloading entire web sites using *offline browsing* tools such as HTTrack (www.httrack.com). They then edit the individual pages of the site using various web development tools (see the "*Web Sites*" section of this module), frequently using image manipulation programs such as Adobe Photoshop (see the "*Desktop Publishing*" section of this module) to modify images. Appropriate URLs are registered (again, see "*Web Sites*"), and the parody sites are uploaded. If a parodist seeks to increase the odds of drawing traffic intended for the official site, he or she might employ various means of promoting or otherwise mentioning the parody URL around the Internet as if it *were* the official site.

Email "Bombs"

Activists routinely help to generate large amounts of email to particular individuals, such as corporate executives and other officials, by encouraging supporters to contact these people. Similar to the "phone jams" discussed in the "*Telephones, Teleconferencing, and Voice over IP (VoIP)*" section, email bombs can take this process to its logical extreme by swarming a particular email server (but more often, a particular email box) with messages until it becomes essentially unusable. The technique differs from a phone jam, however, in that its typical goal is not to impress the recipients with the volume of public opinion in support of a particular position, but simply to interfere with the target's ability to send and receive email.



Email bombs are most effective when directed against inboxes with smaller amounts of storage. Today's major web mail providers typically offer over one gigabyte of storage, making it significantly more difficult to overwhelm their inboxes. While specific inboxes are the most frequent targets, attacks are sometimes aimed at email *servers* by flooding as many inboxes as possible at a particular domain. An email server crash has the potential to affect EVERY inbox within one or more domains. Attacks generally take one of two approaches: direct or indirect. In a direct approach, the initiator sends the messages him/herself, usually with the aid of automated tools designed for mass mailing. Address spoofing, proxy servers, and other techniques are typically used to conceal the origin of the messages. An example of an indirect approach would be one in which the initiator distributes a list of targeted addresses and encourages *others* to send the messages (employing the same methods used for a direct approach).

An alternative, and increasingly common form of indirect approach is for the initiator to subscribe the target email account to massive numbers of mailing lists (see Section One of this module). Most mailing lists today utilize a two-step subscription process, requiring a confirmation email to be sent from the subscribing address following the initial request, before the address is added to the requested list. However, the confirmation requests alone can add up and help to overwhelm an account. Another possible indirect approach would be to share the targeted email address with a number of known spammers, which will cause the address to rapidly receive unsolicited emails from growing numbers of spammers as the address is shared and traded.

One additional approach, which blurs the line between direct and indirect, is the use of address spoofing (see "*Dealing with Forged Email*" in the "*Encryption and Data Security*" section of this module) to send large numbers of messages to nonexistent addresses, using the targeted email address as a "spoofed" return address. This results in the targeted inbox receiving massive numbers

of "return to sender" messages. Spoofing is accomplished by manipulating message elements, such as the *From*, *Return-Path* and *Reply-To* fields, through various means. A few common techniques are described at http://en.wikipedia.org/wiki/E-mail_spoofing.

A common technique for amassing lists of email addresses at a particular domain is to perform a web search for the targeted domain name with an "@" sign inserted in front of it: "@evilcompany.com", for example. A list of specific accounts mentioned on the web can then be compiled from the search results.

Most companies and other institutions utilize a standard format for their email addresses, such as [first initial][last name]@[domain] (which would appear, for example, as lblissett@evilcompany.com). As a result, lists of *known* accounts can often be used to derive a formula that will determine the account names of any known employees (note that not all institutions use a standard formula, and when they do, it's not always applied to employees who had email accounts before the formula was adopted). Lists of employee names can be gathered from additional web searches, or by other means. One common technique is to call the target office's main number after business hours and access the voicemail directory, which typically contains lists of employee names (as well as, in many cases, the mobile phone numbers of various employees left on their voicemail greetings). Company directories are also frequently obtained through *social engineering*: methods used by hackers and others to solicit privileged information from unsuspecting sources.

See this excellent book by famed hacker Kevin Mitnick, which describes common techniques and means of guarding against them: <http://www.amazon.com/gp/product/0471237124/104-5804807-3101502?v=glance&n=283155>

The legality of email bombing varies. The specific techniques utilized may be a major factor in determining legality or illegality of the action.

Black/Mobius Faxes



The sending of "black" or "mobius" faxes to targeted fax numbers is a technique used to rapidly deplete the toner in a fax machine. Typically, one or more sheets of black construction paper are taped end to end to form a loop through the originating machine. In some cases, if the machine on the receiving end prints on standard paper using water-based ink, the saturated paper may even disintegrate inside the machine, causing physical damage. Because the technology used to compress black areas in faxes are so efficient; a solid black fax can be sent quite quickly. In some cases, images have been used instead of solid black pages, which reduce the above-mentioned effects, but create new possibilities for the linkage of political or other messages to the faxes. Note that in the United States, there has been at least one case of individuals being convicted on a charge of "conspiracy to harass using a telecommunications device" in connection with the sending of black faxes. The case, that of the SHAC 7 (see www.shac7.com), is extremely complex, and as of this

writing, still in the appeal process – and so the legality or illegality of black faxes has not, as of yet, been concretely established.

AirPWN

AirPWN is a newly-developed program for disrupting Wi-Fi data networks. By using the AirPWN program in conjunction with a laptop equipped with not one, but *two* wireless network cards, AirPWN users can manipulate the data received by users of the network in various ways. AirPWN can be used to replace specific files or file types with other data. For example, by replacing the banner at the top of a popular web site with one created by the AirPWN user. The system can also be used to redirect requests for some or all web addresses to *alternate* addresses. A typical application might be the redirection of all users to a particular web site regardless of what they type into their web browsers.



AirPWN was originally designed with practical jokes, rather than political expression, or any serious form of disruption in mind. However, it's only a matter of time before AirPWN is applied to activism. Learn more about AirPWN at the following sites:

<http://www.informit.com/guides/content.asp?g=security&seqNum=158&rl=1>
<http://airpwn.sourceforge.net/Airpwn.html>

Megaphone

A new software tool in a category of its own, called Megaphone, was specifically developed to use within the context of the Israeli-Palestinian conflict. Megaphone was developed by the World Union of Jewish Students, to facilitate the influencing of public, web-based opinion polls in favor of Israel. Megaphone is a tool that alerts users to relevant new polls (and allows them to submit their own alerts as well). Designed to manipulate poll results to falsely inflate the appearance of support for Israeli policies, Megaphone is a perfect example of "man-bites-dog": the tool allows, just easily, advocates of peace and justice to keep abreast of new polls and register their own opinions.



Megaphone can be downloaded, free of charge, from <http://giyus.org>.

Conclusion

This document is a work in progress, and will periodically be updated. You will always be able to find the most current version on our web site at www.palestinefreedom.org.

The Palestine Freedom Project periodically offers workshops based upon the content of this module, as well as on other topics, at activist conferences around the world. Check our web site for upcoming events in your area. We also provide customized, in-person training in these and other activist skills. Email pfproject@palestinefreedom.org for details.

To learn more about how you can help us to make these handbook modules more widely available, be sure to ask us about our "handbook adoption program".

As we mentioned in the introduction, we welcome your suggestions to improve this handbook module as well as those to follow it. Send your corrections and ideas to handbook@palestinefreedom.org.



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