Low Threshold Applications (LTA) Workshop

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Open Source Definition:

Open Source is a software development movement that became more formally organized in the mid-90's, offering programs to users at no cost, and to which the development code, commonly referred to as "the source code", is fully available to anyone who wishes to view or modify it. This opens the potential for improvement/bug fix submission by individual software developers, or groups of developers, as well as paving the way for customization of a given program to better suit the specific needs of a user or group. Open Source software commonly follows the auspices of the General Public License (http://www.gnu.org/copyleft/gpl.html) which formally protects the integrity of the original application and prevents such things as commercial exploitation of a program.

Advantages:

1. The apps are free.

2. Its Open Source nature means that all software developers in the world have access to the code, and this expands the number of people available to submit bug fixes and improve features, typically resulting in faster fixes and more frequent updates.

3. Open Source applications are typically available on a wide variety of platforms-- Macintosh, Windows, various UNIX/Linux renditions, etc.

4. Because they're less common in distribution, many Open Source apps are more secure than their commercial counterparts.

General Considerations:

1. Most contemporary Open Source applications haven't been around as long as equivalent closed source, commercial programs, hence the user interfaces of Open Source apps tend to be slightly less user friendly.

2. They commonly lack many of the more advanced features of commercial products.

3. Open Source applications, by default, operate in their own formats that are not compatible with commercial programs.

4. They can be slower in operation, since the programs haven't been around as long as commercial apps, and hence haven't been optimized as well. The wide variety of platforms Open Source software is available on also means the underlying code behind the programs must be in more of a "generic" form, not optimized for the system it's running on-- Hence, slower.

Free Software Definition:

Free software refers to programs made freely (as in, at no cost) available to users, but without the original source code, and usually with more restrictive licensing guidelines. Outside developers cannot modify the program, and they usually cannot be used for commercial purposes. On occasion these programs come with certain features disabled in an effort to motivate a user to buy a commercial version of the application.

Educational Considerations:

1. Fear of use – How comfortable are you in using the applications?
2. What resources do you have to assist you in trying something new? (As stated above these applications are more specialized and can have unique interface issues. Do you have campus resources that can deal with these unique issues?)
3. Accessible – How easy are the applications to use by the instructor and students? An example would be do you need to install other programs to make the main one work? Is this easy to do? Is it worth your time?

Example Programs:

1. PDF Creator -- PDF authoring application capable of producing PDF files out of anything you can print. Ease of operation: Works just like sending items to a printer. (http://sourceforge.net/projects/pdfcreator/)
2. OpenOffice – An Open Source near clone of Microsoft Office, offering Word Processing, Spreadsheet, Presentation, and several other useful programs. (http://www.openoffice.org)

3. GIMP ("Gnu Image Manipulation Program") – An Open Source near clone of Adobe Photoshop, offering powerful image manipulation capabilities. (http://www.gimp.org)

4. Google Apps – A free file storage/collaboration/authoring suite that allows users to create such things as word processing documents, share them with other authorized users, and even simultaneously edit files. (http://www.google.com/a/)

Other Programs Of Interest:

1. Google Earth – A free global exploration program that allows the user to view the world in satellite imagery. (http://earth.google.com/)
2. Audacity - An Open Source digital audio application that allows you to create and edit audio files in varying formats, including the popular mp3 scheme. (http://sourceforge.net/projects/audacity/)
3. Stellarium - An Open Source planetarium application that displays real-time stellar object movement and identification. Allows for a multitude of configurations, including constellation display, atmosphere off/on toggle, and ground transparency. (http://www.stellarium.org/)