Images & documents
in training context

This document aims at facilitating the use of images by teachers and trainers. It answers the following questions: how to manipulate images? How to integrate them properly in documents (e.g. so that they are not stretched)? How to share images and documents containing images (so that they can be opened on any computer)? How to display them? How to select images and what kind of licensing can be used?

Finding images

The problem is never to find images, as with Internet billions of images are available everywhere. Most are free to be displayed in browser, but not free to be copied or modified. So the problem is to find images with **the right to freely use, share and modify**.

When searching for illustrations in pictures' banks, always take care about **license of the picture** (e.g. *Free for non-commercial use, Creative Commons NC-BY-SA, etc.*).

Wikimedia Commons, the Wikipedia media bank (*http://commons.wikimedia.org/*) is a good starting point to find free images. But **free does not mean you don't have duties**: most images requires that you quote the author of the picture and share it under the same license. Example for an image on *Wikimedia Commons*:

Licensing your work

If you benefit from free resources that you found on Internet, maybe you would like to **share your work in the same philosophy**. There are many solutions to share your work under licenses that **preserve your author's rights**. You can look at *Creative Commons* and *GNU Free Documentation License*. This document, for example, is licensed under the **CC BY-SA license**. Look at the end to learn about this license.

Resizing pictures

Pictures weight depend of their size (called « definition »). Images are like an array of pixels, the total number of pixels is $width \times heigh$. If you send by email images or documents containing images (like PPT), the delay to sent it may be very long if embedded images are big.

When images and documents are intended to be displayed on computer screens, **a max size of 1280 $\times$ 1280 pixels is commonly enough**. You can resize images with Paint (Win) or Preview (Mac) or Gimp/Krita (Linux/Win/Mac), but many software can do it. Or see below for PDF conversion.

To print images on paper, **the bigger is the size the best is the final quality**, but the file size can be problematic if you need to send or copy it. In this case, share it on USB Flash key.
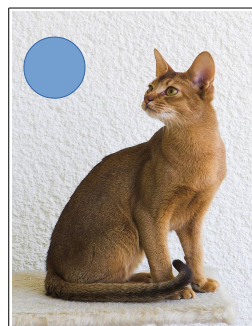
Vectorial images are not concerned by these considerations.
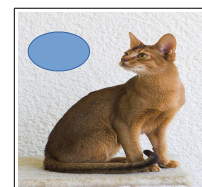
Layout scale

In presentation tools (like Word, Publisher, OpenOffice, etc.) you can rescale images and graphic elements without changing their definition. Only the display size is adapted. The physical size remains.

When you stretch a picture be careful to **preserve its proportions**... Most software preserve proportions by default and some other not. Generally you have to **hit the Shift key** (⇧) to change this behavior (lock/unlock proportions).

Strange size...

Reel size

If you embed a picture in a file, take care of the final file size (see above).

Sharing documents

When sharing documents, native software formats (Word.doc, OpenOffice.odt, etc.) are not always handy for people receiving it. They have to have the same software to open it. Sometime old versions can make problems. Conversion between software families (e.g. Word ↔ OpenOffice) are randomness.

The best solution is to **export your documents in PDF format** (a printer-like format, so that your document is like printed electronically). Look at your software documentation (or search on Internet with keywords like *"export pdf libreoffice"*) to learn how to produce PDF file in your case. OpenOffice/LibreOffice have a PDF icon to make a PDF version of the current document in one click.

Most of image weight problems and format problems are solved by converting your document in PDF. Some PDF converters give options to manage image definition (DPI, *dot-per-inch*). 150 DPI is enough for screen usage, 300 DPI for printing.

Documents above 4 megabytes (all together) should not be sent by email. Email software and webmail generally display the sum size of attached files.

Project documents in classroom with a beamer

To project documents in class there are different solutions apart from PowerPoint PPT. For example, PDF files can be displayed in fullscreen mode (*see menu* View → Full screen mode). Preview software in Mac OS X has a slideshow feature.

To present a set of pictures, you can include it in a document and produce a PDF for the slideshow. You increase the chances to have to have the right tool on the target computer to manage your file!