

Cam's Unix Notes, 3 — **Structuring your directories** so that they're lucid to others (with an emphasis on manuscripts)

In order to make your workplace lucid to others – which is important when working on anything collaborative, including authoring manuscripts – it is of utmost importance to have your workplace laid out according to *some system, some logical structuring* of your directories. (Recall 'directory' in Unix == 'folder' in Windows; same thing.) The need for an orderly and clear structure usually implies a hierarchy of directories/subdirectories (tree-like structure), rooted at some top-level dir as described below.

NB: The following advice is specific to the Mura Lab (Columbus Lab – Use whatever Linda recommends). Here are some guidelines for setting-up your directory workspace if you're working on... :

A manuscript

Say you're working on a manuscript on your Linux box or Windows PC in some directory location, for example `cmura@struc3:/u1/cmura/my/great/manuscript/`. Call this the '*top-level dir*' – that is, this is the highest level^[1] directory for the project, and all the files relevant to this writing project are located in this directory or its subdirs. So, for the following examples, 'TopDir' = `/u1/cmura/my/great/manuscript/`. The following is a list of the typical subdirs that I've found helpful to include in this top-level dir, at least for writing manuscripts:

- TopDir/ — The top-level directory itself. This is usually where I start-out storing manuscript drafts. Needless to say, it's important to keep this area relatively clean; too much clutter in the top-level dir leads to disorganization, and using subdirs like some of the ones described below can help to clean-up things.
- TopDir/**figures**/ — This is perhaps the single **most important** subdir. This is where your figures are created and/or stored. If there are many (>10 or 20) files in this dir, then it makes sense to begin creating subdirs here too – for instance, 'fig_1_seq_alignment/', 'fig_2_diffraction_imgs/'. Tables can go in here too, if there's only a couple; if there are many tables, then consider making a separate TopDir/tables/ subdir.
- TopDir/**references**/ (or references_EndNote/ or something like that) — This is where your references are stored. By 'references' I mean the EndNote files and folders, not the PDFs of the articles themselves (...unless a particular article is hard to come by, in which case it's good to keep local copies of the PDFs!)
- TopDir/**supp_mat**/ — For preparing and storing supplementary materials, including supplementary figures, tables, and so on.
- TopDir/**data**/ — Not always the case, but sometimes useful to have around this directory if there are miscellaneous raw or processed data that you actively need while preparing the manuscript; again, this is optional; only use as necessary.
- TopDir/**misc**/ (or tmp/, or something like that) — For storing miscellany, without polluting and confusing the top-level dir.
- TopDir/**FINAL_TO_SUBMIT**/ — Useful near the end of the writing, immediately prior to submitting. This is a useful place to gather the final set of files for submission (there may be several hundreds in TopDir by now!).
- Finally... The **manuscript drafts** themselves ('whatever_v3cm_23jul2012.docx') can live in TopDir/. Or, if there are numerous (>10) drafts floating around, consider placing them in a subdir of their own, named something like 'drafts/' or 'working_drafts/'. See the next page for an example wherein the draft versions are all in the top-level dir (...starting to get crowded in this example).

A poster or oral presentation

The logic here is the same as above for manuscripts, with some obvious changes — For example, there is no 'TopDir/**supp_mat**' subdir because supplementary materials do not accompany talks or posters. Also, for both posters and talks there often is a subdir entitled something like 'TopDir/**data_images_etc**', which serves as a kinda combined data & figures storage area (some figures and illustrations in oral presentations are not really your own [from scratch], but rather are adaptations of images you've download from the web, etc... in this way it's very different from a manuscript). Also, for talks it can pay to have a 'TopDir/**movies**/' subdir, for storing molecular videos or other animations.

Notes:

[1] ‘highest level’ means closest to the *root directory* of the entire filesystem, which is denoted by ‘/’.

See also:

- CamsUnixNotes-1 (URIs)
- The following directory listing is an actual, recent working example:

```

STRUC3:cmura [347] cd /u1/cmura/jove_dna_rna_prot/
STRUC3:jove_dna_rna_prot [348] ls -lsart
total 9892
 4 drwxr-xr-x  2 cmura strucbio  4096 02/26/12 17:37:32 supp_materials/
 4 drwxr-xr-x  7 cmura strucbio  4096 02/27/12 16:00:15 data/
 4 drwxr-xr-x  2 cmura strucbio  4096 02/27/12 16:02:54 drafts/
 4 -rw-r--r--  1 cmura strucbio 1057 02/27/12 16:12:09 Makefile
 4 -rw-r--r--  1 cmura strucbio  188 02/27/12 18:09:40 .rsync_exclude
28 -rw-r--r--  1 cmura strucbio 26526 03/01/12 11:21:08 PattersonMura_JoVE_v2_27feb2012.docx
32 -rw-r--r--  1 cmura strucbio 29611 03/10/12 18:38:01 PattersonMura_JoVE_v3_10mar2012.docx
36 -rw-r--r--  1 cmura strucbio 33289 06/04/12 21:01:17 PattersonMura_JoVE_v4_01jun2012.docx
 4 drwxr-xr-x  3 cmura strucbio  4096 06/05/12 15:23:50 references_EndNote/
 4 drwxr-xr-x  1 cmura strucbio  4096 06/06/12 10:07:00 lit_background_etc/
44 -rw-r--r--  1 cmura strucbio 41277 06/06/12 15:20:12 PattersonMura_JoVE_v5_05jun2012.docx
48 -rw-r--r--  1 cmura strucbio 48816 06/06/12 18:01:13 PattersonMura_JoVE_v6_06jun2012.docx
56 -rw-r--r--  1 cmura strucbio 51693 06/22/12 18:06:10 PattersonMura_JoVE_v7_20jun2012.docx
1232 -rw-r--r--  1 cmura strucbio 1255936 06/22/12 20:22:18 PattersonMura_JoVE_cover-letter_v1.doc
56 -rw-r--r--  1 cmura strucbio 51940 06/22/12 20:29:55 PattersonMura_JoVE_v8_22jun2012.docx
56 -rw-r--r--  1 cmura strucbio 50686 06/23/12 10:31:07 PattersonMura_JoVE_v9jp_23jun2012.docx
1236 -rw-r--r--  1 cmura strucbio 1257984 06/27/12 09:32:51 PattersonMura_JoVE_cover-letter_v2.doc
80 -rw-r--r--  1 cmura strucbio 77637 06/29/12 13:24:40 PattersonMura_JoVE_v10cm_26jun2012.docx
80 -rw-r--r--  1 cmura strucbio 76901 06/29/12 13:33:34 PattersonMura_JoVE_v11cm_29jun2012.docx
184 -rw-r--r--  1 cmura strucbio 182451 06/29/12 13:34:06 PattersonMura_JoVE_v11cm_29jun2012.pdf
80 -rw-r--r--  1 cmura strucbio 75057 06/29/12 15:14:06 PattersonMura_JoVE_v11jp_30jun2012.docx
84 -rw-r--r--  1 cmura strucbio 77903 06/29/12 19:33:55 PattersonMura_JoVE_v12cm_29jun2012.docx
 4 drwxr-xr-x  2 cmura strucbio  4096 06/29/12 20:00:06 misc/
1236 -rw-r--r--  1 cmura strucbio 1257984 07/09/12 20:29:53 PattersonMura_JoVE_cover-letter_v3.doc
280 -rw-r--r--  1 cmura strucbio 280272 07/09/12 20:31:15 PattersonMura_JoVE_cover-letter_v3.pdf
 4 drwxr-xr-x  6 cmura strucbio  4096 07/09/12 20:50:45 figures/
84 -rw-r--r--  1 cmura strucbio 77957 07/09/12 21:20:23 PattersonMura_JoVE_v13cm_09jul2012.docx
188 -rw-r--r--  1 cmura strucbio 184754 07/09/12 21:20:36 PattersonMura_JoVE_v13cm_09jul2012.pdf
1608 -rw-r--r--  1 cmura strucbio 1639007 07/09/12 21:22:27 PattersonMura_JoVE_bundle2submit_smallfigsize_09jul2012.pdf
448 -rw-r--r--  1 cmura strucbio 450821 07/09/12 22:21:02 jove_Author_License_Agreement.pdf
968 -rw-r--r--  1 cmura strucbio 983277 07/09/12 22:47:04 PattersonMura_Author_License_Agreement SIGNED.pdf
16 -rw-r--r--  1 cmura strucbio 14685 07/09/12 22:57:48 PattersonMura_JoVE_MaterialsTable_v1_09jul2012.xlsx
 4 drwxr-xr-x  2 cmura strucbio  4096 07/09/12 22:58:07 samples_outlines_etc/
 4 -rw-r--r--  1 cmura strucbio 762 07/09/12 23:07:37 .rsync_include
 4 drwxr-xr-x  2 cmura strucbio  4096 07/11/12 09:05:03 FINAL_TO_SUBMIT/
92 -rw-r--r--  1 cmura strucbio 86021 07/11/12 10:07:47 PattersonMura_JoVE_v13cm_09jul2012_linenums.docx
196 -rw-r--r--  1 cmura strucbio 196355 07/11/12 10:09:08 PattersonMura_JoVE_v13cm_09jul2012_linenums.pdf
1380 -rw-r--r--  1 cmura strucbio 1406438 07/11/12 10:15:39 PattersonMu-
ra_JoVE_bundle2submit_smallfigsize_09jul2012_linenums.pdf
 4 drwxr-xr-x 63 cmura strucbio  4096 07/29/12 13:41:51 ../
 4 drwxr-xr-x 12 cmura strucbio  4096 07/30/12 17:50:41 ./

```