



Exercise 1: Getting started

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Logging in and preparing stuff..

- Log in on the CIP Pool with your university account
- Open a shell
- Start a remote session at ZITI with your user name:
 > `ssh -X username@susnx.ziti.uni-heidelberg.de`
 (you may have to accept the RSA fingerprint once with **yes**)

- If you start for the **first time**:
 - Create a new working subdirectory, for instance
 `mkdir cadence`
 - Copy *all* files (also the hidden `.*` files) from directory
 `/shares/designs/UMC/OA/018_1P6M/workdir_template`
 to the working subdirectory
 - The working directory now contains (mainly)
 - a start script `start.sh`
 - a configuration file `.cdsinit`
 - a file with library paths `cds.lib`



Starting Cadence

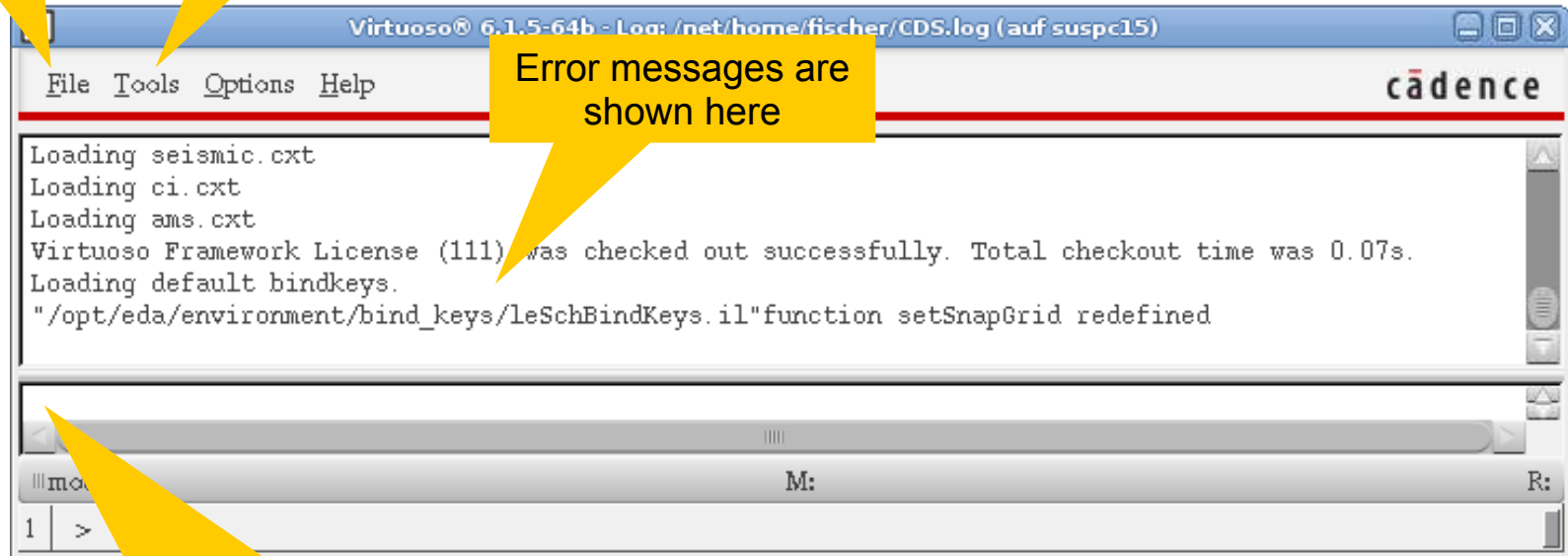
- Start cadence with

- > `./start.sh &`

The usual file menu
(with 'exit')

Start more stuff from
here

Error messages are
shown here



Can type in commands /programs here.
The language 'skill' is very close to LISP
Try (plus 3 4)
or (sqrt 10)



Opening the Library Manager

- Open the library browser under **Tools** → **Library Manager...**

Categories can be used to group cells

Libraries

Devices are here

Cells

Chose view here (layout / schematic / symbol)

Preview area

Library Browser - Create Instance

Show Categories

Library

UMC_18_CMOS
 SUSLIB_UMC018
 UMC_18_CMOS
 analogLib
 avTech
 basic
 cdsDefTechLib
 functional
 vlsi_lib

Cell

P_18_MM
 N_LV_33_MM
 N_PO7W500_18_RF
 N_PO7W500_33_RF
 N_ZERO_18_MM
 N_ZERO_33_MM
 PAD_RF
 PCAP_MM
 PNP_V50X50_MM
 PNP_V100X100_MM
 P_18_MM
 P_33_MM

View

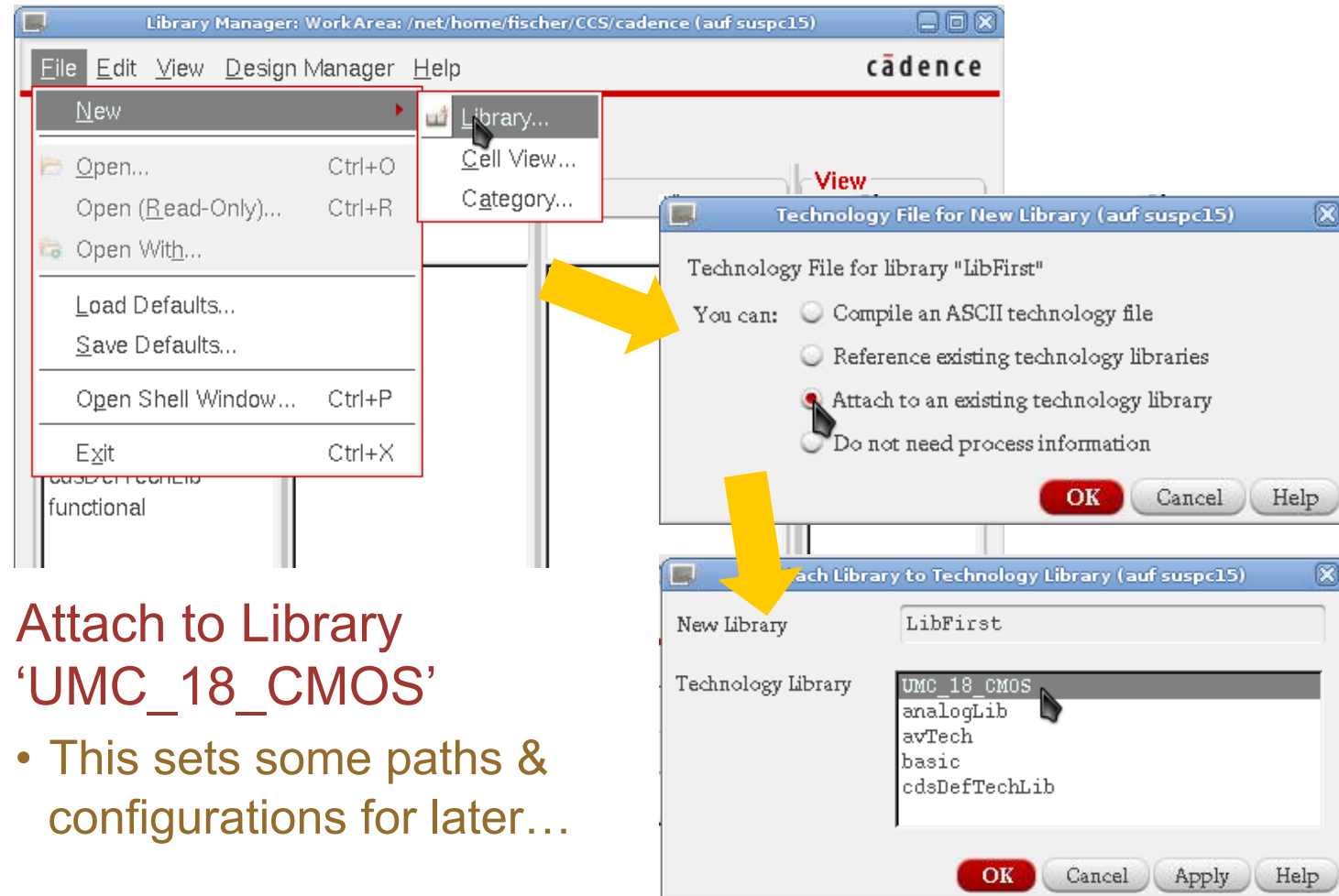
| View | Lock |
|---------|------|
| hspiceS | |
| ivpcell | |
| layout | |
| spectre | |

Close Filters... Display... Help



Creating a library

- Create an *empty* library from the Library Manager with **File → New → Library**

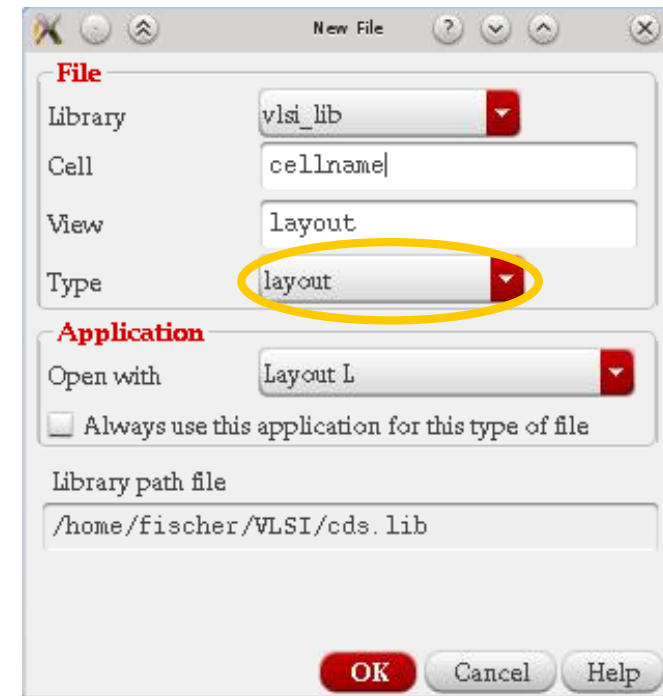


- Attach to Library 'UMC_18_CMOS'
 - This sets some paths & configurations for later...



Creating a new Cell

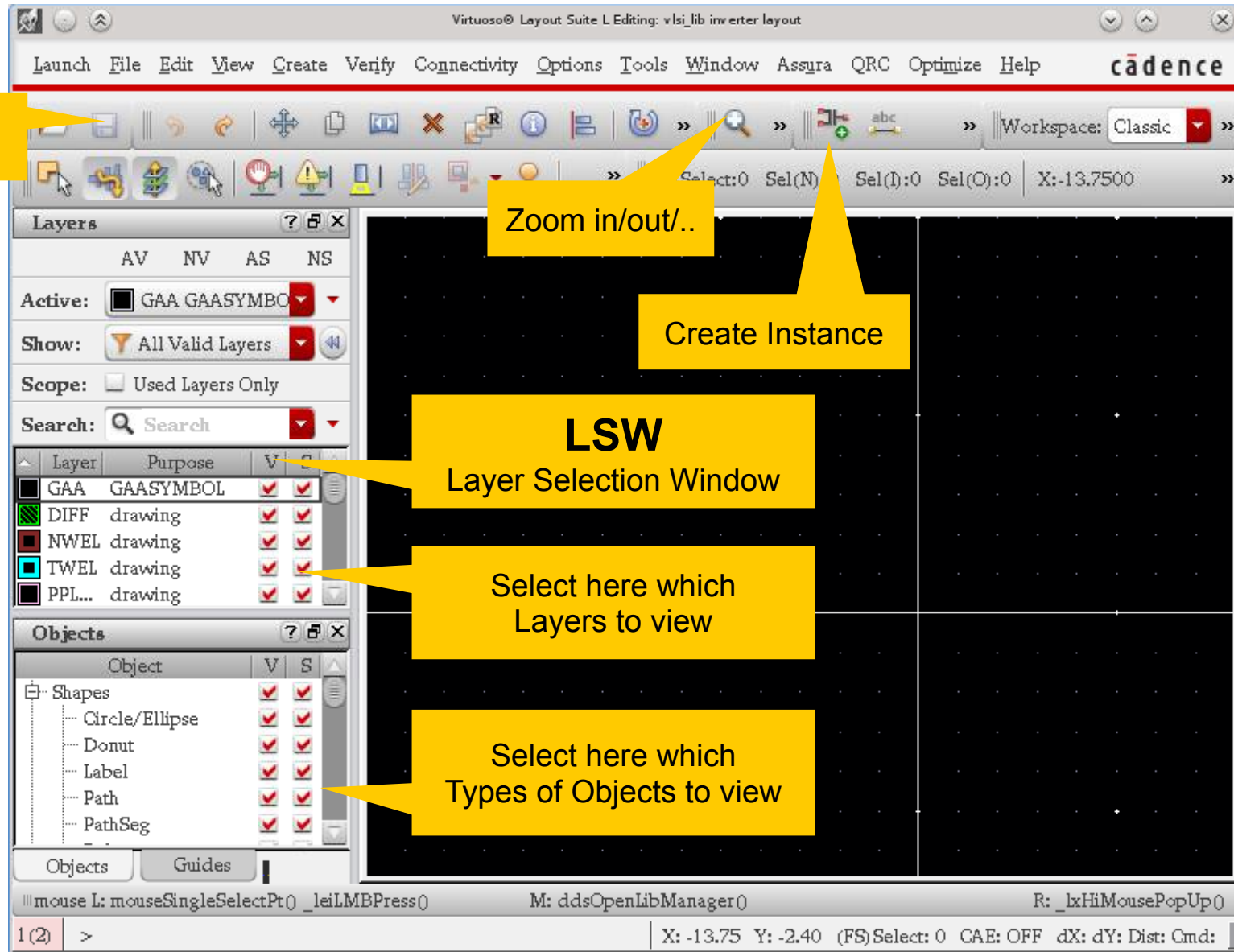
- Select your library
- Create a new layout with **File → New → Cell View...**
- Select type **'layout', 'schematic', 'symbol'** by selecting from the drop down list
- Give the cell a name
- The corresponding editor opens



- (You can create cell categories to sort your stuff with **File → New → Category**)



The (Layout) Editor Window



CHECK and save

Zoom in/out/..

Create Instance

LSW
Layer Selection Window

Select here which Layers to view

Select here which Types of Objects to view