



Office Tools

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Goal

- Standard Office Tools are very commonly used, like
 - Text Processing Word, Pages
 - Presentation Making PowerPoint, Keynote
 - Spreadsheet Excel, Numbers

- Many of us 'know' how to use them, but
 - We never *really* learned systematically (*mostly...*)
 - Knowledge is on a superficial, 'random' level
 - We may not know some *useful* tricks / commands / methods

- In this lecture, I want to show a few things that I know.
 - I am not *real* expert, but 'heavy' every day user, so I have a prejudice of what is important...
 - Please tell us *your* tricks!



Which Tools

- There are plenty of tools out there in the Windows / iOS / Linux worlds
- I cannot cover all (I do not know all)

- Most people probably (still) use Windows suite
 - Therefore I will restrict on this
 - Problem: Even here there are significantly different versions....
Sorry!

- Many concepts are similar everywhere

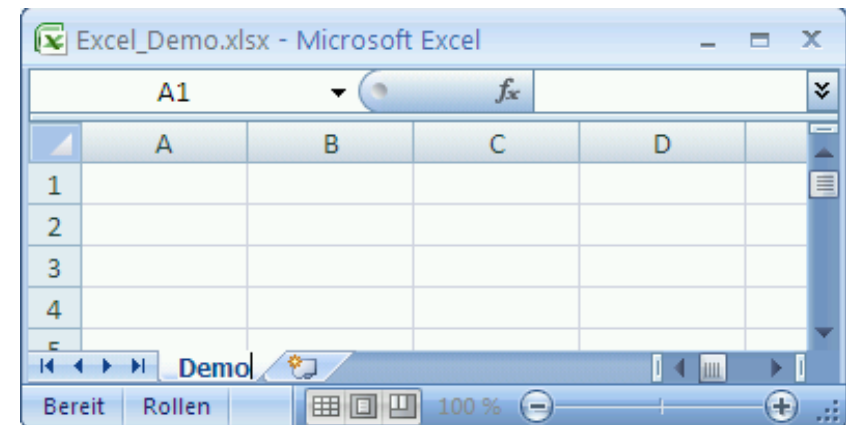
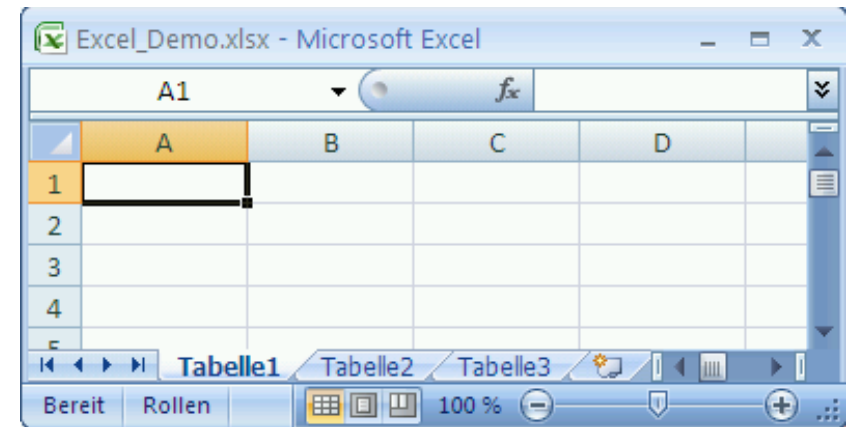


EXCEL



Excel: Misc

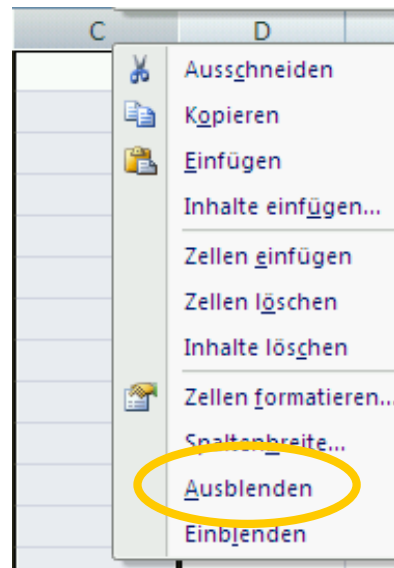
- Delete unused sheets!
 - (Right click - delete)
- Give sheets a good name!
 - Right click - rename





Excel: Viewing Things

- Make columns / rows invisible
 - Hide temporary results
 - Makes table more readable



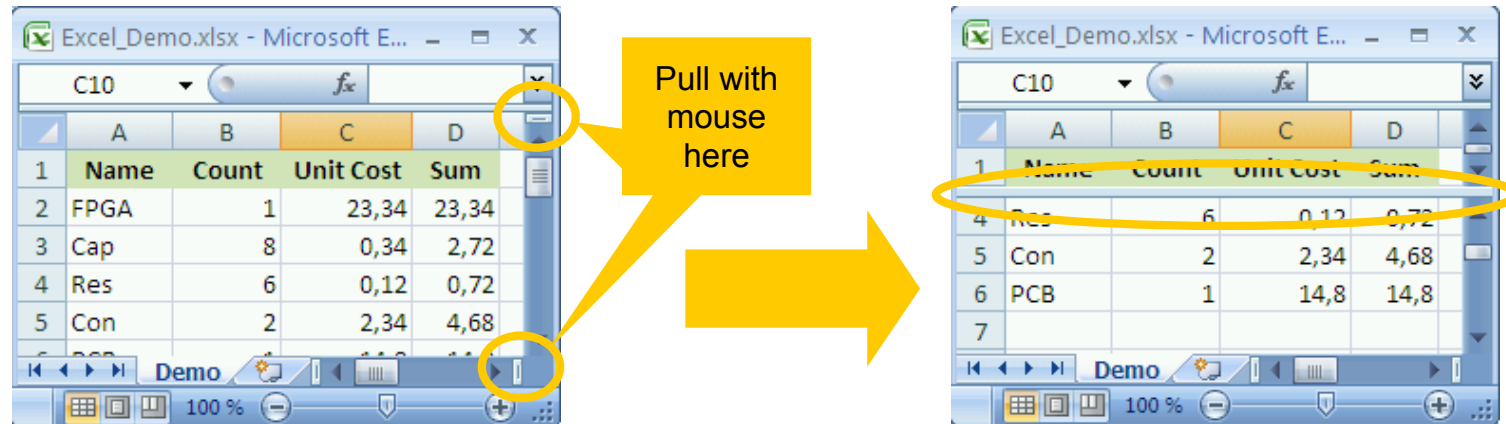
	A	B	D
1	10		
2	1		
3			
4	2		
5			
6	13		

- To show columns again:
 - Select group → Right Mouse
- Can also lock a cell in *Ansicht* → *Fenster fixieren*



Excel: Viewing Things

- Split the screen:
 - Allows to view distant parts



- To cancel, slide separation line back again
- Works in x and y:

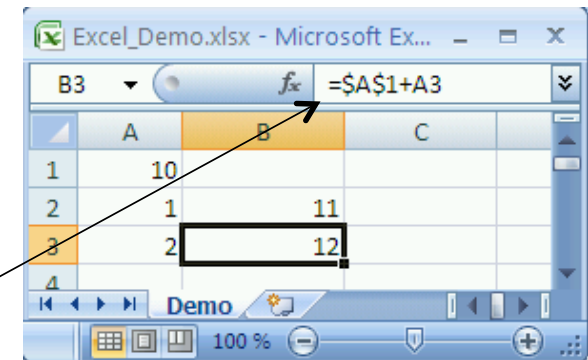
	A	B	C	D	E	F
1	Group	Name	Count	Unit Cost	Sum	
2	MainBoard	FPGA	1	23,34	23,34	
3		Cap	8	0,34	2,72	
4		Res	6	0,12	0,72	
5		Con	2	2,34	4,68	
6		PCB	1	14,8	14,8	
7	Channel					
8						
9						



Excel: Absolute & Relative Expressions

- Field references can be

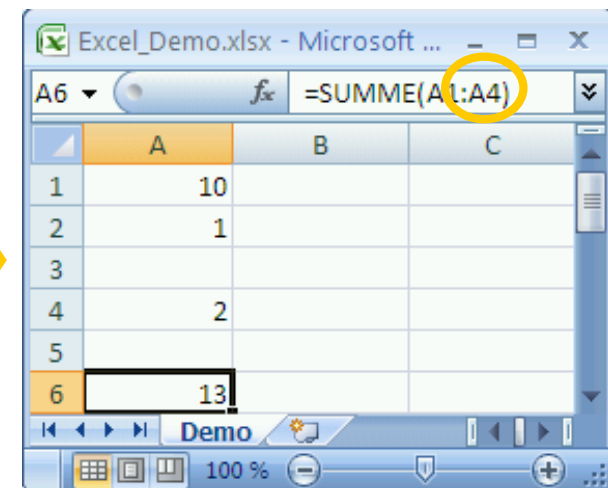
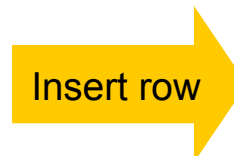
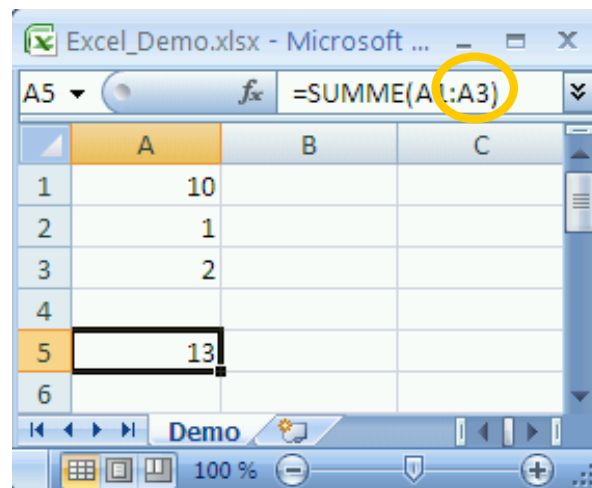
- *relative* (A3) or
- *absolute* in x (\$A3) or in y (A\$3)
- When the cursor is in the formula field, F4 toggles the various possibilities



- Difference relative / absolute mainly visible when copying

- For some functions, you can use ranges, e.g.: (A1:A3)

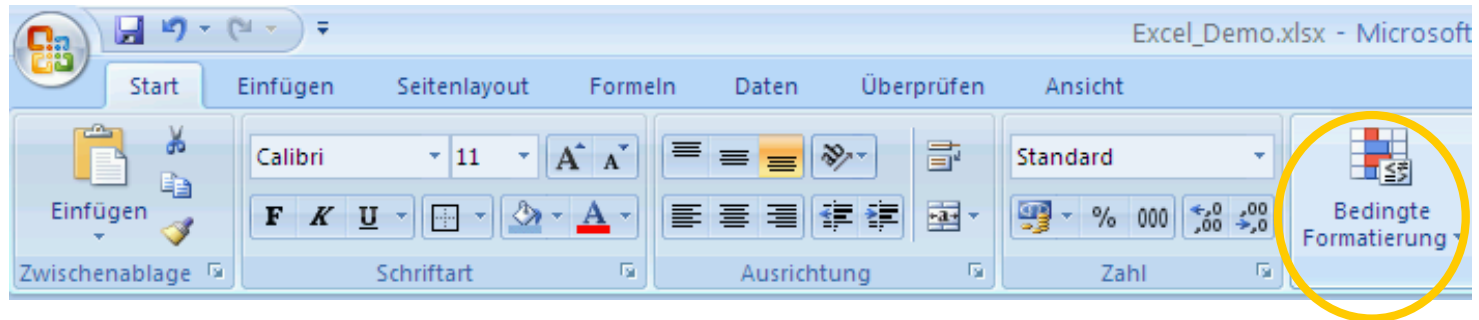
- This is better (&faster) than picking the cells, because the range is automatically extended @ insertion



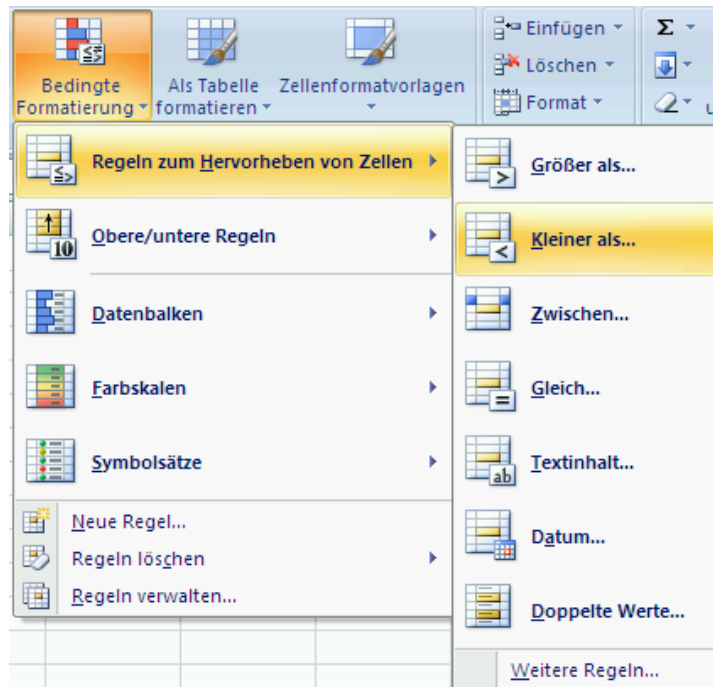


Excel: Highlight of Fields

- A nice feature is the conditional formatting of fields:



- There are many possibilities:





Windows in the CIP Pool

- Best chose 'CIP Pool Windows' session when logging on!



Excel Exercise

- Assume that some particles are absorbed in a material as a function of the penetrated 'amount' (mass) of material
- The Intensity left in depth r is then $I(r) = \text{Exp}(-\lambda r)$
 - λ is a given (constant) attenuation coefficient (cm^2 / g)
 - r is the penetrated mass (g / cm^2)
 - r can be calculated from the penetrated distance x as $r = \rho x$.
 - x is given in (cm)
 - ρ is the density of the material (in g cm^{-3})
- Therefore $I(x) = \text{Exp}(-\lambda \rho x)$

- Make a table of the attenuation of Silicon/Aluminium/Copper ($\rho = 2.32 / 2.7 / 8.96 \text{ g/cm}^3$) in variable x -steps (e.g. 0.1 cm)
- Highlight the cases where the attenuation is better than a given limit
- For a sample output, see next page:



Excel Exercise: Desired Output

- Your sheet should look similar to this:

Material Thickness for required Attenuation			
Attenuation Coefficient [cm ² /g]	1,8		
Required Attenuation [%]	99,0%		
Material	Silicon	Aluminum	Copper
Density [g/cm ³]	2,3290	2,7	8,96
Distance [cm]			
	0	1,000	1,000
	0,1	0,658	0,615
	0,2	0,432	0,378
	0,3	0,284	0,233
	0,4	0,187	0,143
	0,5	0,123	0,088
	0,6	0,081	0,054
	0,7	0,053	0,033
	0,8	0,035	0,020
	0,9	0,023	0,013
	1	0,015	0,008
	1,1	0,010	0,005
	1,2	0,007	0,003

Input field

New rows should be calculated automatically
By repeating the first step size

Input fields

All these cells should use **the same** formula!!!

You should be able to add new materials by just copying this part to the right

Material Thickness for required Attenuation			
Attenuation Coefficient [cm ² /g]	1,1		
Required Attenuation [%]	95,0%		
Material	Silicon	Aluminum	Copper
Density [g/cm ³]	2,3290	2,7	8,96
Distance [cm]			
	0	1,000	1,000
	0,2	0,599	0,552
	0,4	0,359	0,305
	0,6	0,215	0,168
	0,8	0,129	0,093
	1	0,077	0,051
	1,2	0,046	0,028
	1,4	0,028	0,016
	1,6	0,017	0,009
	1,8	0,010	0,005
	2	0,006	0,003
	2,2	0,004	0,001
	2,4	0,002	0,001

Example for modified values:



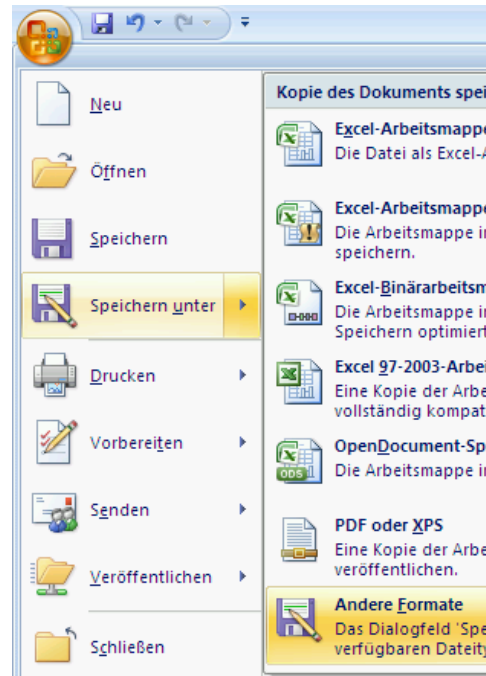
Excel: Data Export

- Data can be exported as 'comma separated values' (csv)

	A	B
1	1	2
2	3	4



1 ; 2
3 ; 4



Dateiname: Excel_Demo.csv
 Dateityp: CSV (Trennzeichen-getrennt) (*.csv)

- Exported data can be plotted in different tool



Excel: Data Import

- csv files can be read in easily
 - separator symbol can be selected in dialog
 - Position in sheet can be fixed
 - Titles ... can be taken from file
- Useful to read in computer generated data
 - Better use a good data processing / plotting tool like root, gnuplot, ...



More hints from *YOU* ?

- **Cool:**
 - Excel's .xlsx files are zipped XML files (with a folder structure)
 - Just rename the .xlsx to .zip and un-zip
 - They can then be edited by hand!
 - This also allows automatic generation of Excel content

- **View -> Freeze Panes**

- **???**

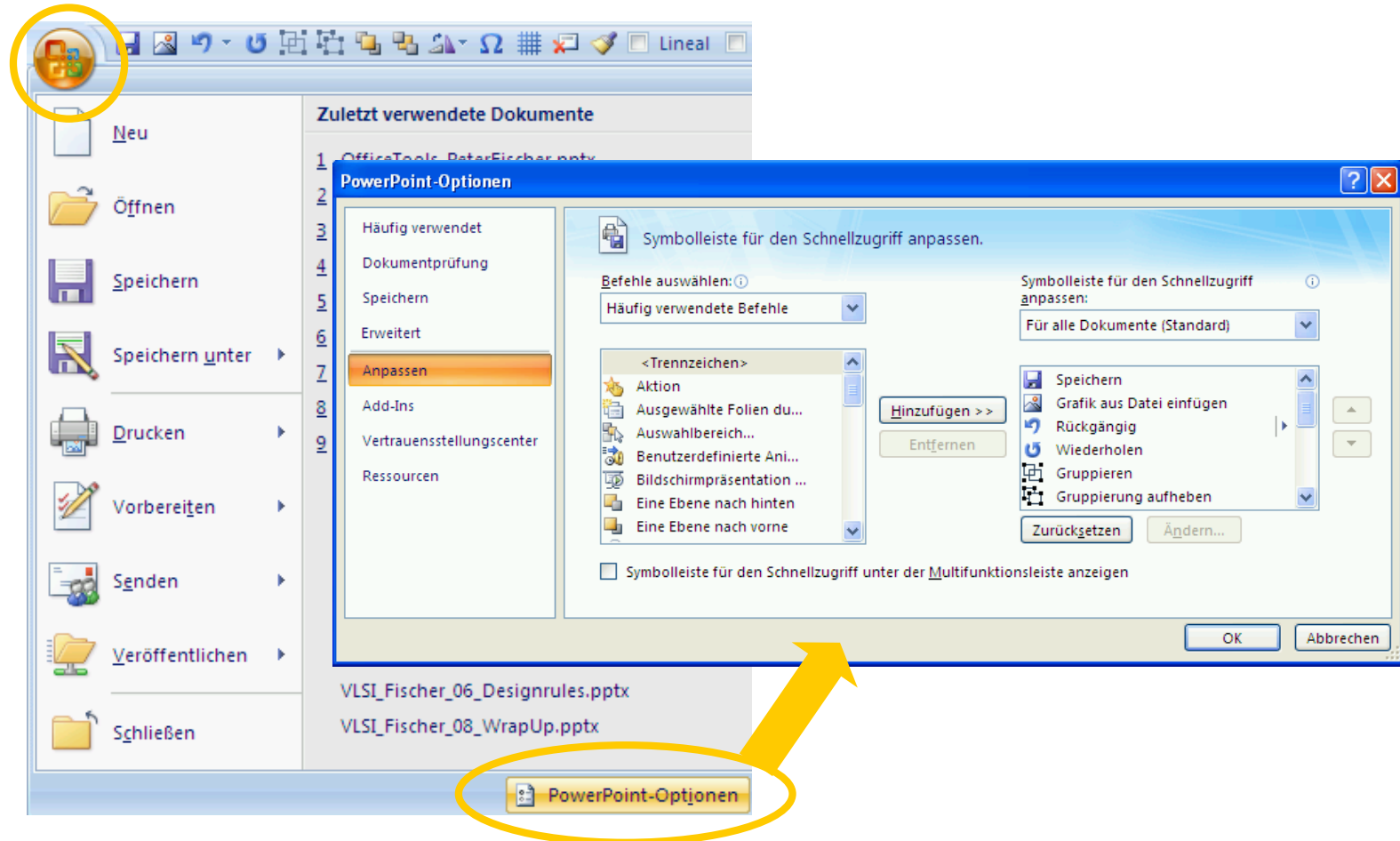


POWERPOINT



PowerPoint: Settings

- Main setting menu is hidden (in my version...)

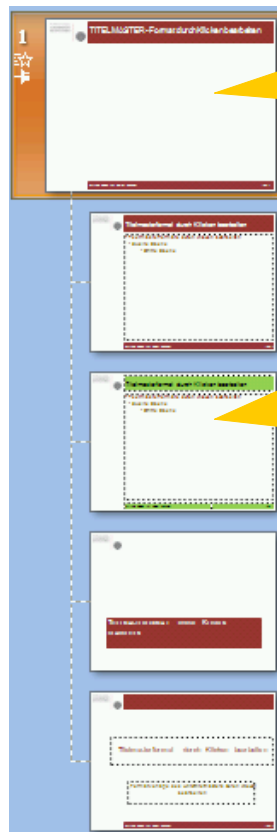
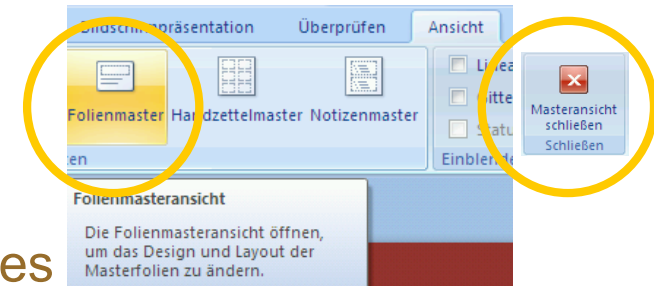


- Very useful: Add buttons for special functions to menu bar



PowerPoint: Slide Master & Layouts

- Most Important:
Use Slide Master for formatting!!!!
 - Format is identical on all slides
 - Things can be changed later on all slides



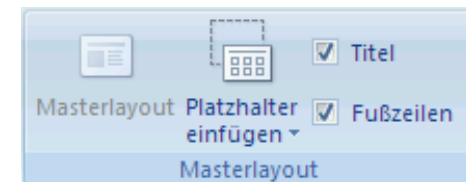
'Master':

- Things that are visible on all pages
- Title and footer template

'Layout':

- Has a name
- Can include title / footer
- Can have additional place holders

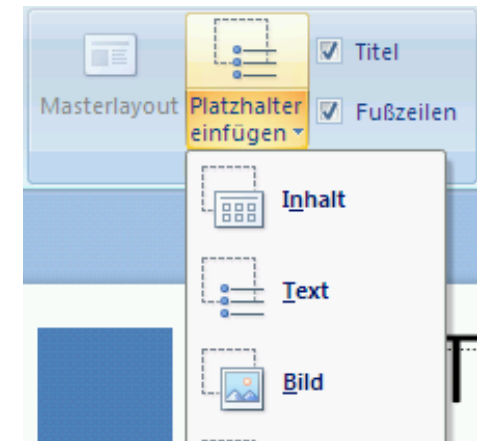
- Layouts cannot be deleted when they are used





PowerPoint: Page / Title / Footer

- There are special objects in the Master / Layout:
 - Page number
 - Date
 - Footer text – Can be set later in Insert → Footer/Header menu
 - Main text field
- Right-click on the *Master* to Add there fields!
- In the Layouts
 - Check the boxes to add Title / Footer
 - Add place holder / text
- This is big mess.
It never works as expected!
 - Must play around to find out!



Footer Text

Slide number



PowerPoint: Page / Title / Footer

- To make these visible on the real slides, must turn them on in menu Insert → Footer/Header



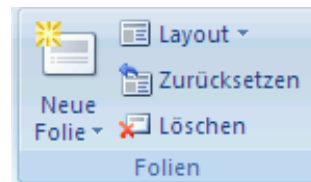
- This information often gets lost... Must repeat this step often...
- Button 'für alle übernehmen' does not work reliably...



PowerPoint: Major Master Problems



- The Master / Layout implementation is ‘special’ (buggy ?)
 - When changing the Master (title,...), the layouts are not updated. Must turn ‘title’ off and back on again
 - For the footer/ data, must delete them and check box again
 - When Layouts are changed, effect is not always visible on slides. Must ‘zurücksetzen’ the layout.



- Unfortunately, this clears all special formatting on the page (bold, slanted, indices, rulers,...)
 - This does not always help: Sometimes must delete the footer/ date/page and insert them again (see previous slide)...
- Must play around until it works out..
 - But: It's really worthwhile!



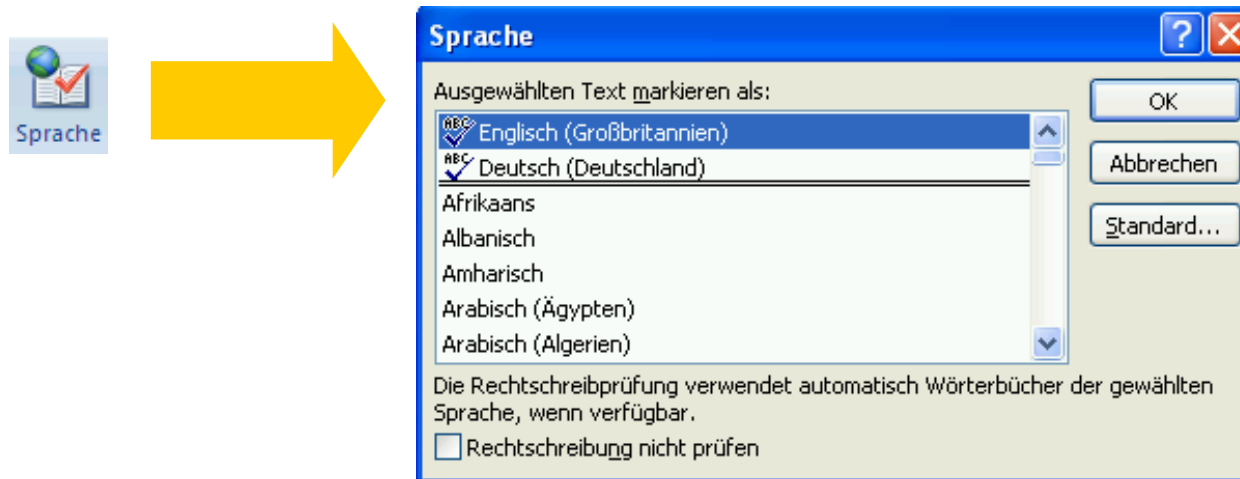
PowerPoint: Importing Slides

- When copying slides from another PowerPoint file, the Master & Layouts are imported
 - But colours etc. could be converted to another 'theme' (I did not talk about themes, I do not use them)
- You must assign one of 'your' Layouts to the new slides and possibly re-shuffle things
 - May need to change language
 - Some 'old' footers may be left over
 - May need to delete and re-activate footers
- I then always delete the 'foreign' Master & Layouts to keep the file clean.



PowerPoint: Spell Checking

- Text can be checked
- Must set the language!

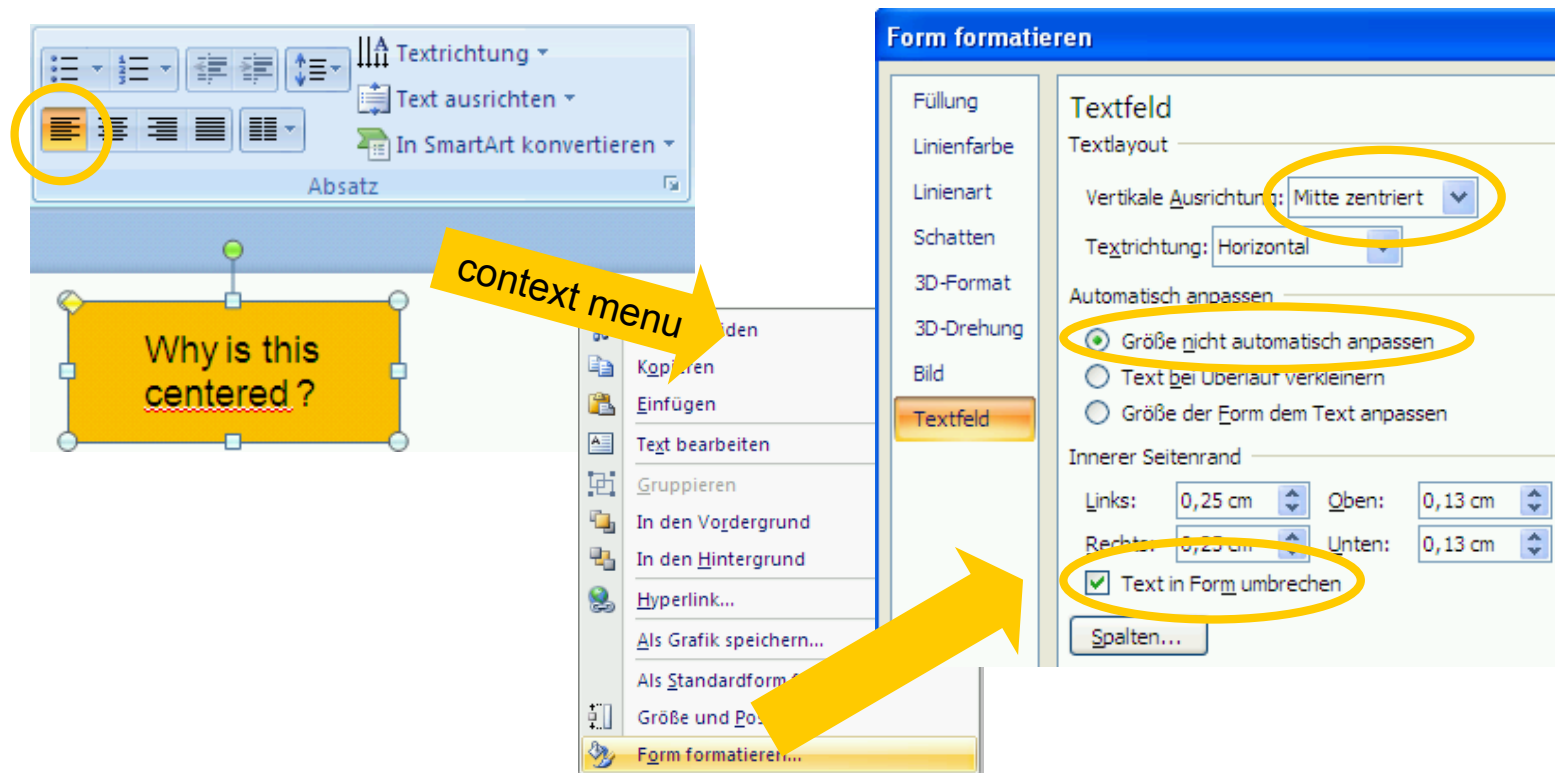


- Modification is only valid for *selected* text!
- Selection 'Standard' sets language for new text fields
- Unfortunately, default language used is not stored in document, but is a property of PowerPoint
 - When editing an English document after a German document, must change language preference back and forth....



PowerPoint: Formatting Text Fields

- Text Fields can be formatted via
 - Menu bar / commands
 - Properties / context menu (right mouse)
- Both not really consistent! More features in context menu!



- Advice: rectangles with text are more easy to scale & align..



PowerPoint: Ruler

- Make the ruler visible: View→Ruler or Right-Mouse on page
- Ruler input acts on selected cells only!
- Various types of tabulators (select @ top left)

- Indent 
- Start of line 
- Left aligned 
- Centred 
- Right aligned 



- Example:

some	text	aligned
and the	next	line

- Use ruler to align text of deeper text levels in Master/Layout



PowerPoint: Creating Master / Layout

- Open an empty .ppt file
- Create a Master and a derived layout which roughly looks like this (also create at least one page..):

Page 2

- This is text on the first level
 - **The second level is red and bold (automatically!)**
 1. The 3rd is green and numbered
 - **By having two levels indented identically, you can easily**
 1. Change between
 2. Green
 - **And red (just use <tab> and <shift-tab>)**
- Here we are back to the 1st level

Your Company Logo here...


This is page: 2

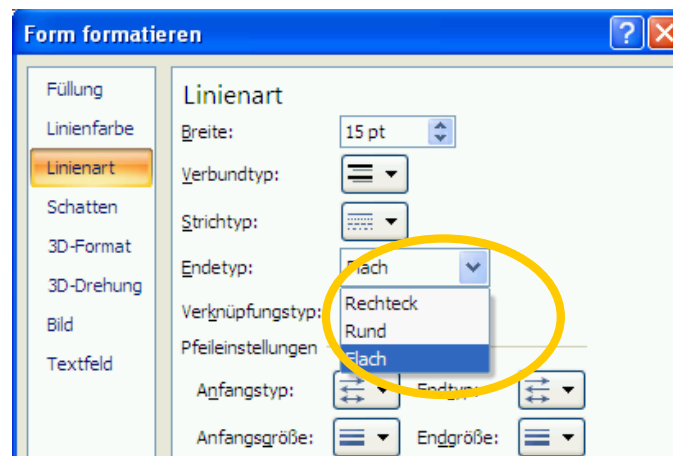
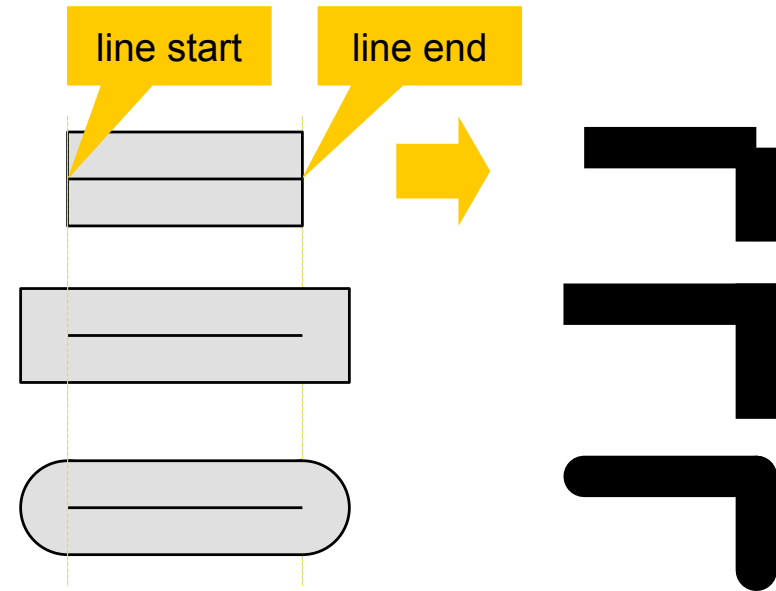
Today is 31.01.2013

This is my Footer



PowerPoint: Making Nice Graphics

- Important: Stay on grid!  (Ansicht→Führungslinien→..)
 - If you must: Shift-arrows shifts in fine steps, off-grid
- Take care of line ends!
 - Normal lines end as a square, so that corners are ugly
 - Much nicer with *rectangle*
 - or *round end*





PowerPoint: Making Nice Graphics

- Rectangles with round corners look nice:



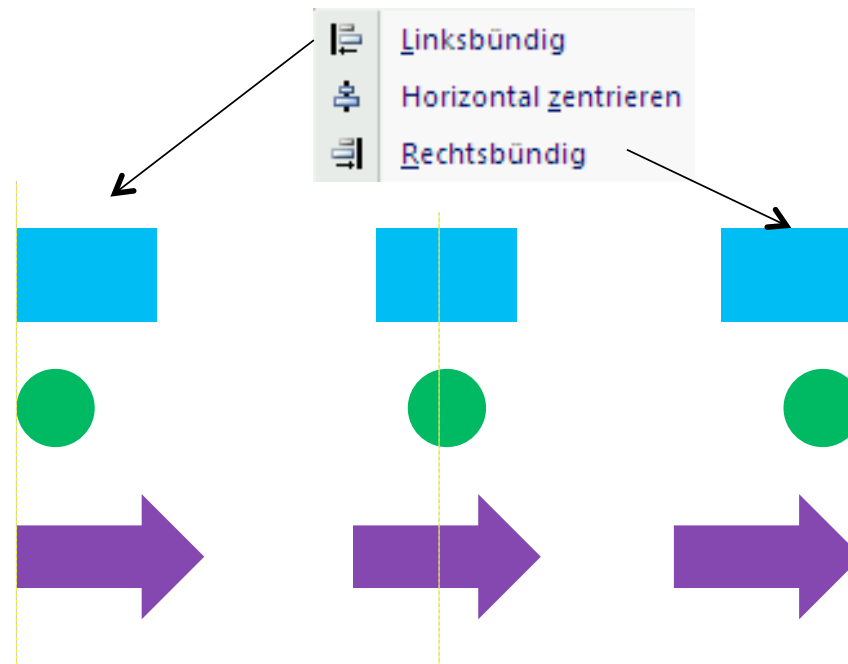
- Images with shadow look cool (standard on MACs...)






PowerPoint: Aligning Things

- Menu Format → Align has many options to align things

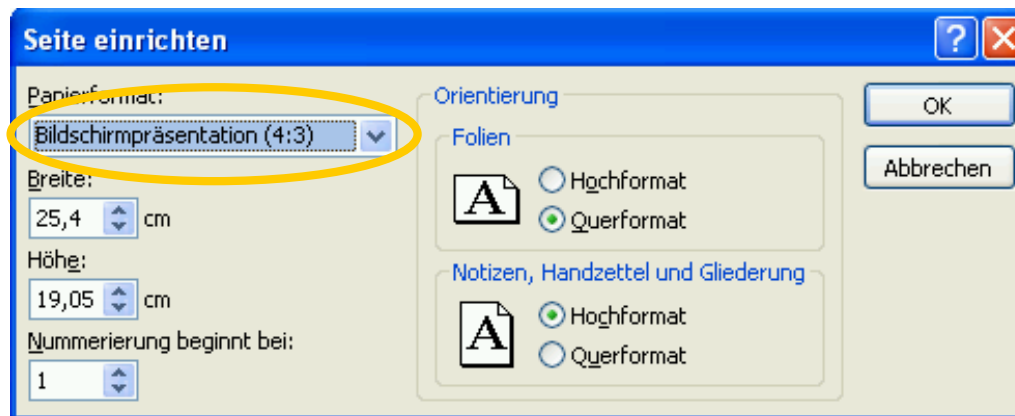


- Make groups  to align multiple objects (see above)
- Try to stay on the grid (by stretching shapes to grid)



PowerPoint: Mixed Stuff

- Chose *page size* for either
 - **Normal Screen Aspect Ratio** (as used in most beamers)
 - ~~Wide Aspect Ratio~~ (only makes sense on screen – what for?)
 - A4 Landscape (if you mainly intend to print..)



- **Never (*never* !)** change the page size once fixed!!!
 - This will stretch all figures to off-grid positions → modifications become ugly

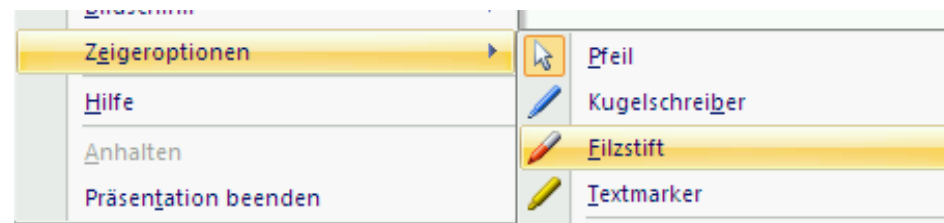


PowerPoint: During the Presentation

- Start slides from #1 F5
- Start from *open* slide Shift-F5
- Turn Screen to White: Press 'W' – any key to quit
- Turn Screen to Black: Press 'B' – any key to quit

- Jump to slide #n page number + <Ret>
 (or G + number + <Ret>)
 - Remember page so that you can jump back!
- Alternative (but uncool): Right mouse → goto slide...

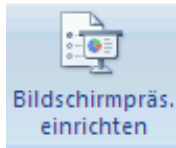
- Mark something on slides: Right mouse → pointer → pen





PowerPoint: Slide Notes

- You can add notes to each slide to remind you what you want to say
 - (Or during development to remember what to put on the slide)
- You can see the notes during a presentation in a dual screen mode (need two monitors as extended desktop)



On Laptop

On 2nd screen (beamer)

PowerPoint: Slide Notes

- You can add notes to each slide to remind you what you want to say
 - (Or during development to remember what to put on the slide)
- You can see the notes during a presentation in a dual screen mode

Office Tools (c) Peter Fischer 29



PowerPoint: LaTeX formulae on slides: *IguanaTex*

- There is a free tool to set formula in PowerPoint with LaTeX
- <http://www.technion.ac.il/~zvikabh/software/iguanatex/>

1. Run installer

2. Install in PowerPoint 2007:

- Open PowerPoint
 - Click Office button → PowerPoint Options
 - Click the Add-ins tab
 - Choose PowerPoint Add-ins (bottom drop down), Click *Go To...*
 - Choose Add New.
 - Select the file IguanaTex.ppa from your install directory
 - Click on Close (must allow to activate macros)
-
- You obviously must have a valid installation of Latex, for instance *MikTeX* from <http://miktex.org>





PowerPoint: Using IguanaTex

- PowerPoint 2007:
 - Open any presentation
 - Choose *New Latex Equation* from the Add-ins tab.
 - Make sure all LaTeX plugins are installed
 - Use the '*Debug*' box to find out..
 - To change an equation after it has been rendered, select the equation and then choose Edit Latex Equation from the Add-in menu.

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



More hints from *YOU* ?

- ???



WORD



Word: Most important: Styles

- Use style files !
- Put ALL formatting (spacing between paragraphs, centering, font, font sizes,...) into style files

- Use Heading styles (level 1,2,3...) for your headings
 - This allows generation of a table on contents...
 - You can modify the style

- Styles can depend on each other
 - All are derived from 'standard'

- Adjust distance to/from next/previous paragraph

- Take this serious!



Word: Frames & Background

- Frames under Text (Header, Footer) looks nice
- In Format definition:
 - Change → Format → Frame → Shadow

Adsddsa| Sa hduf aiufd da daf Daf

This is just Header-2 format

Daffdad ad f fda fdsa fdsa ads f fdsa dsf fdsa oidsaf fdsaoi ofdiu
ofduoidu oifds oi oifda oi oadsf oi oidsa foiads foi oiafdsoi aofdsi
oidsaf oi oifdsaoidsafodsafi fdsaoi oiad fsoi oaid sfoiafds oi ofdsa oi
fdsaoi ofdsaioi adsf



Word: Numbering of Pictures / ...

- Add a graphics
- Right-click on picture:

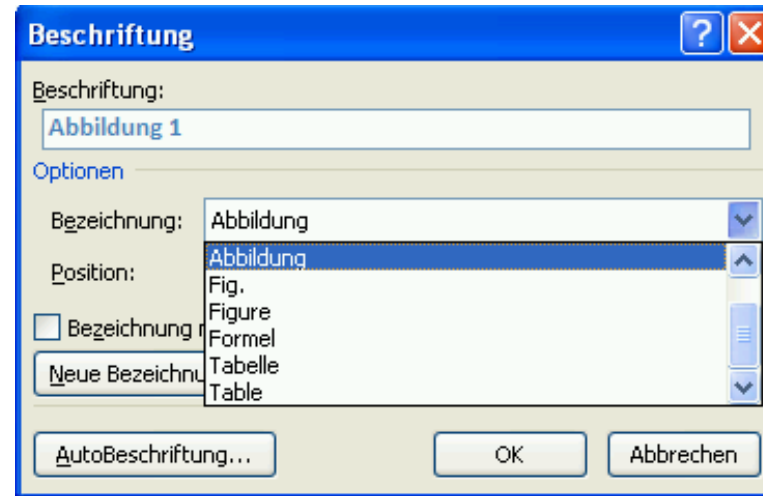
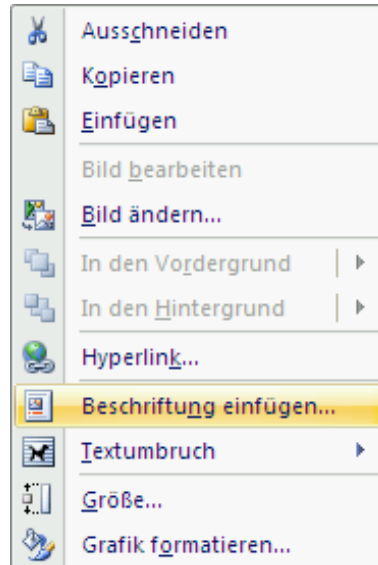


Abbildung 1: ... some text...

- You can also create a new Label Type ('Abb. #')



Word: Adding a Cross Reference

- In Menu 'Verweise', chose 'Querverweis einfügen'
- Chose the type
- Chose what you want to include
 - Only category & number, or also text

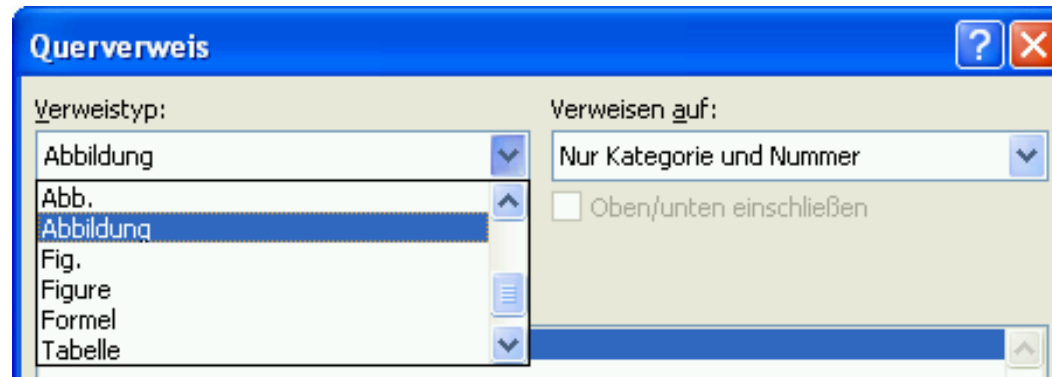


Abbildung 1: ... some text...

A moon is shown in Abbildung 1, on page 1, ..



Word: WaterMark

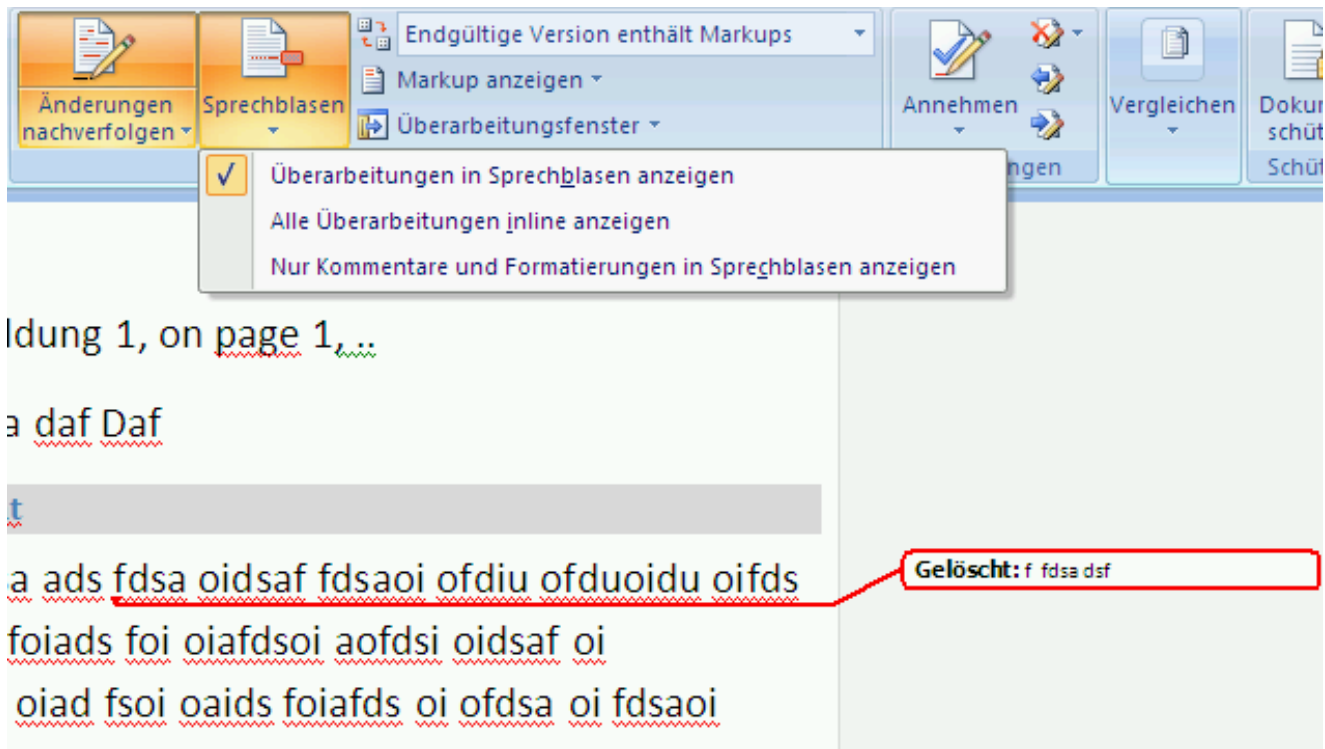
- Useful for preliminary / confidential / texts...
- Page Layout → Watermark → User Defined





Word: Change Tracking

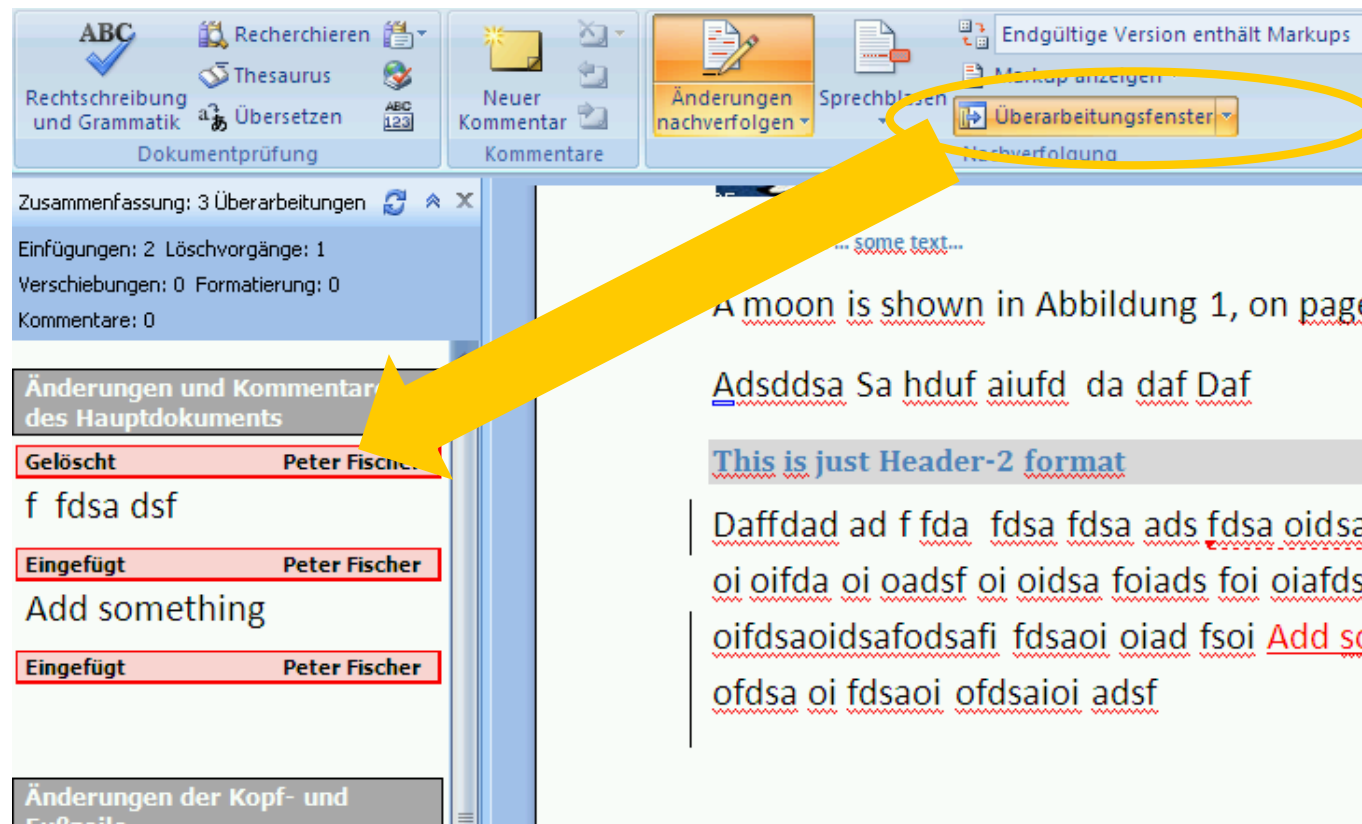
- When working with colleagues, may want to track changes
- Turn feature on in Überprüfen → Änderungen verfolgen
 - May want to turn on side display



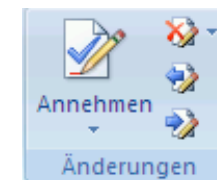


Word: Checking Modifications

- Turn on 'Überarbeitungsfenster'




- Select change and accept or reject






Hints

- Turn *on* the special character display 
- Use non breakable space (ctrl-shift-space) to separate numbers from units etc.

```
Nun·breakable°space.↵  
¶
```

- Shift-Return Adds a Line-Feed without starting a new Paragraph

```
Nun·breakable°space.↵  
End·of·Paragraph·1¶  
  
Paragraph·2¶
```

- Transfer format with the ‘copy format’ button 
- Learn a few short-cut: $\text{index}_x = \text{ctrl} +$, $\text{exp}^{\text{onent}} = \text{ctrl shift} +$
 - Search for ‘Tastenkombinationen’ in (lousy) help system



More hints from *YOU* ?

- ???