



# HOW TO PREPARE & GIVE A TALK

*A FEW VERY PERSONAL ADVICE*



# Goals of your Talk

- What is your *core* message?
  - Technical / Scientific detail
  - Overview over wider subject
  - Publicity for your team / company / yourself
  - ...
  
- How do you want to appear?
  - Expert in the special subject, intelligent & clever
  - Demonstrate your overview & expertise in the field
  - Be cool & funny ('dinner talk')
  - ...
  
- In which 'style' you want to talk?
  - Clear and educational ('hope you understand...')
  - High level ('I am such a clever guy...')
  - ...



# The Audience

- Who is the Audience ?
- What does the audience know ?
- What are the expectations ?
- In what state will the audience be ?
  - Tired from many talks.. (on a conference)
  - Eager to hear from you on a summer school
- This is *very important* to select you foci:
  - Which information do you have to introduce ?
  - What would be boring ?
  - Which results are most relevant for *that* audience ?
    - users want to see results and hear about applications, cost..
    - experts want to hear about details



# Some Boundary Conditions

- What are the other talks in the session ?
  - If you are 5<sup>th</sup> speaker in a session on ATLAS results, you can be quite sure that the experiment has been presented. So do not repeat! (but have some slides ready in case...)
  
- Are there similar talks you should refer to ?
  - Make differences to other talks clear
  - This shows that you overlook the field and that you listen to the colleagues
  
- Do you want to advertise other talks / posters ?



# The Title

- Does it describe your message ?
- Is it understandable (*for the audience*) ?
  - ‘A 7-3 compressor for a fast 16 x 16 ALU’
  - ‘Inverse Kinematics in Blender’
  - ‘Characterization of the XYZ ASIC’
  - ‘Development of Analog Readout, Digital Signal Processing, and Data Analysis Software for Ultra-High Rate HPGe’
- Is it too general ?
  - ‘progress in high speed computing’
- Does it sound interesting ?
  - ‘Getting Close to the Limit : sub Nanosecond Timing with LYSO’
- Is it too long ?
  - ‘Design and Evaluation of a New PEM Scanner Based on Pixelated Solid State CdTe Detectors to Overcome the Intrinsic Limitations of State-of-the-Art Devices Based on Scintillators’

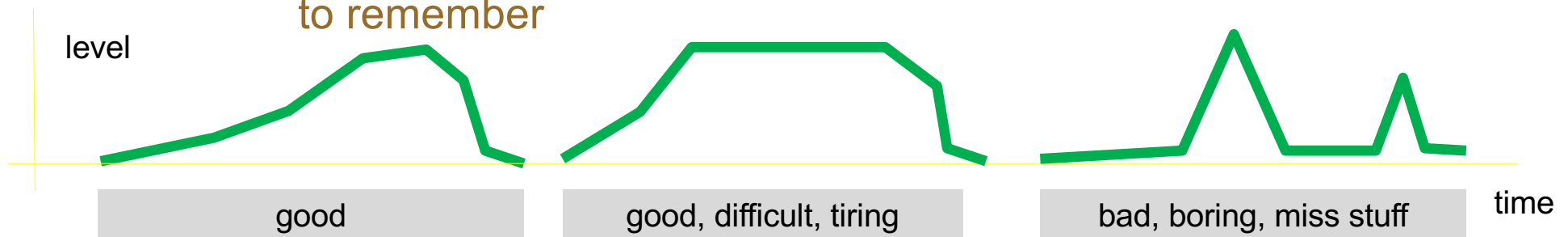
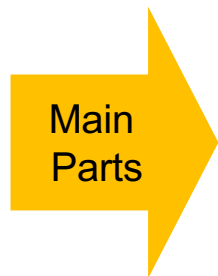


# Structure of the Talk

- General Introduction / Motivation
  - Not too long. This is mostly stuff people know anyway!
- Overview
  - Short! Do not spend a minute to go through all bullets!!
  - In a short (12'-20') talk, I often skip that
- Introduction to your *specific* subject
- Your idea / methods / design
- Results / Highlights
- Further information / Outlook / Ideas
- Summary
  - Only mention few 'take home messages' you want the audience to remember

## Gliederung

- 1. Allgemeines
  - 1.1 Der Begriff RFID
  - 1.2 Überblick der Anwendungsgebiete
  - 1.3 RFID Prognosen
  - 1.4 Frequenzbänder
- 2. Grundlagen
  - 2.1 Induktive Kopplung des ICs
  - 2.2 Radiative Kopplung des ICs
  - 2.3 Multi Tag Erkennung
  - 2.4 RFID Speicher
- 3. Anwendungsbeispiele
  - 3.1 LF RFID
  - 3.2 HF RFID
  - 3.3 UHF RFID
- 4. Quellen





# Contents of the Talk

- What is the idea ?
- What is new ?
- What is state of the art (the competition) ?
- *Why* is it important what you do ?
  
- What are the challenges ?
- What are the solutions ?



# Level

- The ‘average’ audience must be able to follow your talk
  - Can you say ‘MSPS’ or ‘SPECInts’ or do you have to explain?
- I think: few slides (topics) should be difficult to understand
  - This is then interesting also for the experts
  - Make clear for the ‘normal user’ that it is no problem to miss that particular point
  - This shows that you give a high level talk





# THE SLIDES



# The Layout

- Is a matter of taste.
- Do not use a ‘standard’ (08/15) template.
  - This shows you did not put a any effort to chose or develop...
- Take a short moment to think about
  - Font, Font sizes
  - Colors
  - Positioning,
  - ...
- Do you know the beamer format? 16:9? 4:3?
- Implement this in a template / style file!



# The Layout

- Title not too large
- Put **page number, speaker name, date, location, event** on each slide (small, for later reference)
- Do not use too many colours. Use them to provide information!
  
- Difficult issue: How much text ?
  - In general I would say: not too much (just ‘reminders’). **You** are standing there to explain the things
  - Do not just read what is on the slides!
- But:
  - If you are unexperienced & nervous, put all items (not words) you want to treat on the slide to guide you (or use the notes).
  
- NOTE: (my) Lecture slides are NOT a good example: They can be used as Writeup and contain much too much text



# The Slides

- The *optical quality* of the slides shows the audience that you invested time & effort
- So: invest time & effort!
  
- Use a homogeneous layout throughout
- Do not use too small font (the slide should be readable on a 800 x 600 resolution screen...)
  
- Be careful with animation. They need good timing of the speaker
  - I find: Animation is not 'out' or bad 'per se'
  - Never give the expression that you press the key to see what is next. You should know your talk by heart!
  - It's much cooler if you talk about something and the animation comes *later*



# The Slides – Pictures and Graphics

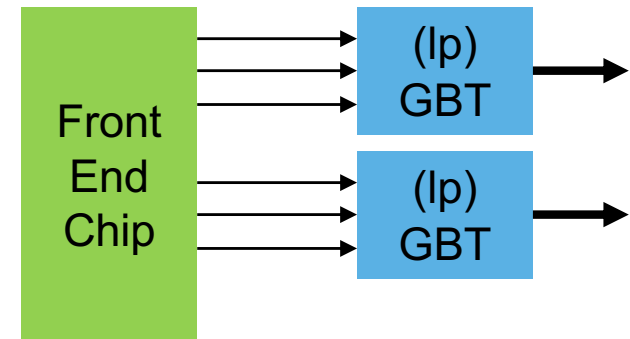
- Pictures make a talk clearer and entertaining
- Use *good quality* pictures. Make an *effort* to find them!
  - But do not copy 8Mpixel bitmaps in the .ppt file. This makes it huge and slow.
  - Do not use .jpg for geometric figures! The compression produces artefacts.
- Make sure the audience can read the text in pictures
  - Enlarge the text if it is too small (add text on top)
  - Delete unnecessary text
- Provide references to the pictures (below the picture, in a footnote, in an appendix) – as for all other information
  - Trivial information is exempt
  - This is most important in a ‘publication’ talk, not so much in a summary or entertainment talk.



# The Slides – Pictures and Graphics

- If the quality of simple ‘block diagrams’ is poor: draw them again yourself!

- This is not taking so long
- It makes your talk much more homogeneous!
- The audience sees you made an effort (so it is good if the picture is identified as hand-made)



- Remove unnecessary information from the pictures
  - Things you do not talk about should not confuse the audience
- NEVER say ‘this is difficult to see on this picture...’ – Use a better picture!



## The Slides – How Full ?

- There is NO need to squeeze information on one slide. Use 2 slides!  
(But limit the amount of information in general)
- Avoid to put (important) information at the bottom of the slide: it may be difficult to see for a large part of the audience.





# The Slides – Page Numbers & Co

- Page numbers are important!
  - With numbers, audience can refer to slides in questions
- Add speaker name
  - It's your 'copyright'
- Add the event of the presentation
  - Useful if slide 'shows up' later somewhere else.  
It's later good to know if content is 'old' or 'recent'





# How Many Slides ?

- Depends on many things
  - How full is one slide ?
  - How fast can you talk / how much can the public digest ?
  - ...
  
- Do not squeeze stuff on one slide 'to save time'
  - Two slides with the same sum content require the same time
  - They give better structure & are more readable
  - This was different when 'transparencies' were expensive...
  
- Use intermediate titles to structure your talk
  
- Rough orientation: 1-1.5 slides / minute
  
- I have seen fantastic talks with 5 slides only!



# A TALK IN A CONFERENCE



# A Talk in a Conference

- In conferences with many speakers & parallel sessions, timing is kept *very (!)* strict
- The 'chairperson' will show you countdown cards:
  - 5 / 3 / 1 minutes to go
  - 0 minutes to go = Stop!
- Show the chairperson that you see this and that everything is ok...
- When you are not done @ 0, you *may* have 1-2 extra minutes. The chairperson will stand up and look angry. The audience will not be amused.
  - Say 'Just one more slide before coming to my conclusions' to announce that the end is near... Come to the end!
- Important: Try to put some slides in the second part of the talk which you could *skip* if you run out of time. Really skip them (with 'G' + slide number) if required!



# Before your Talk

- Check Beamer & Laptop (if you use *your* laptop)
- In a conference:
  - Make sure your talk is uploaded to the presentation PC
  - This must be done BEFORE the session start!  
(sometimes even the day before)
  - Check that the file is ok. Videos are a big risk (missing codec!)
- Make sure you have a (mechanical or laser) pointer
- Maybe clean the blackboard & provide chalk / pen
- If there is a microphone, fasten it well
  - Not too close to your mouth, not too far away
  - Observe how it worked with the previous speakers
  - If you feel uncertain, ask the audience if they can hear you
  - If the clip is bad, better hold the microphone in your hand  
(Your talk makes NO sense if people cannot hear you!)



# The Talk

- Be concentrated, motivated, enthusiastic,..
  - Stand upright
  - Do not be boring!
  
- Speak clearly (but do not shout). Do not speak too fast or too slow. Try not to be monotonic! Make breaks. Emphasize *important* things!
  
- Look at the audience! Look into some faces!  
Talk to individuals, not to the crowd or the room...
  
- Use the pointer. Use it well!
  - Really point on the relevant information (but not on text)
  - Do not wave around...
  - If you are nervous & shake, take the pointer in two hands or support it on your hip!



# The Beginning & the End

- The start of your talk is very important!
- Think about a sentence for introduction ('Hello')
  - 'I hope you enjoyed the lunch and are fresh again after this exciting morning session for more results on ...'
  - 'I guess you are all tired after ... so I will do my best...'
  - 'Let me first say that it is a pleasure to be able to present...'
  - 'Good afternoon! My name is ... As a PhD student, I have worked on ... in the last 3 years and I would like to share a few interesting results with you'
- **Learn this by heart! Do not mess it up!**
- Prepare a nice end
  - Thank the audience for their attention
  - Ask for questions
  - 'I thank you for your attention despite the late time and would be happy to answer your questions'



# Hints

- Stay in time. Better too short than too long
  - Nobody will complain that you have only used 11 minutes out of 12. But pass the message.
- Look at the talk schedule. If you are the 4<sup>th</sup> speaker on xxx, there is no need to bore the audience with repetitions. Skip these slides! (do not delete them – show the audience that you want to save their time!)
- If you are hectic (like I am), add soft slide transitions
- If the chairperson says ‘the title of the next talk is ...’ then do not say ‘the title of my talk is ...’!
- Why not start with the result ?



# Training

- Train your talk!
  - I do that several (3-4) times before an important talk!
  
- Be serious when training!
  - Start a stop watch
  - Speak loud or at least *formulate out* every sentence
  - Do NOT just look at the slides and think about what you want to say...
  
- When training the talk seriously, I often discover
  - that the logical flow is broken and that I need another slide
  - that there are too many slides on one subject
  - that the structure is bad, e.g. I find no good step to the next slide
  - ...





# Online Talks

- Hard job:
  - Audience mainly sees slides, not you. Gets boring
  - You do not get any reaction
- **Make sure your sound quality is good. HEADSET!!!!**
- Use the pointer even more to show where you are on the slide
- I suggest to use less content / slide so that slides change more often. This 'wakes up'



# Examples of Talks

- Here are slides of some of my talks.
- Preparation took ~1.5h per slide on average