HOW TO PREPARE & GIVE A TALK

A FEW 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 your 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 5th speaker in a session on ATLAS results, you can be quite sure that the experiment has been presented. So do not plan for that (but have some slides 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 key points you want the audience to remember
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
  - The ‘normal user’ should understand that it is no problem to miss that point
  - This shows that you give a high level talk

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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
  - 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 talk clear 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 is 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 – 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. 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!
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!)
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!
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 4th 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
  - ...

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Example

- Here are the slides of a talk I gave this fall at the IEEE NSS conference in Seattle.

- This was a 12’ talk

- I had 20 slides (+ titles..)

- Preparation took ~1.5h per slide on average