

Seminar
High-Performance
Computing with FPGAs
How to Give a Good Talk

SS 2018

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Why are talks important

- the computer scientist
 - is a socially handicapped nerd
 - hides behind his computer
 - is incapable of communicating and leading
- the master of business administration
 - is a non-serious show man
 - speaks in content-less phrase
 - is capable of asserting himself
 - becomes the manager of the computer scientist
- these are classic stereotypes, but there is some truth in this observation

- the problem of giving a talk
- general comments
- technical preparation
- mental preparation

- acknowledgement
 - this lecture builds on materials by Holger Karl

The problem of giving a talk

- the ordinary seminar talk
 - scares the presenter
 - makes the presenter want to get over the talk as quickly as possible, no matter how
 - bores the audience
 - frustrates the supervisor
- ... however, the talk offers the presenter a rare opportunity to practice something very important

Control the "take away message"

- fatal psychology
 - "what was difficult for me, shall also torture the audience"
 - "I didn't understand it, hence I will talk around it"
- but you can say something useful
 - for every topic
 - and every audience
 - and within any timeframe
- the listener takes away one thought
 - and you can control which thought

- don't:
 - deceive with your own intelligence
 - tell everything about one topic
 - present all technical details

- but:
 - convey an intuition, an illustration of an idea
 - create a desire for more
 - involve, inspire and excite the listeners

- the AIDA principle

keyword	goal	method
<u>a</u> ttention	attract attention	surprising illustration or example
<u>i</u> nterest	attract interest	presentation of the current (known to the listeners) situation...
<u>d</u> esire	create a desire for change	... complemented by possible improvements
<u>a</u> ction	discuss possibilities to satisfy these desires	explain steps, which need to be followed to reach the goal

- start: depict the problem vividly (attention)
 - why should the listener be attentive?
 - example!
 - present an overview of the talk (informative)
 - say, what you will be saying
- motivation/introduction (interest/desire)
 - clear formulation of the goal, the question, the problem of this talk
 - be specific, state a clear goal for the talk

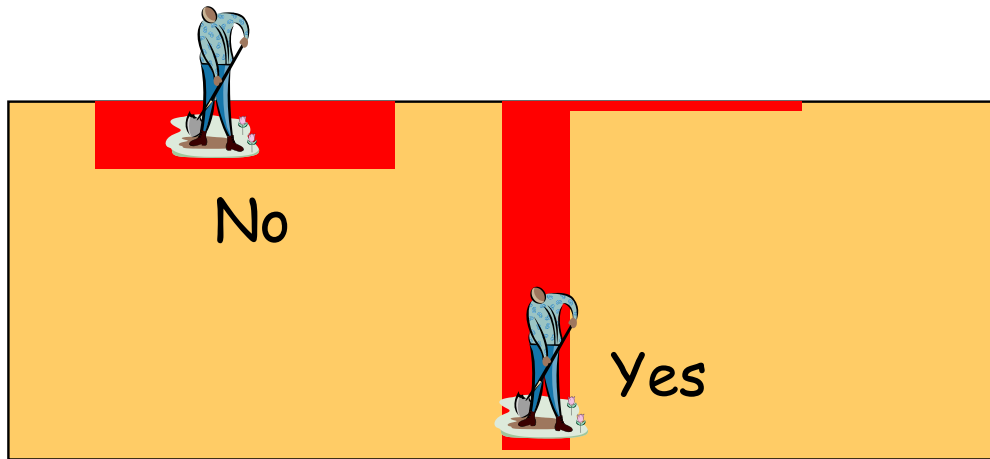
Structure of a talk (2)

- say what you have to say (desire/action)
 - clearly answer the raised questions
- now and then until now
 now we will ...

 offers orientation, rescue point for lost listeners
- the end
 - summary: We have reached the following:...
 - say, what you have said

Major goals of a talk

- goals, ordered by decreasing importance
 - keep the audience awake and attentive
 - explain what the main problem of the talk is
 - give examples!
 - explain the general approach – if possible
 - the little, dirty details – if still possible
- prefer a narrow/deep over a broad/shallow presentation



- a talk is a conversation
not a record
- listeners talk to them
look at them, read in their faces
- (re)include lost listeners example
comparison
repetition

- find a reasonable order of contents
- the order is frequently not canonical
- try different variants
- avoid
 - cross-references "I will discuss this later"
 - repetitions
 - digressions

- usually more material is available than can be presented
- therefore
 - chose a main emphasis
 - select what material to present
 - show an example instead of the general case
- don't try to discuss everything
 - 20% motivation
 - 80% main idea

- available time slot?
- how many listeners? what prior knowledge?
 - desired audience: lively, knowledgeable, excited
 - real audience: no clue, sleepy, just back from lunch! wake them up
- previous speakers with similar topic?

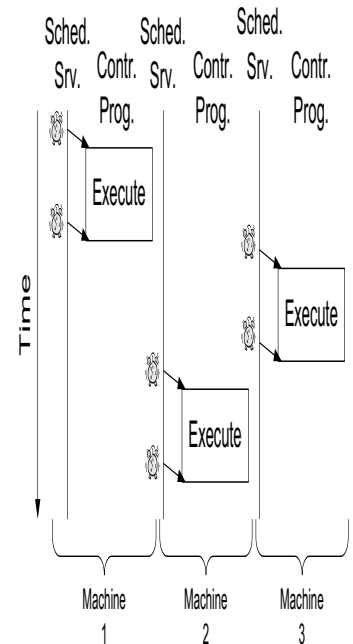
Black board or slides?

- black board
 - enforces good speed
 - requires to speak and write concurrently
 - more difficult than slides
- slides
 - require better preparation
 - enable more possibilities
 - tempt presenter to progress too rapidly
 - for seminar, slides are usually appropriate

- heading
- one topic – one slide (don't be afraid of empty space)
- max 2 slides per topic (restructure if appropriate)
- focus on core statements
- no full sentences and correct grammar required
- consistency (capitalization, phrasing, numeration, ...)

- longwinded, nested sentences, in particular those in which – as it is the case here – the verb, separated from the subject, is at the very last position are completely inappropriate for presentations
- `this is a computer output, which you probably cannot read`
- many **different colors**, **fonts** *and* **formats** reduce the readability
- fill the slide completely to the border
 - reduce spacing to fit everything to the slide
 - write everything very very small to make sure that everything fits to the slide
 - everybody must have good vision, or should at least wear glasses
 - add some unimportant text

meaningless clipart



*a very important figure
(unfortunately distorted)*

- use landscape format
- font sizes
 - sufficiently large
 - use sans serif types (Helvetica, Arial, etc)

16 pt 18pt 20 pt 24 pt 28pt 32pt 36 pt 48 pt

16 pt 18pt 20 pt 24 pt 28pt 32pt 36 pt 48 pt

- use animations with care

- "an image is worth a thousand words"
- be cautious with embellishments
 - fancy 3D charts and animations
 - shadows and reflections
 - font extravaganza
- every illustration should have a recognizable reason for being there

- speak without notes
 - you may use the slide as a cheat sheet, but always connect to the audience
- use slide as guidance without reading it out loudly
- walk listeners through the slides using
 - pointer
 - laser pointer
 - pencil when using overhead slides
- memorize first and last sentences if this provides more security for you

Finding a good pace

- rule of thumb: 2 min / slide
- speak slowly
- do a rehearsal talk
- if you run out of time, skip materials
- never: accelerate the speed of presentation

- symptoms before the talk: nervousness, cold sweat, ...
 - take a deep breath
 - learn starting sentences by heart
 - everybody has this problem
- during the talk: radiate enthusiasm
 - gives audience a reason to listen
 - wakes up the audience
 - listeners become more open-minded and attentive
 - relaxes the presenter



- make eye contact
 - look for some "nodders"
- questions are a compliment!
 - at least somebody is still listening
 - invite audience to ask questions
 - interact with the listeners
- finish on time!
 - it's better to skip materials than to exceed the time limit
 - don't ask: "can I go on for some time?"
 - if you run out of time, wrap up your presentation, advance to the summary slide

- the skill to present something well is (frequently) more important than having very specialized knowledge
- the quality of an average talk is so low, that it is fairly easy to stand out
- you can improve your presentation skills if you really want