

## How to Give a Successful Technical Talk

- **Organization: A talk is like . . .**
  - A meal
  - A group walking tour through the Alps
- **Up-front considerations:**
  - Time limit, Audience, Goal
- **What is your Simple Story?**
- **Creative Repetition**
- **Technique**
- **Practice, Practice, Practice . . .**

## Organization: A Talk is like . . . A Meal.

- Appetizer
- First Course
- Second Course
- . . .
- Dessert

⇒ Group Similar Things Together

⇒ Pause between courses to savor  
and anticipate

⇒ End with a treat

**Organization: A talk is like . . .**  
**A group walking tour through the Alps**

- Group Organizational Meeting before setting out.
- Pause before descending into the first valley, to survey the terrain ahead.
- Admire the details as you pass through.
- Pause after climbing out of it, to reflect on where you've just been.
- Look down at the next valley . . .
- At journey's end, reminisce together about the wonderful time you had.

## Organization: Morals

- Group similar things together into sections.
- Organize sections into a logical sequence.

### **Tell a Simple Story.**

- Start with a tantalizing preview.  
(this also warms up your audience, lets them get settled, and accommodates late arrivals)
  - Put some exciting stuff up front.  
Give your audience a reason to stay awake.  
“Lead with your chin.”
  - End with a treat or with a review.  
Remind the audience that you told them what you promised you would.
- Emphasize the transitions between groups; look back, look ahead; review, preview.  
Announce: “This is a transition.”

## **Up-front considerations:**

### Time limit

- “I apologize for the length of this letter, but I did not have time to make it shorter.” — Blaise Pascal
- “How much time do I require to prepare a speech? That depends on how long it is to be. If five minutes, I require two weeks. If twenty minutes, one week. If an hour or more, I am ready immediately.”  
— anonymous statesman

**TIME IS ALWAYS TOO SHORT!**

**TO SHORTEN TIME, LIMIT DETAIL.**

## Two main categories of technical talks

- 15 to 25 minute talk,  
5 to 10 minute Q & A.  
  
⇒ Typical Conference Talk.  
  
⇒ Time enough to expose the audience to one (maybe two) exciting ideas.
- 50 to 80 minute talk,  
10 minute Q & A.  
  
⇒ Typical Research Seminar or Invited Talk.  
  
⇒ Time enough to give a self-contained lecture, with background and several main ideas.
- **TIME IS ALWAYS TOO SHORT!**
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## Your audience

- **General** — technically informed, but not specialists in the area of your talk.

⇒ The most common case.

⇒ You **must** give the audience enough background to allow them to understand why what you are saying is important.

⇒ The people who don't already know the background will appreciate it.

⇒ The 5% of the audience who already knows it will feel good because they are so smart.

- **Specialized** — most of the audience is already an expert in this area.

⇒ Usually only at specific workshops with a narrow technical focus.

⇒ Here you can jump right in to the nitty-gritty technical details.

## Your Goals

- Communicate an exciting technical result.  
⇒ Usually a technical conference talk.
- Unify several technical results under a common theme or direction.  
⇒ Often a research program review.
- Inform the audience about a research area.  
⇒ Usually a general survey talk.
- Educate the audience.  
⇒ Usually a tutorial.

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## Tell a Simple Story

“Veni, vidi, vici.”

⇒ “I came, I saw, I conquered.”

— Julius Caesar’s description of his military expedition to England.

- Begin to organize a talk by deciding on the “Simple Story” — the one to three sentence summary, usually containing three to five major points.
- Major points become the sections of the talk.
- Their order in the “Simple Story” determines the order of the sections in the talk.
- Group main ideas under the most relevant section.
- Decide on the “Simple Story” for each section.
- Recurse . . .

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✓ Up-front considerations:  
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✓ What is your Simple Story?

Creative Repetition

Technique

Practice, Practice, Practice ...

## Creative Repetition

- Tell them what you're gonna tell them,  
Then tell them,  
Then tell them what you told them.
- At any given point in time,  
at least 20% of your audience is  
thinking about something else.
- Even if listening intensely,  
it takes time for things to sink in.
- Unlike reading, in a talk  
it is impossible to go back and re-read.
- Look back, look ahead; review, preview.

## Technical Skills

- Avoiding nervousness.
- How to recover if you “freeze.”
- Don't get bogged down —  
TIME IS ALWAYS TOO SHORT!
- Vary the elevation.  
Lots of high-level orientation, Lots of sign-posts.
- Handling questions
  - ⇒ During the talk.
  - ⇒ During the Q & A period.
- Eye contact.
- Non-verbal communication —  
hand and body motion.
- Laundry list or no?
- Making and keeping promises.  
Always point out that a promise was kept.

## Practice, Practice, Practice . . .

- “How do you get to Carnegie Hall?”
- Practice is the **best possible** defense against nervousness.
- Practice in front of a mirror first. Speak out loud.
- Then give it to a sympathetic audience.  
⇒ Ask each person to identify at least one thing that was good about the talk, and at least one thing that could be improved. Write these comments down on the spot (or have a friend record them for you).

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