Notes from Problem Solving

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1 Project Reports

- Ali said that they were dealing with the problem of asynchronous simulation. He claimed that it was not possible to know when a step was finished and therefore their backtracking strategy would not be precise enough.

- Grégory M. said that their group was aware of the same problem and found out that using synchronous simulation addresses the problem Marc mentioned during the previous lesson. They found out that Webots 5.0.3 for Windows contains a bug that makes the synchronous simulation acts as if it were asynchronous. This bug is neither present in Webots 5.0.3 for Linux nor in Webots 5.0.1 for Windows. Tom therefore concludes that the competition will be run on mtcserver using Webots 5.0.3 for Linux. Grégory Mermoud said that they were finished with the implementation of the subsumption architecture presented earlier. He mentioned that for locating objects, they were summing the amount of green (or blue) over a column of the image from the camera and from the resulting intensity vector, they were deriving a speed vector for the wheels using a Breitenberg algorithm.

- Wojciech gave a brief report of their work: they are still exploring the *Piglet* implementation.

2 Slides: How to Give a Good Research Talk

2.1 Overview

- *Communication is crucial for researchers:* by giving talk they can get feedback from their peers and attire others' attention on their work.

- *Presentation is a skill.* Therefore, the only way to improve it is to practise.

- *A talk is different from a paper.*

  - In a paper, you must stick to the truth
  - Presentation is more advertisement for the paper (and neither for the speaker nor the hardness of the work he did). Therefore, it is fine

not to tell the whole truth if it helps communicating your main idea. The goal is to make the audience willing to read the paper.

– The presentation is not a substitute to reading the paper

- *The audience is not ideal.* You shouldn't assume that members of the audience know all the background and that they are both interested and alert.

2.2 What to Put In?

- 20% Motivation + 80% Key Idea ⇒ no details, similar to the introduction of the paper.

- *The first two minutes are crucial* for capturing the audience's attention
    - Don't start broadly, at a too general level
    - Proceed immediately to the reason why what you've done is new and interesting

- *A talk should convey exactly one idea*: don't hesitate to explicit that idea and leave out any unrelated details.

- *Avoid shallow overviews*; instead go into some details of your main idea
    - Even in job interviews where you tend to present a survey of what you've done up to now, you'd better choose one idea that you are going to present in detail

- *Use examples* instead of giving details
    - Don't underestimate the difficulty of finding good examples that are small enough whilst still making the point.
    - Try not to multiply the number of different examples. Try to reuse as much as possible previous examples.
    - Spend time (some minutes) for explaining the example to the audience

- *It can be good to have backup slides* in case of a very precise question being asked about details you didn't mention

2.3 What to Leave Out?

- *No outline at the beginning.* You will loose your audience and it is pointless since you haven't presented any kind of motivation yet. An outline might be placed later in the presentation or at the very end as a summary.

- *Do not put a slide in which you list related work.* Instead, acknowledge *positively* related work as you go

- *Do not overwhelm a slide with technical details*

- *Do not apologise*

- *Do not put a slide something you don't want the audience to read.* Keep the content on a slide minimal.

2.4 How to Present?

- *Fresh presentations tend to be better* since you remember well the reason why you put something at a given place. It is also a good idea to modify your presentation at the latest moment. You can even modify it when another speaker at the conference that has done some work you might want to relate with your approach is speaking.

- *Don't reuse slides from previous presentations*

- *Be enthusiastic*

- *Nervousness is normal; cope with it.* Scripting the very first sentences might help but try to avoid having notes

- *Eye contact with the audience*

- *Don't fear questions.*

  - They are an opportunity to connect with the audience and to explain better some part that was unclear for the audience.
  - It's fine not to continue answering questions from a single person ("Yes, but ... ?"); suggest that both of you can discuss the issue afterwards.
  - Ask the audience at times whether you have been clear

- *Avoid revealing the slides item by item and avoid using animations.* Generally, they distract the audience and result in bad handouts.

- *Fit the message to the time frame exactly.*

  - Don't ask for extra time
  - Stop and go to the conclusion in case of too much time having been spent on answering questions (be prepared to do it!)

- *Standards are low*

- *Keep sober* (color and fonts)

- *Slide titles are not compulsory:* you can leave them out if they are not necessary.

- *There shouldn't be too much slides nor too much per slide*