Deliverables

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Deliverable I

- Write one paragraph summary of the area where you do your current project.
- Find two suitable workshops and two suitable conferences where your current project work could be possibly published. The submission deadline for the conferences/workshops should be in 2016/2017. For each workshop/conference provide its full name, acronym, an URL to the home-page of the event and the submission deadline.

I.I Project Summary

The area covered by our current project, Giraf, is the development of an Android device environment for autistic citizens. Some of the problems encountered during this development process, consists of the entangled nature of a multi-group project. Since Giraf is a multi-group project, with nine different groups of software students, a lot of the effort put into said project, focuses on the coordination and work distribution between groups. Moreover the Giraf project focuses on the deployment of a complex software product; this includes automated testing, continuous integration and usability testing among others.

I.II Suitable Options for External Exposure

Workshops

ICSE 2016 - The 38th International Conference on Software Engineering
http://2016.icse.cs.txstate.edu/
Deadline for submission: February 26 2016
Note: ICSE, has a workshop along side the conference.

CHASE 2016 - The 9th International Workshop on Cooperative and Human Aspects of Software Engineering
http://www.chaseresearch.org/workshops/chase2016
Deadline for submission: January 29 2016

Conferences

ASSETS 2016 - The 18th International ACM SIGACCESS Conference on Computers and Accessibility
http://assets16.sigaccess.org/index.html
Deadline for submission: October 14 2016

MOBILESoft 2016 - IEEE/ACM International Conference on Mobile Software Engineering and Systems
http://mobilesoftconf.org/2016/
Deadline for submission: January 25 2016

Deliverable II

- In groups, rewrite the title and abstract of your last year project. You should try to apply the rules/suggestions mentioned during the lecture and your target audience are computer science students that just finished their second year at the university. The basis for the abstract is your group work but it should be then individually improved (after the feedback you get) before it is added to your report.
- In the report write the names of all students participating in the preparation of the title/abstract.

II.I Participants in Group Session

- Claus W. Wiingreen, cwiing13
- Marc T. Thorgersen, mthorg13
- Mathias S. Michno, mmichn13
- Morten Pedersen, morped13
- Søren H. Frandsen, sfrand12
- Troels B. Krøgh, tkragh13

II.II Title

Old title:
Timely Wireless Arduino Communication
New title:
Distributed Communications Protocol for Wireless Embedded Device Networks

II.III Abstract

Old abstract:

In this paper we explore the possibilities of designing and implementing a wireless single frequency communication protocol for embedded devices using cheap RF-modules. We design simple protocol and further expand it to account for scenarios which can arise in a real-world setting. We test the hardware in regard to reliability; the protocol is designed in regard to a naive scenario and iterated upon to account for more realistic scenarios. Each scenario is implemented as a model in UPPALL to verify the validity of the design and to calculate probabilities of successful networks being established. We implement the design onto Arduino devices with attached RF-modules. The protocol is not specified to any distinct use case and allows for user-code to be run alongside the protocol as well as modifiable payloads to allow for different use cases such as a fire alarm network or home automation.

New abstract:

When trying to communicate wirelessly over a single frequency, many problems and obstacles must be overcome in order to establish a reliable distributed network. We propose a graph based design for a distributed wireless communication protocol using single frequency Radio Frequency-modules based on the excising concept of Time Division Multiple Access. We model and verify the proposed design of the protocol, using the model-checker tool UPPAAL, as a part of a model-driven development process. Furthermore we solve oncoming problems such as simultaneous device activation and packet-loss, using the model-driven approach with UPPAAL as the main verification tool. Lastly we implement the verified protocol design on embedded systems configured with single frequency Radio Frequency-modules, such that arbitrary data can be transmitted. We design and implement the protocol with the intent of reuse, such that any application can disregard the issues coupled with creating and maintaining a distributed wireless network using a single frequency.

Deliverable III

- Read the above mentioned paper How to Present a Paper in Theoretical Computer Science: A Speaker's Guide for Students by Ian Parberry.
- Write a summary of the content of the paper (one paragraph).
- List five points mentioned in the paper where you think are your major weaknesses when giving a (slide) presentation and where you would like to improve in the future.

III.I Summary of *How to Present a Paper in Theoretical Computer Science: A Speaker's Guide for Students* by Ian Parberry[1]

The paper is sectioned into four topics; the first concerns the material to be presented and how to choose and organise it, the second is about the actual act of presenting, while the third section focuses on the aids one might use such as overhead and microphones, lastly the fourth section touched upon the post-presentation i.e. taking questions from the audience. On how to choose and organise the material to be presented, Ian Parberry states that it is important to present key ideas and not the obvious. He also underlines the importance of not going into to many details, as this will only help to loose the interest of the audience. Furthermore he presents a structure consisting of; an introduction, a body, some technicalities, and lastly the conclusion. This structure will ensure a Top-down approach, which will ease the general audience into the presentation, but also excite experts by presenting technicalities. On how to perform the actual presentation, Parberry gives the sentence: "Tell them what you're going to tell them. Tell them. The tell them what you told them.". Coupled with repetition one should also try to remind the audience of any standard knowledge. Moreover the author of the paper gives advice about dealing with anxiety, dressing appropriately and appear confident. On using electronic aids when presenting, Ian Parberry advises the presenter to keep the content of slides to a minimum, i.e. not too much text, but key points, pictures and tables. Parberry also speaks against an excessive number of slides and warns the presenter about pitfalls when using a microphone. The question time after a presentation may be filled with people trying to gain reputation by tearing the presenter down, however try to remain composed, and do not be afraid to answer "I don't know".

III.II My Possible Major Weaknesses

1. Not choosing the right material to be presented, i.e. including too much.
2. Not using repetition properly and loosing the audience.
3. Using information-free utterance and fashionable turns of phrase.
4. Being anxious and loosing focus because of it.
5. Being afraid of answering questions from the audience with "I don't know".

[1] `https://www.csee.umbc.edu/csee/research/cra/etw98/speaker.pdf`

Deliverable IV

- Write your answers on the questions in cases A, B, C and D covered during the lecture (see the lecture slides).
- Did your opinion on some of the ethical issues changed after you discussed the cases in the groups/classroom? Comment briefly on how if your answer to this question was positive.
- In the report write the names of all students participating at the group discussion.

IV.I Group Session

Participants

- Claus Wiingreen, cwiing13
- Jonas Madsen, jsma13
- Lars Nielsen, laniel13
- Louise Frederiksen, lfrede13
- Mathias Michno, mmichn13
- Mathias Rasmussen, mvra13
- Rune Larsen, rala13
- Simon Pedersen, sape13
- Søren Larsen, slar12
- Thomas Nielsen, tpne13

Case A

What should Alyssa do?

Alyssa should not put Ben as co-author, since he has not done any of the work. She should seek funding, and it that is not possible, she should withdraw the paper from the conference.

How should Ben have handled the situation?

He should have commented on the drafts and addressed the problem from the start, rather than hiding it and being shy of conflict.

Is it reasonable to have expected Alyssa to have behaved any differently?

If we think ethically, no, she would not have behaved any differently. But if you look at it from a job perspective, she could have chosen differently because of the risk she takes, if she gets into a rift with the professor.

Case B

Do you see any cases of irresponsible conduct?

It is irresponsible conduct of Anna to put Bob as co-author and of Bob to let her do it. It is also irresponsible conduct of Bob to put the paper in his PhD thesis, making it plagiarism.

If so, what would have been the appropriate responsible conduct?

Anna should have gone to the professor with her draft and talked to him, what options she had, both including and excluding Bob.

What actions should be taken in the present situation, if any?

It is not really possible to take actions, that could prove that they are guilty, without hitting innocent people.

Case C

If the experiments are part of a series, are Paula and her students justified in not publishing them together?

If you decide to not publish them together, you have to make sure, that the papers do not become too simple. There is a danger of repetition if the experiments are split up and a danger of no new material.

If they decide to publish a single paper, how should the listing of authors be handled?

Alphabetical order.

If a single paper is published, how can they emphasize to the review committees and funding agencies their various roles and the importance of the paper?

This should not be necessary, but it can be done in the preface.

Case D

How should the data from the two suspected runs be handled?

Present and discuss why they are different.

Should the data be included in tests of the statistical significance and why?

You could argue that they should not be included because of the fluctuations.

What other sources of information, in addition to their faculty adviser, can Deborah and Kathleen use to help decide?

Contact laboratory workers and other professors.

IV.II Plenary Session

After discussing the cases in plenum I did not change opinion. However I did become aware of other ways to present authors than alphabetical, e.g. divided into groups.

Deliverable V

- Write your answers on the questions in cases A, B and C covered during the lecture (see the lecture slides).
- Did your opinion on some of the ethical issues changed after you discussed the cases in the groups/classroom? Comment briefly on how if your answer to this question was positive.
- In the report write the names of all students participating at the group discussion.

V.I Group Session

Participants

- Christian Ovesen, covese13
- Henrik Thomsen, hthoms13
- Ida Thuesen, ithues12
- Kenneth Haunstrup, khch12
- Mathias Michno, mmichn13
- Simon Sillesen, ssille13
- Tristan Bendixen, tbendi13
- Zobair Qauomi, zqauom12

Case A

Do you see any cases of irresponsible conduct?

Yes, it is plagiarism to copy other people's work without giving credit. Yes, he listed a manuscript as a part of the thesis, but he hasn't included it in the thesis.

If so, what would have been the appropriate responsible conduct?

Give credit where credit is due and use quotation mark. Either he should not have included it or he should have written about it.

What actions should be taken in the present situation, if any?

As the plagiarism is not related to the main technical piece, and we assume that the motivating piece is not as essential, we decide: Reject the thesis, and then a committee should decide whether Mark should have a second attempt at his thesis. Inform the world leading university of this misconduct.

Case B

Do you see any cases of irresponsible conduct?

The university and professor P does not know about the conversation between John and ComCom and John is not in a position to "sell" the idea to ComCom.

If so, what would have been the appropriate responsible conduct?

John should have mentioned the interest from ComCom to Professor P and to the university. He has the right to talk about the product, but he is not allowed to sell the idea.

What actions should be taken in the present situation, if any?

Cancel the deal he made with ComCom. He is not in a position to sell it and ComCom should know that. Or, tell the university and professor P about the idea and give ComCom the opportunity to counter the second contract.

Case C

Does Ben have any way of receiving credit for his work?

If Ben can prove that his work is the original technique, he can potentially receive credit. If Dr. Freeman does not agree to give credit, he can, as an extreme alternative contact the conference about the experimental technique being unoriginal. If Ben cannot prove this, Ben cannot claim he was the original inventor.

Should he contact Dr. Freeman in an effort to have this work recognized?

Yes, Ben should contact Dr. Freeman personally first.

Is Ben's advisor mistaken in encouraging his students to be so open about their work?

No, Ben's advisor is not mistaken. The problem is not that Ben was too open, but instead that Dr. Freeman did not correctly cite Ben's work.

V.II Plenary Session

My opinion did not change after discussing the cases in plenum.

Deliverable VI

- Select and read one paper of your interest from the recommended reading of blocks 1 to 5. (The paper by Ian Parberry from block 3 cannot be selected.)
- Write a one paragraph summary of the content of the paper.
- Why did you choose this paper and what was the most important thing that you can perhaps use in your future professional career?

- What topic(s) covered during the first part of the course did you find most interesting?

VI.I Summary of *How to Write an Abstract* by Philip Koopman[2]

Philip Koopman argues that abstracts are vastly more important than they were a decade ago, because of the way publications and scientific work is presented though databases and search engines today. He also presents a checklist, consisting of the parts a good abstract should have. The checklist requires the following parts in an abstract: *a*) Motivation - Why do we care about the problem and its results; *b*) Problem Statement - Defining and presenting the problem and its scope; *c*) Approach - How the problem is solved; *d*) Results - Presenting the results; and lastly *e*) Conclusions - What does this mean and how can or will it be used. On top of follows said checklist one should try to limit the abstract to between 150 and 200 words, and be sure to include key points and keywords relevant to the scientific work. Koopman concludes that writing an abstract is hard work, but a good abstract will greatly benefit the publication.

VI.II Motivation

I choose *How to Write an Abstract* because the abstract is an important part of being able to reach more people with any publication. Moreover I believe that writing a good abstract is the skill I lack the most compared to the different topics of this course to far. The most important or helpful thing from this paper, is the checklist, which is easy to follow and provides a solid base for writing "the best" abstract in any future papers or publications of mine.

VI.III Most Interesting Topics

The most interesting topics were *Topic 2: Writing a Scientific Paper* and *Topic 3: Presenting a Scientific Work*. Both of these provided usable knowledge and techniques that are directly applicable to the work we are doing in e.g. Semester Projects.

[2] `https://users.ece.cmu.edu/~koopman/essays/abstract.html`