582519 Scientific Writing for MSc in Computer Science:

Ethics of writing

Lecture 4, 24.9.2013

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Last week's task: How did it go?

-- fill comments here --

Paper layout
List of references and its structure
Table of contents
First pages

Honesty and ethics of science

- Science is based on trust
  - Researchers are honest
  - Research is ethical
- Honesty
  - Ideas, results, and conclusions presented are new
  - Assumptions are not presented as facts
  - Truth is not misrepresented
- Violation of these norms of behaviour is a serious matter!

Reviewing / Refering

- Criticising and analysing others' work
  - Research article
  - Theses, reports, seminar work
- Important part of the scientific process
- Should be objective and fair
- Referee statement / reviewer statement
  - Analysis of the contents of the article
  - Not evaluation of the author or his/her working place

Reviewing / Refering (2)

- Conflicts of interest in refering
  - Personal or employment relationship
  - Competition for an appointment
  - Conflicting ideas/opinions
  - Too similar research interests/ideas

- A suspicion of non-objectiveness

=> refuse the referee task

Reviewing / Refering (3)

- Confidentiality
  - As referee / reviewer you are not allow to publish the articles or parts of them
  - Not even allowed to show to others, if not an assisting referee
- Totally out of line
  - Suggest rejection, and then
  - Use the ideas/results as a basis for referee's own work

Plagiarism

- The most obvious form of unethical behaviour in science
- Attempt to get honour of work that somebody else has done
- Using existing material without citing to the original work, or citing it inadequately
- Intentional and unintentional plagiarism
  - disregard of the norms of ethical behaviour
  - ignorance of those norms

Plagiarised material

- Plagiarised material can be
  - ideas
  - results
  - text, pictures, figures, tables
  - whole articles or part of them
- Sources of the plagiarised material
  - published articles
  - web pages
  - newsgroup articles
  - e-mail message, ...

Forms of plagiarism

- Use of others' ideas or results without acknowledgements
- Direct copying of material
  - without citing the source
  - citing the source, but not indicating the exact quotation
- Using material with inappropriate or inadequate citations
  - What part of the text the citation covers?

Forms of plagiarism (2)

- Copying the structure of a source
- Using pictures
  - Copying of a unique picture (by scanning or re-drawing it) always plagiarism
  - If modified from its original form (even translated), the source must be indicated
- Self-plagiarism

How not to plagiarize (source: University of Toronto)

http://www.writing.utoronto.ca/advice

- The purpose of any paper is to show your own thinking, not to create a patchwork of borrowed ideas.
- Citations are used to demonstrate that you know what is going on in your field of study.
- In academic papers, you need to keep mentioning authors and pages and dates to show how your ideas are related to those of the experts.
- As you read the text summarize useful points in your own words. (Do not copy to draft – that causes trouble!)

www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize

Self-plagiarism

- Copying/reusing one's own text (previous work)
  - Exception: an extended/complete version of a conference/workshop paper that is published in a journal
- Multiple articles based on same results
  - Publishing improper unless full cross-referenced
  - Simultaneous submissions to different publication forums must be disclosed

Self-plagiarism (2)

- Against good ethics
  - Even the description of the background of the work should always be rewritten
  - A member of a research group cannot use texts of the other group members
- Question of copyright
  - Publication forum has usually the rights for the presentation
  - Author has the rights for his/her ideas!

Authorship

- Each author of an article should have some contribution to the contents of it
  - Implementing an algorithm not enough
  - Giving feedback not enough

  => mentioned in Acknowledgements
- Preferred: contribution to ideas, experimentation and analysis
- Authors must give their permission for authorship
- Being a member of a research group does not automatically give the authorship

Authorship (2)

- Postgraduate studies
  - Student and supervisor together
  - Supervisor should not publish alone results that the student has obtained
  - Student should not publish the results without consulting the supervisor
- Order of the authors
  - Alphabetical order by last names
  - The author with the biggest contribution first

Publishing on web pages

- Articles published only in authors' or research groups' web pages
  - Intention to publish as a conference, workshop or journal article
  - Can be considered by a publication forum as published
  - Usually not refereed
- Articles already published in a conference, workshop or journal
  - Not always allowed
  - When allowed, must typically include the copyright notice of the publisher

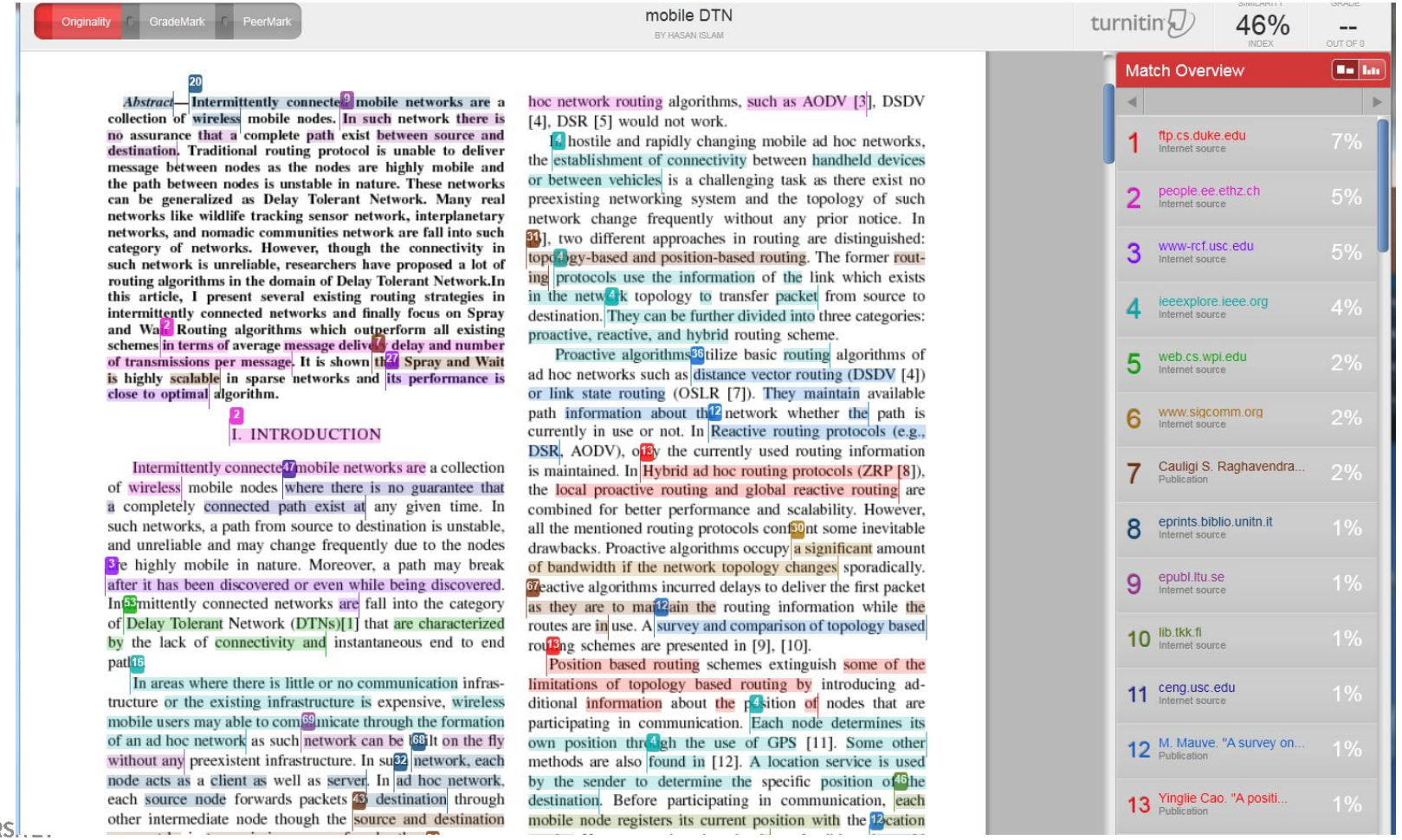
Detecting plagiarism

- Usually it is easy to tell when someone has copied text
- Language changes
  - Language style varies
  - Fluency of text varies
  - Terminology changes
    - especially if copied from different places and sources
  - Words not a normal part of the writer's style and vocabulary

Detecting plagiarism (2)

- Digital copies of articles make copying easy
  - **BUT** they can be easily found also by the referees and teachers!
- Our university and department **do not tolerate plagiarism**, i.e. copying the work of others
- Technical tools are used for detecting plagiarism and checking the originality of submitted reports, seminar works and theses!

Example of detection tools: Turnitin



Cut and paste plagiarism

promote their products and services to customers, in monitoring inventory of products and in shopping in stores through RFID. As per industrial studies mobile marketing can be accepted by customers if the marketing benefits them.

Researchers suggested that some improvements in MCDs such as functionality of the keyboards and screens of MCDs, and the prolonged existence of the devices, can increase the number of features on the devices for an increased number of consumers in our society.

A. PRIVACY AND SECURITY CONCERNS

"Location privacy" is the ability to control the disclosure of one's location information to other parties.

According to researchers benefits of location-based services are only one side of the coin, the issues of customer privacy is the other side of it. As mobile telephony becomes very common which enables location-based services to spread outside closed environments, which raises the serious issues of customer privacy in relation to the building of location based technologies and services. Customer privacy concerns are about control of personal and private information on the mobile devices and about fear of frequent incidents on the devices of likely identity theft and intrusion on the privacy of consumers.

Researchers further discuss about role of privacy activists, that they have cited many fundamental issues such as the mismanagement and marketing of information on citizens and

of America only governs the federal government and the financial and health care industries in information and in rights to privacy but there are no explicit privacy protection rights available in the Constitution of the United States, in other American industries generally. Therefore consumers are dependent on privacy policies of other industries.

Whereas according to European Directive 95/46/EC, for privacy protection information has to be processed fairly and lawfully, collected for explicit and legitimate purposes and not further processed in a manner inconsistent with such purposes, not excessive in relation to the collected or processed purposes, current, and in a form that permits identity of consumers no longer than necessary.

Even in the presence of such a coherent, well implemented and very protective legislation than in America, European consumers still have to be dependent on privacy and security practices in other industries like in America.

Therefore according to researchers, poorly defined and executed legislation policies for controlling the use of location based information, are aggravating privacy issues in America. Federal legislation defined in the Telecommunications Act of 1996, location-based information about a mobile consumer as customer proprietary network information (CPNI) for completing calls for customers but not for marketing products and services to them. Further it was not clearly defined in this Act for the carrier or the provider was the form of opt-in or opt-out by customers for the products and services. However, because of this inconsistency and vagueness in legislation the

What about this one? Plagiarism or not?

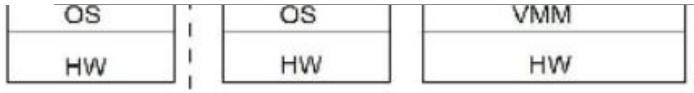


Figure 4.1 CloneCloud system model [4]

Another limitation of CloneCloud is its inability to migrate native state and to export unique native resources remotely. That's why it focuses on migration at execution points where no native state in the stack or the heap needs to be collected and migrated. CloneCloud neither virtualizes access to native resources that are not virtualized already or are not available on the cloud.

Despite of CloneCloud's limitations, Chun et. al. noticed significant speed-ups when they tested their prototype with three different applications. Their prototype delivered up to 21.2x speed-up without programmer involvement.

B. AlfredO

Giurgiu et. al. [5] have also researched how to dynamically distribute applications between the cloud and mobile devices. Their approach has many similarities and differences with CloneCloud. They use AlfredO to distribute an application between a mobile phone and a server. It is based on OSGi, which has been used to decompose and loosely couple Java applications to software modules.

Giurgiu's et. al. approach does not yet do resource profiling automatically so it has to be done manually. They compose a

architecture of cloud storage system. Cloud storage system is based on cooperation between multiple devices, many application domains, and many service forms. There exist many different cloud storage service platforms, but they are usually complex and incompatible. Therefore, Zeng. et. al. want to propose a layered and generalized architecture of cloud storage. It consists of five layers: network and storage infrastructure, storage management, metadata management, storage overlay, and service interface (Figure 5.1).

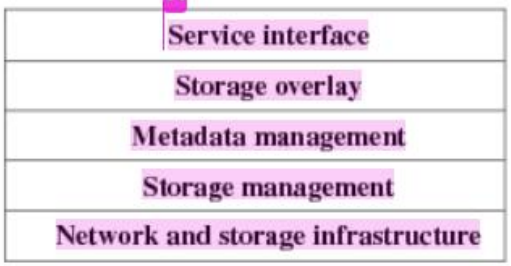


Figure 5.1: Cloud storage layered model [6]

According to Zeng et. al., cloud storage system is actually an implementation of storage as a service which is expected to be available, reliable, cooperative, scalable, secure, concurrent, and economical. When constructing cloud storage system requirement analysis, capacity prediction and performance planning deployment, verification, distribution,

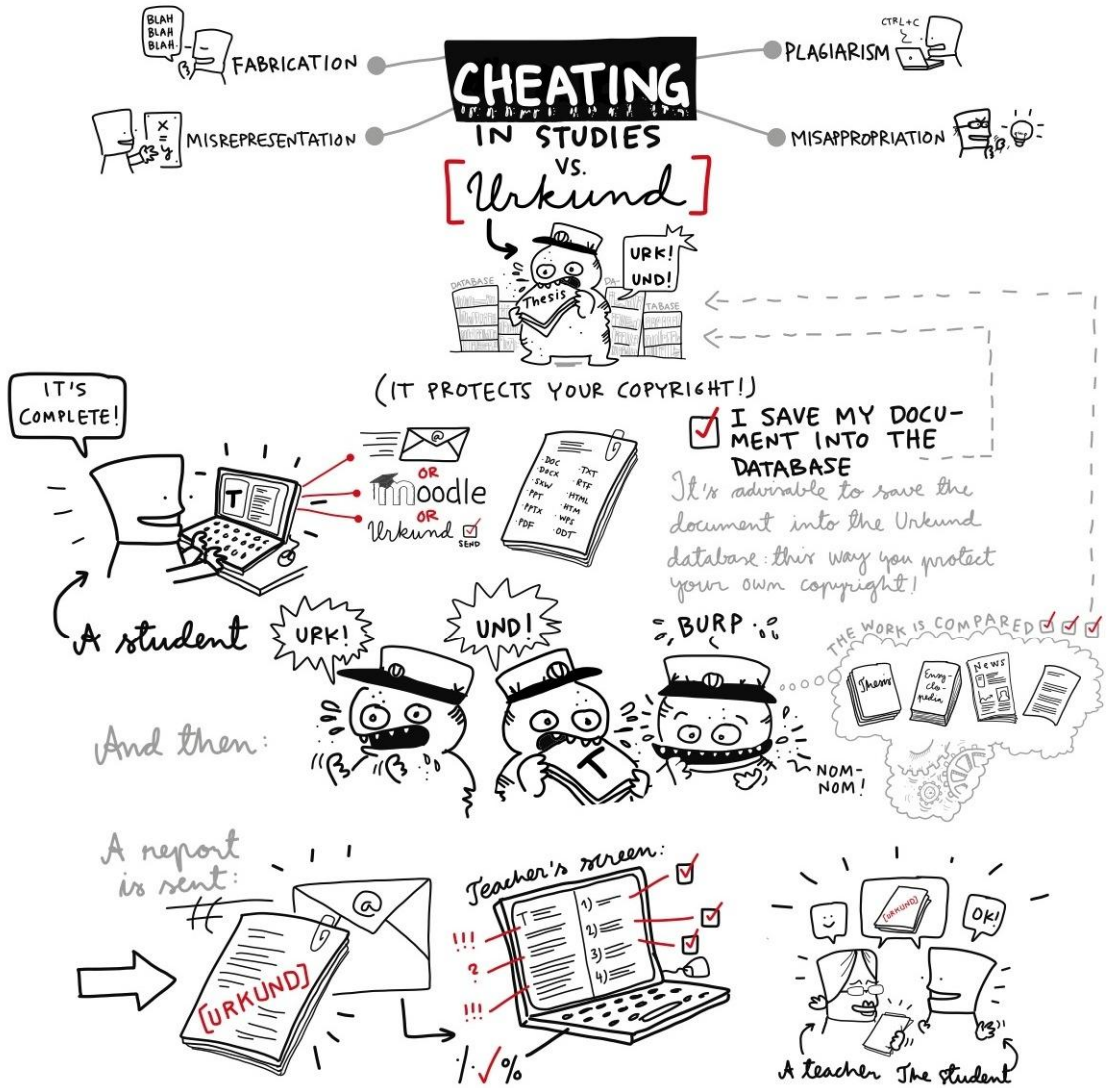
Plagiarism detection at University of Helsinki

- Using URKUND
  - submissions via email or moodle
- Used in this course for all submissions (even the drafts)
  - group leaders will tell your the email address

- More information see:

http://blogs.helsinki.fi/alakopsaa/for-student/?lang=en

- National guidelines
http://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf



Read more at:
http://blogs.helsinki.fi/alakopsaa

REDANREDAN.FI

Consequences of plagiarism in general

- Article is not published
- Lost of reputation
- Lost of a job
- Even jail
- ...

Consequences of plagiarism (2) for students

- Thesis/report/seminar work is not accepted
- Course is failed
- Course must be retaken
- ...
- Personal meeting with Head of the Department, Dean of the Faculty and/or Rector of the University
- Student will lose the study right, i.e., is thrown out of the university

Avoiding plagiarism

- Take model of others work (outlining, writing, citing), but don't copy them
- Cite your sources
- Make it clear what is the origin of your text
  - Distinguish what you state and what the others have stated
  - Paraphrase the ideas of others

Avoiding plagiarism (2)

- Show direct quotations with quotation marks (even direct translations) and proper citations
- Make your own pictures, tables, etc.
- Give in the list of references only those articles that you have read and cited

Paraphrasing

- Writing the ideas of some other authors in your own words
  - Without changing the original meaning
  - Paragraph structure not the same
  - Sentence structure not the same
  - Words not too similar to the original
- Requires that you understand what the others have stated
- Paraphrasing can also help to understand a difficult text

Paraphrasing (2)

- Basic process
  - Read the source and understand it
  - Write/paraphrase the contents with your own words
  - Check your version against the original
  - Revise if necessary
- Different approaches of paraphrasing (writing)
  - **Read the source, put it a side, and do not look at it, while writing**
  - Read the source and take notes, have a break, use the notes while writing
  - Paraphrase while looking at the source

Paraphrasing (3)

- Key steps of the paraphrasing process
  - Changing the structure
    - Paragraph structure
    - Sentence structure
    - Keep just the main and most relevant ideas
  - Changing the words
    - Keep specialised words and terminology, i.e., shared language
    - Find alternative words and expressions for other words and phrases
      - Thesauruses, dictionaries

Paraphrasing (4)

- Paraphrasing is an iterative process
  - Start by changing the structure, not the words
  - Change the words
  - Make further changes to the structure
  - ...
- Several iterations may be needed!

Misrepresentation

- Occurs when
  - the results obtained improperly described and/or overstated
  - the value of previous work diminished
- Description of the results
  - Accurate, precise, correct, truthful
  - All restrictions explained
  - Both negative and positive results reported
  - Detailed enough so that experiments can be repeated

Misrepresentation (2)

- Unintentional mistake is not misrepresentation
- The most serious form: totally incorrect statement(s)
- Other forms:
  - Underestimating previous work
  - Emphasising own results (even preliminary or somehow restricted)
  - Omitting unsuccessful experiments and their results
  - Omitting the change history of web documents

Sources

- Books
  - Zobel, J., Writing for Computer Science: The art of effective communication. Springer-Verlag, Singapore, 1997.
  - Lester, J.D., Writing Research Papers: A complete guide. 7th edition. HarperCollins College Publishers, New York, 1993.
  - Barrass, R., Scientists Must Write: A guide to better writing for scientists, engineers and students. Chapman & Hall, London, 1995.

Sources (2)

- Online guides, for example,
  - Writer's Handbook of University of Wisconsin-Madison (USA)
  - Online writing lab of University of Purdue (USA)
  - Writing skills guide of the Royal Melbourne Institute of Technology (Australia)
  - Justin Zobel's page with links to Technical writing and research ethics

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Time management

-How to balance studies, sleaping and hobbies/family life / free time?

  - any ideas?

- Timetable for studies
- Study plan: which courses and when?

Decisions, skills, tools

Cristallising goals
→ motivation, plans, followup

Selection and priorisation of tasks
- based on values
- systematically
- clear subgoals in terms of
Contents, quality, schedules
- persistence, courage

Long term resoursing
vs instant pleasure

Control of own and shared
Ways of work, e.g. Reporting,
Feedback, splitting work

Removal of disturbance
- materials, tools, peaceful work
Environment, notes available for
No-delay access

Self confidence

Distributing one's own resources according to own values

Feeling of acceptance, value rapport

Process skills, leadership, subordinance skills, expert role

self

Management Of your own work

Feeling of control
Satisfaction of work
Quality of work
Keeping deadlines

Cyclic development of life management

Threats, hinders

Stress, anxiety, exhaustion

Feeling of insufficiency

Avoiding larger tasks

Procastination

Unclearly stated goals

Decisionmaking difficulty ←
Partititioning of work, commitment

Unrealistic expectations →
Difficulty estimating quality of work
Failure to resource

Difficulty reporting
→ failure to receive advisory

Difficulty completing task
← expectations on advisor's push