

Ethics and Policy Issues in Computing

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Today

- Planning a paper
- Debate: webcams
- Privacy wrap-up discussion

- Next time: Freedom of Speech

Organizing a research paper

- Decide up front what the point of your paper is and stay focused as you write
- Once you have decided on the main point, pick a title
- Start with an outline
- Use multiple levels of headings (usually 2 or 3)
- Don't ramble!

Typical paper organization

- Abstract
 - Short summary of paper
- Introduction
 - Motivation (why this work is interesting/important, not your personal motivation)
- Background and related work
 - Sometimes part of introduction, sometimes two sections
- Methods
 - What you did
 - In a systems paper you may have system design and evaluation sections instead
- Results
 - What you found out
- Discussion
 - Also called Conclusion or Conclusions
 - May include conclusions, future work, discussion of implications, etc.
- References
- Appendix
 - Stuff not essential to understanding the paper, but useful, especially to those trying to reproduce your results - data tables, proofs, survey forms, etc.

These sections may
be different in your papers

Road map



- Papers longer than a few pages should have a “road map” so readers know where you are going
- Road map usually comes at the end of the introduction
- Tell them what you are going to say in the roadmap, say it, (then tell them what you said in the conclusions)
- Examples
 - In the next section I introduce X and discuss related work. In Section 3 I describe my research methodology. In Section 4 I present results. In Section 5 I present conclusions and possible directions for future work.
 - Waldman et al, 2001: “This article presents an architecture for robust Web publishing systems. We describe nine design goals for such systems, review several existing systems, and take an in-depth look at Publius, a system that meets these design goals.”

Use topic sentences

- (Almost) every paragraph should have a topic sentence
 - Usually the first sentence
 - Sometimes the last sentence
 - Topic sentence gives the main point of the paragraph
- First paragraph of each section and subsection should give the main point of that section
- Examples from Waldman et al, 2001
 - In this section we attempt to abstract the particular implementation details and describe the underlying components and architecture of a censorship-resistant system.
 - Anonymous publications have been used to help bring about change throughout history.

Avoid unsubstantiated claims

- Provide evidence for every claim you make
 - Related work
 - Results of your own experiments
- Conclusions should not come as a surprise
 - Analysis of related work, experimental results, etc. should support your conclusions
 - Conclusions should summarize, highlight, show relationships, raise questions for future work
 - Don't introduce new ideas in discussion or conclusion section (other than ideas for related work)
 - Don't reach conclusions not supported by the rest of your paper

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Resolve:

- *"The State of Pennsylvania should adopt legal restrictions on the use of web cams"*
 - *Rachel (pro)*
 - *Aaron (con)*

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Engineering Data Privacy

- Privacy by policy
- Privacy by architecture

Privacy stages	identifiability	Approach to privacy protection	Linkability of data to personal identifiers	System Characteristics
0	identified	privacy by policy (notice and choice)	linked	<ul style="list-style-type: none"> unique identifiers across databases contact information stored with profile information
1	pseudonymous		linkable with reasonable & automatable effort	<ul style="list-style-type: none"> no unique identifies across databases common attributes across databases contact information stored separately from profile or transaction information
2		privacy by architecture	not linkable with reasonable effort	<ul style="list-style-type: none"> no unique identifiers across databases no common attributes across databases random identifiers contact information stored separately from profile or transaction information collection of long term person characteristics on a low level of granularity technically enforced deletion of profile details at regular intervals
3	anonymous		unlinkable	<ul style="list-style-type: none"> no collection of contact information no collection of long term person characteristics k-anonymity with large value of k

Source: Rahul Tongia

Webcams and Hospitals

- Parents want to be able to look in on children
- Hospitals want to protect privacy
- Hospitals want to avoid legal liability

Discussion / Q&A
