Lessons I learned writing MobiSys papers

Lin Zhong

http://www.recg.org
Respect your readers
“You are not writing a novel.”

–Mark Corner, University of Massachusetts, Amherst
Shepherd of my very first MobiSys paper (2005)
You wish how your reviewers read your paper
The more likely case

http://edwinleap.com/flying-cross-country-in-steerage/
The more likely case
Or......

http://www.huffingtonpost.com/liz-orsquo/10-new-years-resolutions-_4_b_4512525.html
How reviewers read your submission

• They skim

• Due to low acceptance rate, they often start with a subconscious bias toward reject and simply look for reasons to reject

• They are impatient, irritable and perhaps hostile
Impatient, irritable & hostile

http://www.huffingtonpost.com/michael-goldberg/how-to-annoy-your-audience_b_5504094.html
Impatient, irritable & hostile
1. Write top-down

• Point first, then explanation and warrants

• We evaluated systems A and B on Google Glass and ImageNet. Figure 3 shows the measured frames per second for both systems. When the frame resolution is low, A achieves similar frames per second as B. As the resolution increases, A gradually outperforms B; it outperforms B by 20% with the maximum resolution.

• Our evaluation shows system A outperforms system B by up to 20%. The evaluation is based on Google Glass and ImageNet. Figure 3 shows the measured frames per second for both systems. When the frame resolution is low, A achieves similar frames per second as B. As the resolution increases, A gradually outperforms B; it outperforms B by 20% with the maximum resolution.
1. Write top-down

- The point is usually NOT a summary

- Apply this at all levels: section, subsection, paragraph, caption
  
  - The first few sentences of a paragraph
  
  - The first paragraph of a section
2. Be concise

• Remove words, paragraphs, sections, figures, and concepts if they are not absolutely necessary
  • You don’t have to use all 14 pages!

• You don’t have to tell readers everything you know. You tell them enough to appreciate your work
  • Focus
More is worse
More is worse

3. Don’t handwave

• Quantify a claim.
  
• After ``our solution significantly outperforms the state of the art'', quantify ``significantly'' with ``improving the data rate by three times''.

• Cite a source
4. Don’t haunt readers

• Anticipate questions from readers and answer them immediately

  • “To solve the problem, one must deal with A, B and C. This work focuses on A and B without addressing C.” (Why so?)

  • “Figure 3 shows that our solution improves performance except when the frame rate is extremely high.” (Why so?)

• Or acknowledge these questions and provide a forward reference to where you answer them
5. Don’t surprise

- Promise something early on but fail to deliver later

- Don’t over-claim

  - A testbed used in evaluation is not necessarily a prototype

  - Indicate you solved three problems but the rest of the paper already addressed two

- If your advisor writes the introduction, you have to read it and make sure it does not over-claim
6. Share negative results

• The goal of your evaluation is NOT to show your solution works.

• Rather, it is to find out the scope within which it works and that it does not.
How to work with your advisor on writing
Ask feedback early &
Make sure your advisor reads it
Have a thick skin

Here, I made comments on the paper you wrote.

Um...

I got a little carried away with the red ink...

So I summarized my comments in the back page.

Is... is there anything you liked about it?

It didn't make me vomit.
Persevere and you win!