Report from the Middlestates Committee
On PhD Defenses

Members of the Committee:
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Our committee was tasked with sitting in on PhD thesis and MS Thesis and seeing if they were presented well. (There was only one MS thesis defense in the time period and nobody on the committee was able to go to it.) We interpreted this as answering the following questions.

1. Was the problem they were working on understandable?
2. Was their contribution understandable?
3. Did you sense that the work would be understandable for people IN THE FIELD?

1 Summary

Our committee sat in and evaluated 6 PhD Thesis defenses.

The students generally had good slides and gave nice poised talks so long as they stayed in their area. The three questions above all had answers of YES, YES, YES. But there were other issues that arose.

Almost all of the talks had the following problems:

1. The student didn’t present the motivation behind their problem.
2. The student didn’t present the prior work on their problem. Hence it was hard to tell what they did that was new.
3. The students didn’t present in closely adjacent areas and had a hard time answering questions about it.

Bill Gasarch also chaired this committee in 2008. The talks were far worse then. The students have gotten better at the mechanics of a talk—how to make good slides, how to talk smoothly and non-monotone. The issues left may be intrinsic to the PhD process— which is to learn more and more about less and less until you know everything about nothing. Hence its hard to NOT be somewhat narrow.
For some of the above it is not clear if the problem is in the presentation or the students knowledge. In any case advisers should be made aware of this shortcoming in students and advise them to fill in those gaps in the students knowledge and in their talks.

2 Report on PhD Defense of Student 1

General Comments:

The talk was clear and the student was poised. Even so, there were some problems with the presentation which we discuss below.

Was the problem they were working on understandable?

Someone outside the area (like ourselves) had an idea of what the problem being worked on was but didn’t quite grasp it. Almost the entire talk was on what the student had done (and this was understandable) but the original problem got lost. The student should have stated the problem he was focusing on at the beginning and re-iterated it during the talk.

Was their contribution understandable?

It was clear what the student had done. It was not clear what was done by others before him. There was not brief review of past work which made it hard to put his work in context. Even when asked about this he had a hard time separating out what was already done by others, what was done in the project, and what was done by him.

Did you sense that the work would be understandable for people IN THE FIELD?

Absolutely yes. The people in the audience who were in the field understood what he was working on and asked many questions which he was able to answer clearly.

Formal Ratings

Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.

- Presentation:(2)
- General Comm. Skills:(2)
- Ability to answer questions: (4)
3 Report on PhD Defense of Student 2

General Comments:
The talk was clear and the student was poised. Even so, there were some problems with the presentation which we discuss below. (NOTE- this is the same paragraph as the last student- this is NOT a typo, they were similar.)

Was the problem they were working on understandable?
Yes. The problem was understandable to anyone who has programmed. This is partly a function of the material, but also at tribute to the speaker.

Was their contribution understandable?
It was not clear what the prior had work had been and what the student’s work was. I am sure that the student DID do a lot of good work and this likely outlined in the Dissertation itself; however, the talk itself did not do a good job of distinguishing his work from others.

Did you sense that the work would be understandable for people IN THE FIELD?
Absolutely yes.

Other Comments:
When the student was asked questions just a bit outside of the topic he was unsure how to answer the question efficiently. We sensed that he knew the answers but was a bit rattled by having to go off-script.

Formal Ratings
Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.

• Presentation:(2)
• General Comm. Skills:(2)
• Ability to answer questions: (4)

4 Report on PhD Student 3

Was the problem they were working on understandable?
The overall problem was understandable; but the student had difficulty in presenting where alternate methods, or state-of-the art GA methods would have problems, and where his contributions would lead to a better solution. Possibly, this material was in his dissertation, but not in his slides.
Was their contribution understandable?

Their contributions were understandable, but were not well distinguished from the state of the art. If this were a job talk, as opposed to a Ph.D. defense, perhaps more background material was necessary.

Did you sense that for people IN THE FIELD the guts of the work would be understandable?

Yes.

General Comments:

It seemed like good work, with solid contributions to the state-of-the-art.

Formal Ratings

Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.

- Presentation: (2)
- General Comm. Skills: (2)
- Ability to answer questions: (4)

5 Report on PhD Student 4

General Comments:

The student spoke in a soft Monotone and had an accent. This made the student hard to understand; however, the student’s slides were very good. Whatever we learned from the talk we, we learned from the slides. She may have been reading from the slides directly but this was hard to tell since we could not understand the words.

During the question phase the student, much like Mitt Romney, managed to avoid answering any question directly. Or even indirectly. It may be the case that the student didn’t understand the questions. However, some of them were such obvious questions that the student should have prepared for them (e.g., what is the application of your work?).

Was the problem they were working on understandable?

The slides early on did tell us the problem.

Was their contribution understandable?

Their contributions were understandable, however we did not get a notion of what was done before and how it compares.
Did you sense that for people IN THE FIELD the guts of the work would be understandable?
    Yes.

Formal Ratings
Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.

- Presentation: (4)
- General Comm. Skills: (4)
- Ability to answer questions: (5)

6 Report on PhD Student 5

General Comments:
The student began well with saying how two strings of bits can be similar in various metrics. The student then extended this to how other objects can be similar. But there was an unfortunate big gap between the intuition and clarify of two strings and the notion of similarity of other objects. This made the rest of the talk hard to follow.

The student had a bit of a monotone. The slides were good and the student clearly knew the material in the thesis. However, if the topic went outside of the thesis the student had a hard time answering questions. It is not clear if this is a knowledge problem or a presentation problem.

Was the problem they were working on understandable?
    It was clear the student was looking at how similar certain objects are. It was not clear what the measure was.

Was their contribution understandable?
    The student provided some information on what others had done, but not really enough to tell what the contribution was.

Did you sense that for people IN THE FIELD the guts of the work would be understandable?
    Yes.

Formal Ratings
Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.
7 Report on PhD Student 6

Was the problem they were working on understandable?
The problems were very understandable. The student presented the problem very well.

Was their contribution understandable?
The work was presented at a high level. The results were illustrated beautifully (as perhaps should be expected from a thesis in visualization). However, some technical details were avoided. Perhaps the student and his advisor felt that such items were adequately covered in the thesis document (to which I had no access).

Did you sense that for people IN THE FIELD the guts of the work would be understandable?
Yes, though there were several questions on details (which the student handled well).

General Comments:
He did not clearly present what the state of the art was, and what his specific contributions were in the presentation. there were a few questions on this. He handled questions well, and presented material well. Of several recent defenses I have attended, his presentation skills were the best.

Formal Ratings
Recall that (1) is excellent, (2) is very good, (3) is good, (4) is fair, (5) is poor.

• Presentation:(1)
• General Comm. Skills:(1)
• Ability to answer questions: (3)