Ph.D. Thesis Proposal – Guidelines

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The purpose of the thesis proposal is to provide answers to the following questions:

1. What is the *specific* problem being addressed and why is it important?
2. Are there existing solutions in the literature and what is the state-of-the-art? If there are existing solutions, why are they inadequate and in need of further work?
3. What will be the "*doctoral level*", (*i.e., the major*) contribution(s) of the thesis?
4. What is the specific proposed approach (or approaches)? Why are they likely to advance the state-of-the-art?
5. What specific work has been accomplished until this point in time? What results were obtained so far?
6. What remains to be done to complete the thesis research? Be as specific as possible.
7. What is the timetable to complete the work? Be as detailed as possible.

The thesis proposal document can be structured in different ways to provide this information. In any case, a summary of all the above should appear in the introduction. The literature review, especially the component related to existing approaches to solve the problem, should involve a *strong* critique. It should be very clear why the existing approaches are inadequate, thus leading into the proposed approaches. A strong critique requires being fair to previous work, e.g., you need to judge previous work by its goals and not by your goals. There should be a clear distinction between relevant necessary background (i.e. established theory) and inadequate prior solutions to the specific problem at hand. If there are *no* prior solutions known, that should be made very clear. Parts of a proposed approach may be fully conceived, others may depend on the results of future work. This should be made clear.

Some comments on writing: The thesis proposal (and thesis) needs to be written at a level accessible to a researcher in the discipline, not only to an expert in the particular sub-field. A scenario (with a figure) describing the problem which the thesis solves is a great way to summarize your contributions. Consider using an overview figure ("flow-chart") to describe your approach.