Your 5-10 page Intermediate Proposal should elaborate on all the areas from your 3-page initial proposal to make this a more finished proposal. This version is like a "dress rehearsal" for your final proposal. That is, it should be written as a technical paper – not just a brief outline. All the pieces of a well-written document should be in place – well-formatted document, topic sentences in paragraphs, smooth flow in the arguments, figures with captions, citations in the text pointing to the references section, grammar and spelling checks, etc. In particular you should add/augment/include the following:

- Complete introduction that motivates the project
  - Why is it an interesting problem to solve?
  - Who will care if you do a good job solving it?
- Background and related work (with citations)
- Proposed work – this is starting to be a detailed description of the project
  - Baseline deliverables – what you know you can get done
  - Additional ideas if you have time and energy
- Proposed demo
- You will add details to the initial proposal showing that you understand the problem and are forming a clear plan of action. This will include:
  - Project tasks
  - Components to be purchased
  - Components to be built or constructed
  - Required resources
  - Task interfaces
  - Testing and integration strategy
  - Schedule and milestones
  - Preliminary risk assessment and mitigation plans
  - Preliminary parts list, both SW and HW (you don't need vendor info yet).