These notes are a write-up of the remarks I jotted down and presented for the 314A lecture on 27Apr2004 - to post on the web site - as requested by one of the students.

1. General Remarks

I recommend you think like a co-author. The focus of your effort should be to generate constructive comments that are designed to enable the primary author to improve the next version of the document.

The more specific you can be and the more you put a 'positive spin' on the proposed changes - the better for the original author. I recommend you lead off with whatever positive remarks you have.

2. Specific recommendation on procedure to follow

The following recommended procedure is 'just a suggestion'. Only follow it if it makes sense to you. It is the procedure I have evolved over several decades - as I progressively attempted to streamline my document review processes (proposals, papers, ...) so as to do a good job, while conserving my time (since there is always some other tasks to do!). However, it may not work for you - so only incorporate those parts that do!

2.A Read and annotate by numbers

Read the paper and annotate the original with numbers - akin to using footnotes - whenever you read a portion of the prose that gives rise to some thought you think worthy of mention.

Allow yourself the luxury of reading slowly and thinking as long as you like. It make seem like this is not a good use of your time - but actually 'sustained reflection' is the very best way to learn.

2.B Hand write your thoughts on a separate sheet

Whatever your thought is - handwrite it (rather than typing it) on a separate piece of paper, using the same number as the one you annotated on the original paper. Handwriting, rather than typing, is important - as it is key that you do a good job of

elucidating and expounding the actually thought - SO THAT YOU KNOW WHAT YOU MEANT. It is not important that your note is understandable by any other human being.

Handwriting rather than typing may seem a trivial matter - but it's not. It allows you to focus more on the idea of what you are thinking, rather than typing, formatting, spelling, etc. This is important becuase when you are thinking new thoughts you are at the 'margin of your mind' - where doing things are the hardest. Focusing all your energy on getting the right thought out is key.

Here is a passage from Steve Maguire's book "Debugging the Development Process" which speaks quite eloquently to a similar notion:

"I've been programming computers for almost two decades, so you might be surprised to learn that I don't use a word processor when I set down to write technical documents or books such as this one. I write everything by hand on a pad of legal paper, and later transcribe what I've written into a word processor for editing. I'm obviously not computer-phobic, and writing the old-fashioned way with pen and paper certainly isn't easier than using a word processor.

Nevertheless, that's what I do. I discovered long ago that whenever I sat down to write using a word processor, I would get so caught up in editing every sentence the moment I wrote it that after a day's worth of effort I'd have written almost nothing. Editing was too easy, much easier than writing the next paragraph, and I naturally fell into the habit of doing the easy work."

2.C Group the comments into logical subsets

After you have written your thoughts, now group them into logical subsets. One way to do this is to simply mark the paper with names of categories you invent. Examples might be "good points" and "bad points". Then when you transcribe them into a document (i.e,. typing them up) you then make multiple passes on the comments - picking up each subset.

Alternatively, you might take scissors and cut up the pages, so you can then physically sort them into the subsets.

2.D Rewrite the comments/observations into the essay document

The next step is to rewrite the handwritten notes from the prose you wrote for yourself to more proper prose that is now intended for others. This is where you would first type - say into a word processor document.

2.E Finally, polish the electronic version through iteration

After you've typed up your comments - converting them into 'public prose' (if you will), then iterate on the document. Though it seems a pain, the best way to do this is to print the document out - i.e., review a paper version of the document, not the on-line version. This seems slower and more cumbersome - but it is more likely to evoke some thoughts or observations that you would not have by reviewing the on-line version.

To the extent there is suitable time, keep iterating until you have a final read where you have no further thoughts! [Of course, at some point, you simply have to 'let go' - if only for the sake of time.]

3. So why do this?

A few final remarks (without explanation or supporting argument) about why this may be a good approach to use:

- (a) Though it is very difficult to perceive this you will write a different document than you otherwise would. Your observations will be different and what you write will be significantly different if handwritten than if initially typed. This is an extremely subtle process and not easily seen but I finally convinced myself (over several decades time) that this 'difference effect' definitely exists.
- (b) The document you write will be higher quality.
- (c) The time it takes you to produce that level of quality can't be done in less time any other way.