

6.933J/ STS.420J
The Structure of Engineering Revolutions

Project History Proposals:
Guidelines November, 2001

Each group should submit a proposal for their project history by Wednesday, November 14 at 5pm. The proposal should give us a detailed sense for what work you expect to do in the next month before these are due. It should be 3-4 pages, single spaced. Part of the point of this exercise is to enable us to help you get these projects focused and on track, so tell us anything you feel we need to know, or anything you'd like help with. The better and more comprehensive your proposal, the more we can help.

There is no fixed format for the proposal, but it should cover the following (not necessarily in this order):

Research conducted so far – list people interviewed, books, patents, archives, videos, etc. Include an evaluation of the sources (e.g. "XX's account has great detail but it shows only the junior engineer's view, it misses the big picture," or "document XX sheds light on the early thinking but it was written to impress investors so it may not be entirely representative"). Have you found some key documents which crystallize the salient issues? (i.e. a business plan, a memo, a distribution list, a proposal, etc.)

How do these accounts of the technology vary? Remember, you cannot rely on a single source for the history.

Relationship to context – list secondary sources that give background, context for the technology (What other kinds of machines / solutions were people building? Who was this project competing against? What was happening at MIT at the time? Why was the government/customers interested in technology X?)

Research to be done – documents you're going to examine, people yet to be interviewed, people you'd like to interview if you can find them. Documents you'd like our help to locate or interpret.

Identify a facilitator who will serve for the rest of the term to make sure things get pulled together.

Focus of the project history – How will you narrow down the large topics into questions you can pose, analyze, and answer in your final paper? An example might be "We choose not to focus on technology X overall, but on the engineering decision involving the design of Product X" or "We are looking at the political difficulties encountered during the project due to the decision to take a radical new approach to designing the X." See framing questions below.

Framing questions and thesis – These are the high level intellectual questions from which you will develop a thesis. The thesis will make your project history more than just a story about company X (local interest) but a story about engineering and how new technologies develop (global interest). You don't have to explicitly address ideas from the course reading but that might help. Look at your notes from the 2nd day of class for the "major themes" as well. Example framing questions might be:

What happens when a technological trajectory is interrupted by a business failure?
What kinds of new skills did this technology require? Who actually built it?
How was success defined and who got to define it?
How does the controversy over XX reveal the important issues at stake?
How did the engineers at XX deal with uncertainty?
Was the founder of company XX doing heterogeneous engineering?
How did XX convince others to trust the new technology?
What convinced XX to trust it in the first place?
How did the engineering team make their new technology acceptable?
How did XX build a company, a new technology, and a new product simultaneously?
Can you characterize the corporate culture at XX?
Did participants argue that the technology was following a "natural trajectory" in order to get their new ideas accepted? Did it follow that trajectory in the end?
Who defined the line between "technical" and "non-technical" for what purposes?
Did XX use the rhetoric of "invention" to sell an old idea?

Engineering Concentration – which engineering concentration(s) are you shooting for, and what is the justification for why the project should fit under it/them? (just a sentence or two is sufficient)

Suggested commentators – give us a few names (& emails) of people who are experts in the technology but who were not participants in the story. That way we can get started arranging the final presentations.

Preliminary Outline – take a shot at laying out how you'll tell the story; it can be useful for identifying areas in which you need to know more. Take a look at MacKenzie, Christiansen, Kuh, etc. and the project histories on the web and see how they do it.

Oral presentation [*optional*] – Begin thinking about how to present this story in thirty minutes. Who will present which parts? What visuals will you use? Do you have documents that would be well suited to overhead slides?