This assignment is worth 20 points or 20% of your final grade and is due on September 30, 2012. Please attach a link or the actual HTML files in the drop box.

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9/24/12
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History of Systems Analysis

This pathfinder will explore the history of system analysis in the computer age. How did the growth of technology change the methods of system analysis? What were some significant and still relevant methods that were developed? This guide is designed for people interested in the topic of how system analysis has changed with the continued invention of new software. The time period will be from the general use of the computer in systems analysis. I will concentrate on English speaking countries.

Books:

Hughes, A. C. & Hughes, T. P. (2000). "Systems, Experts, and Computers: The Systems Approach in Management and Engineering, World War II and After (Dibner Institute Studies in the History of Science and Technology)". Cambridge, MA: The MIT Press.

Provides an overall view of the rise of system analysis in the post WWII world. Examines the plethera of ways that system analysis was applied to new areas. In conjecture with computers, the fields of science, management, engineering, and more were managed by the systems approach. Covers 60 years exploring where the approach failed and where it succeeded.
Amazon Book Description:
http://www.amazon.com/Systems-Experts-Computers-Management-Engineering/dp/0262082853/ref=sr_1_1?s=books&ie=UTF8&qid=1347743394&sr=1-1&keywords=history+of+system+analysis

Kuo, Franklin D. Editor. 1966. "System analysis by digital computer". New York; John Wiley & Sons, Inc.

Book explores various applications in system analysis with computers. Several authors contributed chapters to this edited book. Give contemporary 1960s cutting edge information. Goes into possible future applications. Selected for it's early point of view, for historical purposes.

McMillan, Claude and Gonzalez, Richard F. 1968. "System analysis: a computer approach to decision models". Homewood, Illinois; Richard D. Irwin, Inc.

Text introduces a typical graduate level 1960s student to system analysis via computer simulation. Selected for historical purposes.

Hoffer, J. A., George J., & Valacich, J. (2011). "Modern Systems Analysis and Design" (6th Edition) New Jersey: Prentice Hall.

Contemporary text for graduate level students to introduce them to current information system analysis and management. Explores current issues, and practices.
Textbooks.com summary:
http://www.textbooks.com/ISBN/9780136088219/Jeffrey-A-Hoffer-Joe-Valacich-and-Joey-George/Modern-Systems-Analysis-and-Design_-_013608821X.php

Wasson, C. S. (2005). "System Analysis, Design, and Development: Concepts, Principles, and Practices". New Jersey: Wiley-Interscience.

Textbook geared at introducing a variety of system analysis concepts, design strategies, and development practices. Would be a good well rounded introduction to current practices in system analysis.

Jain, R. K. (1991). "The Art of Computer Systems Performance Analysis: Techniques for Experimental Design, Measurement, Simulation, and Modeling".

Supplemental text exploring system analysis and design from the point of view of the early 1990's, pre-internet. Historically relevant, as well as continuing to be a useful text for anyone interested in system analysis. Amazon Editorial Review:
http://www.amazon.com/The-Computer-Systems-Performance-Analysis/dp/0471503363

Subscription Databases:

IEEE Xplore Digital Library

This database has a section of journals, magazines, and conference proceedings focused on computer and electrical engineering. The journals date back to 1988, with some selections dating back to 1950 to current. Both full text and abstracts are available.

ACM Digital Library

This database, Association of Computing Machinery, has journals, magazines, and transactions available in full text. Magazines focus on practical applications of design, specification, and research. Articles range from the 1960's to current.

EBSCOhost

This database has a large selection of articles on many subjects. Germane to the topic we're interested in, they have sections on computer science, library and information science, and science and technology. This would be a good resource to also check for articles.

Web Sites:

http://en.wikipedia.org/wiki/Systems_analysis

Provides definition for the term system analysis, as well as links to related topics. Very helpful to get started and the multiple links would allow for exploration similar to a subject specific portal site, but be wary of the validation of the information found. Always the best course of action to double check sources.

http://www.answers.com/topic/systems-analysis

Provides multiple dictionary definitions for the term system analysis and abundant links to related topics. The multiple sources of definitions with links would act similarly to a subject specific portal site. Links include types of systems analysis, related topics, and systems thinkers.

Online Journals:

Cybernetics and System Analysis
http://www.springer.com/mathematics/applications/journal/10559

Journal focuses on the role of system analysis in confronting new problems and issues in today's computer centric world.

International Journal of Systems Science

http://www.tandfonline.com/action/aboutThisJournal?journalCode=tsys20

Journal focuses on exploring new areas of knowledge in the field of system analysis. Discusses old methods compared to new.

Journal of Computer and System Sciences

http://www.journals.elsevier.com/journal-of-computer-and-system-sciences/

Journal focuses on research papers related to the field of system science and computer science with attention to mathematical principles.

Blogs:

Micheal on Systems. http://www.michaelonsystems.com/ Micheal on the topic of systems, includes system analysis. Blog isn't tagged or well designed but the posts I did see on the topic were interesting.

Tim Bryce on Toolbox. http://it.toolbox.com/blogs/irm-blog/a-short-history-of-systems-development-8066 This particular post was very germane to the subject of the history of systems analysis from a historical point of view. He talked about developments in the subject, especially in regards to computers, from a very early historical point of view. I do wish he cited some of the things he discussed.

Modern Analyst. http://www.modernanalyst.com/ An online community for people working in the field, interested in it, and more. Website is cluttered, hard to read, but full of information like links to articles, definitions, organizations, forums, events, etc.

Search Term/Keywords:

Computer system analysis, System Analysis, history of system analysis, history of computer system analysis, history of science, history of computers, computer science

Reflections/Additional Advice to Researchers:

Overall, this topic is rich with information both offline and on. There are primary and secondary documents for historical use available. There are journals, articles, textbooks and blogs all talking about the current state. What I found very difficult to find anywhere was a comprehensive book or website that discussed how system analysis came to be in it's current form. The one book I did find, which is included in this pathfinder (see the first book entry, Hughes), that covers the development and adaptation of system analysis to a post WWII world was one in a sea of modern text books. One blog post with lots of data relating to the same thing, but not cited and therefore slightly suspect. The two books from the 1960's were found in a local college library and I would think that textbooks from multiple time frames would be very good resources for gaining information about specific developments in the field.

There are no portal sites that come even close to being related to a topic as specific as this one. This topic has a major gap in information available; there are scarce resources that coherently present a time line of the advancements in the field of system analysis. There would be a fair amount of leg work required, even with the resources I've found and included, to fully understand the history of system analysis in the computer age. The modern textbooks do not approach the subject from a historical point of view whatsoever and while they list techniques, they do not mention how they were developed, who developed them, when and how they were

first used. For that, you may go through and look up each system analysis technique by name and learn the history of each one. Time consuming, but effective. I'd start with the two websites I mentioned above.

I'd also recommend that while researching to take breaks often, try to think outside the box, take notes, and don't be discouraged if you can't find exactly what you want.