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Jumping In (!) and Documenting the Life of the Mind of the College of Engineering at the University of Illinois

Established in 1868, the College of Engineering at the University of Illinois at Urbana-Champaign has a history that is in many ways representative of the broader history of science and technology. Indeed, the College includes the Department of Physics in addition to its interdisciplinary engineering curriculum and research programs, and has contributed a multitude of innovations that have impacted the nature of scientific inquiry and the possibilities of technological advancement. In an effort to better preserve this rich history, including the breadth of activities engineers and scientists engage in, the University of Illinois Archives has embarked on a two-year project with the College of Engineering to arrange, describe, and digitize paper records and electronic content. This material will complement the University Archives' extensive holdings that already document such innovations as Joseph T. Tykociner's demonstration of sound on film, two-time Nobel prize winner John Bardeen and his work on theoretical and solid state physics, and structural engineer Hardy Cross' crucial development of "Moment Distribution" that facilitated the analysis of indeterminate structures. The work of these scientists and engineers impacted their respective fields in no small way, and thus their records are important to preserve in order to help us understand the development of such innovations.

The Society of American Archivists' Manuscript Repositories Jump In Initiative seemed an ideal project to use as a springboard from which to begin surveying current systems and tools that yield electronic content produced by the College of Engineering's faculty, students, and staff. Since the first step in this project is arranging and describing the administrative records of the Dean's Office, I met with the Associate Dean for Administration and the Associate Director for Engineering IT Shared Services in order to locate physical media containing electronic content of historic and research value. Much to my disappointment, I learned that such content had been transferred from obsolete media to file shares on the College's servers several years ago. Nevertheless, the file shares contain historic content and files in a number of formats, including email. Because these file shares contain a large amount of confidential and sensitive information, I am currently in the midst of obtaining approval from the College of Engineering administration in order to acquire access and will be working with the University of Illinois' Records and Information Management Services program.

After I have appraised and processed content in the administrative file shares, Engineering IT will begin working with me to provide access to individual academic units' file shares and faculty home directories. The latter are deleted upon retirement, and thus are important to begin preserving, since not all faculty will have maintained copies of this information locally on their computers. Although I have yet to contact individual departments, laboratories, and centers in the

College of Engineering, I believe that physical media containing electronic content may be present in these instances, especially among faculty records.

The Associate Director of Engineering IT noted that this is going to be a large amount of data. No doubt, an important part of this project will entail developing distinct appraisal criteria to facilitate the capture of a wide range of activities. In addition to file shares, the College has online faculty biographical data forms that include information regarding publications, awards, etc. Engineering IT created HTML and PDF snapshots of some biographical data forms before deletion (presumably those of retired faculty). It will be important to collect these forms as well as use web archiving tools to preserve live biographical data forms. Web archiving tools will likewise be utilized to capture the College's wikis (of which it has hundreds) that document ways faculty and administrators communicate with each other and share information.

My project is still in the initial phase and as a result I am not able to share specifics about the size of the data, types file formats, etc. My discussions with Engineering IT, however, have made me very much aware that one of the ultimate goals of this project should be to develop a process for the routine transfer of historically valuable electronic content to the University Archives. The University Archives is preparing to launch a web archiving initiative as well as potentially use the College of Engineering project as an opportunity to develop a pilot test program for the transfer of electronic content. At the same time the University Archives also has the good fortune to be located within the University of Illinois Library, which has a Digital Preservation unit that provides in-house data recovery from obsolete physical media. Working with Digital Preservation will be important as I begin surveying electronic materials of faculty and academic units. Thus, I am ideally situated to begin work on such a project, as I have the support and expertise of my colleagues at the University of Illinois to draw upon. For me then, the chief issue will be appraising the College's electronic content.

Helen Willa Samuels et al. point out that the "process of science and technology is rarely neat, orderly, and predictable."[1] So too do I anticipate that the College of Engineering's electronic content will reflect this disorder and spontaneity, requiring the University of Illinois Archives to be flexible and adept at trying new tools to appraise and process electronic records. Likewise, as the project progresses and I begin working with academic units and faculty, I hope to seek out electronic material in addition to email, websites, reports, minutes, and other documentation of the College of Engineering's administrative and research activities that provide insight into the process of science and technology. Such material may include computer utilities and programs written by faculty to explore mathematical models or represent large aggregates of data. What I've learned from my initial jump into managing electronic content is that the life of the College of Engineering's mind is indeed complex, and preserving its electronic material will present a unique set of challenges. As I continue with the project I hope to learn from my colleagues in the Manuscript Repositories Section who have developed similar programs and encountered comparable issues.

[1] Joan K. Haas, Helen Willa Samuels, and Barbara Trippel Simmons, *Appraising the Records of Science and Technology* (Chicago: Society of American Archivists, 1985), 9.