

ECHO:
Exploring and Collecting the History Online--Science & Technology
Report on Year One: January 1-December 31, 2001

It has been an extraordinarily busy twelve months for the ECHO project, and we are pleased to report that virtually all of our first-year goals have been achieved or surpassed. This year-end report briefly summarizes our accomplishments, reviews some of the changes that were made to the project plan over the year, and looks ahead to the coming year.

The first element of our project was to review existing web-based projects in the history of science and technology (especially those funded by the Sloan Foundation) to get a good sense of what has worked and what has not in the collection and presentation of the history of science and technology online. We spoke with as many of the prior Sloan grantees as we could reach, and also did an extensive study of non-scientific historical websites. In addition, in March 2001 we convened a roundtable of leading experts and GMU faculty in a number of fields related to our project, who assisted us in analyzing current efforts and best practices.

This appraisal phase led to our thorough seventy-page April 2001 report to the Foundation, which laid out important lessons and principles. This document has proven extremely valuable over the past year. We have circulated it to numerous other historical practitioners who are interested in pursuing the history of science and technology online, but who have little experience with the

myriad issues involved. It has also formed the basis for our successful presentations (another deliverable) at an oral history conference in Annapolis in May (Roy Rosenzweig and Jim Sparrow), at the Society for the History of Technology's annual meeting in San Jose in September (Jim Sparrow and Dan Cohen), and at some Washington area events. Another goal of the March roundtable and April report was to fine-tune and, if necessary, revise our three-year plan for the ECHO project, and based on our discussions with the roundtable, we spelled out some specific changes in Part Four of the report (e.g., restructuring the plan for the Memory Bank).

As we had hoped for in our original proposal to the Foundation, our project's website (<http://echo.gmu.edu>) has become one of the most visited and used websites in the history of science. Early in 2001, we were able to convince the editor of the single most visited website on the history of science (the WWW Virtual Library of Science, Technology & Medicine, http://www.asap.unimelb.edu.au/hstm/hstm_ove.htm) to allow us to take over his highly trafficked (but badly out-of-date) site and built upon it to create our "Virtual Center," a comprehensive online portal for the history of science and technology. From that base of several hundred sites we have now catalogued more than 2,500 sites, and to date we have provided annotations for more than 300 of those, double the number we had promised for our first year. In short, we feel that the Virtual Center is now the most comprehensive, up-to-date, informative directory of websites and other online resources in the history of science and technology, and our leadership in this regard has been recognized by the hundreds of websites, scientific and professional institutions, and academic departments that now link to our site.

Beyond providing an outstanding resource for historians, scientists, engineers, and doctors, as well as others interested in the history of science and technology, the prominence of the site has also helped us to gather first-hand recollections of the recent history of science and technology from scientists and the general public. At the time this report was written, we had collected 112 primary source responses through our website, only slightly less than the 125 we had hoped for. (As discussed below, our efforts to collect first-hand accounts via the Internet was slowed somewhat by our significant effort to rapidly launch the September 11 Digital Archive, another Sloan-funded project, at the end of last year.) These responses came in a wide variety of fields, from those directed at scientists and technologists, e.g. recollections of the computer pioneer Claude Shannon (<http://echo.gmu.edu/shannon/survey/memories.php>) or our survey of women scientists (<http://echo.gmu.edu/surveys/contributions.php?survey=wscience>), to those directed at a more popular audience, e.g. recollections of the first moon walk in 1969 (<http://echo.gmu.edu/moonwalk/survey/memories.php>). As recommended by our outside advisors and as noted in our April report, one of our chief goals in our own collecting efforts will be to establish “best practices” and to experiment with different strategies for collecting history online.

As with the Virtual Center, our work on the “Practical Guide” for doing the history of science and technology online has exceeded our goals for the first year. We had planned on having one section of the guide thoroughly completed by the end of the year, but we decided that it would be more useful to our audience to instead fill out the entire outline of the guide, in slightly smaller editorial passages than we will ultimately produce. The more abbreviated prose

in this preliminary version of the guide is supplemented by links to most useful online resources to the topics covered. This way our consultees and more casual visitors to our site can get a complete course on the full range of the subject matter, as well as specific answers, sooner, while we can revise and expand upon this material during the coming year—drawing on feedback from our advisers and from those making use of the Guide. More immediately than we had projected, therefore, the Practical Guide provides a single place on the Internet where historical practitioners can go to find information and links on all of the facets involved in doing online history of science and technology.

A major addition to the Practical Guide we had not anticipated at the start of last year was a set of automated, easy-to-use, web-based tools. As we began to consult with and help historical practitioners who had limited technical knowledge, we realized that one of the most effective ways to assist them was to provide shortcuts so they would not have to spend unnecessary time replicating difficult computer tasks, such as building interactivity into their sites. The ECHO Survey Builder, for example, allows users to create and administrate an online survey of historical subjects without downloading, configuring, or programming any software. We made this tool available for free and programmed it in open source code so that it can be readily used and extended by others. It is accessed through a web browser on our site, and is currently being used by historians of science and technology in thirteen countries. Using the Survey Builder, a group of University of Maryland graduate students, for example, was able to collect over fifty first-hand accounts of the rise and fall of Webvan, the technologically advanced (but failed) grocery delivery company.

In addition to the Survey Builder, we have also developed two other free, open source tools—a Poll Builder and a Scrapbook Builder—that will allow historians without programming expertise to build inexpensive, but interactive sites. We will be testing, refining, and further developing all three of these open source tools over the coming year. These tools are also being featured in our outreach workshops (below), and we have already found that they are making it much simpler for technological novices to launch interactive historical sites.

The fourth major area of work in the ECHO project was outreach to historical practitioners in science and technology. Here also we accomplished more than promised in our proposal. In October 2001 we held our first live workshop to help historical practitioners move online with important projects in the recent history of science and technology. There was clearly a huge demand for this sort of education: we received far more applications than we could accept, and the dozen participants came to the workshop from as far as away as India and New Zealand even though we could not cover their full travel costs. The weekend was very successful, with workshop participants learning about everything from website construction and design, to outreach and publicity with the scientific and lay communities, to more technical issues such as the use of databases.

Since the number of applications from historical practitioners desiring such help was so large, and the audience so eager for the knowledge we tried to impart, we decided it would be best to move up the next workshop we had planned to meet demand and so that others could get started earlier. In addition, we accepted twice as many people per workshop than we declared in our original Sloan proposal, so that at the end of our second workshop in February

2002 we will have already fulfilled our goal of providing twenty-four historical practitioners with live training. We still plan to hold the online workshops we mentioned in our proposal. Our first set of workshop graduates have done an excellent job building upon what they learned; one of them, Kathy Franz, applied for an NSF fellowship to expand her online project, while Shelley McKellar's site on artificial organs, which we are now hosting on our server (<http://echo.gmu.edu/bionics/>), is a very impressive example.

In addition to our live workshops and online assistance, we have also undertaken an extensive outreach effort to raise awareness of the ECHO project, which has generated dozens of consulting opportunities. As we had planned in our proposal, we sent notice of the project to hundreds of history of science, technology, and medicine departments and programs. We also sent two notices of our project to a list of more than 1,200 history departments contacts that we developed, and a full description of the ECHO project was posted to all of the relevant listservs, such as the H-Net discussion lists. In addition, we sent individual emails to approximately 400 history of science practitioners, and we spoke to many others live at the conferences we attended, offering our free consulting services. In ways small and large we have helped dozens of those with whom we have made contact. Simply put, we feel we have made great strides in helping historians of science, scientists themselves, and others (such as museum curators) who wish to use the Internet to collect and present the recent history of science and technology. The breadth and depth of contacts we were able to achieve through conferences, listservs, emails, and other methods allowed us reduce our need for the newsletter articles about the project that we had originally planned to place, especially since such print coverage is usually slow

to appear. Nevertheless, we have received prominent coverage in the Society for the History of Technology newsletter and we will be pursuing further such coverage in the coming year.

We are also glad to report that our efforts over the last year, especially our research for the Practical Guide, have enabled us to rapidly and successfully launch the September 11 Digital Archive (<http://911digitalarchive.org>), which has also received generous support from the Alfred P. Sloan Foundation. In turn, this very important and meaningful project has had an impact on the ECHO project, as we discussed with Program Officer Jesse Ausubel. Responding to these tragic events and generating an appropriate and historically valuable online project did push aside some of the demands of the ECHO project for a time in the fall of 2001, and as this complex project is quickly brought to life this spring we anticipate that the time spent on the ECHO project will have to be reduced significantly. As a result, we have requested and received a six month no-cost extension, which will push back the ending date for the project to the middle of 2004. Despite the necessity of delaying work on the ECHO project, we feel that the strong start we have made in our first year will allow us to continue to make good, albeit slower, progress in 2002.

Roy Rosenzweig, Principal Investigator

Daniel Cohen & James Sparrow, Associate Directors