

PROGRESS REPORT SUMMARYGRANT NUMBER
G08 LM7919

PERIOD COVERED BY THIS REPORT

PRINCIPAL INVESTIGATOR OR PROGRAM DIRECTOR
Nancy T. LombardoFROM
August 1, 2003THROUGH
July 31, 2004

APPLICANT ORGANIZATION

Spencer S. Eccles Health Sciences Library, University of Utah, 1471 E. Federal Way, SLC, UT 84112

TITLE OF PROJECT (Repeat title shown in Item 1 on first page)

Neuro-Ophthalmology Virtual Education Library

A. Human Subjects (Complete Item 6 on the Face Page)

Involvement of Human Subjects No Change Since Previous Submission Change

B. Vertebrate Animals (Complete Item 7 on the Face Page)

Use of Vertebrate Animals No Change Since Previous Submission Change

SEE PHS 2590 INSTRUCTIONS.

WOMEN AND MINORITY INCLUSION: See PHS 398 Instructions. Use Inclusion Enrollment Report Format Page and, if necessary, Targeted/Planned Enrollment Format Page.

The specific aims of the Neuro-Ophthalmology Virtual Education Library (NOVEL) project have not changed. During this first year, necessary personnel were hired.

Most important, the collaboration between the Spencer S. Eccles Health Sciences Library of the University of Utah and the North American Neuro-Ophthalmology Society (NANOS) is highly successful. NANOS members are enthusiastic about the project and have committed a great deal of time and energy in providing peer review. Members are also suggesting potential collections for addition to the collection and are leading the investigation into the issue of standard vocabulary.

Progress on the project is excellent. The William F. Hoyt, MD slide collection is nearly complete. Approximately 800 slides have been digitized, indexed and made available via a Hoyt Collection Web site. (<http://medlib.med.utah.edu/NOVEL/Hoyt/>). Approximately 80 distinct case videos have been digitized from the Shirley H. Wray, MD, PhD collection. Access to much of this collection is available, and a Web site is currently under development. (<http://medlib.med.utah.edu/NOVEL/Wray/>) Work has just begun on the Kathleen B. Digre, MD collection of slides and videos covering spectrum of neuro-ophthalmologic subjects. Much was learned in this process.

Outsourcing of the slide digitization process resulted in unacceptable quality of images. The entire Hoyt collection had to be re-digitized according to specific archival quality specifications. From this point on, slide digitization will be carried out at the Eccles Health Sciences Library at the University of Utah. Digitizing and indexing the slides is much faster and simpler than digitizing and indexing the video collection. Video content is significantly more complex and requires a great deal more time to digitize and encode into accessible formats, as well as to collect complete metadata.

Indexing, or metadata collection, has evolved as a process. Working directly with the content providers (Wray, Hoyt, Digre) has been extremely valuable. Training the neuro-ophthalmic experts in the intricacies of metadata required time and experience. As the project progressed and the experts gained experience in organizing their own material, they also began to understand and value the variety and distinctions in the metadata fields. Early in 2004, the development team made a crucial decision to add 5 medical metadata fields to the standard set. These are: anatomy, pathology, disease or diagnosis, clinical information, and imaging. The decision was the result of working directly with the content experts. It was evident that these core concepts are the key

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to how the content experts think about and organize the material. It is believed that the addition of these fields will greatly enhance accessibility by our primary audience of neuro-ophthalmologists, neurologists, and ophthalmologists.

Standardized vocabulary, an issue barely touched upon in the original proposal has become a large, looming issue in the project. MeSH does not adequately cover the field of neuro-ophthalmology to the level of specificity required by this project for indexing purposes. While the content experts have vocabulary for the content they provide, there is justified concern among the development team and other luminaries in the field that the subject terms be consistent and allow for accurate access from a database. The scope of this issue is large enough that an additional grant may be required to create a truly standardized vocabulary for the neuro-ophthalmology sub-specialty of medicine.

A number of significant collections have been offered to the NOVEL project, due to our solicitation to the members of NANOS. The David G. Cogan collection has been offered from the National Eye Institute, National Institutes of Health. Cogan is one of the premier figures in the field and the collection represents much of his seminal work. The collection is enormous and will require review by appropriate NANOS members to sort and prioritize the most useful materials. Inquiries have also been made from NANOS members at the University of Iowa and Johns Hopkins Hospitals.

Peer review was conducted entirely online using a Web based form. Reviewers were assigned sections of the Hoyt collection for review. Reviewers were asked to focus on the image quality and metadata descriptions. They also provided feedback on the design and navigation of the prototype Web site. All comments and queries were submitted via the peer review form. NANOS members found this to be a convenient and simple process. All feedback is stored in an electronic database. As a result of the feedback received, clerical help was contracted to make minor corrections and additions submitted by the reviewers.

An article outlining the project written by co-investigators Lombardo, Digre and Frohman, was published in the March 2004 issue of Journal of Neuro-Ophthalmology¹. The project was promoted extensively at the 2004 NANOS meeting held in Orlando in March. A presentation was made to the general membership, emphasizing that the collection is ready to be used. In addition, working meetings were held with the Curriculum committee and the Web education committee to discuss the vocabulary, peer review process, general organizational issues and procedures. Starting in July, a quarterly update on the progress of the project will be sent to the entire NANOS membership using the NANOS Letter, and electronic mailing list exclusively for the membership. URL addresses and news of updates will raise awareness and help maintain the enthusiasm generated at the annual meeting. The project was also promoted at the 2004 meeting of the American Academy of Neurology in San Francisco in April 2004, with a poster displayed at the NANOS booth in the exhibitor's hall. A poster has been accepted and prepared for presentation at the 2004 Medical Library Association meeting to be held in Washington DC in late May. A program has been presented at the 2004 Utah Library Association meeting in May in Salt Lake City.

As a result of working meetings with various NANOS committees and members at the annual meeting in Orlando, a programmer was contracted to develop a means for members to submit materials online. A mechanism was also programmed allowing NANOS members to provide online peer review of all online submissions. These programs are currently under review by members of the NANOS Web education committee. After review, NANOS members will be introduced to this new feature and asked to submit appropriate digital materials for consideration.

SENT TO VALERIE FLORENCE BY EMAIL (June 2, 2004):

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In the upcoming year, there is much work to complete or continue from the first year's progress. The project team intends to complete the William F. Hoyt Optic Disc collection. This will entail completion of metadata on all slides, peer review of entire collection by the NANOS Web Education committee, programming of the search feature, and final quality review of the Web interface. The team will continue to work with Shirley H Wray collection. The goal will be to complete more digital video in the second year than the first, as the process of encoding and metadata collection is now better defined. The Wray collection includes around 300 separate video and the intent is to complete the digitization and indexing of the entire collection in the course of the project. These materials will require peer review as well, which will be carried out by the NANOS Web Education Committee. Additionally, further programming will be done to refine and complete the online submission process.

New collections will be started in the second year of the project. The slides and audio lectures of J. Lawton Smith, MD, a pre-eminent Neuro-Ophthalmologist from the Bascom Palmer Eye Institute of the University of Miami have been offered to and accepted by the NOVEL project. The first portion of the collection to be digitized is the lecture series that was recorded on reel-to-reel audio tape. Following the audio lectures, slides will be reviewed and organized by Dr. Smith's peers prior to adding them to the NOVEL collection.

The last significant effort intended for the coming funding year is the review, organization and addition of materials from the David G. Cogan collection. Dr. Cogan is one of the founders of the field of Neuro-Ophthalmology. His collection currently resides at the National Eye Institute (NEI) and permission to review and digitize materials has been approved. This endeavor is being spearheaded by Larry Frohman, MD, Co-PI of the NOVEL project and Ed FitzGibbon, MD, the current Chair of the NANOS Web Education Committee. A visit to the NEI is in the planning stages. The NOVEL team hopes to digitize significant portions of the Cogan collection and has enthusiastic support of the NANOS membership, due to the prominence of Dr. Cogan's work within the field.

1. Lombardo, N.T., Digre, K.B, and Frohman, L. A Virtual Neuro-Ophthalmology Library (NOVEL) in Utah. J Neuroophthalmol 2004; 24: 91.