

# Extending the Web of Our Future: Recruiting and Educating the Faculty Who Will Educate the Next Generation of Library Professionals

## Narrative

Librarianship and library education are faced with personnel shortages of national reach and scope. *Extending the Web of Our Future* will expand the demonstration of a model for an active web of recruitment from nine to eighteen participating ALA accredited degree granting programs, and introduce a formal decision tool *Professional/Personal higher Decision-making Program (P<sup>2</sup>h.D. Program)* to assist potential doctoral student recruits in making choices related to their short and long term career goals.

*Project Athena*<sup>1</sup> (Spinning the Web of Our Future),<sup>2</sup> an IMLS National Leadership Grant 2002 funded project has begun to demonstrate the viability of a web model of recruitment. Once it has fully diffused, this model should become self-sustaining and ensure that sufficient numbers of students are recruited each year into LIS doctoral programs to meet the needs for the next generation of LIS educators. *Extending the Web of Our Future* builds on the momentum already established through *Project Athena* to double the number of institutions participating, thereby potentially assisting over half of the ALA accredited degree programs to meet the second priority established by the IMLS for the *Recruiting and Educating Librarians for the 21<sup>st</sup> Century* grant competition: **Develop faculty to educate the next generation of library professionals.**

*Extending the Web of Our Future* also recognizes that recruiting doctoral students into the field and educating them is not enough to ensure that they will become productive faculty in the near future. In addition, *Extending the Web of Our Future* proposes to develop *P<sup>2</sup>h.D. Program*, a tool to assist potential faculty of the future in making career-related choices based on well-established principles of decision theory.

## National Impact

Librarianship and library education are faced with personnel shortages of national reach and scope. To address this problem, the IMLS *Recruiting and Educating Librarians for the 21<sup>st</sup> Century* grant program has established **develop[ing] faculty to educate the next generation of library professions as Priority 2.** *Extending the Web of Our Future* includes two major deliverables that are designed to ensure that library education remains a vibrant and vital enterprise. *Extending the Web of Our Future* will expand the demonstration of a model for an active web of recruitment (also known as the *Project Athena* recruitment model) from fifteen to up to twenty-six participating ALA accredited degree granting programs, and introduce a tool to support formal decision-making (*P<sup>2</sup>h.D. Program*). This tool will assist potential doctoral student recruits and current doctoral students in making choices related to their short and long term career goals. The immediate goal of *Extending the Web of Our Future* is to meet this priority. Nonetheless, the deliverables are being carefully designed to ensure that they will be adaptable to support all four priorities, thus extending the potential for significant national impact.

## Extending the Web of Recruitment

To support the desired outcome of an increased pool of applicants for faculty positions in library education, *Extending the Web of Our Future* proposes to extend the web of recruitment established by *Project Athena*. A major strength of the *Project Athena* recruitment model is that once the web of recruitment is established the costs—both to maintain the model and for individual institutions to adopt the model—will be minimal. In fact, if this model is successful, recruitment costs per faculty member recruited should actually decrease while the pool of applicants increases. The key to success lies in broad participation as the model is established and demonstrated. Of the 49 academic institutions that offer master's degree programs accredited by the American Library Association, fifteen

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<sup>1</sup> *Project Athena* was named for the Greek goddess of weaving. Athena was a powerful second-generation member of the Greek pantheon who sprang fully armored from Zeus' head.

<sup>2</sup> These challenges are discussed in more detail in the IMLS 2002 National Leadership Grants proposal narrative (see **Appendix B**). *Project Athena* provides a model for recruitment, education and preparation of the next generation of LIS faculty. The current proposal, while tightly focused on the second priority of the 2003 IMLS Recruiting and Educating Librarians for the 21<sup>st</sup> Century call for proposals, will address all three challenges and test the extensibility and replicability of each of the elements and activities developed by *Project Athena*.

(30%) are currently served directly by this model.<sup>3</sup> *Extending the Web of Our Future* will increase that direct service to potentially twenty-six academic institutions(53%).<sup>4</sup> With over one-half of the institutions with ALA accredited master's degree programs invested in the recruitment model, national visibility is assured. Because the model is easy to adopt once established and the costs are low, national visibility should lead directly to national adoption, and to the long-term national impact of a larger, more diverse pool of well-qualified applicants for faculty positions in library education.

## **P<sup>2</sup>h.D. Program**

During the decade 1992-2001, the total number of full-time faculty employed by institutions with ALA accredited degree programs increased from 630 to 728. The percentage of new appointments increased from 6.3% in 1992 to 12.5% in 2001. In 2001, forty-seven new assistant professors were appointed, however; an additional forty-nine positions were unfilled.<sup>5</sup> Twenty-seven of the new appointees held doctoral degrees in a field other than LIS. In the next decade, these trends are expected to continue. In addition, large numbers of retirements will likely lead to higher ratios of new appointments to total faculty as well as substantial increases in the number of unfilled positions. To support the desired outcome of attracting new faculty to library education and retaining them through the process of earning the doctorate and beyond,<sup>6</sup> *Extending the Web of Our Future* proposes to design and implement **P<sup>2</sup>h.D. Program**, a customizable tool based on established principles of decision theory. *Extending the Web of Our Future* recognizes that recruiting and providing formal educational experiences is not enough to ensure that an adequate pool of well-qualified faculty will be available as baby-boomer retirements increase and potential applicants receive more remunerative offers from the private sector. In addition, potential faculty need tools that support good decision-making. Initially, **P<sup>2</sup>h.D. Program** will help potential doctoral students decide whether library education is the field for them, and if so, which doctoral program(s) will best meet their needs based on factors that they identify as important.<sup>7</sup>

## **Adaptability**

*Extending the Web of Our Future* furthers the intent of *Project Athena* to spin a web that will ensure the viability of LIS education for the foreseeable future. To this end, the deliverables of *Extending the Web of Our Future*, like those of *Project Athena*, are designed not only to ensure specific outcomes, but also to be flexible, easily adopted, and self-sustaining.

The first deliverable is demonstration that the web of recruitment established by *Project Athena* can be extended (doubled) at a lower cost per institution than that required to establish the original web of fifteen institutions. Demonstration of this extensibility is key to establishing the diffusion quotient of the model itself.

The second deliverable is a tool to assist potential faculty of the future in making career-related choices. Based on established principles of decision theory, this tool promises to be adaptable to any number of decision points faced in the course of a career, and should be readily adaptable to support professional as well as academic career decision-making.

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<sup>3</sup> The institutions directly served through the 2002 IMLS award include the three partner schools (University of Illinois Urbana-Champaign, University of Washington, and Florida State University), six sponsor schools (University of South Carolina, Wayne State University, University of Southern Florida, University of Oklahoma, North Carolina Central University, and the University of Southern Mississippi), and up to six schools where scholarship awards will be given in 2004-2005.

<sup>4</sup> Additional institutions to be directly served through this award include two new partner schools (University of North Carolina Chapel Hill and University of California Los Angeles), four additional sponsor schools (invitations have been extended to Louisiana State University, Clark-Atlanta University, Iowa State University, and CUNY-Queens), and up to eight schools where scholarship awards will be given in 2005-2006.

<sup>5</sup> Four of these unfilled positions were at the associate professor and professor rank. All others were assistant professor, open rank, or undesignated.

<sup>6</sup> In 2001, only twenty-nine doctoral degrees were granted by LIS schools. Of these, twenty took seven or more years to complete the degree.

<sup>7</sup> The factors will be developed from the responses to the *Project Athena Doctoral Candidates Survey*. Students will be able to apply relative weights to each factor.

## Extending the Web of Recruitment

Prior to the start of *Project Athena*, the Co-P.I.s met with a wide cross-section of the LIS education community to solicit their input into the project design. Interest in the project was expressed by more LIS schools—including both potential partner institutions and potential sponsor schools—than the funding limitations could support. Following subsequent discussions with LIS educators and practitioners to formalize a feedback loop that will ensure that *Project Athena* effectively serves its community and meets its goals, it was determined that it would be possible to take the next step in demonstrating the extensibility of the *Project Athena* model as early as Fall 2003. Three leading doctoral degree-granting institutions—FSU, University of Illinois, and University of Washington—will continue the process they have begun of working collaboratively with six doctoral fellows and six sponsor schools for the second and third years of the grant period.<sup>8</sup> *Extending the Web of Our Future* will extend this web of recruitment to an additional leading doctoral degree-granting institutions the University of North Carolina, Chapel Hill; two additional doctoral fellows; two additional sponsor schools (to be selected later), and up to eight additional schools where scholarship award winners will be placed. This will represent a diffusion rate of up to 53%, with up to twenty-six of the forty-nine ALA accredited LIS schools in the United States participating.

While additional funding is crucial to taking this next step, it is realistic to expect that this can be done at a lower cost per institution because the infrastructure for the project is in place. There will always be costs involved in recruiting, educating and preparing new faculty, but once an infrastructure of inter-institutional cooperation is established, it is anticipated that the institutional costs will not exceed what institutions currently expect to invest in less successful recruitment strategies. *Project Athena* proposed to demonstrate a model for recruitment that assumed that the cost per institution would be reduced as the number of participating institutions increased. *Extending the Web of Our Future* will demonstrate that this assumption is true and that the *Project Athena* web of recruitment is a viable model that will sustain itself as it diffuses.

## P<sup>2</sup>h.D. Program

In a rapidly changing world one thing is certain: humans must make decisions. Decisions range from the routine—such as what to eat for a meal—to the complex—such as choosing a career. *Extending the Web of Our Future* will develop a decision-making tool, based on well-established principles of decision theory, to assist potential LIS faculty in making decisions that will support future career success. The initial iteration of **P<sup>2</sup>h.D. Program** will consist of a tool to assist in the selection of programs for doctoral study in library and information studies based on individual needs and preferences. The tool will utilize both quantitative and qualitative approaches to decision modeling. It will employ techniques derived from the study of neural nets with psycho-social human factors assigned values based on human preference. Data collected by *Project Athena* using a standard survey instrument<sup>9</sup> will be supplemented by additional data collected from the first group of *Project Athena* participants to determine factors potential students consider in selecting a program for doctoral study in library & information studies. This tool is expected to be extensible to other decision points—such as choosing a first academic position, as well as to related careers—such as professional careers in librarianship. The tool will be designed for ease of automation, and will ultimately be made available for general use through the *Project Athena* website.

## Design

To educate the new generation of librarians, new faculty members committed to LIS education must be recruited. To assure a sufficient number of faculty, three conditions must be changed: 1. the total number of students enrolled in LIS doctoral programs must increase; 2. the rate of completion within seven years of admission to an LIS Ph.D. program must increase; and 3. the percentage of LIS doctoral degree recipients accepting a faculty appointment within three years of graduation must increase. To ensure that these potential faculty members will meet the needs of the 21<sup>st</sup> century, we must target our recruitment efforts at increasing the number and diversity of our next generation of faculty who will serve as role models. This outcome can be ensured through extending the *Project Athena* web of recruitment. To ensure that these potential faculty accept appointments and are retained, we need to provide tools like **P<sup>2</sup>h.D. Program** to assist them in making successful career-related choices.

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<sup>8</sup> Further details regarding the first implementation are available in the proposal narrative in **Appendix B**.

<sup>9</sup> Add footnote re: Pew Survey.

## Extending the Web of Recruitment

*Project Athena* has begun the development and demonstration of a self-sustaining web recruitment model. The *Project Athena* model consists of two webs of relationships: a web of recruitment that focuses on individual development and socialization (see **Appendix D**) and a web of institutions that focuses on establishing cooperative relationships between institutions and institution-types (see **Appendix E**). These two webs interact to ensure the project's national impact, sustainability, and adaptability. *Extending the Web of Our Future* will focus on strengthening the web of recruitment through extending the web of relationships. As many as sixteen institutions will be added to the current web of fifteen, bringing the total to up to thirty-one institutions, or more than one-half of the total number of ALA accredited degree programs in the United States. Simultaneously, this proposal will strengthen the web of recruitment. Two additional fellowships will be established at the new partner school, and the six fellowship awards established by Project Athena will be funded for an additional year, to encourage and prepare the best and brightest of our current practitioners for careers in LIS education. Each of these eight fellows will be responsible for recruiting at least one new doctoral student each year that they hold the fellowship. The factors (see **Appendix F**) and criteria (see **Appendix G**) developed for *Project Athena* will form the basis for recruitment of doctoral fellows in *Extending the Web of Our Future* as well, thereby assuring that the goal of diversifying the professorate is maintained.

### P<sup>2</sup>h.D. Program

Each time an individual makes the decision to pursue a higher level of education, he or she must also make a series of choices, including which degree program to pursue and which institution will provide the best fit. Unfortunately, formal guidance mechanisms to aid in making these all-important decisions are very limited. As a result, students typically turn to personal networks for support, but the higher the student's previous level of achievement, the less likely it is that her circle of friends and acquaintances will include many members who have pursued the particular paths that she may want to take into consideration. This problem is exacerbated in a field such as library & information studies where the master's degree is often viewed as the terminal educational opportunity.

To fill this gap, *Extending the Web of Our Future* proposes to build a tool based on decision theory, the body of knowledge and related analytical techniques used to help a decision maker choose among a set of alternatives in light of the possible circumstances each presents. Decision theory applies to three types of conditions: certainty, risk, and uncertainty. Conditions of certainty lead to only one consequence in which case, one choice among alternatives leads to only one choice among consequences. Decisions faced under the condition of risk imply that one alternative has several possible consequences, and the probability of the occurrence of consequences is known. When the probability of consequences is unknown, the decision is made under conditions of uncertainty. Concisely stated, decision theory is the mathematics of making decisions under conditions of uncertainty. The most often cited shortcoming of decision theory is that may not fully consider the human social-psychological conditions that pertain as humans make value judgments regarding a situation under consideration. Therefore, a more qualitative approach has been suggested when applying decision theory to human decision-making processes.<sup>10</sup> To date, most qualitative implementations have relied heavily on artificial intelligence (AI). AI models have focused in the main on the three elemental concepts of belief, intention, and desire. Of these three elements, desire has been the least studied. AI models have worked toward the development of a qualitative theory of preference to facilitate reasoning about partial preferences and conflicting desires.<sup>11</sup> This emerging theory aids in extracting and comprehending human preferences in order to design an automated decision support system. However, AI approaches to decision-making have ignored other psycho-social issues. According to the *Institute of Cognitive and Decision Sciences*, decision making and social cognition require the consideration of several factors including emotion, perceptions of risk, contextual effects on the formulation of judgments, comparison processes, and the communication and sharing of information relevant to decision making.<sup>12</sup>

Current formal models for decision-making processes have qualitative and quantitative theoretical bases. Decision Tree Analysis is a quantitative model that projects back from likely outcomes to establish alternative

<sup>10</sup> Principia Cybernetica Web, "Decision Theory," [http://pespmc1.vub.ac.be/ASC/DECISI\\_THEOR.html](http://pespmc1.vub.ac.be/ASC/DECISI_THEOR.html), Accessed on March 30, 2003.

<sup>11</sup> Braziera, Dunin-Kepliczb, Treura, and Verbrugge, "Beliefs, Intentions and DESIRE," <http://ksi.cpsc.ucalgary.ca/KAW/KAW96/brazier/default.html>, accessed on March 29, 2003).

<sup>12</sup> "Decision Making and Social Cognition Focus Group," The Institute of Cognitive and Decision Sciences, <http://cogsci.uoregon.edu/focus02/index.html>, accessed on March 29, 2003.

choices. The model requires presentation of options and investigation of possible outcomes of selecting the options. Issues of risk and reward are derived through a cost-benefit analysis process. A monetary value is assigned by the user to each option, and the relative value is calculated by the model. Another model, Progress (<http://www.decision-making.co.uk/>), is a formal procedure developed by professionals in the discipline of counseling and management practice to aid the process of making wise decisions. The process uses a purely qualitative approach based on the understanding of three concepts; emotions, values, and cognitions while employing critical thinking skills, creative thinking strategies, and effective communication. The bi-directional linear process involves a five-stage approach of applying these concepts and skills in order to arrive at a decision under conditions of uncertainty.

***P<sup>2</sup>h.D. Program*** is a proposed tool to assist potential LIS doctoral students in the selection of specific degree programs and institutions that provide the best fit for the individual using the tool. The model will be based on a combined quantitative/qualitative theoretical approach. It will combine tree diagramming techniques with psycho-social human factors that are assigned values based on human preference. Data from the *Project Athena Doctoral Candidate Survey* will be used to initially determine those factors that doctoral students report most affected their choice of degree program and institution. The same basic design will be used in the future to apply ***P<sup>2</sup>h.D. Program*** to additional career-choice decision-making processes, such as selection of a first position. The bi-directional linear model that will form the basis for ***P<sup>2</sup>h.D. Program*** will allow for multiple applications to similar situations, such as evaluating the impact of a projected future move to a new institution on career outcomes.

### ***Management Plan***

Florida State University, the principal partner in this proposal, has an established record in grant administration, including administration of previous IMLS awards. The P.I. has experience administering grant awards and will oversee deployment and management of resources including money, facilities, equipment, and supplies with the support of the Office of Sponsored Research and in-house sponsored research support staff. The coordinators at the four partner institutions also have established grant records and will oversee deployment of the sub-awards to their institutions with the support of their grant administration offices.

The *Extending the Web of Our Future* grant-funded activities have been scheduled to begin on December 31, 2003 to maximize the time available to recruit two new doctoral fellows. An additional year of funding is sought for the six doctoral fellows originally funded through *Project Athena* to ensure that timely completion of their degree programs is not compromised.<sup>13</sup>

The new partner institution<sup>1</sup> was selected for its reputation for excellence and innovation, emphasis on minority enrollment, and geographical location, and to complement the strengths of the existing partners. These well-respected institutions are leaders in the field and as such are uniquely qualified to carry out the proposed activities and to ensure the adaptability and sustainability of the project deliverables. The six initial sponsor schools were selected for excellence in minority enrollment, geographic distribution, and viability of the institution. The two new sponsor schools will be selected using the same criteria. Their participation will ensure that the project deliverables meet the needs of the field as a whole, including non-Ph.D. granting and comprehensive institutions. Funding is sought for two .5 FTE graduate assistants. One will provide clerical and research support to Dr. Laurie Bonnici in coordinating the activities involving the sponsor schools and their assessment. The other will provide clerical and research support to Dr. Kathleen Burnett in coordinating activities among partner schools and preparing required reports on grant activities.

### **Extending the Web of Recruitment**

The design of the *Project Athena* recruitment model is complete and implementation has begun. Partner institutions have been identified, as have most of the sponsor institutions. Other Ph.D. granting institutions are aware of the project and many have agreed to supplement scholarship awards with tuition waivers or by matching the scholarship in subsequent years. *Extending the Web of Our Future* will focus on the extending the demonstration of the model through the inclusion of additional partner and sponsor institutions. This increased complexity will be managed through an increase in time commitment by co-P.I. Dr. Laurie Bonnici. (See Schedule of Completion for more detail).

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<sup>13</sup> The partner institutions have agreed that it is not reasonable to expect students to complete the requirements for the doctorate and the obligations of a doctoral fellow in less than three years.

## **P<sup>2</sup>h.D. Program**

Co-P.I. Laurie Bonnici has expertise in the areas of leadership and management where decision tools are employed in managing resources and people for effective organizational operation. She has worked in the area of computer systems networking and web design and development. Her research employs a quantitative approach to theoretical investigation of leadership and management issues.

Co-P.I. Judie Mulholland has expertise in the area of Management Science which scientifically addresses the problems, interests and concerns of organizational decision-makers. She has experience in database design and development. Mulholland has developed simulation models for her dissertation work dealing with electronic commerce and rights management issues.

Bonnici will be responsible for the initial or primary development of **P<sup>2</sup>h.D Program**. Initial development involves the identification of qualitative factors constituting variables which include the topics, conditions, alternatives, and possible decisions as they relate to the psycho-social issues of career development. In the second stage of development, Mulholland will extend **P<sup>2</sup>h.D. Program** through quantitative application and analysis. Psycho-social variables will be assigned numeric values based on a standardized quantification approach allowing the decision process to be analyzed through an automated process.

A team of experts consisting of Information Architect, Brian Arbogast de HM and Web-developer Ryan Miller will be responsible for the third phase of development of **P<sup>2</sup>h.D. Program**. Arbogast de HM, is the Faculty Practitioner who leads the Information Architecture Group at the FSU School of Information Studies. He and his staff have responsibility for design, development, implementation, and maintenance of the school's print and webpresence. The architecture of a new web tool depends on a creating a well-integrated information space, which includes content development and organization, document and interaction design, and a user-friendly interface to enhance the user experience.

Arbogast de HM will be the link between the initial/secondary design phases and the automation phase. Ryan Miller will be responsible for the web programming phase. Miller has experience in web design and development of instructional systems. He served as the lead web-developer for the interface designed by the FSU School of Information studies to deliver the online master's degree program.

## ***Budget Narrative***

*Extending the Web of Our Future* includes a primary budget and three sub-award budgets, one for each of the partner institutions. Florida State University will serve as the primary institution for the awards and will manage the sub-awards to the University of Illinois Urbana-Champaign, the University of Washington, and the University of North Carolina, Chapel Hill. The activities will be highly integrated across institutions, facilitating oversight and coordination of budgetary concerns. Dr. Kathleen Burnett will oversee the budget with the assistance of sponsored research staff, the graduate assistant, the school's accountant. Dr. Laurie Bonnici will coordinate the recruitment and tool development activities with the help of a graduate assistant.

The budget requests funding to support extending demonstration of the recruitment model; development of a tool based on decision theory (**P<sup>2</sup>h.D. Program**); assessment of outcomes of both these activities; and dissemination of the results. Included in the budget is funding for two fellowships at the University of North Carolina, Chapel Hill for two years; extension of six fellowships at three institutions for one year (FSU, UW, and UIUC); and eight \$1000 scholarships. Major areas of funding are outlined here. More detail is available in the Budget Summary, Detailed Budgets, and Budget Justification.

## **Salary**

Partial salary is requested for for the co-P.I.s who will be managing the web of recruitment and development of P<sup>2</sup>h.D. Program, and the two new partner coordinators. The primary institution will contribute partial salary for the P.I. and one co-P.I. the second and third years. The partner institutions will each contribute partial salary for their partner coordinator during the academic year. These funds will be used to support Co-P.I.s and partner coordinators

in their activities related to demonstration of the recruitment model, implementation of a course on faculty roles, design, development and implementation of a decision-making tool, assessment of the project, and preparation of the project results for dissemination. Partial salary (25%) is contributed by FSU for an Information Architect to oversee development of the decision-making tool; temporary hourly rate is requested for a computer programmer to program this tool. Temporary rate for one .5 FTE graduate assistant is requested for all three years to support the recruitment and tool development activities; a match is provided in the form of tuition for the same three years. Temporary rate and tuition for one .5 FTE graduate assistant is provided by FSU in Years 2 and 3.<sup>14</sup>

### **Fellowships and Scholarships**

Two years of fellowship support for two doctoral students at the new partner institution, the University of North Carolina, Chapel Hill is requested. A tuition match will be provided for each fellowship funded. One year of fellowship support extension for six doctoral students selected as Project Athena fellows in 2003, two at each of the original partner institutions (FSU, UW and UIUC), is requested. A tuition match will be provided by each institutions for each fellowship funded.<sup>15</sup> Doctoral fellows will participate actively in the recruitment process as role models and will be enrolled in the course during its first or second offering.

Scholarship support is requested for eight newly recruited doctoral students in the third year (8 x \$1000). Several Ph.D. granting institutions have indicated that they may match such an award with waiver of tuition or supplements to the scholarship.<sup>16</sup>

All fellowship and scholarship awards will be made using the Project Athena Recruitment Criteria (see Appendix ?). These criteria will ensure that all fellowship and scholarship awardees have a commitment to LIS education and intend to pursue careers as faculty in LIS institutions. In addition, all fellowship awardees will participate in a course on faculty roles to maximize the probability of their success in LIS education. Finally, all fellowship and scholarship awardees will have access the decision-making tool being designed as part of this proposal. This tool will assist potential LIS faculty in making good career-related choices. During the funding period, each fellowship and scholarship awardee will be assessed annually using the standards and criteria of his/her institution. Any awardee who is assessed as not making satisfactory or better progress will not receive renewal of the fellowship or scholarship award.

### **Travel**

Travel support is requested for IMLS outcome assessment training for the Co-P.I.s, partner coordinators, and doctoral fellows. As per the IMLS guidelines, travel to IMLS for one person from each institution each year is also requested.<sup>17</sup> Travel support (transport and meals only) is requested in Year 2 and Year 3 to fund recruitment visits by the doctoral fellows to the sponsor schools. The sponsor schools will provide housing for the three-week stay each year. Additional travel support is requested for the doctoral fellows to attend either the ALISE conference, a graduate student conference, or a research conference each year. These activities will support the recruitment and educational goals and are important to maintaining high visibility for the project. A travel match is included by each partner institution.

### **Contributions**

As the principal partner, Florida State University will provide the largest portion of the cost-sharing, including partial salary and fringe benefits, travel, duplicating and data processing, and tuition waivers. The new partner institution will provide cost-sharing, including partial salary and fringe benefits, travel, and tuition waivers for two doctoral fellows. The original partner institutions will also provide tuition waivers for two doctoral fellows. The sponsor schools will each provide housing accommodations for one doctoral fellow for three weeks for each of the three years. Further detail on cost-sharing is available in the Budget Justification and the Detailed Budgets.

### **Personnel**

*Principal Partner Personnel:* The P. I., Dr. Kathleen Burnett, Associate Dean and Associate Professor at the School of Information Studies at Florida State University has experience with doctoral recruitment and education and

<sup>14</sup> Funding for this graduate assistant has already been contributed by FSU in Year 1 in the previous IMLS award.

<sup>15</sup> The University of Illinois at Urbana-Champaign will provide tuition for the two fellowships requested. Institutional policy prohibits them from including this as a match in their budget.

<sup>16</sup> These potential matches are not reflected in the budget.

<sup>17</sup> This is spread across the main and sub-award budgets. It exceeds the IMLS requirement of \$2000 per year each year.

expertise in information behavior in learning contexts. She has experience as an investigator on several federal grants (including a 2002 IMLS National Leadership Grant) and regularly participates in the administration of grants made to the school. Co-P.I. Dr. Jane B. Robbins, Dean of the School of Information Studies at Florida State University is an experienced researcher who has written extensively on LIS education, role modeling and mentoring. She has extensive experience in grants administration. Co-P.I. Dr. Laurie Bonnici, is an Assistant Professor at Texas Woman's University who has published on leadership in LIS and contributes expertise in faculty development, particularly leadership in learning, discovery and engagement to the project. Co-P.I. Judie Mulholland, Assistant Professor at Dalhousie University is completing her dissertation on modeling future trends in digital rights management and brings an understanding of models for predicting future information trends as well as recent experience as a doctoral candidate to the project. The Co-P.I.s were in part selected for their recent experience with doctoral education, which will facilitate their ability act as role models for the doctoral fellows as well as ensure the currency of understanding of doctoral education.

*Partner Institution Personnel:* Dr. Linda Smith, Interim Dean of the Graduate School of Library and Information Science at the University of Illinois-Urbana Champaign, Dr. Harry Bruce, Associate Dean of the Information School at the University of Washington, and Dr. Joanne Marshall, Dean of the School of Information and Library Science at University of North Carolina, Chapel Hill will serve as project coordinators at the partner schools. All have experience as investigators and in administering federal grants.

Further information on *Extending the Web of Our Future* personnel is provided in the Resume section.

### ***Project Evaluation***

*Extending the Web of Our Future* will extend the evaluation plan developed for *Project Athena*, which includes examination on three evaluative levels: Goals-based evaluation, Process-based evaluation, and Outcomes-based evaluation. Each of these evaluation techniques addresses the project at various stages.<sup>18</sup> The primary goals-based evaluation will be conducted independently by Co-PI Jane B. Robbins to ensure that reliable and valid data are available to assess outcomes. All other evaluation, including secondary goals-based evaluation, process-based evaluation and outcomes-based evaluation will be conducted with participation from the Co-P.I.s, partner coordinators, and doctoral fellows.

#### **Goals-based Evaluation**

The primary evaluation will be conducted by Dr. Robbins who has revised the Pew Trust survey (see **Appendix ?**) in cooperation with its designer, Chris Golde. This instrument will be employed to measure the degree of change accomplished by *Project Athena* as well as providing data on doctoral education that can be compared to that collected through the original Pew Trust survey (see **Appendix C**). The survey as modified includes questions relating to the *Project Athena* socialization process as well as formal educational activities and takes into account those characteristics that may be unique to professional education.

- The Pew Trust administered the original survey once to a cohort of third-year doctoral students. Because *Extending the Web of Our Future* and *Project Athena* are interested in discovering the outcomes of goals over time, the revised survey will be administered twice (Spring 2003 and Fall 2006). The first administration involved students advanced to candidacy during calendar year 2001. The second administration will include students advanced to candidacy during calendar year 2006..

Participant-observation by the eleven doctoral fellows (six funded through *Project Athena*; five through *Extending the Web of Our Future*) will be included in the secondary evaluation. Secondary goals-based evaluation will extend the assessment from satisfaction to other measures of success, including commitment, retention and diffusion. Working with IMLS and the Carnegie Foundation, *Project Athena* will identify standard instruments that may be adapted to measure these variables.<sup>19</sup> The doctoral fellows, Co-P.I.s and partner school coordinators will collaborate in data collection and analysis, thus providing the doctoral fellows with the opportunity to extend their formal training in assessment from theory to practice.

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<sup>18</sup> See "Basic Guide to Program Evaluation," [http://www.mapnp.org/library/evaluatn/fnl\\_eval.htm](http://www.mapnp.org/library/evaluatn/fnl_eval.htm) for an explanation of the types of outcomes-based evaluative measures.

<sup>19</sup> We have deliberately delayed identification of instruments for the secondary evaluation in order to take advantage of the opportunity to work closely with IMLS and to involve the doctoral fellows in this process.

### **Process-based Evaluation**

Process-based evaluation measures will be used to discern the strengths and weaknesses of the project. The data sets compiled for the goals-based evaluation will be examined incrementally (annually) to measure change through on-going processes.

Focus group interviews will be conducted with the doctoral fellows and faculty of the partnering and sponsor institutions regarding the perceived effectiveness of the recruitment model at the end of the each year. The questions will be tailored to examine the effectiveness of the web model for increasing doctoral enrollment, and the effectiveness of role-modeling and mentoring through the relationship with the sponsor schools in the socialization process. Additional questions will be included to examine perceptions of the effectiveness of the exemplar course. The focus group results will guide the revision and refinement of the exemplar course through the iterations from pilot to partner offering to general dissemination to all LIS Ph.D. granting schools.

### **Outcomes-based Evaluation**

*Extending the Web of Our Future* will build upon the outcomes-based evaluation design developed during the second year of *Project Athena* in collaboration with IMLS and with the cooperation of the Carnegie Foundation, the demonstration of the extended recruitment web and the **P<sup>2</sup>h.D. Program** will receive rigorous evaluation. Pre-testing of the *Project Athena Survey of Doctoral Candidates*, based on a survey originally administered to students enrolled in a sub-group of academic doctoral degree programs was administered in November 2002 and subsequent revisions were made. The survey itself was administered between January and March 2003 and data are currently being analyzed by Dr. Jane B. Robbins. Specific questions from the survey were selected to serve as indicators of outcomes by *Project Athena* participants at the *IMLS Outcomes Workshop* in September 2002. At the completion of the project this and any additional instruments developed will be made available to all of the LIS doctoral degree-granting institutions for use in the evaluation of goals, processes and outcomes of their activities and programs.

Wherever possible, standard instruments will be identified and adapted to facilitate comparisons across disciplines as well as among LIS institutions. During this process, the Co-P.I.s will work closely with the partner schools and other Ph.D. granting schools to ensure that the instruments selected and the adaptations made will serve LIS education well. The two partner schools added through *Extending the Web of Our Future* will be essential in this process. Representatives of these two institutions will serve as participant-observers, providing a fresh but informed perspective in the evaluation process. Feedback will also be sought from the sponsor schools and other non-Ph.D. granting schools to ensure that their needs, where different, are met.

***All doctoral fellows funded through Project Athena and Extending the Web of Our Future will be active participants in this process, thus learning the concepts and mechanics of outcomes assessment through the process of assessing outcomes of a project where they are stakeholders. They will attend the training in outcomes assessment provided by the IMLS during their initial year of funding, and will assist in identification and adaptation of instruments, as well as data collection and analysis.***

### ***Dissemination***

*Extending the Web of Our Future* will further facilitate the generation of one of the deliverables proposed for *Project Athena*—a self-sustaining recruitment model—as well as generate a new deliverable—**P<sup>2</sup>h.D. Program**. Both deliverables will be made available through the establishment of a *Project Athena Center for Outcomes Assessment of LIS Ph.D. Education* website. The website will be maintained, and technical, data collection, and data analysis support provided for at least three years following the conclusion of the current grant award. Additional modes of dissemination of project results will include presentations by the doctoral fellows, project investigators, and partner coordinators at ALISE and ALA sponsored conferences; project updates in the professional journals; and research publication in relevant professional journals such as the *Journal for Education of Library and Information Science (JELIS)*.

### ***Sustainability***

Special initiatives to support service-based outcomes such as this IMLS competition are rare in times of economic recession. This competition recognizes the importance of librarianship as navigator and equalizer in the information economy. The nationally recognized need to increase the supply of well-prepared librarians ensures that the demand for *Project Athena* and *Extending the Web of Our Future* deliverables will be high because this supply cannot be increased without a commensurate increase in the faculty to prepare them. The four partner

institutions, the eight sponsor schools, the scholarship schools, and the remaining LIS educational community is trapped in an endless loop of need to recruit new doctoral students to become faculty to educate the next generation of librarians. The proposed activities speak to the very missions of these educational institutions: the recruitment of students, educational and career decision-making support and the study of goals, processes, and outcomes through systematic collection and evaluation of data.

The demonstrated commitment of LIS educational programs to this approach is tangibly evident in the level of cost-sharing by the principal and partner schools, the willingness of the sponsor schools to provide housing to the doctoral fellows during their three week visits each year, and the commitment from many other LIS schools to supplement the proposed \$1,000 scholarships with tuition waivers or matching funds. The ongoing need will heighten the perceived value of the activities and outcomes of the funded project. With a solid foundation established through the 2002 National Leadership Grant award, *Extending the Web of Our Future* will demonstrate the cost effectiveness of a self-sustaining recruitment model, the adaptability of an exemplar course, and further the ability to effectively design the means for comparative assessment of goals, processes and outcomes across institutions. The schools selected to participate in this project have the professional networks, physical electronic networks, and research expertise to carry out the three activities: recruitment, course development, and outcomes-based evaluation. *Extending the Web of Our Future* will further *Project Athena's* ability to convert the considerable vitality and energy of the 53 ALA accredited LIS schools from insular competition to national collaboration. The good will established by this effort should have positive consequences for all stakeholders--from library patron to practitioner to doctoral student to educator--that extend well beyond *Project Athena's* and *Extending the Web of Our Future's* life and goals.