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The University Library as Information Provider and Communication Facilitator: A Faculty Research Database

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ABSTRACT

The current "information explosion," coupled with rapid electronic developments and pervasive economic constraints, is forcing academic communities and their libraries to refine and rethink their policies and services in order to increase efficient dissemination of information. This requires close monitoring of and quicker response to the changing needs of their own user communities. This collaborative project addresses these issues by collecting and correlating information obtained directly from university faculty and research units, tracking elements such as research interests, projects, patents, funding sources, publications, and courses taught. Preliminary findings and the significance of providing wide electronic access to the results are discussed.

INTRODUCTION

The Faculty Research Interests database project grew out of a desire to more carefully hone collection development at Merrill Library to meet the information needs of Utah State University. The library's collection development has historically been based primarily on curricular information. Anticipation of new demands concurrent with static or even reduced acquisitions budget allocations prompted the search for a means to delineate and track active research areas as well.

We determined that the most reasonable approach to this problem was to obtain the information through direct contact with faculty members and research adjuncts of the University. A programmed series of specific questions directed to each researcher would provide the information which we could then organize for our use. Storing

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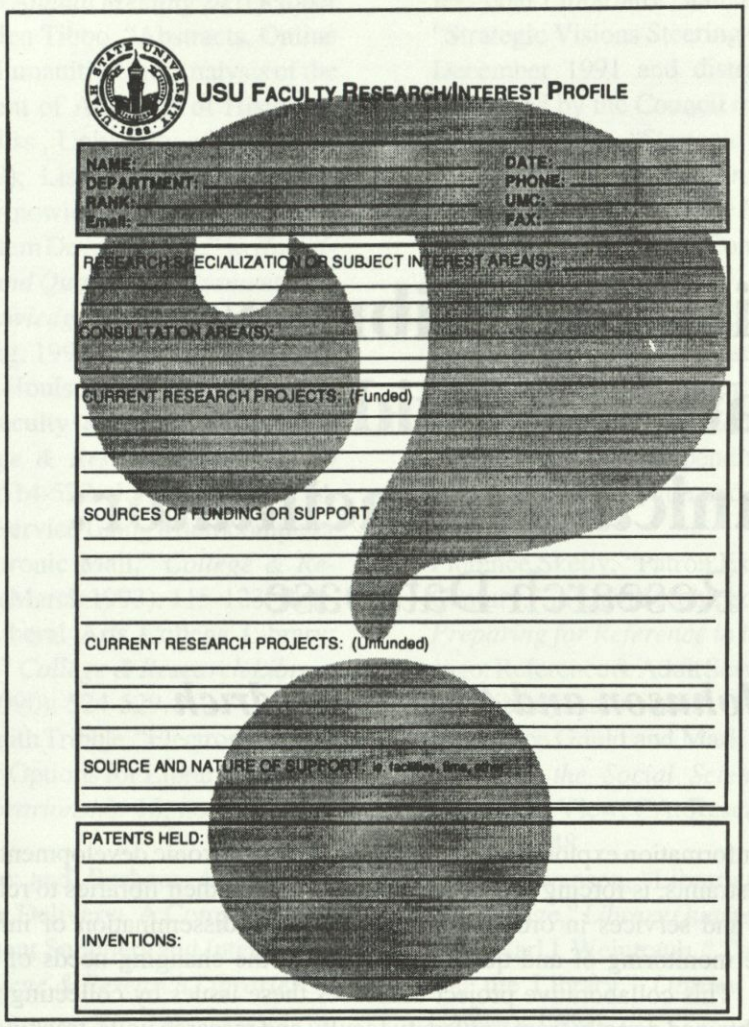


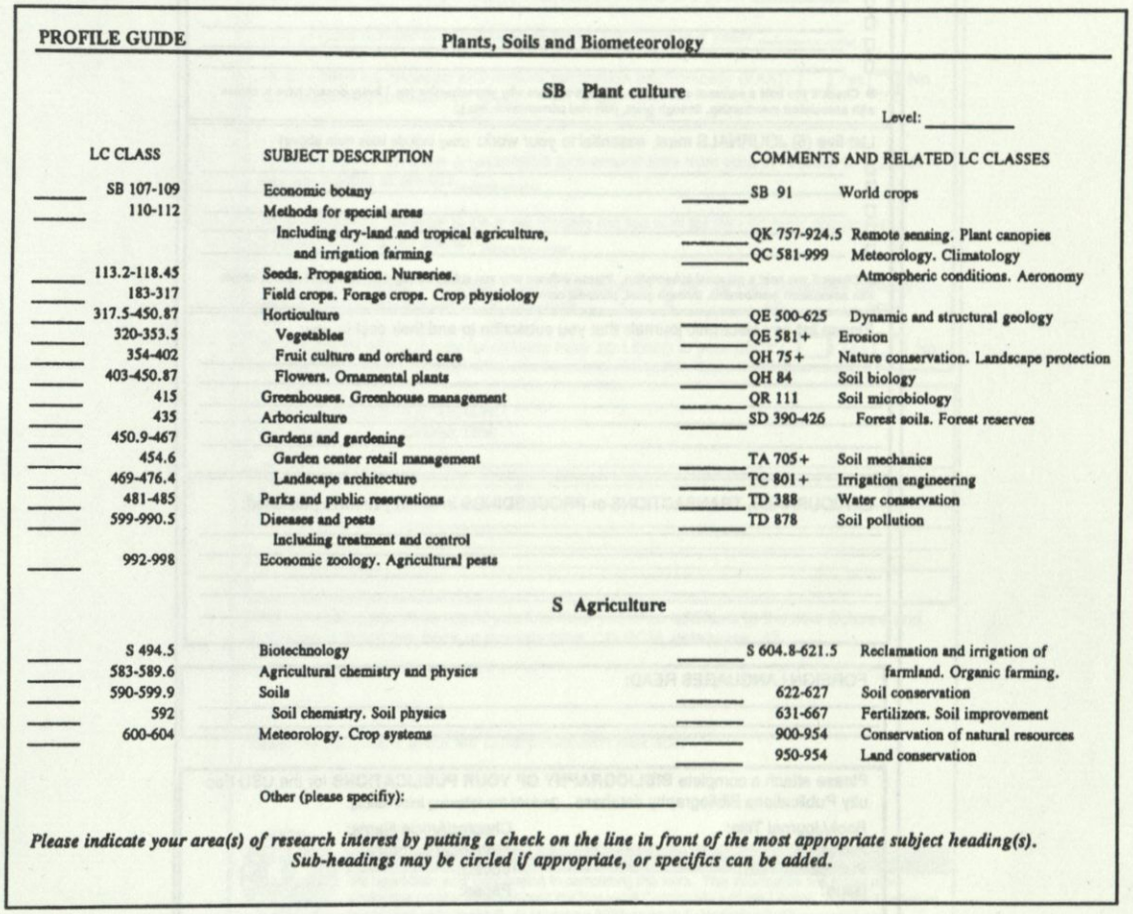
Figure 1: First page of Faculty Research/Interest questionnaire

this information in an electronic relational database would allow flexibility in both anticipated and potential uses. Information would be easily accessible, could be updated annually, and would be available for electronic dissemination.

APPROACH

It is difficult to gather information from university faculty, because such individuals are both perpetually overloaded with work and frequently the target of surveys from a variety of agencies. Because ever-rising costs and the proliferation of journal titles have captured the attention of university faculty and researchers, this awareness was our hook for eliciting the cooperation of our user community.

In order to include all 1000+ faculty members and researchers in the survey, it was necessary to address all academic departments as well as research units and other university affiliates. Sheer numbers dictated the use of a printed survey questionnaire. Drawing heavily on the work of Don Dillman* and other social scientists, a four-page questionnaire was designed and tested which visually delineated various groups of questions by subject. A large shadow-toned question mark was used as a watermark on the first page of the survey, and the university seal was depicted on two of the four pages to reinforce the official nature of the survey (Figure 1).



PROFILE GUIDE — **Plants, Soils and Biometeorology**

SB Plant culture

Level: _____

	LC CLASS	SUBJECT DESCRIPTION
_____	SB 107-109	Economic botany
_____	110-112	Methods for special areas Including dry-land and tropical agriculture, and irrigation farming
_____	113.2-118.45	Seeds. Propagation. Nurseries.
_____	183-317	Field crops. Forage crops. Crop physiology
_____	317.5-450.87	Horticulture
_____	320-353.5	Vegetables
_____	354-402	Fruit culture and orchard care
_____	403-450.87	Flowers. Ornamental plants
_____	415	Greenhouses. Greenhouse management
_____	435	Arboriculture
_____	450.9-467	Gardens and gardening
_____	454.6	Garden center retail management
_____	469-476.4	Landscape architecture
_____	481-485	Parks and public reservations
_____	599-990.5	Diseases and pests Including treatment and control
_____	992-998	Economic zoology. Agricultural pests

	COMMENTS AND RELATED LC CLASSES	
_____	SB 91	World crops
_____	QK 757-924.5	Remote sensing. Plant canopies
_____	QC 581-999	Meteorology. Climatology Atmospheric conditions. Aeronomy
_____	QE 500-625	Dynamic and structural geology
_____	QE 581+	Erosion
_____	QH 75+	Nature conservation. Landscape protection
_____	QH 84	Soil biology
_____	QR 111	Soil microbiology
_____	SD 390-426	Forest soils. Forest reserves
_____	TA 705+	Soil mechanics
_____	TC 801+	Irrigation engineering
_____	TD 388	Water conservation
_____	TD 878	Soil pollution

S Agriculture

	LC CLASS	SUBJECT DESCRIPTION
_____	S 494.5	Biotechnology
_____	583-589.6	Agricultural chemistry and physics
_____	590-599.9	Soils
_____	592	Soil chemistry. Soil physics
_____	600-604	Meteorology. Crop systems

	COMMENTS AND RELATED LC CLASSES	
_____	S 604.8-621.5	Reclamation and irrigation of farmland. Organic farming.
_____	622-627	Soil conservation
_____	631-667	Fertilizers. Soil improvement
_____	900-954	Conservation of natural resources
_____	950-954	Land conservation

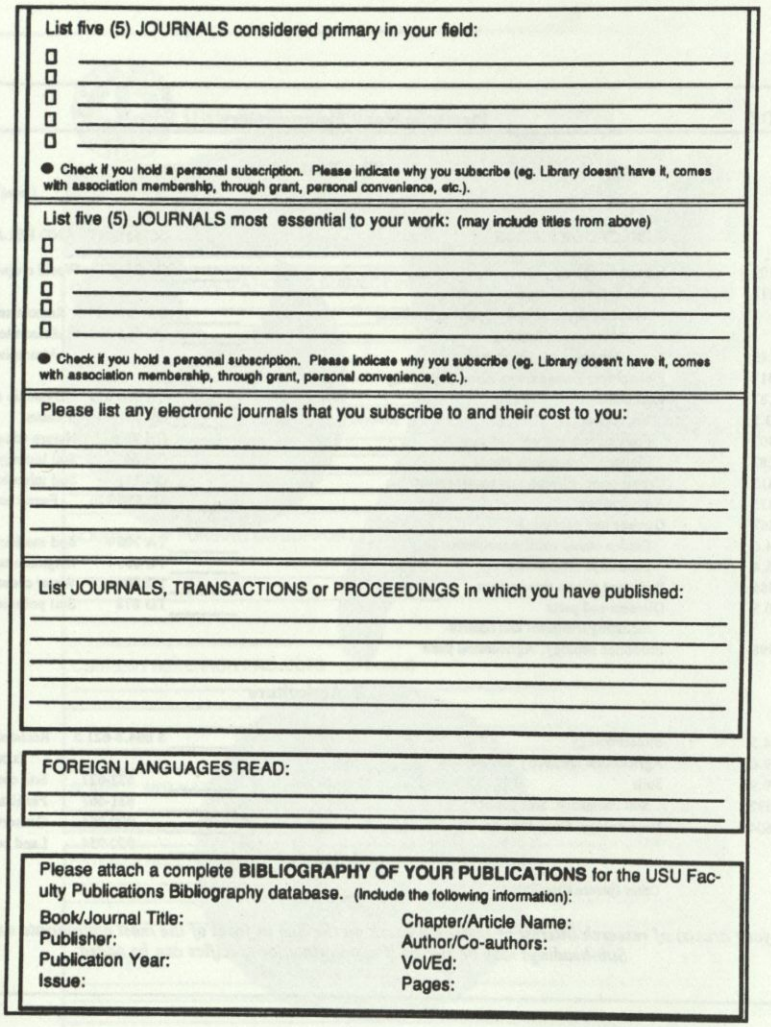
Other (please specifiy): _____

Please indicate your area(s) of research interest by putting a check on the line in front of the most appropriate subject heading(s). Sub-headings may be circled if appropriate, or specifics can be added.

Figure 2: Page 4 of the Faculty Research/Interest questionnaire

The questionnaire was constructed to define research interests by free text description and the researcher's own choice of the Library of Congress (LC) subject headings that best describe their interests (Figure 2). There is space for five journal titles considered primary in the faculty member's discipline, and five journal titles essential for his/her particular research. The respondent is asked to indicate which of the journals in each category he/she personally subscribes to, and list reasons for the subscription, such as membership in a professional association, personal convenience, and/or absence from the library's collection (Figure 3).

Data on research conducted at Utah State University will aid in collection development, and may provide crucial information for decisions being made in an era of reduced budgets and endangered serials collections. Based upon the questionnaire, Merrill Library can identify specific journals needed for research by university faculty. Although it is impossible to purchase every journal needed by every researcher, previously undetected trends in titles needed may be uncovered. Since the information will be updated annually, these trends may be tracked over time. One of the greatest benefits of the project will be data delineating long term patterns and sudden shifts in research emphases at the University.



List five (5) JOURNALS considered primary in your field:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

● Check if you hold a personal subscription. Please indicate why you subscribe (eg. Library doesn't have it, comes with association membership, through grant, personal convenience, etc.).

List five (5) JOURNALS most essential to your work: (may include titles from above)

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

● Check if you hold a personal subscription. Please indicate why you subscribe (eg. Library doesn't have it, comes with association membership, through grant, personal convenience, etc.).

Please list any electronic journals that you subscribe to and their cost to you:

_____
_____
_____
_____
_____

List JOURNALS, TRANSACTIONS or PROCEEDINGS in which you have published:

_____
_____
_____
_____
_____

FOREIGN LANGUAGES READ:

_____
_____

Please attach a complete **BIBLIOGRAPHY OF YOUR PUBLICATIONS** for the USU Faculty Publications Bibliography database. (Include the following information):

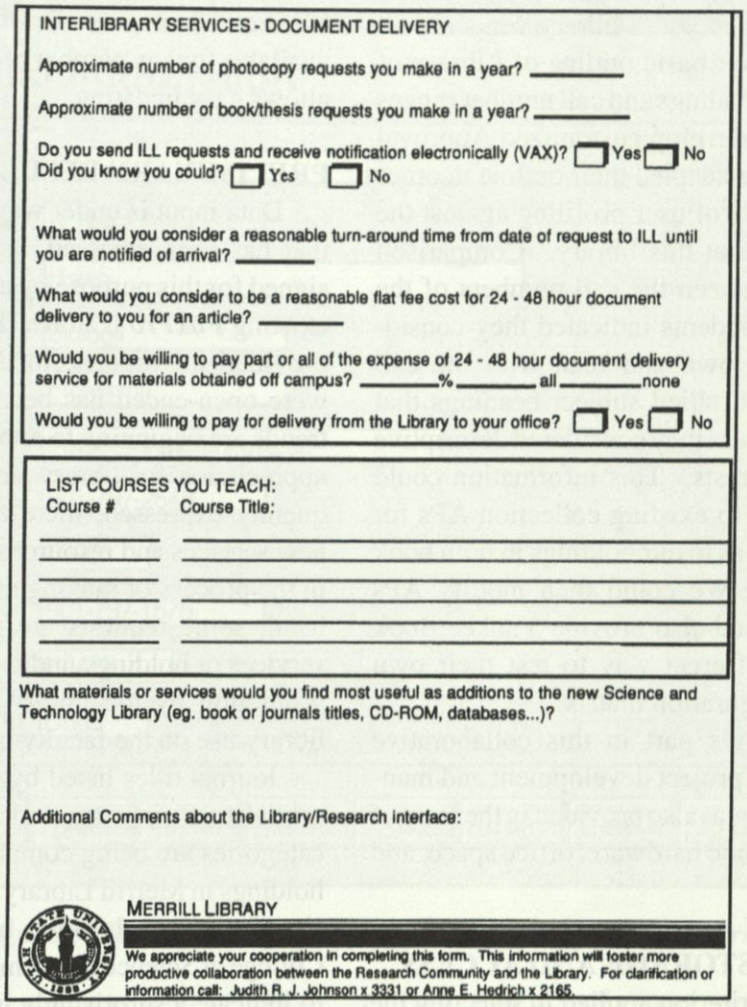
Book/Journal Title:	Chapter/Article Name:
Publisher:	Author/Co-authors:
Publication Year:	Vol/Ed:
Issue:	Pages:

Figure 3: Page 2 of Faculty Research/Interest questionnaire

Selected LC classification ranges can be used to refine or reconfigure book approval profiles currently in use, and analyze journal holdings and needs.

The questions developed to characterize journal use patterns suggested other access issues critical to academic libraries at the present time. Increasing use of Interlibrary Services to obtain articles or copies of articles, and the appearance of new document delivery vehicles and vendors, inspired a series of questions regarding individual use of Interlibrary Services, in terms of both frequency and quantity. Additional questions were aimed at assessing the use of a new electronic ordering and notification service our ILS department had recently developed, as well as exploring the feasibility of using commercial document delivery services (Figure 4). Would faculty be willing to pay for enhanced document delivery services, and if so, how much?

Campus interest in the questionnaire grew and the original vision of the database expanded to include research and teaching personnel, with added questions about courses taught, consultation areas, and foreign language expertise to supplement identifying information such as department and email addresses. In the future, photographic images and other biographical materials may be added. These enhancements will offer prospective faculty and graduate students the opportunity



INTERLIBRARY SERVICES - DOCUMENT DELIVERY

Approximate number of photocopy requests you make in a year? _____

Approximate number of book/thesis requests you make in a year? _____

Do you send ILL requests and receive notification electronically (VAX)? ☐ Yes ☐ No
Did you know you could? ☐ Yes ☐ No

What would you consider a reasonable turn-around time from date of request to ILL until you are notified of arrival? _____

What would you consider to be a reasonable flat fee cost for 24 - 48 hour document delivery to you for an article? _____

Would you be willing to pay part or all of the expense of 24 - 48 hour document delivery service for materials obtained off campus? _____% _____all _____none

Would you be willing to pay for delivery from the Library to your office? ☐ Yes ☐ No

LIST COURSES YOU TEACH:

Course #	Course Title:

What materials or services would you find most useful as additions to the new Science and Technology Library (eg. book or journals titles, CD-ROM, databases...)?

Additional Comments about the Library/Research interface:

MERRILL LIBRARY

We appreciate your cooperation in completing this form. This information will foster more productive collaboration between the Research Community and the Library. For clarification or information call: Judith R. J. Johnson x 3331 or Anne E. Hedrich x 2165.

Figure 4: Page 3 of Faculty Research/Interest questionnaire

to investigate campus research areas and expands the services provided at the Reference Desk. Patrons with specialized information or service needs can locate local experts through the database.

The University Research Office expressed interest and suggested that more specific information on research projects, such as sources and nature of support for both funded and unfunded research, be added to the database.

COLLABORATION

Working with other units and agencies both on and off campus to make information electronically available and to improve services represents a new collaborative aspect of library activity. The University Research Council indicated interest in the tracking of research specialties, grant funding and faculty publications, and the Research Office subsequently provided funding to underwrite the expenses of software, programming and student help. The University's Research Park affirmed their own interest and suggested tracking of inventions and patents as well. A database coordinating these varied aspects of the research scene could have numerous uses outside the library, in such areas as research and consultation team building, fund raising, recruitment of new faculty and graduate students, and assessment of new directions in research emphasis.

Yankee Book Peddler, a library vendor, provided a copy of their basic outline of Library of Congress subject headings and call number ranges which they use to develop customized Approval Profiles (APs). We adapted their outline in order to test some aspects of user profiling against the current APs in use at this library. Comparison could be made between the call numbers of the journal titles respondents indicated they considered important to own and read with the call number ranges and allied subject headings that they specified as areas they considered descriptive of their work interests. This information could then be compared to existing collection APs for the library, as well as to our holdings in both book and journal titles. We could then modify APs where necessary and also provide Yankee Book Peddler with a different way to test their own subject area configuration matrix.

Merrill Library's part in this collaborative effort consisted of project development and management. Support was also provided in the form of staff hours, electronic hardware, office space, and supplies.

ELECTRONIC STORAGE AND ACCESS

The primary criterion applied in selecting the software used for the databases was easy availability to any library or unit interested in using or emulating the project. Research focused on commercially-produced programs. Microsoft's ***FoxPro*** relational database software was selected for its flexibility and ease of use. ***Papyrus*** bibliographic software by Research Software Design was chosen to organize the faculty publications database. The faculty bibliography will be available independently from the rest of the information as well as in an integrated format.

Networking capability was another important consideration in the choice of software.

Electronic availability campus-wide and, potentially, via the Internet is critical to the usefulness of the instrument being developed. Electronic access makes it available to many more people than the information would be in print. Electronic storage makes the information readily available for any number of different uses and also allows easy updating.

PRELIMINARY RESULTS

Data input is under way with the information that has been amassed, using input screens designed for this purpose by a programmer utilizing existing ***FoxPro*** features (Figure 5). Information provided in response to those questions which were open-ended has been tabulated, and some trends are beginning to appear. On the one hand, appreciation for library services in place is frequently expressed; there are requests for some new services and resources which we are already in the process of making available. On the other hand, some requests are for currently existing services or holdings, indicating either inadequate promotion by the library or a lack of diligent library use on the faculty member's part.

Journal titles listed by respondents in the essential to their work and primary in their field categories are being compared to current journal holdings in Merrill Library. It is too early to draw significant conclusions; however, the trend in College of Science departments to this point seems to indicate a surprisingly high degree of correlation, approximately 80% in each area, considering the ongoing pressure by departments to obtain new titles. This apparent trend may falter as analysis extends to non-science disciplines.

CONCLUSION

Collecting local information on researchers and educators is a familiar undertaking. Processing, storing and making it electronically available to the university community is a new aspect of information provision for Merrill Library. This role becomes more valuable as competition for qualified faculty and students, and research and development dollars increases. Librarians, as experts on the local university community, can take on an expanding role as information organizers and providers. Detailed knowledge of specific research areas aids in the provision of services with the least cost.

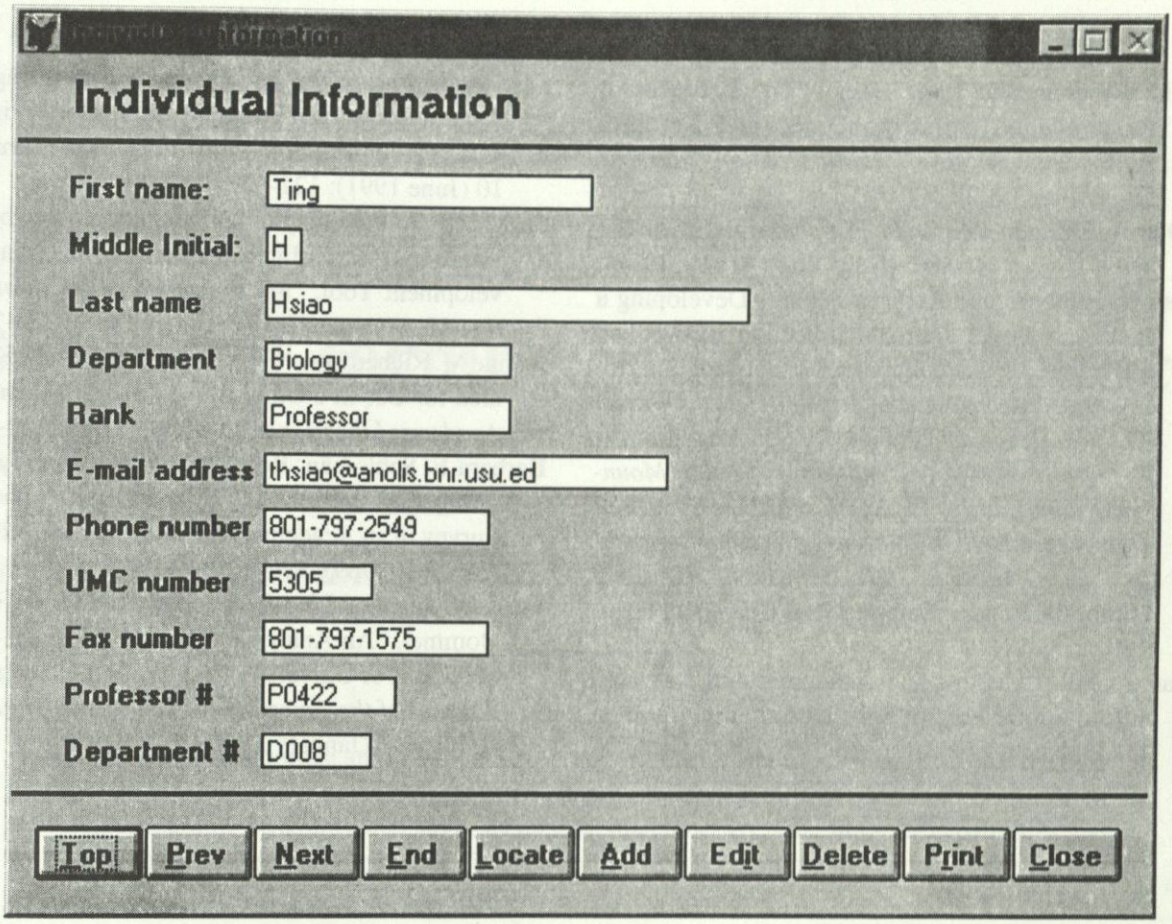


Figure 5: Example of data input screen developed in *FoxPro*

There are some reservations about the project. The survey methods we have implemented have yielded what is in survey terms a highly successful return; however, complete information has been gathered from only 69% overall of university faculty/researchers at this point. To be able to make informed and balanced journal collection development decisions, information from all researchers is the ideal goal. We expect to receive greater participation as we conduct annual updates and the resulting databases are seen to have practical application. For libraries considering a similar undertaking, the costs in time and labor for a project of this magnitude need to be carefully weighed.

Although we are still in the process of building our databases and processing our data, one of the most significant results of this project may well have already manifested itself. We have discovered an upsurge in interest in the library and its' activities as the university community has become aware of the nature and goals of our undertaking. The library is being seen as an active, even proactive, force on campus rather than the passive body many formerly perceived it to be. This provides us with an excellent opportunity to build stronger liaison relationships in the various educational roles the modern academic library is prepared to perform. If the services already being provided receive greater exposure across campus and positive changes are seen to come from our project, the improved access and services the library will be providing should continue to build greater participation and support in the community of users we are committed to serve.

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