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ABSTRACT
                This document consists of supplemental information
designed to accompany a presentation on the application of projection
technology, including video projectors and liquid crystal display
(LCD) devices, in the online catalog library instruction program at
the Indiana State University libraries. Following an introductory
letter, the packet includes: (1) general considerations in selecting
computer projection equipment; (2) pluses and minuses of the SONY
Video Projection System and Kodak DataShow System; (3) a listing of
six other institutions that use computer projection technology; (4)
simplified schematics illustrating the SONY Video Projection System
and the Kodak DataShow System; (5) a questionnaire designed to elicit
information about student's reactions to video projection; (6) the
results of the video projection evaluation by students; (7) nine
selected sources for further reading; and (8) selected materials used
in Indiana State University's library instruction program, i.e., a
brief guide to LUIS (Library User Information Service) and a
Cunningham Memorial Library Instruction and Orientation LUIS
exercise. (KM)

ADVANCES IN PROJECTION TECHNOLOGY
FOR ON-LINE INSTRUCTION

developed by

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for presentation at the

15th National LOEX
Library Instruction Conference
Ohio State University

May 1987

"Advances in Projection Technology

for On-line Instruction"

PROPOSED DOCUMENT RESUME

This document was distributed as a packet of supplemental information at a presentation given at the 15th National LOEX Library Instruction Conference (Ohio State University, May 1987). The presentation dealt with uses of new projection equipment (video projectors and liquid crystal display projection devices) as applied to on-line catalog instruction, and represented an expanded treatment of a presentation made earlier at a NOTIS User's Group Meeting at Northwestern University in July 1986. The document contains information useful to libraries considering the purchase of the newer projection equipment, including: general considerations in selecting computer projection equipment; positive and negative characteristics of video projection systems and liquid crystal display (LCD) devices; a simplified schematic of two such systems; a list of institutions identified as currently using computer projection for on-line instruction; a video projection evaluation form and results of such an evaluation conducted at Indiana State University; and selected sources for further reading. The document also includes selected general materials used in Indiana State University's library instruction program.

Advances in Projection Technology for On-line Instruction

15TH NATIONAL LOEX
LIBRARY INSTRUCTION CONFERENCE
OHIO STATE UNIVERSITY
MAY 6-8, 1987

PRESENTORS:

SCOTT DAVIS, ASSOCIATE LIBRARIAN
MARSHA MILLER, SENIOR ASSISTANT LIBRARIAN
INDIANA STATE UNIVERSITY
TERRE HAUTE, IN
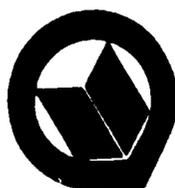
INDIANA STATE UNIVERSITY LIBRARIES
DEPARTMENT OF LIBRARY INSTRUCTION AND ORIENTATION

Thursday, May 7, 1987

Dear Library Instruction Colleague:

The purpose of this presentation is to share with you the application of
projection technology in the on-line catalog library instruction program
at Indiana State University Libraries. Even though specific projection
equipment will be demonstrated, our purpose is not to promote or malign
any particular projection system or brand. There are numerous systems
available on the market, ranging widely in cost, portability, and
instructional potential.

Integration of projection technology into the library instruction program
at ISU began in Spring, 1985, using a SONY video projection system inter-
faced with an IBM-pc. Such a system was considered state-of-the-art at
that time. Our SONY system has worked well for us during the past two
years and has been received favorably by the students and faculty who
have attended our instructional sessions. However, recent advances in
liquid crystal display systems (LCDs) could have a major impact on what
constitutes today's state-of-the-art instructional projection system.
ISU's Department of Library Instruction and Orientation is in the process
of upgrading their current projection hardware to incorporate these
recent LCD advances into their instructional program. Full implementation
of a new LCD system is planned for Fall, 1987.

A table of contents has been provided on the following page for quick
access to specific materials in this packet. The materials summarize
much of the information presented in our demonstration. We have also
included a couple of miscellaneous handouts used in our on-line instruc-
tional efforts which may be of interest to you.

The technology which surrounds us is changing so rapidly that it is
little wonder that many of us often feel a bit frustrated and intimidated
by the prospect of staying abreast of the advances. In implementing the
hardware demonstrated here today, one need not become a "technical
wizard." Instead, should you choose to acquire a video or LCD projection
system, you should work very closely with your vendor and with your
institution's systems department, computer center, and media services
unit to ensure a system that is versatile, durable, and effective in
terms of your instructional program needs.

Sincerely,

H. Scott Davis
Department Head

Marsha A. Miller
Instruction Librarian

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ADVANCES IN PROJECTION TECHNOLOGY
FOR ON-LINE INSTRUCTION

ABSTRACT

Most would agree that the "best" type of library instruction involves an interactive component, i.e., hands-on. On-line catalogs in academic libraries present new, yet not insurmountable, instructional problems for BI librarians. There seems to be something very two-dimensional about using the traditional transparency/lecture/ handouts approach for instructing library users on how to use an on-line catalog. Video projection and recent advances in liquid crystal display technology (LCDs) provide an exciting instructional alternative to more traditional BI methods. This presentation's purpose is to introduce participants to one of the latest advances in projection technology--specifically, the Kodak DataShow Projection Pad. DataShow is an LCD device which interfaces with an IBM-pc and standard overhead projector, allowing for projection of terminal screen images as the instruction librarian goes through an actual search. In addition to a demonstration of DataShow, other LCD systems and the SONY Video Projection will be discussed. Positive and negative characteristics of the various systems discussed will be presented.

GENERAL CONSIDERATIONS IN SELECTING
COMPUTER PROJECTION EQUIPMENT

-cost of equipment and any needed peripherals

-portability/storage requirements

-download/simulation capabilities

-durability/warranty

-versatility of applications

-comparative on-site demonstrations of different systems

-satisfaction of other users (request addresses from vendor)

-specifications of room where equipment will be used most,
    i.e., light control, dimensions, power supply, security, etc.

* *

PLUSES AND MINUSES OF THE
SONY VIDEO PROJECTION SYSTEM AND KODAK DATASHOW SYSTEM

The following positive and negative characteristics of the SONY Video
Projection System and the Kodak DataShow System have been identified in terms
of their utilization and anticipated implementation in the library instruction
program at Indiana State University. The extent to which you agree that these
characteristics are positive or negative will be determined by the specifics
of your library instruction program, and by your intended application(s) of
computer projection technology in the program. Given that the utilization of
computer projection equipment is relatively new to academic library instruc-
tion, this list should not be considered complete.

SONY Video Projection System (Model VPH-722Q1):

  + Capability for projecting "live action" videotapes

  + Well-received by students and faculty; preferred over more traditional
    teaching methods (transparencies/lecture)

  + Relative portability

  + Maintenance record at ISU is very good

  - Cost is relatively high

  - Fixed projected image size (7' diagonal max.)

  - Sensitive to ambient light; considerable parallax with wide viewing angle

  - Magnifies "noise" in live action video images

  - Audio quality is only "fair" in live action video

  - Diminished image clarity with increased viewing distance

PLUSES AND MINUSES... (continued)

Kodak DataShow:

+ Cost is relatively low

+ Very portable

+ IBM compatible

+ Download/simulation software

+ Unlimited projected image size

+ Less sensitive to ambient light than SONY system

+ Remote control capability

- Fragile

- Image fades when overhead lamp wattage exceeds 360 watts (650 watts is the prevalent overhead lamp wattage)

- Software is complicated for persons with limited computer knowledge

- Cannot project "live action" video

- Relatively untested in terms of long-range durability/maintenance requirement

- Miscellaneous design "negatives": cabling too short, no "off/on" switch on unit, power cord is on the overhead's neck corner.

* *

A NOTE ABOUT OTHER SYSTEMS:

Two other systems which need to be mentioned are the Limelight and the PC-Viewer, both manufactured by Vivid Systems, Fremont, California. Our direct experience with these two systems is very limited; however, each has certain advantages and disadvantages over the other systems discussed. Promotional literature from the manufacturer has been inserted for the Limelight and the PC-Viewer. When we contacted Vivid Systems to request the promotionals we found them to be most helpful.

SOME INSTITUTIONS USING COMPUTER PROJECTION FOR ON-LINE INSTRUCTION

The institutions listed below have been indentified as users of video and/or computer projection technology in on-line instruction. The contact persons listed below all indicated that they would be willing to answer your questions or discuss with you their use of the "new" projection technology.

Houston Academy of Medicine......................Contact Person:
Texas Medical Center Library   Dr. Abigail Hubbard
1133 M. D. Anderson Blvd.   Director of Education
Houston, TX 77030   System in use:
(713) 797-1230   Limelighter
                                                   Kodak Datashow (in use 1 month)

Health Sciences Library.........................Contact Person:
Univ. of North Carolina   Ms. Fran Allegri
Pittsboro Road   System in use:
Chapel Hill, NC 27514   SONY (ceiling mounted)
(919) 962-0700   [is considering Kodak Datashow]

University of North Carolina....................Contact Person:
Chapel Hill, NC 27514-6080   Carson Holloway
(919) 962-1151   System in use:
                                                   Kodak Datashow

Duke University.................................Contact Person:
William R. Perkins Library   Elizabeth Dunn
Durham, NC 27706   System in use:
(919) 684-2373   Kodak Datashow [not yet in
                                                   use; awaiting Toshiba PC]

University of Georgia Libraries.................Contact Person:
Athens, GA 30602   Ms. Deborah Condrey
(404) 542-8460   Bibliographic Instruction
                                                     Coordinator
                                                 System in use:
                                                   SONY

Indiana State University........................Contact Person:
Cunningham Memorial Library   Scott Davis
Terre Haute, IN 47809   System in use:
(812) 237-2604, 2605   SONY (in use 2 years)
                                                   LCD to be purchased FY 87/88

SIMPLIFIED SCHEMATIC OF SONY VIDEO PROJECTION SYSTEM
Cunningham Memorial Library - Department of Library Instruction
INDIANA STATE UNIVERSITY
Terre Haute, Indiana
May, 1987

coaxial cable,
RGB and sync

Monitor

to AC

*"hardwire" to LUIS

SONY Video
Projector

SONY
PC 701

IBM-PC

to phone
to jack
to AC

Keyboard

to
AC

*You will need a special "board"
to enable your PC to receive a
coaxial cable/signal. We use
IRMA, manufactured by Digital
Communications Associates of
Alpharetta, Georgia.

to
AC

11

12
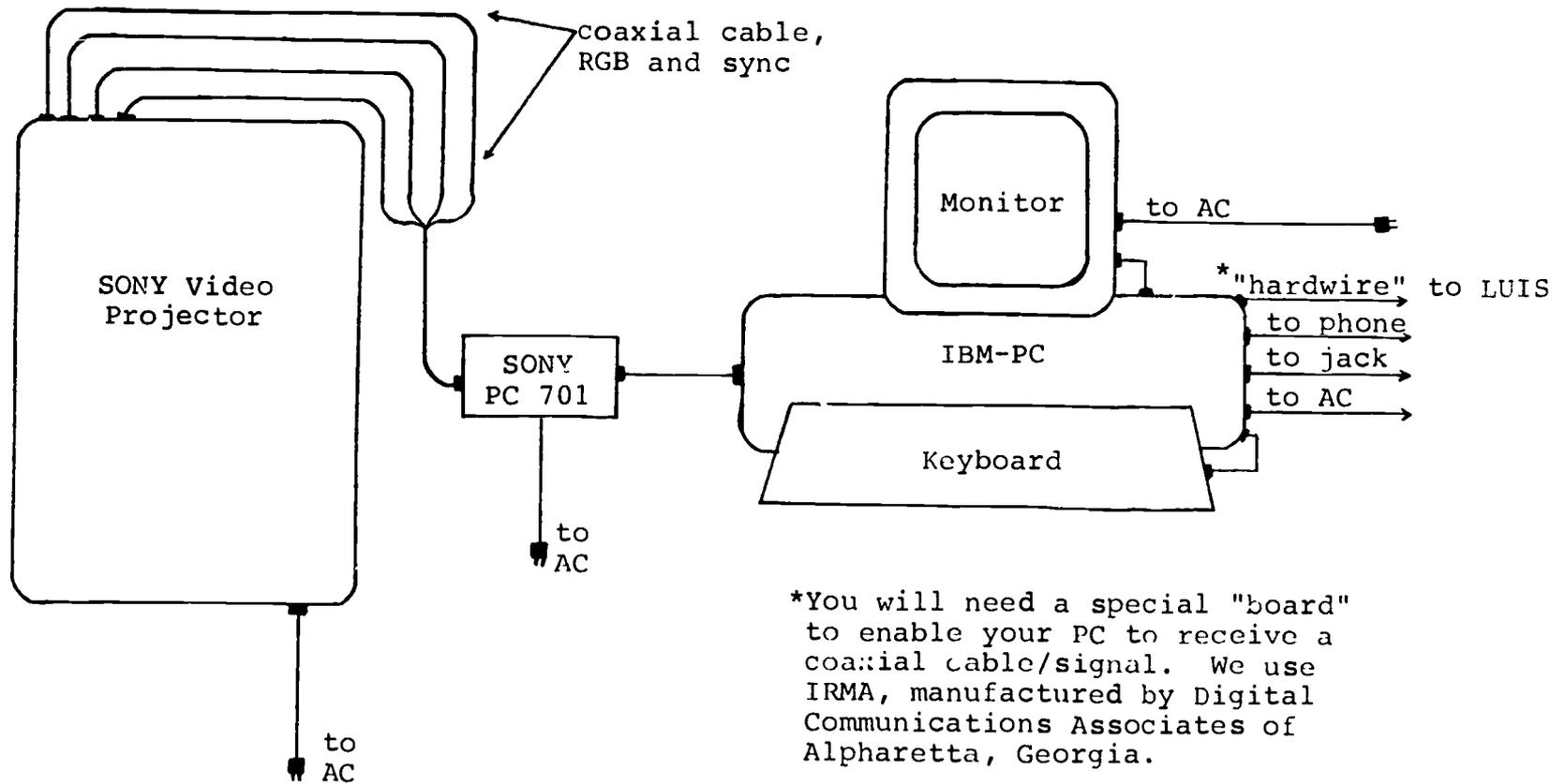
SIMPLIFIED SCHEMATIC OF DATASHOW PROJECTION SYSTEM
Scheduled for Fall, 1987 Implementation
Cunningham Memorial Library - Department of Library Instruction
INDIANA STATE UNIVERSITY
Terre Haute, Indiana
May, 1987

DATA
SHOW

Over-
head

Monitor

to AC

*"hardwire" to LUIS

to phone

IBM-PC

to jack

to AC

to AC

Keyboard

to AC

serial port
connection
for software/
remote
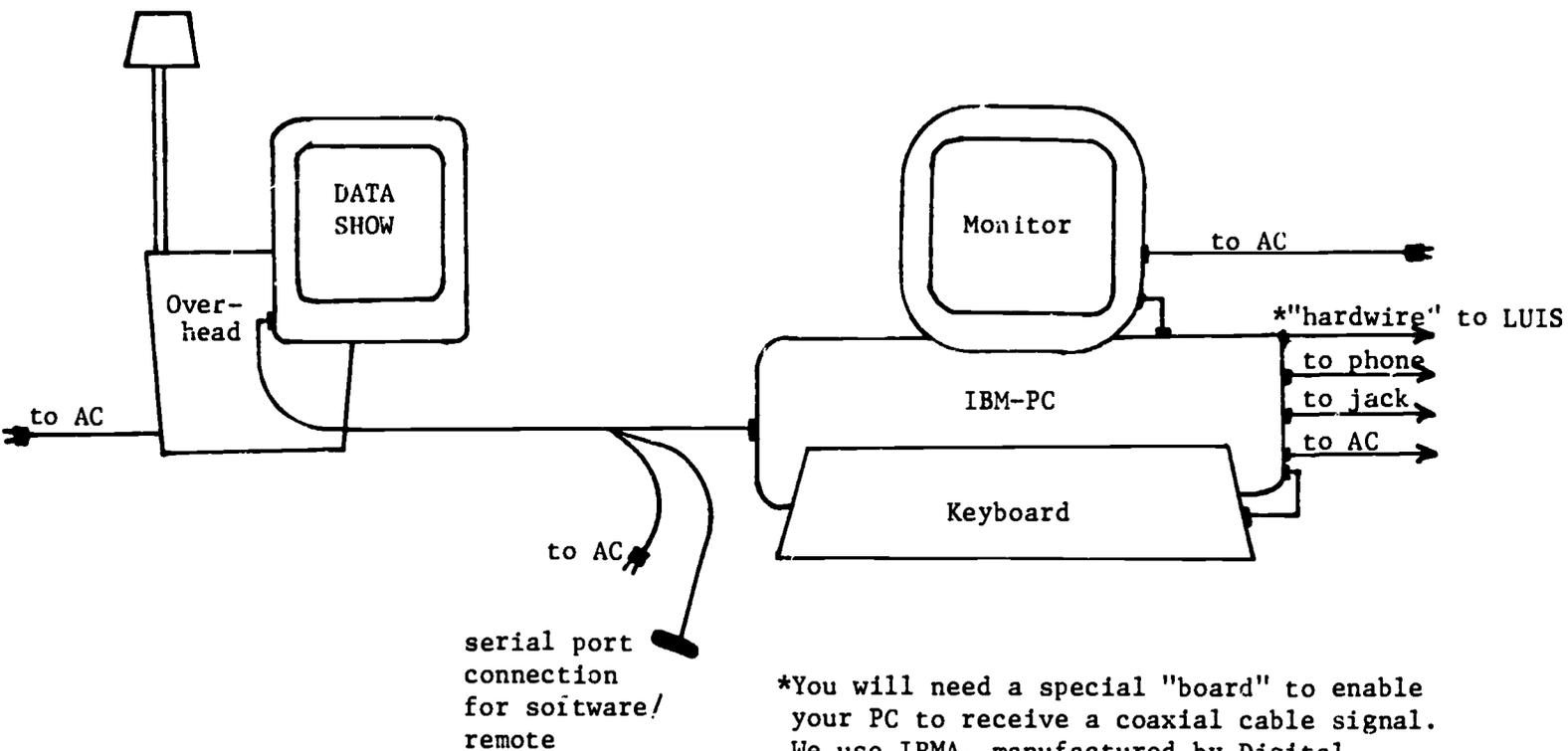
*You will need a special "board" to enable
your PC to receive a coaxial cable signal.
We use IRMA, manufactured by Digital
Communications Associates of Alpharetta, GA.

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* VIDEO PROJECTION EVALUATION

This is an anonymous evaluation which seeks student input and reaction to the various teaching methods used in instruction. Please respond to each of the following items. DO NOT SIGN YOUR NAME TO THIS EVALUATION. THANKS FOR YOUR INPUT!

1. The use of video projection for teaching students how to use LUIS is effective. (Circle your response)

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

2. I prefer the video projection method of teaching LUIS over more conventional teaching methods, such as transparencies, handouts, lecture only, etc.

   SA   A   D   SD

3. I would have preferred a more conventional teaching method for learning LUIS, i.e., transparencies, lecture only, handouts, self-paced exercise, etc.

   SA   A   D   SD

4. Please comment briefly on your overall reaction to the use of video projection in the classroom. Note any specific advantages (things you particularly like about it) and/or disadvantages (things you did not like about it):

   _____

   _____

   _____

   _____

   _____

   _____

   _____

                THANK YOU FOR THIS IMPORTANT INPUT!!

* [EXPLANATORY NOTE: This evaluation instrument was administered to students and faculty in June, 1986, in an effort to determine their reaction to the SONY video projector. A similar evaluation will be administered upon implementation of DataShow in Fall, 1987].

RESULTS OF SONY VIDEO PROJECTION EVALUATION
JUNE, 1986

N=85

SA=Strongly Agree   A=Agree   D=Disagree   SD=Strongly Disagree

---

n=84   1.   The use of video projection for teaching students how to use LUIS is effective.

SA	A	D	SD
77%	23%	0%	0%
(65)	(19)	(0)	(0)

n=85   2.   I prefer the video projection method of teaching LUIS over more conventional teaching methods.

SA	A	D	SD
72%	26%	2%	0%
(61)	(22)	(2)	(0)

n=85   3.   I would have preferred a more conventional teaching method for learning LUIS.

SA	A	D	SD
9%	14%	37%	40%
(8)	(12)	(31)	(34)

4.   Representative student/faculty comments on the use of video projection as a teaching method:

"Too dim for my eyes; the screen is not clear enough."

"It leaves no room for misinterpretation. It shows you what you do and what happens after. Very clear cut. I like having the handouts with it. It gives you something in writing to refer to later."

"This is great--continue to use it please!"

"I did not know this was available. I cannot wait to tell our corporation's computer person--this streamlines computer instruction."

"The projection system was more interesting than the normal teaching method. It let me see first-hand how LUIS works."

"It eliminates the problem of accent mostly for foreign students."

"It put you in the driver's seat. Very good presentation!"

"By my vision being impaired (I wear glasses) this was a very good device because I did not have to strain to see what the instructor was covering."

SELECTED SOURCES FOR FURTHER READING

NOTE: While little has been published about video projection as an instructional delivery system, even less is currently available on LCDs.

Anonymous. "Large Screen Data Projection for Computer Classes." T.H.E. Journal, 13 (September, 1985): 74.

Anonymous. "Projection Brings Interactive Video to Computer Classes." T.H.E. Journal, 12 (January, 1985): 92.

Hayhn, Carl H. "How Things Work: Liquid Crystal Displays." Physics Teacher, 19 (April, 1981): 256-257.

Hubbard, Abigail and Barbara Wilson. "An Integrated Information Management Education Program... Defining a New Role for Librarians in Helping End-Users." Online, 10 (March, 1986): 15-23.

Luhn, Robert (editor). "From the Hardware Shelf: PC World Offers First Impressions of Recent Hardware Releases--Limelight." PC World, 4 (February, 1986): 258-259.

Robbins, Chris. "Cathode Ray Tube Faces Major Challenge from Rivals." Computer Weekly, (September 5, 1985): 28-29.

Saffady, William. Video Based Information Systems: A Guide for Educational, Business, Library, and Home Use. Chicago: American Library Association, 1985.

Smith, Judson. "Should You Be Using a Video Projection System?" Training, 17 (November, 1980): 40, 42, 44.

Wendelin, Colby. "The Big Picture." Infosystems, 31 (October, 1984): 90, 92.

BRIEF GUIDE TO LUIS
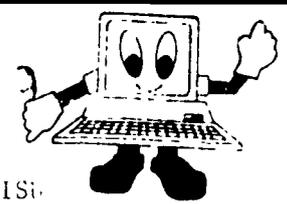
LUIS is an on-line system for locating books and other materials in the ISU libraries, Rose-Hulman Institute of Technology Library, and St. Mary of the Woods College Library.

IF YOU KNOW:	TYPE COMMAND:	FOLLOWED BY:	ALWAYS PRESS ENTER KEY

AUTHOR   a=   author's last name, then first name, if known   ENTER

EXAMPLE-
To see a list of available books by Louisa May Alcott use ANY of the following command combinations:

    a=alcott   OR   a=alcott 1   OR   a=alcott louisa   OR   a=alcott louisa m

---

TITLE   t=   title of book   ENTER

EXAMPLE-
To see if a copy of Little Women is available in any of the libraries you could use ANY of the following command combinations:

    t=little women   OR   t=little wom   OR t=little

SUBJECT   s=   the appropriate Library of Congress subject heading   ENTER

EXAMPLE-
The following subject search examples use subject headings which were verified in the Library of Congress Subject Headings (large, two volume set) as legitimate headings:

    s=accounting   s=united states--history   s=prisons

IMPORTANT REMINDERS ABOUT LUIS SEARCHING...

...You do not need to capitalize or use punctuation when searching in LUIS.

...When searching by title, DISREGARD A, AN, and THE at the beginning of book titles.

...When subject searching, you MUST verify subject headings in the Library of Congress Subject Headings (large, two volume set) to make sure that all headings are legitimate.

...Follow the various command options in the COMMAND MENU (at the bottom of each LUIS search screen) until you get the information you need.

...For step-by-step instructions on LUIS searching, pick up a copy of "GETTING STARTED WITH LUIS" on the Library Information Rack.

MOST IMPORTANTLY, REMEMBER THAT IF YOU NEED HELP IN USING LUIS, ASK AT THE REFERENCE DESK!!

DATE DUE_____   SCORE_____

CUNNINGHAM MEMORIAL LIBRARY
LIBRARY INSTRUCTION & ORIENTATION

YOUR NAME_____ PROFESSOR'S NAME_____

COURSE ABBREV. & NO. _____ COURSE MEETING TIME_____

LUIS1   SEARCHING FOR LIBRARY MATERIALS USING LUIS

[For these exercises, DO NOT use for your answers any items marked
TEST RECORD or STAFF USE.]

LUIS--SEARCHING FOR A BOOK BY AUTHOR

1. Using the author search prompt (a=), how many entries are listed
    on the AUTHOR/TITLE GUIDE or INDEX screen for the author
    LANGSTON HUGHES?

TOTAL NUMBER OF ENTRIES:_____

2. What is the first title listed under the above author that is
    owned by ISU? Write down its line number, then go to the BIBLIOGRAPHI(
    RECORD screen to determine the complete title, location and call number

LINE NUMBER _____   TITLE _____

_____

LOCATION _____CALL NUMBER _____

3. Go back to the INDEX screen(s) for the above author. Can you find
    listings for books by this author owned by libraries other than
    ISU? If so, write down the line number, title, and location for
    the first one you find.

LINE NUMBER _____   TITLE _____

_____

LOCATION _____

LUIS--SEARCHING FOR A BOOK BY TITLE

1. Using the title search prompt (t=) how many books do you find if
    you type in the following search requests?

    t = SINGING _____   t = SINGING ACTOR _____

                                                        (Continued)

LUIS--SEARCHING FOR MATERIALS BY SUBJECT

Remember that you must determine correct subject heading(s) in order to use LUIS
when searching for subjects. For this part of the exercise, assume that you are
interested in finding books on the subject of COLLEGE EDUCATION COSTS.

1. Consult a set of the LIBRARY OF CONGRESS SUBJECT HEADINGS. Look up the
    above heading. What is the correct subject heading to use?

    CORRECT SUBJECT HEADING _____

2. Now go to a LUIS terminal and type in a search request for the above correct
    subject heading. You should see a SUBJECT HEADING GUIDE screen. How many
    subject headings (total) are listed at the top of the screen?

    TOTAL SUBJECT HEADINGS _____

3. Using the correct LUIS command, go to the SUBJECT/TITLE INDEX screen for the
    subheading listed as --UNITED STATES under the main subject heading. How
    many titles are listed on the SUBJECT/TITLE INDEX   screen?

    TOTAL TITLES LISTED _____

4. Do not leave the SUBJECT/TITLE INDEX screen(s) you are at now. Within the
    titles listed here, look for as many types of entries as are listed below.
    If there is more than one INDEX screen of titles, just look on the first
    two screens. Give the information requested below. LIST THE FIRST
    ENTRY YOU FIND THAT FITS EACH CATEGORY. You will need to go back and forth
    between the INDEX screens and the individual BIBLIOGRAPHIC RECORD screens
    for each item to be sure you have complete answers.

    If you don't find a title that fits one of the categories below,
    write: NONE LISTED.]

    a. BOOK OWNED BY ISU, LISTED AS BEING IN THE MAIN LIBRARY (CML)

        TITLE _____

        PUBLISHER _____ CALL NO. _____

    b. BOOK OWNED BY ISU, IN THE REFERENCE COLLECTION

        TITLE _____

        CALL NUMBER _____ DATE OF PUBLICATION _____

    c. A GOVERNMENT DOCUMENT U. S.   TITLE_____

        CALL NUMBER _____

    How long did it take you to do this exercise? _____

    Have you used LUIS before? _____ YES   ____NO

When you finish this exercise, return it to the Library Instruction and
Orientation office, Room D2/D3, on the second floor. If the office is not open,
ip the exercise under the door.