NRRI ONLINE INFORMATION SERVICE
USER'S GUIDE

VERSION 1.0

PILOT PROGRAM

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PREFACE

The National Regulatory Research Institute (NRRI) is assessing the need for a computer service providing information on regulatory actions and issues. The objectives of the NRRI Online Information Service (NOIS) are to expand the NRRI information services, increase the information exchange between commissions, create an NRRI central data bank, and improve NRRI marketing capabilities. To test this new service, a pilot program is being implemented to determine the feasibility of providing this service to state commissions. The pilot program is being offered to all state commissions free-of-charge for a three-month trial period. The pilot will provide you with a sample of each data base within the service. If the pilot is successful, it will be fully implemented early in 1985, with a more extensive data base.

This User's Guide introduces the online service. The service is expected to evolve towards improved ease of use and expanded current data bases. Updates of the User's Guide will be prepared when changes to the function or operation of the service occurs.

At the conclusion of the pilot program, you will be contacted to assess your reactions and comments. If you have any questions or problems, we have a complete staff of professionals ready to help you.

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INTRODUCTION

The National Regulatory Research Institute (NRRI) provides state regulatory commissions with technical assistance and expert policy research on regulatory issues. As commissions tackle more complex issues, their demand for timely and accurate information increases. Taking a bold step forward into the information age, NRRI has established the NRRI Online Information Service (NOIS) to specialize in providing information and computer resources to regulatory agencies.

NOIS is currently supported on the Ohio State University (OSU) main computer system. Access to NOIS can be accomplished by calling the main computer system using an inward WATS line (an 800 toll service) to communicate with the OSU mainframe computer via your computer terminal or microcomputer system. NOIS will be providing you services to exchange information, to access NRRI's data bases, to execute computer models, and to order NRRI publications.

Services on NOIS are available to all state utility regulatory commissions. This User's Guide contains information required to connect your terminal to the OSU main computer system, and the commands and menu options available to access NRRI's information and computer services.

CHAPTER 1

GETTING STARTED

The NRRI Online Information Service (NOIS) provides you access to NRRI data bases and computer resources using an inexpensive computer terminal. The service is easy to use with no special training required. All services are accessible by selecting options from a set of menus. Other options are available to you by entering a single letter command such as "Q" for quit (this will return you to a previous menu).

1.1 What Type of Equipment Do You Need?

You will be communicating with the online service using a computer terminal or microcomputer system linked together by the public telephone network as shown in figure 1-1. To access the service, you need at least the following equipment.

1. a computer terminal
2. a modem
3. an interfacing cable

The costs will range between $700 to $3000 depending on the level of sophistication and quality of the equipment. The computer terminal can be a display terminal with a Cathode Ray Tube (CRT) and a keyboard, a printing terminal, or a personal microcomputer . It should provide at least one standard RS-232C communications port for a modem and an optional communications port for a printer. The system configuration is shown in figure 1-2.

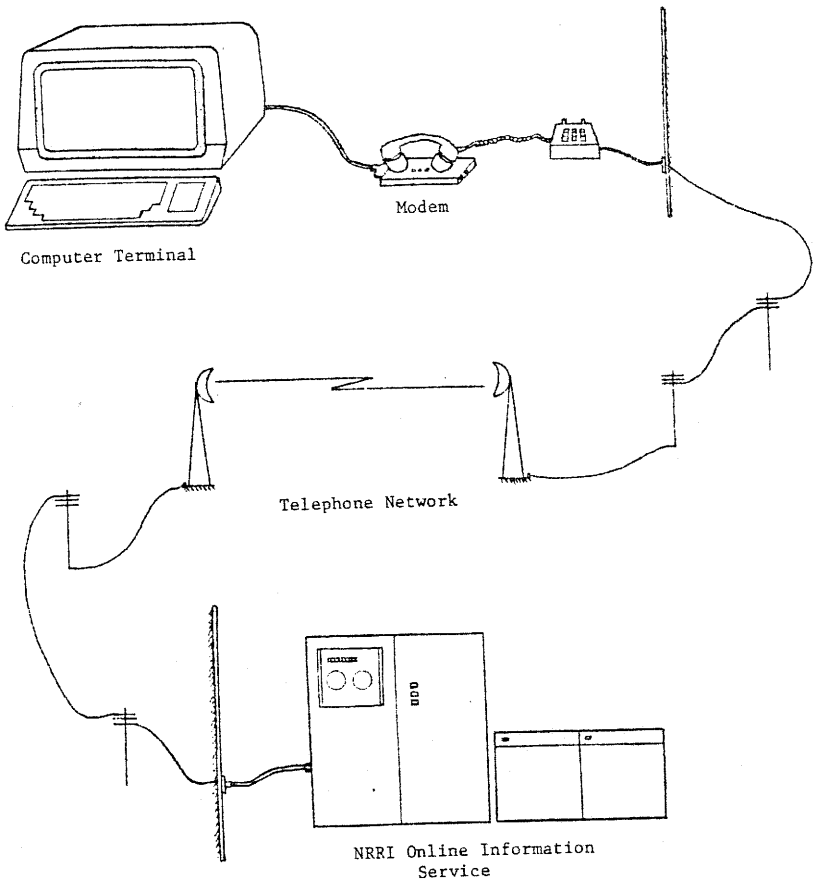


Fig. 1-1 Communications Link to the NRRI Online Information Service

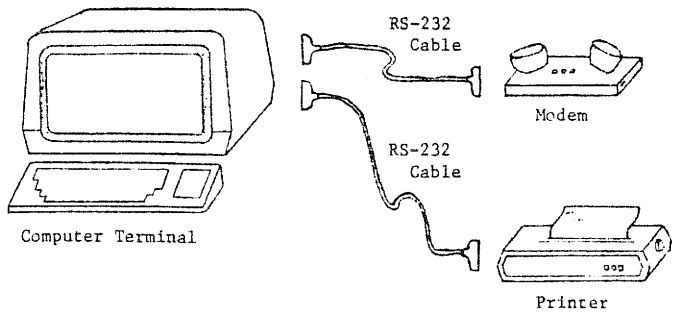


Fig. 1-2 System Configuration

A modem is a device which translates the computer's digital signal into an analog signal for transmission over the telephone network. Characters can be transmitted at 300 baud (approximately 30 characters per second) or 1200 baud (approximately 120 characters per second) depending on the capabilities of the modem. The modem also has a standard RS-232C port for connecting it to the terminal using a cable. Modems come in two types: an acoustic coupler or a direct connection modem. Using an acoustic coupler modem is the easiest method. Connection is made by placing the handset of the telephone into the acoustic coupler modem. A direct connection requires a special telephone connector plug usually located in a wall outlet. This may not be available if you are currently using a key phone system. You should contact your local telephone company for information on how to use a direct connect modem with your telephone system.

A printer is optional but recommended in receiving hard copy of all information displayed on the terminal. The printer should have a standard RS-232C port to connect to the second RS-232C port on the terminal. There is one precaution you need to take when you purchase a printer. The printer must have the capability to print faster than the rate characters are received by the terminal. For example, suppose your terminal is receiving data at 120 characters per second using a 1200 baud modem, you would have to purchase a printer that prints more than 120 characters per second.

You can also use a microcomputer to access the service. The microcomputer would be used as a terminal by using the proper communications software. Because of the variety of microcomputers, we will not discuss this in any detail. You should contact your microcomputer support representative for more information in using your microcomputer as a terminal. If you have questions about equipment,

please call us at (614)422-9404.

1.2 Setting Up an Account.

To set up a NOIS account, an application form is provided for you at the end of this User's Guide with the following information. (See Appendix A, Computer Account Appplication Form).

1. Your name and title
2. Name of organization
3. Street
4. City, state and zip code
5. Telephone number
6. An account number
7. Number of access codes.

An account is required for billing purposes (Note, no billing is perfórmed during the free pilot program). If you need multiple billings for your organization you need to set up an account for each billing. An access code is required to gain access to NOIS. Each account will be assigned at least one user with an identification code, a password, and a university identification code. You should request an access code for each person using the service because only one person can use an access code at any one time. Up to 10 access codes can be issued per account. It will take approximately two weeks to process an account application.

1.3 How Charges are Calculated

The cost to access the service is based on the time you are connected to the telephone network and the computer system, and the

amount of computer resources used such as computation time, and disk accesses. Because this is a pilot program, no decision has been made on the price structure of the service.

CHAPTER 2

LOGGING ON THE SYSTEM

The NRRI Online Information Service (NOIS) currently uses on the main computer system at Ohio State University. Access to NOIS is available by dialing the computer using an 800 number, or a long-distance toll number, or a WATS line. You can communicate with the computer at character transmission rates of 300 baud and 1200 baud however the number of 1200 baud lines is limited and they may be busy. This chapter tells you how to begin using NOIS. The seven chapters that follow provide an introduction to each type of service offered.

2.1 Configuring Your Terminal

All terminals require that they be configured properly to communicate with any computer system. Configuring a terminal can be very difficult and may require some technical assistance. You should refer to the terminal's instruction manual for detailed information. The following settings of key parameters are required for proper terminal communications at 300 or 1200 baud.

1.	Transmission Rate	=	300 baud or 1200 baud
2.	Receiving Rate	=	300 baud or 1200 baud
3.	Number of Stop Bits	=	1 bit
4.	Parity	=	OFF or NONE
5.	Data Length	=	8 bits
6.	Most Significant Data Bit	=	0 bit
7.	XON/XOFF	=	ON or YES
8.	Local Echo	=	OFF or NO
9.	End of Message character	=	Carriage Return or Hex code 13
10.	Full or Half Duplex	=	FULL
11.	Originate or Answer	=	Originate

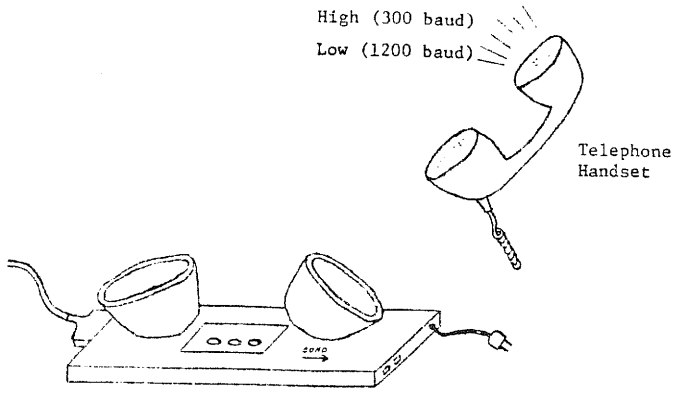
2.2 Sample Terminal Session

A sample terminal session is presented to instruct you in accessing NOIS. You will be dialing the main computer system at (614) 422-1111 for 300 baud or (614) 422-3070 for 1200 baud using the public telephone network. If you have access to our 800 number, it will be supplied to you when you receive your access codes and passwords. NOIS will be available from 9AM to 5AM EDT Monday through Friday and 24 hours on weekends. Staff assistance will be available 9AM to 5PM EDT Monday through Friday.

The following is a sample terminal session showing you how to log on to the system.

STEP 1. Make sure your modem is set to originate and at full duplex for 300 baud and 1200 baud.

STEP 2. Dial the appropriate telephone number to call up NOIS. When the phone is answered, you should hear a high pitched tone for 300 baud or a low pitched tone for 1200 baud. If you are using an acoustic coupler, put the telephone handset into the coupler noting the position of the phone cord with respect to the coupler.



Acoustic Coupler Modem

STEP 3. Let's assume that your access code is TS1234, password is ABC, and university identification code is 123456789. Begin by typing a "T" for TSO in response to the "Host Name?". All information must be typed exactly the first time until you are officially logged into the system (No backspacing is allowed). Your conversation with the computer to initiate a NOIS session is shown below. All of your entries are underlined in the example.

```
The Ohio State University
Hosts are TSO, WYLBUR, CMS, DEC20
Host Name? T
GO
LOGON
USERID? TS1234
PASSWORD? ABC
UNIVERSITY ID? 123456789
TS1234 LOGON IN PROGRESS AT 14:34:09 ON MARCH 21, 1984
READY
```

STEP 4. When the computer says "READY", you can begin to use NOIS. Type "exec nois", and a menu of services will be displayed for your selection as shown below.

```
exec nois

04/02/84 -------- NRRI ON-LINE INFORMATION SERVICE -------- 09:10:09
MAIN MENU
1.  BULLETIN BOARD
2.  NRRI NEWS
3.  BIBLIOGRAPHIC RETRIEVAL
4.  COMPUTER SOFTWARE CATALOG
5.  INDUSTRY DATA
6.  DATA BASE OF LISTS
7.  COMPUTER MODELS
8.  ORDER NRRI PUBLICATIONS
9.  END SESSION
MAKE A SELECTION?
```

2.3 Overview of Services

The online service will be offering eight different services: (1) an electronic bulletin board, (2) access to NRRI news, (3) a bibliographic retrieval system, (4) a computer software catalog, (5) a set of list-formatted data bases, (6) industry data bases, (7) high-powered computer models, and (8) the ability to order NRRI publications.

ELECTRONIC BULLETIN BOARD - A bulletin board gives users the ability to post messages for everyone to see. It provides a method for users to communicate with each other about current issues and events. The bulletin board will be cleared of all messages every two weeks.

NRRI NEWS - This service informs users about information on current research and events occurring at The National Regulatory Research Institute.

BIBLIOGRAPHIC RETRIEVAL - A bibliographic retrieval system has been developed to allow users easy access to abstracts from the NRRI Quarterly Bulletin and other NRRI resources in the areas of electric, gas, water, and telecommunication regulation. This will extend the availability of the Bulletin and improve the timeliness of information on regulatory issues, rate cases, and commission research.

COMPUTER SOFTWARE CATALOG - The computer software catalog is a collection of program abstracts from the NARUC Catalog of Computer Programs and Data Bases. It allows you to search for a particular software package based on utility sector and application.

DATA BASE OF LISTS - This service contains a miscellaneous assortment of data bases for your reference. They are formatted lists and accessed by displaying the data base on your terminal.

INDUSTRY DATA - The industry data section is a set of data bases which you use to construct a worksheet consisting of up to 100 columns and 400 rows of information. It allows you to extract information from a data base and insert it in your worksheet. You can then manipulate the data in the worksheet using an English language command structure.

COMPUTER MODELS - NRRI computer models can be accessed and ruan according to your specifications. The cost of running the models is in addition to any other costs. It is advisable that you order the User's Manual to the model and contact the appropriate NRRI staff member to assist you.

ORDER NRRI PUBLICATIONS -NRRI publications can be ordered and credited to your account for fast delivery using this service. You have the option to be invoiced and the ability to the select various shipping options.

2.4 Using the Online Service

The online service displays menus and "prompts" for you to make a selection or enter a command. Prompts also request information to execute a task. A default answer for a prompt is given in brackets "< >". For example, the following prompt asks you if the order for publications is correct.

IS THIS THE CORRECT ORDER <YES>?

If you press the ENTER key, the answer yes is assumed and processing continues. On some terminals, the ENTER key is also labeled the RETURN key. The ENTER key will be used here as the standard notation for executing a carriage return. A carriage return is represented by the notation "[CR]" in this User's Guide.

The online service uses a set of single letter commands to supplement the menu selections. It provides you the option of performing tasks such as searching for text by keywords, paging within a data base, or determining system status. A set of standard commands is used throughout the service as responses to prompts as listed below.

Command	Function
H	HELP - Lists the available commands.
Q	Quit - Ends processing and returns you to the last menu displayed.
ENTER key	Pressing the ENTER key continues processing by using the default entry specified in the prompt.
BREAK key	Pressing the BREAK key or ATTENTION key interrupts processing and returns you to a previous menu.

The command HELP is used to list all single letter commands available for the service selected. It is a quick reference to assist you in answering a command prompt.

The command QUIT is used to end processing of a service and to return you to a previous menu. It provides a method to suspend processing within a service.

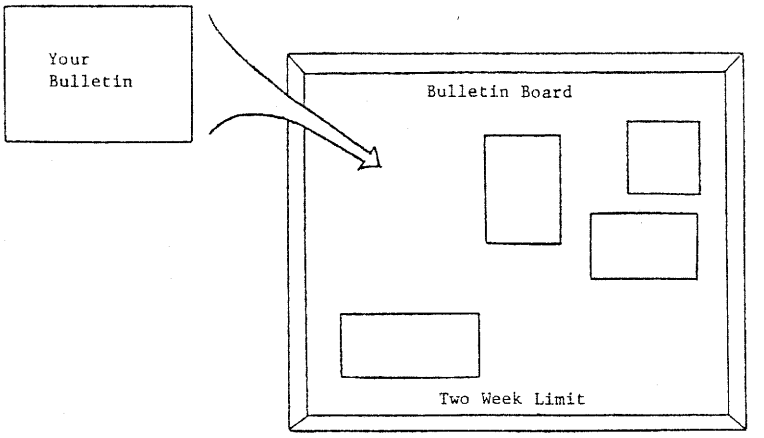
The action of pressing the ENTER key invokes a default response to a prompt. A default response is given in brackets "<>" within the prompt.

The action of pressing the BREAK key interrupts processing and returns you to a previous menu. This type of response can be performed at any time. For example, suppose you accidently started to print a lengthy abstract and you wish to stop processing. Pressing the BREAK key will stop the printing and will return you to a previous menu.

CHAPTER 3

BULLETIN BOARD

The bulletin boar provides a means for you to communicate with other users. A message can be posted on the bulletin board for all users to see when it is accessed. The bulletin board is cleared of all messages every two weeks.



3.1 Entering Commands

To select this option from the main menu, type a "1" and a carriage return. NOIS will display the first 16 lines of the bulletin board and then ask you for a response to one of the following questions.

PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . COMMAND?

or

PRESS ENTER TO CONTINUE . . . OR . . COMMAND?

You have the option to press ENTER or to type a command. Commands are executed by typing a single letter and a carriage return. If the ENTER key is pressed for it to continue, it will display the next 16 lines before requesting another response such as a command. The following commands are available.

Command	Function
H	Help - This lists all commands
Q	Quit - Returns you to main menu
R	Restart - Restarts the display of the bulletin board
P	Post - Posting a bulletin on the bulletin board

3.2 Posting a Message

Type the command "P" to select the option to post a bulletin. A bulletin can have as many as 16 lines of text with each line having up to 72 characters. All bulletins are displayed in uppercase letters even if they were typed in lowercase letters. The bulletin will be posted for two weeks. You can write the bulletin in any format but the following format is suggested.

Line No. 1: DATE AND YOUR NAME
Nos. 2-16: BULLETIN TEXT

Suppose you want to post the following bulletin.

APRIL 22, 1984 JOHN DOE
IF ANYBODY HAS A COPY OF THE STAFF REPORT USED IN THE LAST OHIO BELL TELEPHONE CASE CONCERNING BYPASS, PLEASE GIVE ME A CALL AT (909) 423-8900.

This following is a sample terminal session to post a bulletin. All of your entries are underlined.

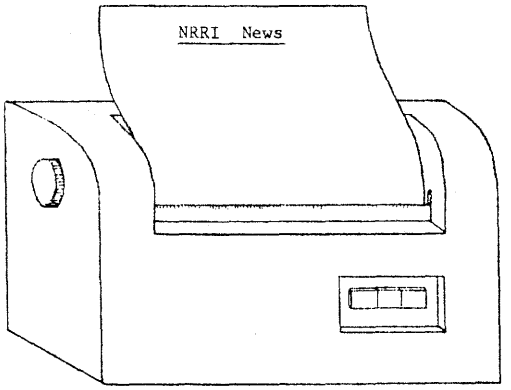
```
04/02/84 ------- NRRI ON-LINE INFORMATION SERVICE -------- 13:23:51

MAIN MENU
1.  BULLETIN BOARD
2.  NRRI NEWS
3.  BIBLIOGRAPHIC RETRIEVAL
4.  COMPUTER SOFTWARE CATALOG
5.  INDUSTRY DATA
6.  DATA BASE OF LISTS
7.  COMPUTER MODELS
8.  ORDER NRRI PUBLICATIONS
9.  END SESSION
MAKE A SELECTION?
1

**********04/02/84 BULLETIN BOARD 13:24:11**********
********************************************************************************
PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . . COMMAND?h

>TO USE AND ACCESS THE BULLETIN BOARD, TYPE ONE OF THE FOLLOWING SINGLE
LETTER COMMANDS.

"Q" QUIT AND RETURN TO MAIN MENU
"R" RESTART THE BULLETIN BOARD
"P" POST A NEW BULLETIN

PRESS ENTER TO RETURN TO MAIN MENU . . . OR COMMAND?p


***** WRITE YOUR OWN BULLETIN *****
YOU CAN HAVE UP TO 16 LINES OF TEXT.  EACH LINE CAN HAVE AS MANY AS 72
CHARACTERS AS SHOWN BELOW.
  <------------------------72 CHARACTERS-------------------------->
 1.
 2.
 3.
 4.
 5.
 6.
 7.
 8.
 9.
```

```
10.
11.
12.
13.
14.
15.
16.
PRESS ENTER TO CONTINUE . . . OR . . . TYPE "Q" TO QUIT
[CR]

***** BEGIN ENTERING BULLETIN *****
TYPE A SLASH "/" IN COLUMN 1 WHEN YOU ARE FINISHED.

TYPE LINE NO. 1 ----------72 CHARACTER LIMIT----------
april 22, 1984 john doe

TYPE LINE NO. 2 ----------72 CHARACTER LIMIT----------
if anybody has a copy of the staff report used in the last ohio bell

TYPE LINE NO. 3 ----------72 CHARACTER LIMIT----------
telephone case concerning bypass, please contact me at (614) 999-1111.

TYPE LINE NO. 4 ----------72 CHARACTER LIMIT----------
/

*****YOUR BULLETIN *****
1. APRIL 22, 1984 JOHN DOE
2. IF ANYBODY HAS A COPY OF THE STAFF REPORT USED IN THE LAST OHIO BELL
3. TELEPHONE CASE CONCERNING BYPASS, PLEASE CONTACT ME AT (614)999-1111

DO YOU WANT TO MAKE ANY CHANGES <NO>?
[CR]

PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . . COMMAND?r


********** 04/02/84 BULLETIN BOARD 13:27:08 **********
APRIL 22, 1984 JOHN DOE
IF ANYBODY HAS A COPY OF THE STAFF REPORT USED IN THE LAST OHIO BELL
TELEPHONE CASE CONCERNING BYPASS, PLEASE CONTACT ME AT (614) 999-1111.
**********
PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . . COMMAND?q
```

CHAPTER 4

NRRI NEWS

NRRI News provides information on the activities of The National Regulatory Research Institute (NRRI). These may include progress on research projects, employment of new staff members, and topics under investigation by the institute. This service allows you to keep informed on NRRI activities and for NRRI to provide better service to NRRI constituents.



4.1 Entering Commands

To select this option from the main menu, type a "2" and a carriage return. NOIS will display the first 18 lines of the news and then ask you for a response to one of the following questions.

PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . . COMMAND?

or

PRESS ENTER TO CONTINUE ... OR ... COMMAND?

You have the option to press ENTER or type a command. Commands are executed by typing a single letter and a carriage return. The news is listed by pages, each page consists of 18 lines of text. The following commands are available.

Commands	Function
H	Help - This lists all commands
Q	Quit - Returns you to main menu
R	Restart - Restarts the display of the news starting at the first page
S	Search - Search the News for a set of words
L	List - List current page of the news.
P	Previous - List the previous page of the news
B	Beginning - Go to the beginning of the news
E	End - List the last page of the news.

4.2 Sample Session

The following is a sample session accessing the NRRI News. All of your entries are underlined.

```
04/02/84 -------- NRRI ON-LINE INFORMATION SERVICE -------- 09:10:09
MAIN MENU
1.  BULLETIN BOARD
2.  NRRI NEWS
3.  BIBLIOGRAPHIC RETRIEVAL
4.  COMPUTER SOFTWARE CATALOG
5.  INDUSTRY DATA
6.  DATA BASE OF LISTS
7.  COMPUTER MODELS
8.  ORDER NRRI PUBLICATIONS
9.  END SESSION
MAKE A SELECTION?
2
```

********** NRRI NEWS **********

Online Information Service Available

Starting April 16 state commissions can try out the new NRRI Online Information Service (NOIS). The service is available for the commissions free of charge through either a terminal or microcomputer system. The NOIS is being offered as a pilot program to determine the feasibility of providing an information service to the regulatory community.

The NOIS will offer the following services: a bulletin board, NRRI news, a bibliographic retrieval of regulatory information, a computer software catalog, a database of technical and financial data, a list-format data base for miscellaneous items, the NRRI's computer models, as well as the ability to order NRRI publications. The pilot program will last approximately three months or until its funding is exhausted. If your state commission is interested in participating, contact Michael Wong for more information at (614) 422-9404 during business hours.

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
h

>TO ACCESS NRRI NEWS. TYPE ONE OF THE FOLLOWING SINGLE LETTER COMMANDS.

"Q" QUIT AND RETURN TO MAIN MENU
"R" RESTART THE DISPLAY OF NRRI NEWS
"P" GO TO THE PREVIOUS PAGE OF NRRI NEWS
"S" SEARCH NRRI NEWS FOR A SET OF WORDS
"B" GO TO THE BEGINNING OF THE NRRI NEWS
"E" GO TO THE END OF THE NRRI NEWS
"L" LIST CURRENT DISPLAY OF THE NRRI NEWS

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
q

4.3 Searching for a News Item

The NRRI News service provides the option to search for words in the text. A search is performed by specifying a set of keywords. The search will begin where the display of the text ends. It will try to match each word in the text with one of the keywords. The search will terminate when a match occurs. To start the search at the beginning of the text, type the command "B" and a carriage return. To execute the search command, type the "S" command and a carriage return. If the search is successful, the location of the text will be printed and 18 lines of text will be printed. The text where the word was found will be located in the 9th line of the listed text. Here is an example.

```
PRESS ENTER TO RETURN. . . OR . . .COMMAND?
b

PRESS ENTER TO RETURN. . . OR . . .COMMAND?
s

ENTER WORDS FOR SEARCH?
employ

*** SEARCH FAILED

ENTER WORDS FOR SEARCH?
models

*** SEARCH SUCCESSFUL AT
models, as well as the ability to order NRRI publications.  The pilot

**************************************************************************
feasibility of providing an information service to the regulatory
community.

The NOIS will offer the following services: a bulletin board, NRRI news,
a bibliographic retrieval of regulatory information, a computer software
catalog, a database of technical and financial data, a list-format
database for miscellaneous items, the NRRI's computer models, as well as
the ability to order NRRI publications.  The pilot program will last
approximately three months or until its funding is exhausted.  If your
state commission is interested in participating,
```

contact Michael Wong for more information at (614) 422-9404 during business hours.

Research Advisory Committee Looks at 1985 Project Proposals

The NRRI's Research Advisory Committee met in Columbus in February to talk about the progress of fiscal year 1984 projects and to discuss possible fiscal year 1985 projects. The Committee meets next on April

PRESS ENTER TO RETURN . . . OR . . . COMMAND?
s
ENTER WORDS FOR SEARCH?
models

*** SEARCH SUCCESSFUL AT
Developing Microcomputer Models for Electric Utility Analysis: Develops

**********NRRI NEWS**********
Technical Assistance to the FERC in the Use of the Ceres Program: Includes development of a new production cost algorithm to simulate hydroelectric plants, creation of new user options to the FERC's specifications, and training staffers to use the program. This project has been completed.

Developing Microcomputer Models for Elecric Utility Analysis: Develops three microcomputer-based programs and relevant documentation for electric utility analysis. Both the programs and draft documentation were completed at the end of March.

NRRI Publications Given National Attention

Studies prepared by NRRI researchers have received national attention recently. The NRRI's study of telephone access charges (see NRRI Quarterly Bulletin 17, p. 1) was the subject of a story on ABC's "Good-Morning, America" news program in January. The study, prepared by

PRESS ENTER TO RETURN. . . OR. . . COMMAND?
q

CHAPTER 5

BIBLIOGRAPHIC RETRIEVAL AND COMPUTER SOFTWARE CATALOG

The bibliographic retrieval and computer software catalog are data bases of abstracts from the NRRI Quarterly Bulletin and the NARUC Computer Software and Data Base Catalog. These two data bases use the same access method and commands procedures. The access method involves a series of menus displaying the type of information available for retrieval. The menus are linked in a tree-like structure with the final menus accessing the appropriate group of abstracts. You can gain access to information by making selections from the menu or by specifying a set of keywords for a search operation.

5.1 Introduction

To get an idea of how this service would work, here is a conceptual view. The following example is a simple overview of accessing the data base of abstracts from the NRRI Quarterly Bulletin.

Suppose you wanted to learn about recent commission actions on treatment of fossil fuel expenses by an electric company. The menu strucure for this inquiry is shown in figure 5-1. For access, you would take the following steps.

STEP 1 Select the principal topic area from the main menu. Since this is an electric case, the "electric utilities" principal topic area would be chosen (2).

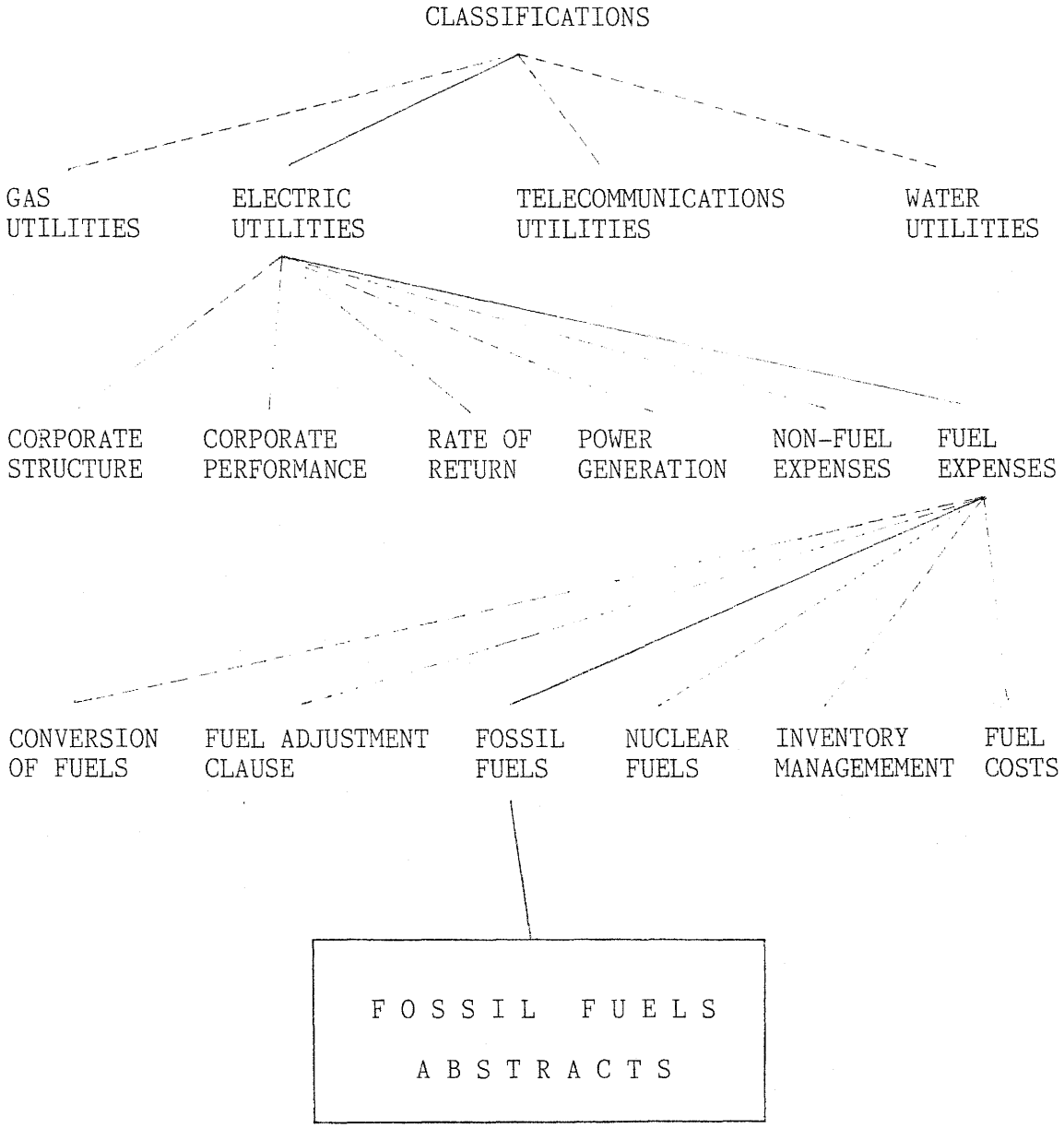


Fig. 5-1 Menu Structure

```
04/08/84 ---- BIBLIOGRAPHIC RETRIEVAL ---- 11:26:04

CLASSIFICATIONS
==========================================================

 1. GAS UTILITIES
 2. ELECTRIC UTILITIES
 3. TELECOMMUNICATIONS UTILITIES
 4. WATER UTILITIES
 5. REGULATORY AGENCIES

MAKE A SELECTION?
2
```

STEP 2 After the principal topic area is selected, an area topic submenu will appear on the user's screen. In this example, the user would select the "fuel expenses" option (11).

```
CLASSIFICATIONS
==========================================================
ELECTRIC UTILITIES

 1. LIST OF CLASS A AND B ELECTRIC UTILITIES
 2. LIST OF RURAL ELECTRIC COOPERATIVES
 3. LIST OF MUNICIPAL ELECTRIC UTILITIES
 4. LIST OF FED. ELEC. SYS. & POWER MARKETING AUTHORITIES
 5. INDUSTRY-WIDE ISSUES
 6. CORPORATE STRUCTURE
 7. CORPORATE PERFORMANCE
 8. RATE OF RETURN, FINANCING, & CAPITAL STRUCTURE
 9. POWER GENERATION, TRANSMISSION, & DISTRIBUTION PLANT
10. GENERATION, TRANSMISSION, & DISTRIBUTION NON-FUEL EXPENSE
11. FUEL EXPENSES
12. NON-PLANT, NON-FUEL EXPENSES
PRESS ENTER FOR MORE SELECTIONS -->

MAKE A SELECTION?
11
```

STEP 3 Finally, the user would select the specific topic area of interest--fossil fuels (4).

```
ELECTRIC UTILITIES
==========================================================
FUEL EXPENSES

 1. CONTRACT NEGOTIATION AND ADMINISTRATION
 2. CONVERSION OF FUELS
 3. FUEL ADJUSTMENT CLAUSE
 4. FOSSIL FUELS
 5. NUCLEAR FUELS
 6. INVENTORY MANAGEMENT
 7. FUEL COSTS
 8. PURCHASED POWER

MAKE A SELECTION?
4
```

STEP 4 Reference to cases in the NRRI Quarterly Bulletin that discussed fossil fuel expenses would appear, one by one, on the screen as shown below.

```
FOSSIL FUELS
**************************************************************************

*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin No. 18, April 1984, p. 67
GEORGIA PSC
Order on Reconsideration:  Georgia Power Company, Docket No. 339U,
1/17/84, 30 pages
Test Year:  12 months ended 3/31/84
Rate of Return:  Approved 12.23%
Return on Equity:  Requested 16.50%; Approved 15.50%
Summary:  Denies motion for reconsideration of case, but determine
that a more complete explanation of Commission's rationale is
appropriate.  Removes nuclear fuel purchase from rate base because
neither the fuel nor the plant are used and useful to the ratepayers.
Finds that Company has made two errors in its lead-lag study.  Finds
that estimate of cost of coal is exaggerated and that reserves are
excessive.

PRESS ENTER TO CONTINUE ... OR ... COMMAND?
9
```

For the complete article on which the abstract is based, you would refer to the NRRI Quarterly Bulletin. For the documents themselves, you should contact a representative from the Quarterly Bulletin.

5.2 Entering Commands

To select this option from the main menu, type a "3" for the Bibliographic Retreival or a "4" for the Computer Software Catalog and a carriage return. NOIS will display the first menu of information classifications. This menu represents the most aggregated classification in the data base. As you proceed through the menus, you define a more narrow scope of the data base. In the following examples, the Bibliographic Retrieval service will be shown. Access to the Computer Software Catalog is identical using the same commands and procedures. The bibliographic retrieval is accessed in the following example.

```
04/04/84 -------- NRRI ON-LINE INFORMATION SERVICE ---------- 09:12:21
MAIN MENU
  1.  BULLETIN BOARD
  2.  NRRI NEWS
  3.  BIBLIOGRAPHIC RETRIEVAL
  4.  COMPUTER SOFTWARE CATALOG
  5.  INDUSTRY DATA
  6.  DATA BASE OF LISTS
  7.  COMPUTER MODELS
  8.  ORDER NRRI PUBLICATIONS
  9.  END SESSION

MAKE A SELECTION?
3
04/04/84 ---- BIBLIOGRAPHIC RETRIEVAL ---- 09:12:37
CLASSIFICATIONS
=============================================================================
  1.  GAS UTILITIES
  2.  ELECTRIC UTILITIES
  3.  TELECOMMUNICATIONS UTILITIES
  4.  WATER UTILITIES
  5.  REGULATORY AGENCIES

MAKE A SELECTION?
```

In response to the above prompt, you have the option to make a selection from the menu or to enter a command. The following commands are available.

Command	Function
H	Help - Lists all commands.
Q	Quit - Returns you to the previous menu.
M	Main Menu - Returns you to the main menu.
S	Search - Search abstract classifications using a set of keywords.
W	Window - Sets the number of lines in the abstract to be displayed.
A	All - Start displaying all abstracts classified for all menu selections.
P	Previous - Go to previous menu.
L	List - List menu selections.

Another set of commands is used when an abstract is found and displayed. The commands are the following.

Command	Function
H	Help - Lists all commands.
Q	Quit - Returns to menu.
L	List - List 16 lines of abstract.
T	Topics - List menu topics selected to access abstract.

5.3 Scanning Abstracts

When an abstract is accessed, 16 lines is displayed. If you would like to scan only the first 4 lines of the abstract, use the window command to set the number of lines to 4, as shown below.

MAKE A SELECTION?

w

NUMBER OF LINES?

4

After reviewing the 4 lines of the abstract, you can list 16 lines of the abstract by typing the command "L". Here is an example.

```
MAKE A SELECTION?
a

COURT DECISIONS
**************************************************************************
*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin No 18, April 1984, p. 69
IDAHO PUC
Idaho Supreme Court Order:  Utah Power and Light, Opinion No. 188,
12/14/83, 20 pages

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
l

*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin No. 18, April 1984, p. 69
IDAHO PUC
Idaho Supreme Court Order: Utah Power and Light, Opinion No. 188,
12/14/83, 20 pages
Summary: Company appealed to Idaho Supreme Court a Commission decision
on its request for a 52.49 percent rate increase.  Court notes that the
following issues are challenged: Commission's formula to calculate rate
base, Commission's refusal to include construction work in progress,
property held for future use, and certain coal inventories in rate
base, Commission's adjustment of allowance for maintenance and
operation, Commissions rejection of an attrition allowance, and
Commission's reduction of Company's request for a return on equity.

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
```

5.4 Searching for Abstracts

A search is performed by matching a set of words to the descriptions in the menus. The search uses the tree-structure of the menu to determine the search path. Menu descriptions which lie in the path of search is examined for a match. All words must match for a successful search. Part of a word can be specified by using a hyphen such as in RATE-, TRANS-, -FUEL-, and -CLAUSE. The following is an example of a search.

```
MAKE A SELECTION?
s

ENTER WORDS FOR SEARCH?
fuel-

FOSSIL FUELS
**************************************************************************
*QUARTERLY BULLETIN ABSTRACT Quarterly Bulletin No. 18, April 1984, p.
67
GEORGIA PSC
Order on Reconsideration:  Georgia Power Company, Docket No. 3397-U,
1/17/84, 30 pages.
Test Year:  12 months ended 3/31/84
Rate of Return:  Approved 12.23%
Retun on Equity:  Requested 16.50%; Approved 15.50%
Summary: Denies motion for reconsideration of case, but detemines that
a more complete explanation of commissions' rationale is appropriate.
Removes nuclear fuel purchase from rate base because neither the fuel
nor the plant are used and useful to the ratepayers.  Finds that
Company has made two errors in its lead-lag study.  Finds that estima-
tion of cost of coal is exaggerated and that reserves are excessive.

PRESS ENTER TO CONTINUE . . . OR . . .COMMAND?
t
--- MENU TOPICS ---
  1.  CLASSIFICATIONS
  2.  ELECTRIC UTILITIES
  3.  FUEL EXPENSES
  4.  FOSSIL FUELS

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
q
```

5.5 A Sample Session

A sample session accessing the bibliographic retrieval service using commands is shown in the following example. In the first part of the example, all asbtracts under the menu classification for electric utilities "Power Generation, Transmission & Distribution Plant" is selected by using the command "A". The second part of the example accesses the abstracts related to the "Abandonment of Plant" by selecting menu item 5 from the "Power Generation, Transmission & Distribution of Plant" menu. All of your entries are underlined.

```
04/04/84 ---- BIBLIOGRAPHIC RETRIEVAL ---- 09:27:50

CLASSIFICATIONS
==========================================================================
1.  GAS UTILITIES
  2.  ELECTRIC UTILITIES
  3.  TELECOMMUNICATIONS UTILITIES
  4.  WATER UTILITIES
  5.  REGULATORY AGENCIES
MAKE A SELECTION?
2

CLASSIFICATIONS
==========================================================================
ELECTRIC UTILITIES
  1.  LIST OF CLASS A AND B ELECTRIC UTILITIES
  2.  LIST OF RURAL ELECTRIC COOPERATIVES
  3.  LIST OF MUNICIPAL ELECTRIC UTILTIES
  4.  LIST OF FED. ELEC. SYS. & POWER MARKETING AUTHORITIES
  5.  INDUSTRY-WIDE ISUES
  6.  CORPORATE STRUCTURE
  7.  CORPORATE PERFORMANCE
  8.  RATE OF RETURN, FINANCING, & CAPITAL STRUCTURE
  9.  POWER GENERATION, TRANSMISSION, & DISTRIBUTION PLANT
 10.  GENERATION, TRANSMISSION, & DISTRIBUTION NON-FUEL EXPENSE
 11.  FUEL EXPENSES
 12.  NON-PLANT, NON-FUEL EXPENSES
PRESS ENTER FOR MORE SELECTIONS -->

MAKE A SELECTION
9
```

ELECTRIC UTILITIES

POWER GENERATION, TRANMISSION & DISTRIBUTION PLANT

1. CONSTRUCTION WORK IN PROGRESS
2. ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION
3. RATE BASE
4. CAPITALIZATION
5. ABANDONMENT OF PLANT
6. DECOMMISSIONING OF PLANT
7. PREMATURE RETIREMENT OF PLANT

MAKE A SELECTION?
a

CONSTRUCTION WORK IN PROGRESS

*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin No. 18, April 1984, p. 65
CONNECTICUT DPUC
Decision: Connecticut Light and Power Copmany, Docket No. 83-07-15, 12/8/83, 83 pages
Test Year: 12 months ended 12/31/82
Rate Base: Requested $1,955,294,000; Approved $2,025,259,000
Revenue Increase: Requested $167,418,000; Approved $99,382,000
Rate of Return: Requested 12.63%; Approved 12.22%
Return on Equity: Requested 17.00%; Approved 15.90%
Summary: Finds that Company's electric construction program is well managed and that the nuclear program continues to follow guideliens set forth in an earlier order. Says that gas construction program is unacceptable, however. Holds insufficient attention is being paid to conservation of natural gas, but that a reasonable proportion of Company's conservation effort is devoted to larger municipalities. Allow a limited amount of CWIP in rate base.

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
t

--- MENU TOPICS ---

1. CLASSIFICATIONS
2. ELECTRIC UTILITIES
3. POWER GENERATION, TANSMISSION, & DISTRIBUTION PLANT
4. CONSTRUCTION WORK IN PROGRESS

PRESS ENTER TO CONTINUE . . . OR . . .COMMAND?
[CR]

*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin No. 18, April 1984, p. 69
IDAHO PUC
Idaho Supreme Court Order: Utah Power and Light, Opinion No. 188, 12/14/83, 20 pages
Summary: Company appealed to Idaho Supreme Court a Commission decision on its request for a 52.49 percent rate increase. Court notes that the following issues are challenged: Commission's formula to calculate rate base, Commission's refusal to include construction work in progress, property held for future use, and certain coal inventories in rate base, Commission's adjustment of allowance for maintenance and operation, Commission's rejection of an attrition allowance, and Commission's reduction of Company's request for a return on equity.

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
q

ELECTRIC UTILITIES
==========
POWER GENERATION, TRANSMISSION & DISTRIBUTION PLANT

1. CONSTRUCTION WORK IN PROGRESS
2. ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION
3. RATE BASE
4. CAPITALIZATION
5. ABANDONMENT OF PLANT
6. DECOMMISSIONING OF PLANT
7. PREMATURE RETIREMENT OF PLANT

MAKE A SELECTION?
5

ABANDONMENT OF PLANT
****
*QUARTERLY BULLETIN ABSTRACT
Quarterly Bulletin, No. 18, April 1984, p. 72
IOWA SCC
Proposed Decision and Order: Union Electric Company, Docket No. RPU-83-14, 12/28/83, 15 pages
Test Year: 12 months ended 12/31/82
Rate Base: Approved $60,081,000
Revenue Increase: Requested $6,170,000; Approved $2,180,000
Rate of Return: Approved 11.30%
Return on Equity: Requested 18.00; Approved 14.80%
Summary: Stipulation among parties to case resolved all but three issues: rate of return and capital structure, the proper federal income tax rate, and nuclear plant cancellation costs. Denies without prejudice Company's request to amortize the cancellation costs.

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
q

ELECTRIC UTILITIES

POWER GENERATION, TRANSMISSION, & DISTRIBUTION PLANT

1. CONSTRUCTION WORK IN PROGRESS
2. ALLOWANCE FOF FUNDS USED DURING CONSTRUCTION
3. RATE BASE
4. CAPITALIZATION
5. ABANDONMENT OF PLANT
6. DECOMMISSIONING OF PLANT
7. PREMATURE RETIREMENT OF PLANT

MAKE A SELECTION?

7

*** NO INFORMATION AVAILABLE ON PREMATURE RETIREMENT OF PLANT

MAKE A SELECTION?

m

CLASSIFICATIONS

1. GAS UTILITIES
2. ELECTRIC UTILITIES
3. TELECOMMUNICATIONS UTILITIES
4. WATER UTILITIES
5. REGULATORY AGENCIES

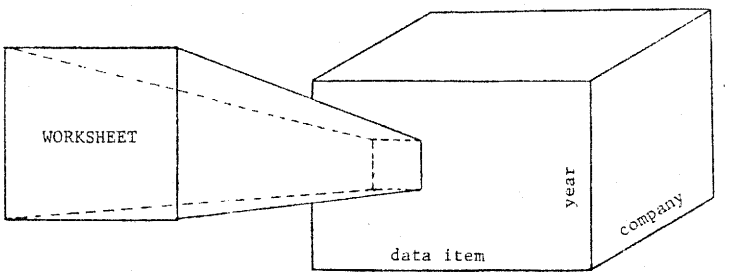
MAKE A SELECTION?

q

CHAPTER 6

INDUSTRY DATA

A set of industry data bases resides on NOIS. The data bases are constructed in a form to store information by utility, year of data, and type of data item. This service gives you the ability to construct worksheets for manipulating data. A worksheet is consistings of 400 rows and 100 columns. Each row represents a data item and each column represents the data for a given utility and year. A set of English-language commands are used to manipulate the worksheet.



INDUSTRY DATA BASE

6.1 Setting Up a Worksheet

To access industry data, type a "5" from the main menu and a carriage return. The available data bases will be displayed as follows.

```
04/04/84 ----INDUSTRY DATA ----11:09:11

DATA BASES

  1.  FCC STATISTICS OF COMMUNICATION COMMON CARRIERS

MAKE A SELECTION?
1
```

There are no limits to the number of worksheets you can construct. However, you are charged for the storage of each worksheet. This cost is minimal (Note, no charge during pilot program).

A worksheet is created to work with a single data base and can use data only from that data base. Worksheets are grouped together according to the data base in which they were formed. The following steps would be used in developing a worksheet.

STEP 1 Enter the worksheet name. The name could represent a new or old worksheet.

STEP 2 Load data from data base by selecting the utility company and year of data. All data items are loaded into a worksheet column starting at the first available column.

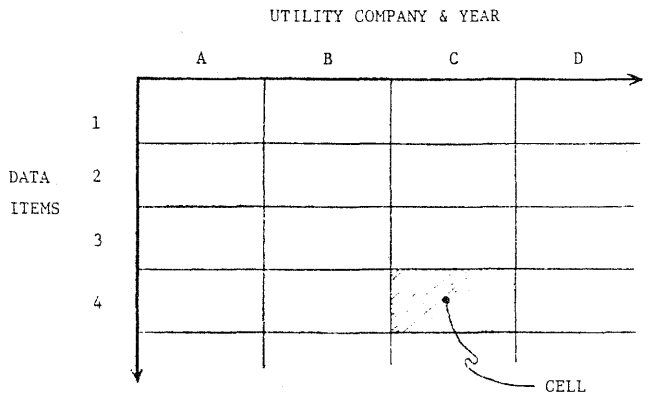
STEP 3 After completing the loading process, you will be in a mode to manipulate the data in the worksheet. Each piece of data is stored in a cell with 40,000 cells located a worksheet of 400 rows and 100 columns.

Here is an example of setting up a worksheet name "MYDATA" for the data base FCC Statistics of Communication Common Carriers.

```
04/08/84 ---- INDUSTRY DATA ---- 13:27:45
DATA BASES
1. FCC STATISTICS OF COMMUNICATIONS COMMON CARRIER
MAKE A SELECTION?
1

ENTER WORKSHEET NAME?
mydata
```

```
IS THIS A NEW WORKSHEET(Y/N)?
Y

INITIALIZING WORKSHEET
DO YOU WANT TO LOAD DATA INTO WORKSHEET MYDATA(Y/N)?
Y

UTILITY COMPANIES

1. ALL COMPANIES
2. BELL SYSTEM
3. American Telephone and Telegraph Co.
4. Bell Operating Companies
5. AT&T Long Lines Department
6. AT&T General Department
7. Bell Telephone Co. of Nevada
8. Bell Telephone Company of Pennsylvania
9. Chesapeake & Potomac Telephone Co.
10. Chesapeake & Potomac Telephone Co. of Maryland
11. Chesapeake & Potomac Telephone Co. of Virginia
12. Chesapeake & Potomac Telephone Co. of West Virginia
13. Cincinnati Bell Inc.
14. Diamond State Telephone Co.
15. Illinois Bell Telephone Co.
16. Indiana Bell Telephone Co. Inc.

SELECT A COMPANY ... OR ... COMMAND?
7

YEARS AVAILABLE FOR
Bell Telephone Co. of Nevada

 1981

SELECT A YEAR ... OR ... COMMAND?
1981

*TRANSFERRING DATA IN YEAR 1981 TO COLUMN   1

SELECT A YEAR ... OR ... COMMAND?
9
```

```
UTILITY COMPANIES

1. ALL COMPANIES
2. BELL SYSTEM
3. American Telephone and Telegraph Co.
4. Bell Operating Companies
5. AT&T Long Lines Department
6. AT&T General Department
7. Bell Telephone Co. of Nevada
8. Bell Telephone Company of Pennsylvania
9. Chesapeake & Potomac Telephone Co.
10. Chesapeake & Potomac Telephone Co. of Maryland
11. Chesapeake & Potomac Telephone Co. of Virginia
12. Chesapeake & Potomac Telephone Co. of West Virginia
13. Cincinnati Bell Inc.
14. Diamond State Telephone Co.
15. Illinois Bell Telephone Co.
16. Indiana Bell Telephone Co. Inc.

SELECT A COMPANY ... OR ... COMMAND?
q

ACCESS WORKSHEET FOR DATA ANALYSIS.  USE A SET OF
COMMAND WORDS TO MANIPULATE DATA.  TYPE "HELP" FOR
ASSISTANCE.

COMMAND?
q
```



6.2 Data Manipulation in a Worksheet

Each worksheet has 400 rows and 100 columns. Each row is labelled according to its data item and accessed by a row number. Each column is labelled by utility and year, and accessed by a column code starting with "A" through "Z" and continuing with "AA, AB, AC, ...". Each cell in the worksheet is identified by combining the column and row codes as follows.

```
B     20
|     |
|     |_____Row Number
|
|___________Column Code
```

A set of commands allows you to manipulate data in a worksheet. It allows you to move or delete data and to perform calculations. A command sentence has the format,

[command] [data item] [range of data item]

Here is a brief summary of the commands.

Commands	Data Items	Function
DISPLAY		display worksheet data
HELP		access help feature
LIB		list library of command words
LIST	COMPANY	list company or item information
	ITEMS	
SCREEN		Sets display screen format
QUIT		Return to menu

DISPLAY [cell position]

This command displays the worksheet according to the screen format set up by the command SCREEN. The [cell position] represents the cell in the upper-left-hand corner of the worksheet to be displayed , "A1" in this example. The first 16 rows are displayed starting at the specified cell position.

```
COMMAND?
display a1
```

	* ITEMS *	[A] Bell Telephone 1981	[B] Bell Telephone 1981
1-	BALANCE SHEET-ASSETS		
2-	Communication Plant:		
3-	telephone plant in service	412,447,740	5,682,446,300
4-	telephone plant under construction	22,932,080	117,419,280
5-	property held for future telephone use	29,488	254,192
6-	telephone plant acquisition adjustment	0	0
7-	satellite earth stations	0	0
8-			
9-	TOTAL COMMUNICATION PLANT--GROSS	435,409,410	5,800,120,300
10-	less: depreciation reserve	83,254,576	970,801,920
11-	amortization reserve	0	0
12-	earth station depreciation & amortiz	0	0
13-			
14-	TOTAL COMMUNICATION PLANT--NET	352,154,880	4,829,319,200
15-			
16-	Investments and Funds:		

```
PRESS ENTER TO CONTINUE...OR...TYPE "Q" TO QUIT?
q
```

HELP

This command provides access the help facility in order to instruct the user in using the worksheet.

LIB

This command lists all words used in a command sentence and word abbreviations.

LIST [data item] [ranges]

This command list worksheet labels for the utility companies and row data items. Up to 10 ranges can be specified with a dash used to separate the first and last item in a range. A series of ranges are separated by commas.

```
COMMAND?
list company a-c

    * COMPANY NAMES *

A -Bell Telephone Co. of Nevada
B -Bell Telephone Company of Pennsylvania
C -Chesapeake & Potomac Telephone Co.

COMMAND?
list items 1-10,30

    * ITEM DESCRIPTIONS *

 1.          BALANCE SHEET-ASSETS
 2. Communication Plant:
 3. telephone plant in service
 4. telephone plant under construction
 5. property held for future telephone use
 6. telephone plant acquisition adjustment
 7. satellite earth statis
 8.
 9.   TOTAL COMMUNICATION PLANT--GROSS
10. less: depreciation reserve

    * ITEM DESCRIPTIONS *

30. all other current assets
```

SCREEN [number of columns]

This commands determines the screen format when displayed. The format is determined by specifying the numbers of the columns displayed. Following is an example of setting the screen to display 3 columns.

```
COMMAND?
screen 3

USING SCREEN FORMAT NO.  3

COMMAND?
```

QUIT

This commands ends worksheet processing and returns the user to the data base menu.

6.3 Data Analysis

The worksheet contains a mathematical interpreter to perform calculations over rows and columns. You can access this facility by typing a "?" and the formula instead of a command in response to the prompt "COMMAND?" as shown below.

```
COMMAND?
? [ formula definition ]
```

The mathematical interpreter allows you to construct complex arithmetic expressions to analyze worksheet data. All data are stored in cells and represented by their cell variable such as "A1", and "CD34".

The interpreter has five arithmetic operations: exponentiation (↑), multiplication (*), division (/), addition (+), and subtraction (-). It will allow up to nine set of parentheses with any level of enclosures. All calculations are performed according to the sets of parentheses, the operation hierarchy, and from left to right in an arithmetic expression as shown below.

Mathematical Hierarchy

1. parentheses "()"
2. exponentiation "↑"
3. multiplication "*" and division "/"
4. addition "+" and subtraction "-"

The following are valid arithmetic expressions:

```
A100/A200
(B4-B6)*0.5
(C3*(A25-D25)+A100)*0.5
```

Two types of formula exists -standard and generic. The standard formula generates a single value from a user-defined formula. For generic formulas, there are two designations: a number sign(#), and an at sign(@). Within a formula, the number sign replaces the row number and the "@" sign replaces the column code (e.g. A#, BC#, @12). During the calculation process, the number sign is replaced by a row number and the "@" sign is replaced by a column code. Generic formulas are used to perform calculations over rows and columns. The following are valid arithmetic expressions.

```
100+A#/@200
A#+B#/C#
(E10-E#)*0.5/E10
(@12+@16)/100
```

The interpreter contains four built-in functions for simplifying formulas. These functions are as follows:

1. SUM - sum a group of rows and columns
2. AVG - average a group of rows and columns
3. MIN - find the minimum value in a group of rows and columns
4. MAX - find the maximum value in a group of rows and columns

Functions are used in a formula in the same manner as variables and constants. All functions have the following format.

SUM < starting column/row, ending column/row >

The following are some examples of the use of built-in functions.

1. The sum of column A through E for row 12.

   SUM<A12,E12>

2. The average of value in row 32.

   AVG<A32,ZZ32>

3. Proportion of line 20 to the maximum value in row 30 for columns A through C.

   SUM<A20,C20>/MAX<A30,C30>

The following is a sample session using formula definitions.

```
04/08/84 ---- INDUSTRY DATA ---- 18:59:24

DATA BASES

1. FCC STATISTICS OF COMMUNICATIONS COMMON CARRIER

MAKE A SELECTION?
1

ENTER WORKSHEET NAME?
mydata

DO YOU WANT TO LOAD DATA INTO WORKSHEET MYDATA(Y/N)?
n

ACCESS WORKSHEET FOR DATA ANALYSIS.  USE A SET OF
COMMAND WORDS TO MANIPULATE DATA.  TYPE "HELP" FOR
ASSISTANCE.

COMMAND?
?SUM<A1,a5>

>RESULT IS      435,409,308.0000

COMMAND?
?(c3+c5+c8)*.5678

>RESULT IS       24,541,113.0000

COMMAND?
?2345678+345567/34555

>RESULT IS        2,345,688.0005
```

```
COMMAND?
?SUM<A#,C#>/1000

  1.           BALANCE SHEET-ASSETS
  2. Communication Plant:
  3. telephone plant in service                          7,032,417.7500
  4. telephone plant under construction                    164,681.1680
  5. property held for future telephone use                    494.9850
  6. telephone plant acquisition adjustment                      0.0000
  7. satellite earth stations                                    0.0000
  8.
  9.   TOTAL COMMUNICATION PLANT--GROSS                    7,197,594.6100
 10. less: depreciation reserve                           1,292,298.2860
 11.       amortization reserve                                 0.0000
 12.       earth station depreciation & amortization reser      0.0000
 13.
 14.   TOTAL COMMUNICATION PLANT--NET                     5,905,297.1800
 15.
 16. Investments and Funds:

PRESS ENTER TO CONTINUE...OR...TYPE <Q>UIT?
q

COMMAND?
?@4

A -Bell Telephone Co. of Nevada                          22,932,080.0000
B -Bell Telephone Company of Pennsylvania               117,419,280.0000
C -Chesapeake & Potomac Telephone Co.                    24,329,808.0000
D -Chesapeake & Potomac Telephone Co. of Maryland        37,909,232.0000

COMMAND?
?@4+@3/@5

A -Bell Telephone Co. of Nevada                          22,946,066.9689
B -Bell Telephone Company of Pennsylvania               117,441,634.9376
C -Chesapeake & Potomac Telephone Co.                    24,334,244.8269
D -Chesapeake & Potomac Telephone Co. of Maryland        37,910,934.2661
```

```
COMMAND?
?SUM<A#,B#>/@5
```

1. BALANCE SHEET-ASSETS	
2. Communication Plant:	
3. telephone plant in service	
A -Bell Telephone Co. of Nevada	206,690.6552
B -Bell Telephone Company of Pennsylvania	23,977.5211
C -Chesapeake & Potomac Telephone Co.	28,844.0597
D -Chesapeake & Potomac Telephone Co. of Maryland	3,708.5611
4. telephone plant under construction	
A -Bell Telephone Co. of Nevada	4,759.6093
B -Bell Telephone Company of Pennsylvania	552.1470

```
PRESS ENTER TO CONTINUE...OR...TYPE <Q>UIT OR <N>EXT?
[CR]
```

C -Chesapeake & Potomac Telephone Co.	664.2122
D -Chesapeake & Potomac Telephone Co. of Maryland	85.3996
5. property held for future telephone use	
A -Bell Telephone Co. of Nevada	9.6202
B -Bell Telephone Company of Pennsylvania	1.1160
C -Chesapeake & Potomac Telephone Co.	1.3425
D -Chesapeake & Potomac Telephone Co. of Maryland	0.1726
6. telephone plant acquisition adjustment	
A -Bell Telephone Co. of Nevada	0.0000
B -Bell Telephone Company of Pennsylvania	0.0000
C -Chesapeake & Potomac Telephone Co.	0.0000
D -Chesapeake & Potomac Telephone Co. of Maryland	0.0000

```
PRESS ENTER TO CONTINUE...OR...TYPE <Q>UIT OR <N>EXT?
q

COMMAND?
quit
```

CHAPTER 7

DATA BASE OF LISTS

The online service provides a set of miscellaneous data bases for general interest. These data bases are in a list-format. This format allows the data base to be easily generated and installed. To access information in a data base, you would list the data base on your terminal. Other options are available to you such as paging and word search. The simplicity of these data bases allows seldom used information to be placed on the service without the high cost of installation.

7.1 Entering Commands

To select this option from the main menu, type a "6" and a carriage return. NOIS will display a menu of the available data bases you can access. A selection is made by typing the appropriate number identifying the data base. An example of selecting the NARUC Membership List data base is shown below.

```
04/02/84 ---------- DATABASE OF LISTS ---------- 15:09:43

LISTS
1.  COMPUTER ON-LINE INFORMATION SERVICES
2.  NARUC MEMBERSHIP LIST

MAKE A SELECTION?
2
```

After selecting a data base, NOIS will display the first 16 lines of the data base and then ask you for a response to one of the following questions.

PRESS ENTER TO RETURN TO MAIN MENU . . . OR . . . COMMAND?

or

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?

You have the option to press ENTER or type a command. Commands are executed by typing a single letter and a carriage return. The news is listed by page with each page consisting of 16 lines of text. The following commands are available.

Commands	Function
H	Help - This lists all commands.
Q	Quit - Returns you to main menu.
R	Restart - Restarts the display of the data base.
S	Search - Search NRRI News for a set of words.
L	List - List current page displayed by the data base.
P	Previous - List the previous page display of the data base.
B	Beginning - Go to the beginning of the data base.
E	End - List the last page of the data base.

7.2 Sample Session

A sample session accessing a list-formatted data base using commands is shown in the following example. All of your entries are underlined.

PAGE 1
NARUC MEMBERSHIP LIST
==========

CIVIL AERONAUTICS BOARD
1825 Connecticut Avenue, N.W.
Washington D.C. 20428
Area Code (202) Information: 655-4000

Dan McKinnon, Chairman, 673-5164
Elizabeth E. Bailey, Member
Glorida Schaffer, Member, 673-5226
James R. Smith, Member, 673-5168
Diane K. Morales, Member, 673-5229

FEDERAL COMMUNICATIONS COMMISSION
1919 M. Street, N.W.
Washington, D.C. 20554
Area Code (202) Information: 655-4000

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
h
>TO ACCESS THIS DATABASE. TYPE ONE OF THE FOLLOWING SINGLE LETTER
COMMANDS.
"Q" QUIT AND RETURN TO THE LIST OF DATABASES
"R" RESTART THE DISPLAY OF THE DATABASE
"P" GO TO THE PREVIOUS PAGE OF THE DATABASE
"S" SEARCH DATA BASE FOR A SET OF WORDS
"B" GO TO THE BEGINNING OF THE LIST
"E" GO TO THE END OF THE LIST
"L" LIST CURRENT DISPLAY OF DATA BASE
PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
[CR]

PAGE 2
NARUC MEMBERSHIP LIST
==========

Mark S. Fowler, Chairman, 632-6600
James H. Quello, Commissioner, 632-7557
Mimi Weyforth Dawson, Commissioner, 632-6446
Henry M. Rivers, Commissioner, 632-6996
Dennis R. Patrick, Commissioner, 632-7117

FEDERAL ENERGY REGULATORY COMMISSION
825 North Capitol Street, N.E.
Washington, D.C. 20426
Area Code (202) Public Information: 357-8055

Raymond J. O'Connor, Chairman, 357-8055
Georgianna Sheldon, Vice Chairman, 357-8055
J. David Hughes, Commissioners, 357-8388
Anthongy G. Sousa, Commissioner, 357-8377
Oliver G. (Rick) Richard III, Commissioner, 357-8383
PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
e

PAGE 63
NARUC MEMBERSHIP LIST
==========

WYOMING PUBLIC SERVICE COMMISSION
Capitol Hill Building
320 West 25th Street
Cheyenne, Wyoming 82002
Area Code (307) 777-7427

```
John R. (Dick) Smyth, Chairman
Charles E. (Ned) Johnson, Deputy Chairman
Nels J. Smith, Commissioner
---------------
==========END OF DATABASE==========
PRESS ENTER TO RETURN . . . OR . . . COMMAND?
q
```

7.3 Searching for Items in a Data Base

The Data Base of Lists provides the option to search for words in the data base. A search is perfomed by specifying a set of keywords. The search will begin where the display of the data base ends. It will try to match each word in the data base with one of the keywords. The search will terminate when a match occurs. To start the search at the beginning of the data base, type "B" for the command and a carriage return. To execute the search command, type "S" for the command and a carriage return. If the search is successful, the location of the data base will be printed and 16 lines of the data base will be printed. The data base where the word was found will be located in the 8th line of the listed data base. Here is an example.

```
PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
s
ENTER WORDS FOR SEARCH?
maryland
*** SEARCH SUCCESSFUL AT
MARYLAND PUBLIC SERVICE COMMISSION

PAGE 28
NARUC MEMBERSHIP LIST
================================================================================
Augusta, Maine  04333
Area Code (207) 289-3831
```

Peter A. Bradford, Chairman, 289-3831
David Moskovitz, Commissioner
Cheryl Harrington, Commissioner, 289-3831

MARYLAND PUBLIC SERVICE COMMISSION
231 East Baltimore Street
Baltimore, Maryland 21202
Area Code (301) 659-6000

Frank O. Heintz, Chairman, 659-6071
William A. Badger, Commissioner, 659-6070
Lilo K. Schifter, Commissioner, 659-6073

PRESS ENTER TO CONTINUE . . . OR . . . COMMAND?
q

CHAPTER 8

COMPUTER MODELS

NOTE: Models will not be accessible to users during this free-pilot program because of the lack of funds.

NRRI has developed a set of powerful computer models for utility regulation and plans to provide access to them through NOIS at an additional cost. The cost of running a model is determined by the amount of central processing, disk access and storage is used. The costs could range from $10 to $50 per run depending on the complexity of the model. Using the models through this service,

1. Allows you to access models for a particular need without the problems of installing the model on your computer system.

2. Allows you to examine a model's usefulness before deciding to install it on your system.

3. Allows you to access the most current version of the model including enhancements.

4. Allows you to access the computing power at NRRI if a computer system is not available to you.

Because of the complex nature of the models, it is required that all persons desiring access to a particular model request the proper authorization through an NRRI online service representative. It is advisable that you obtain the User's Manual to the model as a reference. Extensive use of NRRI staff for a modelling application could require a separate contract agreement.

To select this option from the main menu, type a "7" and a carriage return. NOIS will display a menu of all of the computer models available. Computer models are executed by typing the appropriate number identifying the model. An example of selecting a computer model called the "Interactive Cost Allocation System(ICAS)" specified on line 1 is shown below.

```
04/04/84 ---- COMPUTER MODELS ---- 11:26:39
MODELS

  1.  INTERACTIVE COST ALLOCATION SYSTEM (ICAS)
  2.  CAPACITY EXPANSION AND RELIABILITY EVALUATION SYSTEM (CERES)
  3.  REGULATORY ANALYSIS MODEL (RAM)
  4.  LOAD FREQUENCY AND DURATION DATA ANALYSIS PROGRAM (FRED)

MAKE A SELECTION?
1
INTERACTIVE COST ALLOCATION SYSTEM - VER 3.21 - BY MICHAEL D. WONG

ICAS TASKS
  1.  USE A DATA FILE FOR DATA MANIPULATION
  2.  COPY A DATA FILE
  3.  DELETE A DATA FILE
  4.  ARCHIVE A DATA FILE TO TAPE
  5.  RELOAD A DATA FILE FROM TAPE
  6.  LOCATE A JOB ON THE COMPUTER
  7.  SPECIFY PRINTER FOR OUTPUT
  8.  DISPLAY SYSTEM STATUS
  9.  END ICAS

MAKE A SELECTION?
```

CHAPTER 9

ORDERING NRRI PUBLICATIONS

The National Regulatory Research Institute (NRRI) has produced a series of reports on the regulation of electric, gas, water, and telephone utilities. Also, a series of short research works are published called the NRRI Occasional Papers. NRRI Report topics include the following,

- Gas Wellhead Price Deregulation
- Gas and Electric Utility Rate Design
- Power Pooling
- Gas Marginal Cost Pricing
- Computerized Utility Analyses
- Utility Operating Efficiency
- Forecasting and Planning
- Fuel Adjustment Clauses
- Regulatory Incentives
- Cogeneration and Avoided Costs
- Cost Overruns in Utility PLant Construction
- Regional Multistate Regulation
- Funding Nuclear Decommissioning
- Commission-Ordered Management Audits
- Water Regulation and Rate Design
- Measured Rate Telephone Service
- Quality of Telephone Service
- Telephone Market Structure Analyses
- Computer-Based Telephone Cost Studies

- AT&T Divestiture
- Telephone Access Charges
- Small Water Utility Regulation
- Electric Generation Deregulation
- Deregulation of CPE

Publications can be ordered through the online service. You have the option of being invoiced or having it charged against your computer account (NOTE: During the pilot, all orders will be invoiced). All orders will be processed immediately.

9.1 Ordering Publications

Ordering publications using the online service is simple using the following steps. All the necessary information is prompted for you and then later printed for your verification.

STEP 1. Select publications and the number of copies.
STEP 2. Verify order and costs.
STEP 3. Enter and verify the shipping address.
STEP 4. Is the billing address the same as the shipping address? If it's different, enter and verify billing address.
STEP 5. Select shipping method.
STEP 6. Select billing method.

9.2 Entering Commands

To select this option from the main menu, type an "8" and a carriage return. NOIS will start displaying the list of publications. You place an order by typing the number associated with that publication located in the far-left column. It will then ask you the number of copies for the publication. Enter the number of copies following with a carriage return. Next, the system will return to command mode for another selection. To search for a publication, you have a set of single letter commands available as follows.

Commands	Function
H	Help - This lists all commands.
Q	Quit - This ends the ordering process. If any orders were placed, the system will prompt you with the necessary information to complete the order.
R	Restart - Restart the display of the publications list.
P	Previous - Go to the previous page of publications.
N	Next - Go to the next page of publications. Pressing the ENTER key will perform the same function.
S	Search - Search for a set of key words.
L	List - List current page of publications.
O	Order Code - Order publications by specifying publication code.

9.3 Sample Session

A sample session to place an order for publications is shown in the following example. You will be placing an order for two copies of Deregulation of the Electric Power Industry: Perspective of State Regulation and a copy of Unplanned Shutdowns: Allocating the Burden. All of your entries are underlined.

```
04/02/84 -------- ORDER NRRI PUBLICATIONS --------16:01:45
YOU CAN ORDER NRRI PUBLICATIONS THROUGH YOUR TERMINAL.  ALL ORDERS ARE
BILLED AGAINST YOUR COMPUTER ACCOUNT UNLESS OTHERWISE SPECIFIED.  IF
FUNDS ARE NOT AVAILABLE, YOU WILL BE INVOICED.

TYPE "HELP" FOR ASSISTANCE OR "QUIT" TO COMPLETE ORDER.

NO.              DESCRIPTION                          PRICE ($)
=============================================================================
 1.  NRRI-83-6
     DEREGULATION OF THE ELECTRIC POWER INDUSTRY:        9.25
     PERSPECTIVE OF STATE REGULATION (NRRI OCCASIONAL
     PAPER NO. 6)
 2.  NRRI-82-3
     FUNDING NUCLEAR POWER PLANT DECOMMISSIONING        11.25
 3.  NRRI-82-2
     THE APPROPRIATENESS AND FEASIBILITY OF VARIOUS     11.25
     METHODS OF CALCULATING AVOIDED COSTS
 4.  NRRI-81-19
     UNPLANNED SHUTDOWNS: ALLOCATING THE BURDEN         11.00

MAKE A SELECTION . . . OR . . . COMMAND?
1
```

HOW MANY COPIES?

2

MAKE A SELECTION . . . OR . . .COMMAND?

4

HOW MANY COPIES?

1

MAKE A SELECTION . . . OR . . .COMMAND?

q

*** VERIFY PUBLICATION ORDER ***

QTY	DESCRIPTION	PRICE ($)
2	NRRI 83-6 (UNIT PRICE $ 9.25) DEREGULATION OF THE ELECTRIC POWER INDUSTRY: PERSPECTIVE OF STATE REGULATION (NRRI OCCASIONAL PAPER NO. 6)	18.50
1	NRRI 81-19 (UNIT PRICE $ 11.00) UNPLANNED SHUTDOWNS: ALLOCATING THE BURDEN	11.00

SPECIFIC ORDER TOTAL = $ 29.50

IS THIS THE CORRECT ORDER <YES>?

[CR]

PLEASE ENTER THE SHIPPING ADDRESS.

1. NAME?

john doe

2. STREET?

1267 apple road

3. CITY?

ridgetown

4. STATE?

ohio

5. ZIP?

43256

```
6.  AREA CODE AND TELEPHONE NUMBER?
524-456-0000

*** VERIFY SHIPPING ADDRESS ***
1.  NAME: JOHN DOE
2.  STREET: 1267 APPLE ROAD
3.  CITY: RIDGETOWN
4.  STATE: OHIO
5.  ZIP: 43256
6.  TELEPHONE NUMBER: 524-456-0000

IS THIS THE CORRECT ADDRESS <YES>?
[CR]

IS THE BILLING ADDRESS THE SAME AS THE SHIPPING ADDRESS <YES>?
[CR]

ORDERS ARE SHPPED 4TH CLASS.
DO YOU WANT SPECIAL SHIPPING SERVICES
($5.00 SURCHARGE PER ORDER) <NO>?
yes

SHIP VIA
1.  U.S. MAIL, FIRST CLASS (POSTAGE INVOICED)
2.  U.S. MAIL, EXPRESS MAIL (CHARGES INVOICED)
3.  AIR COURIER (DELIVERY CHARGES COLLECTED)
SELECT SHIPPING?
2
TOTAL ORDER   $   34.50
DO YOU WANT TO BE INVOICED<NO>?
yes
YOU WILL BE INVOICED FOR $  34.50
DO YOU NEED A COPY OF THE ANNUAL PURLICATIONS LIST <NO>?
yes
THANK YOU!
```

9.4 Searching for a Publication

Search facilities are provided to find a publication by matching words in the publication description with a set of key words. The search is performed over all publications. When a publication is found, you have the option to order it. To use this feature, type the command "S" and a carriage return. The following is an example of a publication search.

```
MAKE A SELECTION . . . OR . . .COMMAND?
s
ENTER WORDS FOR SEARCH?
ceres
PUBLICATION:
NRRI-81-12     (UNIT PRICE = $  17.50)
CERES: CAPACITY EXPANSION AND RELIABILITY EVALUATION SYSTEM

DO YOU WANT TO ORDER PUBLICATION <YES>?
yes
HOW MANY COPIES?
2

MAKE A SELECTION . . . OR . . . COMMAND?
q
```

9.5 Ordering by Publication Code

Each publication has a code represented in the form NRRI-XX-XX where the X is a numeric character. The publication code is displayed above the description of each publication. You can place an order by specifying the appropriate codes. To use this feature, type the command "O" and a carriage return. The following is an example of an order.

MAKE A SELECTION . . . OR . . .COMMAND?

o

ENTER PUBLICATION CODE (NRRI-XX-XX)?

nrri-82-2

PUBLICATION:

NRRI-82-2 (UNIT PRICE = $ 11.25)

THE APPROPRIATENESS AND FEASIBILITY OF VARIOUS METHODS OF CALCULATING AVOIDED COSTS

DO YOU WANT TO ORDER PUBLICATION<YES>?

[CR]

HOW MANY COPIES?

1

ENTER PUBLICATION CODE (NRRI-XX-XX)?

[CR]

MAKE A SELECTION . . . OR . . . COMMAND?

q

APPENDIX A

COMPUTER ACCOUNT APPLICATION FORM

A computer account application is necessary to access the NRRI Online Information Service. An account is required for billing purposes. For each account, you may have as many as 10 access codes. Please fill out the enclosed form and return it to the following address.

Michael D. Wong
NRRI Online Information Service
The National Regulatory Research Institute
2130 Neil Ave Rm 418
Columbus, Ohio 43210

THE NATIONAL REGULATORY RESEARCH INSTITUTE

ONLINE INFORMATION SERVICE

COMPUTER ACCOUNT APPLICATION FORM

DATE MONTH _____ DAY _____ YEAR ____

ORGANIZATION _____

TITLE _____

NAME _____

ADDRESS _____

_____

CITY _____ STATE _____ ZIP _____

TELEPHONE ( ) _____

HOW MANY ACCESS CODES? ____ (maximum 10)

LIST ALL USERS FOR THIS ACCOUNT AND THEIR 3 LETTER PASSWORD.

	User Name	Password
1.	_____	_ _ _
2.	_____	_ _ _
3.	_____	_ _ _
4.	_____	_ _ _
5.	_____	_ _ _
6.	_____	_ _ _
7.	_____	_ _ _
8.	_____	_ _ _
9.	_____	_ _ _
10.	_____	_ _ _

RETURN TO: Michael D. Wong, NRRI Online Information Service,
The National Regulatory Research Institute,
2130 Neil Ave Rm. 418, Columbus, Ohio 43210

APPENDIX B

SUMMARY OF COMMANDS

The following is a summary of commands used to access the NRRI Online Information Service. Use it as a fast reference when you are using these services. Remember, press the ATTENTION or BREAK key any time to stop processing the current service and it will return you to a previously accessed menu.

Service	Command	Function
Bulletin Board	H	Help - This lists all commands
	Q	Quit - Returns you to main menu
	R	Restart - Restarts the display of the bulletin board
	P	Post - Posting a bulletin on the bulletin board
NRRI News	H	Help - This lists all commands
	Q	Quit - Returns you to main menu
	R	Restart - Restarts the display of the news starting at the first page
	S	Search - Search the News for a set of words
	L	List - List current page of the news.
	P	Previous - List the previous page of the news
	B	Beginning - Go to the beginning of the news
	E	End - List the last page of the news.

Service	Command	Function
Bibliographic Retrieval & Computer Software Catalog	H	Help - Lists all commands.
	Q	Quit - Returns you to the previous menu.
	M	Main Menu - Returns you to the main menu.
	S	Search - Search abstract classifications using a set of keywords.
	W	Window - Sets the number of lines in the abstract to be displayed.
	A	All - Start displaying all abstracts classified for all menu selections.
	P	Previous - Go to previous menu.
	L	List - List menu selections.
* abstracts only	H	Help - Lists all commands.
	Q	Quit - Returns to menu.
	L	List - List 16 lines of abstract.
	T	Topics - List menu topics selected to access abstract.

Industry Data Worksheets	DISPLAY	display worksheet data
	HELP	access help feature
	LIB	list library of command words
	LIST COMPANY	list company information
	LIST ITEMS	list data item information
	SCREEN	Sets display screen format
	QUIT	Return to menu

Service	Command	Function
Data Base of Lists	H	Help - This lists all commands.
	Q	Quit - Returns you to main menu.
	R	Restart - Restarts the display of the data base.
	S	Search - Search NRRI News for a set of words.
	L	List - List current page displayed by the data base.
	P	Previous - List the previous page display of the data base.
	B	Beginning - Go to the beginning of the data base.
	E	End - List the last page of the data base.
Ordering Publications	S	Search -Search for a set of key words.
	L	List -List current page of publications.
	O	Order Code -Order publications by specifying publication code.