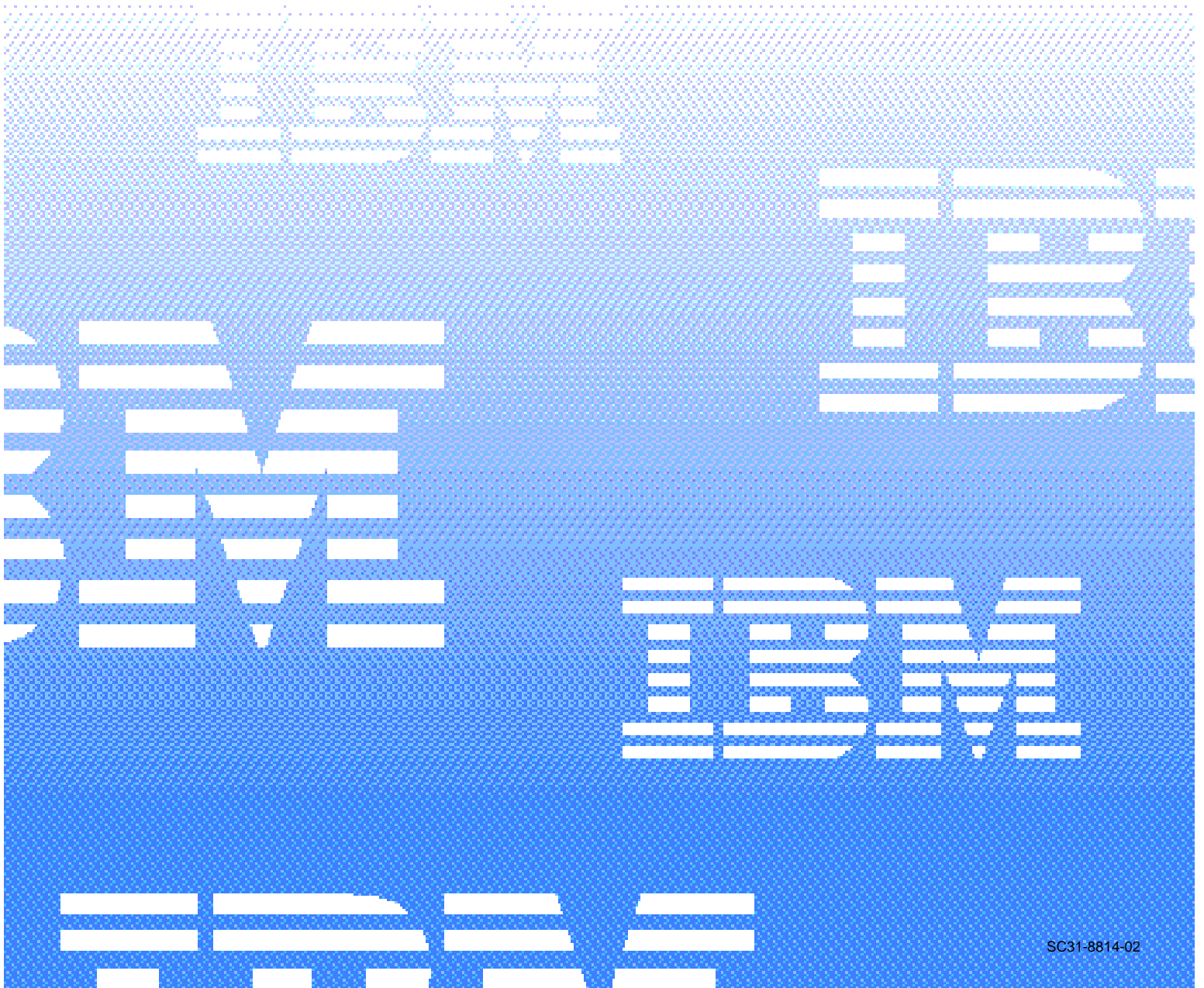




IBM BookManager BookServer for World Wide Web for z/OS: Getting Started Version 1 Release 2





**IBM BookManager BookServer
for World Wide Web for z/OS:
Getting Started Version 1 Release 2**

Second Edition, October 2001

This edition applies to Version 1 Release 2 of z/OS (5694-A01) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Introduction to BookManager BookServer

The IBM BookManager BookServer is a specialized World Wide Web server that lets information providers make BookManager electronic libraries, containing electronic books, bookshelves, and book cases available on the Internet. You can read and search for information in these libraries using any Web browser such as Netscape Navigator or Internet Explorer. Hypertext links within a BookManager electronic book can link to any Internet resource.

Publish on the Web

BookManager BookServer translates your BookManager book text into HTML and serves it to a Web browser when requested. BookManager BookServer translates the pictures in your books into GIF format (if not already stored in the book in a Web-ready format) and serves them up at the same time. This means you can maintain one copy of your source—in its original word-processor format—and use it in multiple platforms and media, such as softcopy on workstation or Web, or traditional hardcopy.

For information on using BookManager BookServer to create and maintain a library of electronic books on a Web server, see Chapter 4, “Managing BookManager BookServer,” on page 33.

Read BookManager Books on the Web

Use your favorite Web browser to access BookManager electronic books, bookshelves, and bookcases on the Web, taking full advantage of BookManager's powerful search capabilities and easy toolbar navigation.

To find out more about how to use BookManager BookServer to access a BookManager BookServer electronic library and read BookManager electronic books, see Chapter 3, “Using BookManager BookServer,” on page 5.

The BookManager BookServer Advantage

BookManager BookServer offers significant advantages over the traditional methods for storing and serving World Wide Web documents as HTML and GIF files.

For the information provider:

Creating books

- You can store up to 10 times more content on the same amount of server disk space.
- You can create your BookManager books using a wide variety of tools: most PC word processors, SGML and BookMaster.
- BookManager BookServer supports all BookManager document elements, including those not directly supported in HTML, such as complex tables.
- Table of contents, list of figures, and list of tables are automatically generated when the book is built, unless specified differently by the author.

Distributing books

- You can distribute the same electronic book files unchanged across media types (diskette, CD-ROM and WWW) and across operating systems (OS/2, Windows, AIX, DOS, MVS, VM, OS/400 and CICS).

- Each electronic book is a single, readily portable and self-contained file, rather than a large number of separate HTML and GIF files.
- Your readers have remote access to BookManager libraries from Web browsers across every platform.
- A single BookManager server can serve books, bookshelves, and book-cases from its own or from multiple remote file systems. Their actual location is not part of the URL of a document and is transparent to readers.

For the reader:

- You can read a BookManager book using any Web browser on any Web platform
- BookManager BookServer supports fuzzy and morphological full-text searching across entire books and bookshelves, not just the currently loaded HTML file.
- You can easily move around within a book by using the navigational features of the browser as well as the intuitive icon push buttons of the BookManager BookServer toolbar. In addition, a table of contents, list of figures, list of tables and an index are available, if enabled by the author.

Starting with this release, BookServer provides limited support for PDF documents. When a companion PDF version of a Book document is present in the BookServer Library, BookServer makes the PDF available for viewing and printing via the Adobe Acrobat Reader, and for downloading to the local workstation.

For information on how to use BookManager BookServer, see Chapter 3, “Using BookManager BookServer,” on page 5.

Chapter 2. Product Prerequisites

Server Product Prerequisites

Software

z/OS V1R2 or higher including:

- Language Environment
- SMP/E
- IBM HTTP Server
- GDDM (required for displaying GDF graphics)

Hardware

Hardware prerequisites for the BookManager BookServer:

- Any processor that supports your z/OS operating system
- An IBM 3390 Direct Access Storage or equivalent that supports your MVS operating system
- 100 cylinders of disk space on the IBM 3390 Direct Access Storage or equivalent
- One of the following tape drives (to install the distribution tapes):
 - A 9-track reel device
 - An 18-track cartridge device, such as an IBM 3480 Magnetic Tape Subsystem
 - A 4mm cartridge device

Client Product Prerequisites

Software

Software prerequisites for BookManager BookServer clients

- An HTML World Wide Web browser product and related Internet connectivity software
- For BookServer frame support (when enabled by the BookServer Administrator and requested by the client), a browser which supports frames, such as Netscape Navigator 4.0 or Internet Explorer 4.0 (or their equivalent) with javascript and cookies enabled.

Chapter 3. Using BookManager BookServer

The BookManager BookServer Library

Description: The BookManager BookServer library is a group of electronic books (and optionally, companion PDFs) made available over the World Wide Web on an IBM BookManager server. You can pick a book to read by finding it in the Catalog of All Books, in a bookcase, or in a bookshelf.

Using the Library Page: The BookManager BookServer Library page is displayed when you first access BookManager BookServer. You can choose the following items on the Library page:

Find field

Allows you to find any cataloged book in the BookManager BookServer library. Type all or part of a book title or name (for example, **EPHM2MD0**), or document number, and choose the **Find** push button. The books that are found are displayed on the Catalog of All Books page. To display every cataloged book in the library, leave the Find field blank and choose the Find push button. Note, that uncataloged books are not listed via the Find function.

Browse Bookcases

Lists BookManager bookcases, which contain bookshelves and other bookcases.

Browse Bookshelves

Lists BookManager bookshelves, which contain books that have been grouped by special interest.

Administration

Displays the Administration page, which is used to manage a BookManager BookServer library.

Help

Provides help for the Library page.

Getting Started push button

Links to the online Getting Started Version 2 Release 2 book (the book you are reading now), where you can read about BookManager BookServer and how to use its features.

Product Information push button

Displays product and service level information about BookManager BookServer.

The Catalog of All Books Page

Description: The Catalog of All Books page lists all cataloged books in the library whose titles, names, or document numbers match the information you typed in the Find field on the Library page.

For any catalog list, if a companion PDF file is present for any book in the list, a PDF icon is displayed alongside the corresponding book icon.

What is the Catalog of All Books? The Catalog of All Books contains every cataloged book in the BookManager BookServer Library that meets the Find field specification.

Using the Catalog of All Books Page: On the Catalog of All Books page, you can:

- Open a book by clicking on its title or icon.

- Display the PDF (if present) with Adobe Acrobat Reader by clicking on the PDF icon.
- Look for specific books in the Catalog. Type all or part of a book title, name, or document number in the Find field and choose the Find push button (or press Enter). BookManager BookServer looks through the entire catalog, not just the list of books currently displayed on the Catalog of All Books page.
- List every book in the Catalog by choosing the Refresh push button.

Navigation buttons:

Library—Returns you to the Library page

Bookshelves—Takes you to the Bookshelves page

Help—Provides help for the page you are on

Push buttons:

- **Find**—Displays a list of all books in the Catalog whose titles, names, or document numbers match the information entered in the Find field
- **Refresh**—Lists every book in the Catalog, grouped by collection

Columns:

- **ICONS**—For Book and companion PDF (if present)
- **Book Title**—Title of the book
- **Name**—File name of the book
- **Date**—Date the book was created or last updated
- **Document Number**—Document number of the book

Rows: Each book meeting the Find criteria is listed. If there is a PDF or dataset with a name similar to that of the book, the Adobe Acrobat Icon provides access to the PDF via the Acrobat Plug-in, which must be installed on your work station. If the book or PDF are stored in MVS datasets and the dataset is migrated, icons indicating the migrated status will display and allow the datasets to be recalled. Once the recall request is issued, reloading or refreshing the shelf display will poll the completion of the recall request.

Additional Information:

- “Using the Find Field” on page 13

The Bookcases Page

Description:The Bookcases page lists the bookcases available to you through BookManager BookServer. A **bookcase** contains bookshelves, other bookcases, or both. You access the Bookcases page by choosing the *Browse Bookcases* icon on the Library page.

Using the Bookcases Page: On the Bookcases page, you can:

- Choose a specific bookcase to display the bookshelves and bookcases it contains.
- Look for specific bookcases and bookshelves. Type all or part of a bookcase or bookshelf title or name in the Find field and choose the Find push button (or press Enter). BookManager BookServer looks at the titles and names of all the bookcases in the library and all bookshelves contained within bookcases. It ignores bookshelves not contained within bookcases. The Bookcases page is redis-

played, presenting the matches found. To restore the original list of bookcases, choose the Refresh push button.

- Sort the list of bookcases by title, name, or date. Choose the Sort push button.

Navigation buttons:

Library—Returns you to the Library page

Help—Provides help for the page you are on

Push buttons:

- **Find**—Displays a list of all bookcases and bookshelves within bookcases whose titles or names match the information entered in the Find field
- **Sort**—Lets you sort the bookcases by title, name, or date
- **Refresh**—Restores the original list of bookcases that appeared before you used the Find field

Columns:

- **Bookcase Title**—Title of the bookcase
- **Name**—File name of the bookcase
- **Date**—Date the bookcase was created or last updated

Additional Information:

- “Using the Find Field” on page 13

Sorting the Bookcases

Description: You can temporarily rearrange the order in which bookcases are listed by choosing the Sort push button on the Bookcases page. A form titled *Sort the Bookcases* is displayed to allow you to change the order of the bookcases.

How to sort the list of bookcases: In the *Sort the Bookcases* form, you can change the order in which the bookcases are listed according to following elements:

- Title (the default)
- Name
- Date

Choose an element from the list and then choose the Sort push button. The list of bookcases is redisplayed with the bookcases sorted by the element you chose.

Push buttons:

- **Sort**—Sorts the Bookcases as specified
- **Reset**—Resets the sort order to the default
- **Help**—Provides help for sorting a list of bookcases

The Bookcase Page

Description: The Bookcase page lists the contents of a specific bookcase. A **bookcase** contains bookshelves, other bookcases, or both. You access the Bookcase page by choosing a specific bookcase from the Bookcases page. (To create a bookcase, see “Creating a Bookcase” on page 44.)

Using the Bookcase Page: On the Bookcase page, you can:

- View a bookshelf or bookcase by clicking on its title or icon.
- Look for specific bookshelves and bookcases contained within this bookcase. Type all or part of a bookcase or bookshelf title or name in the Find field and choose the Find push button (or press Enter). The Bookcase page is redisplayed, presenting the matches found. To restore the original list, choose the Refresh push button.
- Sort the list of bookshelves and bookcases by title, name, or date. Choose the Sort push button.

Navigation buttons:

Library—Returns you to the Library page

Bookcases—Returns you to the Bookcases page

Bookshelves—Takes you to the Bookshelves page

Help—Provides help for the page you are on

Push buttons:

- **Find**—Displays a list of all the bookshelves and bookcases within this bookcase whose titles or names match the information entered in the Find field
- **Sort**—Lets you sort the bookshelves and bookcases within this bookcase by title, name, or date
- **Refresh**—Restores the original list of bookshelves and bookcases that appeared before you used the Find field

Columns:

- **Title**—Title of the bookshelf or bookcase
- **Name**—File name of the bookshelf or bookcase

Bookcase Description: This information appears at the bottom of the Bookcase page:

- **Name**—File name of the bookcase
- **Path**—Directory path and filename of the bookcase
- **Date**—Date when the bookcase was created or last updated

Additional Information:

- “Creating a Bookcase” on page 44
- “Using the Find Field” on page 13

Sorting a Bookcase

Description: You can temporarily rearrange the order in which items are listed in the bookcase you are viewing by choosing the Sort push button on the Bookcase page. A form titled *Sort a Bookcase* is displayed to allow you to change the order of the bookshelves and nested bookcases.

How to Sort the Bookcase: In the *Sort a Bookcase* form, you can sort the bookcase by name or descriptive title.

Select **Sort by Name** or **Sort by Title** and then choose the **Sort** push button. The bookcase is redisplayed with the items sorted by the element you chose.

Push buttons:

- **Sort**—Sorts the bookcase as specified
- **Reset**—Resets the sort order to the default
- **Help**—Provides help for sorting a bookcase

The Bookshelves Page

Description:The Bookshelves page lists the bookshelves and collections available to you through BookManager BookServer. You access the Bookshelves page by choosing the *Browse Bookshelves* icon on the Library page.

Using the Bookshelves Page: On the Bookshelves page, you can:

- Choose a specific bookshelf to display a list of the books it contains.
- Look for specific bookshelves. Type all or part of a bookshelf title or name in the Find field and choose the Find push button (or press Enter). The Bookshelves page is redisplayed, presenting the matches found. To restore the original list, choose the Refresh push button.
- Sort the list of bookshelves and collections by title, name, or date. Choose the Sort push button.
- View all bookshelves only, all collections only, or all bookshelves and collections. Choose the View push button.

Navigation buttons:

Library—Returns you to the Library page

Help—Provides help for the page you are on

Push buttons:

- **Find**—Displays a list of all bookshelves whose titles or names match the information entered in the Find field
- **View**—Lets you view all bookshelves only, all collections only, or all bookshelves and collections
- **Sort**—Lets you sort the bookshelves by title, name, or date.
- **Refresh**—Restores the original list of bookshelves that appeared before you used the Find field

Columns:

- **Title**—Title of a bookshelf or collection
- **Name**—File name of a bookshelf or a system assigned name (for example, 4-COLLECTION) for a collection
- **Date**—Date the bookshelf was created or last updated.

Additional Information:

- “Using the Find Field” on page 13

Viewing the Bookshelves

You can decide whether you want the Bookshelves page to display a list of all bookshelves only, all collections only, or all bookshelves and collections. Choosing one or the other may shorten the list.

After you select a view, the Bookshelves page displays *all* bookshelves or collections or both, that exist in the library. This happens even if, prior to setting the view, you used the Find field to display a subset of library items.

The view you select only temporarily overrides the default view set by the administrator on the Administration page. The view returns to the administrator defaults the next time you load the Bookshelves page.

Regardless of the view you select, the Find function operates according to the view set by the administrator. For example, if the administrative setting is bookshelves only, and you set the view to both bookshelves and collections before using the Find field, the Find function looks for matches only among bookshelves.

Changing Your Bookshelves View: To select a view:

1. Choose the **View** push button on the Bookshelves page.
2. On the page titled *Viewing the Bookshelves*, make a choice in the list box and choose the **View** push button.

Additional Information:

- “Using the Find Field” on page 13

Sorting the Bookshelves

Description: You can temporarily rearrange the order in which bookshelves are listed by choosing the Sort push button on the Bookshelves page. A form titled *Sort the Bookshelves* is displayed to allow you to change the order of the bookshelves.

How to sort the Bookshelves: In the *Sort the Bookshelves* form, you can change the order in which the bookshelves are listed according to following elements:

- Title (the default)
- Name
- Date

Choose an element from the list and then choose the Sort push button. The list of bookshelves is redisplayed with the bookshelves sorted by the element you chose.

Push buttons:

- **Sort**—Sorts the Bookshelves as specified
- **Reset**—Resets the sort order to the default
- **Help**—Provides help for sorting a list of bookshelves

The Bookshelf Page

Description: The Bookshelf page displays a list of books contained in a bookshelf or collection (cataloged or uncataloged). You access the Bookshelf page by choosing a specific bookshelf or collection from the Bookshelves page. (To create a bookshelf, see “Creating a Bookshelf” on page 41.)

For any bookshelf, if a companion PDF file is present for any book on the shelf, a PDF icon is displayed alongside the corresponding book icon.

Using the Bookshelf Page: On the Bookshelf page, you can:

- Open a book by clicking on its title or icon.
- Display the companion PDF (if present) with Adobe Acrobat Reader by clicking on the PDF icon.

- Look for specific books. Type all or part of a book title, name, or document number in the Find field and choose the Find push button (or press Enter). The Bookshelf page is redisplayed, presenting the matches found. To restore the original list, choose the Refresh push button.
- Sort the list of books by title, name, date, or document number. Choose the Sort push button.
- Search all of the books in the bookshelf or collection for specific information.

Navigation buttons:

Library—Returns you to the Library page

Bookshelves—Returns you to the Bookshelves page

Help—Provides help for the page you are on

Push buttons:

- **Find**—Displays a list of all books within this bookshelf whose titles, names, or document numbers match the information entered in the Find field
- **Search Books**—Allows you to search all of the books in the bookshelf for specific information
- **Sort**—Allows you to sort the list of books by title, name, date or document number
- **Refresh**—Restores the original list of books that appeared before you used the Find field

Columns:

- **ICONS**—For Book, and companion PDF (if present)
- **Book Title**—Title of the book
- **Name**—File name of the book
- **Date**—Date the book was created or last updated
- **Document Number**—Document number of the book

Rows:

Each book (cataloged or uncataloged) on the shelf is listed. If there is a PDF or dataset with a name similar to that of the book, the Adobe Acrobat Icon provides access to the PDF via the Acrobat Plugin, which must be installed on your work station. If the book or PDF are stored in MVS datasets and the dataset is migrated, icons indicating the migrated status will display and allow the datasets to be recalled. Once the recall request is issued, reloading or refreshing the shelf display will poll the completion of the recall request.

Bookshelf description: This information appears at the bottom of the Bookshelf page (if displaying the contents of a bookshelf, not a collection):

- **Name**—Name of the bookshelf
- **Shelf Date**—When the bookshelf was created or last updated
- **Search Index**—File name of the bookshelf search index (if any). Books contained in the search index are listed with the indexed book icon.
- **Index Date**—Date when the bookshelf search index file (if any) was created
- **Shelf Path**—Directory path and filename of the bookshelf

Additional Information:

- “Creating a Bookshelf” on page 41
- “Using the Find Field” on page 13

- “Reading a Book” on page 15

Sorting a Bookshelf

Description: You can temporarily rearrange the order in which books are listed in the bookshelf you are viewing by choosing the Sort push button on the Bookshelf page. A form titled *Sort a Bookshelf* is displayed.

How to sort the Bookshelf: In the *Sort a Bookshelf* form, you can change the order in which the books in the bookshelf are listed according to the following elements:

- Title (the default)
- Name
- Date
- Document Number

Choose a book element from the list and then choose the Sort push button. The bookshelf is redisplayed with the books sorted by the element you chose.

Push buttons:

- **Sort**—Sorts the bookshelf as specified
- **Reset**—Resets the sort order to the default
- **Help**—Provides help for sorting a bookshelf

Searching a Bookshelf

Description: You can do fuzzy (morphological) searching over all books in a BookManager bookshelf in the BookManager BookServer library.

How to Search a Bookshelf:

1. Choose the **Search Books** push button in a BookManager bookshelf to display the Search Bookshelf form.
2. Type your search requests in the list box. (Click here for examples.)
3. Choose the **Search** push button to begin the search. The results are displayed in the Bookshelf Search Results List. If a companion PDF file is present for any book in the list, a PDF icon is displayed along side the corresponding book icon.
4. In the Bookshelf Search Results List, select the book for which you want to view search matches by clicking either the book icon or book title. A Search Results List of matching book topics is displayed from which you can select a topic to view the matches.
5. Alternatively, if a PDF icon is present, you may select the PDF icon to launch the Adobe Acrobat Reader for that document and repeatedly use the Acrobat Reader **find function** to view the matches. Note, that the Acrobat Reader find function is not morphologically based.

Push buttons:

- **Search**—Begins the search
- **Reset**—Clears the search request list box

Search Request Examples: For examples of Search Requests that you can specify, see “Search Request Examples” on page 24.

Additional Information:

“Bookshelf Search Results List”
 “Bookshelf Search Index”

Bookshelf Search Index

Description: A bookshelf search index increases the speed with which you can perform a search across the books in a BookManager bookshelf. The search index is associated with a specific bookshelf and contains all the words in all the books that are in the bookshelf at the time the search index is created. (Collections do not have search indexes.)

How a search index is created: To create a bookshelf search index use BookManager BUILD/MVS, BookManager BUILD/VM, BookManager READ/MVS, BookManager READ/VM, BookManager Index Utility for OS/2, or BookManager Index Utility for Windows V2.2. Prebuilt bookshelves acquired from IBM on collection kits usually come with search indexes.

Identifying whether a Book is in the search index: Bookshelves can include a combination of books listed in a search index and books that are not. You can search all books in a bookshelf, regardless of whether they are contained in the search index. If they are listed in a search index, the search is faster.

When you display a list of books in a bookshelf, the book icon for a book contained in the search index shows a list, represented by a sheet of paper, behind the book. The icon for a book not contained in the search index does not show a list behind the book.

Bookshelf Search Results List

The Bookshelf Search Results List is a list of all books containing matches from the last bookshelf search you performed. If a companion PDF file is present for any book in the list, a PDF icon is displayed alongside the corresponding book icon.

Books are always displayed in ranked order of importance in the Bookshelf Search Results List. To view a book containing search matches, select the book from the list. BookManager BookServer opens the selected book and displays a list of the matching topics in the Book Search Results List. If a PDF icon is listed alongside any book from the book list, you may alternatively select the PDF icon to launch the Adobe Acrobat Reader and repeatedly use the Acrobat Reader **find function** to do a non-morphological find for matches within the PDF.

Using the Find Field

Description: A Find field appears on the Library page, Catalog of All Books page, Bookcases page, Bookcase page, Bookshelves page, and Bookshelf page. Use the Find field to look for specific items appropriate to the page. For example, on the Bookshelf page for the "User Guides Bookshelf," you can look for specific book titles contained within that bookshelf. The Find field is useful when there is a long list of items on the page or when the items are not displayed (for example, books on the Library page).

How to Use the Find Field: Type all or part of a title or name (or document number on some pages) and choose the Find push button (or press Enter). Capitalization is ignored.

Example and Guidelines: Suppose you are on the Bookshelves page with fifty bookshelves displayed. You are looking for a bookshelf with this title and name:

PSF/MVS & "AFP Viewer" Bookshelf
APSBKA02

You remember only part of the title or name. What can you type in the Find field that will ensure a match?

- Type any single word or part of a word. For example, if you type any of the following, BookManager BookServer will display the above bookshelf and all other bookshelves that contain these words or word parts:
 - **Match:**
 - *02*
 - *"AF*
 - *mvs*
 - *viewer*
 - Use the question mark (?)—the single-character wildcard—to substitute for a single character anywhere in a word.
 - **Match:**
 - *A?P*
 - **Not a Match:**
 - *A??P*
 - Use the asterisk (*)—the multiple-character wildcard—to substitute for one or more characters anywhere in a word or series of words.
 - **Match:**
 - *v*r *shelf*
 - *APS*2*
 - If you type more than one word of a title, they must be in the correct order. Use the asterisk (*) to substitute for intervening words.
 - **Match:**
 - *AFP viewer*
 - *mvs* viewer*
 - **Not a Match:**
 - *viewer AFP* (words not in correct order)
 - *mvs viewer* (asterisk not used for intervening words)

Using Find a Second Time: You cannot use the Find function to look through a list of items previously found. If you use the Find function a second time, it looks through the entire original set of items.

Using Find with View: On the Bookshelves page, you can choose the View push button to display a list of all bookshelves only, all collections only, or all bookshelves and collections. The view you select temporarily overrides the default view set by the administrator.

The Find function operates independently of the view you select:

- After you select a view, the Bookshelves page displays *all* bookshelves or collections or both, that exist in the library. This happens even if, prior to setting the view, you used the Find field to display a subset of library items.
- Regardless of the view you select, the Find function operates according to the view set by the administrator. For example, if the administrative setting is bookshelves only, and you set the view to both bookshelves and collections before using the Find field, the Find function looks for matches only among bookshelves.

What are Bookshelves and Collections?

Related books may be grouped in either a bookshelf or a collection. You can tell a collection from a bookshelf by looking at the Name field on the Bookshelves page. Collections have names like 4-COLLECTION. When a collection is opened, both cataloged and uncataloged books are listed; and when selected, uncataloged books are automatically cataloged.

A **collection** is a set of books located in a single directory. A **bookshelf** may contain books located along several directory paths. Unless you are a BookManager BookServer administrator, these differences are not important. As a user, you can think of a collection as a kind of bookshelf (except that collections are never included in bookcases). You can view, sort, and search a collection just as you would a bookshelf, however a collection will never have an associated bookshelf search index. Where the distinction is not important, we will use the term *bookshelf* to mean both bookshelf and collection.

Reading a Book

Description: A BookManager book is a precompiled electronic document containing one or more topics, which are similar to chapters in a hardcopy book. In a BookManager book, you can conduct complex searches, navigate throughout the entire document using hypertext links, and link to other books and external resources.

BookManager BookServer looks for books along a set of directory paths defined by your server administrator. When you request a book topic, BookManager BookServer serves it in a Book page to your World Wide Web browser.

Based on a combination of end user preference and administrative setting, the HTML that is served to the browser for a book topic may be frames-based.

If so, each topic is presented within a page consisting of the following frames:

- A topic frame
- A table of contents frame for the book
- A toolbar frame

Using the Book page: On the Book page, you will find:

- A toolbar for viewing, navigating, searching, and obtaining help in the book
- Optional book description information
- The current book topic
- Icons at the bottom of the Book page to take you to the previous or next topics (in a framed page, these icons appear only within the toolbar frame which is always frozen in place).
- The security classification of the book

You can access the Book page by choosing a book from:

- A catalog of books
- A Bookshelf
- A hypertext link defined in another HTML document
- The URL address of the book

What you see when you open a BookManager Book: When you open a BookManager Book without specifying a particular topic, the book's table of contents topic is displayed in the Book page. If a book does not contain a table of contents, or if the

table of contents is displayed in it's own frame (as is the case for a framed-page), the first topic in the book is displayed.

To navigate within a topic displayed in your World Wide Web browser, use the browser functions available for scrolling. To navigate to other topics in the book, choose a topic from the book's table of contents, take a hypertext link from within a topic, or use the Previous Topic and Next Topic toolbar icons.

Book Versions

When more than one copy of a book has been placed in the library, BookServer may not be able to accurately identify which copy would satisfy the user's request. More than one copy of a book (i.e. when the same filename is in more than one directory or dataset) may represent multiple versions of the book. Different versions of a book will have different document numbers or build dates.

When BookServer can not uniquely identify which version of a book is being requested, a list of the versions in the library is presented, from which the user may choose the desired version.

Navigating through a Book

You can move through a book sequentially or randomly, going directly to a topic or illustration that most interests you.

There are several methods for moving through a BookManager book:

By Topic

Moving through a book topic by topic is the softcopy equivalent of going through a hardcopy book page by page, chapter by chapter. By scrolling through each topic sequentially, you are assured of seeing all the information within the book. Use the Previous Topic and Next Topic toolbar icons to move backwards or forwards through the book sequentially.

Using the Toolbar

The toolbar lets you access the table of contents quickly, from which you can pick any topic to read. You can also display a list of revised topics, which you can link to. In addition, you can perform searches and request Help directly from the toolbar.

Linking

Hypertext linking offers you a quick way to get to related information while reading a topic. Link targets can be other locations within the same book, links to other Internet resources, or links between BookManager books. When you link to information by selecting highlighted text or images, you can then return to your place to continue reading by choosing the *Back* button of your World Wide Web browser.

Note that when performing a link to another book from a framed page, a new browser window is launched for the target book.

Searching

You can search a book for a specific word or phrase. When the list of search results is displayed, you can go directly to the topics containing your word or phrase.

Linking to Internet Resources

Description: Using BookManager BookServer, you can link to Internet resources, display an image from the Internet, or display an Internet image and link from it to an Internet resource in a BookManager book.

Using Internet Resources: Internet resources that are coded in a BookManager book are interpreted by BookManager BookServer and translated into HTML when the book topic is displayed. The emphasized text, inlined image or emphasized image appears in the book topic as defined by the author. You choose the emphasized text or images to link to the Internet resources.

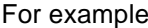
Examples:

Linking to an Internet resource from text

Choose the hot text, which is emphasized, to link to the Internet resource defined by the author. For example, to link to the IBM Home page on the World Wide Web, [click here](#).


Displaying an image inline from the Internet

Images from the Internet can be displayed inline with the book text as defined by the author.

For example,  the BookManager logo is displayed here.

Linking to an Internet resource from an Internet image

Choose the hot image, which is emphasized, to link to the Internet resource defined by the author. The Internet image is displayed in line with the book text. Text around the image can also be hot.

For example,  click on the IBM logo to link to the IBM Home page on the World Wide Web.

BKMGRURL Special Application Launch Definition

A special application launch object, BKMGRURL, provides portable links to the World Wide Web across BookManager READ platforms. On non-World Wide Web BookManager READ platforms, a program named BKMGRURL must be supplied that starts the World Wide Web browser and passes it the URL from the DATA= parameter.

The BookManager BookServer detects this special application launch definition, BKMGRURL, in a BookManager book and automatically converts it into a link to the URL specified. For example, [link to the IBM Home Page using the special application launch BKMGRURL definition here](#).

For Authors: Creating links to Internet resources:

Description: Authors can create links in a BookManager book to link to Internet resources, display an image from the Internet, or display an Internet image and create a link from it to an Internet resource.

Using BookMaster tags to create links: If you are the author of a BookManager book, you can define links to Internet resources by using the IBM BookMaster tag set and then build the book with BookManager Build 1.3. When an Internet link is encountered by the BookManager BookServer, the link is converted into HTML.

You can use the :LDESC and :DOCDESC BookMaster tags to identify the Internet link object and its target URL address. The URL that represents the address of the object to link to will be specified as the document number in the NUM field of the :DOCDESC tag. The URL that represents the address of the image is specified in the DATA field of the :LDESC tag.

Example link definitions:

1. Link from text to an Internet resource

Link Definition:

```
:ldesc id=lnk001 docid=lnk001 object=INTERNET obj type=OTHER.  
:docdesc ID=lnk001 num='http://www.ibm.com/' .  
¼
```

To link to the IBM Home page
on the World Wide Web, :l lid=lnk001.click here:el..

Example link: To link to the IBM Home page on the World Wide Web, click here.

2. Link to display an image from the Internet inline with text

Link Definition:

```
:ldesc id=lnk002 object=INTERNET obj type=IMAGE  
data='/bookngr/library.gif' .  
¼
```

The :l lid=lnk002. BookManager logo is displayed here:el..

Example link: The BookManager logo is displayed here.

3. Link to an Internet resource from an Internet image

Link Definition:

```
:ldesc id=lnk003 docid=lnk003 object=INTERNET obj type=IMAGE  
data='/bookngr/ibmlgo.gif' .  
:docdesc ID=lnk003 num='http://www.ibm.com/' .  
¼
```

For example, :l lid=lnk003. click on the IBM logo:el.
to link to the IBM Home page on the World Wide Web.

Example link: For example, click on the IBM logo to link to the IBM Home page
on the World Wide Web.

4. BKMGRURL Special Application Launch Definition

BKMGRURL Link Definition:

```
:ldesc id=lnk004 object=BKMGRURL obj type=PROGRAM  
data='http://www.ibm.com/' .  
¼
```

For example, link to the IBM Home page using the
special application launch *BKMGRURL*
definition :l lid=lnk004. here:el..

Example BKMGRURL link: For example, link to the IBM Home page using the
special application launch BKMGRURL definition here.

Linking Between Books (Cross-Book Linking)

Description: Cross-book links look like any other hypertext link, but take you to a different book rather than to a different part of the book you are already in. These links are provided by the author to enable you to link between BookManager books.

How the cross-book links work: The author of the book defined the cross-book link using the book's document number to identify another book as the link target.

When you activate a cross-book link, BookManager BookServer searches the Catalog of All Books for a matching document number, looks up the associated book name, and opens that book for you. The cross-book link might take you to a topic header, figure, table, question, answer, list item, or series of steps in the other book. Authors can also create links to spot IDs and component items.

Special note about document numbers: Note that an ambiguous cross book link may result when multiple versions of a document have been placed in the library (see “Book Versions” on page 16) and the document author specifies the link to the document either without a dash level or at a minimum level. When BookServer can not uniquely identify which document is referred to by the cross-book link, a list of the document numbers in the library is presented from which the user may choose.

Books you can link to: Because BookManager BookServer searches the Catalog of All Books for document numbers, it is possible to link to any book in the BookManager BookServer library, once that book has been cataloged. A book is cataloged when the administrator rebuilds the catalog. An uncataloged book is automatically cataloged the first time it is selected from a collection list.

For Authors: Creating Cross-Book Links:

Description: Authors of BookManager books can create cross-book links using the book's document number to identify another book as the link target. These cross-book links can be made to the entire book, to a particular topic in the book, or to specific locations within the book, such as figures, tables, list items and spots.

Using BookMaster tags to create cross-book links: If you are the author of a BookManager book, you can create a cross-book link by using the :LDESC and :DOCDESC BookMaster tags to identify the document number and location in the target book. The document number of the target book is specified in the NUM field of the :DOCDESC tag. The location in the target book to link to is specified on the OBJECT and OBJTYPE field of the :LDESC tag.

Example cross-book link definitions: The following example shows the necessary BookMaster tagging to create a cross-book link definition to a target book and samples of how to link to different sections within the book.

DOCDESC tag definition: Use the :DOCDESC tag to specify the document number of the target book. The ID= attribute identifies this :DOCDESC definition tag when invoking the link in the text of your book.

```
:docdesc id=xb2 num=' SC34-5009' .
```

LDESC tag definition: Use the :LDESC tag to specify the location in the target book to link to. The OBJTYPE= attribute identifies the element in the target book you are linking to, and the OBJECT= attribute identifies the ID of the element you are linking to. The elements of a book you can link to include the following:

1. BOOK—Links to book.
2. HEAD—Links to a topic heading in the book.
3. FIG—Links to a figure in the book.
4. TABLE—Links to a table in the book.
5. LI—Links to a list item in the book.
6. SPOT—Links to a spot in the book.
7. QUES—Links to a question in the book.
8. ANS—Links to an answer in the book.
9. STEP—Links to a step in the book.
10. CI—Links to a component item in the book.

Following is the :LDESC tag coding for each of the previous example elements. In the following tags, the OBJECT= attribute is shown with sample element IDs. You must use the target books' real element IDs in place of these sample ones:

1. :ldesc id=1k1book docid=xb2 objtype=book.

2. :ldesc id=lk1head docid=xb2 object=head1 obj type=head.
3. :ldesc id=lk1fig docid=xb2 object=fig1 obj type=fig.
4. :ldesc id=lk1tab docid=xb2 object=tab1 obj type=table.
5. :ldesc id=lk1li docid=xb2 object=li1 obj type=li.
6. :ldesc id=lk1spot docid=xb2 object=spot1 obj type=spot.
7. :ldesc id=lk1ques docid=xb2 object=ques1 obj type=ques.
8. :ldesc id=lk1ans docid=xb2 object=ans1 obj type=ans.
9. :ldesc id=lk1step docid=xb2 object=step1 obj type=step.
10. :ldesc id=lk1ci docid=xb2 object=ci1 obj type=ci.

Sample cross-book link tagging: To create the cross-book link in the text of the source book, you can use the :L tag and specify the ID of the :LDESC tag on the LID= attribute.

The following shows sample tagging to link to the target book defined in the previous examples:

1. Link to book :l lid=lk1book. here:el..
2. Link to head1 :l lid=lk1head. here:el..
3. Link to fig1 :l lid=lk1fig. here:el..
4. Link to tab1 :l lid=lk1tab. here:el..
5. Link to li1 :l lid=lk1li. here:el..
6. Link to spot1 :l lid=lk1spot. here:el..
7. Link to ques1 :l lid=lk1ques. here:el..
8. Link to ans1 :l lid=lk1ans. here:el..
9. Link to step1 :l lid=lk1step. here:el..
10. Link to ci1 :l lid=lk1ci. here:el..

Try it! The following is a link to the BookMaster User's Guide, document number SC34-5009. If this book exists on your BookManager BookServer, you will be taken to its table of contents. Otherwise, you will see a message stating the document number cannot be found. Link to the BookMaster User's Guide here.

Linking to a BookManager Book using a URL

To link to a BookManager Book on the BookManager BookServer, specify one of the following URLs from your browser or Web document:

```
http://server-addr/bookngr-cgi/bookngr.exe/books/bookname/CCONTENTS
http://server-addr/bookngr-cgi/bookngr.exe/books/bookname
http://server-addr/bookngr-cgi/bookngr.exe/books/bookname/2.0
```

In the above examples, *server-addr* is the name and address of BookManager BookServer, for example: *w3.pok.ibm.com*

The first URL opens the book, specified by *bookname*, to its table of contents topic. This is designated by the special topic name **/CCONTENTS** at the end of the URL. If left off, as shown in the second URL, the book opens to the table of contents by default, or to the first topic found, if no table of contents exists, or if the table of contents is displayed in its own frame (as is the case for a framed-page).

The third URL opens the book to a specific topic ID, designated by the topic ID at the end of the URL. For example, if you want to open the book to topic 2.0, you would specify */2.0* for the topic ID at the end of the URL.

Additional Information:

- "Linking to BookManager BookServer from a Web Document" on page 50

Using the Toolbar

The toolbar on the Book page contains icon push buttons for viewing, navigating and searching the book. If a function is not available at a particular time, the corresponding icon will not be selectable. The toolbar includes the following buttons:

Library Page

Returns you to the BookManager BookServerLibrary page.

Bookshelf Page

Returns you to the Bookshelf page (present if the book was opened from a bookshelf page).

Frame Mode

Provides ability to switch between framed and unframed mode for book topics. Initially, the user's default mode is the Library default mode established by the administrator. If the mode is switched by the user, the preference is remembered and becomes the user's new default.

Table of Contents

Displays the book's Table of Contents topic (present only for unframed book pages).

Revised Topics List

Displays a list of topics that have been revised in the book.

Previous Topic

Takes you to the previous sequential topic from the topic currently displayed.

Next Topic

Takes you to the next sequential topic from the topic currently displayed.

Search

Starts the BookManager BookServer Search facility to search for information anywhere within the book.

Search Results List

Displays the Search Results List from the last search performed.

Previous Matching Search Topic

Takes you to the previous topic that contains search matches listed in the Search Results List.

Next Matching Search Topic

Takes you to the next topic that contains search matches listed in the Search Results List.

Create Notes

Allows you to create a note for the book topic

List Notes

Lists the notes that are in the book.

Print

Allows you to preview and print book topics.

Download Book

Allows you to download an entire book to your workstation.

Download PDF

Allows you to download an entire PDF to your workstation.

Help

Provides Help for reading a book.

Revised Topics List

Description: The Revised Topics List is a list of topics that have been revised by the author. In order for a topic to appear in the Revised Topics list, the author must identify the revisions with revision symbols.

Using the Revised Topics List: Choose the Revised Topics icon on the toolbar to display the Revised Topics List. It is not a topic contained in the book, but a list that is built if there are revisions in the book.

Example: An author can attach a revision symbol to a topic title or to one or more lines of book text. Below is an example of a set of text that has been revised. The author has placed a vertical bar (|) revision symbol next to the revised text.

This paragraph is an example of text that contains revisions. The revision character is displayed to the left of this text. In addition, the Revised Topics List button on the toolbar is selectable and this topic appears in the Revised Topics List.

Book Topics

Description: Book topics contain elements such as plain text, hypertext links, and imbedded graphics. Topics have headings, like chapters in a hardcopy book. When displayed in the Bookpage, the topic heading ID (name or number) and the topic title are shown.

The following elements are found in book topics:

Table of Contents

A list of topics contained in a book.

Tables

Preformatted data, usually arranged in rows and columns, such as a grid or a spreadsheet layout. If the author specified a table list and there are tables in the book, a Tables topic will exist in the Table of Contents. Since tables are preformatted they can be larger than the viewing area and require scrolling.

Figures

Preformatted drawings or other illustrations, built into the book. If the author specified a figure list and there are figures in the book, a Figures topic will exist in the Table of Contents. Since figures are preformatted they can be larger than the viewing area and require scrolling.

Pictures

BookManager books can contain graphics that are compiled into the book at build time. These are portable across platforms and converted or extracted, as necessary, when the book topic is displayed. See "Displaying BookManager Pictures" on page 31 for more information.

Internet Images

You can view Internet images on the book page. See "Linking to Internet Resources" on page 16 for more information.

Hypertext Links

BookManager books can contain hypertext links within topics, between topics, between BookManager books, and to Internet resources.

Text

Book text can be either preformatted or be formatted when displayed at the browser. Books built with BookManager Build 1.2 contain preformatted text. Books built with BookManager Build 1.3 and BookManager Build 2.x allow many text elements to be formatted when displayed at the browser, such as paragraphs and lists.

Notes

Any comments you make in book topics are displayed in a list of notes at the bottom of the topic.

Additional Information:

Table of Contents Topic

Description: The Table of Contents topic lists the topics defined by the author in a BookManager book. The topic identifier is typically *Contents*. If the table of contents exists, you can reach it by choosing the *Table of Contents* icon on the toolbar of the Book page. From a framed book page, if the table of contents exists, you can display it in a topic frame by choosing the Table of Contents link from the Table of Contents frame. Note that if the administration setting for frames-based Book pages as the default is in effect, selecting this link causes the cached copy of the book's table of contents file to be refreshed.

Using the Table of Contents: Use the table of contents to view the book's contents and link to other topics in the book. When you choose the Table of Contents icon, available for unframed Book pages, the Table of Contents is positioned to the topic you last viewed, or to the beginning of the Table of Contents if the topic level is not included in the Table of Contents.

For a Table of Contents appearing in an unframed Book page, you can expand or summarize the table of contents to view subtopics or only main topics. By default, the table of contents is expanded, listing all the subtopics that the author allows. To view only the main topics, click on the word [Summarize] at the top of the table of contents. To switch back to the expanded table of contents, click on the word [Expand].

For framed book pages, the table of contents, if one exists, is always present in its own frame and appears in tree form with each of the individual topic nodes being independently expandable and collapsible.

Authors can elect to include only a certain level of topics in the Table of Contents. In this case, topic levels not included can be reached by the previous topic and next topic icons, and by hypertext links from the subtopics list at the end of other topics.

Book Description: When a book is opened to the first topic, the following book description information is displayed at the top of the Book Page:

- Title
- Author
- Document number
- Date and time the book was built
- Build version
- Directory path and filename of the book

This same information is also displayed in unframed mode when a book is opened, by default, to its table of contents.

Searching a Book

Description: With the BookManager BookServer you can do exact and fuzzy (morphological) full-text searching of the entire contents of a BookManager book.

How to search a Book: Choose the Search Book icon on the toolbar of a book topic to display the Search Book form. In the form, modify one or more of the following:

- Your search request(Click here for examples)

- Type of Search
- Where to Search
- How to Show Results

Then choose the Search push button in the form to begin the search. The search is performed at the server and the results are displayed in the Search Results List, from which you can select a book topic to view the matches.

Push buttons:

- **Search**—Begins the search
- **Reset**—Restores the default values on the Search Book form

Examples: For examples of Search Requests that can be specified, see “Search Request Examples”.

Additional Information:

“Searching a Bookshelf” on page 12

Search Request

A search request contains the words or expressions you want BookManager BookServer to find.

You can enter a single word, a phrase, or a combination of words and phrases. In addition, you can include wildcards, and search operators to create Boolean expressions, to group expressions together, or to treat search operators as literal characters.

See “Search Request Examples” for sample search requests.

Search Request Examples

The following examples illustrate the different types of Search Requests you can specify:

animal

Search for the existence of the single word *animal* in any topic.

my animal farm

Search for the existence of the phrase *my animal farm* in any topic.

my animal farm, dog

Search for the existence of the phrase *my animal farm* or the word *dog* in any same topic, using a comma to separate one or more words or phrases from each other.

dog

Search for words that contain the letters *dog* using the asterisk (*)—the multiple-character wildcard—to substitute for one or more characters anywhere in a word. In this example, **dog** would find matches such as *doghouse*, *dog-catcher*, *dogma* or *Reddog* if any one of them existed in any topic.

c?t

Search for three-letter words that begin with the letter *c* and end with the letter *t* using the question mark (?)—the single-character wildcard—to substitute for a single character anywhere in a word. In this example, *c?t* would cause search to find matches on such words as *cat*, *cot*, or *cut* if any one of them existed in any topic.

lion & tigers

Search for the existence of both the word *lion* and the word *tigers* in any same topic.

cat | dog

Search for the existence of either the word *cat* **or** the word *dog* in any same topic.

opossum ! sleep

Search for the existence of only the word *opossum* **but not** the word *sleep* in any same topic.

(cat | dog) ! tigers

Search for the existence of either the word *cat* **or** *dog*, **but not** *tigers* in any same topic using parentheses—grouping operators—to group together words or phrases to change the order of precedence of the search. In this example, a match will occur if either *cat* exists without *tigers* or if *dog* exists without *tigers*, in any same topic.

cat '&' mouse | kitten's fur

Search for the phrase *cat & mouse* **or** the phrase *kitten's fur* using single quotes—the AS IS operator—to prevent special characters from being treated as search operators. In this example, the ampersand (&) and the apostrophe (') are treated as regular characters.

Exception: When a single-quote (or apostrophe) character is part of a search request, as in *kitten's fur*, it is only necessary to add one single quote to treat it as an apostrophe.

Type of Search

The **Type of Search** options determine how closely a word or phrase in the book text must correspond to your search request. This allows you to narrow or broaden the number of matches you can receive from your search request.

BookManager BookServer offers the following types of searches:

- Exact
- Exact, any case
- Fuzzy (the default)

Exact

An exact-match search finds exactly the words you type in your search request, including capitalization. The word order must be the same and no additional words can intervene. Spaces typed between words in the search request are not significant, however.

Examples: The following shows which book text matches the search request phrase *my forest cottage*:

- **Match:**
 - *my forest cottage*
- **Not a Match:**
 - *My forest cottage*
 - *my enchanted-forest cottage*
 - *my enchanting cottage in the forest*
 - *my cute new enchanting little three-bedroom yellow forest cottage*

Exact, any case

This is treated the same as the Exact option, except the search ignores capitalization, treating uppercase and lowercase letters identically.

Examples: The following shows which book text matches the search request phrase *my forest cottage*:

- **Match:**
 - *my forest cottage*
 - *My forest cottage*

- **Not a Match:**
 - *my enchanted-forest cottage*
 - *my enchanting cottage in the forest*
 - *my cute new enchanting little three-bedroom yellow forest cottage*

Fuzzy

A fuzzy-match search (the default) will find the following types of matches for your search request:

- Exact matches, regardless of case
- Different morphological forms of the search request words (different endings, tenses, capitalization, punctuation, singular versus plural)
- Resequenced words in your search request
- Up to five intervening words between the individual words of a phrase in your search request.

Examples: The following shows which book text matches the search request phrase *my forest cottage*:

- **Match:**
 - *my forest cottage*
 - *My forest cottage*
 - *my enchanted-forest cottage*
 - *my enchanting cottage in the forest*
- **Not a Match:**
 - *my cute new enchanting little three-bedroom yellow forest cottage*

Where to Search

The **Where to Search** options determine what areas of a book BookManager BookServer will look through for matches when performing a search. The different areas of a book that can be searched are:

Topic titles

Searches the text of all topic titles

Topic text

Searches the text in all topics

Indexed words

Searches the list of indexed entries

You can select these options in any combination, but at least one area must be selected. All areas are selected by default. Select the areas of the book you want searched and choose the Search push button.

How to Show Results

The **How to Show Results** option determines the order in which topics containing search matches will be sorted when listed in the Search Results List. The options available are:

List Topics by Importance

Lists topics in ranked order of probable importance. Topics most likely to contain the information you are looking for are listed first. This is the default option.

List Topics in Sequence

Lists topics sequentially as they occur in the book, with no attempt to rank them. This option is faster because the topics are not ranked and sorted.

You can select only one **How to Show Results** option. Select the way you want topics sorted and choose the Search push button.

Search Results List

Description: The Search Results List is a navigator listing all the topics containing matches from the last search you performed.

The order in which topics are sorted when displayed in the Search Results List is determined by the **How to Show Results** option on the Search form. If you selected **List Topics by Importance** on this form, topics are ranked by the probable importance of the matches. Otherwise, topics are listed sequentially as they appear in the book.

Viewing Search Matches: To view a topic containing search matches, select the topic from the Search Results list. BookManager BookServer displays the selected topic, emphasizes the matching search words in the topic text, and positions you to the first matching word in the topic. You can navigate between topics with search matches by choosing the Previous Matching Search Topic and Next Matching Search Topic toolbar icons. To return to the Search Results list, choose the Search Results List toolbar icon.

Ranking Search Results:

BookManager BookServer determines the probable importance of search matches and ranks topics based on the following factors, listed in order of decreasing importance:

Location

Matches are likely to be of greater value if they occur in certain parts of the book. For example, matches found in Indexed words rank highest, followed by matches in Topic titles, and then matches in the Topic text.

Frequency

Topics with the most matches rank highest. When the request contains more than one search word or phrase, frequency also depends on how many words or phrases match.

Exactness

Exact matches, including exact capitalization of letters, rank highest. Matches that differ only in capitalization rank next, followed by matches that share the same root.

Distinctness

Matches for words or phrases that occur in only a few topics rank higher than matches that occur frequently throughout the book. For example, if you search for the word *cats* and the phrase *Siamese cats*, matches for *Siamese cats* rank higher than matches for *cats*. In this example, the added qualifier *Siamese* to *cats* makes the phrase more distinct than the word.

Also, when two or more topics contain the same number of matches, shorter topics, topics with less text, rank higher than longer topics.

Sequence similarity

Search matches on phrases are ranked according to their similarity to the search phrase. For example, matches on a search for *the forest cottage* might rank as follows:

1. *The forest cottage* (identical sequence)
2. *the enchanting forest cottage* (identical sequence, with one insertion; contains three search-phrase words)
3. *forest cottage* (identical sequence, with one deletion; contains only two search-phrase words)

4. *cottage in this forest* (reverse sequence, with one deletion; contains only two search-phrase words)

Order of Precedence

The order of precedence of search operators defines the order in which the search operators are processed.

Search operators are listed below from highest to lowest order of precedence. Those of equal order are listed together and are processed from left to right.

1. Wildcard characters: *, ?; phrase separator: ,
2. **AS IS** operator: ' ' (two single quotes)
3. Grouping operators: ()
4. Boolean BUT NOT: !
5. Boolean AND: &
6. Boolean OR: |

For example, to change the default order of precedence of the Boolean search request *A & B ! C*, so that A and B are processed first, put the parentheses around A & B as follows: *(A & B) ! C*.

Creating Notes in Book Topics

Description: You can make comments in book topics by creating notes that are appended to the end of each topic. The notes you create are not private. They are shared with anyone else who reads the book.

You can tell if a topic contains notes if the topic title has a note icon next to it. You click on the note icon to read the notes listed in a table at the end of the topic.

How to Create a Note

To create a note in a book, choose the Create Note icon in the tool bar.

The Notes form appears.

1. Type your note in the **Enter a note for topic:** field.
2. Enter your name (optional)
3. Enter your e-mail address (optional)
4. Choose the **Add** push button.

You are returned to the topic you added the note to. The note icon now appears next to the topic title. Click the note icon to view your note (and notes of other users) appended at the end of the topic. You can also scroll to the bottom of the topic to view the notes.

To add more notes to the topic:

1. Either click the Create Note icon in the tool bar, or click **Add Notes** at the bottom of the notes table.
2. On the **Enter a note for topic** form, choose the **Reset** button to clear the entry field.
3. Enter your next note as before. (Name and e-mail address are optional.)
4. Choose **Add** and your new note is appended to the previous note at the end of the topic.

Viewing All the Notes in a Book

To view a list of all the notes contained in a book, choose the List of Notes icon from the toolbar. The *Notes for book* page appears, listing all the notes by topic that have been created for the book.

To go to a topic, click the hot topic title.

Deleting Notes

Description:

Using an administration password, you can delete the notes in different topics, in an entire book, and in all books in your library. You cannot delete individual notes.

Deleting notes within a topic:

1. To delete the notes for a topic, choose **Delete These Notes** at the bottom of the topic, following the notes.
A confirmation message appears, asking you to confirm that you want to delete all the notes in the topic.
2. Enter your administration password and click the **Delete Notes** push button. The notes are deleted and you are returned to the topic.
3. If you decide not to delete the notes, click your browser back button to return to the topic.

Deleting all notes in a book:

You can delete all the notes for a book from the *Notes for book* page.

1. To delete all the notes for a book, choose the List of Notes icon to list the notes that are in the book.
2. At the bottom of the list, click the **Delete These Notes** push button.
A confirmation message appears, asking you to confirm that you want to delete all the notes in the book.
3. Enter your administration password and click the **Delete All Notes** push button. All the notes in the book are deleted, and you are returned to the topic from which you started.
4. If you decide not to delete the notes, click your browser back button to return to the topic.

Deleting all notes in all books:

You can delete all the notes in every book of the library from the Administration page.

To delete all the notes for every book in the library,

1. On the Administration page, enter your administration password and choose the **Delete All Notes** push button at the bottom of the page.
A confirmation message appears, asking you to confirm that you want to delete all the notes in every book in the library.
2. Click **Yes**, to delete all the notes. You are returned to the Administration page.
3. If you decide not to delete the notes, click **No**.

Deleting Notes—Confirmation

Confirm that you want to delete all notes in the topic or book by entering your password and pressing the push button to delete the notes.

If you decide not to delete the notes, click your browser back button to return to the notes.

Printing Book Topics

Description:The Print Preview facility allows you to format one or more selected topics of the book you are reading for previewing in your browser. You can then use the print facility of your browser to produce a hardcopy document of the selected topics.

Alternatively, if the book has a companion PDF, the PDF can be downloaded and viewed with Adobe Acrobat Reader, and printed with page fidelity, using the Acrobat Reader print function.

How to use Print Preview:While viewing any topic in a book, choose the Print icon in the toolbar to preview one topic or several topics. The **IBM BookManager Print Preview** page appears, on which you can specify the topics you want to preview and print. For a framed page the print dialog is launched in a new browser window. For a non-framed page, the current window is used.

To preview and print one or more topics in a book:

1. Select the topic or topics you want to preview and print from the **Select topics** list.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

2. To preview and print any notes contained in the topics, check **Include book notes**.
3. Choose the **Selected topics** push button.

The topics you selected are displayed for you to preview. If you included notes, you will see a note icon next to the topic titles that have notes. These notes will be printed.

If you decide that you don't want to print a topic after previewing it, use your browser back button to return to the Print Preview page, deselect the topic in the list, and choose the **Selected topics** push button as before.

4. To print, select the print option on your browser.

All subtopics within a topic are included in the output, even subtopics that do not appear in the table of contents. For example, the book's author may have chosen not to display fourth-level subtopics (such as 3.1.4.2) in the table of contents, but those subtopics will be included in the print preview and printed copy.

To preview and print all topics in a book:

1. To preview and print any notes contained in the book, check **Include book notes**.
2. Choose the **All topics** push button.

All topics in the book are displayed for you to preview. If you included notes, a note icon appears next to topics that contain notes.

3. To print, select the print option on your browser.

Push buttons:

Selected topics

Displays the topics that you select in the list box for you to preview before printing them.

All topics

Displays all the topics in the book for you to preview before printing them.

Reset

Deselects topics previously selected in the list box.

Check box:**Include book notes**

When checked, includes any notes that the book contains when you print it.

About your printout: What you see when you preview your printout is what you see when it is printed. The following information is included at the top of your printout:

DOCNUM

The document number of your book

DATETIME

The date and time the book was created

BLDVERS

The version of the BUILD product used to create the electronic book

TITLE

The title of the book

AUTHOR

The author of the book

COPYR

The book's copyright information

The printed output is very close to the author's original intent, but it is not an exact reproduction. Any pictures in your book appear inline with the text. The toolbar, footer, and copyright statement displayed at the bottom of each topic in the online book are not included in your printout.

Displaying BookManager Pictures

Description: Pictures are graphics that are built into a BookManager book by an author using a BookManager BUILD product. They are portable across platforms and converted, if necessary, when the book topic is displayed. Pictures may exist in a BookManager book as vectors, images or mixed types. Newer BookManager books (V1.4) contain pictures only in a Web-ready format (for example JPEG, GIF and PNG). BookServer for z/OS supports pictures in both the newer and older versions of BookManager books.

Viewing BookManager Pictures: When you display a topic, BookManager BookServer converts the BookManager pictures into the GIF format and displays the pictures integrated within the topic text, scaling them as needed. You can view a non-scaled version of a picture in its own separate page by clicking on the integrated picture or its picture number.

Pictures in newer BookManager books are extracted directly from the book, without conversion, and integrated into the topic text.

Each picture in a BookManager book has a unique number, for example, *Picture 14*. Either the picture number or the picture itself is integrated into the topic text.

To improve performance, as a picture is displayed, it is cached at the server in its Web-ready format in a special directory called the "picture cache."

Chapter 4. Managing BookManager BookServer

As an administrator, you can organize your BookManager BookServer library in a way that makes it easy for your users to get quickly to the information they need. BookManager BookServer provides the elements you need to organize any library, small or large. In this section of the book, we describe in detail what these elements are and how to use them effectively.

Once you have decided on a plan of organization, you can proceed to create your library. Most of the work of creating and maintaining a library can be done from the Administration page. We show you how to use the Administration page to create and modify bookshelves and bookcases, build the library catalog, log book access requests, generate diagnostic output, and perform other administrative tasks.

Finally, we explain how you can customize the product headers and footers, and—for administrators or others who manage a Web site or own a Web document—how to create links from a Web document to the BookManager BookServer.

Organizing Your BookManager BookServer Library

The elements of BookManager BookServer library organization include collections of books, bookshelves, bookshelf search indexes, and bookcases. As a user, you are familiar with at least some of these. In this section, we discuss them in the context of helping you as an administrator decide how to organize your library most effectively.

Bookshelves and Bookcases

Bookshelves are a means for grouping related books so that users can find information quickly. For example, books on employee benefits can be grouped on a bookshelf called "Benefits." An employee interested in medical coverage can choose the "Benefits" bookshelf from a list of bookshelves on various topics. This is a faster way of finding the information than having to browse through a long list of unrelated books.

Related bookshelves can be grouped into a **bookcase**. For example, all the bookshelves with employee information (benefits, personnel policies, legal regulations, and so on) could be grouped into one bookcase, separate from a bookcase that contains, say, bookshelves of product manuals. Bookcases can also include other bookcases.

For very large libraries, this technique of hierarchical organization aids not only the search for information but also helps prevent delays caused by displaying long lists of books or bookshelves.

For example, you could organize 3000 books into 300 bookshelves, each containing 10 books on average. However, a list of 300 bookshelves may be overwhelming to a user. So you might organize the 300 bookshelves into 20 bookcases. Now, if you choose one bookcase from a list of 20, you might see a list of 15 bookshelves. When you choose one of the bookshelves, you may see a list of 10 books. Starting at the top of the hierarchy ensures smaller lists and, therefore, optimum performance.

Internally, a bookshelf is a single text file (with extension .bks) containing a list of book file names, locations, and descriptions. A bookcase is also a text file (*.bkc), but instead of containing a list of books, it contains a list of bookshelves or other bookcases or both.

Collections and Bookshelves

When you create or update a library, you copy the books (binary files) into one or more directories and then identify those directories to BookManager BookServer so it knows where to find the books. Each set of books in a directory is called a **collection**. In contrast to a bookshelf, which is a single text file, a collection is a set of binary book files that reside in a single directory.

It is possible to put all of the books in your library into a single large collection. However, like bookshelves, collections can be used as a means of grouping related books. For example, a collection of employee benefits publications could be grouped in the `/usr/lpp/booksrv/books/benefits` directory. A collection of legal documents might reside in the `/usr/lpp/booksrv/books/legal` directory.

To a user, the difference between a collection and a bookshelf may not be apparent. On the Bookshelves page, both collection names and bookshelf titles are listed in the Bookshelf Title column. You can click on the name or title to display a list of books in the collection or bookshelf. You can sort or search both bookshelves and collections. But bookshelves offer some advantages that impact the user and are important in helping you as an administrator decide how to organize your library.

- A bookshelf may contain books that physically reside along several directory paths. For example, if the manuals for various products reside in separate collection directories, you could create a bookshelf that logically groups all of the user guides, taking one from each directory.
- The same book can be included in more than one bookshelf. Since there need be only one physical copy of the book, this assures that both bookshelves include the same copy.
- Bookshelves can make use of bookshelf search indexes to provide high performance searching.
- Bookshelves make your library organization easily portable to other BookManager platforms. Some BookManager platforms do not recognize collections as a way of organizing a library.

Bookshelf Search Indexes

One of the special advantages of bookshelves is that you can create a bookshelf search index to provide fast searching through an entire bookshelf. (You cannot create a search index for a collection.) The bookshelf search index file contains all the words in all the books on a bookshelf. The name of the index file is included in the bookshelf file.

BookManager BookServer can search a bookshelf without using a bookshelf search index, but the search is slower. Without a bookshelf search index, BookManager BookServer opens and searches each book separately, rather than searching a single index file. This method is satisfactory for occasional searching. However, if you expect your users to search a bookshelf often, you should consider building a bookshelf search index.

Bookshelf search indexes are shipped with collection kits for IBM products. To create your own search indexes, use the BookManager Index Utility, which you can download from our Web site at <http://booksrv2.raleigh.ibm.com/homepage/indxutil.htm>.

Additional Information:

- “Searching a Bookshelf” on page 12
- “Bookshelf Search Index” on page 13

Scenarios for Library Organization

Now that you understand more about the elements of library organization (collections, bookshelves, and bookcases), here are some possible scenarios for organizing your library. Here, we focus on collections and bookshelves. Of course, if you have bookshelves, you can also create bookcases.

One Collection, Multiple Bookshelves

One way to organize a library is to place all books into a single collection directory and then use bookshelves to group them. This is especially convenient if you have prebuilt bookshelves for an IBM product. Other advantages to this organization:

- By maintaining a single directory, you avoid the problem that sometimes occurs in large libraries managed by several people, of duplicate out-of-date books appearing in some of the directories. When a book with the same file name resides in two or more collection paths, BookManager BookServer displays the one located in the path first listed in the Enter directories for collections box on the Administration page.
- Bookshelves are easily portable to other BookManager platforms. Some BookManager platforms do not recognize collections as a method of library organization.
- You retain the other advantages of bookshelves—the ability to create bookshelf search indexes and to have the same books on more than one bookshelf.

Performance delays can result when a user displays a single large collection. If you organize your library this way, you can eliminate collections from the default user view by choosing the *Bookshelves only* option under *Settings* on the BookManager BookServerAdministration page. Then choose the Save Settings push button.

Multiple Collections, No Bookshelves

Another way to organize your library is to distribute books among several collection directories and not use bookshelves at all. You can easily modify a collection by adding or removing books from the directory path. However, you lose the advantages of bookshelves.

Multiple Collections and Bookshelves

You can use both methods in combination. For example, you could put the books for several products into a single large collection directory, and then create a bookshelf for each product. But for other collections, such as a small collection of books of personal interest, you might decide not to create bookshelves at all.

Creating a BookManager BookServer Library

Once you have decided how you want to organize your library, you can create the necessary directory paths, copy files to them, set the appropriate security authorizations, identify the directory paths to BookManager BookServer, and then create bookshelves and bookcases.

1. Create Directories

Create directory paths for your collections, bookshelves, and bookcases. You do this *outside* of BookManager BookServer.

Examples:

Path name	BookServer Access
/u/test/books	read, search
/u/test/shelves	read, search
/u/test/shelves	read, search
/u/test/cases	read, search

2. Copy Files to Directories

Copy your book files into the directory you created for collections. Be sure that each book file has the .boo extension. If you wish to include companion PDFs for book files on your Library, see “Special Considerations for Supporting PDF Documents in Your BookServer Library” on page 37.

If you have prebuilt bookshelves (*.bks) and bookshelf search indexes (*.bki) shipped with an IBM product, copy those files into your bookshelves directory. Copy prebuilt bookcases (*.bkc) into your bookcases directory. You can also copy bookshelf search indexes (*.bki), into the collections directory.

You can copy files in one of several ways:

- Load the file directly onto the BookManager BookServer DASD.
- Use your host emulator file transfer system.
- Use a file transfer program (FTP).

Upload bookshelves (*.bks) and bookcases (*.bkc) as ASCII files. Upload books (*.boo) PDFs (*.pdf) and bookshelf search index (*.bki) files as binary.

For information about copying books stored in MVS data sets, see “Using BookManager BookServer with MVS Data Sets” on page 38.

3. Set Security Authorizations

The security authorization for books, bookshelves, bookcases, and bookshelf search indexes must allow all BookManager BookServer clients to read the files or data sets. Otherwise, BookManager BookServer will generate security alerts when users try to reference files or datasets that they are not allowed to see.

In addition, bookshelves and bookcases must be set to write mode in order for you to modify them using BookManager BookServer.

Note: In order to use BookManager BookServer to modify bookshelves located in MVS data sets, you must first copy them to HFS files. See “Using BookManager BookServer with MVS Data Sets” on page 38.

Whenever you create bookshelves or bookcases within BookManager BookServer, the appropriate mode settings are automatically set. However, whenever you copy files to a directory, make sure that the mode settings are sufficient to satisfy the security authorization requirements. Use the following settings:

File	BookServer Access
book (*.boo)	read
bookshelf (*.bks)	read, write
bookshelf search index (*.bki)	read
bookcase (*.bkc)	read, write

4. Identify Directories to BookManager BookServer

Use the Administration page to identify the directories you created to BookManager BookServer, and to include in the library catalog the books that you copied to collection directories. To get to the Administration page, choose the Administration push button on the Library page.

Follow all of the steps listed under "Paths and Names" on page 46. Be sure to save settings and then rebuild the catalog.

5. Create Bookshelves and Bookcases

Now that you have all of your books copied to collection directories, you can create bookshelves and bookcases for them at any time. You create bookshelves and bookcases from the Administration page. Choose the Create Bookshelf or Create Bookcase push button. Once bookshelves and bookcases are created, you can update them in the future by choosing the Modify/Delete Bookshelf or Modify/Delete Bookcase push buttons.

For more information on how to create or modify bookshelves and bookcases, see "The Administration Page" on page 39.

Special Considerations for Supporting PDF Documents in Your BookServer Library

The BookServer administrator can indicate an equivalence between a BookManager Book version of a document and an Adobe Acrobat PDF version of a document. The administrator indicates this equivalence by doing two things. First, the administrator names the PDF file similar to the book file. In the case of documents distributed by IBM, this means preserving the similarity in the names shipped by IBM.

Secondly, the administrator places the PDF file near the book file. When the book is stored in an HFS file, this means that the PDF can be stored in the same directory as the book or in a peer directory named "pdf."

When the books are stored in an MVS dataset, this means that the PDF file can be stored in an MVS dataset or in the first directory in the BookServer "books path" directory list configuration value which is specified on the administration page.

For example, when a book is stored in `/u/os390/r10/books/docname.boo`, the PDF can be stored in either `/u/os390/r10/books/docname.pdf`, or in `/u/os390/r10/pdf/docname.pdf`. Alternatively, if the book is stored in an MVS dataset named `OS390.R10.DOCNAME.BOOK`, the PDF can be stored in either `OS390.R10.DOCNAME.PDF`, or in `/u/books/docname.pdf` where `/u/books` is the first directory in the "books path" configuration value.

Updating Your BookManager BookServer Library

You update your BookManager BookServer library in much the same way that you created it. You can add books to new or existing collection directories, add new bookshelf and bookcase directories, and create or modify bookshelves and bookcases as your library expands. Here are some important points to keep in mind:

- Whenever you create, rename, or delete directories for collections, bookshelves, or bookcases, you must update the BookManager BookServer Administration

page. Make your changes in the appropriate list boxes and then choose the Save Settings push button.

- Whenever you add, delete, or replace books in a collection directory, add or remove a collection, or change the order of collections listed in the **Enter directories for collections** list box, you need to rebuild the Catalog. Choose the Rebuild Catalog push button on the Administration page. (See “Building the Catalog” on page 49.) Rebuilding the catalog also clears all cached picture files and table of contents files which may become invalid due to collection changes.

Using BookManager BookServer with MVS Data Sets

Books, bookshelves and bookshelf search indexes created with the BookManager BUILD/MVS or READ/MVS products are stored in MVS data sets.

Keeping BookManager Objects in MVS Data Sets

If you have many BookManager data objects (books, bookshelves, and bookshelf search indexes) stored in MVS data sets, you may prefer not to copy them to HFS files. It is possible to use BookManager BookServer with MVS data sets, but you lose some administrative capability.

What you can still do

- Users can still use BookManager BookServer to access books and bookshelves stored in MVS data sets.
- You can also create bookcases and add bookshelves to them by manually editing the bookcase files.
- You can continue to use READ/MVS to manage books that users access through MVS data sets.
- You can catalog books contained in MVS data sets.

What you can't do

- You can't use BookManager BookServer to add or remove books from bookshelves that reside in MVS data sets.

Copying MVS data sets to HFS

When adding MVS data sets to your library, follow the same basic procedure described under “Creating a BookManager BookServer Library” on page 35: create your HFS directories (or use existing ones), copy the MVS data sets to HFS, verify security authorizations, and identify your directory paths to BookManager BookServer.

To copy MVS data sets to HFS files, use the OPUT or OCOPY commands. Be sure to specify the *binary* parameter when copying books and bookshelf search indexes.

Example: The following command copies a book from an MVS data set named EOX.EOX01MST.BOOK to an HFS file named *eox01mst.boe*:

```
oput 'EOX.EOX01MST.BOOK' '/usr/lpp/booksrv/books/eox01mst.boe' binary
```

For more information about the OPUT and OCOPY commands, type `tso help oput` or `tso help ocopy`, at an ISPF command line and press ENTER. To get help from a TSO/E READY prompt, type the same commands without the preceding `tso`.

Adding Bookshelf Data Sets to a Bookcase

You can create bookcases and then manually edit them to include bookshelves that are stored in MVS sequential datasets:

1. Create a directory path for the bookcase. You do this *outside* of BookManager BookServer.
2. Identify the bookcase directory path to BookManager BookServer on the Administration page. (See “Paths and Names” on page 46) To get to the Administration page, choose the Administration push button on the Library page.
3. Create the Bookcase from the BookManager BookServer Administration page. Remember the directory path in which the bookcase was created.
4. Manually edit the bookcase. For each bookshelf that you are adding to the bookcase, insert a line in the following format:

```
SHELF DataSetName  
Title
```

where *DataSetName* is the fully qualified data set name.

5. Save the file.

It is possible for the same bookcase to list both HFS files and sequential data sets. You can use BookManager BookServer to add or remove HFS bookshelves (Choose the Modify/Delete push button on the Administration page). You can also use BookManager BookServer to remove (but not add) bookshelves stored in data sets.

Example of Edited Bookcase File: In this example, the bookcase file lists both a data set name, and an HFS file name.

```
BKCASE=novels  
BKCTITLE=Project Gutenberg - Classic Novels  
BKCDATETIME=01/30/97 10:12:43  
SHELF IBMBOOKS.SK2T1237.EDCCC002.BKSHELF C/C++ for MVS/ESA V3R2.0 Bookshelf  
SHELF gutnbrg2 Classic Novels Shelf 1
```

The Administration Page

Description: The Administration page presents all of the administrative functions and settings needed to manage a BookManager BookServer library. To use administrative functions and update settings you must enter an administration password. The settings apply to all clients.

Using the BookManager BookServer Administration Page: Following is a list of administrative functions and settings presented on the Administration page. For more detail, link to the section you are interested in.

Bookshelf and Bookcase Management

The Administration Password entry field on this panel is only for the other functions on this panel. An Administration Password entry field will be provided on a subsequent panel for the Bookshelf and Bookcase Management functions.

Create Bookshelf

Lets you create a new bookshelf.

Modify/Delete Bookshelf

Lets you add books to or remove books from a bookshelf, or delete a bookshelf.

Create Bookcase

Lets you create a new bookcase.

Modify/Delete Bookcase

Lets you add or remove bookshelves or nested bookcases from a bookcase, or delete a bookcase.

Administration Password

The password required to perform administrative functions or update administrative settings below.

Push Buttons**Save Settings**

Saves changes you made in any of the boxes on the Administration page.

Rebuild Catalog

Updates the library catalog, and clears the picture and frames caches.

Clear Picture Cache

Removes cached picture files from the picture cache, and cached table of contents files from the frames cache.

Delete All Notes

Deletes all notes from every book in the library.

Reset

Displays settings as they appeared when the Administration page was last loaded.

Paths and Names**Enter Directories for Collections**

The directories in which BookManager BookServer looks for books and bookshelf search index files. Any book, whether accessed as part of a collection or a bookshelf, must be in one of the directories listed here.

Enter Descriptive Collection Names

Enter a descriptive name for each collection of books. Descriptive collection names are displayed on the Bookshelves page.

Enter directories for bookshelves

The directories in which BookManager BookServer looks for bookshelves to serve to the client.

Enter directories for bookcases

The directories in which BookManager BookServer looks for bookcases to serve to the client.

Settings**Bookshelf View**

You can set one of the following as the default view on the Bookshelves page. Users can temporarily override the default by choosing the View push button on the Bookshelves page.

Collections only

When selected, displays only collections as the default view on the Bookshelves page.

Bookshelves only

When selected, displays only bookshelves as the default view on the Bookshelves page.

Collections and Bookshelves

When selected, displays both collections and bookshelves as the default view on the Bookshelves page.

Options

Permit note creation

When checked, allows users to create notes in any book.

Log book access requests

When checked, requests for book access are logged.

Generate diagnostic output

When checked, diagnostic output is generated.

Present frames-based EUI for books as default

When checked, generates book pages in frames mode as the default, which can be overridden by client preference.

Produce running IBM footer

When checked, generates running IBM footer on most pages.

Password

New password

To change your administrator password, enter your new password.

Confirm password

Retype your new password to confirm the change.

Administration Password

Description: An administration password is required for using administrative functions and saving any changes that you make on the Administration page.

Note: BookManager BookServer is shipped with a default password 'BOOKMGR' (in uppercase).

How to use the Administration Password:

To change the administration password

First, enter your administration password in the Administration Password field. Next, enter a new password in the New Password and the Confirm new password fields. Choose the Save Settings push button.

To make other changes on the BookManager BookServer Administration page

Enter the administration password in the *Administration Password* field. Make your changes on the page, and then choose the Save Settings push button.

Note: Before you save settings, make sure that the New Password and Confirm new password fields are blank.

Creating a Bookshelf

Description: Use the Create a Bookshelf page to make a new bookshelf. The new bookshelf is initially empty when you create it.

To create a bookshelf:

1. On the Administration page, choose the **Create Bookshelf** push button. Then, on the Bookshelf and Bookcase Management page, enter the administration password.
2. In the Bookshelf Name field, enter a name for your bookshelf.
3. Select a path in which to create your bookshelf from the > Bookshelf Path list.
4. In the Bookshelf Title field, enter a descriptive title for your bookshelf.
5. If you are working with a bookshelf search index to speed searching, indicate the file name of the search index in the Bookshelf Index field.

The bookshelf search index file must be located in the bookshelf path that you specified. It must be an HFS file. The security authorization for this file must be set to read. This is done by setting the mode to 644. (See “Using BookManager BookServer with MVS Data Sets” on page 38.)

6. Press **Create**. The Modify Bookshelf page appears so you can add books to your new bookshelf.

Fields:

Bookshelf Name

Enter the name for the bookshelf you are about to create.

Bookshelf Path

Select the path in which your bookshelf will reside. The path selection list corresponds to the paths already entered on the BookManager BookServer Administration page.

Bookshelf Title

Enter a descriptive title for your bookshelf.

Bookshelf Index

Optional. Enter the file name of the bookshelf search index.

Push buttons:

Create

Creates your bookshelf and takes you to the Modify Bookshelf page where you can add books to it

Reset

Clears the entry fields

Modifying or Deleting a Bookshelf

Description:

Use the Modify or Delete a Bookshelf page to add or remove books from a bookshelf or to delete a bookshelf.

In order to modify a bookshelf, the security authorization for the bookshelf file must be set to write. In addition, all BookManager BookServer clients must be able to read any of the bookshelves found in the bookshelf path. These requirements are satisfied by setting the mode to 666. The appropriate mode is set automatically when you create a bookshelf through BookManager BookServer. You should verify the mode setting for any bookshelf files that were copied to a directory.

BookManager BookServer can only modify bookshelves located in HFS files. In order to use BookManager BookServer to modify a bookshelf stored in an MVS data set you must first copy it to an HFS file. As an alternative, you can use READ/MVS to maintain bookshelves located in MVS data sets. (See “Using BookManager BookServer with MVS Data Sets” on page 38.)

To modify or delete a bookshelf:

1. On the Administration page, choose the **Modify/Delete Bookshelf** push button. Then, on the Bookshelf and Bookcase Management page, enter the administration password.
2. On the Modify or Delete a Bookshelf page, select the bookshelf you want to delete or modify.
3. To delete the bookshelf, choose the **Delete** push button. The bookshelf is deleted, but the books contained in the bookshelf are not removed from your system.

4. To modify the bookshelf, choose the **Modify** push button.

Modifying a Bookshelf

Description:

You can add or remove books from your bookshelf. Removing books from a bookshelf does not erase them from your system. The books still exist in their directory paths.

The security authorization for book files must allow all BookManager BookServer clients to read all books found in a collection path. Also, allow read and search access to the books directory. You can only add books located in HFS files. In order to add books stored in MVS data sets, you must first copy them to HFS files. (See “Using BookManager BookServer with MVS Data Sets” on page 38.)

To remove books:

Select one or more books from the list box on the Modify Bookshelf page and press the **Remove** push button.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

To add books:

1. In the entry field, type the directory path or paths containing the books you want to add. Separate each directory path with a semicolon (;). (The eligible paths are specified in the **Enter directories for collections** box on the BookManager BookServer Administration page.)
2. Choose the **Add Books** push button. A list of books that you can add to your bookshelf appears. Select one or more books from this list and press the **Add** push button to add these books to your bookshelf.

Push Buttons:

Remove

Removes the selected book from the bookshelf but does not erase it from your system

Add Books

Takes you to a page containing a selectable list of books from the specified path or paths to add to your bookshelf

Adding Books to a Bookshelf

To add books to your bookshelf, select one or more books from the list and press the **Add** push button.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

Push Buttons:

Add

Adds to your bookshelf the books you select in the list.

Cancel

Returns you to the Modify Bookshelf page without adding any selected books to your bookshelf.

Deleting a Bookshelf—Confirmation

Deleting a bookshelf erases the shelf but not the books that were placed in the shelf. They still exist in their directory paths.

Choose **Yes** to confirm that you want to delete the bookshelf.

Choose **No** if you decide not to delete the bookshelf. You are returned to the Modify or Delete a Bookshelf page.

Creating a Bookcase

Description:

Use the Create a Bookcase page to make a new bookcase. The new bookcase is empty when you create it.

To create a bookcase:

1. On the Administration page, choose the **Create Bookcase** push button. Then, on the Bookshelf and Bookcase Management page, enter the administration password.
2. In the Bookcase Name field, enter a name for your bookcase.
3. Select a path in which to create your bookcase from the Bookcase Pathlist.
4. In the Bookcase Title field, enter a descriptive title for your bookcase.
5. Press **Create**. The Modify Bookcase page appears so you can add bookshelves and nested bookcases to your new bookcase.

Fields:

Bookcase Name

Enter a name for the bookcase you are about to create.

Bookcase Path

Select the path in which your bookcase will reside. The path selection list corresponds to the paths already entered on the BookManager BookServer Administration page.

Bookcase Title

Enter a descriptive title for your bookcase.

Push buttons:

Create

Creates your bookcase and takes you to the Modify Bookcase page where you can add bookshelves and nested bookcases

Reset

Clears the entry fields so you can enter new information

Modifying or Deleting a Bookcase

Description:

On the Modify or Delete a Bookcase page, you can modify a bookcase by adding or removing bookshelves and nested bookcases, or you can delete a bookcase.

In order to modify a bookcase, the security authorization for the bookcase file must be set to write. In addition, all BookManager BookServer clients must be able to read any of the bookcases found in the bookcase path. These requirements are satisfied by setting the mode to 666. The appropriate mode is set automatically when you create a

bookcase through BookManager BookServer. You should verify the mode setting for any bookcase files that were copied to a directory.

Only bookshelves located in an HFS file can be added to a bookcase through BookManager BookServer. To add a bookshelf stored in an MVS data set, you must manually edit the bookcase file. (See “Adding Bookshelf Data Sets to a Bookcase” on page 39.)

To modify or delete a bookcase:

1. On the Administration page, choose the Modify/Delete Bookcase push button. Then, on the Bookshelf and Bookcase Management page, enter the administration password.
2. On the Modify or Delete Bookcase page, select the bookcase you want to delete or modify.
3. To delete the bookcase, choose the **Delete** push button. The bookcase is deleted, but the bookshelves and nested bookcases contained within the bookcase are not removed from your system.
4. To modify the bookcase, choose the **Modify** push button.

Modifying a Bookcase

Description:

You can add bookshelves and nested bookcases to a bookcase, and you can remove them. Removing bookshelves and nested bookcases takes them out of the bookcase but does not erase them from your system.

To remove bookshelves and bookcases:

Select the bookshelves or bookcases you want to remove from the list box on the Modify Bookcase page and press the **Remove** push button.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

To add bookshelves and nested bookcases:

1. In the entry field, type the directory paths containing the bookshelves and bookcases you want to add. The eligible paths are specified in the list boxes titled Enter directories for bookshelves and Enter directories for bookcases on the BookManager BookServer Administration page.
2. To add bookshelves, choose the **Add Bookshelves** push button. A list of bookshelves that you can add appears.
3. To add bookcases, choose the **Add Bookcases** push button. A list of bookcases that you can add appears.

Adding Bookshelves to Your Bookcase

Select one or more bookshelves from the list and press the **Add** push button.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

You are returned to the Modify Bookcase page, which now lists the bookshelves you have selected to place in your bookcase.

Push buttons:

Add

Adds the selected bookshelves to your bookcase and returns you to the Modify Bookcase page

Cancel

Returns you to the Modify Bookcase page without adding bookshelves to your bookcase

Adding Nested Bookcases to Your Bookcase

Select one or more bookcases from the list and press the **Add** push button.

Note: Some browsers may preselect the first item in the list. If you do not want that item selected, click it to deselect it. Also, with some browsers, you need to press and hold the Ctrl key in order to select non-consecutive items.

You are returned to the Modify Bookcase page, which now lists the bookcases you have selected to nest in your bookcase.

Push buttons:**Add**

Adds the selected bookcases to your bookcase and returns you to the Modify Bookcase page

Cancel

Returns you to the Modify Bookcase page without adding bookcases to your bookcase

Deleting a Bookcase—Confirmation

When you choose to delete a bookcase, a confirmation message appears and asks you to confirm that you want to delete the bookcase. Deleting a bookcase erases the bookcase but not the items that were placed in the bookcase. They still exist in their directory paths.

Choose the **Yes** push button to confirm that you want to delete the bookcase.

Paths and Names

Description: To serve bookshelves and bookcases and books (from a book collection), BookManager BookServer searches directory paths that you specify.

Setting Directory Paths:

1. Enter your administration password in the Administration Password field.
2. In the **Enter directories for collections** box, type a directory path for each book collection, one path per line. Do not add trailing slashes. Type a name for each path in the **Enter descriptive collection names** box. You can number corresponding paths and names.
3. In the appropriate list box, type a directory path or paths for bookcases and bookshelves. Type one path per line. Do not add trailing slashes.
4. Choose the Save Settings push button.
5. Rebuild the catalog if you have added, deleted, or replaced books in a collection directory, added or removed a collection, or changed the order of the collection directories listed in the **Enter directories for collections** box.

Sample Directory Path Specifications: Below are sample directory path specifications:

/usr/lpp/booksrv/books/legal

/usr/lpp/booksrv/shelves
/usr/lpp/booksrv/cases

Note: Do not add trailing slashes. For best results, provide fully qualified paths as opposed to relative paths.

Note: *Do not add trailing backslashes to any of the directory paths that you specify on the Administration page.* You must provide fully qualified paths rather than relative paths.

Additional Information:

- “Creating a BookManager BookServer Library” on page 35
- “Updating Your BookManager BookServer Library” on page 37

Defining Catalog Collection Names

Description: Catalog collection names are names given to each directory path listed in the **Enter directories for collections** list box. The collection names you specify here are displayed in the Title column on the Bookshelves page.

Specifying Collection Names: Enter each descriptive collection name in the **Enter descriptive collection names** list box, one per line. Each line corresponds to the directory path listed on the same line of the **Enter directories for collections** list box. You can number the collection names to correspond to numbered collection paths.

Sample Collection Names: Below are sample collection names:

Host (NFS) Procedure Books
MVS Programming Library
OS/2 Reference Library
Legal Regulations

Additional Information:

- “Creating a BookManager BookServer Library” on page 35
- “Updating Your BookManager BookServer Library” on page 37

Numbering Collection Paths and Names

Description: The **Enter directories for collections** list box and the **Enter descriptive collection names** list box on the Administration page are independently scrollable. When you have long lists of collection paths and collection names, you can number them in order to keep track of which name goes with which path.

How to Number Paths and Names: Preceding each path or name, type a number followed by a period and then a space. Numbering in both boxes must be sequential.

Example:

Collection Path	Collection Name
1. /usr/lpp/booksrv/books/nfs	1. NFS Procedure Books
2. /usr/lpp/booksrv/books/mvs	2. MVS Programming Library
3. /usr/lpp/booksrv/books/os2	3. OS/2 Reference Library
4. /usr/lpp/booksrv/books/legal	4. Legal Regulations

Logging book access requests

Description: You can log requests made to read books. Each topic request is logged, as well as requests to search books.

How to use Logging: Select the **Log book access requests** check box to turn book logging on or off. When this check box is checked, logging is performed. Choose the **Save Settings** push button to activate the changes.

BookManager BookServer logs the requests in a log file named *bookmgr.log*, located in the */cgi-bin/* subdirectory.

Each log entry contains the date, time, book path and file name, followed by the topic, search, book description, or cross-book link request.

Diagnostics

Description: Diagnostic output can be generated to help debug any BookManager BookServer problems you may experience. A set of diagnostic information will be displayed for each page served.

How to use Diagnostics: Select the **Generate diagnostic output** check box to turn diagnostics on or off. Diagnostics will be generated when the check box is checked. Choose the **Save Settings** push button to activate the changes.

Frames-based EUI

Description: The end user interface for Book pages can be generated by BookServer using frames-based HTML. If so, Book pages are presented with each of the topic, toolbar, and table of contents in a separate frame on the same page.

How to generate frames-based EUI: Check the 'Present frames-based EUI for books as default' check box to enable or uncheck to disable this feature as the default made for all clients. Clients may override the administrative default, choosing a framed or unframed presentation, by selecting their preference on the toolbar. When frames are generated, table of contents files are cached in the *./frames* subdirectory.

Running IBM Footer

Description: You can disable generation of the running IBM footer, which contains a link to the BookServer Library Page and the IBM Corporate web site. When checked, this footer is generated for all BookServer generated pages, with the exception of the Print Preview results page.

How to disable the running IBM Footer: Uncheck the 'Produce running IBM footer' check box to disable this feature. Unlike other administrative settings, this setting is pre-checked.

Save Settings

Description: Save Settings saves any changes you made in the Paths and Names list boxes, the Settings check boxes, or the Password fields on the BookManager BookServer Administration page. Once saved, the changes become permanent.

How to Save Settings: On the Administration page, enter the Administration password in the Administration Password field and choose the **Save Settings** push button.

Building the Catalog

Description: The Catalog of All Books contains descriptive information about each book in the library. The books may reside on any drive or any machine available to BookManager BookServer. You should rebuild the catalog whenever you add, delete or replace books in a collection directory, add or remove a collection, or change the order of the collection directories listed in the '**Enter directories for book collections:**' box on the Administration page.

A book must be cataloged in order to locate it by using the Find field on the Library page and Catalog of All Books page. Cataloging also enables cross-book links to any other book in the catalog. Rebuilding the catalog also clears all cached pictures and table of contents files.

How to Build the Catalog: Choose the **Rebuild Catalog** push button on the Administration page.

Picture Cache

Description: The pictures stored in BookManager books are stored in a special subdirectory (called the "picture cache") to improve performance. The cached pictures are stored in Web format.

How to use the Picture Cache: When the catalog is rebuilt, all the cached pictures are erased from the picture cache.

To clear the picture cache at any other time (for example if replacement books have updated pictures and it is not otherwise necessary to rebuild the catalog), choose the **Clear Picture Cache** push button on the Administration page. Clearing the picture cache also clears all cached table of contents files generated when a frames-based EUI is generated.

The default directory for picture cache is `/usr/lpp/booksrv/public/bookmgr/pictures`.

Customizing the Site Header and Footer

Description: You can replace the IBM product name that appears in the title bar and heading of the Library page with your own text (such as the name of your organization), and you can add text below the heading. You can also create your own header or footer to appear on all BookManager BookServer product pages, or you can choose to display no custom header or footer at all.

To customize the Library page header:

Edit the *library.htm* file. This file is located in the `/usr/lpp/booksrv/cgi-bin` subdirectory.

Do not remove any `<TITLE>`, `</TITLE>`, `</HEAD>` or `<BODY>` tags. Be sure to use correct HTML coding; otherwise, the Library page may fail to display.

To create your own page headers or footers:

Edit the *bmheader.htm* and/or *bmfooter.htm* files. These files are located in the `/usr/lpp/booksrv/cgi-bin` subdirectory.

You can either replace the default text or you can add your own text below the default.

Do not include <HTML>, <HEAD>, </HEAD>, <BODY>, </BODY> or </HTML> tags in this file. The first four tags are already included in the HTML product pages to which the header and footer are added. The </BODY> and </HTML> tags will automatically be added following the header and footer.

To display no custom headers or footers:

If you do not want to display any custom headers at all, rename the *bmheader.htm* file to *noheader.htm*. If you do not want to display any custom footers at all, rename the *bmfooter.htm* file to *nofooter.htm*.

To disable the link to the IBM Corporate web site:

As mentioned in section 4.5.10, the IBM running footer contains a link to the IBM Corporate web site. This link can be overridden by renaming the *custROUT.htm* file located in the (such as `c:\inetpub\wwwroot\bookmgr`) `/usr/lpp/booksrv/public/bookmgr` subdirectory to *bmrouter.htm*. Doing so will cause the *bmrouter.htm* page to be served in place of taking the link to the IBM Corporate web site, when selected. The *bmrouter.htm* file can be customized as needed.

Linking to BookManager BookServer from a Web Document

Description: If you own and maintain a Web document (Web page), you can create links within the document that give readers direct access to your BookManager BookServer library. You can link to the Library page, to a list of bookshelves or bookcases, to a specific bookcase or bookshelf, to a section of a book, and so on.

Parts of a BookManager BookServer URL: You create each link to the BookManager BookServer by specifying the appropriate URL within HTML tags. Each URL has three basic parts: the protocol, the server name, and the CGI script information. Here is an example:

`http://server-addr/bookmgr-cgi/bookmgr.exe/library`

- The *protocol*, `http`, precedes the colon and double slash.
- Following the protocol, between the double slash and the first single slash, is the *server name*. You can specify either the fully qualified domain name of the server machine (for example, `w3.pok.ibm.com`) or the IP address.
- The remainder of the URL contains the CGI script information:
 - `bookmgr-cgi`—an *alias* for the directory (`cgi-bin`) that contains the BookManager BookServer CGI script.
 - `bookmgr.exe`—the name of the BookManager BookServer CGI script.
 - One or more parameters to be passed as variables to the BookManager BookServer CGI script (`bookmgr.exe`). In this example, the parameter *library* directs the program to transmit the Library page for display at the browser.

How to Create Links to the BookManager BookServer: Instead of using an absolute URL for every link, you can use the <BASE> tag at the beginning of your Web document to identify a "base address." In our examples, the base address contains the protocol and server machine, which are the same for all links. Then throughout the document you can create links that are relative to the base address. The relative links contain the CGI script information. If the server address ever changes, you need change only the BASE.

Place the <BASE> tag within the <HEAD> element of your document.

```
<HEAD>
<TITLE>My Web Document</TITLE>
<BASE HREF="http://server-addr/">
</HEAD>
```

Examples: Following are examples of relative links to the BookManager BookServer. Use these as a guide in creating your own links. You can use your browser to connect to a specific BookManager BookServer item (book, bookshelf, and so on) and display its URL. Use that specific URL information to create a link to that item.

Access a BookManager BookServer library

```
<A HREF="/bookmgr-cgi/bookmgr.exe/library">The BookServer Library</A>
```

This anchor tag directs the URL to the BookManager BookServer Library page.

Access a book

```
<a href="/bookmgr-cgi/bookmgr.exe/books/h10/CCONTENTS">Hercules</a>
<a href="/bookmgr-cgi/bookmgr.exe/books/h10">Hercules</a>
<a href="/bookmgr-cgi/bookmgr.exe/books/h10/2.0">Hercules</a>
```

The first anchor tag directs the URL to open a book called h10 and display the table of contents topic, designated by the special topic name /CCONTENTS. If left off, as shown in the second URL, the book opens to the table of contents by default, or to the first topic found if no table of contents exists.

The third anchor tag directs the URL to open the book h10 and display topic 2.0.

Search a book

```
<a href="/bookmgr-cgi/bookmgr.exe/search?book=h10">Search</a>
```

This anchor tag directs the URL to display the Search Book form for a book called h10.

List bookshelves

```
<a href="/bookmgr-cgi/bookmgr.exe/shelves">Browse Bookshelves </a>
```

This anchor tag directs the URL to list all bookshelves.

Open a bookshelf

```
<a href="/bookmgr-cgi/bookmgr.exe/shelves/media">World Events</a>
```

This anchor tag directs the URL to open a bookshelf called media.

List bookcases

```
<a href="/bookmgr-cgi/bookmgr.exe/cases">Browse Bookcases </a>
```

This anchor tag directs the URL to list all bookcases.

Open a bookcase

```
<a href="/bookmgr-cgi/bookmgr.exe/cases/almanac">The Almanac Bookcase</a>
```

This anchor tag directs the URL to open a bookcase called almanac.

Display the Administration page

```
<a href="/bookmgr-cgi/bookmgr.exe/administration">Administration</a>
```

This anchor tag directs the URL to display the BookManager BookServer Administration page.

Chapter 5. Help

Description: Help is accessible from any BookManager BookServer page and from several dialog forms (such as the *Search Book* and *Sort Bookshelf* forms).

Using Help: Choose the Help icon or push button on the page or form to get help. On a Book page, choose the Help icon on the toolbar. The Help button links to the relevant topic in the Getting Started Version 2 Release 2 book.

Once you are in the Getting Started Version 2 Release 2 book, you can navigate around by following the hypertext links or by reading one topic at a time.

Note that when requesting help from a framed Book page that the Help pages are launched in a new browser window. When requesting help from a non-framed Book page, the current browser window is used.

Chapter 6. BookRead API

This chapter contains Programming Interface information. BookRead is an API which supports the 'man' command for OS/390 UNIX System Services. Although provided with BookServer, BookRead is not used by BookServer. The following information explains how to use the BookRead API.

BookRead is an API that provides access to the textual information in BookManager books. Books are binary files built from word processor or Bookmaster source files. Given a book file name and topic name within the book, BookRead returns the text of the topic and of any sub-topics contained within the topic.

What tasks must be done to use the interface?

Who will perform these tasks?

1. An application programmer or developer must code and compile statements to invoke the BookRead entry point in the EPHBOOKR load module.
2. The MVS systems programmer must place the EPHBOOKR load module in the system search order. (The default installation will place EPHBOOKR in SYS1.LINKLIB which is in the system search order. The MVS system programmer must also customize SYS1.PARMLIB(EPHWPO0) to contain the prefix of the SEPHTAB suffixed dataset.

What information do they need in order to perform these tasks?

1. They need to know how to code an OS linkage subroutine call in the programming language of their choice. This file contains an example of how to code a call to BookRead in the C or C++ languages.
2. The parameters to and the return codes from BookRead. The parameters are descriptively named in the declaration file: EPHBOOKR which is also shipped as a sample with the BookRead PTF. This information is repeated and elaborated upon below.
3. The systems programmer needs to know what the standard system search I believe that it includes but is not limited to:

a: `steplib`
b: `joblib`
c: `lpa`
d: `linklib`

PARAMETERS to `bookread ()`:

```
long bookread(char * szBuffer,  
              long   lBufLen,  
              long * plBytesWritten,  
              long   lCodePage,  
              char * szBookName,  
              char * szTopicName ) ;
```

szBuffer

is a pointer to an array of characters where the topic contents will be written.

lBufLen

is a four byte length of `szBuffer`.

plBytesWritten

is a pointer to a long integer (4 bytes) where the number of bytes written in the buffer will be returned. This count will not include the null terminator written at the end of the topic.

lCodePage

Is a four-byte integer. The display page legal values:

```
1047 -- OE latin1
500  -- M/S latin1
933  -- Korean
935  -- Simplified Chinese
937  -- Traditional Chinese
939  -- Japanesez
```

szBookName

is a pointer to a null terminated string which is the fully qualified name of the book file. To indicate a dataset name, enclose the dataset name in single quotes.

szTopicName

is a pointer to the null terminated string with the topic id.

Return code	BASE value	most likely cause
Success	0	-- you did it right
Topic Not found	1	-- book didn't contain the requested topic Double check the topics in a book by calling bookread with the "contents" topic.
Buffer overrun	-1	-- the length of the output buffer is not great enough to hold the entire topic
SOPEN_ERRORS	100000	-- Tab file open failed -- Prefix in EPHWPO not set.
BOPEN_ERRORS	200000	-- Book file open failed
XINCPY_ERRORS	300000	-- Translation failed, tab file bad?
SETTPCID_ERRORS	400000	-- Topic id errors other than not found.
GETLN_ERRORS	500000	-- Reading book line failed. Bad Book.
XOUTCPY_ERRORS	600000	-- Translation failed, tab file bad?
BCLOSE_ERRORS	700000	-- Closing book failed. ABEND
SCLOSE_ERRORS	800000	-- Closing session failed. ABEND
LOCTOP_ERRORS	900000	-- Position to top of book failed, bad book
GETCTL_ERRORS	1000000	-- Interpreting book control words failed,
CONFIG_ERRORS	1100000	-- Config file open failed--- EPHWPO0 not in SYS1.PARMLIB.

```
*/
// START of SAMPLE BOOKREAD C/C++ calling code.
/* ***** */
/* This test harness will drive the bookread API. */
/* */
/* A test case file is read from stdin. */
/* The format of the testcase file is as follows: */
/* Line 1 word 1 is a codepage keyword: */
/*     ) Ja_JP -- japanese */
/*     ) Zh_CN -- simplified chinese */
/*     ) Zh_TW -- trad. chinese */
/*     ) Ko_KR -- korean */
/*     ) anything else -- latin1 */
/* Lines 2 - n) */
/*     word 1 is the book name */
/*     word 2 is the topic name */
```

```

/*                                                                    */
/* Output from the test harness is the textual contents of the      */
/* topics of the books listed in the test case file.                */
/*                                                                    */

/* example test case file

Ja_JP Japan
/u/booksrv/dev/cgi-bin/ephm2JPN.boo CONTENTS
/u/booksrv/dev/cgi-bin/ephm2JPN.boo 1.0
/u/booksrv/dev/cgi-bin/ephm2JPN.boo 3.0
/u/booksrv/dev/cgi-bin/ephm2JPN.boo 4.0
/u/booksrv/dev/cgi-bin/ephm2JPN.boo GLOSSARY
/u/booksrv/dev/cgi-bin/ephm2JPN.boo INDEX

*/
/* ***** */
#pragma csect (code, "TSTBKR@")
#pragma csect (static, "TSTBKR$")

#if defined DEBUG
    #define VDEBUG
    #pragma options (test(all))
    #pragma runopts (test(, checkc, ;, *) )
    #pragma runopts (execops)
    #include
#endif

#define OS MSTS0

#include
#include
#include
#include
// #include "ephodef.h"
#include "ephbookr.h"
#define MAX_CHAR 1024
#define MAX_CHAR_BUFFER MAX_CHAR * 16
#define MAX_PARAMS 25

int main(int argc, char * argv■■, char * envp■■) {

char          in_string■MAX_CHAR+1■ = "";
int           in_length ;

    int scanfrc = 0;

char * pTopicBuffer;
long  lBufLen = MAX_CHAR_BUFFER;
long  lBytesWritten ;
long  sCodePage ;
long * plBytesWritten = &lBytesWritten; ;
char  szBookName■MAX_CHAR+1■ = "" ;
char  szTopicName■MAX_CHAR+1■ = "" ;
char  szCountryName■MAX_CHAR+1■ = "" ;
long  lRC = 0 ;
char  cString■MAX_CHAR■;

```

```

char * token;
bookread_T * pfbookread;
FILE * ConfigFile ;

#ifdef VDEBUG
printf("argc=%i\n", argc);
#endif
printf("\nStart BOOKREAD() Test Harness \n");
pfbookread = (bookread_T * ) fetch("EPHBOOKR");
if ((long int) pfbookread == 0) {
    printf("fetch error\n");
    return(12);
}
if ( ( pTopicBuffer = (char *) calloc((int)lBufLen,1) ) == NULL )
{
    fprintf(stderr, "no memory for topic buffer");
    return((int)NULL);
}

/*  open and read sys1.parmlib(ephwp00)
----- */
ConfigFile = fopen("///SYS1.PARMLIB(EPHWP00)", "r") ;
fgets(cString, MAX_CHAR, ConfigFile) ;
fprintf(stdout, ">>>>>> Tab File Prefix :%s: \n", cString) ;

/*  test case file line one has country name
----- */
fgets(cString, MAX_CHAR, stdin) ;
token = strtok(cString, " ");
strcpy(szCountryName, token);
fprintf(stdout, ">>>>>> SetLocale to :%s: \n",
        szCountryName );
setlocale(LC_ALL, szCountryName);
setenv("LANG", szCountryName, 1);
/* get the language, set the codepage
----- */

if (!strcmp(szCountryName, "Ja_JP")) sCodePage = 939; /* japanese */
else if (!strcmp(szCountryName, "Zh_CN")) sCodePage = 935 ;/* simpl. chinese
*/
else if (!strcmp(szCountryName, "Zh_TW")) sCodePage = 937 ;/* tradi. chinese
*/
else if (!strcmp(szCountryName, "Ko_KR")) sCodePage = 933 ;/* korean
*/
else sCodePage = 1047 ;
/* latin1, production everyone else.
else sCodePage = 500 ; latin1, prototype everyone else.
----- */
printf("sCodePage = %d \n", sCodePage);

/*  test case file lines two-n have book and topic
----- */
while ( ( fgets(cString, MAX_CHAR, stdin) ) != NULL)
{
    /*  test case file lines two - n have book and topic
    ----- */
    token = strtok(cString, " ");
    strcpy(szBookName, token);
    token = strtok(NULL, " ");

```

```

strcpy(szTopicName, token);
szTopicName[strlen(szTopicName)-1] = 0 ;

fprintf(stdout, ">>>>>> Book: %s : Topic :%s : Buflen %i \n",
        fprintf(stdout, ">>>>>> Book: %s : Topic :%s : Buflen %i \n",
                szBookName, szTopicName, lBufLen );

memset(pTopicBuffer, lBufLen, 0) ;          /* zero out prev contents
        ----- */

lRC = pfbbookread(pTopicBuffer,
                lBufLen,
                plBytesWritten,
                sCodePage,
                szBookName,
                szTopicName ) ;

fprintf(stdout, "%s", pTopicBuffer);
fprintf(stdout, "\n>>>>>>> END Book: bytesWrit:%li: strlen:%li:\n",
        lBytesWritten, strlen(pTopicBuffer));
fprintf(stdout, "\n>>>>>>> END Book: %s : Topic :%s: lRC %li \n",
        szBookName, szTopicName, lRC);

}

```

```

printf("\nEND of Test Harness \n");

exit(0);

}

```

The following is a sample header for use with BookRead:

```

/*-----
--*/
/*                      IBM                      */
/*-----
--*/
/*                      */
/* Product Name:   BookServer                      */
/*                      */
/* Component Name: Bookread                       */
/*                      */
/* Module Name:    EPHBOOKR.H                    */
/*                      */
/* Date Written:   03/14/98                       */
/*                      */
/* Copyright:      IBM 1999                       */
/*                      */
/*                      Operating Environment: M/S */
/*                      */
/*                      */
/* MODULE DESCRIPTION:                            */
/* This header file provides a sample prototype header for
*/

```

```

/* using the Bookread API in a C or C++ program */
/* In addition, defines for the base values of bad return codes are
*/
/* listed. */
/*
/* DEPENDENCIES:
/* LE 1.5 or above
/*
/*
/* MODULE FUNCTIONS:
/*
/* Name Description
/* -----
--*/
/* Bookread external entry point */
/* -----
--*/
/*-----
--*/

/* Change History: */
/* Rel Programmer Date Description */
/* -----
--*/
/* 1.0 Jim O' Donnell 03/14/98 Original module */

/*****
***/
#define SOPEN_ERRORS 100000
#define BOPEN_ERRORS 200000
#define XINCPY_ERRORS 300000
#define SETTPCID_ERRORS 400000
#define GETLN_ERRORS 500000
#define XOUTCPY_ERRORS 600000
#define BCLOSE_ERRORS 700000
#define SCLOSE_ERRORS 800000
#define LOCTOP_ERRORS 900000
#define GETCTL_ERRORS 1000000
#define CONFIG_ERRORS 1100000
/* ----- */
#ifdef __cplusplus
#pragma linkage(bookread_T, OS) /* OS linkage since bookread is */
/* extern "OS" */
#else
extern "OS" {
#endif

typedef long bookread_T(char * szBuffer,
                        long lBufLen,
                        long * plBytesWritten,
                        long lCodePage,
                        char * szBookName,
                        char * szTopicName ) ;

long bookread(char * szBuffer,
              long lBufLen,
              long * plBytesWritten,
              long lCodePage,
              char * szBookName,

```

```
char * szTopicName ) ;  
  
#i fdef __cplusplus  
}  
#endi f
```

Appendix A. Support for Handheld Devices

You can use Palm OS and Windows CE handheld devices to view pages served by IBM BookManager BookServers (AIX, Windows and Linux) on the internet. The BookServers are capable of delivering pages that are optimized for downloading and viewing on a handheld device.

You will use a service (such as AvantGo and Palm.Net Wireless Communications Service) to download information from a BookServer Web site to the handheld device. Web clipping produces a condensed version of the Web page that is fast and efficient to download and use on a handheld device.

Downloading BookManager Book Pages to a Handheld Device

There are two methods of downloading BookServer pages to a handheld device. With both, you will initially connect your handheld, in its cradle synchronized to a PC, to the BookServer Web site. You will download the BookServer pages you wish to store in the memory of your handheld.

Unconnected

(After the handheld is removed from the cradle it has no connection to the internet.) The Book pages you selected from the Web site are downloaded and you can view and link between the these pages on your handheld.

Connected

(The handheld can have a wireless connection to the internet.) The Book pages you selected from the Web site are downloaded to your handheld. In addition to being able to view and link between the pages stored in your handheld, you can establish a wireless connection to the Web site with your handheld and link to and download other Book pages. With the **Connected** method, your Book pages have more functions than with the Unconnected method, such as being able to do searches and sorting.

The BookManager BookServer Library Web site can be configured, via an option on the Administrative Page¹, to display two buttons (icons) on the tool bar for various pages. This will allow you to select the type of pages that will be downloaded to the handheld device:

- Unconnected button
- Connected button

Unconnected

Click on the **Unconnected** button if you plan to use your handheld **without** an internet connection.

1. Place your handheld device in a docking station (or cradle)
2. Use your PC's browser to view the Web site that contains the BookManager books from which you want to download pages
3. Click on the **Unconnected** button to view the page optimized for handhand viewing
4. Download the optimized Book pages to your handheld using the Web clipping service of your choice.

Note: The method of downloading pages to the handheld will vary for different Web clipping services.

¹.On the BookServer Administration Page, go to **Options** and put a check in the box next to "Permit clipping for handhelds."

The pages from the book are now stored in the memory of your handheld device. You can use the handheld independently from the cradle to view and link between the book pages you downloaded.

Note: You will not be able to link to pages on the Web site that you did not download on the handheld. This can be done only when using the Connected button and a wireless handheld device, see below.

Connected

Click on the **Connected** button if you plan to use your handheld **with** a wireless internet connection.

1. Place your handheld device in a docking station (or cradle)
2. Use your PC's browser to view the Web site that contains the BookManager books from which you want to download pages
3. Click on the **Connected** button to view the page optimized for handheld viewing
4. Download the optimized Book pages to your handheld using the Web clipping service of your choice.

Note: The method of downloading pages to the handheld will vary for different Web clipping services.

The pages from the book are now stored in the memory of your handheld device. You can use the handheld independently from the cradle to view and link between the book pages you loaded. You will also be able to view, do searches, and link to pages you did not store in the memory of your handheld. You can connect your handheld wirelessly to the internet to download new pages from the Web site.

Glossary

This glossary defines all new terms and abbreviations used in this document. Definitions that were derived from the following sources are identified by the symbols indicated:

- The *American National Standard Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies can be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions are identified by the symbol (A) after the definition.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition; definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating that final agreement has not yet been reached among the participating National Bodies of SC1.

Special Characters

*. A multiple-character wildcard, the symbol used as a substitute for one or more letters in a word when defining a search request.

?. A single-character wildcard, the symbol used as a substitute for one letter in a word when defining a search request.

&. In Boolean searching, an operator you enter in a search request to connect two words or phrases with an AND relationship.

|. In Boolean searching, an operator you enter in a search request to connect two words or phrases with an OR relationship.

!. In Boolean searching, an operator you enter in a search request to connect two words or phrases with a BUT NOT relationship.

() . Grouping operators, which allow you to group together words or phrases in a Boolean search to change the order of precedence of the search.

'. In a Boolean search, the "AS IS" operator used to prevent special characters, such as "&," from being treated as search operators.

,. A phrase separator, used to separate one or more words or phrases from each other in a search request.

A

active. The window or icon that you are currently using or that is currently selected.

AFS. Andrew File System. A worldwide distributed file system.

American National Standard Code for Information Interchange (ASCII). The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including parity check), that is used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters. (A)

author. The person who wrote or prepared the information in a softcopy document.

B

book. In BookManager BookServer, a softcopy document, created by BookManager BUILD, that can be read and searched with a display device. A softcopy book often has the traditional structure of a printed book, including standard book elements such as a cover page, table of contents, chapters, and an index. BookManager book files have the *.boo* file extension.

bookcase. In BookManager, a logical grouping of bookshelves and other bookcases organized for convenience. The contents of a specific bookcase are displayed on the Bookcase page. Bookcase files have the *.bkc* file extension.

book search. A search done within a single book, on selected topics or on the entire book. Search matches are emphasized in the book text.

bookshelf. In BookManager, a logical grouping of softcopy books organized for convenience and for faster searching. The contents of a specific bookshelf are displayed on the Bookshelf page. Bookshelf files have the *.bks* file extension.

bookshelf search index. An index of all information in books on a bookshelf, created with the Index Utility that is supplied with BookManager BUILD/MVS, BookManager READ/MVS, or BookManager BUILD/2. Using a search index can make searching the books in a bookshelf significantly faster. The search index is usually created as a file that has the same name as the bookshelf, and the *.bki* file extension.

Boolean. A process where combinatorial relationships are established between elements and the result takes on one of two values. In a Boolean operation, each of the

elements may be assigned a value, such as 0 or 1, true or false.

Boolean search. A search method that uses Boolean processing to analyze search matches. Boolean operators are used in a search request to make a Boolean expression.

browser. A software product or tool used to read an electronic document on the World Wide Web.

C

case-sensitive. Pertaining to the ability to distinguish between uppercase and lowercase letters. When you do a "case-sensitive" search, the search results match the case of the search request.

catalog. The set of all electronic books available from a BookManager BookServer installation, usually consisting of multiple collections. Also referred to as the Catalog of All Books.

CD-ROM. Compact disc-read only memory. High-capacity, read-only memory in the form of an optically read compact disc.

CGI script. Common Gateway Interface script. A program that is run on a Web server in response to input from a browser.

chapter. In BookManager, a section or part of a soft-copy book whose topic ID begins with a major topic number, such as 1.0 or 4.0.

choose. To use a mouse or keyboard to pick an item that begins an action. You choose items on menus to perform tasks, and you choose icons to start applications.

client. A computer system that uses data or services from another computer, known as the server.

collection. A set of electronic books that reside at a single file system location, such as /usr/lpp/book-srv/books.

collection kit. A set of electronic books provided by IBM on a CD-ROM.

cross-book link. A link that takes you from one soft-copy book to another softcopy book.

D

data set. In MVS, a unit of information that can be stored and retrieved.

default. A value used by BookManager BookServer when you have not explicitly specified one.

document. A collection of information, intended to be perceived and understood by a human being.

document number. The form number of a manual that can be used to link between books, or order copies of the manual. The document number is displayed in the table of contents, in a collection, and in a bookshelf. See cross-book link.

E

electronic book. A document stored on a computer as a file, and accessed by readers using software that presents its content in a familiar, book-like manner.

ESA. Enterprise Systems Architecture

exact match. A word or phrase found by BookManager BookServer during a book search, that corresponds exactly to the word or phrase typed in the search request. Contrast with fuzzy match.

F

figure. A vector graphic, image, or other kind of illustration in the text of a document that is identified by a title or caption and a sequential number.

FIGURES. The topic ID of a topic in a softcopy book that contains the list of figures in the book.

filter. A string of text used to list books or bookshelves containing the string within their names and titles.

form. An electronic document into which you enter information to complete an action.

FTP. File Transfer Protocol. In TCP/IP, an application protocol used for transferring files to and from host computers.

fuzzy match. A word or phrase found during a single-book that is a variation the word typed in a search request. Fuzzy matches are different forms of the same root word.

G

GIF. Graphics Interchange Format. A widely supported format for image data on the World Wide Web.

graphic. Pertaining to pictorial material or the output of graphics software, in contrast to text. Graphics in a soft-copy book can be integrated into the text or displayed in a separate window.

grouping operators. In a search request, the symbols used to change the Boolean operators' default order of precedence. In BookManager BookServer, the grouping operators are the left and right parentheses.

H

heading. Words indicating the beginning of a new topic or section.

HFS. Hierarchical File System. Refers to the kind of file system used on personal computers in which files and directories are arranged in a hierarchical tree-like structure leading to the highest level directory, called the root directory.

HTML. Hypertext markup language. HTML is the standard format for the interchange of document text between World Wide Web clients and servers.

HTML document. A document represented using HTML, consisting of one or more pages.

HTML form. An HTML page containing input fields, radio buttons, and other controls where the user provides information to be returned to a Web server.

HTML page. (1) A unit of HTML content that is accessed in a single transaction over the World Wide Web. (2) The default HTML page provided by a Web server when no page is explicitly requested is called the server's home page.

hypertext. A method of accessing information in a non-linear fashion by linking to more information on a particular graphic or idea.

hypertext link. An automatic connection between an element in one part of a softcopy book to another element in the same book or to another softcopy book.

I

icons. Graphical representations of various elements such as disk drives, applications, and documents.

index. An alphabetical list of the subjects in a softcopy document and the topics in which each subject is found. Contrast with table of contents and search index.

inline image. A graphic image that appears on the same line as text in a document.

Internet. The global "network of networks" that connects large corporations, small businesses, universities, governments, private organizations and individuals.

Internet resource. A document or service accessible via the Internet.

L

LAN. Local area network. A computer network located on user premises within a limited geographical area.

library. A collection of electronic documents. A BookManager BookServer library is the set of all electronic books available from one BookManager BookServer installation.

link. (1) A connection between related pieces of information. (2) To go to a related piece of information by activating the connection. See hypertext link.

M

mainframe. A computer, usually in a computer center, with extensive capabilities and resources to which other computers can be connected so that they can share facilities.

match. A word or phrase that is identical or similar to the words or phrases in a search request.

modify. Add or remove objects. For example, you can modify a bookshelf by adding books to it or removing books from it.

morphological search. Searching in a manner that takes into account the different forms taken by words in the language of the text. For example, finding occurrences of "media", in response to a search request for "medium".

N

name. (1) The file name of a book, bookshelf, or bookcase. File names appear in the Name column on several BookManager BookServer product pages. (2) The name assigned by BookManager BookServer to a collection, such as 4-COLLECTION. Assigned collection names appear in the Name column on the Bookshelves page. (3) On the Administration page, a descriptive name or title for a collection. Descriptive collection names appear in the Title column on the Bookshelves page.

navigate. To locate and work with information in a book.

NFS. Network File System. A remote file system in which server computers make files available to client computers. NFS runs over the Internet Protocol.

O

object. Anything that you can focus attention on and manipulate as a single unit (for example, a book or a bookshelf).

online. Connected to, served by, or available through, a system or computer.

operator. (1) A symbol that represents an operation to be done. (2) In a search request, the lexical entity that indicates the action to be performed on a word or phrase.

order of precedence. The order of priority in which Boolean operators are processed in a search request. The default order of precedence is BUT, AND, and then OR. The order can be altered by putting parentheses around words or phrases in the search request.

P

page. A unit of content, usually textual, that is accessed in a single transaction over the World Wide Web. (May

be the equivalent of one or many pages of printed material.)

path. The storage location of a file. The path includes the drive, directory, and, if applicable, the line of subdirectories leading to the directory in which the file resides.

PDF. Portable Document Format. A standard specified by Adobe Systems, Incorporated, for the electronic distribution of documents. PDF files are compact; can be distributed globally via e-mail, the Web, intranets, or CD-ROM; and can be viewed with the Acrobat Reader, which is software from Adobe Systems that can be downloaded at no cost from the Adobe Systems home page.

phrase. In a search request, a collection of two or more words treated as a unit.

prebuilt. Refers to existing BookManager files, such as books and bookshelves found on an IBM CD-ROM collection kit.

R

rank. The relative significance of one topic within a set of topics that match a search query.

resources. Documents, data, or services.

revision character. A character in the margin, such as a bar (|), that indicates that the text line beside it has been changed by the author.

revisions. Changes an author has made to a book. Revisions may be marked with revision characters. Readers can move through a book looking at only those topics that have been changed or added to the book.

S

search. A powerful BookManager BookServer function that lets you locate specified words and phrases within multiple books on a bookshelf, a single book, or selected topics.

search options. In BookManager BookServer, the options you can set to specify which type of search form is to appear, what areas of the book to search, what type of search to do, and how to show results.

search results. In a single-book search, a list a topics that contain one or more search matches.

select. To mark an item so that a subsequent action can be carried out on that item.

server. A computer that makes resources available to other computers.

softcopy. Online information that can be electronically distributed, manipulated, and printed.

sort. To arrange a set of items to be used in a specified sequence, such as alphabetic or numeric.

T

table. Information presented in rows and columns and defined by the author as a table.

table of contents. A list of topics in the order in which they appear in a book.

TABLES. The topic ID of a topic in a softcopy document that contains the list of tables in the book.

topic. A heading and its subsequent text up to the next heading; the basic unit of information in a BookManager BookServer softcopy document.

topic heading. A heading that introduces a new topic in softcopy. Each topic heading is made up of two parts: a topic ID and a topic title.

topic title. The title that is associated with a topic heading. See also topic heading.

topics list. A list of all the topics in a softcopy document that have topic IDs.

U

URL. Universal resource locator. The standard World Wide Web means for specifying the location of a resource on the Internet.

V

vector graphic. Computer graphics in which display images are generated from display commands and coordinate data. (I) (A)

W

wildcard. The character used to substitute for unknown or unspecified characters or words in a search word or phrase. An asterisk (*) is an example of a wildcard character.

Web browser. A browser for reading World Wide Web documents. See browser.

World Wide Web. A worldwide network of linked documents on the Internet that point to other documents on related topics. Using Netscape Navigator or other Web browser software, a user can navigate quickly and easily around the global Internet, following the pointers to topics of interest.

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Listed below is the BookManager family of products and related information.

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IBM BookManager BookServer for World Wide Web for Windows: Getting Started SC34-3104 (available in softcopy only)

BookManager READ

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IBM BookManager READ/MVS: Installation Planning and Customization , SC38-2035

IBM BookManager BUILD/MVS: Preparing Online Books , SC38-2036

IBM BookManager BUILD/MVS: Installation Planning and Customization , SC38-2037

BookManager VM

IBM BookManager READ/VM and BookManager BUILD/VM: General Information , GC23-0447

IBM BookManager READ/VM: Getting Started and Command Summary , SC23-0448

IBM BookManager READ/VM: Displaying Online Books , SC23-0449

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5009

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2921 (CD-ROM only)

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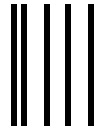


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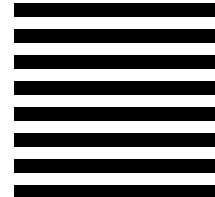
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