Hazardous Solvent Substitution Data System Tutorial

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ABSTRACT

This manual is the tutorial for the Hazardous Solvent Substitution Data System (HSSDS), an on-line, comprehensive system of information on alternatives to hazardous solvents and related subjects. The HSSDS data base contains product information, material safety data sheets, toxicity reports, usage reports, biodegradable data, product chemical element lists, and background information on solvents. HSSDS use TOPIC® to search for information based on a query defined by the user. TOPIC provides a full text retrieval of unstructured source documents.

In this tutorial, a series of lessons is provided that guides the user through basic steps common to most queries performed with HSSDS. Instructions are provided for both window-based and character-based applications.

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INTRODUCTION

In 1995, ozone-depleting hazardous solvents will be banned. For any of these hazardous solvents currently in use, suitable replacements must be found. There are volumes of literature from various sources that provide information on replacement chemicals. However, trying to sort through all the available literature to find the desired replacement is an overwhelming task. A computer system, called the Hazardous Solvent Substitution Data System (HSSDS), has been developed at the Idaho National Engineering Laboratory (INEL) to make this task simpler. HSSDS is an on-line, comprehensive system of information on alternatives to hazardous solvents and related subjects. Currently, the HSSDS data base contains product information, material safety data sheets (MSDSs), toxicity reports, usage reports, biodegradable data, product chemical element lists, and background information on solvents. In the future, more information will be added to the system.

HSSDS uses TOPIC[®] to allow a user to search for information based on a user-defined query. A query is simply a combination of words, phrases, and operators that allows the user to narrow the data base search to documents that may contain information related to the hazardous solvent. The query will result in a list of relevant documents that can be viewed. TOPIC provides a full text retrieval of unstructured source documents. With TOPIC, you can perform simple and complex queries. TOPIC also sorts the results of the query by probable relevance to the query. As you will discover by working through this tutorial, TOPIC is a flexible and powerful tool!

Product information and other source documents from researchers and manufacturers were scanned into the HSSDS data base. As a source document was loaded into the HSSDS data base, TOPIC indexed every word contained in that document. Because TOPIC indexes by words, any document in any format can be loaded into HSSDS. This makes the system extremely flexible!

This tutorial is designed to help a user operate HSSDS effectively in a short amount of time. The tutorial consists of a series of lessons. The lessons start out slow, providing the step-by-step instructions necessary to complete the most basic HSSDS functions. The later lessons provide instructions for more advanced features. To gain the most benefit from the tutorial, the authors suggest that the user start at Lesson 1 and work through the entire series.

Getting Started

The *Hazardous Solvent Substitution Data System Reference Manual (EGG-WM-10661)* provides detailed instructions for obtaining access to HSSDS. Refer to that document for instructions.

The Lessons

Sixteen lessons are presented in this tutorial. A description of each lesson is provided below.

a. Mention of specific products and/or manufacturers in this document implies neither endorsement or preference, nor disapproval by the U. S. Government, any of its agencies, or EG&G Idaho, Inc. of the use of a specific product for any purpose.

Lesson 1	Provides basic instructions for selecting an application; maximizing, minimizing, and restoring a window; resizing a window; flipping through windows; moving a window; and closing a window.
Lesson 2	Provides instructions for performing a simple query using a <u>stem</u> .
Lesson 3	Provides instructions for performing queries that combine words, <u>phrases</u> , and <u>operators</u> .
Lesson 4	Provides additional instructions about using words and phrases.
Lesson 5	Invokes the stems-assist menu to show how TOPIC defines word variations.
Lesson 6	Provides additional instructions about using phrases.
Lesson 7	Provides instructions for using synonyms to query the data base.
Lesson 8	Provides instructions to locate products that clean germs.
Lesson 9	Provides instructions for viewing the data contained in a document.
Lesson 10	Provides instructions for "navigating" through documents.
Lesson 11	Provides instructions for narrowing a search.
Lesson 12	Provides instructions for using the <Sentence> and <Paragraph> operators.
Lesson 13	Provides instructions for copying and pasting text from a documents into the query window.
Lesson 14	Provides instructions for changing the source TOPIC uses for its queries.
Lesson 15	Provides instructions for creating a topic.
Lesson 16	Provides instructions for grouping query statements.

Each lesson contains instructions for both window-based and character-based applications. The authors are assuming you are using Microsoft® Windows 3.1. If you are using a different windowing system, the step-by-step instructions you need to perform may differ. Since we cannot possibly show all variations of windows, you need to make the appropriate changes as you work through each lesson. As you work through the tutorial, a number of terms that may be unfamiliar to you will appear. These terms are underlined when introduced. A glossary containing definitions of these terms is provided at the end of this tutorial.

Verification Procedures

The tutorial connection was tested using PC X-VIEW (for Windows) and PC/TCP. PC/TCP provides the connection to HSSDS and X-View provides the user interface. If you are using different software, the instructions may have to be adjusted accordingly.

Helpful Hints

Throughout this document, a variety of terms are used that have specific meanings in TOPIC. Before you start the lessons, it would be beneficial to read Section 5.4 of the *Hazardous Solvent Substitution Data System Reference Manual (EGG-WM-10661)* for clarification of these terms.

Hot keys are available throughout HSSDS. Hot keys allow you to directly invoke a function without selecting it from a menu. The hot keys are shown on the pull-down menus adjacent to the menu options. If you use a function repeatedly, it would be advantageous to learn the hot key associated with the function. This can save lots of time! Hot keys vary from platform to platform; therefore, you must learn the hot keys for your system. Because of these variations they are not used in this tutorial; however, we encourage their use!

As you navigate through Topic and display different menus, you may notice that all menu selections may not be available at all times. Under Windows, available selections are highlighted or bolded. In the character-based system, it may be difficult to determine the available options. Once a menu is displayed, cursor through the options in the list. If the cursor skips over an option, that option is not available at the present time.

NOTE: The tutorial data base is a subset of the HSSDS data base. It should be used with the tutorial only! It should not be used to perform meaningful searches.

LESSON 1. GETTING AROUND IN WINDOWS

NOTE: If you are familiar with basic window operations, you may skip this lesson and proceed to Lesson 2.

In this lesson, you will learn basic window operations. These basics include selecting an application; maximizing, minimizing, and restoring a window; resizing a window; flipping through windows; moving a window; and closing a window. Instructions for these operations will be shown for Microsoft® Windows and character-based terminals.

Most users operate HSSDS in a windows environment. All windows have the same basic layout, regardless of the application being executed. Each window contains a title bar (i.e., a line with a title on it) with several symbols at each end, and a menu bar that displays the options available from the current window. Down the right-hand side and across the bottom are scroll bars that allows you to scroll up or down through the display.

Window applications are designed to be used with a mouse. The mouse makes it easier to move around the applications and also saves keystrokes. To make a selection using a mouse, position the mouse indicator (i.e., the mouse cursor) on the appropriate icon or menu option and double-click or single-click the left mouse button.

STEP 1: SELECTING HSSDS

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1. Select and execute HSSDS.

A. **For both window applications and character-based terminals, HSSDS will automatically be invoked when you login.**

2. The TOPIC Query Window will appear.
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In window applications, you may notice that the TOPIC Query Window uses only part of the screen. Since this is the window from which you will be doing most of your work, you will probably want to resize it. To make a window larger, perform Step 2.

STEP 2: MAXIMIZING A WINDOW

Maximizing enlarges the current window to its maximize size. The maximized window fills the entire viewing area. To maximize a window,

1. Enlarge (maximize) the TOPIC Query Window.
 - A. **In window applications**, position the cursor on the **▲**, located in the top right corner of the TOPIC Query Window (not the background TITLE screen) and click the left mouse button once.
 - B. **In character-based terminals**, you cannot maximize the window. Go to STEP 6: FLIPPING THROUGH WINDOWS.
 2. The TOPIC Query Window will fill the entire screen.
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STEP 3: MINIMIZING A WINDOW

When you minimize a window, it is reduced to an icon. You may want to minimize a window in order to make room for another window. To minimize the window,

1. Reduce (minimize) the TOPIC Query Window.
 - A. **In window applications**, position the cursor on the **▼** (located to the right of the title bar) and click the left mouse button.
 - B. **In character-based terminals**, you cannot minimize the window. Go to STEP 6: FLIPPING THROUGH WINDOWS.
2. The Program Manager screen will return and the TOPIC Query window will be reduced to an icon.
3. Select the TOPIC icon by:
 - Double-clicking on the TOPIC icon.

or

- Single-clicking on the TOPIC icon. A submenu will be displayed. Select the Maximize or Restore option. You will return to the screen as described in Step 2.
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STEP 4: RESTORING A WINDOW

The Restore button appears after you have maximized a window (see Step 2). The Restore button is the up/down arrowheads that appear at the right of the title bar. The Restore button will restore the window to its previous size. To restore a window to its original size,

1. Restore the TOPIC Query Window to its original size.
 - A. **In windows applications**, position the cursor on the up/down arrowheads shown in the upper right corner of the screen, and click the left mouse button once.
 - B. **In character-based terminals**, you cannot restore a window. Go to STEP 6: FLIPPING THROUGH WINDOWS.
 2. The screen will return to its previous size. This is the window size when first entering HSSDS.
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STEP 5: RESIZING A WINDOW

The maximizing and minimizing functions result in two extreme sizes for a window. You will probably want to size your window somewhere in between the two. When the mouse indicator (i.e., cursor) is located on a border of a window, the cursor changes from a single arrow to a double arrow (i.e., an arrowhead at both ends). To resize a window, perform the following.

1. Size the window to meet your specific needs.
 - A. **For windows applications**, position the cursor at any one of the four corners of

the TOPIC Query Window.

(You can tell when you are positioned at a corner, because the single arrowhead changes to a double arrowhead).

B. **For character-based terminals**, you cannot resize the window. Go to STEP 6: FLIPPING THROUGH WINDOWS.

2. When positioned at the desired corner, **press and hold down** the left mouse button. An outline of the window appears.
 3. Position the outline at the desired location and release the mouse button. The window will be resized accordingly.
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STEP 6: FLIPPING THROUGH WINDOWS

In character-based application, a flip command is available that allows you to move through the series of screens. You may scroll from the query window, to the results window, to the query/results screen. To flip through screens, perform the following:

1. Flip through the series of HSSDS screens.
 - A. **In window applications**, no flip command is available.
 - B. **In character-based applications**,
 - Press the <Ctrl> and <\> keys simultaneously to access the menu bar.
 - Press <W> to display the **Window** submenu
 - Press <F>.

The query window will fill the entire screen.

Repeat these steps again:

- Press the <Ctrl> and <\> keys simultaneously to access the menu bar.
- Press <W> to display the **Window** submenu

- Press <F> .

The results window will fill the entire screen.

Repeat these steps again. You will return to the original query/results screen.

STEP 7: MOVING A WINDOW

Sometimes you will need to move a window to a new location on the screen in order to view the contents of another window. To move a window, perform the following:

1. Move the window to a new location on the screen.
 - A. **In window applications**, position the cursor anywhere on the title bar and hold down the left mouse button.
 - B. **In character-based terminals**, you cannot move the window. Go to STEP 8: CLOSING A WINDOW.
 2. With the mouse button still held down, drag (move) the mouse until the desired location is reached.
 3. Release the mouse button. The entire window and its contents will be moved to the new location.
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STEP 8: CLOSING A WINDOW

When you have finished executing your application, you should close the window before exiting.

1. Close the TOPIC Query Window.
 - A. **In window applications**, position the cursor on **File** on the menu bar and click the

left mouse button. Press <C> or click on **Close** to close the window.

The window will close and you will return to the Program Manager window.

B. In character-based terminals

- Press <Ctrl> and <\> keys simultaneously
- Press <F> to display the **File** submenu
- Press <C> to close.

If you have not performed a query, the following prompt will appear:

Last window closed. Exit TOPIC?

At the prompt, press <Enter> to exit.

If you have performed a query, the following prompt will appear:

Save changes to query Untitled?

At the prompt, press <Tab> to discard and press <Enter>. The **Last window closed** prompt will appear. Press <Enter> to exit.

Before you exit this lesson, invoke HSSDS to return to the TOPIC Query Window. This concludes Lesson 1.

LESSON 2. USING A STEM TO QUERY HSSDS

In Lesson 2, you will perform a query using a stem (i.e., *law*).

A stem is similar to a root word. When you use a stem, TOPIC will search for the stem as well as a few variations of it. The variations are specified by TOPIC. For example, if you use *wash* in a query, TOPIC will search for *wash*, *washes*, *washed*, *washing*, and *washable*. We will look how TOPIC has defined stems in a subsequent lesson.

STEP 1: QUERYING USING THE STEM *law*.

To obtain a list of documents that contain the stem *law*,

1. Position the cursor in the Query Window (i.e., the upper pane).
 - A. **In window applications**, move the mouse cursor into the Query Window. Then, click the left mouse button once to display the flashing I-beam (i.e., cursor indicator) in the window. This activates the Query Window.
 - B. **In character-based terminals**, you will be positioned in the Query Window when you first enter HSSDS. In subsequent steps, you will use the <Tab> key to move between the Results List and the Query Window.
 2. Type in the stem *law*.
 - A. **In window applications**, type *law*, and press <Enter> (or you may click on the **Retrieve** button).
 - B. **In character-based applications**, type *law* and press <Enter>.
 3. In our sample data base, 7 out of 32 documents contain the stem *law* or a TOPIC-defined variation of *law*. These documents are listed in the lower pane. This lower pane is referred to as the Results List.
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In the results list, the score, product number, product name and company name are shown. In The documents are listed in descending order from highest to lowest score. This score is determined by TOPIC. This score reflects the likelihood that a particular document will actually contain information relevant to your query. It **does not** indicate anything about the quality of the product. This is an important point and must be understood. This is a query relevance score only!

As you can see, some of the company names do not fit on the screen. **In window applications**, you may use the scroll bars shown at the bottom of the results list to scroll to the left or right. **In character-based applications**, there is no left/right scrolling feature available.

NOTE: It is important to note here, **TOPIC** is not case sensitive. Therefore, documents containing *law*, *Law*, or *LAW* (or any defined variation) will be located.

STEP 2: DELETING THE CONTENTS OF THE QUERY WINDOW

After reviewing results, go into the query window and delete the stem law.

1. Delete the stem law.

A. **In window applications**, position the cursor (**I**) on the letter *l* in *law* and click the left mouse button to display the flashing I-beam.

Press the delete key until *law* is erased.

or

Position the cursor (**I**) on the letter *l* in *law* and click and hold down the left mouse button. Hold down the left mouse button and drag the cursor until *law* is highlighted. Then, release the mouse button and press the key once.

B. **In character-based applications**, press the <Tab> key once to return to the Query Window. Then, press and hold down the key until *law* is erased.

This concludes Lesson 2.

LESSON 3. COMBINING WORDS AND PHRASES

In this lesson, you will perform a series of queries using a combination of words, phrases, and operators.

In the previous lesson we performed a query using the term *law* as a stem. TOPIC searched for variations of this term. When you use a word in a query, TOPIC searches for documents that contain the exact letters (regardless of case) that make up that word. For example, if you query using the word *wash* only documents containing the words *wash*, *Wash*, *WASH* (or any case variation) will be searched. Documents containing the words *washes*, *washing*, *washed*, etc., will not be found. As you can see, you can severely limit your search by using a single word. **NOTE:** A word must appear in double quotation marks when typed into the Query Window.

Instead of basing a query on a single word, a more valuable query would probably include a combination of words, phrases, and operators. By using a combination of words, phrases, and operators you can broaden or narrow your search depending on your requirements. When first using HSSDS, it is a good practice to start with a very broad search. As you examine the results of the initial search (i.e., list of documents/products), you will understand what needs to be done to begin narrowing the search. The purpose of this lesson is to show you how to quickly change the results of a query by combining words and operators.

The operator you will be using in this query is the accrue operator, which is designated by a comma (,). An accrue operator works similar to an OR. That is, one or both terms joined by the OR must be found somewhere in the document in order for it to be included in the results list. However, using accrue rather than OR provides better results when the documents are sorted for relevance. The accrue (,) is the preferred operator in most situations.

STEP 1: PERFORMING A SIMPLE QUERY USING THE WORD *slime*.

To perform a query using the word *slime*,

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1. Type the word "*slime*" in the Query Window.

- A. **In window applications**, position the cursor in the Query Window. (Since the flashing I-BEAM is already positioned at the beginning of the Query Window, you do not have to click the left mouse button.

Type "*slime*" and press <Enter> or single-click on **Retrieve**. (Don't forget the quotes! A word must be enclosed in quotes.)

- B. **In character based applications**, you will be positioned in the Query Window when you enter HSSDS. Therefore, simply type "*slime*" and press <Enter>.

2. TOPIC finds three documents containing the word *slime* out of a possible 32.
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-

STEP 2: PERFORMING A QUERY USING WASH WITH AS A PHRASE

Before performing this next query, let's delete the previous query from the query window.

1. Delete the word *slime* from the Query Window.
- A. **In window applications**, position the cursor (I) on the first quotation mark in "*slime*". Press and hold down the left mouse button and drag the mouse until the entire word is highlighted. Press the key once.

or

Once "*slime*" is highlighted, you can skip to #2, and type the phrase *wash with*.

- B. **In character-based applications**, you must first press the <Tab> key once to return to the Query Window. Press and hold down the key until "*slime*" is erased.
2. Type the new phrase *wash with*. When you use a phrase, the exact combination of terms, in the order specified, will be searched.
- A. **In window applications**, position the cursor (I) in the Query Window and click the left mouse button to display the flashing I-beam. Type:

wash with and press <Enter>.

- B. **In character-based applications**, type *wash with* and press <Enter>.

3. TOPIC finds 3 documents containing the phrase *wash with* out of the 32 documents available in the data base. Notice the score. The values are very high. TOPIC has determined that there is a very high degree of probability that these documents will contain the phrase *wash with*.
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STEP 3 - COMBINE THE WORD *slime* AND THE PHRASE *wash with* INTO A NEW QUERY

Now you are ready to combine words and phrases into a new query. The Query Window contains the phrase *wash with* appears. You will add "*slime*" to this existing phrase. This query will provide you with a list of documents that contain either the phrase *wash with* or the word *slime*. It will not locate documents with the phrase *wash with slime*!

1. Add the word *slime* to the existing phrase, *wash with*. Remember, this query will locate all documents that contain the phrase *wash with* or the word *slime*. It will not locate documents that contain the phrase *wash with slime*. In this query you will use the accrue operator. This operator, denoted as a comma, works like an OR command. However, as you will see in the results, queries using the accrue operator are scored differently.
 - A. **In window applications**, position the cursor (I) at the end of *with*, and click the left mouse button. The flashing I-BEAM appears at the end of *with*.

Type the accrue operator (,) followed by "*slime*" (including the quotation marks) and press <Enter>.
 - B. **In character-based applications**, press <Tab> once to return to the Query Window. Use the arrow key (→) to position the cursor at the end of *with*. Then, type a comma followed by "*slime*" (i.e., including the quotation marks) and press <Enter>.
2. As a result of this query, TOPIC finds 6 documents that contain the phrase *wash with* or the word *slime*. Notice that there are more documents located as a result of this query. TOPIC located the three documents located in STEP 1, along with the 3 documents located as a result of STEP 2. However, notice how the scores have dropped drastically.

It is more important to compare the value assigned to the document in the results list rather than comparing the documents on a scale from 0 to 1.

This concludes Lesson 3.

LESSON 4. MORE ABOUT WORDS AND PHRASES

In this lesson, you will learn more about words by performing a query using the word *wash* and a query using *wash* as a stem. This will emphasize how the query is limited when using a word.

A simple term may be a single word, a stem, or a topic. Using the same term with minor modifications, it is possible to perform two or three different queries. For example, you can use the term as a word in a simple query, as a stem, or after defining it as a topic. These queries will produce different results. In this lesson, we will use the term *wash* in a simple word query and then as a stem. Stems will be discussed further in the next lesson.

STEP 1: DELETE EXISTING QUERY AND PERFORM QUERY USING WASH AS A STEM

If you have not exited HSSDS since the last lesson, *wash with, "slime"* appears in the Query Window. In this step, you will perform a query using the stem *wash*. Therefore, we must delete *with, "slime"* from the Query Window.

1. Delete *with, "slime"* from the query window.
 - A. In window applications, there are several ways to delete items. One of the easiest ways is to position the cursor (I) after the *h* in *wash*. Then, press down and hold the left mouse button and drag the cursor to the end of the word *slime*. The phrase *with, "slime"* will be highlighted. Press the key once.
 - B. In character-based applications, press the <Tab> key once to return to the Query Window. Use the arrow key (→) to move the cursor after the *h* in *wash*. Press and hold down the key until the phrase, *with, "slime"* is erased.
2. Execute the query.
 - A. In window applications, press <Enter>, or click on **Retrieve**.
 - B. In character-based applications, press <Enter>.

3. TOPIC will locate 22 documents out of the 32 available in the data base.
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STEP 2: PERFORM A QUERY USING THE WORD *WASH*

A word query is defined with quotation marks. This tells TOPIC to search for documents that contain the exact word specified in the quotes. Remember, TOPIC is not case sensitive. Therefore, *WASH*, *Wash*, and *wash* will yield the same results.

1. Change the query to a simple word search by adding quotes.

In window applications, position the cursor (I) in front of the *w* in *wash* and press the left mouse button to position the flashing I-beam. Type the first quote ("). Move the cursor to the end of the word, click the left mouse button, and type the ending quote.

Press <Enter> or click on **Retrieve** to execute the query.

In character-based applications, press <Tab> to return to the Query Window. Position the cursor in front of the word *wash* and type the beginning quote. (In character-based applications, the insert mode is the default.) Use the arrow key (→) to move to the end of the word and type a closing quote.

You should now have "*wash*" in the Query Window.

Press <Enter> to execute the query.

2. TOPIC locates 17 documents out of the 32 available in the HSSDS data base.
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Note the difference in the result totals for the two queries. You can see that by using a word search, the results are limited. Stems allow greater flexibility and can broaden the scope of the search. Stems are discussed further in the next lesson.

This concludes Lesson 4.

LESSON 5. STEMS ASSIST

In this lesson, you will view the stems assist for the term *wash*. This allows you to view variations as defined by TOPIC.

Stems are defined in TOPIC to include most (not all) variations of a term. This concept is similar to the "root" word concept. When you use a stem in a query, you are telling TOPIC to search for all variations of the simple term currently defined by TOPIC. This broadens the scope of the search and usually increases the number of products (i.e., documents) located.

STEP 1: INVOKE THE STEMS ASSIST OPTION

1. Select the Query-Assist-Stems option.
 - A. In windows application, single-click on the **Query** option on the menu bar at the top of the screen. Select the **Assists** option by clicking on it.
 - B. In character-based application, perform the following;
 - press <Ctrl> <\> (backslash) to move the cursor to the menu bar at the top of the screen
 - type <Q> to invoke the **Query** submenu
 - type <A> to invoke **Assists** option.

The Assist window with topics will appear.

2. Invoke the **Topics** option.
 - A. In window applications, single click on the **Topics** button.
 - B. In character-based applications, press <Tab> twice to position the cursor on the ◀Topics▶ button. Press <Enter>.

The Assists types will appear. This window lists all assist types currently defined.

3. Select **Stems** from the Assists Window.
 - A. In **window applications**, double click on **Stems**, or single click and click on OK.
 - B. In **character-based applications**, use the down arrow key to highlight **Stems** and press <Enter>.
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STEP 2. VIEWING THE STEM

In the Stems Window, all stems currently defined by TOPIC are displayed. This is an extremely large list! Therefore, HSSDS supplies two methods to locate a particular stem.

1. Locate the stem *wash*.
 - A. In **window applications**, two methods are available. The most effective method is to type the stem you are trying to find in the locate window. This is the window where the flashing I-BEAM is located when you first entered the stems assists window. Type *wash*. TOPIC will scroll through the stems list so *wash* is located at the bottom of the results list.
 - B. In **character-based applications**, type the term *wash* on the locate line. This is the horizontal bar where you are positioned when you first invoked the stems assists. As you type each letter, the stem that most closely matches your entry will be highlighted. This is a quick way to locate the desired stem. You may also scroll through the list of stems a line at a time.

Now that *wash* has been located, press <Tab> to go to the lower part of the window.
2. Note the variations.
 - A. In **both window applications and character-based applications**, since *Wash* was located and highlighted in the previous step, simply press <Enter>. The variations of the term *Wash* will appear.

There are 5 primary variations of the stem *wash*. These include *wash*, *washable*, *washed*, *washed*, *washes*, and *washing*. (NOTE: **washer and washers are not defined as variations of wash.**) When you use the stem *wash* in a query, TOPIC will search for all variations of the stem.

2. Exit the assists option.
 - A. **In the windows applications**, position the cursor on **File** in the menu bar of the Assist Window and click the left mouse button. Type <C> or click on **Close**.
 - B. **In the character-based applications**, press <Esc> .

This concludes Lesson 5.

LESSON 6. MORE ABOUT PHRASES

In this lesson, you will perform a series of queries consisting of a number of combinations of stems and words.

A phrase can be any combination of words and stems, but no operators. A phrase is a phrase. That is, TOPIC considers it a single unit. To be found in a document, the terms making up the phrase must appear together (i.e., no intervening words).

This lesson will show you how making simple changes to a query can greatly affect the results. For example, in this lesson we use a number of combinations of the phrase *wash machine*. TOPIC searches for all instances of variations of the stem *wash* immediately followed by variations of the stem *machine*.

STEP 1: DELETE EXISTING QUERY FROM THE QUERY WINDOW

By now you may have exited HSSDS to take a break. If you have not, an existing query remains in the Query Window. To avoid confusion, let's delete any existing queries in the Query Window.

1. Delete the contents of the query window.
 - A. **In windows applications**, position the cursor at the beginning of the Query Window. Press and hold down the left mouse button and drag the mouse until the entire query is highlighted. Release the mouse button and press the key once.
 - B. **In character-based applications**, press <Tab> to return to the Query Window. Press and hold down the key until the query is erased.
-
-

STEP 2: PERFORM A QUERY USING THE STEM WASH MACHINE

It this step, you will use the phrase *wash machine* in a query.

1. Execute the query.
 - A. **In windows applications**, the flashing I-beam should already appear at the beginning of the Query Window. If not, position the cursor in the Query Window and press the left mouse button. Type *wash machine* and press <Enter> or click on **Retrieve**.

- B. **In character-based applications**, type *wash machine* and press <Enter>. (You should already be positioned in the Query window.)

You should now have the phrase *wash machine* in the Query Window.

TOPIC finds four documents that contain the stem *wash machine* out of a possible 32.

STEP 3: PERFORM A QUERY USING A COMBINATION OF A STEM AND A WORD

In this step, you will change the query to reflect a combination of a stem and a word. This should result in fewer documents being located, since we are limiting the search to one stem and an exact word.

1. Change machine from a stem to a word.
 - A. **In window applications**, add quotes around the word *machine*. To do this, position the cursor in front of the *m* in *machine*, and type the beginning quotation mark. Next, move the cursor to the end of the word, click the left mouse button, and type the ending quote. Press <Enter> or click on **Retrieve**.
 - B. **In character-based applications**, press <Tab> once to return to the Query Window. To add the quotes:
 - position the cursor on the letter *m* of *machine*
 - type the beginning quote
 - move the cursor to the end of the word
 - type in the ending quote.

Press <Enter> to execute the query.

TOPIC locates three documents that contain the stem *wash* and variations (i.e., wash used as a stem) of the word "*machine*". Variations of the word "*machine*" include machines, machined, machinery, and machining. You may invoke the stems assists option as discussed in Lesson 5 to view all variations.

STEP 4: REVERSE THE STEM AND WORD DEFINITIONS IN THE PREVIOUS QUERY

In the previous step, you used *wash* as a stem and *machine* as a word. In this step, you will reverse it. That is, you will use *wash* as the word and *machine* as the stem.

1. Make *wash* a word and *machine* a stem.

- A. **In window applications**, place quotes around *wash* and delete the quotes around *machine*.

To add quotes:

- position the cursor in front of *wash* and click the left mouse button
- type the beginning quote
- move the cursor to the end of *wash* and click the left mouse button
- type the ending quote.

To delete quotes:

- move the cursor to the first quote around *machine*
- press the key once
- Move the cursor to the end of *machine* and press the left mouse button
- Press the key once
- Press <Enter> to execute the query.

- B. **In character-based applications**, press <Tab> to return to the beginning of the Query Window.

To add the quote:

- type in the beginning quote
- use the arrow key (→) to move to the end of *wash*
- type the ending quote

To delete the quotes from machine

- Use the arrow key to position the cursor on the first quote of *machine*
- Press the key once
- Position the cursor on the closing quote and press .

The query now reads: *"wash" machine*.

Press <Enter> to execute the query.

2. TOPIC locates only one document in the data base that contain the word *wash* and variations of the stem *machine*. It is important to note, a stem will find most variations, but not necessarily all variations. That is, it will find all variations currently defined by TOPIC.

STEP 5: PERFORM A SEARCH USING THE WORD *WASH MACHINE*

As mentioned earlier, when a word is used to query the data base the scope of the search can be severely limited. This will become clear when you perform the following step.

-
1. Change the query to the word *"wash machine"*.
 - A. **In window applications**, position the cursor on the ending quote of *wash*, click the left mouse button, and press the key once. Next, position the cursor after *machine* and press the left mouse button. Type the ending quote.
 - B. **In character-based applications**, press <Tab> to return to the beginning of the Query Window. Position the cursor on the closing quote of *wash* and press the key once. Position the cursor at the end of the word *machine* and type a closing quote.

The query now reads: *"wash machine"*.

Press <Enter> to execute the query.

TOPIC was unable to find any document containing the word *wash machine*.

NOTE: Remove any existing queries from the Query Window before continuing to the next lesson.

This concludes Lesson 6.

LESSON 7. USING SYNONYMS TO QUERY THE DATA BASE

In this lesson, you will search the data base for documents that identify a product as a replacement.

The documents contained in the data base were produced from multiple sources. Therefore, products are described differently in each document. Each manufacturer may use different terminology, but may be trying to convey the same thought. You must learn to take this into consideration when developing your queries. Since phrasing is different from document to document, you must think about synonyms when defining your queries. In this lesson, you will develop a query using synonyms for the term *replacement*.

STEP 1: USING SYNONYMS IN A QUERY

In this step, you will define a query that will locate documents that describe a product as a replacement. Now remember, since our documents come from a variety of sources, the term *replacement* may not be used in all documents. Therefore you must think of synonyms.

What are some synonyms?

Turn to the next page to see the synonyms we came up with!

We came up with the following words as possible synonyms for *replacement*:

substitute
replace
alternate
alternative.

You may come up with others. If you do, add them to the query. Your results may be different than ours, but that is not important. The purpose of this lesson is to show you the value of synonyms in developing queries.

Now that we have our list of synonyms, we can develop our query.

STEP 1: DEVELOP A QUERY USING SYNONYMS

In this step you will define the query using synonyms for *replacement*. When developing such queries it is a good idea to use stems. In this way, most variations will be located by TOPIC.

1. Develop a query using the synonyms listed above.
 - A. **In window applications**, type the following in the Query Window:
substitut, replac, replacement, alternat
and press <Enter> or click on **Retrieve**.
 - B. **In character-based applications**, type the following in the Query Window:
substitut, replac, replacement, alternat and press <Enter>.

TOPIC will locate 10 documents.

STEP 2: EXECUTE A QUERY USING THE STEM REPLACEMENT ONLY

Now, create a query with just the stem *replacement*. TOPIC will locate only three documents. As you can see, synonyms will widen your search greatly.

NOTE: Delete the existing query from the Query Window before continuing to the next lesson.

This concludes Lesson 7.

LESSON 8. LOCATE PRODUCTS TO CLEAN GERMS

In this lesson, you will develop a query to locate products than will clean germs. Again, we will be using synonyms to broaden the scope of the search.

STEP 1: DEVELOP A QUERY TO LOCATE PRODUCTS THAT CLEAN GERMS

As with the previous lesson, you must consider synonyms in developing this next query. Synonyms for *germs* include *virus*, *bacteria*, and *microbe*. We are assuming in this lesson that if the product addresses germs, its talking about eliminating them. You may come up with other synonyms. Develop your query accordingly.

1. Develop a query to locate products that clean germs.
 - A. In window applications, the flashing I-beam should already appear at the beginning of the Query Window. If not, position the cursor at the beginning of the Query Window and click the left mouse button. Type the following in the Query Window:

germ, virus, bacteria, microbe

and press <Enter> or click on **Retrieve**.
 - B. In character-based applications, type the following in the Query Window:

germ, virus, bacteria, microbe

and press <Enter> .

Based on the above query, TOPIC will locate 10 documents.

2. Try other synonyms such as *disinfect* or *germicide* and note the differing results.
 3. When complete, put the original query back (see Step 1) before moving to the next lesson.
-
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This concludes lesson 8. NOTE: Don't delete the query before moving to the next lesson. In the next lesson we will look at a document. This is a good time to take a break!

LESSON 9. LOOKING AT THE DATA

In this lesson, you will open a document contained in the results list. You will then scroll through the document looking at the available information.

In the previous lessons we have executed queries to obtain a list of documents that may contain the desired information. Now, we will open one of those documents and view the information. Each document in HSSDS contains a standard header consisting of the product name, company name, product number, and the date that the data in the HSSDS was updated. The header is followed by a section listing additional sources of information, including MSDSs, chemical lists, and usage data.

STEP 1: OPEN A DOCUMENT

As a result of the query in the last lesson, we have 10 documents in the results list. Let's take a look at the first one in the list (GERMA-CERT).

1. Open the document.
 - A. **In window applications**, position the cursor on the first document and double-click the left mouse button.
 - B. **In character-based applications**, press <TAB> to return to the result list (if not already positioned there). Press the down arrow key once to highlight the first document. Press <Enter>.

NOTE: Throughout this lesson, you may need to move and/or resize a window to view the document under windows. If you need assistance, refer to Lesson 1 for instructions.

2. Scroll through the document.
 - A. **In window applications**, you can use the <PgUp> and <PgDn> keys to scroll through the document a page at a time. Or, you can use the scroll arrows located on the side of the current window. As you scroll through you may notice that certain terms are highlighted (e.g., the term *bacteria* in the second paragraph). These are the terms (or variations of them) specified in the current query.
 - B. **In character-based applications**, you can use the <PgUp> and <PgDn> keys to scroll through the document a page at a time. As you scroll through you may notice that certain terms are highlighted. These are the terms (or variations of them) specified in the current query.

NOTE: Depending on your hardware and software configuration, your movement keys may be different than the ones described in this section.

3. Return to the top of the document.
 - A. In window applications, the easiest way to return to the top of this document is to press the <PgUp> key until you are returned to the top.
 - B. In character based applications, press the <Home> key once.
 4. At the top of the document, you will find the following header information:
 - product name
 - company name
 - product number (this is internal to the INEL Pollution Prevention Unit)
 - update date
 5. As you continue through the document, you will notice a product MSDS, a chemical list, and other available information. When an icon appears with these titles that means a link exists. A link is a reference to another document or object. In the next step, you will activate these links.
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STEP 2: ACCESSING A LINK

A link is a reference to another document. This can be a document or an image. For example, an MSDS link references an image, while a chemical list link references a document. Your computer must have graphic capabilities in order to view scanned images. Character-based applications **CANNOT** view images. In windows-based applications, an image icon is represented by a sun and mountains.

NOTE: When running windows on a slow system, a double-click on an image icon may not appear to be responding. To ensure it is working, look for a little bit of shading on the icon. It may take some time on slower machines, so be patient!

1. Activate the MSDS link.

In window applications, position the cursor on the first MSDS icon and double click. The MSDS image will appear.

NOTE: Each open image uses significant amounts of memory, therefore, it is best if you open only one image at a time.

Often when you bring up images you will have to rotate them so you can view them. To rotate a document, invoke the **Functions** submenu (in the **Image** window), and select rotate left or rotate right.

When the first page of the image is displayed initially, it will probably be too small to read. Resize or maximize the window as discussed in Lesson 1.

In character-based applications, you CANNOT display an image! However, you may display text (a document). In character-based applications, an image is denoted with [I] and a document is denoted by [D]. To view a linked document, simply position the highlight on [D] and press <Enter> .

2. Exit the current document or image and return to the previous document.

In window applications, invoke the File menu on the menu bar of the Image Window, and press <c> or single-click on Close to exit the image window.

In character-based applications, press <Esc> .

3. Repeat these steps to bring up the chemical list.
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As you can see, TOPIC makes it very easy to transfer back and forth between documents.

This concludes Lesson 9.

LESSON 10. NAVIGATING THROUGH DOCUMENTS

In this lesson, you will be introduced to the "navigational" features of TOPIC. These features allow you to move quickly to a previous or next document, previous or next highlight, or next or previous link.

In the last lesson, we looked at the product GERMA-CERT. We scrolled through the document and looked at the information available. In this lesson, you will learn how to transfer between documents and links easily by using the next and previous document commands, next and previous links, next and previous highlight. In addition, you will use the Find Text command.

STEP 1: OPEN GERMA-CERT AND INVOKE THE NAVIGATE SUBMENU

1. To open the GERMA-CERT document,
 - A. **In window applications**, highlight GERMA-CERT and double click.
 - B. **In character-based applications**, press the down arrow key once to highlight GERMA-CERT and press <Enter>.
2. To invoke the Navigate submenu,
 - A. **In window applications**, position the cursor on **Navigate** on the menu bar and click the left mouse button. The Navigate submenu will appear.
 - B. **In character-based applications**, press <Ctrl> <\> simultaneously to go to the menu bar. Press <N>. The Navigate submenu will appear.
3. Review the Navigate options. When done, remove the Navigate window from view.
 - A. **In window applications**, position the cursor anywhere but on the Navigate window and single-click the left mouse button.
 - B. **In character-based applications**, press <Esc>.

You may need to invoke the Navigate menu later to review the commands you will be using.

STEP 2: USING THE NEXT/PREVIOUS DOCUMENT COMMANDS

The Next and Previous document commands allow you to view the documents on the results list quickly. When you use a series of next or previous commands, TOPIC uses the same window to display the document's contents. Therefore, you do not have to perform an open and close to view each document.

1. Invoke the next document command. In window applications and character-based applications, the GERMA-CERT document is open.
 - A. **In window applications**, to view the next document,
 - Invoke the **Navigate** submenu on the menu bar (position the highlight on **Navigate** and single click).
 - Type <D> or single click on **Next Document**.
 - B. **In character-based applications**, to view the next document,
 - Press <Ctrl> <\> to access the menu bar, and type an N to display the **Navigate** submenu.
 - Type <D>.

The TERGOCIDE CONCENTRATE 315 document will be opened in the same window, essentially overwriting the previous document.

NOTE: Here is an instance where hot keys become very valuable (see **Helpful Hints** section). Instead of invoking the **Navigate** submenu and clicking on the **Next Document** option, you can use the hot key. In our setup, we simply press <F9> to display the next document. The hot keys for your system appear next to the options listed on the submenus.

You may now view the contents of the document.

2. Invoke the Previous command.

The Previous command operates in a similar fashion. The only difference is the previous command allows you to scroll back through the documents instead of forward. To invoke the previous document command, select the **Previous Document** option from the **Navigate** submenu.

Remember, it will be less cumbersome to use the hot key combinations in this instance. In our setup, the previous document is invoked using the <F8> key.

STEP 3: USING THE NEXT/PREVIOUS HIGHLIGHT COMMANDS

When you execute a query, TOPIC highlights each word, phrase, or stem specified in the Query Window. To help you review these occurrences quickly, TOPIC provides a next and previous highlight command. The Next Highlight command displays the next occurrence of the query in the document; the Previous Highlight command displays the previous occurrence.

NOTE: You may want to resize your window before continuing! Otherwise, you may not see each highlighted occurrence without pressing <PgDn> or scroll keys.

1. Invoke the Next Highlight command.

A. In window applications,

- Invoke the **Navigate** submenu on the menu bar.
- Type <H> or single click on **Next Highlight**.

OR

Use the hot key combination. In our window application, we press the <Shift/F9> keys simultaneously to display the next highlight.

The next occurrence of any word, phrase, or stem specified in the current query will be located and displayed. You can use this command to quickly view each occurrence to see if this product meets your needs.

B. In character-based applications,

- Invoke the **Navigate** submenu (<Ctrl> <\>, then press <N>).
- Type <H> to activate the **Next Highlight**.

Or

Use the hot key (for our setup, we press the <Shift> and <F9> keys simultaneously.)

The next occurrence of any word, phrase, or stem specified in the current query will be located and displayed. You can use this command to quickly review each occurrence in the document to see if this product meets your needs.

STEP 4: USING THE NEXT/PREVIOUS LINK COMMANDS

The next and previous link commands will position the cursor on the next link in the document. A link is a reference to another document or object.

1. Invoke the next link command.

- A. **In window applications,**

- Invoke the **Navigate** submenu on the menu bar.
- Type <L> or single click on **Next Link**.

OR

Use the hot key combination. In our window application, we press the <Ctrl/F9> keys simultaneously to display the next highlight.

You may repeat this process to step through the entire document. When the desired link is located, you may then double-click on it to retrieve the document or image.

- B. **In character-based applications,**

- Invoke the Navigate submenu (<Ctrl> <\>, then press <N>.
- Type <L> to activate the **Next Link**.

Or

Use the hot key (for our setup, we press the <Ctrl> and <F9> keys simultaneously.)

You may repeat this process to step through the entire document. When the desired link is located, you may then press <Enter> to retrieve the document. **Remember**, you can only retrieve documents (not images) in character-based applications. In character-based applications, a link to a document is represented by a [D], while a link to an image is represented by an [I].

2. Invoke the previous link command.

A. **In window applications,**

- Invoke the **Navigate** submenu on the menu bar.
- Type <k> or single click on **Previous Link**.

OR

Use the hot key combination. In our window application, we press the <Ctrl/F8> keys simultaneously to display the next highlight.

You may repeat this process to scroll back through all the links contained in the document. When the link is located, you may then double-click on it to retrieve the document or image.

B. **In character-based applications,**

- Invoke the Navigate submenu (<Ctrl> <\>, then press <N>.
- Type <k> to activate the **Previous Link**.

Or

Use the hot key (for our setup, we press the <Ctrl> and <F8> keys simultaneously.)

You may repeat this process to scroll back through all the links contained in the document. When the desired link is located, you may then double-click on it to retrieve the document (NOT IMAGES).

STEP 5: USING THE FIND TEXT COMMAND

Sometimes you need to locate a specific word or phrase in a document. The Find Text command allows you to locate a specific word or group of words in the document. To invoke the find text command, perform the following.

1. Invoke the Find Text command to locate *salmonella*.
 - A. **In window applications**, invoke the **Navigate** submenu. Then, click on **Find Text**. The Find Text window will appear. Type in

salmon

and press <Enter>.

(Note: You may have to resize your window to see the results of the search).

Salmonella is highlighted.

- B. **In character-based applications**,
 - Invoke the **Navigate** submenu (<Ctrl> <\>, then press <N>).
 - Type <F> to activate **Find Text**. The Find Text window will appear. Type in

salmon

and press <Enter>.

Salmonella is highlighted.

STEP 6: CLOSING THE DOCUMENT

This is a good time to take a break. When we exit windows, we should first close the windows that are opened. To close a window, perform the following.

1. Close the GERMA-CERT document.
 - A. **For window applications**, invoke the **File** Submenu and press <C> to close or single click on **Close** (see Lesson 1).
 - B. **For character-based applications**, press <Esc> (see Lesson 1).

Remove the existing query for the Query Window.

This concludes Lesson 10.

LESSON 11. REFINING A SEARCH

In this lesson, you will learn how to refine a search. First, you will perform a broad search that will result in over a hundred documents. Then, you will refine the search using operators to limit the results to a manageable number.

So far, you have learned how to query the data base to get a list of documents. However, we have not been concerned with the number of documents located. In the real world, however, this is an important factor. You would not be willing to search through hundreds of documents to locate a product. You may be willing to search through 15. In this lesson, you will see how operators can limit results to a manageable level.

STEP 1: LOCATE PRODUCTS TO CLEAN MAGNESIUM

1. Develop a query to locate products that clean magnesium.
 - A. In window applications, position the cursor at the beginning of the Query Window and type *magnesium*. Press <Enter> or click on **Retrieve**.
 - B. In character-based applications, type *magnesium* and press <Enter>. (You should already be positioned in the Query Window.)

Five documents match the query. However, you probably want the cleaning process to be safe. Let's change the query accordingly.

2. Define a query to locate products that clean magnesium safely.
 - A. In window applications, position the cursor at the end of *magnesium*, click the left mouse button to reposition the flashing I-beam, and type:

 , *safe* and press <Enter>.
 - B. In character-based applications, press the <Tab> key once to return to the Query Window. Use the arrow keys to position the cursor after *magnesium* and type:

 , *safe* and press <Enter>.

TOPIC locates 18 documents that match our query. In our sample data base, only 18 documents were found. However, in the complete data base over a 100 documents would be located. Now, no one wants to search through 100 documents. Therefore, TOPIC provides several operators to allow you to optimize the query. These operators are discussed in the next step.

STEP 2: USING OPERATORS

Operators allow you to optimize your search. Currently, TOPIC supplies the following operators:

- AND - Both words, phrases, or stems must be present in the document.
- OR - One of the words, phrases, or stems must be present in the document.
- , - This is the accrue operator that we have used exclusively up to this point. It essentially works like an OR, but the scoring is more consistent and it is therefore the preferred operator.
- NOT - The converse of what follows will be included in the results.
- ? - A wildcard that represents exactly one character.
- * - A wildcard that represents zero or more characters.
- () - Grouping that specifies the order in which operations should be performed. The grouping operator is demonstrated in Lesson 16.
- < sentence > - This is a proximity operator that tells TOPIC to locate products where both words, phrases, or stems must appear in the same sentence.
- < paragraph > - This is a proximity operator that tells TOPIC to locate products where both words, phrases, or stems must appear in the same paragraph.
- < thesaurus > - Uses additional words in your query. The additional words are defined by TOPIC.
- < case > - Uses the upper- and lower-case letters exactly as specified in the query. As a default TOPIC is not case sensitive; this operator forces TOPIC to be case-sensitive.

In the steps that follow, you will use some of these operators in queries. Pay close attention to the difference in the results.

1. Define a query to locate products that clean magnesium and are safe. (Currently, the Query Window should contain - *magnesium, safe*).
 - A. In window applications, place the cursor on the accrue operator (comma) located between *magnesium* and *safe*, click the left mouse button and press the key once. Now, press the <spacebar> once, type in *and*, and press <Enter>. TOPIC recognized AND as a keyword and supplies the < > for you.
 - B. In character-based applications, press <Tab> once to return to the Query Window. Use the arrow keys to position the cursor on the comma between *magnesium* and *safe* and press the key once. Now, press the <spacebar> once and type in *and* and a trailing space, and press <Enter>.

TOPIC recognized AND as an operator and supplies the < > for you. **NOTE:** TOPIC does not provide the < > characters for some operators like <THESAURUS> and <PARAGRAPH>. The operators must be entered with the < > characters, followed by a space.

TOPIC locates three products that contain both the stems *magnesium* and *safe*.

NOTE: Calla 855 is at the top, with a score of 0.89.

STEP 3. USING THE NOT OPERATOR

The <NOT> operator allows you to look for a document where a certain term does not exist. For example, in this step you will use the phrase <NOT> *safe*. This does not mean the product is not safe, rather it searches for documents that do not contain *safe*.

1. Define a query to locate products that clean magnesium, but do not mention the word *safe*. The query will read *magnesium* <AND> <NOT> *safe*.

- A. **In window applications**, position the cursor on the accrue command and press the key once. Now, press the <spacebar> once, type <and> <not> and press <Enter>. Again, TOPIC recognizes and/not as operators and supplies the <> for you (<> indicates an operator).
- B. **In character-based applications**, press the <Tab> key once to return to the Query Window. Delete the accrue command (comma). Now, type <AND> <NOT> and press <Enter>.

TOPIC locates 2 documents. Let's open the first document (AERONAUTICS CLEANER).

2. Open the first document.

- A. **In window applications**, position the cursor on AERONAUTICS CLEANER and double-click.
- B. **In character-based applications**, press the down arrow key once to highlight AERONAUTICS CLEANER and press <Enter>.

Based on our query, *magnesium* <AND> <NOT> *safe*, we should have received a list of documents that clean magnesium but do not include the word safe. Let's look at the WARNING message that begins the fourth paragraph. Here it tells us that we should not leave magnesium parts in the cleaner for more than 2 hours. Well, this infers that the cleaner is safe - at least for the first two hours. So this product is safe, but restrictions apply. You must take these kinds of things into consideration when you are developing your queries.

NOTE: Before starting Step 4, return to the Query Window and delete the existing query.

STEP 4: USING WILDCARDS IN QUERIES

A wildcard is a character that represents one or more other characters. Wildcards allow TOPIC to deal with variations in spelling and syntax. Wildcards should be used as much as possible when querying the data base.

1. Develop a query to locate the products that use the word *flu*.
 - A. **In window applications**, position the cursor in the Query Window and type *flu* and press <Enter>.
 - B. **In character-based applications**, position the cursor in the Query Window and type *flu* and press <Enter>.

TOPIC will locate five documents.

2. Change the query and use the wildcard *?*, which represents **exactly one character**.
 - A. **In window applications**, position the cursor in the space at the end of the stem *flu*, type a *?*, and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return to the Query Window. Position the cursor at the end of *flu*, type the wildcard *?* and press <Enter>.

TOPIC locates three documents. In this query, TOPIC locates products that contain words like *flux*.

3. Change the query and use the wildcard *(*)*, which represents **zero or more characters**.
 - A. **In window applications**, position the cursor on the wildcard *?* and click the left mouse button. Press the key once and type *** (asterisk) and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return to the Query Window. Delete the *?* and replace with an *** and press <Enter>.

TOPIC locates 24 documents. Take the time to view a few of the documents in the results list. As you will see, TOPIC located products that containing words like *flu*, *flux*, *flush*, *fluid*, *fluorescent*, *fluorine*, *fluorocarbon*, *fluorinate*, and *fluctuate*.

NOTE: Before continuing to the next step, delete the existing query from the Query Window.

STEP 5. USING THE THESAURUS

TOPIC's Thesaurus capability provides a look-up table containing additional words. The purpose of this step is to show you the power of the <Thesaurus> option. You might get more than you bargained for! To invoke the thesaurus in a query, perform the following.

1. Develop a query to look for products containing the stem *virus*.
 - A. **In window applications**, position the cursor at the beginning of the Query window and click the left mouse button to position the flashing I-beam. Then, type *virus* and press <Enter>.
 - B. **In character-based applications**, type *virus* and press <Enter>. (You should already be positioned at the beginning of the Query Window.)

TOPIC locates five products (i.e., documents) that contain *virus* or a variant. Now, let's perform the same query using the <thesaurus> option.

2. Add the <Thesaurus> option to the above query.
 - A. **In window applications**, position the cursor in front of the *v* in *virus* and click the left mouse button. Then, type <thesaurus> and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return to the beginning of the Query Window. Type in <thesaurus> and press <Enter>.

This time, TOPIC locates six documents that contain *virus* or any of its synonyms. Let's perform another simple query using the <Thesaurus> option.

3. Develop a query to locate products that clean.
 - A. **In window applications**, delete the existing query. Then, type *clean* and press <Enter>.
 - B. **In character-based applications**, press <Tab> once to return to the Query Window. Delete the existing query. Then, type *clean* and press <Enter>.

TOPIC locates 29 products that clean.

4. Add the <Thesaurus> option to the above query.
 - A. **In window applications**, position the cursor in front of the *c* in *clean* and click the left mouse button. Type in <*thesaurus*> and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return to the beginning of the Query Window. Type in <*thesaurus*> and press <Enter>.

TOPIC locates 31 documents.

Now, let's go into the thesaurus and see how TOPIC has defined the additional words it uses in the queries.

STEP 6: OPEN THE THESAURUS ASSIST MENU

To understand the differences in the results in the above queries, it is helpful to look at the thesaurus to see how TOPIC has defined words and synonyms.

1. Invoke the Query-Assists-Thesaurus menu.
 - A. **In window applications**, position the cursor on the **Query** option on the menu bar and click the left mouse button. Then,
 - Select **Assists** (single-click)
 - Select **TOPICS** (single-click)
 - Select **Thesaurus** (double click)

- B. **In character-based applications**, press the <Ctrl> and <\> keys simultaneously to activate the menu bar at the top of the screen. Then,

- Type <Q> (to open the **Query** menu)
- Type <A> (to open the **Assists** menu)
- Press the <Tab> key twice and press <Enter> (to select **Topics**)
- Select **Thesaurus**

The Thesaurus Window will appear.

2. Locate the word *virus*.

- A. **In window applications**, at the flashing I-beam, type *virus*. In the lower pane, the word *virus* will be highlighted. Press <Enter> to display synonyms for *virus*.
- B. **In character-based applications**, type *virus* and press <Enter>. Press the <Tab> key once to advance to the lower pane. Press <Enter> again to display synonyms for *virus*.

Use the arrow keys to scroll down the list of synonyms. These words include *germ*, *microbe*, *poison*, *venom*, and *toxin*. This means that when you used the <thesaurus> option with *virus*, TOPIC located documents that also contained these five additional words. By doing this, TOPIC found two additional products that met the query requirements.

3. Now, locate synonyms for *clean*.

- A. **In window applications**, position the cursor in front of the *v* in *virus* and click the left mouse button. Type *clean* and press the key until *virus* is erased. The additional terms for *clean* will appear. Use the scroll bars and arrow keys to page through the list of words.
- B. **In character-based applications**, press <Tab> twice to return to the locate window. Press <Backspace> until *virus* is deleted. Type *clean* and press <Enter>. Press <Tab> to go to the lower pane.

There are several dozen additional words. For a word like *clean* you would probably not want to invoke the Thesaurus option. You would probably do better using it as a stem only!

NOTE: Before continuing with the next lesson, return to the Query Window and delete the existing query.

This concludes Lesson 11.

LESSON 12. USING <SENTENCE> AND <PARAGRAPH> COMMANDS

In this lesson, you will use the proximity operators <Sentence> and <Paragraph> to perform several queries.

TOPIC provides two proximity parameters: SENTENCE and PARAGRAPH. These operators tell TOPIC to locate documents where both words or phrases are contained in the same sentence or paragraph. Remember, TOPIC uses a phrase as a single unit. That is, the terms making up the phrase must appear in a document exactly the way specified and in that order. With proximity commands by contrast, you can use a phrase, but that phrase can contain many intervening words. The order of the words contained in the phrase is not relevant. The only limiting factor is the proximity. That is, the phrase must appear in the same sentence or same paragraph.

STEP 1: USE THE PROXIMITY COMMANDS TO LOCATE DOCUMENTS THAT CLEAN MAGNESIUM SAFELY

Perform two separate queries using proximity commands. In the first query use the <Sentence> operator and use the <Paragraph> operator in the second query.

-
1. Define a query to locate products that clean magnesium safely.
 - A. **In window applications**, position the cursor in the Query Window and click the left mouse button to position the flashing I-BEAM. Type:

magnesium <AND> safe and press <Enter>.
 - B. **In character-based applications**, position the cursor in the Query Window and type:

magnesium <AND> safe and press <Enter>.

TOPIC locates three documents. Now, use the <SENTENCE> proximity in the same query.

2. Use the <Sentence> operator to locate products that clean magnesium safely.
 - A. **In window applications**, position the cursor on <AND> (on the first <) and press the key until AND is erased. Next, type <Sentence> and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return to the Query Window. Then, position the cursor on the <AND> (on the first <) and press the

 key until <AND> is erased. Next, type <Sentence> and press <Enter>.

TOPIC locates one document where the words *magnesium* and *safe* appear in the same sentence. We can be fairly confident that this product cleans magnesium safely since the words appear in the same sentence. Notice the score! It has a score of 1.00.

3. Use the <Paragraph> operator to locate products that clean magnesium safely.
 - A. **In window applications**, position the cursor on <SENTENCE> (on the first <) and press the key once. Next, type <PARAGRAPH> and press <Enter>.
 - B. **In character-based applications**, press <Tab> to return the Query Window. Next, position the cursor on <Sentence> (on the first <) and press and hold the key until <Sentence> is erased. Next, type <Paragraph> and press <Enter>.

In this case, TOPIC locates the same document. However, in other queries it would be quite possible that the two words could be contained in the same paragraph, but not in the same sentence.

NOTE: Before proceeding to the next step, delete the current query.

STEP 2. LOCATE SOLVENTS THAT REMOVE HARD WATER DEPOSITS

In this next query, it will be more advantageous to use the <Sentence> operator rather than <Paragraph>. By using the <Sentence> operator you can be more confident that any product listed in the results list will indeed remove hard water deposits (if we use the right words in our query statement).

-
-
1. Use the <Sentence> operator to locate products that remove hard water deposits.
 - A. **In window applications**, the flashing I-beam should be positioned at the beginning of the Query Window. Type

remove < sentence > hard water

and press <Enter> .

B. In character-based applications, type:

remove < sentence > hard water

and press <Enter> .

TOPIC locates two products: BURCO TIME and ORCHEM REBOUND 107. In the next step, we will look at these two documents.

STEP 3: VIEWING DOCUMENTS

In this step, we will view the two documents to see if they really do remove hard water deposits.

1. Select and view the BURCO TIME document.

A. In window applications, position the cursor on BURCO time and double-click to open the document.

B. In character-based applications, press the down arrow key once to highlight BURCO TIME and press <Enter> .

Page down through the document until you see the first highlighted occurrence of the query. As you can see, this product does not remove hard water deposits, but removes heavy greases. Let's view the second document. Exit out of this document and return to the Query Results.

NOTE: In window applications, invoke the **File** submenu and press <C> or click on **Close** to close the document. In character-based applications, press <Esc> .

2. Select and view ORCHEM REBOUND 107.

A. In window applications, position the cursor on ORCHEM REBOUND 107 and double-click to open the document.

- B. **In character-based applications**, press the down arrow key again to highlight ORCHEM REBOUND 107 and press <Enter> .

Page down through the document until you see the first highlighted occurrence of the query. As you can see, this product does remove hard water deposits! Close the document and return to the Query Window.

Let's think for a moment about the query we developed. How could we have restated the query so that the BURCO TIME product would not be included in our results?

ANSWER: The query should have been defined as:

hard water <Sentence> deposits

As you can see, the key to using HSSDS successfully is to develop meaningful queries.

Now, is there a synonym for hard water? Try using *scale* instead of *hard water*. That is, perform a query using *scale <sentence> deposits*. How will this effect the results? We get three documents in the results list. View the first document and note the use of water scale deposits.

NOTE: Before continuing to the next step, delete existing query from the Query Window.

STEP 4: LOCATE PRODUCTS THAT CLEAN BLOOD FROM FABRICS

In this step, you will design a query to locate products that clean blood from fabrics.

1. Develop a query to locate products that clean blood from fabrics.
 - A. **In window applications**, position the cursor at the beginning of the Query Window and click the left mouse button (if not already there). Type the following:

blood <sentence> fabric

and press <Enter> .

B. In character-based applications, type:

blood <sentence> fabric

and press <Enter> .

TOPIC locates two documents. Take time now and view the documents to see how well our query did in finding products that will remove blood from fabric.

When complete, return to the Query Window and delete the existing query.

LESSON 13. SHORTCUT TO TYPING

In this lesson, you will learn how to avoid lots of typing by cutting and pasting text into the Query Window to input the query.

Chemical names are often hard to spell. TOPIC provides a method whereby you can cut and paste a word from a document or an Assists menu into the Query Window.

STEP 1: OPEN THE DOCUMENT TITLED ULTRASONIC CLEANER

1. Currently, we have no existing query. Therefore, type *freon* in the Query Window and press <Enter>. This will bring up the document we will be working with in this step.

Next, erase *freon* from the Query Window, so we have a blank area in which to paste in a later step.

2. Select and view the document entitled "ULTRASONIC CLEANER."
 - A. In window applications, position the cursor on ULTRASONIC CLEANER and double click to open the document.
 - B. In character-based applications, press the down arrow key once to highlight ULTRASONIC CLEANER and press <Enter> to open it.
3. Highlight the word *TRICHLOROETHANE* located on the third line of discussion.
 - A. In window applications, scroll down to the third line of the discussion. Position the highlight on the *T* in *TRICHLOROETHANE*, and press and hold down the left mouse button and drag the mouse until the entire word is highlighted.
 - B. In character-based applications, use the arrow keys to position the highlight on the *T* in *TRICHLOROETHANE*, and press the <spacebar> once to highlight the entire word.
4. Copy and paste the highlighted word into the Query Window.
 - A. In window applications, perform the following:
 - Invoke the **Edit** submenu (located on the menu bar)
 - Select **Copy** (single-click)
 - Invoke the **File** submenu and press <C> or click on **Close** to exit and return

to the query menu

- Position the cursor at the beginning of the Query window and click the left mouse button
- Invoke the **Edit** submenu again
- Select paste

B. In character-based applications, perform the following:

Copy:

- Press the <Ctrl> <\> keys simultaneously to go to the menu bar.
- Press <E> (to invoke the **Edit Submenu**)
- Select **Copy**

Paste:

- - Press <Esc> to return to the Query Window
- Press <Tab> to return to the Query Window (search pane)
- Press the <Ctrl> <\> keys simultaneously to go to the menu bar.
- Press <E> (to invoke the **Edit Submenu**)
- Select **Paste**

TRICHOROETHANE will appear in the Query Window. Now, you can simply press <Enter> to locate all documents that contain this word.

This can be a great tool if you must search for a chemical name or if spelling is not your strong suit!

NOTE: Before continuing with the next lesson, delete the contents of the Query Window.

This concludes Lesson 13.

LESSON 14. HSSDS SOURCES

In this lesson, you will learn how to change the source **TOPIC** uses for its queries.

HSSDS groups source documents into logical categories. These categories include:

Product information	-	Contains information about the product
Chemical List	-	Contains the chemical makeups of products, including EPA toxicity reports
Miscellaneous	-	Contains background information, including journal articles
Usage	-	Contains data resulting from actual usage of the product ("lessons learned" type information)
Toxicology	-	Contains toxicology studies on products

In HSSDS, product information is the default source. In this lesson, you will change this default from product information to the chemical list.

STEP 1: CHANGE THE DEFAULT SOURCE TO CHEMICAL LIST

In this step, you will change the default source from product data to the chemical list.

I. Invoke the **Query** Submenu, select the **Choose Sources** option, and change default.

A. In window applications, perform the following:

- Position the cursor on **Query** in the menu bar and single click
- Select **Choose Sources** (single click)
- Highlight **chemlist.qry**
- Click on **Set** (at the bottom of the window)

B. In character-based applications, perform the following:

- Press the <Ctrl> <\> keys simultaneously to invoke the menu bar.
- Press <Q> (to display **Query** submenu)
- Press <U> (to invoke **Sources** menu)
- Press the <spacebar> once to un-highlight **prodinfo.qry**
- Use the arrow keys to move to **chemlist.qry** and press the <spacebar> once
- Press the <Tab> key to position of **Set** and press <Enter>.

IMPORTANT: Don't forget to set the default back to prodinfo.qry before exiting!!!

STEP 2: PERFORM A QUERY BASED ON MISCELLANEOUS SOURCE

In certain circumstances, the only way to access particular information is to change the source. In the following example, we will change the source to miscellaneous to obtain general information on solvents, solvent substitution, etc. The only way to get this type of information is to change the source.

The concept of the sources is an attempt to categorize types of searches. By specifying the source (i.e., type of search), a user limits their search to the desired material. For example, to search the HSSDS data base for information strictly on chemicals, a user would select chemlist.qry as the source. The misc.qry makes use of all information that doesn't neatly fit into other categories. For example, many of the periodicals that have been entered into the HSSDS contain information that is irrelevant to most queries. Thus, it is classified as miscellaneous.

NOTE: The prodinfo.qry is by far the most useful choice for source, since it contains all product information. However, a user may select a different source or even multiple sources to obtain all possible information.

1. Change source to miscellaneous.

A. In window applications, perform the following:

- Position the cursor on **Query** in the menu bar and single click
- Select **Choose Sources** (single click)
- Highlight misc.qry
- Click on **Set** (at the bottom of the window)

In character-based applications, perform the following:

- Press the <Ctrl> <\> keys simultaneously to invoke the menu bar.
- Press <Q> (to display **Query** submenu)
- Press <U> (to invoke **Sources** menu)
- Press the <spacebar> once to un-highlight prodinfo.qry
- Use the arrow keys to move to misc.qry and press the <spacebar> once
- Press the <Tab> key to position on **Set** and press <Enter>.

2. Perform the following query: *cfc <sentence> recycle*.

A. In both window and character-based applications, type the following in the Query Window:

cfc <sentence> recycle and press <Enter>.

Two documents are retrieved.

- B. Open and view the first document (**CFC Recycling & Substitution**).
- C. When finished viewing, close the document.

IMPORTANT: Don't forget to set the default back to prodinfo.qry before exiting!!!

LESSON 15. CREATING A TOPIC

In this lesson, you will create a topic. A topic is a complex query that includes branches to other words or topics.

In the previous lessons, you have performed simple queries. A well-designed topic is more powerful than a simple query. A topic is composed of words and phrases that describe a complete concept. A topic is a query that is judged to be of use to many HSSDS users, and is saved under a single title. This query is then made available to all users.

A topic also allows you to save searches that you will use often. You may modify the topic by adding a child to a branch, or adding a sibling, or by changing the words that make up the topic. When you go back to perform a search using a query that is defined as a topic, TOPIC will use all the words defined in the topic for the search process. This allows you to perform a very complex query by entering a simple word.

A topic tree can consists of the following:

- Node - An individual entry on the topic tree.
- Root - The first node on the topic tree.
- Child - A node that branches off from a node closer to the root.
- Parent - A node that has at least one child.
- Siblings - Two nodes that have the same parent.
- Leaf - A node that has a parent but no children.
- Topic Handle - The solid, black diamond that appears to the left of the topic name.
- Open/close - The half-diamond that appears to the right of the node operator.

In this lesson, you will create a user topic.

STEP 1. CREATE A USER TOPIC

When you invoke HSSDS, you are automatically in simple query mode. The simple query may be converted to a topic tree (window-based applications) or a topic outline (in character-based applications). The steps to convert a simple query to a topic are shown below.

1. Define a simple query (methanol, methyl alcohol). (Do not execute the query yet!)
 - A. **In window applications**, position the cursor in the Query Window and click the left mouse button to position the flashing I-BEAM. Type:

methanol, methyl alcohol
 - B. **In character-based applications**, position the cursor in the Query Window and type:

methanol, methyl alcohol
2. Change the simple query to a topic.
 - A. **In window applications**, perform the following:
 - Invoke the **Query** option on the menu bar
 - Select **Query Type**
 - Select **Topic Query**
 - B. **In character-based applications**, perform the following:
 - Press the <Ctrl> <\> keys simultaneously
 - Press <Q> (to invoke the **Query** submenu)
 - Press <T> (to change query to a topic query)

The Query Window changes from a simple query to a topic tree. The topic tree has two branches (one for methanol and one for methyl alcohol).

3. Name the topic "methanol."
 - A. **In window applications**, click on the small rectangle in front of <Accrue>. The rectangle changes to a small box. Type in *methanol* and press <Enter>.
 - B. **In character-based applications**, press the <Tab> key to highlight the <Accrue> line. Type *methanol* and press <Enter>.

4. Expand a branch.
 - A. **In window applications**, position the cursor on the triangle that points to the left at the end of the lower branch, and double-click.
 - B. **In character-based applications**, perform the following:
 - Use the down arrow key to highlight the methyl alcohol line.
 - Press <Ctrl> <\> to invoke the menu bar
 - Press <V> (to invoke the **View** submenu)
 - Press <E> (to expand topic)

Notice how the branch expands. TOPIC divided the words methyl and alcohol into two separate branches.

5. Execute the Topic Query. Three documents are located.
 - A. **In window applications**, click on retrieve or press <Enter>.
 - B. **In character-based applications**, perform the following:
 - Press <Ctrl> <\> (to invoke the menu bar)
 - Press <Q> (to invoke the **Query** menu)
 - Press <R> (to execute the query)
6. Execute the simple query instead of a Topic.
 - A. **In window applications**,
 - Select the **Query** Menu
 - Select **Query Type**
 - Select **Simple Query**
 - Press <Enter> or click on **Retrieve**.
 - B. **In character-based applications**, perform the following:
 - Press <Ctrl> <\> (to return to the menu bar)
 - Type <Q> (to invoke the **Query** menu)
 - Type <S> to return to the simple query.

In both cases, three documents are retrieved. Changing the query to Simple doesn't change the search, it just alters the way it is viewed. Also, the name methanol now is defined as a topic and represents the complex query entered earlier.

NOTE: Delete the contents of the Query Window before continuing to the next step.

STEP 2. PERFORM A TOPIC QUERY USING FLUX

Now, let's perform a topic query using the topic *flux*.

1. Perform a search using the topic *flux*.
 - A. **In window applications**, type *flux* in as a simple query. DO NOT press <Enter> yet. Before we execute the query, we must change the simple query to a topic by performing the following:
 - Invoke the **Query** menu (on the menu bar)
 - Select **Query Type**
 - Select **Topic Query**
 - B. **In character-based applications**, type *flux* in as a simple query. DO NOT press <Enter> yet. Before we execute the query, we must change the simple query to a topic by performing the following:
 - Press <Ctrl> <\> to activate the menu bar
 - Press <Q> to display the **Query** menu
 - Press <T> to change to a Topic Query
 - Execute the Query

Notice the topic has two branches: *flux* and *rosin*. *Flux* was defined by a user as a topic, with two branches. Every time the topic *flux* is used in a query, both terms (i.e., *flux* and *rosin*) will be used in the search process.

Now, execute the search as detailed in Step 1, #5.

2. View the first document.
 - A. **In window applications**, position the cursor on the first document and double-click.

Page through the document. Note all occurrences of *flux* and *rosin* are highlighted.
 - B. **In character-based applications**,
 - Press <Ctrl> <\> to activate the menu bar
 - Press <W> to display **Window** menu
 - Press <P> to move to the lower pane
 - Highlight the document and press <Enter> .

3. Close the document window.
-
-

STEP 3: ACTIVATE THE QUERY-ASSIST MENU

Now, let's see how these topics are defined. To see a list of the topics currently defined, invoke the Query, Assists menu.

1. Open the Assists Window to view topics.

- A. **In window applications**, open the **Query** menu and select **Assists**.

A list of topics is presented.

Go down to the topic *flux* and double click. You can see that the words *flux* and *rosin* are defined. These were the branches generated in the previous step.

Go down to *methanol* and double-click. Again, two phrases are defined: *methanol* and *methyl alcohol*. These were the branches generated in the previous step.

Now, go down to *soils* and double-click. Over a dozen words are defined. These words make up the concept of the topic *soils*.

- B. **In character-based applications**, perform the following:

- Press <Ctrl> <\> to activate the menu bar
- Press <Q> (to invoke the **Query** menu)
- Press <A> (to invoke **Assists** menu)

A list of topics is presented.

Move to the lower pane by pressing the <Tab> key once.

Use the down arrow key to position the cursor in front of the word *flux*. Press the right arrow key to display. You can see that the words *flux* and *rosin* are defined. These were the branches generated in the previous step.

Go down to *methanol* and press the right arrow key. Again, two phrases are defined: *methanol* and *methyl alcohol*. These were the branches generated in the previous step.

Now, go down to *soils* and press the right arrow key. Over a dozen words are defined. These words make up the concept of the topic *soils*.

2. Return to the Query Window.
 - Do not save any changes
 - Return to the simple query window.
-
-

This concludes lesson 15.

LESSON 16. GROUPING QUERY STATEMENTS

In this lesson, you will use the grouping operator to specify the order in which you want multiple operations performed.

A grouping is an operator that tells TOPIC what order to perform a series of operations. For example, look at the following mathematical statement:

$$1*2+3.$$

This statement is ambiguous. It could mean $1*(2+3)$ or $(1*2)+3$. This same type of ambiguity can exist in complex queries. In this lesson, you will develop and execute two separate queries. The first query will locate products that will clean windows, is a general purpose cleaner, but is not ammonia. The second query will find a paint stripper with a pleasant odor. We perform these queries in phases so you can see how we build upon the preceding query to narrow our search.

In this lesson you will bring together many of the concepts presented in the previous lessons: stems, <AND>, <NOT>, <SENTENCE>, wildcards, etc.

STEP 1: DEVELOP THE QUERY USING GROUPINGS

1. Develop and execute a query to clean windows.
 - A. In window and character-based applications, type the following in the Query Window:

window

and press <Enter>.

Six documents are located.

Now, we should think a little about synonyms for a moment. Some manufacturers may use the term *glass* instead of *window*. Modify the query accordingly by adding , *glass* to the end of the previous query. Press <Enter> to execute. Eleven documents are found!

STEP 2: ADD "GENERAL PURPOSE CLEANER" TO THE QUERY

Now, let's narrow the search by adding the first limiting factor *general purpose cleaner* to the query. Here, we must think about grouping. Which of the following would best meet the intent of our query?

window, glass, general purpose
window, glass <AND> general purpose
(window, glass) <AND> general purpose

HINT: The <AND> operator has higher precedence than the accrue operator.

The query *(window, glass) <AND> general purpose* will retrieve products that work on glass or windows, and also are general purpose.

1. Add the phrase <and> *general purpose* to existing query. The query should read:

(window, glass) <AND> general purpose

- A. **In window applications**, perform the following:

- position the cursor at the beginning of the Query Window and click the left mouse button. Type the beginning parenthesis.
- position the cursor at the end of the term glass and click the left mouse button. Type the ending parenthesis.
- type <AND> *general purpose* and press <Enter> .

- B. **In character-based applications**, perform the following:

- press <Tab> to return to the beginning of the Query Window
- type the beginning parenthesis (grouping operator)
- move to the end of the query and type the ending parenthesis and

<AND> *general purpose* and press <Enter> .

TOPIC locates three documents. View one or two of the documents to see how close our query is to providing a viable product.

STEP 3: ADD - NO AMMONIA TO THE QUERY

1. Now, we want to be certain that the cleaner contains no ammonia. Before you look at the query we came up with (shown in the following steps), develop your own query. Then, match it against the one we developed.

- A. **In window applications**, position the cursor at the end of the current query, and type the following:

<AND> (<NOT> ammonia, no <Sentence> ammonia)*

and press <Enter>.

This query will give us documents that do not have the term *ammonia* (operating on the dubious assumption that if it doesn't say ammonia, it doesn't have ammonia in it) as well as documents that have *no** and ammonia in the same sentence (e.g., "does not have any ammonia", "no ammonia", "does not contain ammonia", etc.).

- B. **In character-based applications**, press <Tab> to return to the Query Window and type

<AND> (<NOT> ammonia, no <Sentence> ammonia)*

and press <Enter>.

TOPIC locates three documents. It looks like the same three documents that were found in the previous query. Let's view the first document and view all the highlights.

2. View the document entitled "999 SAFETY CLEANER DEGREASER."

Page through and look at the highlighted words. The highlighted words include: general purpose, windows, glass, Ammonia None.

This product meets our requirements. Look at the other documents and see if they also meet our specifications.

Before you develop the next query, return to the Query Window and delete the current query.

STEP 4: DEVELOP A QUERY TO LOCATE PRODUCTS THAT STRIP PAINT, BUT HAVE A PLEASANT ODOR.

In the following steps you will develop another query using the grouping operators. Again, we suggest you develop the query in two phases to reiterate the query-building process. Again, think about using wildcards whenever possible and proximity operators to ensure terms AND-ed together appear in the same sentence.

1. **Develop and execute a query to locate products that strip paint.**
 - A. **In window applications**, position the cursor at the beginning of the Query Window, click the left mouse button and type

 strip <sentence> paint*

 and press <Enter> .
 - B. **In character-based applications**, position the cursor at the beginning of the Query Window and type:

 strip <sentence> paint*

 and press <Enter> .

This query tells Topic to look for any word that begins with s-t-r-i-p and has any number of characters after it that appears in the same sentence with the stem paint.

TOPIC locates five documents. Now let's add the limiting factor that the product must have a pleasant odor.

2. **Specify that the product must have a pleasant odor.**

If you ask 10 people to define what a pleasant odor is, you will probably get 10 different answers. For a paint stripper, a pleasant odor may be no odor. To others, a pleasant odor may have a slight fragrance. Modify your query to account for your own sensibilities.

A sample query is shown on the following page.

(strip <sentence> paint) <AND> (no* <sentence> odor)*

Using this query, TOPIC located three documents.

View the documents to see if the products meet the criteria specified.

This concludes the tutorial. If you would like to work through additional query examples, additional samples are provided in the *HSSDS Reference Manual*.

GLOSSARY

click	This term describes the motion of pressing and releasing the mouse button quickly. You click on an ICON, a document, etc., to select or open it.
drag	This term describes the motion of highlighting an item by selecting the item (single click), then pressing and holding down the left mouse button while moving the mouse.
double click	This term is the same as described for "click" above, except a double click refers to performing the motion twice, one right after the other.
icon	This refers to the graphical representation of an application or document. In windows, every application appears as an ICON.
menu bar	This refers to the line on the window (usually at the top of the window) that contains the options available. To select an option from the menu bar, position the cursor on the desired option and single-click (or press <Enter> to display the submenu.
operators	Operators connect words or phrases together in a query. The following operators are provided by TOPIC. (In the following definitions words includes words, phrases, stems, and topics.)

AND - Both words must be found in the document

OR - One or both words must be found in the document.

, (Comma) - Similar to an OR, except it is scored differently.

NOT - TOPIC locates the converse of what follows. For example, <NOT> carcinogenic would find documents that do not include the word carcinogenic.

() - Group words and operators so that the query is performed in a specific order. For example, <NOT> (carcinogen <OR> grease) will find documents that contain neither the word carcinogen nor the word grease. Conversely, (<NOT> carcinogen) <OR> grease will find documents that either do not contain the word carcinogen or that do contain the word grease.

? - A wildcard representing exactly one character.

* - A wildcard representing zero or more characters.

<case> - TOPIC is not case sensitive. This operator allows for case-sensitive searches. For example, <CASE> Carcinogen will only find Carcinogen.

<paragraph> - Two words joined by this operator must be found in the same paragraph (proximity operator).

<sentence> - Two words joined by this operator must be found in the same sentence (proximity operator).

<thesaurus> - Searches for the word indicated plus any synonyms of that word as defined in the TOPIC thesaurus.

phrase	A phrase can be a word, or a series of words, or a stem. A phrase cannot be a topic.
query	A query is a combination of words, phrases, and operators that allows you to narrow the data base search to documents that may contain information related to the hazardous solvent.
query window	The query window is the box located under the words "Enter words and phrases, separated by commas". This is the area where you input all your query statements.
Score	This is a proprietary system used by TOPIC. It indicates the likelihood that a particular document will actually contain information relevant to your query. This score indicates nothing about the quality of a product.
stem	This is similar to a root word. When you use a stem all variations of the root word specified will be included in the search. For example, if you use <STEM> wash, TOPIC will search for wash, washes, washed, washing, and washable.
title bar	This refers to the horizontal bar containing the title of the window.
TOPIC®	This is the text retrieval system produced by Verity Corporation that is used by HSSDS.
topic	Topics are composed of words and phrases so that they describe a complete concept. A query that is judged to be of use to many HSSDS users, which is saved under a single word title. This query is then made available to all users. For example, metal is defined as a topic. A query on metal will search for steel, copper, silver, iron, gold, metal, aluminum, ferrous, and non ferrous.
wildcard	A wildcard is a character that represents one or more other characters.

word

A *word* can be a single word, a *stem*, or a *topic*. If a single word is used, it must appear in double quotes (" "). Only those documents that contain the exact letters in the quotes will be found. A word query is considered a simple query.

END

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