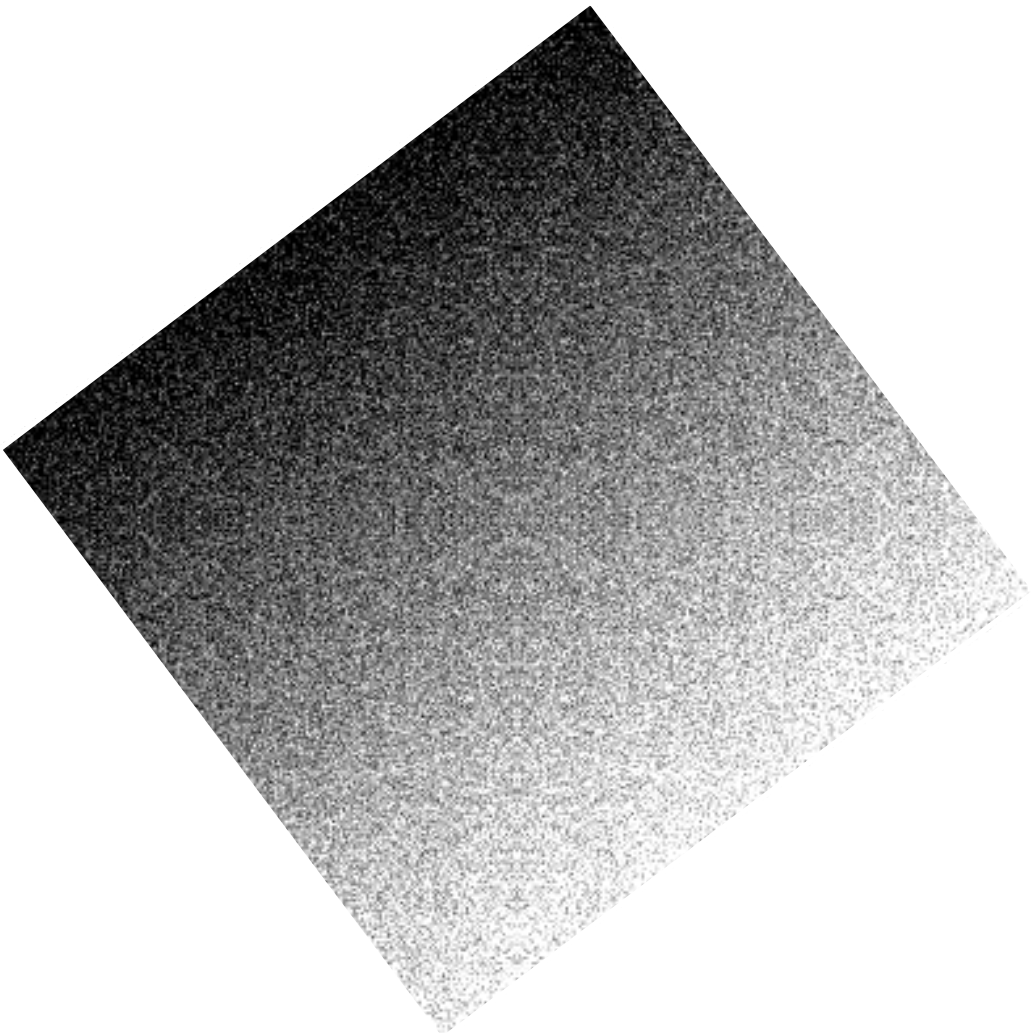
Intelligent Decision Server

IBM

Getting Started with The Intelligent Decision Server

Version 1



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Note

Before using this information and the product it supports, be sure to read the general information under “Notices” on page vi.

First Edition (October 1996)

This edition applies to Version 1 of Intelligent Decision Server, 5639–IDS, and to any subsequent releases until otherwise indicated in new editions or technical newsletters. Make sure you are using the correct edition for the level of the product.

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About This Book

This book describes how you can begin working with the components, features, and functions of the Intelligent Decision Server (IDS).

Who Should Read This Book

Anyone who wants a first look at IDS and a general introduction to working with IDS will find this guide useful. Also, anyone who wants a simple and quick overview of IDS tools, such as Capsule, Envelope, File Drawer, Folder, Mail Tray, Plot, Printer, Spreadsheet, and Text, will find the information in the form of lessons and exercises.

Prerequisite Reading

Several of the IDS tools are introduced in this guide. For further details about each one, refer to the appropriate book.

Capsule User's Guide	SC26-8906
Plot User's Guide	SC26-8905
Spreadsheet User's Guide	SC26-8904
Text User's Guide	SC26-8896
Working with the Intelligent Decision Server	SC26-8893

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Chapter 1. What Is the Intelligent Decision Server?

The IBM Intelligent Decision Server (IDS) is a set of software tools and services that helps you make business decisions. From any IDS desktop, you can access multiple databases on multiple systems through a personalized desktop. After you retrieve the data, you can analyze and graph the information, include the information in a report and then distribute it to whomever needs it.

Upon your first look, IDS appears as a suite of icons, or rectangles of graphics and labels, on the screen. These application icons represent IDS tools and services. You use tools to retrieve, analyze, store, present, and distribute information. For example, icons exist that represent tools for creating documents (such as the Text icon) and icons that represent tools for retrieving data (such as the Query and Reporter icons).

How You Can Use IDS in Your Work

With this system, you can develop and employ reusable applications to use individually or put them in file drawers to be shared with other users. You can also nest one application icon inside another to build even more sophisticated applications, such as those described next.

Marketing information systems—combine syndicated product-movement data with internal distribution, pricing, advertising, and promotional data to help you understand how well your products are doing against the competition on a global or regional level. IDS lets you conduct quick, ad hoc explorations of potential problem or opportunity areas.

Sales information systems—combine customer information, branch data, and demographics, so a retail marketing group or credit card group can define targeted direct-marketing programs; identify new product opportunities; produce ad hoc, customer-specific analyses; and set product and branch performance goals.

Financial analysis systems—present profit-and-loss data so a finance department can thoroughly investigate and explain trends and variances in performance.

Credit exposure management—combine data from numerous internal systems with purchased databases, so credit analysts can evaluate loan exposure and commitment levels, identify areas of risk, and minimize undesirable exposure in the loan portfolio.

In IDS you can accomplish a great deal with a single click of a mouse button. For this quick introduction to IDS, a sample of a company's personnel database and tasks related to making the information usable are examined.

Looking at IDS Components

You use all the IDS tools through ordinary desktops, which communicate with each other through a local area network (LAN). The LAN can be either token-ring or Ethernet. These workstations are configured to run a variety of services, including file

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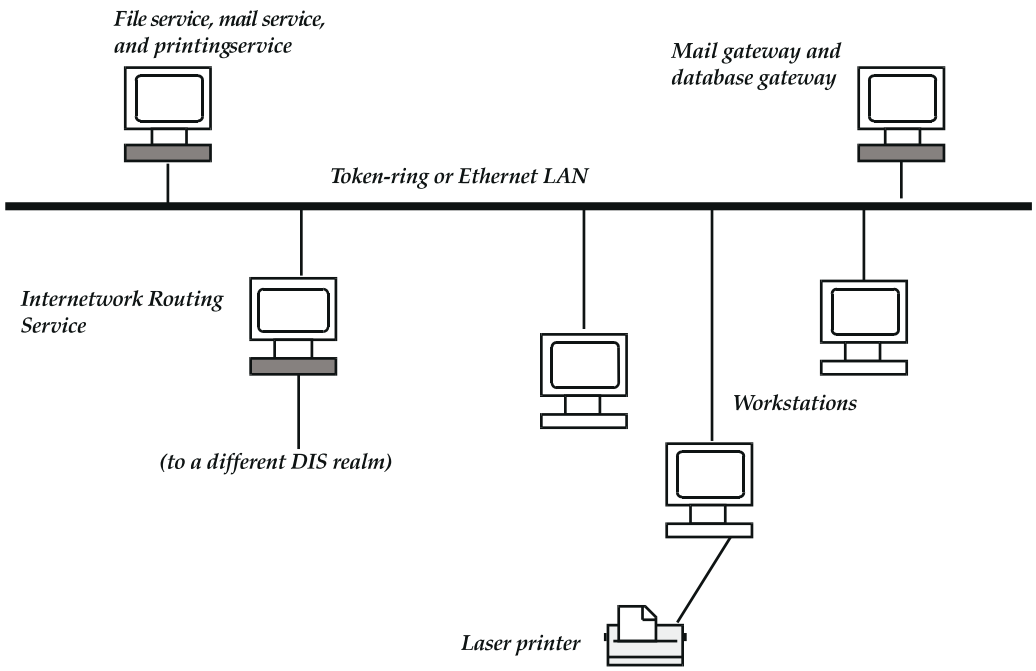
services, mail services, gateway services, communications services, printing services, conversion services, Capsule Execution Services, Cooperative Application Services, Open Access Services, and desktop tools.

Typically, a simplified IDS network is similar to the next illustration.



The workstation from which you access IDS should be complete with a monitor, keyboard, and mouse. You will use the keyboard primarily to enter values and text, and use the mouse to move the pointer on the screen to open icons and windows and to make selections. The instructions in the lessons rely heavily on using the mouse to access most of the IDS features.

Notice that when you move the mouse, the movement is reflected in the motion of the arrow-like pointer on the screen. You can lift the mouse and replace it on your work surface to continue sliding it if you need more work room. The pointer continues to move in the direction that you slide the mouse. Lifting the mouse has no effect on the pointer's position on the screen.

You can choose to use the mouse for moving around the IDS icons and other operations for everyday tasks such as copying or moving text or data on the screen.

With the left mouse button, you select or deselect icons and select buttons, menu choices, and text.

With the right mouse button, you can extend your selection, expand an icon when the icon's name is too lengthy to read, and cause an open window to appear in front of or behind other windows.

Throughout this and other IDS manuals, the terms listed in the next table are used to describe actions you perform with a mouse. The instructions in this and other IDS publications are written as if you use a right-handed mouse.

If you have a trackball instead of a mouse, roll the trackball whenever an instruction tells you to slide the mouse. The buttons on your trackball work the same as mouse buttons.

Term	Meaning
Point to	Slide the mouse to move the pointer onto the specified object.
Click on, as in "Click on the **Reply** button."	Press and release the left mouse button while the pointer is on the specified object.
Double-click on, as in "Double-click on the Text icon."	Press and release the left mouse button two times rapidly while the pointer is on the specified object.
Drag an object	Point to the object, then hold down the left mouse button and slide the mouse.

Logging On to IDS

Before you begin to work with IDS, your system administrator should inform you about your user ID and password for the IDS system. Your **user ID** is the name you use to log on to IDS and that you use for electronic mail. Your password is the character string you should type when you log on for the first time. You need this information before you can log on to IDS.

You can log on to IDS when you see the IDS log-on screen. If you have just turned on or rebooted your workstation, your workstation display might show the general OS/2 screen, which contains several objects or icons representing various operations or programs you can run. The Start IDS Desktop icon should be visible among those icons.

1. To display the IDS log-on screen, move the pointer to the IDS icon and double-click (click twice rapidly) the left mouse button. The log-on screen appears.
2. At the prompt, **Please enter your user ID**, type your user ID and press Enter.
3. Type your password and press Enter.

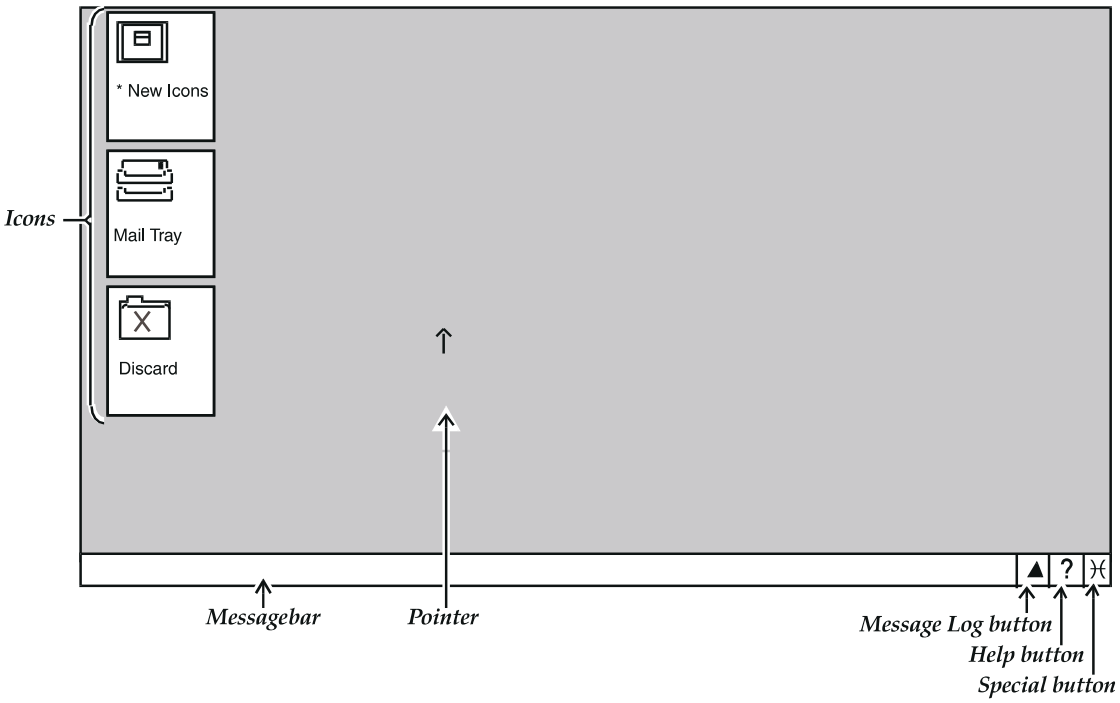
   Notice that the hands on the stopwatch pointer spin as the system loads your desktop icons. The log-on screen changes to the screen, or desktop, where you accomplish your work.

   After IDS opens, you can change your password whenever the need arises. Refer to *Working with the Intelligent Decision Server* for more information.

Working with IDS

The IDS screen you see after you log on to the system contains several types of objects to help you with your work. Mostly, you see small labeled rectangles with pictures. The rectangles are called icons and represent the tools and features of IDS. At the bottom of the screen is a long bar, called the message bar. Information about the system or an operation's status is displayed in the message bar.

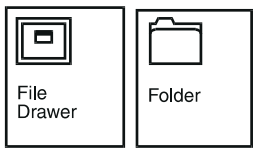
If more information than will fit in the message bar needs to be displayed, a message window appears when you click on the Message Log button near the right edge of the bar. When you click on the Help button, a window opens to provide how-to information. The IDS Special button allows you to exit IDS using a menu, as well as customize your desktop.



You use the pointer on the screen to select an object by clicking once or twice on the object. When you attempt an action that is not valid, the pointer changes to a “do-not” symbol. Or, if you choose an activity that is somewhat lengthy, the pointer becomes a stopwatch.

Understanding Icons and Their Types

Nearly all IDS users work with the icons that allow them to access data, create text, chart spreadsheet results, and send electronic mail. These icons are IDS tool icons such as the Query, Plot, Text, Spreadsheet, and Mail Tray icons that help increase your productivity. Other icons help you store your information and stay organized. These container icons are the File Drawer and Folder icons.



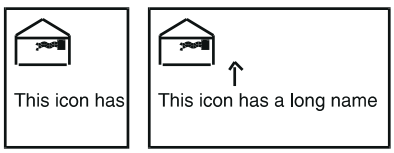
IDS also provides several other icons that are used to perform administrative tasks, set up services for the network to access database software, or create applications.

The icons open to a main window and possibly several sub-windows in which you complete your work by selecting tasks from menus or the window buttons.

When the name of an icon is lengthy or when you are using a large screen font, you might not be able to read the name of an icon unless you expand the icon. To expand an icon to read a long name:

1. Make sure no icons are selected by clicking anywhere on the background screen.
2. Point to the icon you want to expand and hold down the right mouse button.

   The icon expands to show the complete name.

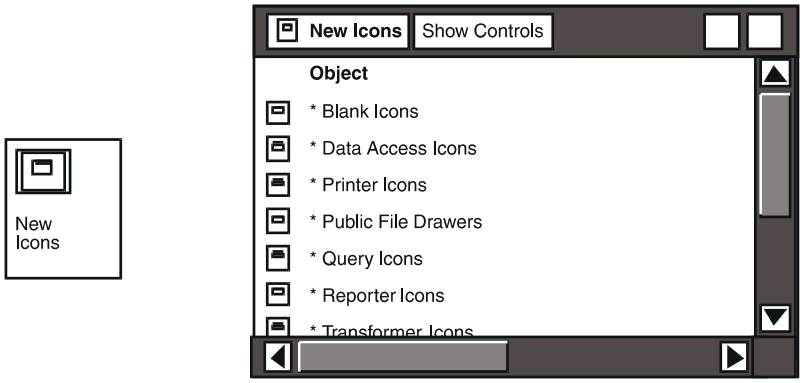


Icon *Expanded Icon*

3. To see the complete names of other icons, continue holding down the right mouse button and drag the pointer across the icons you want to expand.

Viewing the New Icons File Drawer

For the lessons in this guide, you need to have copies of several icons on your desktop. When you first log on to IDS, your desktop has a File Drawer icon labeled **New Icons**. This File Drawer icon contains other File Drawer icons that keep the IDS icons organized for your site. You might see icons as shown in the next illustration.



Your system administrator might have added other file drawers to contain custom applications for your company. The tool icons you learn about in this guide are located in the *Blank Icons file drawer, which is described in IDS Chapter 2, “Working Inside IDS” on page 9.

Because File Drawer icons are generally for use by everyone at your site, you might be prevented from moving icons out of file drawers unless you originally placed the icon in the file drawer. You should copy icons that you want to use out of the File Drawer icon window to your desktop.

Exiting from Your Desktop

Upon completing your tasks in IDS, you can continue working in other software applications on your desktop. To log off your IDS desktop and exit from IDS, follow the instructions in the next sections. Logging off returns you to the IDS log-on screen. Exiting IDS returns you to the OS/2 desktop.

Logging Off

When you finish working with IDS, be sure to log off. Logging off:

Closes all open IDS windows and saves your work

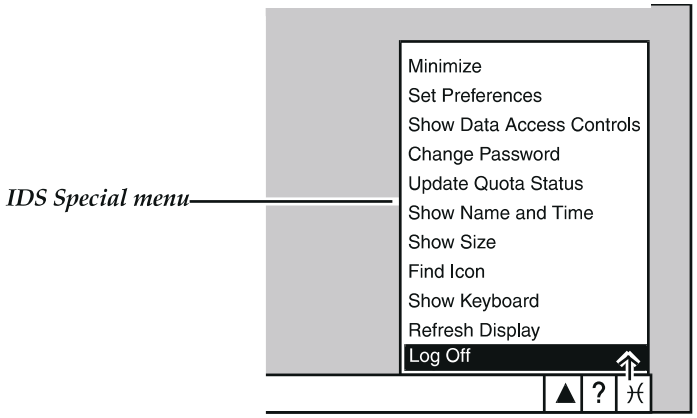
Prevents unauthorized use of your IDS desktop and icons

To log off:

1. Point to the IDS Special button and press the left mouse button.

   A menu opens and remains open for as long as you continue to press the left mouse button.

2. Move the pointer up the menu until **Log Off** is **highlighted** (that is, marked in a way that distinguishes it from other menu choices).



3. Release the mouse button.

   Your IDS desktop closes and the system saves all open IDS windows, informs the network that you are no longer using IDS, and displays the log-on screen.

Exiting IDS

You can continue working with your workstation after you log off IDS. Exiting IDS frees up resources (such as memory) for use by your other applications.

To exit IDS:

1. Log off IDS, as instructed earlier.
2. Point to the IDS Special button in the log-on screen and press the left mouse button.

   A menu opens and remains open as long as you continue to press the left mouse button.
3. Move the pointer up the menu to highlight **Exit Intelligent Decision Server**.
4. Release the mouse button.

   The OS/2 screen appears and you can continue working.

Using Online Help

Many IDS features have information stored online to guide you through a specific task. If you have questions about how to complete a task, you can select the Help button in the message bar or press the F1 key.

Reviewing This Lesson

In this lesson, you have read an overview about how IDS works, how you can use IDS in your daily tasks, and how to look at online Help. Also, you learned the basics about

logging on and off IDS. In the next sections, you can review the information from this lesson.

Quick Steps

The steps below outline the various task you learned, as presented in this lesson.

1. Display the IDS log-on screen.

   Double-click on the Start IDS Desktop icon in the OS/2 environment.

2. Enter your user ID and password.

   Be sure to press Enter after you type your user ID and then again after your password.

3. Use the Intelligent Decision Server.

   For help with IDS, click on the ? button in the message bar of your IDS screen.

4. Log off of IDS.

   Select **Log Off** from the **Special** menu on the far right of the message bar.

5. Exit IDS.

   Select **Exit Intelligent Decision Server** from the **Special** menu.

Learning More Details

Now that you have read a simple description of IDS features, you might want to learn more than the information described in this lesson. Several of the tools available in IDS are explained briefly in the rest of this guide. For more information, many of the tools have their own publication, as listed in the preface of this guide.

Chapter 2. Working Inside IDS

Before you begin to work with the Intelligent Decision Server, your system administrator should have assigned you a user ID or log-on name and password. This lesson contains information and steps about the basic skills you need to work effectively through the lessons in this guide, including:

Locating new icons

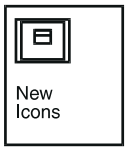
Copying, moving, and deleting items in IDS

Renaming an icon

Setting choices for icons

Manipulating windows

Locating New Icons



Because file drawer icons are generally for use by everyone at your site, you might be prevented from moving icons from file drawers unless you originally placed the icon in the file drawer. You should copy icons that you want to use to your desktop. For the lessons in this guide, you need to have copies of several icons on your desktop.

When you work with IDS, you can be more productive if you keep copies of your frequently used icon types on your desktop.

To keep some icons handy:

1. Copy the icons you most frequently use from the New Icons file drawer to your IDS desktop.
2. As you learn each icon type, open the icon.
3. Specify your preferred settings and options for each icon.
4. Close each icon.

   You can now use these icons as templates whenever you need to begin with a fresh icon, instead of opening the New Icons file drawer each time.

To open or activate most icons, double-click anywhere on the icon within its border.

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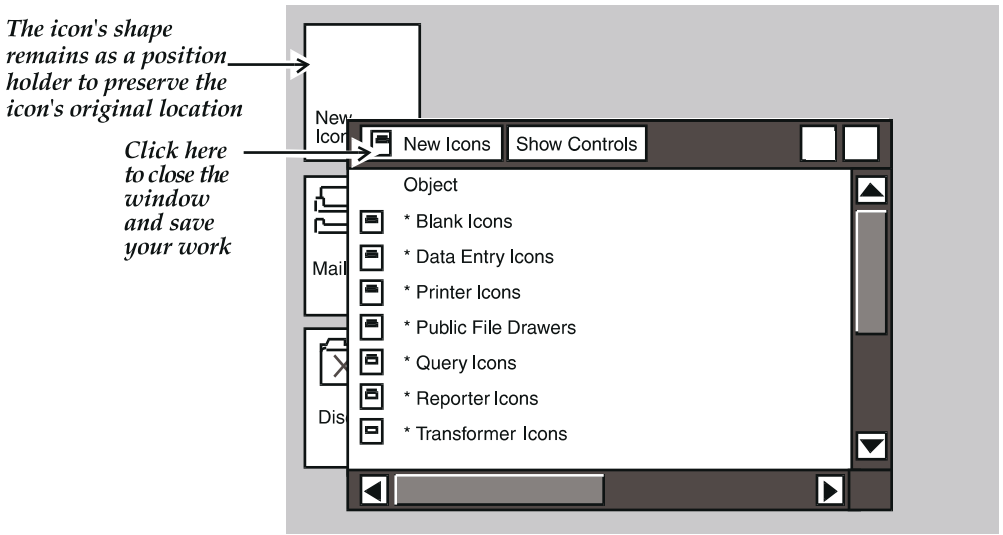
For example, double-click on the New Icons file drawer. The icon's contents are displayed. When the icon's rectangle changes and becomes a rectangle with no graphic, you see a window and its contents appear on your screen.



The number of windows you can have open at one time depends on the amount of memory available on your workstation. A message appears in the message bar when no more windows can be opened or when an operation cannot be performed unless you first close one or more windows.

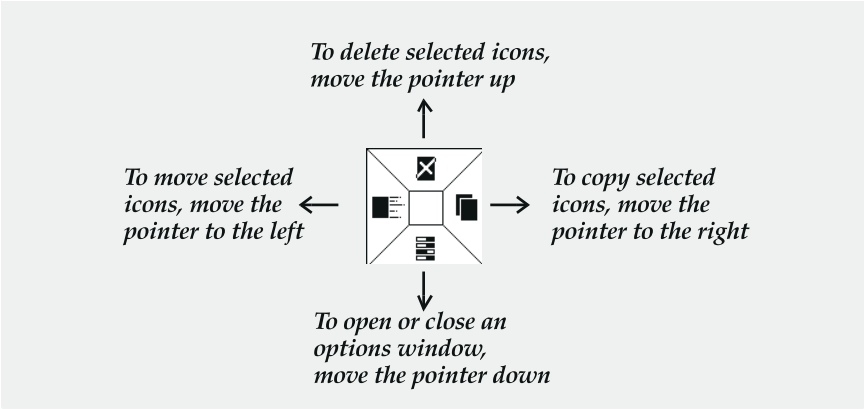
Copying, Moving, and Deleting Objects in IDS

This section first describes a method for manipulating icons—using the pop-up function pad. Then, the rest of this section provides step-by-step instructions for moving, copying, and deleting icons and selectable objects. Work through the exercises wherever you see steps.

Using the Pop-Up Function Pad

The pop-up function pad provides a convenient way for you to manipulate icons and other objects in IDS with the mouse. You can use the function pad to move, copy, and delete icons, text, or values, and to open an options window where you can select settings for the operations of the tools.

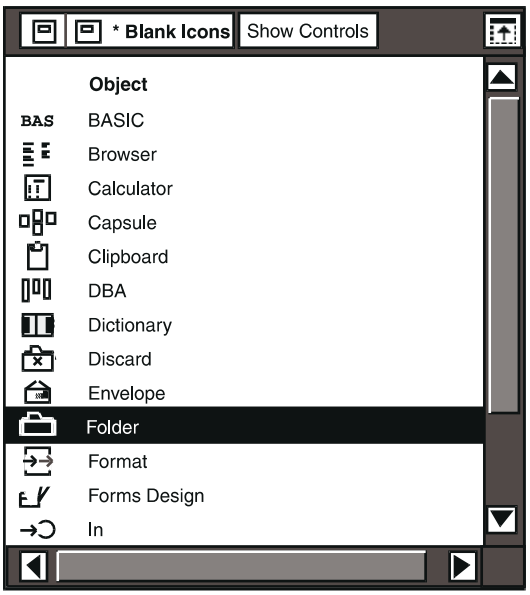
You activate the pop-up function pad by simultaneously pressing both mouse buttons while the pointer is anywhere on your IDS desktop. The function pad appears for as long as you continue to press both mouse buttons. Each of the four symbols on the pop-up function pad represents the operation you can perform by dragging the mouse toward that symbol when something is selected.



Use the pop-up function pad to copy a Folder icon to your desktop from the * Blank Icons file drawer that is in the New Icons file drawer. Follow these steps:

1. Double-click on the * Blank Icons file drawer near the top of the New Icons file drawer window. Another window opens: the * Blank Icons file drawer.

   Icons cannot be moved from the *Blank Icons file drawer; they can only be copied. Your system administrator can advise you if you need help.



2. Select the Folder icon.
3. Press and hold down both mouse buttons.

   The function pad appears for as long as you continue to press both mouse buttons.

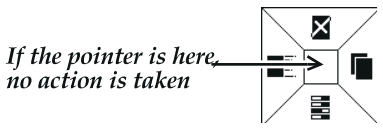
4. Drag the pointer over the copy symbol toward the right side of the pad.

   The color of the selected symbol changes.

5. Release the mouse buttons.

   The pointer becomes a miniature version of the selected Folder icon.

   If you release the mouse buttons while the pointer is on top of the box in the center of the pad, no action is taken.



6. Click on an empty spot on your IDS desktop to where you want to move the icon.

   The pointer changes back to an arrow shape and the copied icon appears on the desktop where you clicked.

   Notice that the icon is still highlighted. You can rename an icon whenever it is selected by opening the Icon Options window.

When you begin to work with the IDS tools, practice using the function pad. Be sure to use copies of icons for your practice and be careful not to delete your New Icons file drawer.

To use the function pad for other actions besides copying:

1. Highlight the item you want to affect.
2. Press and hold both mouse buttons.
3. Drag the mouse to the desired symbol on the function pad, then release the mouse buttons.
4. Complete the operation as necessary.

   You might need to select a destination for moving or copying. You might also need to make choices in an options window.

Use the delete function with caution when you select icons. Deleted icons are sent to a special icon called Discard, which retains the last four icons that were deleted or changed. If the Discard icon is not on your screen, the deleted icons are immediately erased and cannot be recovered.

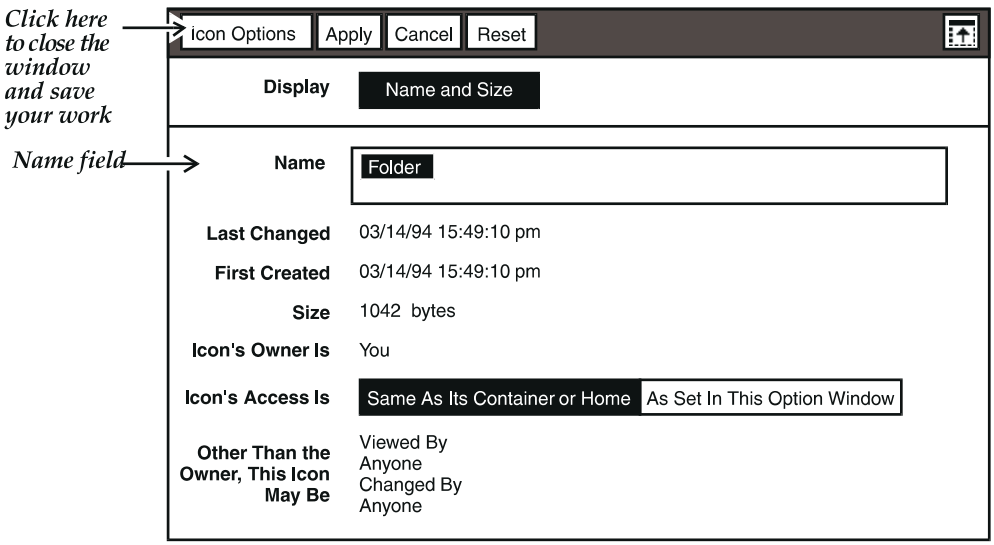
Using the Function Pad to Rename an Icon

You can rename an icon whenever it is selected by opening its Icon Options window. It can be convenient to rename a new icon directly after copying it from the file drawer because it is still highlighted.

To rename a selected icon:

1. Open the Icon Options window using the function pad and moving downward with both mouse buttons pressed.
2. Release the mouse buttons and notice that the Icon Options window opens.

   The icon's name is already highlighted in the **Name** field.



3. Enter **Getting Started** as the new name for the folder icon by typing within the **Name** field.

   Notice that the highlighted name is cleared and the new name appears as you type.
4. Close the Icon Options window using the function pad by choosing the downward direction.

Closing the options window applies the changes. If you want to cancel the new changes before you apply them, you can either:

Click on **Cancel** in the window header. The options window closes without applying the changes.

Click on **Reset** to view the options as they were before you specified changes.

Copying Multiple Icons

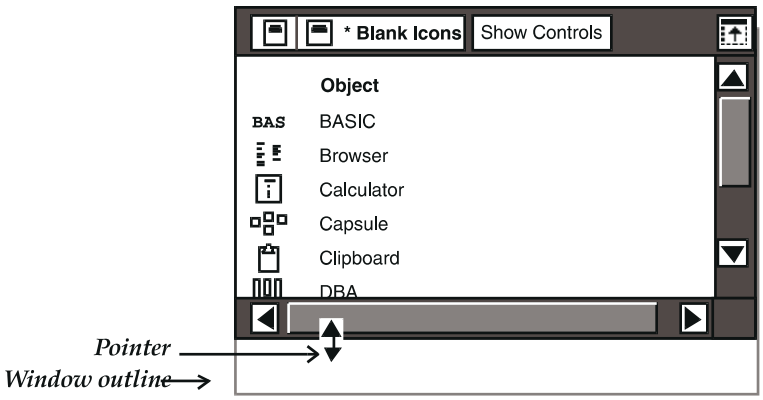
You can select several icons at one time by first selecting one, then with the right mouse button, clicking on the additional icons you want to select. When the icons are selected, you can use the function pad to move, copy, or delete all of them.

Use the steps below to copy new icons from the * Blank Icons file drawer. First, stretch the * Blank Icons window so that you can see down to the Text icon.

To stretch or resize a window:

1. Move the pointer over to the bottom edge of the window until the pointer changes shape to a two-headed arrow.
2. Pressing and holding the left mouse button down, drag the mouse toward the bottom of the screen.

   Notice the window outline follows the mouse path as you drag the window edge.
3. Release the mouse button when the window is the size you want.



Now that you can see most of the icons in the file drawer, copy multiple icons to your desktop.

To see how to copy multiple icons:

1. Click with the left mouse button on an Envelope, then using the right mouse button, click one time on the Mail Tray, Plot, Spreadsheet, and Text icons so they become highlighted.
2. With the icons selected, use the function pad and move toward the copy symbol to the right.

   The pointer arrow changes shape to the small graphic of the first icon you selected.
3. Click on the Getting Started folder that you created earlier.

   The Folder icon becomes highlighted to show that the selected icons are now inside it and the pointer arrow regains its original shape.
4. Double-click on the Getting Started icon to open it and see the contents.

Working with IDS Windows

Already, you have been working with a few windows in this lesson. In IDS, you can have many windows open at the same time. Unless you know how to manipulate the

windows, they can easily get in the way of your work. This section describes some basics about working with the tool windows.

After opening a few windows, you might notice that some windows have opened on top of other windows or on an icon you wish to open. You can move any window or icon by dragging, that is, pressing and holding the left mouse button down and moving the mouse after you have the pointer on the window header or icon. You can drag windows to any area of the screen, even partially off the screen so that only a portion of the window appears.

For the drag operation on a window, the border becomes a different shade and moves when you move the mouse. For the drag operation on an icon, the pointer changes to a small version of the icon's graphic inside the icon's border as you begin moving the icon.

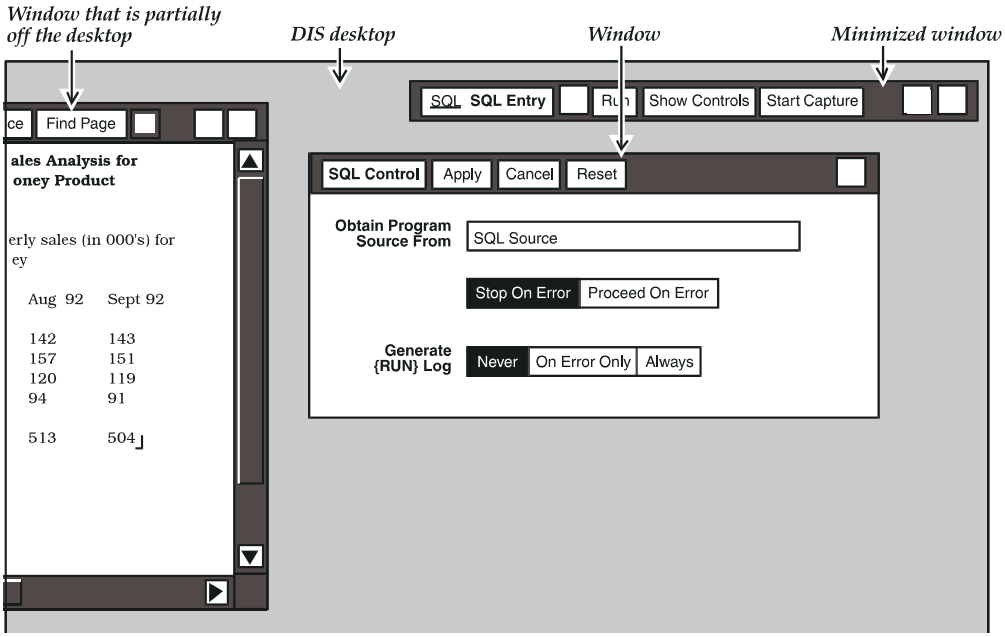
You can also minimize or shrink the window by clicking on the Minimize button at the far right end of the window header.

You can move a minimized window around on your desktop the same way you move a window that has not been minimized. For example, you can move a minimized window partially off your IDS desktop or send it to the bottom or top of a stack of windows.

To restore a minimized window to full size:

1. Click on the window's Restore button.

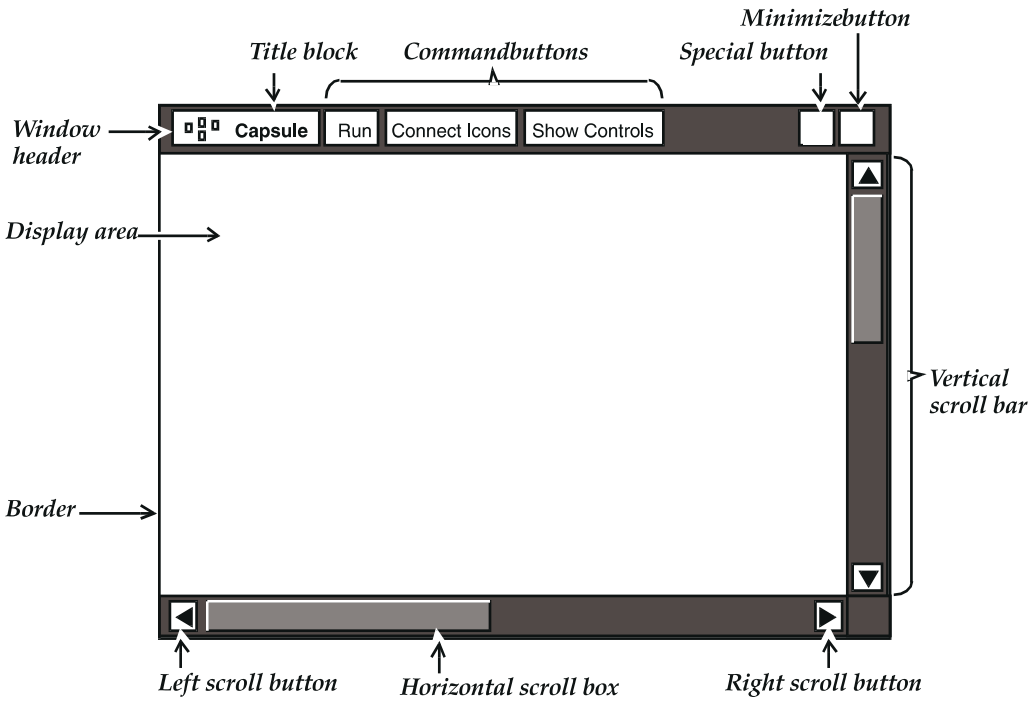
The next illustration shows windows in different states.



Working Within Windows

A window has many components. The window header often contains many buttons. Some of the buttons are command buttons that you click on to accomplish a specific operation. Other than the command buttons, the rest of the window components control the shape of the window or how much of the window remains visible.

The parts of a typical tool window are shown in the next illustration.



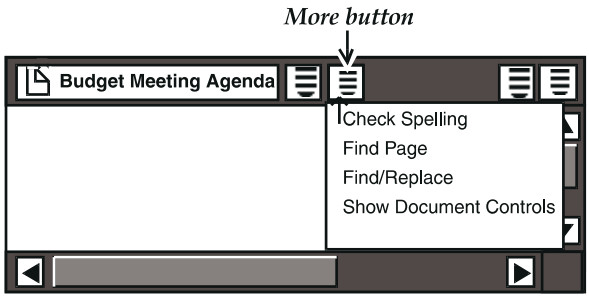
The scroll bars and buttons allow you to shift the display of contents inside the window borders.

To move the contents of a window quickly, drag a scroll box.

To move the contents nearly line by line, use a scroll button.

Practice clicking or dragging the scroll mechanisms of a window until you feel comfortable moving the contents around. If no movement occurs, the window has reached the edge of that content.

If you open a window that does not seem to have any command buttons, the window might be too narrow and not have enough room to display the command buttons in the window header. In this case, the window header has a More button, as shown in the next illustration. If you click on the More button, a menu containing the commands appears.



When two or more windows are open on your desktop, the most recently opened window can partially or completely conceal previously opened windows, like pieces of paper stacked on your office desktop. To change the order of windows in a stack:

1. Point to any border portion or the window header background of the window you want to move, and click the right mouse button when the pointer changes.

The selected window will appear on top of all windows.

Opening and Closing Windows

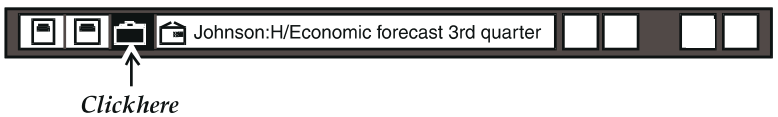
To close an open window, you merely click in the title block, or name area, in the window header. If you are working in a folder or file drawer, you can close just the one icon you want, or you can close the container icon, thereby closing all the residing icons that were open.

To close an icon and leave the container open:

1. Click on the part of the title block that represents only the icon (the right part of the title block).

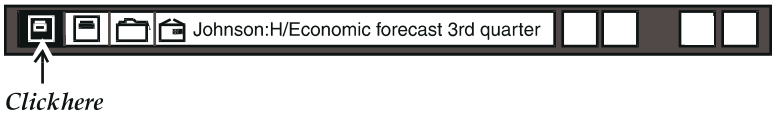
To close an icon and its container at the same time:

1. Click on the part of the title block that represents the container.



To close the outermost container and all its containers and icons at the same time:

1. Click on the left-most part of the title block, which represents the outermost container.



Another kind of window you might see occasionally is the Important Message window. Whenever the system needs to give you a status message, such as a certain disk is offline or a software maintenance task is to be carried out, you hear a beep and a message will flash on the Message bar. Or, if more information than will fit in the message bar needs to be displayed about a task you just tried, a message window appears when you select the Message Log button near the right edge of the bar.

When you receive an important message, you cannot continue to work until you dismiss it.

To dismiss an Important Message window:

1. Read the message and then click on **OK** (that is, point to **OK**, and then press and release the left mouse button).

The window is removed from the screen, but you can still read the message by opening the Message Log window by clicking on the Message Log button.

Reviewing This Lesson

In this lesson, you have read how you can manipulate windows and icons on the IDS desktop. You also learned how to rename an icon.

In the next sections, you can review the information from this lesson.

Quick Steps

The steps below outline the various tasks you learned, as presented in this lesson.

1. Locate the icons with which you want to work.

   Open the New Icons file drawer. Generally, the most frequently used icons are in the Blank Icons file drawer.

2. Set options, and copy, move, or delete icons with the function pad.

   First, select an icon or object. Then, activate the pop-up function pad by pressing and holding down both mouse buttons and move to the graphic for the desired operation.

3. Change the window size.

   Select the window border and drag the mouse until the window is the desired size.

4. Move the contents of windows.

   Use the scroll bars to move to the top, bottom, or sides of the window contents.

5. Cause the window to shrink to the window header or expand.

Select the minimize button in the window header.

Learning More Details

You can learn many more details about working in the IDS environment. *Working with the Intelligent Decision Server* describes all the ways to work with the IDS desktop, as well as how to customize the colors and other settings of your desktop, such as the font size, date, or number formats. You can also discover how to determine certain status information, such as the size of an icon or your complete desktop.

For information about using IDS information and tools in conjunction with other software, refer to *Interacting with PC Applications* guide.

Chapter 3. Writing and Printing Text

Assume that the president of your company has asked you, as the human resources manager, to write a summary of the personnel changes during the last quarter. The IDS Text tool best suits this type of information preparation.

For this exercise, you will need a copy of a Text icon from the Getting Started folder you created in Lesson 2 or from the * Blank Icons file drawer. Later, you will need a Printer icon, too. The tasks in this lesson are presented as a guideline. After you learn the characteristics of the Text tool, you will discover your preferred order of tasks. After reading this lesson, you will know how to:

Create a document

Modify the document's format

Check the document for proper spelling

Print the document

Preparing a Simple Report

Be sure you have a copy of a Text icon for this lesson. Rename the Text icon to Icon Options window. If you need to refresh your memory about how to rename an icon, see “Using the Function Pad to Rename an Icon” on page 12.

Double-click on the Quarterly Update icon to open it. You can stretch the window to a larger size on your screen.

Typing a Text Document

First, consider the different department names found at your company, such as Sales, Marketing, and others. Your report needs to include something about each department. You can type the same report as in the example, or create your own for this lesson. The tasks presented in this lesson are presented as a guideline. After you learn the characteristics of the Text tool, you will discover your preferred order of tasks. The following sections contain steps that describe how you might construct such a report.

1. Click anywhere in a blank window or to the left of the box or end mark inside the draft-mode window that appears. The blinking bar (|) indicates where you can begin typing your report. Enter text for the status of each department.

Notice that characters are inserted as you type and that the words wrap around to the next line when the line is full. If the lines of text are not completely visible, stretch the window wider.

Editing Mistakes

To correct a mistake, you can select the character or word and retype the correction. You can select words or phrases by placing the insertion point in a word and clicking the left mouse button until what you want is highlighted.

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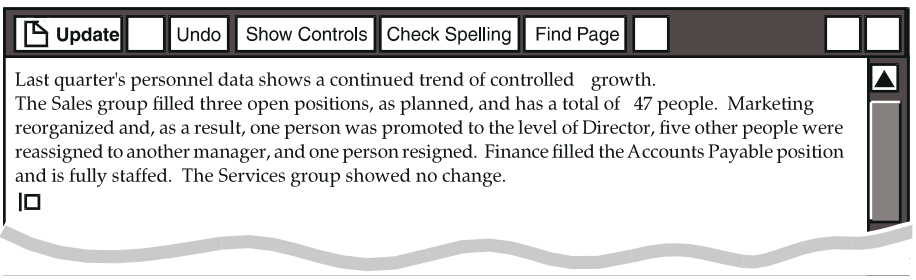
Number of Clicks	To Select	Effect
2	A word	Number of words highlighted. Even a paragraph.
3	A sentence	Number of words highlighted. Even a paragraph.
4	A paragraph	Number of words highlighted. Even a paragraph.

You can also use the **Undo** button in the window header to remove the last text entry or edit. This button appears only when you enter text, and does not revert font characteristics, or paragraph format. This behavior is important to note because, if you enter text and change the character format, then click on the **Undo** button, the text disappears. **Redo**, of course, restores the original text. **Undo** and **Redo** both retain a sequence of changes if you use them more than one time during an editing session.

Add the heading **Personnel Update** at the beginning of the report. You can reposition the insertion point by clicking on the character, word, or line where you want to start typing again. Leave a blank line after the heading.

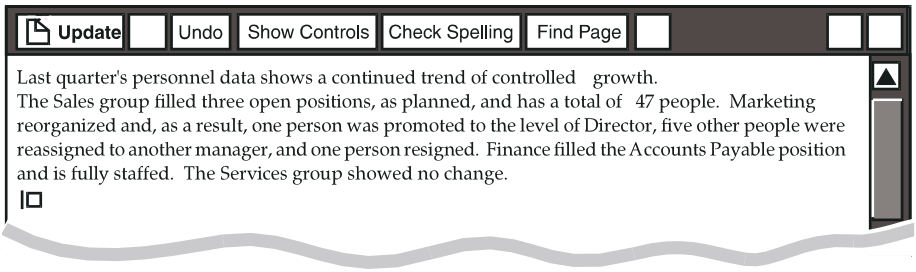


For now, use the default settings for text appearance, as already set in the IDS Set Preferences window, described in *Working with the Intelligent Decision Server*. The first portion of your report might contain information similar to the report in the next illustration.

Add the heading Personal Update at the beginning of the report. You can reposition the insertion point by clicking on the character, word, or line where you want to start typing again. Leave a blank line after the heading.

To begin a new line:	At the insertion point, press Shift and Enter to create a new line in the same paragraph. The insertion point is at the beginning of the line.
To begin a new paragraph:	At the insertion point, press Enter to create a new paragraph. You can also use Enter to create a blank line.

Your report probably looks similar to the next illustration. You will add more to your report later.

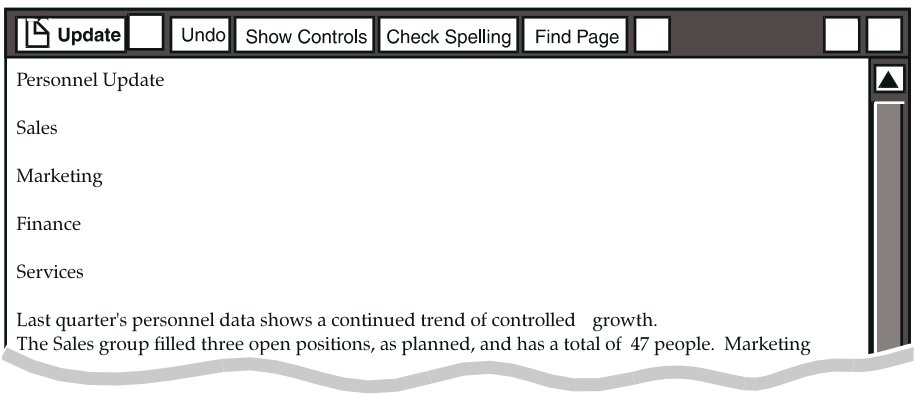


Copying and Moving Pieces of Text

After reading your report, assume you decide to rearrange it. Rather than keeping your report in a continuous paragraph form, you want the department names to precede the text describing the department activities.

First, add department names to the report, such as Sales, Marketing, Finance, Services, and others mentioned in your report.

1. Click above the first paragraph and type the department names, following each with a blank line.



2. When you have finished adding the department names, copy the group of department names to a location below the first paragraph.

   To copy text:

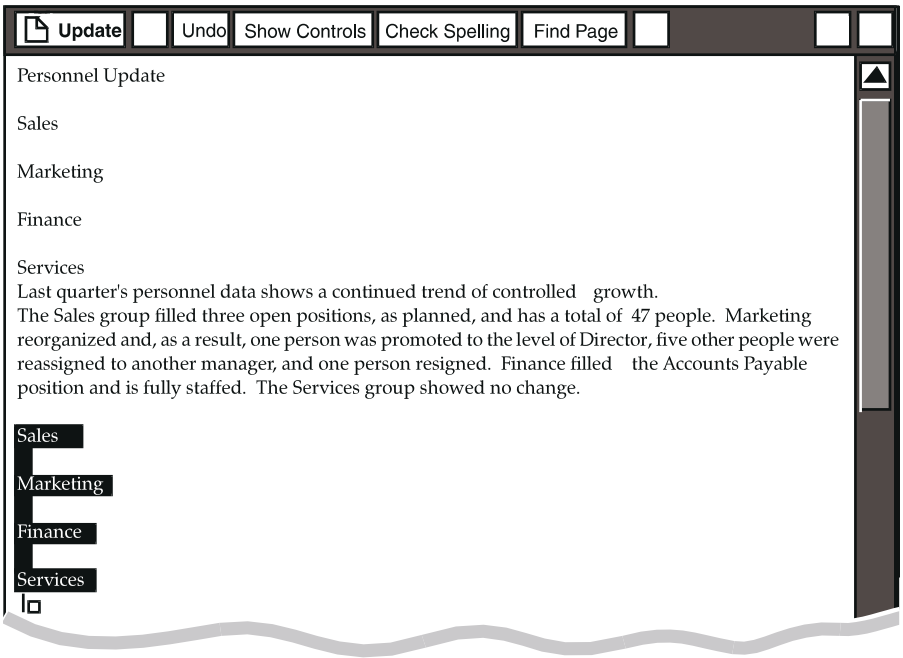
   a. Highlight the text to be copied.

   b. Activate the pop-up function pad. Keep holding down both mouse buttons.

   c. Move the pointer to the right for copying. Release the buttons when the copy symbol changes color.

   d. Click in the location where you want the text to appear.

After you have made the copy, your text window should look similar to the next illustration.



3. Move the status sentence for each department to the line below the appropriate department name in the first group. First, select the sentence about Sales and move it to the line beneath the **Sales** heading. Then, continue to move the contents of your report for the other departments.

   To move text:

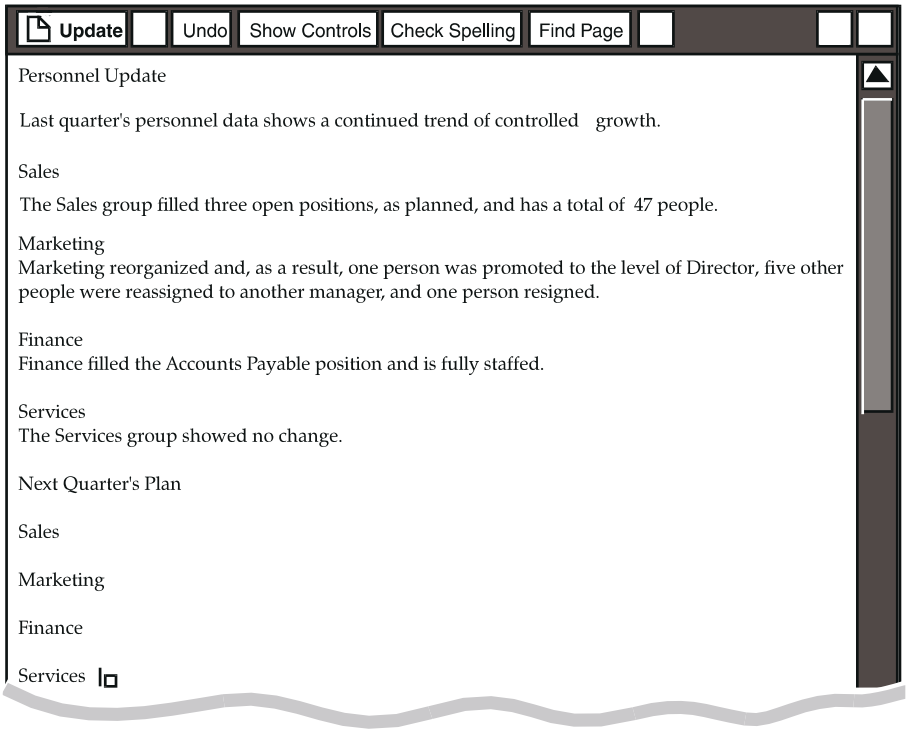
   a. Highlight the text to be moved.

   b. Activate the pop-up function pad. Keep holding down both mouse buttons.

   c. Move the pointer to the left for moving. Release the buttons when the move symbol changes color.

   d. Click in the location where you want the text to appear.

   If you type the heading **Next Quarter's Plan** on the line above the second **Sales** heading, your text window should appear similar to the following illustration.



Save your work up to now by closing the Text icon. To close the icon, click in the title block in the window header. The contents and format of your icon are saved. You can double-click on the icon to reopen it to continue working.

After you reformat the current version of the report, you can return to adding more information for the next quarter.

Changing the Appearance of Your Report

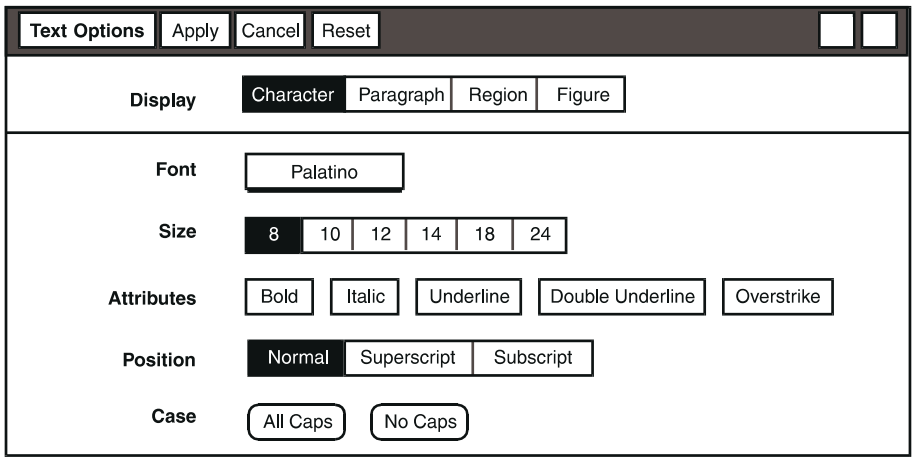
Now that you have several headings in your report, you can change their appearance by reformatting the text.

Adding a Title

In the Text tool, text and paragraph format characteristics are specified in the Text Options window. You can open the Text Options window whenever you have the insertion point in the text window. If you have any characters selected, the options you specify are applied to the selected text. If you have only the insertion point in a line with no selected characters, the options are applied to the text you type after closing the options window.

Since you already have the major title in the report, **Personnel Update**, add the subtitle **Summary** above the sentence beginning with **Last quarter's**. To reformat these titles, follow the next set of instructions.

1. Select the titles **Personnel Update** and **Summary**.
2. Open the Text Options window with the pop-up function pad, moving the mouse downward to highlight the options symbol on the pad. The Text Options window appears with the **Character** page visible, as shown in the next illustration.



3. Select a choice in the **Font** field by clicking on the field and highlighting your selection.
4. Select a choice in the **Size** field, for example, **18**. Only the sizes available for the selected font appear in this field.
5. Select **Bold** and **Underline** in the **Attributes** field to enhance your titles.
6. Click on the Text Options window to apply the changes.

   Remember, the **Undo** button does not undo formatting changes. To avoid applying the newly changed settings in an options window, click on **Cancel** in the window header before clicking on **Apply** or closing the window.

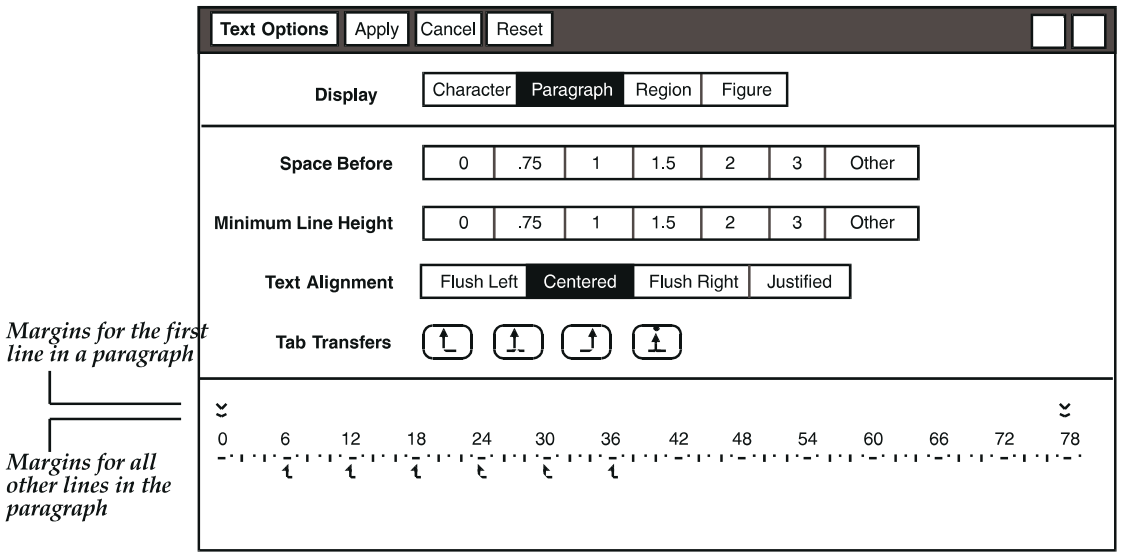
After you determine the typeface and other settings you prefer, it is useful to create a blank Text icon as a template on your desktop with those settings. This template will apply your preferred settings to the text you enter in the new icon. To preserve the template Text icon for repeated use, be sure to use a copy of the icon before you begin to work.

Changing the Format

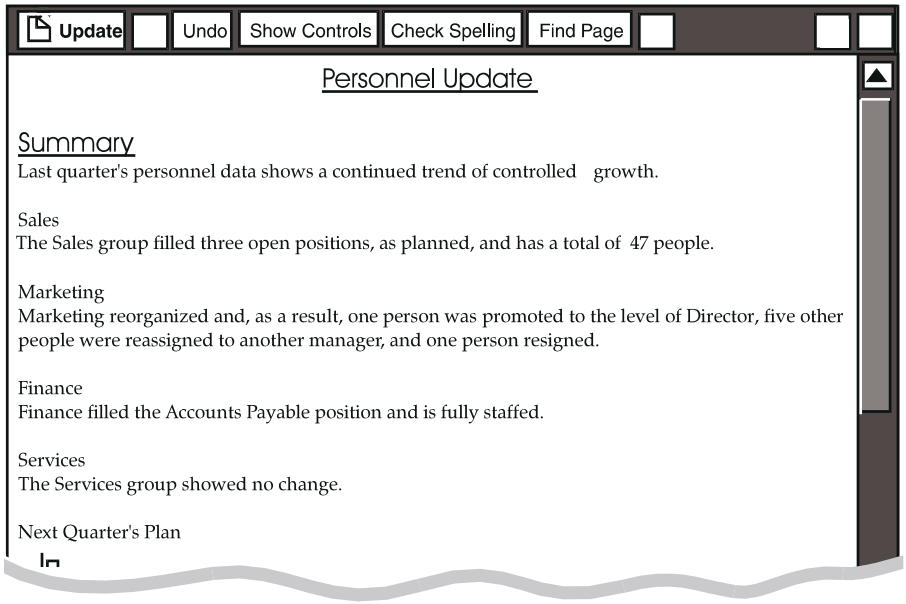
Your headings are now larger, bold, and underlined. Assume you want to center the main title. Changes to the format are set in the same Text Options window with the choices available in the **Paragraph** page.

To center the **Personnel Update** title, follow these instructions:

1. Select the **Personnel Update** title.
2. Open the Text Options window.
3. Select **Paragraph** in the **Display** option to open the **Paragraph** page.
4. Select **Centered** in the **Text Alignment** field, as shown in the next illustration, and close the window.

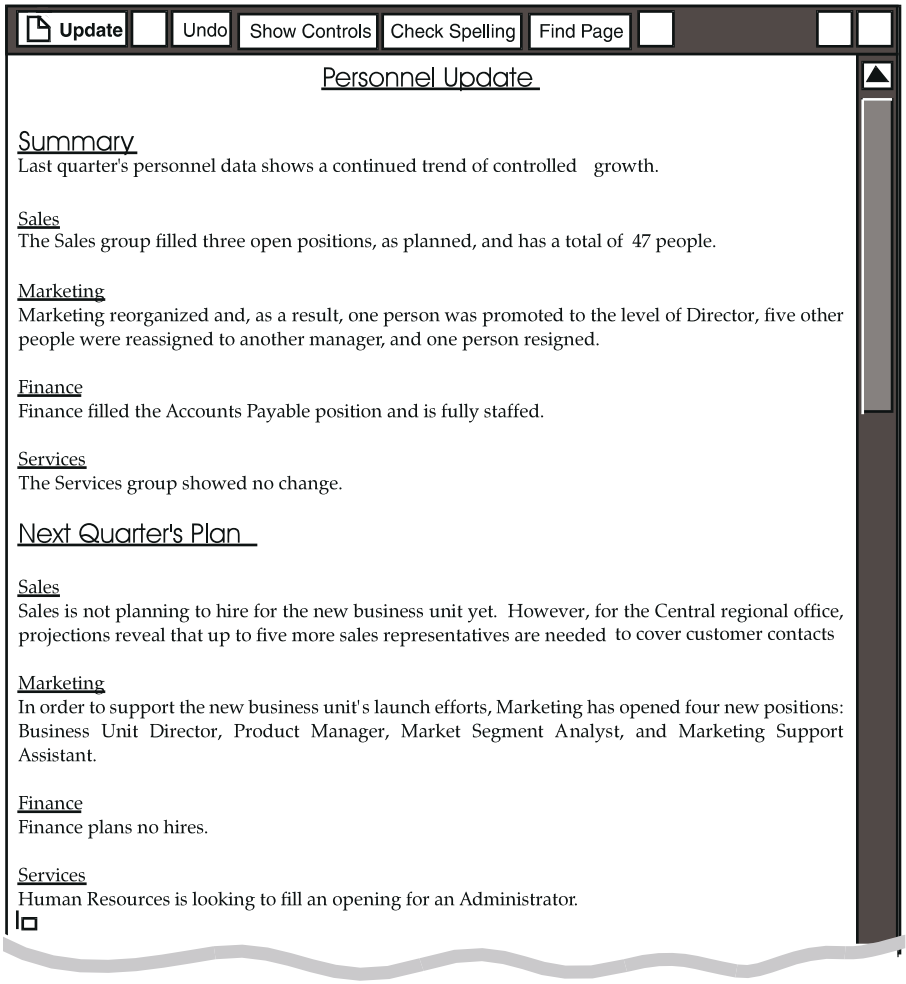


You can use the Text Options window features to reformat any highlighted text or to begin a new format. The report titles should look similar to those titles in the following illustration.



Now you can finish typing the contents of your report. After reformatting the **Next Quarter's Plan** heading to match the **Summary** heading, add information for each department for next quarter. You can also underline the department names.

Your completed report might look similar to the report shown in the next illustration.



Canceling Changes

If you find that you want to ignore the changes you have made and wish to go back to the document's contents and format as it was when you first reopened the icon, you can:

1. Use the Cancel Changes item in the Special menu to remove all the edits implemented since the last time you closed the icon.

After you click on Cancel Changes, the Text window closes and reverts to the state it was in before you last opened it.

Checking for Proper Spelling

Before you decide to print your report, you should use the spelling check feature of the Text icon to ensure the accuracy of your typing.

To access the spelling checker:

1. Click on the **Check Spelling** button in the Text window header.

   A Dictionaries folder appears near the lower-right corner of your desktop and the Spelling window appears to the right of the Text window. The Dictionaries folder remains on the desktop after you close the Text window.

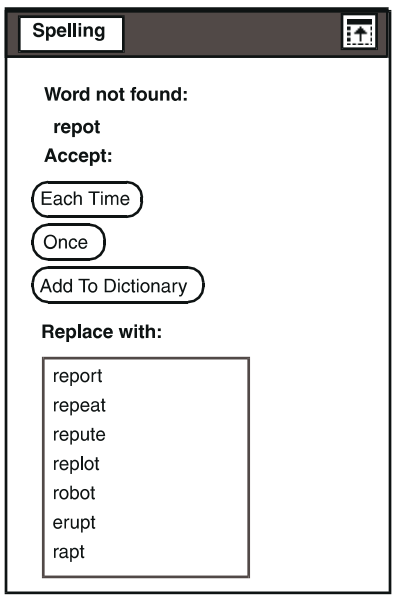
   You can check an entire document or just the selected text for spelling errors. By default, the spelling check begins at the insertion point. If the insertion point is not located in the document, then the spelling check starts at the beginning of the document.

2. Click before the first word in the document to check the entire report.
3. In the Spelling window, click on the **Start Check** button to start a spelling check.

   The following message appears in the message area:

   Spelling check in progress...

   When the spelling checker locates a word that is not found in the main or your personal dictionary, the word is highlighted in the Text window, and the Spelling window expands as shown in the next illustration.



The expanded Spelling window provides the following information:

Word not found identifies the highlighted word in the document.

Accept provides the following options:

Each Time, which allows you to accept the word each time it appears in the document.

One time, which allows you to accept the word this time, but highlight it the next time it appears in the document.

Add To Dictionary, which allows you to add the word to your personal dictionary.

Replace with provides suggestions for alternate words.

4. Select one of the buttons in the **Accept** area. The spelling check continues automatically.

   Replace the word manually in the Text icon window by deleting the highlighted word. Typing in the Text icon window closes the expanded Spelling window. You must click on the **Start Check** button to continue.

5. Repeat steps 3 and 4 each time the spelling checker highlights a misspelled word or an invalid text string.

Preparing Your Document for Printing

You determine the positioning of your document on the printed page. The Text tool has a Document Controls window in which you can:

Change the page size and orientation of your document

Change the margin width of your document

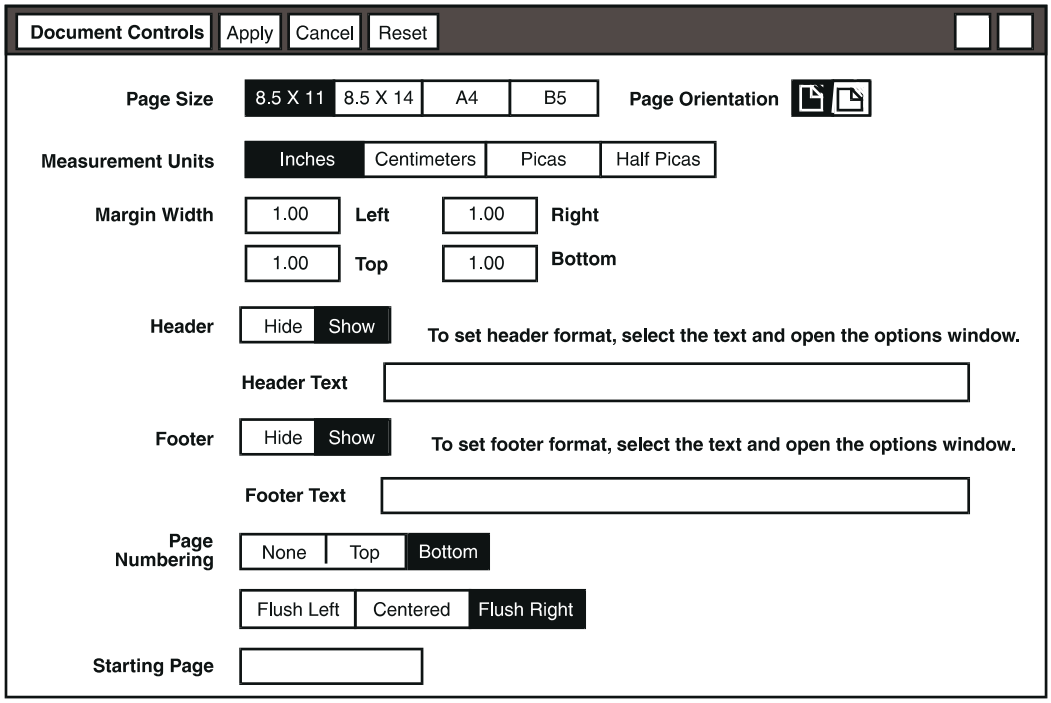
Add headers and footers in your document

Add page numbers in your document

To display the Document Controls window of the Text icon:

1. Open the icon you want to print.
2. Click on the button in the window header.

   The Document Controls window appears, similar to the next illustration.



The default settings of the **Page Size** and **Page Orientation** options are appropriate for your report on the printed page.

The **Margin Width** option controls the amount of indentation for each edge of your printed document. The default width is one inch on each side of the printed page. Because your report has a large centered title, change the top margin width as follows:

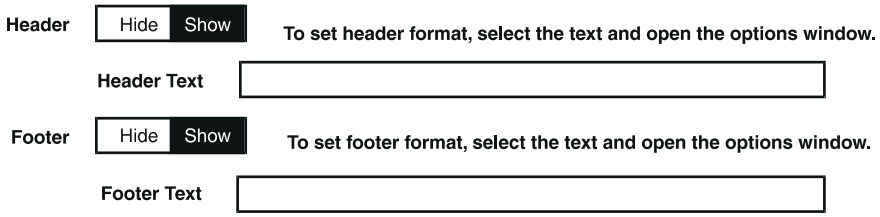
1. In the **Margin Width** field, select the **Top** margin.
2. Delete the current setting.
3. Enter 1.5 for the **Top** value.

   If you enter 0 (zero) in the **Margin Width** fields, the document will not align properly on the printed page.

   You must have at least half an inch (.5 “) for the top and bottom margins to accommodate headers and footers. They are positioned that far from the edge. If you use a narrower margin, the headers and footers will be overwritten by text.

Adding Headers and Footers

You can include a header and a footer on each page of your printed document. For example, on this page the lesson title near the line at the top of the page is a header. When you select **Show** for the **Header** or **Footer** option, the **Header Text** or **Footer Text** field appears, as illustrated next.



Add a header for your report:

1. In the **Header** field, select **Show**.
2. In the **Header Text** field, type or copy the text you want to use and close the Text Options window.

   The header text appears when you print the document or when you display it in final mode.

Using Keywords

As you might want to keep the report document to modify for the next month's summary, adding a footer with the date and your user ID would be a convenient way to distinguish each month.

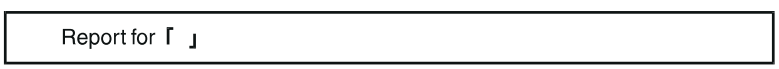
Inserting @-keywords (pronounced: at-keywords), such as **@Date**, **@Time**, or **@User**, in the **Header** or **Footer Text** field within regions causes the value of the @-keyword to appear on each page in that location.

To insert the **@Date** keyword in a footer:

1. In the open Document Controls window, select **Show** in the **Footer** field.

   The **Footer Text** field appears for you to enter text.
2. Type: Report for.
3. Select right after the word for in the Text Options window.
4. In the Text Options window **Display** field, click on **Region**.
5. Enter @Date for the region and close the window.

   Do not include a space after the @ symbol.
6. The **Footer Text** field should look similar to this:



creates a footer similar to

Report for Tue Oct 5, 1993

For more information about @-keywords, headers, and footers, refer to *Working with the Intelligent Decision Server* guide and *Text User's Guide*.

Displaying Your Final Report

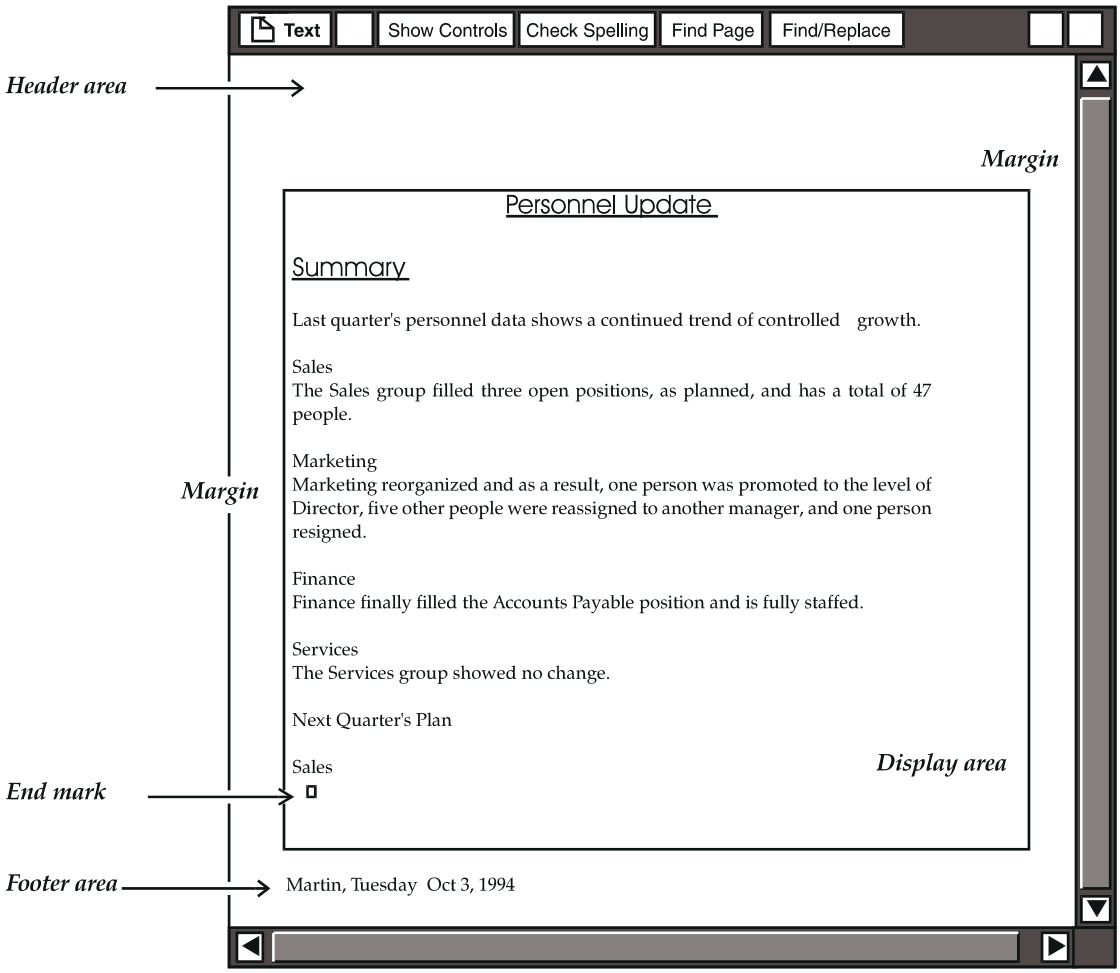
The Text tool has two modes in which you can work—draft mode and final mode.

Typically, you develop a document in draft mode, then switch to final mode when you want to review the document layout before printing it. Final mode allows you to see how the document margins, headers, footers, and images in the figure frames will appear when the document is printed.

To change between draft mode and final mode:

1. Click on the **View Draft**/**Final Mode** choice in the Special menu (*) in the window header.

   Notice that the report in the icon window is now displayed with visible margins, headers, and footers.



Locating a Printer Icon

After you are satisfied with the spelling in your report, you can print it. The IDS Printer icon controls the printing process.

The additional icon you need for the remainder of this lesson is the Printer icon, usually found in a * Printer Icons file drawer in the New Icons file drawer. Your system administrator should be able to inform you about the most appropriate Printer icon for your use. Often, if more than one printer is connected to your network, the Printer icons are uniquely named.

You can open the Printer icon and see a list of everything that is waiting to be passed to the OS/2 print queue. When you copy an icon to a Printer icon, you send the icon to

the print queue. After the document is printed, the icon does not appear in the printer window. Also, you can have a printer prompt you for options each time you print an icon by setting the controls in the printer Icon Options window.

The printing service allows you to:

Choose the number of copies and selection of pages you want to print

Check the printer queue

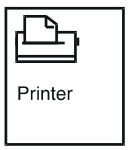
Update the list in the printer window

Sending an Icon to the Printer

You can copy individual icons, an envelope, or an entire folder to a printer. All documents within the envelope or folder are printed. Generally, icons are printed in the order that they are copied to the Printer icon.

To print an icon:

1. Copy the icon to a printer icon.

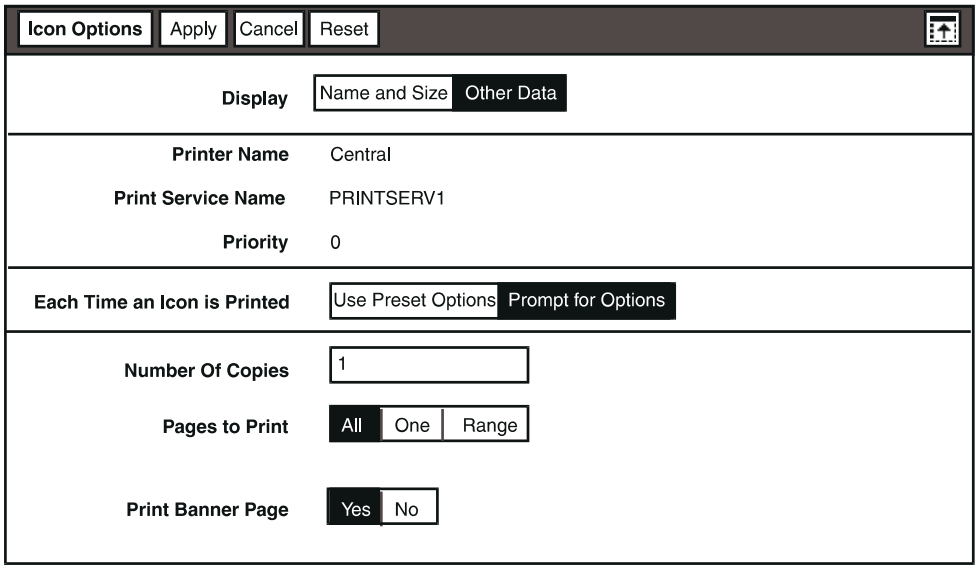


If the printer options have not been changed from the default settings, one copy of the entire document is printed.

You can set the printer icon to prompt you for options each time you send an icon to the printer. To set the printing options:

1. Open the Icon Options window for the Printer icon.
2. Click on **Other Data** in the **Display** field.

   The Other Data page of the Icon Options window opens.



3. In the **Each Time an Icon is Printed** field, click on Icon Options window.

   When you send an icon to the printer, the **Prompt for Options** choice allows you to:

   Print one or several copies of an icon

   Print an entire document, one page, or a range of consecutive pages

   Decide whether or not to print a banner page (your printer might or might not be configured to include this option)

You can cancel or reset these options at any time. Closing the Printing Options window applies the options and sends the icon to the print queue.

When you print multiple icons at one time and have **Print Banner Page** set to **Yes**, each icon is printed with its own banner page.

Reviewing This Lesson

In this lesson, you have learned how to create a report with the Text icon, modify its format, correct any spelling errors, and print a copy of your report. In the next sections, you can review the information from this lesson.

Quick Steps

The steps below outline the guidelines for constructing the text document, as presented in this lesson. You might choose to carry out your tasks in a different order.

1. Open a copy of a Text icon and type your document.

Keep a blank Text icon on your desktop that contains your preferred font and paragraph characteristics. Then, copy this template icon whenever you need to create a new document.

2. Add titles and headings to your document.

   Position the insertion point in the text where you want to add titles or headings.

3. Format the title and headings in the Text Options window.

   Select the text, open the Text Options window header, then click on either **Character** or **Paragraph** to change the format.

4. Correct any typing or spelling mistakes.

   Click on **Check Spelling** from the window header.

5. Print your document.

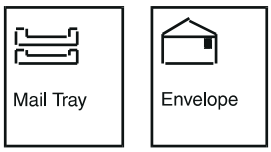
   Copy the Text icon to the Printer icon.

Learning More Details

Now that you have constructed a very simple report with the Text icon, you can create more or add different details. For more information about tailoring the Text tool icon, refer to *Text User's Guide*. Details about the Printer icon are discussed in *Working with the Intelligent Decision Server* guide.

Chapter 4. Getting the Word Out with Mail

Communicating electronically with other users across the IDS network is accomplished with two icons—the Mail Tray and the Envelope.



With the mail service, you can:

Send or receive information between your desktop and other users' desktops or users on other mail systems.

Distribute any other icon on the desktop to other IDS users by enclosing it in an envelope.

Automatically send processed data to other users from within a Capsule application.

If they are not already on your desktop, you can find an Envelope icon and a Mail Tray icon in the New Icons file drawer or from the Getting Started folder you created earlier. To use mail, you need to have a copy of these icons directly on your desktop.

In this lesson, you will learn how to:

Address an Envelope icon

Create a message

Enclose an icon to be mailed

Read your mail

Manage your mail

Writing a Memo Using Envelope

Like the Text icon, you can enter, edit, and format text in the Envelope icon. You determine the type of message you want to send—a short reminder or a longer memo. Also, you can enclose any icon in an envelope and mail it to another valid user ID on your local realm or on a remote realm.

When you open an Envelope icon, you first see the main window, as shown in the next illustration. The message window has two sections: the preformatted address area and the message area.

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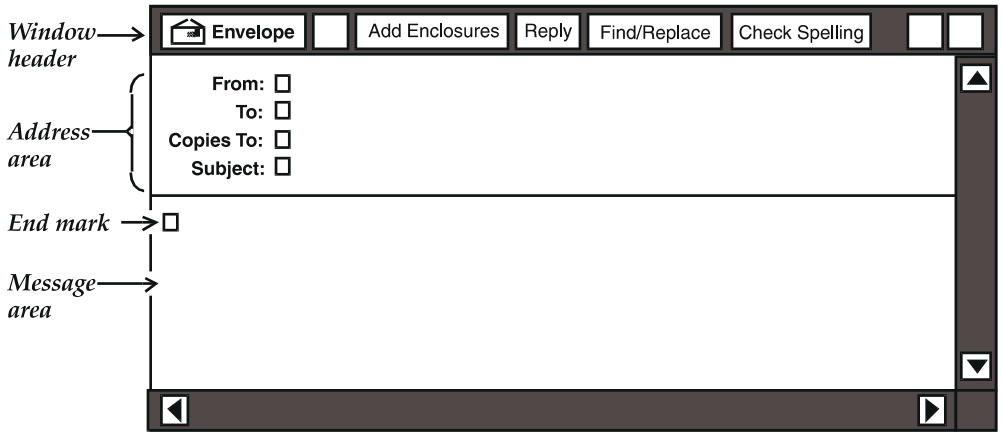


For this lesson, consider sending your manger a memo about the report you prepared using the Text icon in Lesson 3. The tasks you need to accomplish are:

Addressing the Envelope icon

Typing your message

Enclosing the report Text icon

Sending the message

Addressing an Envelope

To address an envelope, you must click in the **From**, **To**, **Copies To**, and **Subject** lines, one at a time, and enter the appropriate information after the insertion point.

1. Click after the word **From** and type your name.

   You don't have to supply your name for the **From** line as your desktop user ID is automatically inserted by the mail system when the Envelope icon is sent. However, if you want to add your first name, for example, you can enter that name in the **From** field.

   You can use the Tab key to move to the next line.

2. In the **To** line, you would type your manager's user ID. However, because this lesson is an exercise, type your own user ID so that you will receive your practice envelope as mail.

   You can insert as many user IDs here as you want. Just separate each of them with a comma.

3. Type a description of your memo in the **Subject** line.

4. Type your own user ID in the **Copies To** line.

   You can insert as many user IDs in the **To** line separated by commas as you need, or you can enter the name of a valid distribution list that contains the user IDs of a

specified group of people. If you send a message to a duplicate user ID, the mail service sends only one copy of the message to that user ID.

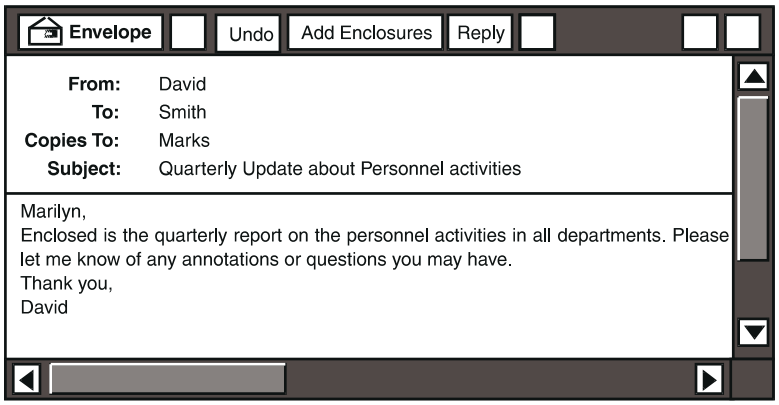
Typing Your Message

Now, you are ready to write a message about your report.

1. Click in the message area below the line.
2. Type your message

   You can change the font and format of the text in the message area by selecting the text and opening the Text Options window.

When you are done with your message, your Envelope window might look similar to the next illustration.



When you close the Envelope icon, the contents are saved. You can reopen the icon and add or change any of the contents. No mail is sent until you move or copy the icon to the Mail Tray icon.

You can save time by having an Envelope icon saved on your desktop so you can make and use a copy of it whenever you want to send mail. To make an Envelope icon usable as a source icon:

In a blank Envelope icon, enter the desired information in the **From** and the **Copies To** lines.

Set the preferred font and format characteristics.

Close the Envelope icon.

Be sure to work from a copy of this icon if you want to keep it for later use.

Adding an Enclosure

Envelope icons are unique because you can send both a message and additional icons to the designated recipients. You can send any type of icon in an Envelope icon, even another Envelope icon. You can copy your icon to be enclosed directly to the closed Envelope icon. The copied icon appears in the Enclosures-Envelope window.

The **Add Enclosures** button in the window header opens the enclosures window, as shown in the next illustration. Another way to enclose an icon in an envelope is to move or copy the icon to be mailed to the open Enclosures-Envelope window, as described in the following steps.

1. In an open Envelope window, select the **Add Enclosures/Show Enclosures** button in the window header. The enclosures window opens.

   The name of the **Add Enclosures** button changes to **Show Enclosures** when the envelope contains an enclosure. The button opens the enclosures window, regardless of its name.

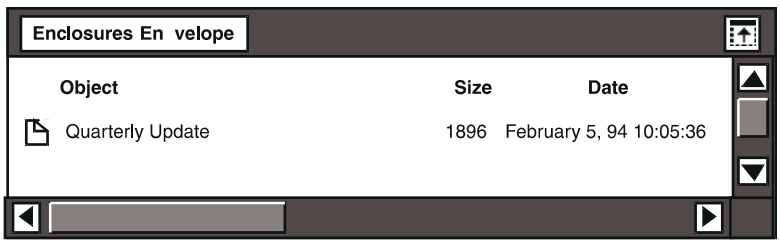
2. Select the icon to include with your mail message, in this case your Text icon, **Quarterly Update**.

3. Either move or copy the icon to the open enclosures window.

   If you want to keep a copy of the icon, either copy it to the envelope instead of moving it, or include yourself on the **Copies To** line of the address area of the **Envelope** message window.

   If you move an icon to an envelope and mail it, the icon is no longer on your desktop.

   The icon name appears in the window.



Although you can copy or move icons for mailing directly to a closed Envelope icon, when you add enclosures as described above, you can verify that you are sending only the icons you intend. The Envelope icon enclosures window allows you to enclose any icons in the envelope, or display any enclosed icons included in the envelope.

To return to the message window, either just click in the message window, or close the **Enclosures-Envelope** by clicking in the title block.

Sending Your Memo

After your envelope is properly addressed and your message entered, and you have enclosed any icons you want to include, you can mail your envelope. You can move or copy Envelope icons to either an open or a closed Mail Tray icon.

To mail an envelope:

1. Select the Envelope icon.
2. Choose to move or copy the icon with the function pad.
3. Select the Mail Tray icon, if it is closed.

   Select at the top near the word Mail Tray window, if it is open. Avoid inserting it into another icon in the Mail Tray.

The following message appears in the desktop message area:

Envelope has been delivered to Post Office.

The Post Office is now processing your mail.

Resending Returned Mail

If any user ID or network name was unidentifiable, the post office returns your mail inside another envelope with the title **Unable to Deliver**. Sometimes you need to verify that you typed the recipients' names properly or have the correct network ID.

To resend this mail:

1. Select the text of the returned Envelope icon.
2. Copy the text to a new copy of an Envelope icon.
3. Enter the proper addressing information in the new icon.
4. Close the new icon and move or copy it to the Mail Tray icon.

Because you mailed the envelope to yourself for this lesson, the mail service has probably beeped at you to let you know that you have mail.

Reading Your Mail

Mail can arrive at any time for you. Because your mail, along with your desktop, is stored on the file server, you do not have to be logged on to receive mail. If you have any mail in your Mail Tray icon, an envelope appears in the tray, indicating you should check your mail.

While you are logged on and you get mail, you are notified three ways:

The workstation beeps.

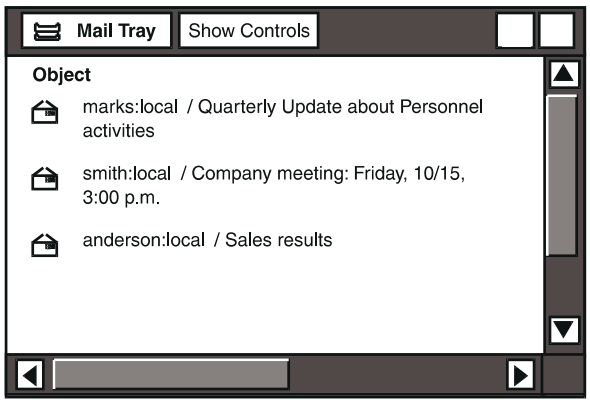
An envelope now appears in the Mail Tray icon, if your Mail Tray icon was empty.

This message appears in the desktop message area:

You have mail. -- Check your Mail Tray.

Checking Your Mail Tray

To access your mail, open your Mail Tray icon. If you have mail, your Mail Tray window will look similar to the next illustration.



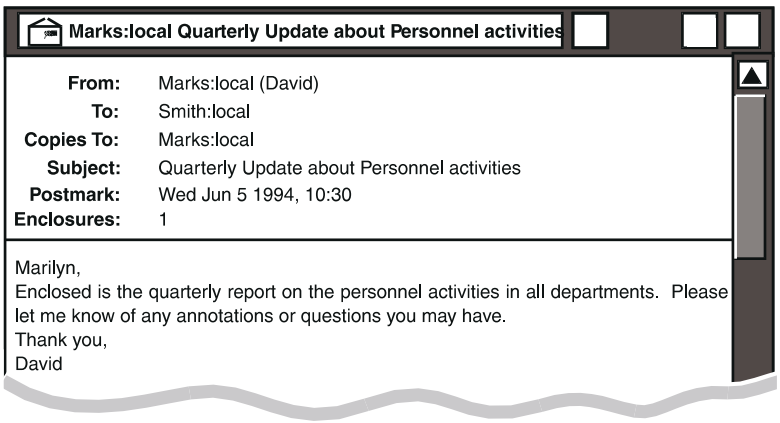
Notice that the mail service automatically changes the Envelope icon name to the sender's desktop name, the network realm name, and the contents in the line. This change allows you to see the subject of each envelope in your open Mail Tray window.

Reading Mail

You can open and read each message while it remains in your Mail Tray, or you can move or copy it to your desktop and then open it.

After you have removed mail from the Mail Tray, do not move or copy it back into the Mail Tray for storage. If you do move or copy the message back to the Mail Tray, the envelope is again mailed to all those listed in the address area, except with your name inserted as the sender.

In the example for this lesson, you have mailed to yourself the message to your manager about the personnel activities. The envelope you open to read should look similar to the following illustration.



When you open a message, you can see the user ID of the sender in the **From** line, when the message was sent in the **Postmark** line, and how many enclosures accompany the message in the **Enclosures** line.

To access an enclosed icon:

1. Click on Show Enclosures in the window header.

   The Enclosures - Envelope window opens.

2. Double-click on the icon in the Enclosures - Envelope window, or move it to your desktop and then open it.

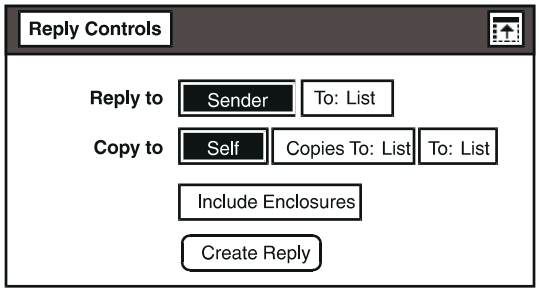
Replying to a Message

To reply to a message, you could create a completely new Envelope icon and address it as you would an original message. However, the Envelope icon has a Reply feature. In the window header of an Envelope icon to which you want to reply is a **Reply** button.

To create a **Reply** Envelope icon:

1. Select the Envelope window header.
2. Select your options for readdressing the Envelope icon.

   The default control settings for the Reply Controls window, as shown in the next illustration, allow you to select **Create Reply** to create a new envelope that is addressed to the original sender and contains reference to the original subject line.

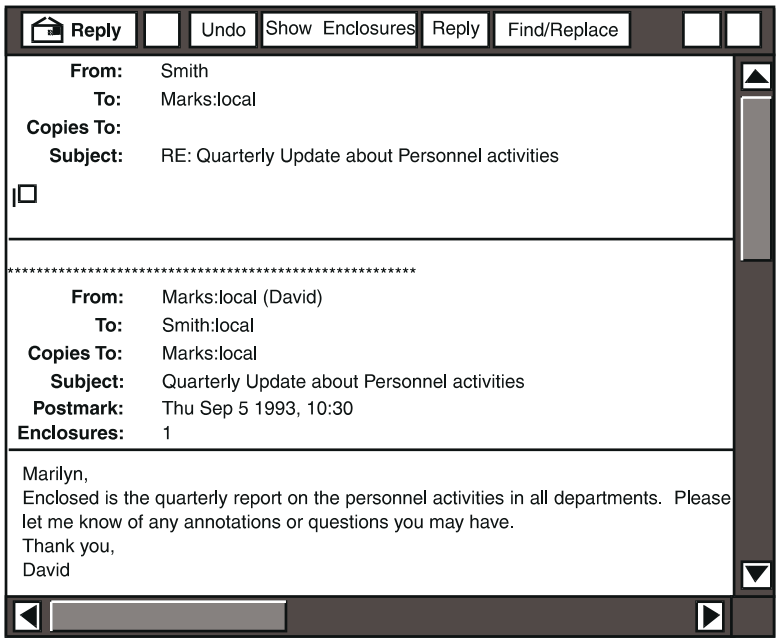


3. Click on **Create Reply**.

   You have created a **Reply** Envelope icon that is already addressed. The **Reply** Envelope icon appears in an empty spot on your desktop.

   To close the Reply Controls window envelope, click on the title block in the Reply Controls window header. The old message is below the new message area.

   The Reply Controls window closes. When you open the **Reply** envelope, it appears similar to the envelope in the next illustration.



The **Reply** envelope contains a new message area between the first line and the line of asterisks (***) for you to enter your reply. When you complete your message, you mail the **Reply** envelope by closing the icon and copying or moving it to the Mail Tray icon.

Printing a Mail Message

Printing characteristics are set in the Printing Controls window. You access the Printing Controls window by clicking on the **Show Printing Controls** choice in the Special menu. The window opens in which you specify how the envelope will be printed. The choices are very similar to the choices for printing text. For example, you can specify margin width, headers, footers, and page numbers. After setting the printing controls, copy or move the Envelope icon to a printer icon.

Reviewing This Lesson

In this lesson, you have read how you can use an Envelope icon and the Mail Tray icon to communicate electronically with other users. Envelope icons are a convenient means of distributing icons to others.

Quick Steps

The steps below outline the procedure for using mail, as presented in this lesson.

1. Have a Mail Tray icon on your desktop.

   You should have only one Mail Tray icon on your desktop. Use the Envelope icon for your message.

2. Address an Envelope icon and type your message.

   Prepare an Envelope icon on your desktop with your preferred settings, such as your user ID in the Copies To line, for use as a master envelope.

3. Place the icons you want to mail in the Enclosures window.

   Select the icons and then move the icons to be mailed to the Enclosures - Envelopes window.

4. Close the Envelope window and place the icon in the Mail Tray.

   Either copy or move the icons to the Mail Tray. If you move the icon, remember that a copy no longer remains on your desktop.

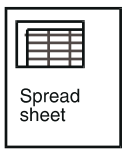
5. Retrieve your mail when an envelope appears in the Mail Tray icon.

   Open the Mail Tray icon when new mail arrives.

Learning More Details

For more information about using the Envelope icon and the mail service, refer to *Working with the Intelligent Decision Server* guide.

Chapter 5. Adding the Facts in the Spreadsheet



Often, the type of information you work with is numerical. The IDS icon that lets you work with numbers is the Spreadsheet. The Spreadsheet tool, an electronic version of the traditional accounting worksheet, enables you to perform calculations, change the numbers or calculations to do “what-if” scenarios, sort your data, and schedule projects using the date functions.

Be sure to work from a copy of a Spreadsheet icon on your desktop. For the example in this lesson, you use a spreadsheet to add the sales department personnel budget for two quarters. In this lesson, you learn the basics of how to:

Insert different types of data

Move and copy data

Set global options for the spreadsheet

Use calculations and functions

Using a Spreadsheet Icon

A spreadsheet window has a series of rows, labeled with numbers, that intersect with columns, labeled with letters. The intersection of a row and column makes a cell, whose coordinates are the combination of a letter and number labels, such as **b2**, illustrated in the next figure.

Selecting Cells

You select a whole row or column by clicking on the row or column label. When you click near the border of a cell, you can select the entire cell such that the whole cell is highlighted. When you click in the center of a cell, you see the border of the cell become outlined and a vertical insertion bar (|) appears. An outlined cell is the active cell, ready to receive input. You can select a single cell, a whole row, a whole column, or a block or range of cells. Thus, you can clear the contents of cells, or delete, move, and copy one or any number of cells in one process.

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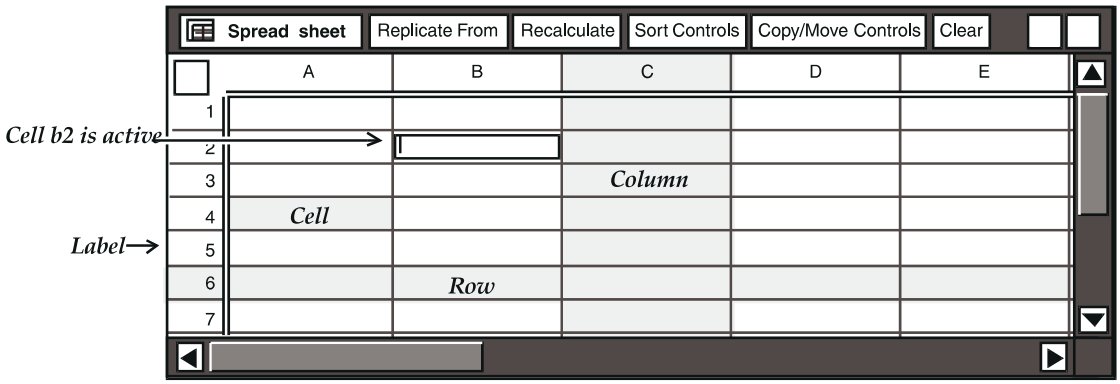


You can use the keyboard arrow keys to move from cell to cell in either a left-right direction or up-down direction. Most keyboards also have keys labeled **Home, End, Page Up,** and **Page Down**. These keys allow you to jump to the four corners of the spreadsheet, regardless of the location of the current active cell.

Entering Data into Cells

Spreadsheet cells hold data. Often data is automatically transferred into a Spreadsheet icon when the icon is part of a capsule application. Manually, you insert data by:

Clicking inside the cell and typing directly into the cell

Copying or moving data to the cell or a group of cells

Opening the options window for the selected cell to type in the **Entry** field

Spreadsheet cells can hold different types of data. The data can be text for column and row labels, dates, formulas for calculations, and numbers. Some data types have a distinct appearance when selected. Formulas are preceded with an equal sign (=). Dates are designated by a backslash (\). Text appears without a symbol, but an empty text cell contains a period (.) in the lower left corner. The data in cells can be set to appear flush left, centered, flush right, or in a predetermined combination.

Setting Up Rows and Columns

One way to start your lesson spreadsheet is to enter row and column titles. You can use the example to build your own spreadsheet. First, enter text data for the row titles in column A using the steps below. Your titles can include such items as **Salary & Wages, Payroll Taxes & Benefits, Training, Education Reimbursement,** and **Travel & Entertainment**.

1. Click in the cell A5 and begin typing your titles. Press Enter when you have completed typing the title.

   Notice that the cell directly below the active one becomes highlighted when you press Enter.

Depending on the font, type size, and column width, your titles might not fit in the column, as shown in the next illustration. The titles will remain readable until the adjacent cells contain data or are selected.

	A	B	C	D
1				
2				
3				
4				
5	Salary & Wages			
6	Payroll Taxes & Benefits			
7	Training			
8	Education Reimbursement			
9	Travel & Entertainment			
10				

2. Adjust the column width for column A to **1.75** inches using these steps:
   a. Select the column label and then open the Spreadsheet Options window.
   b. In the **Width** field, type the new width.
   c. Click on **Apply** or close the window.

   You should now be able to see the row titles in column A.

Next, enter dates for the column titles. Begin in row 4.

1. Click in cell **B4**.
2. Type January, 93.
3. Select the cell and change the data type from Text to Date:
   a. Select the cell and then open the Spreadsheet Options window.
   b. In the **Display** field, click on **Entry**.
   c. Select the desired data type (**Date**) in the **Type** field.
   d. Click on **Apply** or close the window.

If you click in the cell contents, **01/93** now appears preceded by a backslash (\) to denote the date data type. To enter a date data type directly into a cell, type a backslash and then the date.

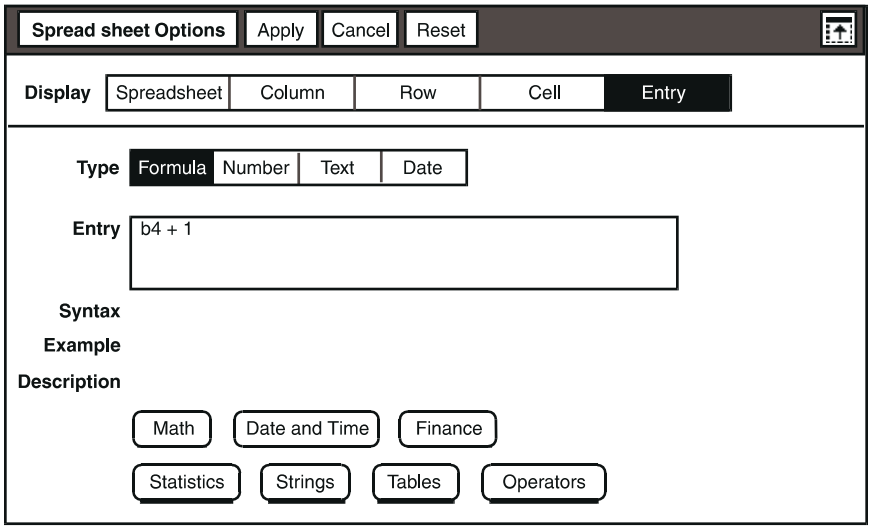
If you have changed your date display type in the **Country** page of the **Set Preferences** choice of the IDS Special menu, your date will appear in a different format than shown above.

Using Dates in Formulas

Instead of entering each column title as an individual date data type, you can use a formula to cause the titles to appear. Formulas use cell data referenced by coordinates and spreadsheet functions to calculate or produce a numeric result or date arithmetic. A simple use of date arithmetic is to generate monthly titles for the columns.

1. Click in cell C4 and open the Spreadsheet Options window.
2. In the **Display** field, click on **Entry**.
3. In the **Type** field, click on **Formula**.

   Notice that the **Entry** field appears.



4. Type b4 + 1 in the **Entry** field.

   Cell B4 contains a date of 01/93. The formula **b4 + 1** considers the cell contents, determines the data type, and adds one more unit, in this case, a month.
5. Close the Spreadsheet Options window.

   The cell C4 now shows the formula results: **= 02/93**.

Similar to date entries, you can enter a formula directly into a cell by preceding the formula with a symbol—in this case, an equal sign (=). However, you cannot edit the results of a formula; only the formula itself is editable. To edit a formula, you must open the Spreadsheet Options window.

Referencing cells in formulas allows you to define an operation that uses the data from the specified cell or range of cells. The reference might stay fixed or absolute, or the coordinates can adjust or be relative such that they change depending on the location of the cell containing the formula. The cell references used in this example are relative. Absolute cell references are preceded with an exclamation point (!).

Replicating Cell Contents

To enter the remaining column titles, you could repeat the steps described for entering date arithmetic formulas for column B. You can save some effort by using the **Replicate From** button in the window header to duplicate the formula into any number of cells. The **Replicate From** button allows you to copy a single cell's contents to more than one cell at a time.

To enter the remaining column titles, replicate the formula in cell C4 to the cells D4 through G4.

1. Select the cell D4 and press and hold down the right button, move the pointer to select the next three cells: E4**,** F4**,** and G4.

   You can enlarge the window to see column G.

2. Click on the **Replicate From** button in the window header.
3. Click on cell C4 and notice that the new column titles appear in the next four cells.

   Your lesson spreadsheet should be similar to the next illustration.

	A	B	C	D	E	F	G
1							
2							
3							
4		01/ 93	=02/93	=03/93	=04/ 93	=05/ 93	=06/93
5	Salary & Wages						
6	Payroll Taxes & Benefits						
7	Training						
8	Education Reimbursement						
9	Travel & Entertainment						
10							

The **Replicate From** button is also used frequently for calculations.

Entering Data

Now that the row and column titles are determined, you can enter the numerical data for the sales department personnel expense budget. Enter the expenses for each month. Whenever you press Enter to complete an entry and move downward, or press Tab to complete the entry and move to the right, the cell entry is automatically given a number data type.

1. Enter the data that correspond to expenses for each month. You can enlarge the window. If you want, you can use the sample data below.

	01/ 93	=02/93	=03/93	=04/ 93	=05/ 93	=06/93
Salary & Wages	186,158	186,158	186,158	196,696	197,750	202,284
Payroll Taxes & Benefits	36,160	36,160	36,160	37,372	37,538	38,434
Training	1670	1600	1600	1950	1950	2020
Education Reimbursement	345	300	370	385	415	415
Travel & Entertainment	7080	7080	7080	6300	6300	5080

To work through this lesson more quickly, you can copy salary and payroll data from the first column to the next to columns, presuming the figure remain the same as for the first month.

To copy multiple cells:

a. Select the top left cell of the group to copy.

b. Move the pointer to the bottom right cell of the group.

c. Click the right mouse button to select the range of cells.

d. Select the copy operation from the function pad.

e. Move the pointer to the top left cell of the group of cells to which you want to copy and click.

   The data fills an equivalent group of cells.

2. Close and reopen the icon to save the work you have accomplished.

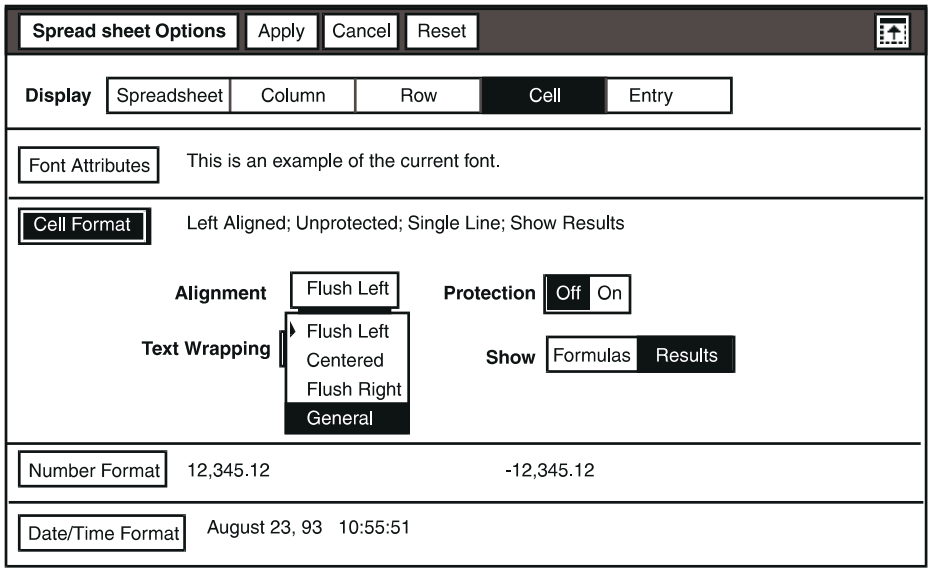
Changing the Global Format

If you haven't changed the default format settings, the cell numbers appear flush left, like text. You can change the format on a cell, row, column, or whole spreadsheet.

To set any font attributes, cell, number, or date and time format, use the Spreadsheet Options window. In the upper-left corner of the spreadsheet is a Select All button. When you click on the symbol, the whole spreadsheet is selected. The Select All button looks like:

To change the cell format:

1. Click on the Select All button and open the Spreadsheet Options window.
2. In the **Display** field, click on **Cell**.
3. Click on **Cell Format** if that page of the window is not visible.

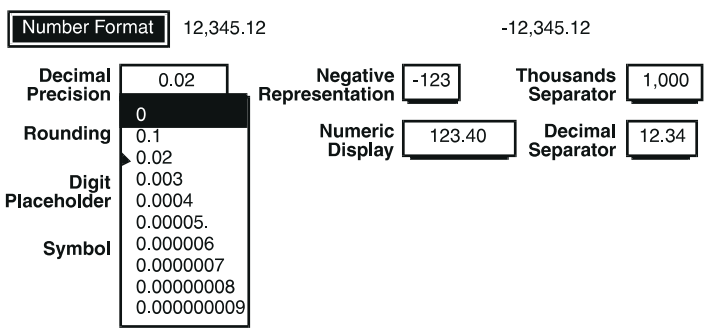


4. In the **Alignment** menu, select **General**.

   The **General** choice shifts the spreadsheet contents such that the numeric contents of the cells become flush right, while keeping the text, date, and formula contents of cells flush left.

   Rather than closing the Spreadsheet Options window, continue working to set the decimal precision of the numbers.

5. Click on **Number Format**, if that page is not already visible.
6. In the **Decimal Precision** menu, select **0** to have the expenses shown in whole dollars.



7. Close the Spreadsheet Options window to apply all the changes.

You can set many attributes for your spreadsheets using the Spreadsheet Options window. Experiment to determine which settings you prefer.

Your spreadsheet should now look similar to the next illustration.

	A	B	C	D	E	F	G
1							
2							
3							
4		01/ 93	=02/93	=03/93	=04/ 93	=05/ 93	=06/93
5	Salary & Wages	186,158	186,158	186,158	196,696	197,750	202,284
6	Payroll Taxes & Benefits	36,160	36,160	36,160	37,372	37,538	38,434
7	Training	1670	1600	1600	1950	1950	2020
8	Education Reimbursement	345	300	370	385	415	415
9	Travel & Entertainment	7080	7080	7080	6300	6300	5080
10							

Freezing a Portion of the Spreadsheet

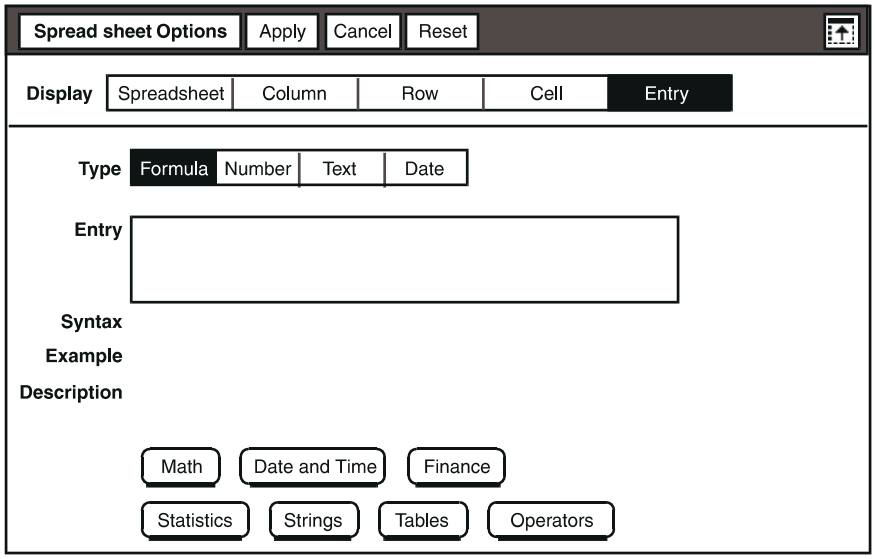
Especially when working on large projects, you can keep a specific area of your spreadsheet in view while you scroll to another location. You can freeze a portion of the spreadsheet, such as the row titles column, using the **Freeze Selection** choice in the Special button menu.

1. Select the column label **A**.
2. In the Special button menu, click on **Freeze Selection**.

   Notice the column label cell is shaded to indicate that the column is frozen.
3. Using the bottom scroll bar, move the spreadsheet such that column E is next to the row titles in column A.

Inserting a Calculation

Calculations are entered into the spreadsheet using formulas. Near the bottom of the Spreadsheet Options window, you see several buttons. Each button has a menu. The menu choices are predefined functions or operations with which you construct calculations.



Information appears in the **Syntax**, **Example**, and **Description** lines to guide you about the syntax, usage, and purpose of the choice you select from one of the menus. The calculation you create in the **Entry** field should conform to the syntax sample.

You can define calculations to apply to specific portions of your spreadsheet. Create a calculation to add the expenses for the second quarter in column **H** using the following steps.

1. Enter the column title, Q2Total, in cell H4.
2. Select cell H5 and open the Spreadsheet Options window for the **Entry** choice.
3. Ensure that **Formula** is selected in the **Type** field.
4. In the **Statistics** menu, select **sum**.

   Notice that the **sum** function appears in the **Entry** field. To make the calculation complete, you need to make the statement in the field match the format of the syntax information in the **Syntax** line.
5. Type the coordinates of the cells you want to total: e5:g5

   or

   Enter the cells' coordinates using the following steps.

   a. Select the range of cells in the spreadsheet.

   b. Select the copy operation on the function pad.

   c. Click after the left parenthesis in the **Entry** field after the pointer changes to show that the copy operation is in process. The spreadsheet enters the range of cells **E5:G5**.

6. Type the right parenthesis [)].
7. Check the syntax for accuracy and close the Spreadsheet Options window.

   The spreadsheet now contains a result for the formula in cell H5.
8. Replicate the formula from cell H5 to the cells H6 through H9. Thus, the items in rows 5 through 9 have totals for the second quarter.

   To replicate cell contents:

   a. Select the cell or range of cells to which you want to copy another cell's contents.
   b. Click on the **Replicate From** button in the window header.
   c. Click on the source cell containing the formula you want to copy.

      Notice that the formula results or cell contents appear in the cells that were originally selected.

Inserting a Column

Your spreadsheet now has a column that contains the totals for the second quarter expenses. You can copy and insert a calculation for first quarter expenses.

1. Select column H and then select the copy operation from the function pad.
2. Click on the vertical line after column D to insert the calculation between columns D and E.
3. Select the **Q2Total** title and change it to read
4. Select cell E5 and open the Spreadsheet Options window to view the **Entry** page.

   The formula should read: **sum(b5:d5)**

Inserting a row is very similar to inserting a column:

1. Select the label of one or more blank columns or rows.
2. Select the copy or move operation on the function pad.
3. When the pointer changes shape, click to the left of the insertion location for columns or above the insertion location for rows. The new blank row or column appears and row or column labels are adjusted.

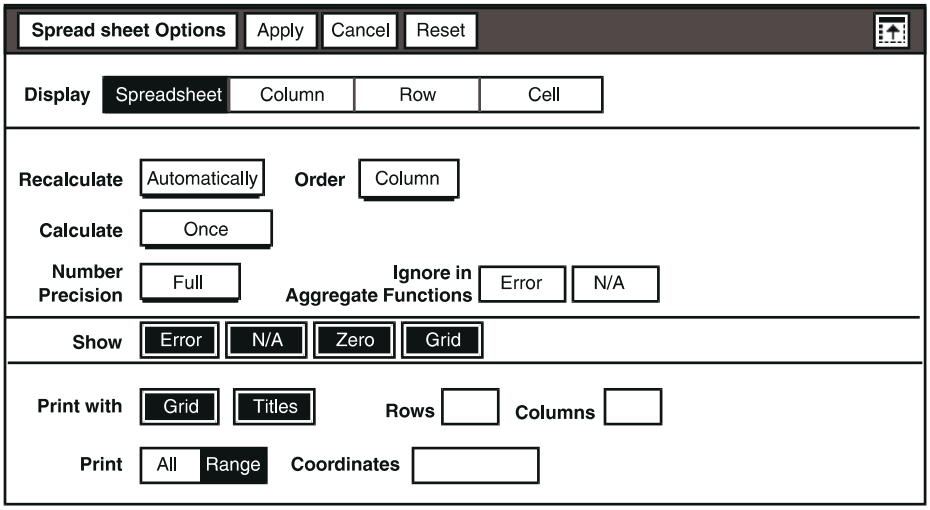
Printing the Spreadsheet

You can choose to print the whole spreadsheet or only a portion of it. You can also elect to print the spreadsheet with a grid for the background, similar to what you see on the screen.

To select how you want to print, select anything in the spreadsheet and open the Spreadsheet Options window.

1. In the **Display** field, be sure that **Spreadsheet** is selected.
2. Near the bottom of the window you find two options: **Print With** and **Print**.

3. Click on **Range** in the **Print** option.
4. Enter the cell coordinates that describe the group of rows and columns you want to print. For example, enter a5:h13.



5. Close the Spreadsheet Options window.
6. Close the Spreadsheet icon and copy it to a Printer icon.

Reviewing This Lesson

In this lesson, you have learned how to begin building a spreadsheet. In the next section, you can review the information from this lesson.

Quick Steps

The steps below outline the procedure for building a spreadsheet, as presented in this lesson.

1. Enter data with the correct data type in the cells.

   In the Entry page of the Spreadsheet Options window, select the appropriate data type from your cell.

2. Set up you rows and columns.

   You can change the column row or size. Select the whole spreadsheet, or row or column. Open the Spreadsheet Options window to the appropriate display page to change settings.

3. Enter a calculation using a formula.

   In the Entry page of the Spreadsheet Options window, click on **Formula** in the **Type** field. Use the syntax information provided by the function buttons.

4. Replicate a cell's contents to another cell.

   Use the **Replica From** button in the Window header.

5. Set global date and number formats, calculation method, and printing options.

   Change options in the Spreadsheet Options window using the **Select All** button.

Learning More Details

Now that you have constructed a spreadsheet, you can refer to *Spreadsheet User's Guide* to learn more about the functions and advanced features of the Spreadsheet tool.

Spreadsheet is also very useful in building applications. For more information about using the tool icons for capsule applications, refer to *Capsule User's Guide*.

Chapter 6. Plotting Your Results

The Plot tool puts information into a visual format. With the Plot tool, you can make axes graphs and pie graphs of your information. You should have a copy of a Plot icon in the Getting Started folder you created in Lesson 2.

To prepare your Plot icon for this lesson:

1. Move the Plot icon out of the folder to your desktop.
2. Rename the Plot icon to Lesson.
3. You need to open the Icon Options window to rename an icon.
4. While the Icon Options window is open, select the **Printing** page and change the **Orientation** to horizontal, or landscape.

Now, you are ready to continue with this lesson, which covers how to:

Transfer data to the Plot icon

Select the overall characteristics

Make a bar graph

Determine the appearance of each row or column plotted

Transferring Data to Plot

You can transfer data to a Plot icon by copying data from an open or a closed icon that contains data in a tabular format, such as Spreadsheet, Query, Reporter, or Layout. Data can also be transferred into the Plot tool through a Capsule arrow in a capsule application.

For this lesson, you might use a Spreadsheet icon with contents similar to that in the next illustration.

	A	B	C	D	E
1					
2					
3	Salary & Wages	91 Total	92 Total	93 Total	
4	Sales Dept.	558,474	436,550	569,775	
5	Marketing Dept.	390,932	450,835	430,760	
6	Finance Dept.	251,313	238,545	235,622	
7					
8					

This spreadsheet shows the salary and wages totals over the past three years for the Sales, Marketing, and Finance departments.

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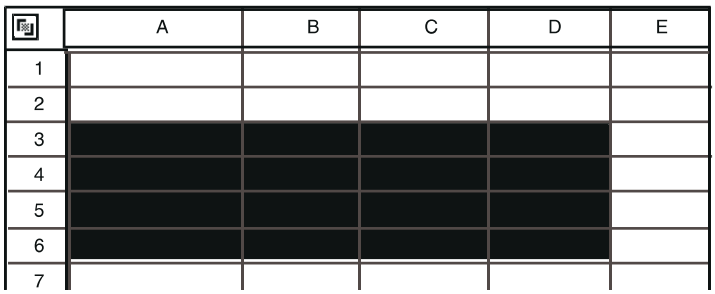
To transfer data to the Plot icon:

1. Open the Spreadsheet icon from which you want to copy data.
2. Click on the cells containing the data to highlight them. In this example, click on cell **a3** and extend your selection to cell **d6**.

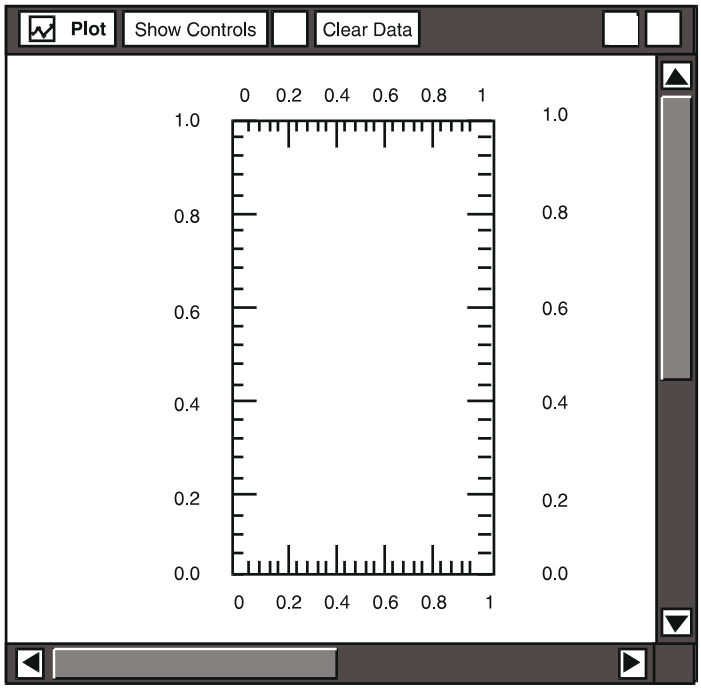


3. Copy the highlighted cells and click on the Lesson icon when the pointer changes shape. The Plot icon can remain closed to receive data or can be open.

   Notice that the Plot icon opens and a message appears in the message bar to inform you the data was successfully copied:

   Plot now has data for 4 columns and 3 rows, plus one row of title.

   The Plot tool has a main window and a controls window that allow you to determine the type, appearance, and titles for the graph. Although the data is not displayed in the main window, your Plot icon now contains data that it can use to make a graph. You must now determine the appearance of the graph by choosing settings in the Plot Controls window.



Making an Axes Graph

After the Plot icon has data, you can select the type of graph you desire. The Plot tool displays both line and pie graphs. For this lesson, you will make an axes graph with bars, using the guidelines presented in the following sections.

Selecting the Graph Characteristics

You can select the appearance of the overall graph, the axes, and each single plot in the Plot Controls window. Notice that the Plot icon opens when you copy data to it. In the window header is the **Show Controls** button.

1. Look at the Lesson Plot window. You can stretch the window to have enough room to display the graph later.
2. Click on the button in the window header to display the Plot Controls window.

   The Plot Controls window has three accompanying pages: **Single Plots**, **Overall Graph**, and **Axes** that you select in the **Display** field.

   First, you will set options in the **Overall Graph** page, and then select characteristics for each plot in the **Single Plots** page.
3. In the **Display** field, click on **Overall Graph**.

Determining the Position on the Page

Positioning the graph on the page and also in the Plot window is done in the **Overall Graph** page. You can consider several aspects of a graph to determine the most appropriate settings, such as:

The size of the graph on the page

Whether to treat data as rows or columns

The direction of orientation

The spacing of the bars

Choosing the most appropriate size of your graph can depend on:

How large you want the graph to be

With the **Size** field, you can make the graph occupy nearly the whole printed page or only a smaller portion of a page. You can change the size of your graph if you cannot view the entire graph in the Plot window.

The length of labels on an axis

If the labels on the x-axis of your graph are long, for example, you can select **Full** in the **Size** field so there will be room for the labels to appear.

The orientation of the graph

You can change the orientation of the graph to allow you to keep the graph a smaller size.

The **Sixe** field defaults to 1/4. The graph appears one-fourth the size of the printed page in the Plot window, and prints one-fourth the size of the paper, minus the margins.

You also need to decide to have the Plot tool show the data as row or column data, which determines how the data in the graph is grouped. For the lesson example, the information should be treated as rows.

Choose the appropriate settings in the **Overall Graph** page before you create the graph.

1. Click on **Full** in the **Size** field.
2. Click on **Rows** in the **Treat Data As** field.
3. Change the **Orientation** field to the second choice.
4. Click on the third choice in the **Bar Spacing** field.

   This choice leaves a small amount of white space between the bars.

Selecting Plot Characteristics

After you determine the overall characteristics of your graph, return to the Plot Controls window.

The Plot Controls window is divided into three areas when the **Display** choice is **Single Plots**. The top portion allows you to select the options, depending on the type of graph.

The center portion is a small depiction area to portray what the individual plots resemble. The bottom portion of the window allows you to specify how you want the graph to be drawn, as well as how the **Legend Title** should read.

Specify how your plots of data should appear.

1. In the **Show** field, click on **Bars** to draw the data in long, narrow, rectangular bars.

   Notice that the bottom portion of the window expands to display more choices about the appearance of the bars, such as the thickness of the outline, density of the shading, design of the pattern, and the color.

   Each time you select the **Add Plot** button, the Plot tool automatically selects the next choice in the **Shading** and **Pattern** fields. Or, you can select characteristics from the choices for each plot individually as you add to the graph with the **Add Plot** button.

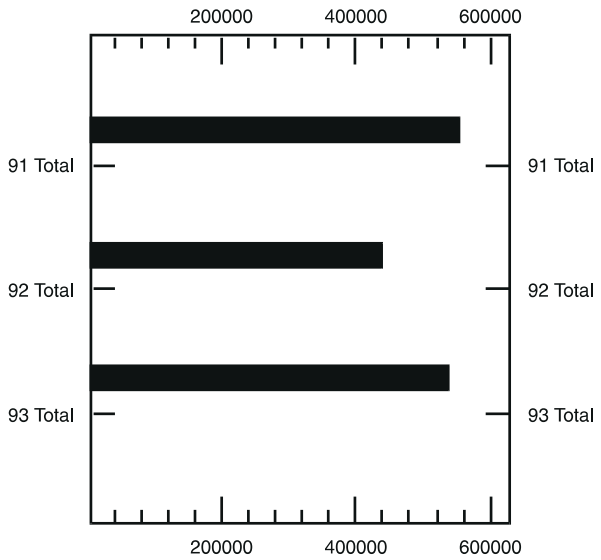
   You can choose to use the default settings. However, for this lesson, try selecting different variations and color, such as those shown in the next illustration.

   You can also modify a characteristic after the plot has been drawn by selecting the new choice and clicking on **Apply** in the window header. The new formats are applied to the plot depiction, that is selected in the window. The available options vary, depending on the selection in the **Show** field.

2. Finish selecting the display characteristics of the first plot.

Individual plots with x- and y-axis labels and Legend

3. Click on **Apply** in the window header to see the bars of the first plot appear in the main window. Your plot can appear similar to the next illustration.



Adding More Plots to the Graph

In the Plot Controls window header, the **Add Plot** button allows you to chart the next segment of data you transferred into the Plot tool. When you click on **Add Plot**, another depiction of the plot appears in the middle of the Plot Controls window. The Plot tool creates a depiction for each row or column of data you want to graph. When you want to change characteristics or delete a plot, select the miniature depiction, select the changes in the bottom portion of the window, and click on **Apply**, or simply delete the depiction.

While the depiction is highlighted, set the shading, pattern, and color characteristics you want for the new plot, if you do not want the automatically specified choices.

Each time you select the **Add Plot** button, the Plot tool automatically selects the next choice in the **Shading** and **Pattern** fields. You can change the characteristics for each plot individually after you add to the graph with the **Add Plot** button.

Add the two additional plots from the example spreadsheet.

Adding a Title

In the main window of the Plot tool, you can add a title for your graph. When you click in the window, a frame pops up. You can move, copy, delete, or change the size of the frame to accommodate your title. If you click on the frame itself, small squares or handles appear.

You can move the frame by dragging the handles until the frame is in the desired location. To resize the frame, you select it and press F8 to enable the mouse to stretch or shrink the frame when you drag the mouse. After you type your title, you can select the text and open the options window.

Add a title to your plot using the steps below.

1. Click in the main Plot window where you want to insert a title.

   Notice a small rectangle appears with a blinking insertion pointer. This rectangle is the title frame.

2. Type your title in the frame. For example, type:

   Salary and Wages Summary

3. Select the text in the title frame and open the Text Options window using the pop-up function pad.
4. Change the font size and make the text bold and underlined. Close the Text Options window.
5. Click on the frame and open the Title Options window using the function pad.
6. Select the third line choice in the **Border** field and close the window.

Reviewing This Lesson

In this lesson, you have learned how you can graphically display your data using the Plot tool. In the next section, you can review the information you learned in this lesson.

Quick Steps

The steps below outline the guidelines for making a bar graph, as presented in this lesson.

1. Transfer data into the Plot tool.

   Copy data to the Plot tool from a Spreadsheet, Query, Reporter, or Layout icon. You can copy a region of data or the whole table.

2. Select the type of graph you want.

   Decide if you want an axes or pie graph in the Plot Controls window. The type of axes graph is selected from the **Show** field.

3. Determine the position on the page.

   In the Overall Graph page of the Plot Controls window, you can set the size, orientation, and the treatment of data. You can also use the Icon Options printing-orientation choices.

4. Choose the characteristics for each plot.

   In the Single Plot page of the Plot Controls window, set the appearance for each plot.

5. Add a title and format the axes.

Click in the Plot Controls window to get a title frame and type your title.

Learning More Details

Now that you have constructed a very simple bar graph with the Plot tool, you can build more. You can also make pie, line, and point graphs. Refer to *Plot User's Guide* for more information on using the Plot tool.

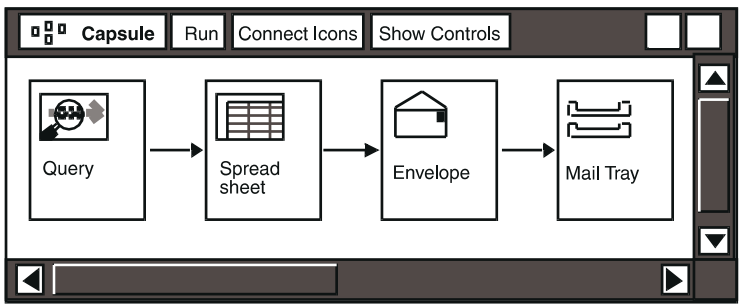
After you have become proficient in using the tools, you can build time-saving applications. For more information about tailoring the tool icons for capsule applications, refer to *Capsule User's Guide*.

Chapter 7. Running Capsule Applications

One way to automate a task or routine procedure you use frequently is to create a capsule application using the Capsule icon. With a capsule application, you can rerun the same application repeatedly and efficiently with a single click of a mouse button. At your site, you can find capsule application icons in a file drawer for your use. Consult your system administrator for information about such applications.

In this lesson, you will see how to use a capsule application that has a form for entering data, and how to set different options for the application to use.

Note its icon graphic, symbolizing connected icons. Capsule applications help you automate the flow of data from one icon to another. For example, you can run a series of similar reports for different departments on a regular basis. To get the data for those reports, you need to query a database, run calculations over the data, present the data in a specific report, and mail it to a colleague with a cover note. The arrows show the direction of data flow.



Instead of doing each step for each report, you can have a capsule application generate the report for the various departments. In the example, you can use the mail service in a capsule application to automatically send processed data to other desktops connected to your network. By including an addressed Envelope and a Mail Tray as destination icons in a capsule application, you can retrieve, analyze, present, and mail information in one step.

Using Capsule Applications

Most IDS icons can be connected together inside a Capsule icon to create an application. You can run a capsule application by selecting **Run** in the window header, and the results of the icons' processing will be produced.

You can run any capsule application for which you have access. If you are interested in building your own capsule applications, you should consult your system administrator to see if you have the appropriate IDS capabilities.

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This lesson does not require any specific icon. Capsule applications can vary, depending on the tasks for which they were built. Some of the common characteristics of a capsule application are the ability to:

Run the application with a single click on the **Run** button.

Choose certain parameters or constraint choices for the application through a data entry form.

Use sophisticated capsule applications without needing to understand how to build them.

To use a capsule application, you must first open the Capsule icon. Depending on the application, perhaps you will need to click on a Data Entry icon to access the form.

Entering Data Through a Form

Many capsule applications use icons that access or update databases. Instead of expecting the capsule application user to know how to use the database, the application developer often constructs a form that allows the user to enter data or specify limitations or constraints on the data retrieved from the database.

The form allows you to interact with a database or capsule application. You enter, retrieve, and delete information from within Data Entry forms. For example, suppose you work in Human Resources and need to update an employee's records.

The Data Entry form you use can include different buttons, prompts, and fields than those shown in the illustration above.

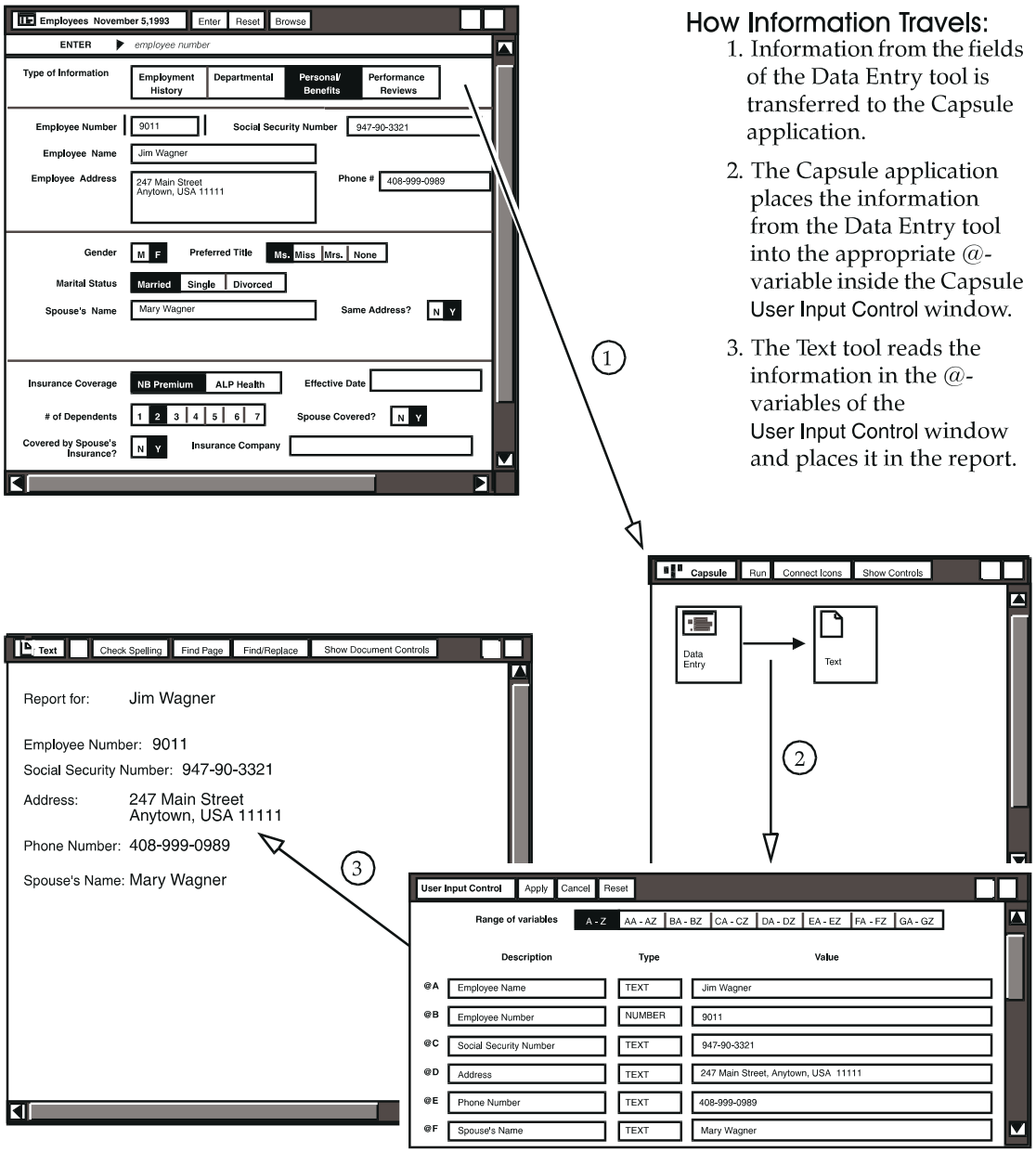
How Data Entry Forms and Capsule Applications Communicate

When you enter information into a Data Entry form that interacts with a capsule application, the information is transferred to **@-variables** within the capsule application. An @-variable is a control that passes information to tools within the capsule application.

The contents of the @-variables change based on your entries in the Data Entry form, but the name of the @-variable is constant. Because the name of the @-variable is constant, the contents of the @-variable can be used in other tools within the capsule application.

For example, a report that displays an employee's information was created with a Text tool. The information in the report changes based on your entries in the Data Entry form. To accomplish this information transfer between the Data Entry form and the Text tool, both icons must be within a capsule application and have defined @-variables to use in both tools.

The following diagram helps to illustrate the transfer of information between the Data Entry form and the Text tool within a capsule application.



How Information Travels:

1. Information from the fields of the Data Entry tool is transferred to the Capsule application.
2. The Capsule application places the information from the Data Entry tool into the appropriate @-variable inside the Capsule User Input Control window.
3. The Text tool reads the information in the @-variables of the User Input Control window and places it in the report.

The same @-variables can be used in an envelope within a Capsule. When used in the address lines (From, To, Copies To, and Subject) of an encapsulated Envelope icon, you avoid having to open the Icon Options window every time you need to make a slight change in the address area of the envelope.

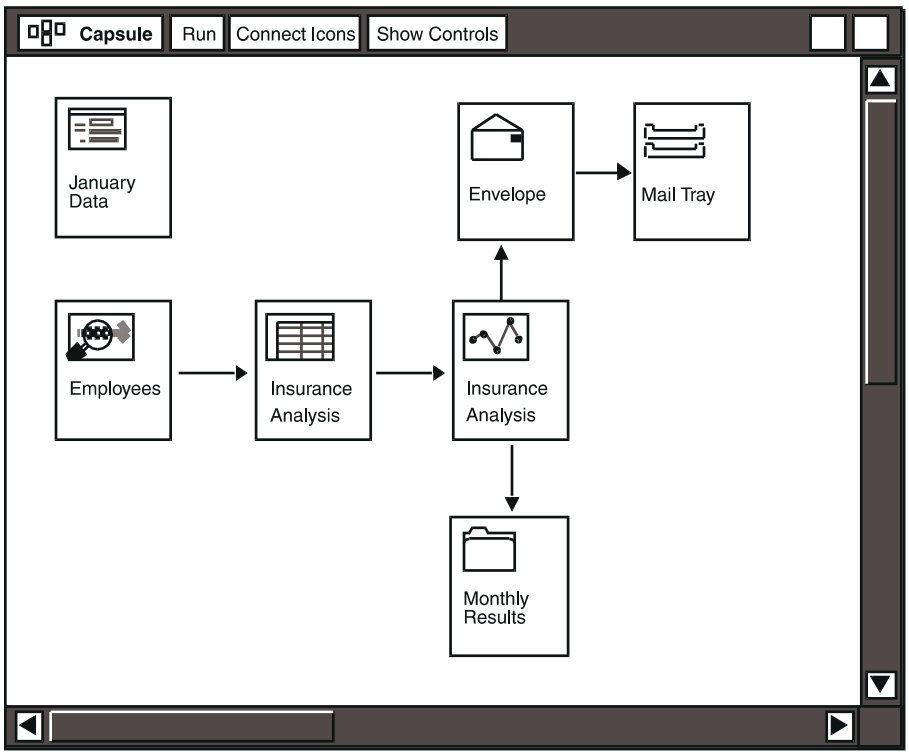
So, you can make many choices in a Data Entry form that affect how the capsule application runs.

Walking Through a Sample Application

In this application, a stand-alone Data Entry icon reads and sets the @-variables from the capsule application. The Data Entry form looks like the previous example.

A Query icon inside the Capsule window permits you to retrieve data each time you click on the **Run** button. The Query tool retrieves the data, then transfers it to the Spreadsheet tool for analysis. The data is then sent to a Plot tool, which is set up to chart specified analysis trends, and, finally, the results of this application are placed into a folder as a permanent record.

When you run a capsule application that includes an Envelope icon and a Mail Tray icon, like this one, the results information is automatically enclosed within the envelope, then mailed to another user.



When you click on the **Run** button, the first icon that is topmost, left-most in the Capsule window, becomes highlighted to indicate that it is active. In this example, the first icon to be run is the Query icon named **Employees**. Then, the icons connected next in the flow highlight in succession until the Capsule is finished.

Using the Capsule Controls Window

If the capsule application you want to use does not have a Data Entry icon, often you can use the Capsule User Input Control window to specify new values for the @-variables. A User Input Control window looks similar to Figure 1.

Changing values in the User Input Control window means that often you can use one capsule application to get different results rather than using separate applications to accommodate all the values you want in your reports for the different departments.

To open the User Input Control window:

1. Open a Capsule window on your desktop.
2. Click on **Show Controls** in the window header.

For the previous sample application, the User Input Control window might look similar to the Figure 1 illustration.

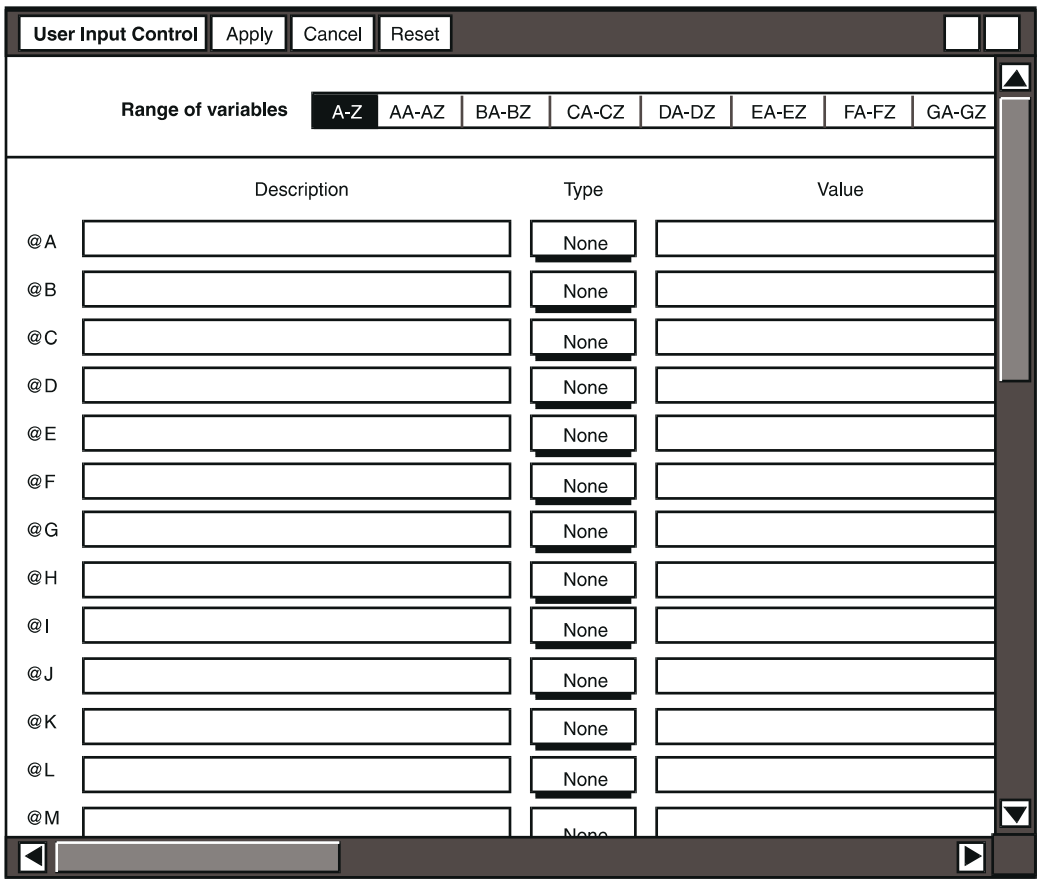


Figure 1. User Input Control window

When you open the User Input Control window, you might find that there are already values for the @-variables. In that case you can clear the values if you want to reset them.

To clear all the displayed values in the User Input Control window:

1. Open a Capsule window on your desktop.
2. Click on **Show Controls** in the window header.
3. In the User Input Control window's Special button menu, select **Clear Values**.

To delete individual values:

1. Select a value in the **Value** column.
2. Replace the value by typing a new one.

When you have entered the values you want, you need to close the User Input Control window by either:

Clicking on its title block.

or

Clicking on the **Cancel** button, providing you have first applied any new values, types, or descriptions.

After you close the window, you cannot retrieve cleared values, types, and descriptions.

When the capsule application is done, you can click on the results icons to view the final product.

Reviewing This Lesson

In this lesson, you have read how you can use capsule applications to become more efficient when you have a repetitive task to do. The capsule applications developed specifically for your use will be somewhat different. Consult with your system administrator about any capsule applications at your site. In the next section, you can review the information from this lesson.

Quick Steps

The steps below outline the guidelines for working with capsule applications, as presented in this lesson.

1. Insert appropriate values in a Data Entry form, if there is one.

   Double-click on the Data Entry icon if it is not open. Enter or select the appropriate choices. Select Enter in the window header and close the icon.

2. Assign values to the @-variable in the User Input Control window.

   Show Controls from the Capsule window header. If you need to enter new values, clear the values you need to change. Enter the appropriate values and select **Apply** in the window header or close the window.

3. Run the capsule application.

   Select **Run** you can watch the capsule application run or schedule it for a later execution.

4. Look at your capsule results.

Learning More Details

Now that you have seen the basics of using a capsule application, you can use or build others. Many of the tools available in IDS can be incorporated into capsule applications. Each of the tools has its own user's guide.

Glossary

absolute cell reference. (Spreadsheet) In a spreadsheet formula, a cell reference that always refers to the same cell, even if the formula is copied to or replicated in another part of the spreadsheet. An absolute cell reference is identified by a preceding exclamation point. Contrast with relative cell reference. See also cell reference, replicate.

access privileges. A set of permissions assigned by an icon's owner to control who may view or change the icon.

Add Enclosures. (Envelope) The window header button that opens the Enclosures - Envelope window into which the user can move or copy icons to be enclosed in the envelope.

Add Plot. (Plot) The window header button that adds a plot to a line, bar, or text graph. The plot appears in the depiction area. See also depiction area, plot.

Alignment. (Spreadsheet) In the Cell Format panel of the Cell page of the Spreadsheet Options window, the field where the user specifies the position of information in a cell.

All. (Spreadsheet) In the Spreadsheet page of the Spreadsheet Options window, the choice in the Print field specifying that all of the data in the spreadsheet is to be printed.

and. (Spreadsheet) In the Entry page of the Spreadsheet Options window, the function in the Operator menu that, as the conditional argument, returns True if both arguments in the statement are true and returns False if either argument in the statement is false.

Apply. Put into effect. A window header button that puts into effect any changes that you have specified in an options or controls window.

arrow. (Capsule) A symbol that connects icons in capsule applications and directs the flow of data. An arrow can be selected or deleted, and its settings can be changed in the Arrow Options window.

Arrow Options. (Capsule) The window in which the user can set options for directing and controlling the flow of data between icons in a capsule application. In a capsule application, data flow is illustrated with an arrow. See also arrow.

@date. A system-defined @-keyword that returns the day and time.

@-keyword. A system-defined variable that returns current values within a capsule application or within the headers and footers.

attribute. (1) A column in a database table (or relation). (2) A characteristic. For example, boldface and italics are text attributes.

@-value. The value assigned to an @-variable in the Capsule's User Input Controls window. See also @-variable.

@-variable. A control variable used to represent a value in any tool that can be run inside a capsule application. These values are frequently used as constraints and variable titles in the Query, Plot, Spreadsheet, Layout, and other tools. See also @-value.

Axes. (Plot) The choice in the Display field of the Plot Controls window that displays options for formatting the axes of a line, bar, or text graph.

banner page. A printed page that provides a record of the document name, the time it was sent to the printer, the time it was printed, and the name of the desktop from which it was sent.

Bar Graph Spacing. (Plot) In the Overall Graph page of the Plot Controls window, the field where the user specifies how far apart to place bars in a graph.

Bar Graph Style. (Plot) In the Overall Graph page of the Plot Controls window, the field where the user specifies whether to place the bars side-by-side or stacked (that is aligned vertically) in a graph.

Bars. (Plot) In the Single Plots page of the Plot Controls window, the choice in the Show field that causes the data in the graph to be depicted as a bar and causes the window to display the options for formatting the bar plot. See also plot.

baseline. (Plot) The primary reference line for a line, bar, or text graph. The baseline represents a data value of zero.

bimonth. A two-month period.

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*** Blank Icons file drawer**. A file drawer icon that contains one of each icon that a user is likely to need. An asterisk at the beginning of a file drawer name indicates the file drawer is a standard system file drawer distributed on the software installation media. See also file drawer.

Bold. (Envelope, Layout, Reporter, Spreadsheet, Text) The toggle button in various fields that makes the specified text darker and thicker.

border. The lines that define the boundaries of a window.

button. An object, in a window or window header, that contains graphics or text and is used to open other windows, open a menu, perform an action, or set a condition.

Calculate. (Spreadsheet) In the Spreadsheet page of the Spreadsheet Options window, the field where the user specifies whether a spreadsheet performs calculations one time or repeatedly until a specific condition is met.

Cancel. A window header button that closes an options or controls window without saving any changes other than those that were saved the last time the user clicked on Apply. The difference between the Cancel and Reset buttons is that the Cancel button closes the window and the Reset button does not. See also Apply.

Cancel Changes. A window header button or a choice in a Special menu that closes the icon without saving the changes that you have made since you opened the icon.

Capsule. A tool for building an automated processing sequence using other icons.

category. The highest-level division of a logical database. A category contains tables, and tables contain columns and rows. Logical joins between tables are defined at the category level.

cell. In a spreadsheet, the intersection of a row and column.

Cell. (Spreadsheet) The choice in the Display field of the Spreadsheet Options window that displays the options for formatting cell data.

cell coordinate. (Spreadsheet) A column letter and row number in a spreadsheet that identify a specific cell.

Cell Format. (Spreadsheet) In the Cell page of the Spreadsheet Options window, the toggle button that expands the window to display the options for formatting cells.

cell protection. (Spreadsheet) A cell setting that prevents the contents of a cell from being cleared or changed.

cell reference. (Spreadsheet) Cell coordinates used in formulas. See also absolute cell reference, cell coordinate, relative cell reference.

cell type. (Spreadsheet) The classification of the contents of a cell. A cell can be one of four types: formula, text, number, or date.

Check Spelling. (Envelope, Text) The window header button that opens the Spelling Checker window, in which the user can find and correct spelling errors.

choice. Graphics or text that can be selected in a field or menu.

click. (1) To press and release a mouse button without moving the pointer. (2) To press and release the left mouse button while the pointer is on a desired object. For example, "Click on Show Controls," "Click anywhere in the window header."

On a left-handed mouse, the right mouse button is used instead of the left one.

See also select.

column. (1) A vertical field in a table. Columns may be identified by letters or text strings at the top of the display area. (2) A vertical field in a spreadsheet. Columns are identified by letters at the top of the display area. See also row.

Columns. (1) (Plot) In the Overall Graph page of the Plot Controls window, the choice in the Treat Data As field that charts the columns of data copied into the Plot tool. (2) (Spreadsheet) In the Spreadsheet page of the Spreadsheet Options window, the field where the user specifies the columns of the spreadsheet to be printed as titles.

constraint. A limitation on the range or values of data retrieved from the database, entered to reduce the amount of data that is returned to the desktop. For example, you might constrain data based on territory and period so that only data relevant to New York during March, 1992 is retrieved.

container. An icon, such as the Folder and File Drawer icons, that can hold other icons.

controls window. A window that displays settings that you can view or modify. Usually, to open a controls window you click on a button (often named Show Controls) or select a choice from a menu.

Copies To:. (Envelope) A line in the address area of the Envelope window where the user can type one or more user IDs and network names of users who are to receive a copy of the message. See also To.

database administrator (DBA). The person who issues administrative instructions to a database service. The DBA defines the data tables used by data access tools, monitors database performance, and assigns user access.

data column. (Plot) A column of data from a source icon used by the Plot tool to determine values in a graph.

data row. (Plot) A row of data from a source icon used by the Plot tool to determine values in a graph.

data type. The type of information represented by data in a database column. Data types generally available in the IDS logical tables are integer, real, character, and date. Other data types available in some IDS logical tables include null, long varchar, varchar, time, and timestamp.

date resolution. The way in which the interval between dates is interpreted. For example, if the date resolution is Week, the interval between dates is 7 days, but if the date resolution is QuadWeek, the interval is 28 days (4 weeks). IDS date resolutions include Day, Week, QuadWeek, Month, EvenBiMonth, OddBiMonth, Quarter, Year.

decimal precision. The number of digits past the decimal that are used to express the fractional part of a number. More digits result in greater precision. For example, 3.14159265 is more precise (that is, more exact) than 3.14. Contrast with displayed precision.

default value. A value that is assumed when no value has been specified.

depiction area. (Plot) In the Single Plots or Single Slices page of the Plot Controls window, the middle third of the window, which displays a picture of each plot or slice in the graph that has been constructed.

deselect. To cause a selection to no longer be selected.

desktop. The screen space occupied by IDS.

destination icon. An icon that receives information from other icons.

IDS. The IBM Intelligent Decision Server.

Discard. A container icon that temporarily holds an icon that is deleted.

double-click. (1) To click a mouse button twice (transitive), as in "point to the icon and double-click the left mouse button." (2) To click the left mouse button twice (intransitive), as in "double-click on the Envelope icon."

On a left-handed mouse, the right mouse button is used instead of the left one.

drag. To move an object on the screen by pointing to the object, pressing the left mouse button, and then moving the mouse while holding down the left mouse button.

On a left-handed mouse, the right mouse button is used instead of the left one.

Enclosures - Envelope. (Envelope) The window that holds enclosures (other icons) that have been placed in an envelope. The user can copy or move icons into and out of this window.

end mark. The small square symbol that marks the end of all text and figure content in the Text window.

Envelope. An icon used to create messages and to send messages and icons to other users.

even bimonth. A two-month period ending in an even-numbered month; for example, January and February. Contrast with odd bimonth.

field. (1) A specified area used for a particular class of data. (2) In a window, an identifiable area where you can enter information (entry field), select a choice (field of choices), or view information.

figure. (Text) A graphic image or a group of graphic images. See also frame.

Figure. (Text) In the Text Options window, the Display choice that opens the Figure page, in which the user can specify placement and other characteristics of figures (graphic images).

file drawer. A container, created or renamed by the system administrator, that may be shared among desktops.

folder. An organizing container that resides on a single desktop and is used to store icons and other folders. Folders are represented on the IDS desktop by the Folder icon, on which a file folder is depicted. See also file drawer.

Font. (1) (Envelope, Text) The field in the Text Options window in which the user can choose the typeface for selected text. (2) (Spreadsheet) In the Font Attributes panel of the Cell page of the Spreadsheet Options window, the field where the user can choose the typeface for text in a cell.

Formula. (Spreadsheet) In the Entry page of the Spreadsheet Options window, the choice in the Type field that formats the cell for a formula entry and opens the field for entering formulas and the buttons for each category of functions.

freezing. (Spreadsheet) The process of keeping selected columns and rows stationary at the top or left of the spreadsheet when the spreadsheet is scrolled.

From:. (Envelope) The line in the address area where the user's user ID and network name are automatically inserted after the Envelope is copied or moved to the Mail Tray.

function keys. A set of workstation keyboard keys, labeled F1, F2, F3, and so on, located across the top or at the left side of the keyboard. In IDS, function keys are used to perform tasks such as deleting an object or opening a help window.

graph. (Plot) A graphic representation of quantitative information comparing one or more sets of variable data. The Plot tool can be used to create pie (circular) and axes graphs.

Graph Type. (Plot) The field in the Plot Controls window in which the user chooses a line, bar, text, or a pie graph to depict the data.

grid. (Spreadsheet) The vertical and horizontal lines in the display area that delineate the columns, rows, and cells of a spreadsheet.

Help button. The button containing a question mark (?) on the right side of the message bar that opens a menu of online help topics.

Help key. The function key that opens a menu of online help topics.

highlighted. Changed in appearance to denote selection. Selected objects, such as text or icons, are highlighted either by being shown in reverse video or in a different color.

icon. A graphic representation of a tool or service. An icon consists of a picture (called the icon graphic) and a label on a rectangular background.

icon graphic. The small picture in the title block of a tool window header and in the tool icon. The icon graphic usually depicts a tool's function, so a tool window or icon can be easily identified.

Icon Options. A window in which the user can reset values or view information about an icon. Each icon has its own Icon Options window. The content of this window varies depending on the icon.

Important Message. A window that displays a message that requires an acknowledgment from the user. An important message can be generated by a tool or service, or by the system administrator.

input. Data that is entered into a workstation for processing.

insertion point. The symbol (usually a blinking vertical bar) that shows where mouse or keyboard input will appear in a document or field. See also field.

integer. A whole number, that is, a number that does not contain a decimal place, such as 5, 60, or 912. Contrast with real number.

key. A button on the keyboard. In IDS publications and online information, Enter refers to the Enter key. See also function keys.

legend. (Plot) An explanatory caption included with a graph to identify what each plot represents.

list separator. A character, such as a comma, used to break a text string into separate items.

Log Off. The choice in the Special menu that closes and saves all open files and closes IDS.

log-on screen. The screen on which the user enters a user ID and password to start IDS.

mail service. A service that controls the exchange of Envelopes within IDS. See also Envelope.

Mail Tray. An IDS container icon that sends and receives mail by relaying it through the mail service.

menu. A list of available choices that you open by pressing the left mouse button while the pointer is on certain buttons.

message area. (Envelope) The bottom part of the Envelope window, where the user can enter and format text.

message bar. The rectangular area along the bottom of the desktop, where advisory or error messages are displayed.

Message Log. A window that stores and displays messages sent to the message bar. You can open this window to read the full text of a lengthy message, to read a previous message, or to copy messages to a text document.

Message Log button. The button on the right side of the message bar that opens a window in which the user can view desktop messages. The Message Log button looks like this:

Minimize button. The window header button that reduces the size of a window so that only the window header is displayed on the desktop. The Minimize button looks like this:

monitor. A workstation component that includes the display (screen).

More button. The window header button that opens a menu of other window header buttons that cannot be displayed for space reasons. The More button looks like this:

mouse. A pointing device with buttons that you manipulate to perform operations on the workstation screen. You slide the mouse on a flat surface to control the position of the pointer. See also pointer, trackball.

Move. A function key used to transfer selected objects, such as icons or text, from one location to another.

N/A. (Spreadsheet) In the Spreadsheet page of the Spreadsheet Options window, the toggle button in the Show field that controls whether N/A values are displayed in the spreadsheet.

network. A set of workstations, servers, and other devices connected together for the interchange of information.

New Icons file drawer. A file drawer that contains the *Public File Drawers file drawer and the *Blank Icons file drawer.

new-line character. The format character that is used to move the print or display position to the beginning of the next line without beginning a new paragraph. In IDS the new-line character is represented by this symbol:

new-page symbol. (Text) A symbol that indicates printing will end on the current page and restart at the top of the next page. The new-page symbol looks like this:

new-paragraph character. The format character that is used to move the document content or display position to the next paragraph. The new-paragraph character is represented by this symbol: ¶

odd bimonth. A two-month period ending in an odd-numbered month; for example, December and January. Contrast with even bimonth.

OK. (Desktop) The button in an Important Message window that closes the window.

open. To perform an action that causes a window or menu to appear on the desktop. For example, you open a tool window by double-clicking on an icon.

Operating System/2. See OS/2.

operator. A symbol or word that you select or enter along with one or more values to define the amount, range, or characteristics of data. For example, +, - , >, not=, and between.

Options. A function key used to open an options window or, if an options window is already open, to close it.

options window. Any window that you can open by using the Options key or the options function on the pop-up function pad. Options windows let you view and modify the properties of the selected object.

OS/2. Operating System/2. A single-user, multitasking, IBM operating system that runs on workstations with an Intel 80286 or later microprocessor.

output. The result of workstation processing.

page. (1) In a window, an alternate view that provides a different set of options for setting controls and defining

the behavior of an icon. (2) In a window, the amount of information that can be displayed at one time.

password. A unique string of characters known to a workstation system and to a user, who must specify the character string to gain access to a desktop, gateway, database, system, or service within a system. See also user ID.

Password. The field in some windows in which you type the appropriate sequence of characters to gain access to a desktop, database, service, or system.

PC. See personal computer.

PC application. An OS/2, DOS, or Windows workstation program. The terms application and program are often used interchangeably.

personal computer (PC). A microcomputer workstation designed primarily for use by a single user.

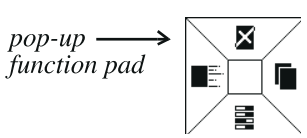
plot. A graphical representation of one row or column of numerical values.

Plot. A tool used to create line, bar, text, and pie graphs.

Plot Controls. (Plot) A window that allows the user to select data for individual plots and slices and to set options for graphs.

pointer. The symbol displayed on the workstation screen that you move by moving the mouse or other pointing device. Usually, the pointer looks like an arrow, but it assumes other shapes depending on the operation taking place. For example, the stopwatch pointer indicates that a process is in progress.

pop-up function pad. An image that appears on the desktop when you press both mouse buttons at the same time and that is used to delete, move, or copy icons, or to open or close an options window.



Printer. An icon that represents a printer to which the user can copy an icon for printing.

Printing. A page in some Icon Options windows in which the user can specify how a document will be printed. For example, the user can specify margin width, headers, and page numbers.

quadweek. Exactly four weeks, starting on a Sunday. Also spelled quad week.

query. A request for data from a database, based on specified conditions.

Query. A tool used to retrieve data from a database, based on specified conditions.

range. (Spreadsheet) A group of cells to which a common name has been assigned.

realm. In IDS networks, a collection of IDS resources that are maintained as a logical group (that is, a group that is determined not by physical boundaries, but rather by virtue of being associated with one another). A realm must contain at least a primary file service and a directory service. Other components such as workstations, Internetwork Routing Service, and Data Access Services can be added to form a functional IDS local area network (LAN).

real number. A number with a decimal point, such as 2.1 or 0.003. Contrast with integer.

region. (Envelope, Spreadsheet, Text) A specified area in an IDS tool to which the user has assigned a unique name. Regions are used to hold data transferred to or from other sources. See also input region, output region.

region marker. Region markers identify an area in a text document where data is inserted from other sources. Envelope and Text region markers look like this: ⌜ ⌟

relative cell reference. (Spreadsheet) In a spreadsheet formula, cell coordinates that change when the cell containing the formula is copied or replicated. Contrast with absolute cell reference.

Reply. (1) (Envelope) The window header button that opens the Reply Controls window. (2) The window (opened when the user clicks on Create Reply in the Reply Controls window) in which the user types a reply to a message.

Reply Controls. (Envelope) The window that displays control settings for a reply envelope and a button that creates a reply envelope.

Reply to. (Envelope) The field in the Reply Controls window in which the user can specify that the reply

envelope be automatically addressed. This field provides two toggle buttons: Sender and To: List.

Reporter. A desktop tool used to retrieve data from a database, analyze it, and format it into a report that can be printed.

Reset. A window header button in an options or controls window that restores the settings that were in effect when the user opened the window, or those that were saved the last time the user clicked on Apply. The window remains open. The difference between Cancel and Reset is that Cancel closes the window and Reset does not.

Restore button. The window header button that expands a minimized window to its full size. The Restore button looks like this:

result. (Spreadsheet) The value in a spreadsheet cell that represents the outcome of a calculation.

results area. (Query) The lower portion of the Query window, where the query results appear after Show Data has been selected.

row. (1) The horizontal component of a table. A row contains exactly one value for each column of the table. (2) A record, or single instance, in a database table. (3) See also column.

scroll. To move the image in a window up, down, left, or right to view information that is not otherwise visible within the boundaries of the window.

scroll bar. A bar, at the bottom or right edge of a window, that shows that more information is available or can be added that is not currently displayed in the window. The components of a scroll bar can be used to bring different information into view. See also scroll box, scroll button.

scroll box. The part of a scroll bar that indicates the position and proportion of information currently visible in a window relative to the total amount of information available. You can drag the scroll box to a different location in the scroll bar to bring different information into view.

scroll button. The part of a scroll bar that contains an arrow. Clicking on a scroll button causes the window to scroll up, down, left, or right.

secure. To restrict access to.

select. To identify one or more objects on the workstation screen so that they can be operated on. You select icons and choices in fields by clicking on them. See also click.

Select All button. The button in a window header that causes everything in the window to be selected. The Select All button looks like this:

selection. Something on the desktop that has been selected. Selections are highlighted. See also highlighted.

server. The workstation on which a service runs.

service. A software process that provides facilities to other parts of IDS, such as a file service, a mail service, a mail gateway service, and a data access service.

Show Controls. A window header button, usually in the main window of an icon, that opens a controls window in which the user can specify settings that determine icon behavior, how a program is processed, or both.

Show Enclosures. (1) (Envelope) The window header button that opens the Enclosures - Envelope window. (2) Size. A function key used to open an icon or to change the size of a window. This key has additional functions in data access tools.

Special button. A button in some window headers and on the far-right side of the message bar. The Special button, which opens a menu, looks like this:

Special menu. A menu that appears when you point to the Special button and press the left mouse button (or, in the case of a left-handed mouse, the right mouse button). In tool windows, the menu choices are usually reserved for special functions or controls associated with the icon.

spelling checker. A facility in the Text and Envelope tools that checks a document for spelling errors.

Spreadsheet. A tool used to perform calculations and analyses, schedule projects, and perform iteration in embedded capsules.

Spreadsheet Options. (Spreadsheet) The window in which the user can view and modify the properties of the Spreadsheet tool.

SQL. Structured Query Language, a command language for use with relational databases. The language consists of statements to insert, update, delete, query, and protect data. IDS tools use SQL to communicate with database servers.

Stop. A function key used to stop an operation in progress, such as querying a database.

string. A sequence of characters.

Structured Query Language. See SQL.

Syntax. (Spreadsheet) In the Entry page of the Spreadsheet Options window, a read-only field that appears when Formula is selected in the Type field. The Syntax field displays the appropriate syntax for the selected function.

system administrator. In IDS, the person who is responsible for maintaining and configuring IDS, including its workstations, servers, and network.

tab symbol. The symbol that indicates where a tab is set. The tab symbol looks like this: ▶

table. In a database, a single file, consisting of data organized in columns and rows.

Text. A tool used to write and format text documents, format the results of data access tools, and receive data and images from other tools and desktop applications.

text alignment. The vertical arrangement of one or more lines of type. Text alignment can be flush left, justified, flush right, or centered.

title block. A window header button that contains the icon graphic and the window title. You can click on the title block to close the window.

toggle button. A button that switches between two states or modes. For example, Italic is a toggle button that, when highlighted, sets selected text in italics, and when not highlighted, removes italics from the selected text.

tool. An IDS desktop program, such as Text, Reporter, or Query. Every tool is represented by an icon.

Undo. (Envelope, Text) The window header button that cancels the last action in the window.

user ID. A name used to access a desktop, system, gateway, or database service.

window. A rectangle that displays a window header and display area, the contents of which vary depending on the type of window. For example, a tool window displays a view of the tool and the data associated with it.

window header. The area at the top of a window that contains the title block, command buttons, and other buttons.

workstation. A microcomputer workstation at which you can use IDS to perform work. Depending upon the model, workstation components include the monitor, keyboard, mouse, and system unit, which may house a disk drive.

workstation keyboard. The physical keyboard, which is the primary input device used to interact with IDS.

x-axis. (Plot) The horizontal line at the bottom of a graph, used to chart values.

y-axis. (Plot) The vertical line at the left of a graph, used to chart values.

IDS Publications

This section lists IDS publications, including order numbers. To order copies of the books listed here, or to get more information about a book, see your IBM representative.

General Publications

Getting Started with the Intelligent Decision Server (SC26-8892)

Working with the Intelligent Decision Server (SC26-8893)

Installation, Configuration, and Administration Publications

Installing IDS LAN Components (GC26-8877)

System Administration Guide and Reference (SC26-8890)

Messages and Codes (GC26-8878)

Database Gateway Services Publications

Installing Database Gateway Services for UNIX Environments (GC26-8884)

Configuring and Administering Database Gateway Services (GC26-8885)

Administering Databases with IDS (SC26-8891)

Host Services Publications

Planning MVS Host-to-LAN Connectivity (GC26-8880)

Installing Host Services and Configuring Host-to-LAN Communications for MVS (GC26-8881)

Administering Host Services for MVS: DB2 and Cooperative Application Services (GC26-8882)

Developing Applications with Cooperative Application Services (GC26-8883)

Configuring and Administering Mail Gateway Services (GC26-8923)

Open Data Access Service Publications

Developing Applications with Open Data Access Service (SC26-8888)

Data Access Tools Publications

Browser User's Guide (SC26-8900)

Data Entry User's Guide (SC26-8897)

DBA Tool User's Guide (SC26-8894)

SQL Entry User's Guide (SC26-8898)

Data Analysis Tools Publications

BASIC Tool User's Guide (SC26-8908)

Query User's Guide (SC26-8901)

Spreadsheet User's Guide (SC26-8904)

Presentation Tools Publications

Layout User's Guide (SC26-8902)

Plot User's Guide (SC26-8905)

Reporter User's Guide (SC26-8903)

Text User's Guide (SC26-8896)

Application Development Tools Publications

Transformers Guide (SC26-8907)

Capsule User's Guide (SC26-8906)

Forms Design User's Guide (SC26-8899)

Interacting with PC Applications (SC26-8895)

Installing and Configuring IDS Open Clients (GC26-8889)

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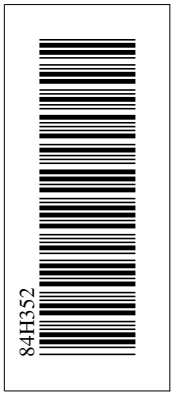
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