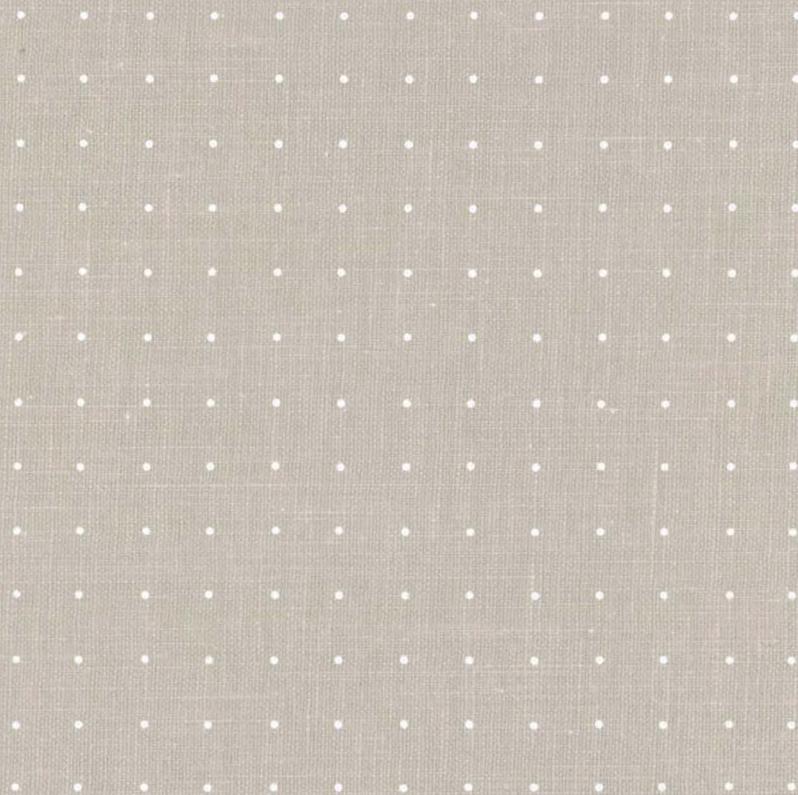




LisaProject

*Lisa*

LisaProject



# ***LisaProject***

***Program by  
Debra J. Willrett***

***LisaProject***

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In addition, if Apple releases a corrective update to a software product during the 90-day period after you purchased the software, Apple will replace the applicable diskettes and documentation with the revised version at no charge to you during the six months after the date of purchase.

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### **Product Revisions**

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# ***Guide to Lisa Manuals***

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Set up your Lisa following the setup procedures in the Lisa accessories box or in Appendix 1, Setup Procedures, in the *Lisa Owner's Guide*.

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Go through Section A, LisaGuide, in the *Lisa Owner's Guide*, for an introduction to the Lisa.

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If your dealer or service representative did not set your system Preferences so that the Lisa knows what external devices are attached, follow the instructions in Section D, Desktop Manager Reference Guide, under Set, in the *Lisa Owner's Guide*.

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- ▶ Go to Section A, Getting Started, in the manual for each office tool that you want to learn, for the essentials of using that tool.
- 

Go to Section B, Lisa Fundamentals, in the *Lisa Owner's Guide*, for the background information you need before beginning long-term work on the Lisa.

---

You are now ready to start doing your own work on the Lisa:

- If you want self-paced instructions for using a tool, go to Section B, Tutorial, in that tool manual.
  - If you want instructions for performing specific tasks with a tool, go to Section C, Reference Guide, in that tool manual.
- 

For specific instructions on filing and desktop management, go to Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*.

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For more information on the Lisa hardware, tips on caring for the Lisa, and suggestions for troubleshooting when the system isn't working properly, go to the other sections of the *Lisa Owner's Guide*.

# Contents

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## ***Preface***

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### ***A. Getting Started with LisaProject***

A quick introduction to the basic skills needed to use LisaProject.

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### ***B. LisaProject Tutorial***

Self-paced instructions on LisaProject using examples on the Lisa.

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### ***C. LisaProject Reference Guide***

Complete information on LisaProject consisting of an overview and step-by-step procedures.

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### ***D. Appendixes***

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### ***E. Index***

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# Preface

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LisaProject is a project management tool that helps you schedule and track projects. You enter the information as individual tasks, and LisaProject shows you the critical path, the interdependencies, and the answers to What if? questions. LisaProject displays the project as a schedule chart, a resource chart, and a task chart.

This manual contains three kinds of documentation of LisaProject:

- Section A, Getting Started with LisaProject, is a quick introduction to the tool. It is designed to give you the basic skills for using LisaProject.
- Section B, LisaProject Tutorial, is a step-by-step guide to the major features of LisaProject. It includes suggestions on how to use LisaProject efficiently and effectively.
- Section C, LisaProject Reference Guide, is a complete reference section. It contains instructions for performing specific tasks, including the details of how each feature works.

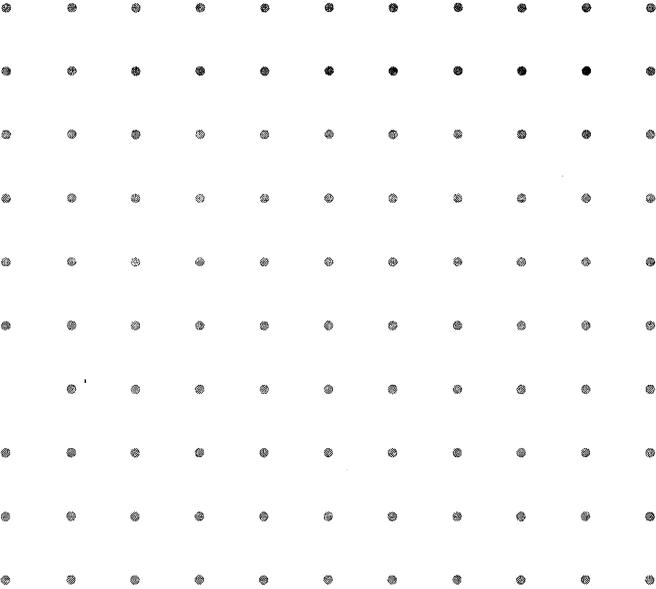
The material in this manual assumes that you have used LisaGuide, which teaches you the fundamentals of using the Lisa. The LisaGuide diskette came in the front pocket of the *Lisa Owner's Guide*, and instructions for using it appear in Section A of that manual.

Section B, Lisa Fundamentals, of the *Lisa Owner's Guide*, contains important background information about setting up and using the Lisa for long-term work. Make sure you understand the concepts in that section before going on to either the Tutorial or the Reference Guide. Refer to Section D, Desktop Manager Reference Guide, of the *Lisa Owner's Guide*, when you need to know how to do filing or how to perform any of the other tasks outlined in Section B, Lisa Fundamentals.

The material in this manual can be used in either short or long blocks of time. You can complete Getting Started in about 30 minutes. Then you can either go through the Tutorial one chapter at a time or start creating your own documents, looking up procedures in the Reference Guide as you need them.



***Section A  
Getting Started  
with LisaProject***



# ***Getting Started with LisaProject***

---

With LisaProject you can plan and track large, complex projects, and for any one project automatically produce a Schedule chart, a Resource chart, and a Task chart.

LisaProject can assist you in managing projects by giving you critical scheduling information in a graphic, easy-to-understand form, enabling you to make better decisions at the times they're needed.

Getting Started with LisaProject is a hands-on exercise. By going step by step through an easy example, you will quickly become familiar with the basic skills for using LisaProject, and afterward be able to create, edit, file, and print your own LisaProject documents.

# What You Need to Get Started

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## Here's what you need

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- A Lisa set up and plugged in, with the keyboard and mouse attached.
- A ProFile set up and plugged in, with the Office System and LisaProject tool on it.
- A Printer set up and plugged in if you want to print. Make sure your printer is hooked up to your Lisa and turned on. Printing is optional.
- About 30 minutes.

**Note:** If your system is not already set up and configured, refer to the *Lisa Owner's Guide*, Appendix 1, Set up Procedures.

ProFile

Lisa

Keyboard

Mouse



If you haven't yet gone through LisaGuide, in which Lisa introduces Lisa, now is a good time to do so — it will make Getting Started even easier. For instructions on starting LisaGuide, refer to the *Lisa Owner's Guide*, Section A, LisaGuide.

If you've already gone through a Getting Started for another Lisa tool, you'll see many similarities in using LisaProject — the basic concepts for using each Lisa tool are the same.

# Starting Up

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## What You're About To Do

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Follow the numbered steps below and on the next page to:

- Turn on and start up your ProFile and Lisa.
- Learn how to brighten the screen if it has dimmed automatically.

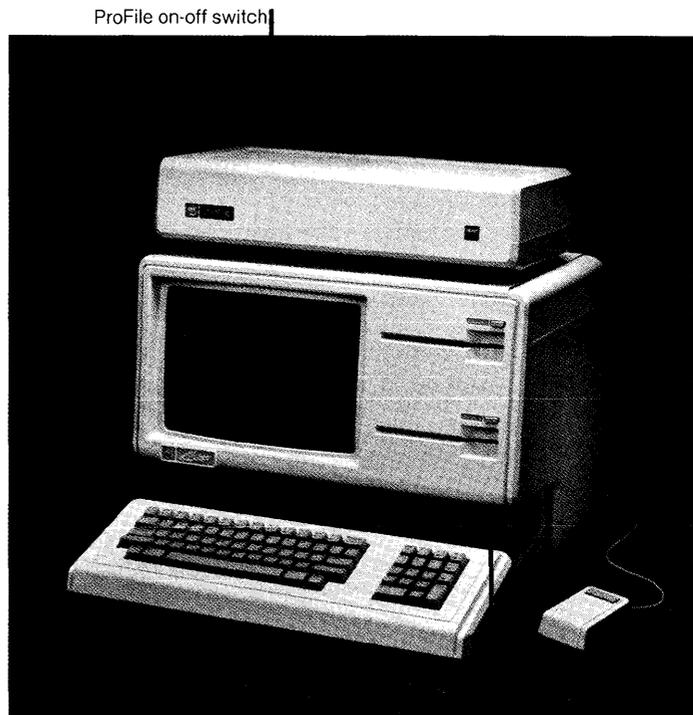
**Note:** If your ProFile and Lisa are already on, skip to step 3. The red ProFile light is lit when the ProFile is on, and the Lisa on-off button is lit when the Lisa is on.

---

## Do This

---

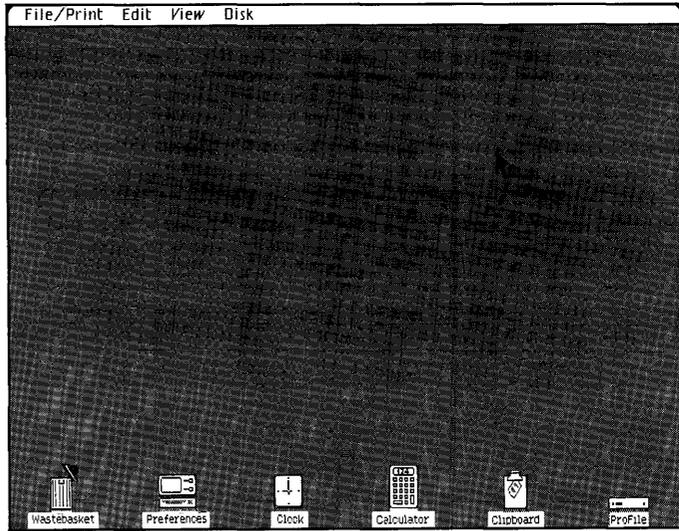
- 1 Turn on your ProFile by pressing the on-off switch on the back, left-hand side of the ProFile, as shown.
- 2 Turn on your Lisa by pressing the on-off button, at the lower, right-hand side of the Lisa, as shown.



Lisa on-off button

## Do This

- 3 After several minutes, when the red ProFile light stops flashing, your screen should look something like the one to the right. (See something different? Refer to the *Lisa Owner's Guide*, Section G, Troubleshooting.)



- 4 If your Lisa has been on for a period of time with no activity, the screen may have automatically dimmed. If your screen is dim, just move the mouse to brighten it.



Screen dim? Move the mouse

# The Desktop and the Mouse

---

## **What You're About To Do**

The gray area of your screen is called the **desktop**. Like the desktop of an office desk, it's where you do your work.

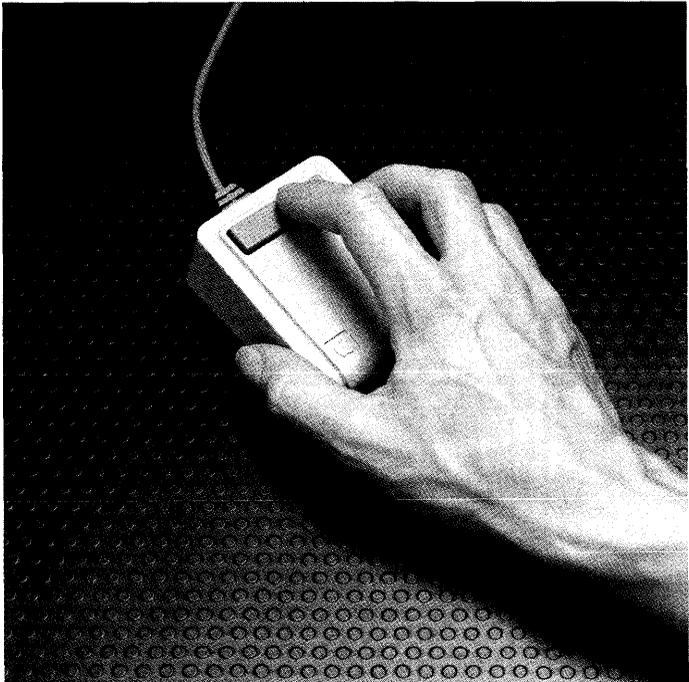
The **mouse** is what you use to communicate with your Lisa — you use it to point out what it is you want done.

To get familiar with your Lisa's desktop and how to use the mouse, follow the steps below.

---

## **Do This**

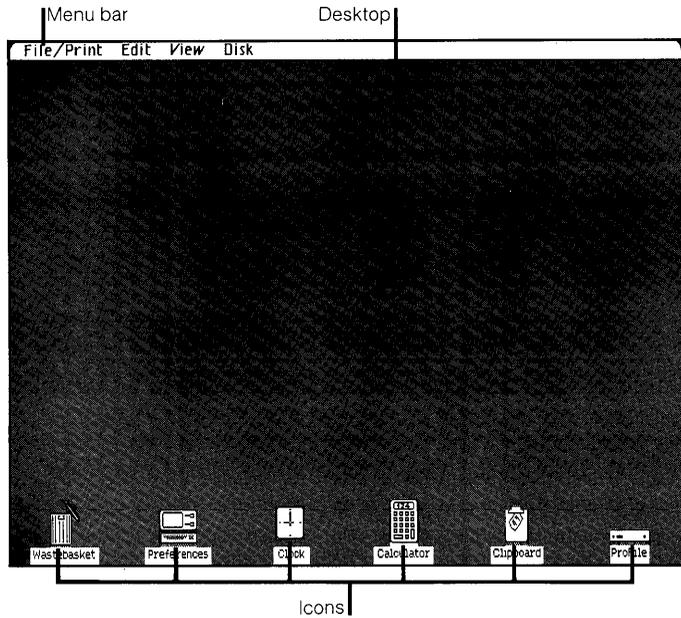
- 1 Hold the mouse as shown. (Don't press the mouse button yet.)



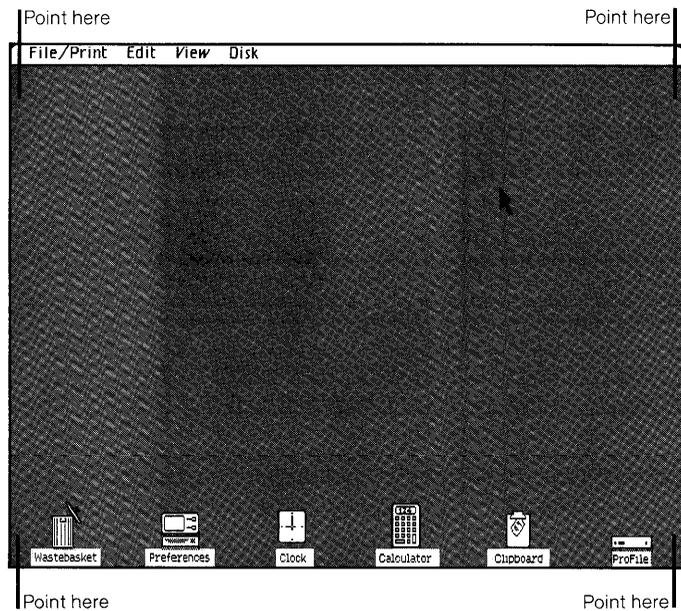
## Do This

- Slide the mouse on your desk to move the pointer around the Lisa desktop — the gray part of your screen.

Notice the **menu bar** across the top of your screen — it contains **menus** of different actions you can take. Along the bottom of your screen are various **icons** — graphic symbols that stand for different things.



- To get oriented, move the pointer to the different spots shown to the right. (Trouble making the pointer go where you want it to go? Lift up and reposition the mouse.)



# Seeing What's on a Disk

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## What You're About To Do

To get at the document you'll work with, you first need to open the ProFile disk icon as described in the steps below.

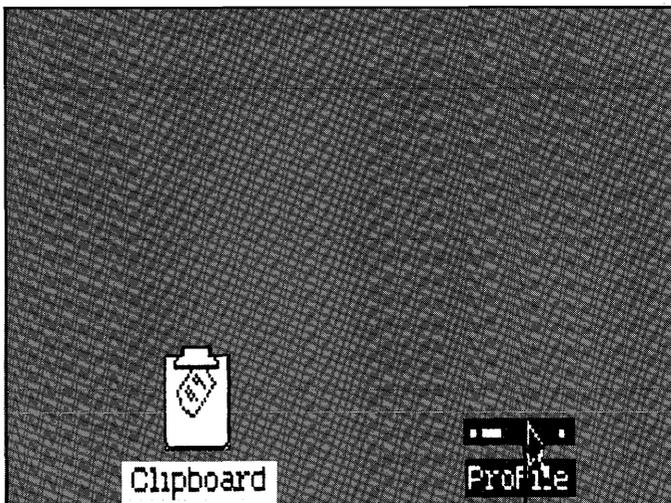
The way you'll open the disk will illustrate your Lisa's most general principle:

- First you select something.
- Then you do something to what you've selected.

---

## Do This

- 1 Select (highlight) the ProFile disk icon by placing the tip of the pointer on it and clicking the mouse button, as shown. (Icon not highlighted? Try again.)



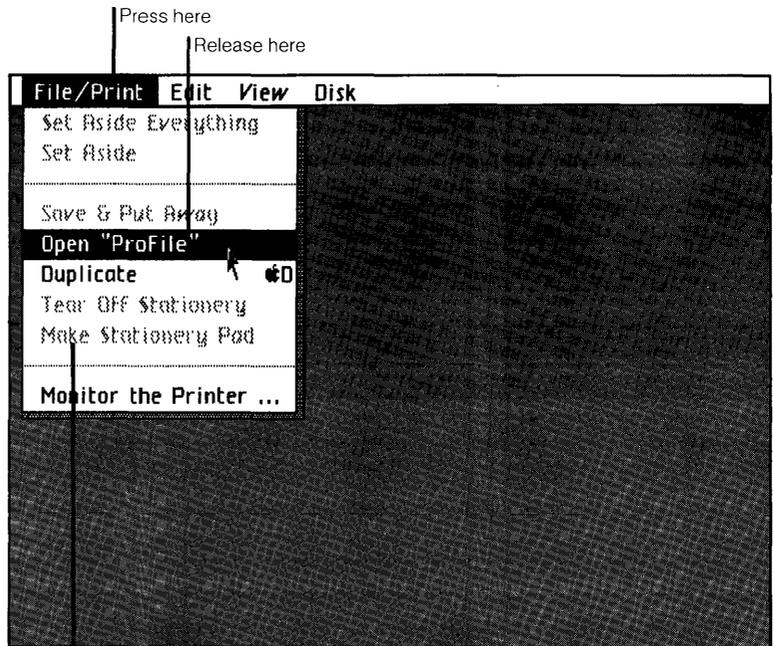
Click on ProFile to select

## Do This

- 2 Open the selected disk icon by choosing Open "ProFile" from the File/Print menu.

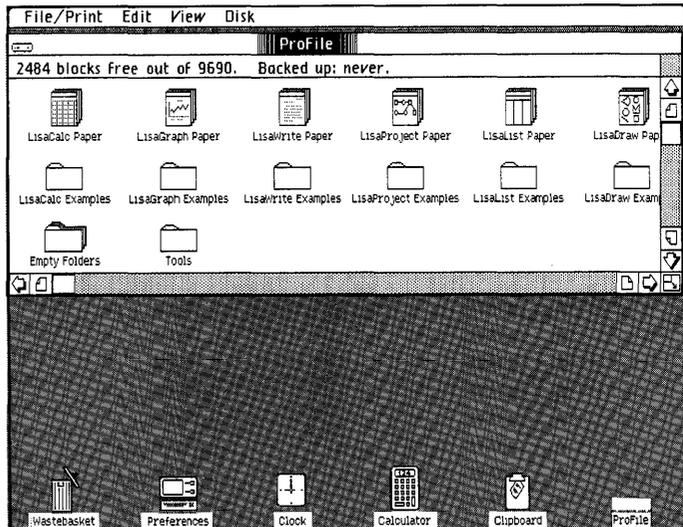
### Here's how

- Press and hold with the pointer's tip on File/Print in the menu bar.
- Move the pointer down and release when Open "ProFile" is highlighted. (Is the Open menu item dim? You probably clicked somewhere else on the gray part of the screen and deselected the ProFile icon. Go back to step 1 and make sure the ProFile icon is selected.)



Note: When a menu item is dim, you can't choose it

- 3 Notice the window to the ProFile that zooms open on your Lisa's desktop. Your ProFile is like a very large file drawer — it's where you'll keep most of your work.



# Pulling a Document

## What You're About To Do

Inside the ProFile window you should see several stationery pads and folders. The LisaProject Examples folder contains the example you'll be working on here. In the steps below, you will:

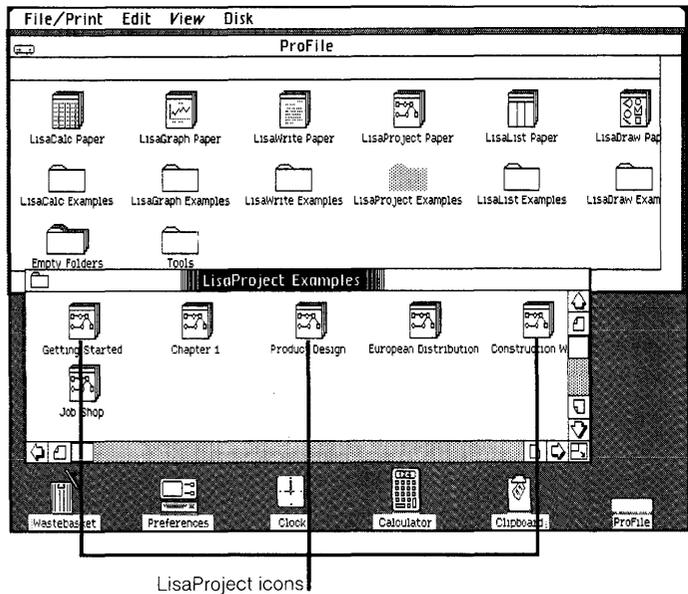
- Open the LisaProject Examples folder.
- Tear off a sheet from the Getting Started stationery pad that's inside the folder.
- Move the new sheet, or document, to a clear spot in the folder.
- Give the new document the name Ad Schedule.
- Open the document.

## Do This

- To open the LisaProject Examples folder:

- 1 Select the LisaProject Examples folder by clicking on it.
- 2 Choose Open "LisaProject Examples" from the File/Print menu.

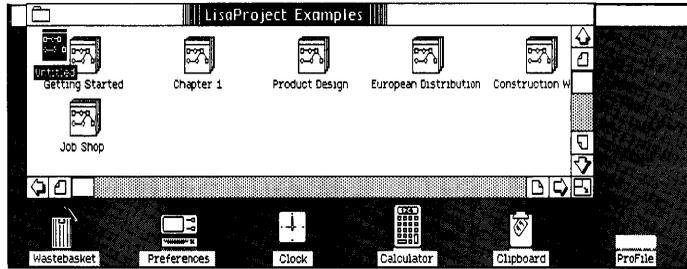
*Notice the window to the LisaProject Examples folder that zooms open, and its contents, as shown. The "network" patterns on the icons in the folder show they are LisaProject icons.*



## Do This

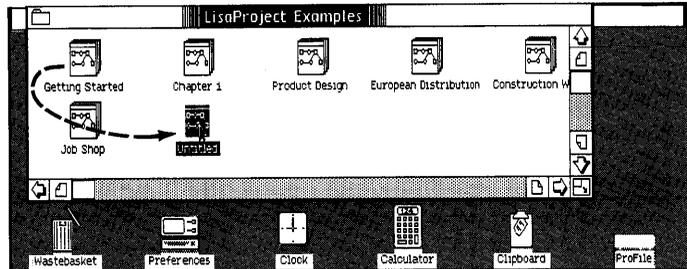
- Copies of the Getting Started example are on the Getting Started stationery pad. To tear off a sheet from the pad:

- 1 Select the Getting Started pad icon.
- 2 Choose Tear Off Stationery from the File/Print menu and wait a moment until the new document appears, as shown.



- To move the new icon out of the way, to a clear spot in the folder:

- 1 Place the pointer on the icon.
- 2 Press and hold down the mouse button and move the icon as shown; then release the mouse button.

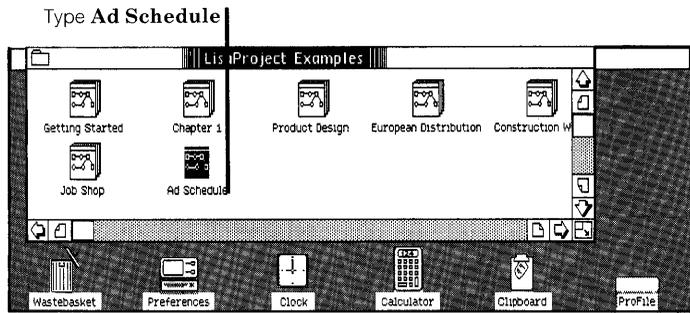


## Do This

- To rename the new document:

1 Make sure the untitled document icon is still selected (highlighted). If you've deselected the icon by clicking elsewhere on the screen, select it again by clicking on it.

2 Type the name **Ad Schedule**. (Typing mistake? Use the **Backspace** key to correct it.)

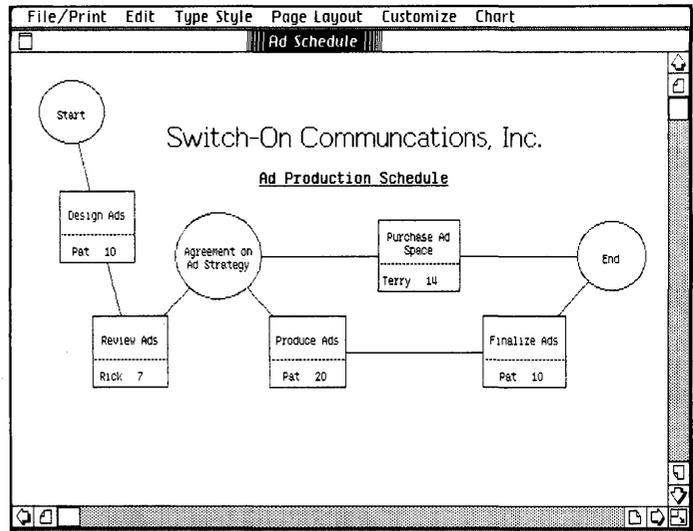


## Do This

- To open the Ad Schedule document:

- 1 Make sure the document icon is selected (highlighted).
- 2 Choose Open "Ad Schedule" from the File/Print menu.

*Notice how the icon zooms open into a window. Wait a minute — the hourglass, ⌵, means wait — until the LisaProject tool displays the Ad Schedule document, as shown.*



# The LisaProject Document

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The Ad Schedule document is now open on your Lisa's desktop.

Across the menu bar at the top of the screen are the **LisaProject menu names**. Each menu contains a list of actions you can take with a LisaProject document.

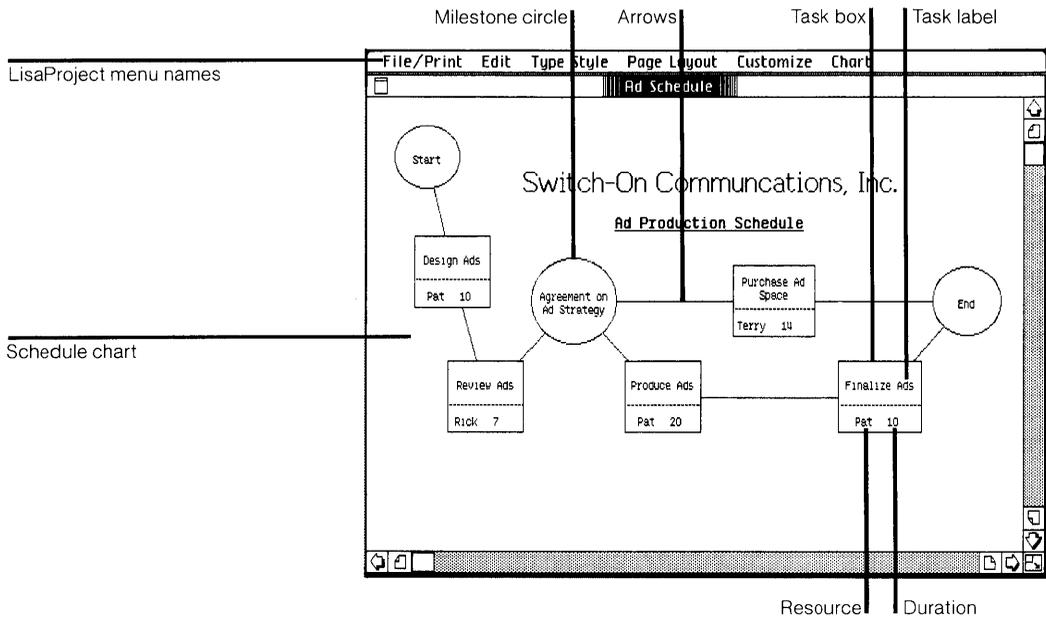
The LisaProject Schedule chart is made up of **task boxes, milestone circles**, and connecting lines, called **arrows**.

Each task box contains three pieces of information: the name of the task, the name of the person responsible for the task, and the estimated number of days to complete the task. For example, the resource person responsible for the task labeled "Finalize Ads" is named "Pat", and the estimated duration of the task is "10" days.

Unlike task boxes, milestone circles do not contain resources or durations. A milestone typically indicates a major step in the completion of a project. For example, "Agreement on Ad Strategy" is a milestone.

The connecting lines, called arrows, show the dependencies among the tasks and milestones, and indicate that the task or milestone on the left must be completed before the one on the right can be started. For instance, there must be agreement on the ad strategy before ad space can be purchased and ad production can begin.

Without pressing the mouse button, move the pointer around the screen and notice how the shape of the pointer changes to a **drawing pointer**, +, when it's over a blank part of the Schedule chart, to a **text pointer**, I, when it's over text, and to an **arrow pointer**, ↗, when it touches the edge of a task box, milestone circle, or arrow.



# ***What You Are Going to Do***

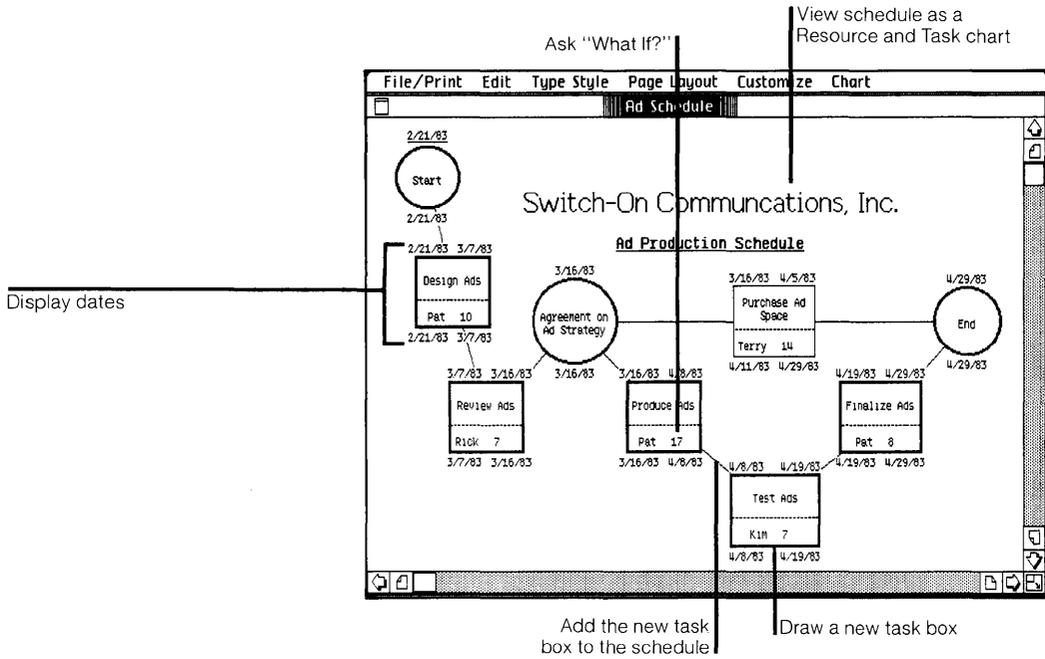
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Imagine you work for a fictional company called Switch-On Communications, Inc. You've put together a preliminary schedule for an ad production project that now needs some editing. You need to add another task to the schedule, and because the overall project has an aggressive deadline, you also need to shorten the duration of some tasks.

In the next several pages you will learn to:

- 1.** Display the earliest and latest possible dates that each task can be started and finished, and identify those tasks that are critical for completing the entire project in the shortest possible time.
- 2.** Draw and enter information into a new task box.
- 3.** Add the new task box to the schedule.
- 4.** Ask "What If?" by changing task durations and evaluating changes to the schedule.
- 5.** View the schedule as a Resource chart and a Task chart.

When you are finished, your schedule will look like the one below. Compare it with the schedule now on your screen.



# Displaying Dates on the Project Schedule Chart

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## What You're About To Do

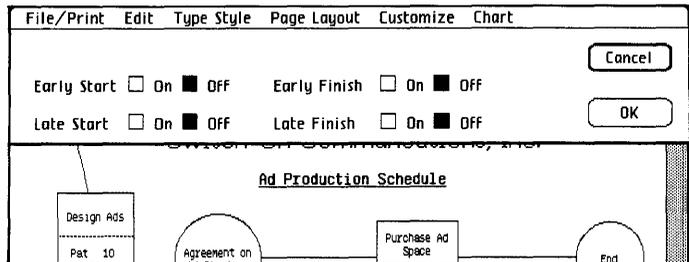
Follow the steps below to display the earliest and latest possible dates that each task can be started and finished in order to complete the project in the shortest possible time. LisaProject will automatically calculate the dates based on the dependencies and durations of each task, and a five day work week. Once the dates are displayed, you'll be able to identify the entire project's earliest possible completion date, and the project's critical tasks.

**Note:** In project scheduling, critical tasks are those tasks that must be completed on time if the entire project is to be finished in the earliest possible time. A task that is not critical has slack time, extra time in which the task can be completed without affecting the project's overall finish date. If you're unfamiliar with project scheduling, this will become clearer as you work through this example.

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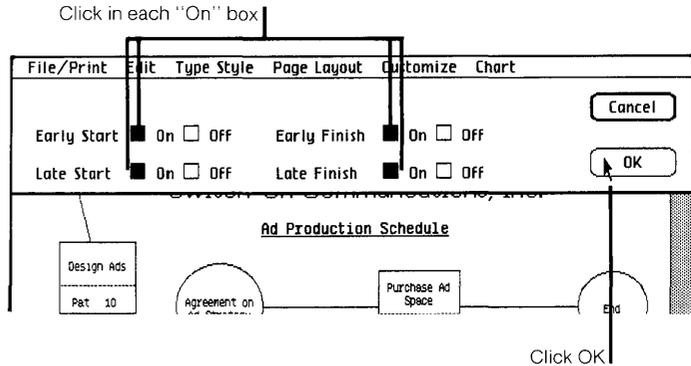
## Do This

- 1 Choose Display Dates from the Customize menu to bring up the Display Dates dialog box, as shown.



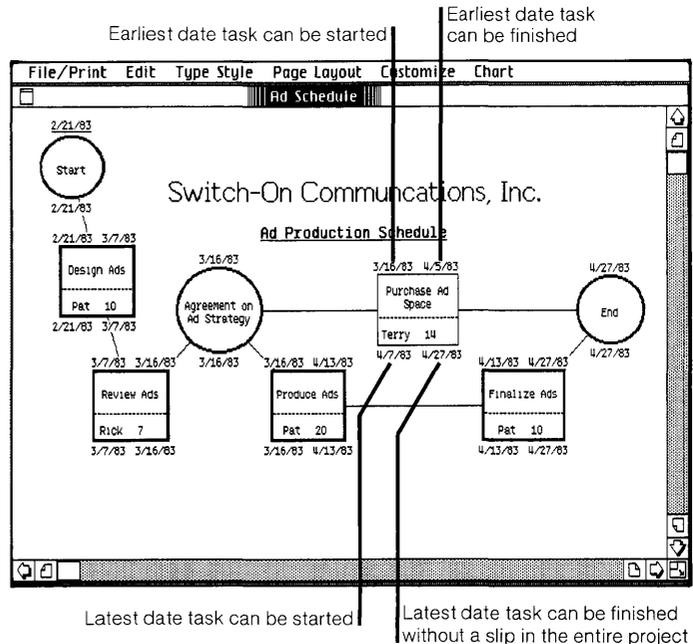
## Do This

- Use the mouse to check each of the "On" boxes, and then check "OK", as shown.



- Take note of the dates now displayed on the Schedule chart. The "Start" circle shows that the whole project is to begin 2/21/83. The bolded boxes show tasks that are critical. A slip of one day on a critical task will slip the entire project one day beyond the earliest possible finish date of 4/27/83.

*Notice that the task box labeled "Purchase Ad Space" is not bolded — it is not a critical task. This is because the ad space will be purchased during the same time the ads are being produced and finalized. Producing and finalizing the ads will take 30 days, while purchasing the ad space will take only 14 days, resulting in 16 days of slack time available for purchasing ad space.*



# Drawing and Entering Information into a New Task Box

## What You're About To Do

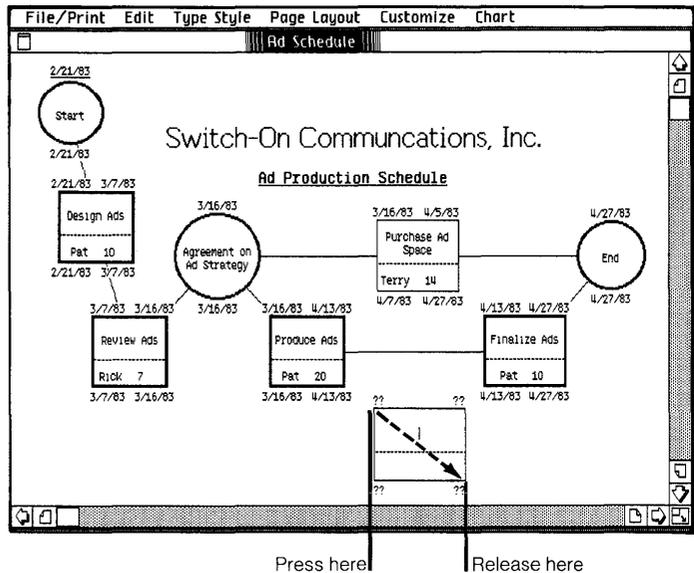
Your manager has suggested that you test the ads that are produced before you finalize them. Follow the steps below to draw a new task box and then enter the appropriate information into it.

## Do This

- 1 Draw a new task box below and between the two task boxes labeled "Produce Ads" and "Finalize Ads", as shown.

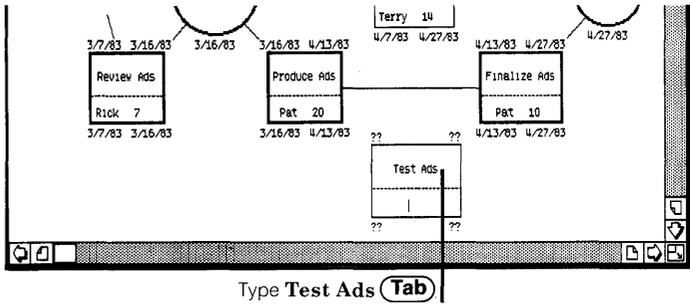
*Here's how*

- Place the drawing pointer, +, where you want the upper-left corner of the new box.
- Hold down the mouse button; as you move the drawing pointer down and to the right, a box appears.
- Release the button when the box is the size shown to the right. (Box not the size you want, or not in the right spot? Select the box by clicking on its edge with the arrow pointer, ↶. Then choose Cut from the Edit menu and start over.)



## Do This

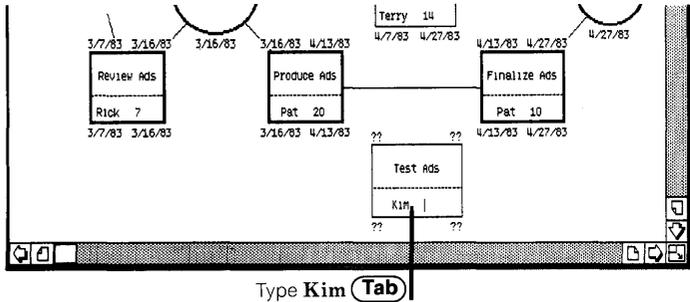
2 Notice the blinking vertical line in the top half of the box. It's called an insertion point, and indicates that you are able to enter the task label. (Don't see an insertion point? Click once in the top half of the box to select an insertion point.)



3 Type the task label **Test Ads** and press the **(Tab)** key. (Typing mistake? Use the **(Backspace)** key to correct it.)

*Notice that pressing **(Tab)** moves the insertion point down to the resource area of the task box.*

4 Now enter the name of the person who will test the ads: type **Kim** and press **(Tab)** to move the insertion point over to the duration area of the task box.

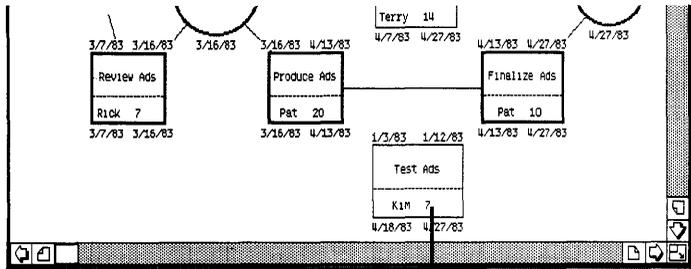


**Important:** The resource and duration area of the task box are two separate areas. You cannot type in the name of the resource and then press the **(Spacebar)** to get to the duration area. To get to the duration area you must either press **(Tab)** after typing in the name of the resource, or click with the pointer in the duration area, the lower, right-hand area of the task box.

## Do This

- 5 Make sure the insertion point is in the duration area of the task box, and enter the estimated duration of the task in days: type 7 and press **Tab**.

*Notice that since the new task box is not connected to any other tasks, it's displayed dates are not yet adjusted to the rest of the schedule.*



Type 7 **Tab**

# Adding a New Task Box to the Schedule

## What You're About To Do

The ads must be produced before they can be tested, and tested before they can be finalized. With these dependencies in mind, connect the new task to the project schedule as described in the steps below.

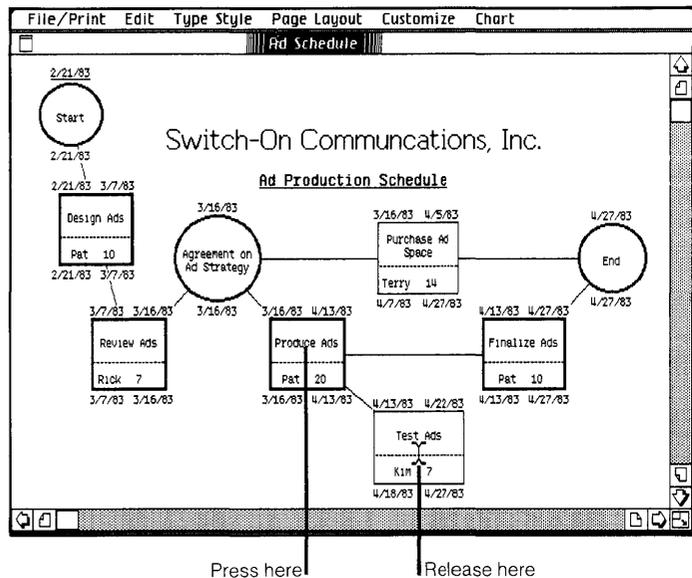
## Do This

- 1 Draw a connecting line, or arrow, from the "Produce Ads" task box to the "Test Ads" task box, as shown.

### Here's how

- Place the pointer in the middle of the "Produce Ads" task box.
- Hold down the mouse button and move the pointer to the middle of the "Test Ads" task box; then release.

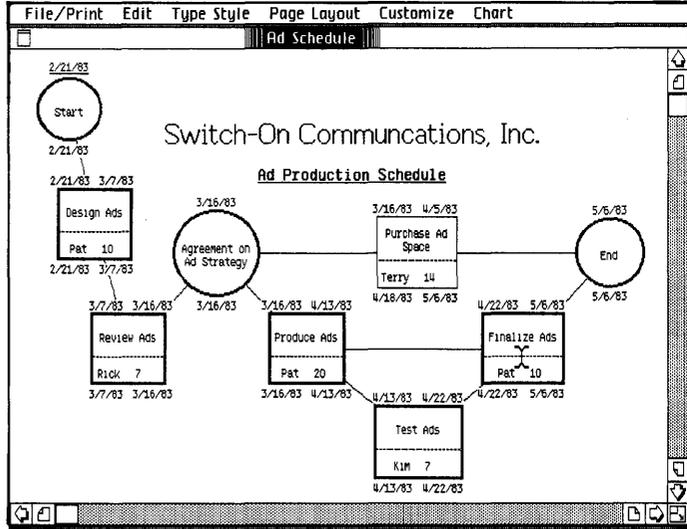
Notice the new connecting arrow and the change in displayed dates.



## Do This

- 2 Follow the same procedure to draw an arrow from the "Test Ads" task box to the "Finalize Ads" task box, as shown.

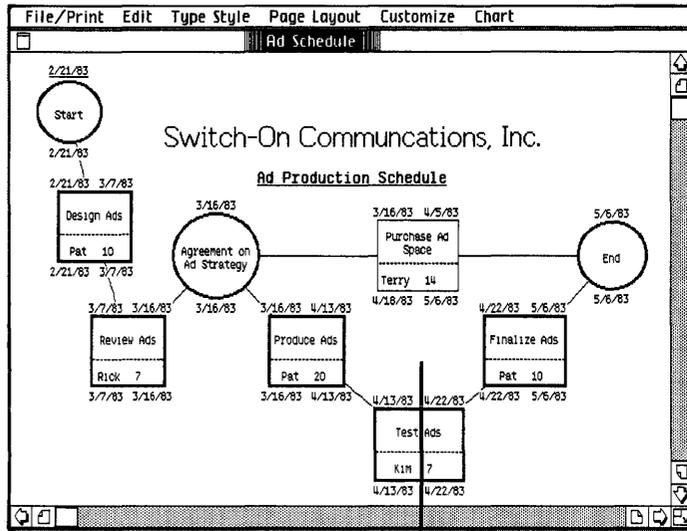
*Notice how the displayed dates are recalculated for the "Finalize Ads" task box, and that now the scheduled end date for the project is 5/6/83.*



- 3 Now that you've added the "Test Ads" task box to the schedule, you can cut the arrow between the "Produce Ads" task box and the "Finalize Ads" task box.

*Here's how*

- Select the connecting arrow by clicking on it with the tip of the arrow pointer, ↑. (Arrow between the tasks not highlighted? Try again.)
- Choose Cut from the Edit menu.



Arrow is cut

# “What If?”: Changing Task Durations and Evaluating Changes to the Schedule

## What You’re About To Do

Besides suggesting that you test your ads before they are finalized, your manager has specified that the entire project must be finished by the end of April. But the project is now scheduled to end on 5/6/83.

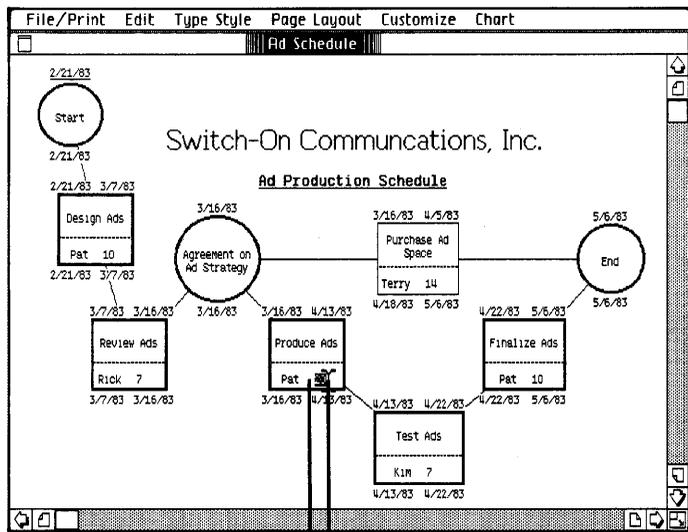
You’ve talked to the project team members, and think the time it takes to produce and finalize the ads can be reduced. Follow the steps below to see what will happen to your schedule when you replace some of the current task durations with your new estimates.

## Do This

- 1 Select (highlight) the number “20” in the “Produce Ads” task box, as shown.

*Here’s how*

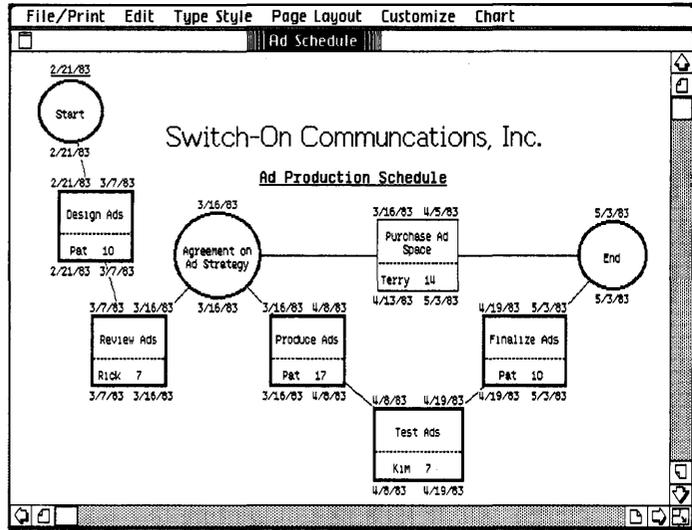
- Place the text pointer, **I**, immediately before the “2”.
- Hold down the mouse button and move the pointer through to the other side of the “0”; then release. (The number “20” not highlighted? Try again. Make sure you start with the text pointer just to the left of the “2”.)



## Do This

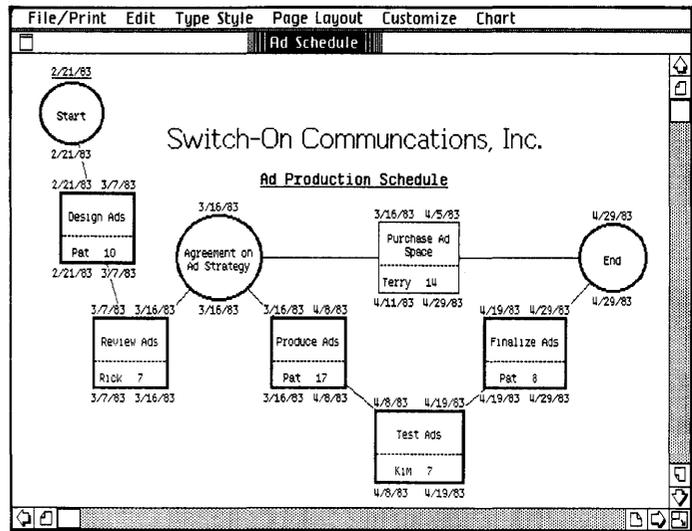
### 2 Type 17 and press **Tab**.

Notice that the displayed dates are recalculated after you press **Tab**, and that the project's new scheduled end date is 5/3/83, still not at your goal.



### 3 Follow the same procedure in steps 1 and 2 to reduce the duration in the "Finalize Ads" task box from "10" to "8", as shown. (Select the number "10", type 8, and press **Tab**.)

Notice that the displayed dates are recalculated after you press **Tab**, and that your project is now scheduled to be completed on 4/29/83, finished by the end of the month.



# Viewing the Schedule as a Resource Chart and a Task Chart

---

## What You're About To Do

---

LisaProject is able to display your project plans in several different ways. Up until now, your project has been displayed as a Schedule chart. Take a look at your project plotted by resource, and then by task, as described below.

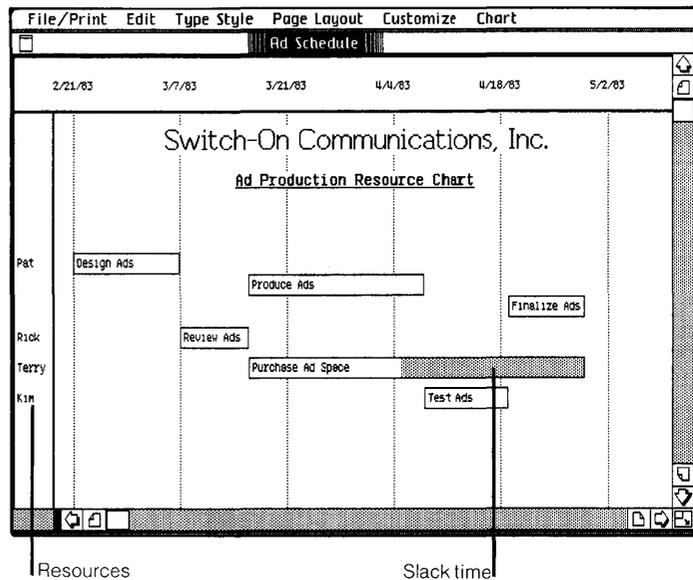
---

## Do This

---

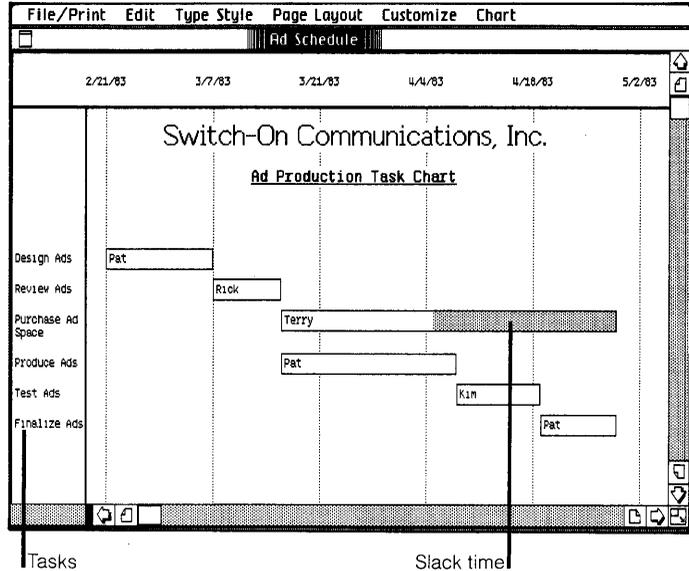
- 1 Choose Resource from the Chart menu to see your project schedule laid out by resource. The Resource chart allows you to see the tasks performed by each resource, and see how busy each resource will be over the life of the project.

*Notice the gray area of the "Purchase Ad Space" task bar — it shows the slack time for that task. If a bar does not show slack time, that task is critical.*



## Do This

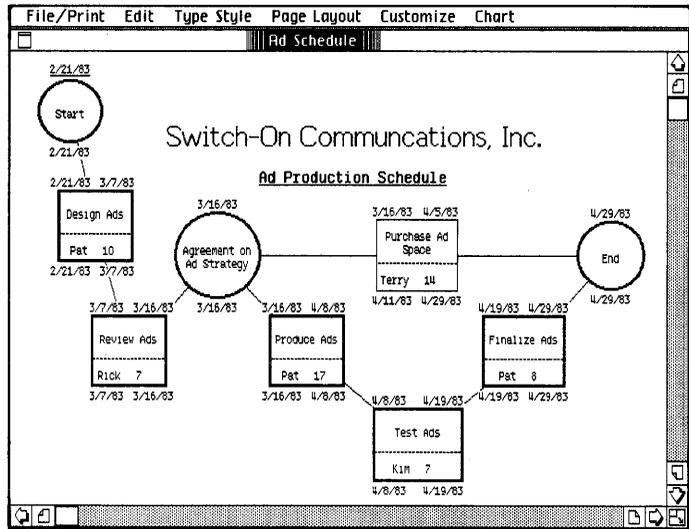
- 2 Choose Task from the Chart menu to see your project schedule laid out by task. The Task chart allows you to see the overall order in which the tasks will be performed.



- 3 Choose Schedule from the Chart menu to get back to your original Schedule chart.

You've examined your overall project in various ways and you're satisfied with the plan. Your schedule is now complete.

**Note:** The Schedule chart is where you actually enter and make changes to your project's schedule. The Resource and Task charts are then generated automatically, allowing you to examine and track your project from different vantage points.



# Printing Your Document (Optional)

---

## What You're About To Do

---

If you don't want to print your schedule now, or don't have a printer available, you can skip this section and go on to **Putting Your Document Away**.

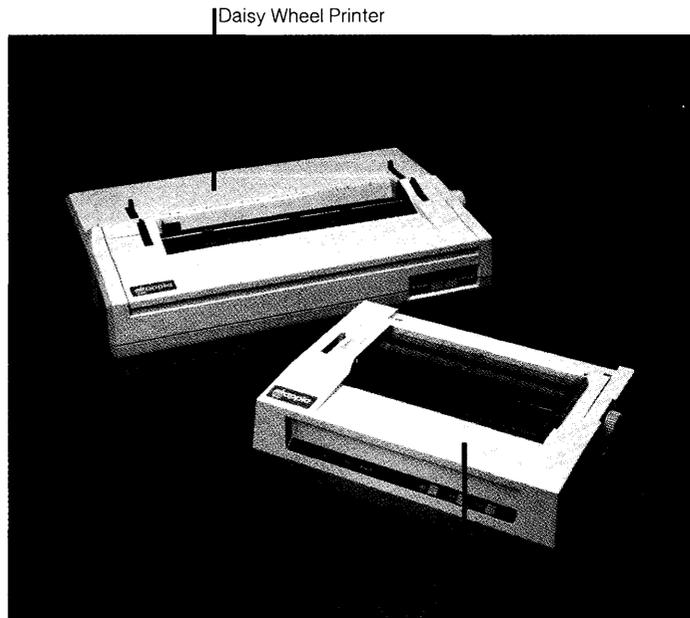
To print a copy of your finished schedule, follow the steps below.

---

## Do This

---

- 1 To ensure that your work is saved on the ProFile before you print, choose **Save & Continue** from the **File/Print** menu.
- 2 Make sure your printer is hooked up and turned on. (Refer to the manual that came with your printer for information on connecting the printer and loading paper and print ribbons.)

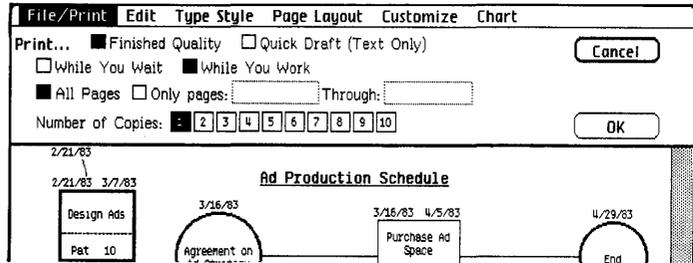


Daisy Wheel Printer

Dot Matrix Printer

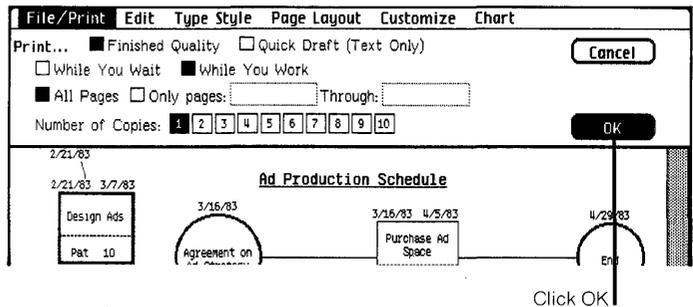
## Do This

- 3 Choose Print from the File/Print menu to bring up the Print dialog box shown to the right. (See a different message on the screen? Go to the next page and read the “Trouble with printing?” section.)



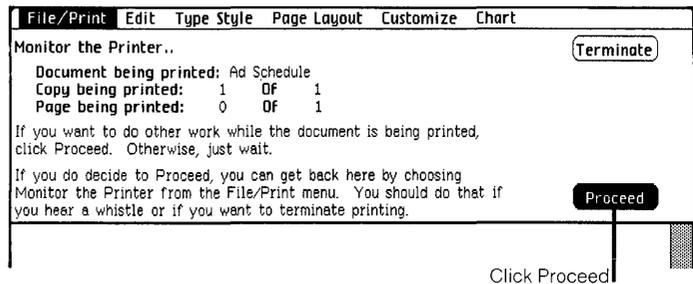
- 4 The current settings in the Print dialog box are fine, so use the mouse to check “OK”, as shown. (Trouble? See “Trouble with printing?” on the next page.)

*Notice that the hourglass appears for a few moments — the hourglass means wait — as your Lisa records the information necessary to print the document.*



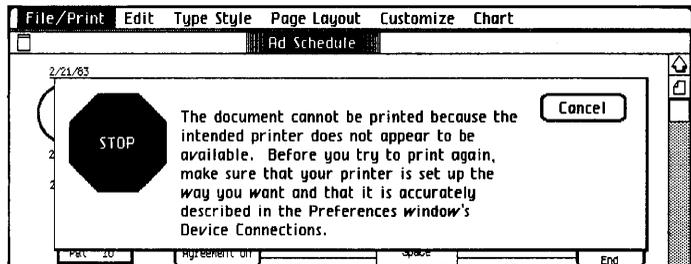
- 5 When your document begins printing and you see the Monitor the Printer dialog box, check “Proceed”, as shown. (Trouble? See “Trouble with printing?” on the next page.)

*Notice that once the hourglass disappears and printing begins, you can use your Lisa to do other work.*



## Trouble with printing?

- If you see the alert message to the right, refer to the *Lisa Owner's Guide*, Section D, Desktop Manager Reference Guide, under Set Printer Configuration.
- If you see any other alert message, follow its instructions. If needed, refer to the *Lisa Owner's Guide*, Section G, Troubleshooting, under Printers, or see the manual that came with your printer.
- To learn more about printing, refer to Section C, LisaProject Reference Guide, Chapter 2, under Print.



# Putting Your Document Away

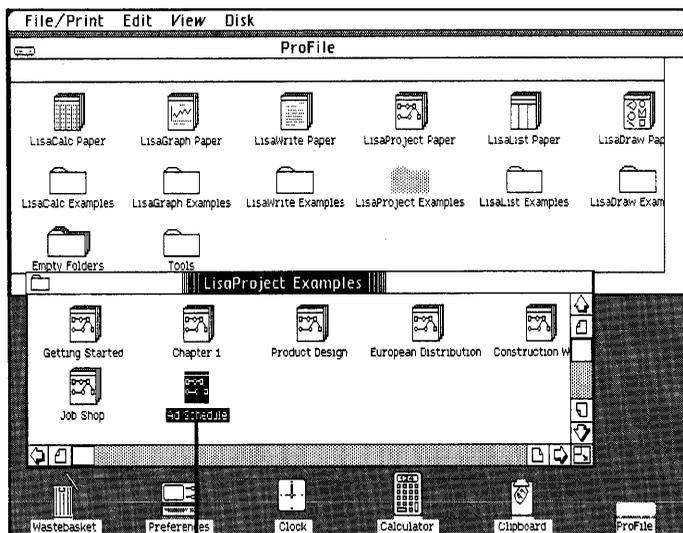
## What You're About To Do

Now that you've finished working on your document, follow the steps below to put it away. Even if you chose to print your document and it's still printing, you can continue to use your Lisa to do other work.

## Do This

- 1 Choose Save & Put Away from the File/Print menu. (Is the Save & Put Away menu item dim? Then you need to click in the document to make the window active.)

*Notice how the window zooms down to a document icon back in its filing home in the LisaProject Examples folder.*



Document is Saved & Put Away

# Starting from Scratch

---

## What You're About To Do

---

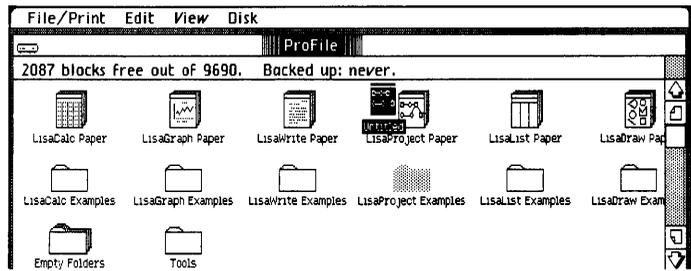
In order to start a new schedule, you need to get a piece of LisaProject stationery, as described below. Blank LisaProject stationery is in a pad called LisaProject Paper, in the ProFile window.

---

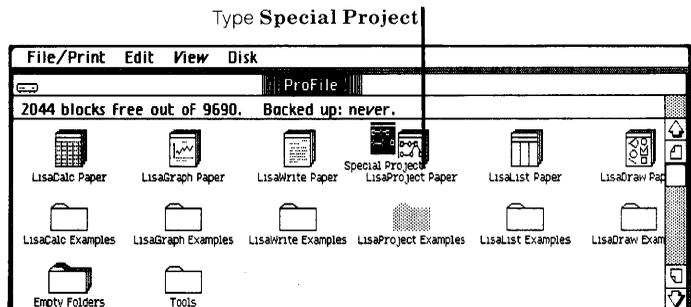
## Do This

---

- 1 Tear off a sheet from the LisaProject Paper pad at the top of the ProFile window. (Select the pad icon; choose Tear Off Stationery from the File/Print menu.)

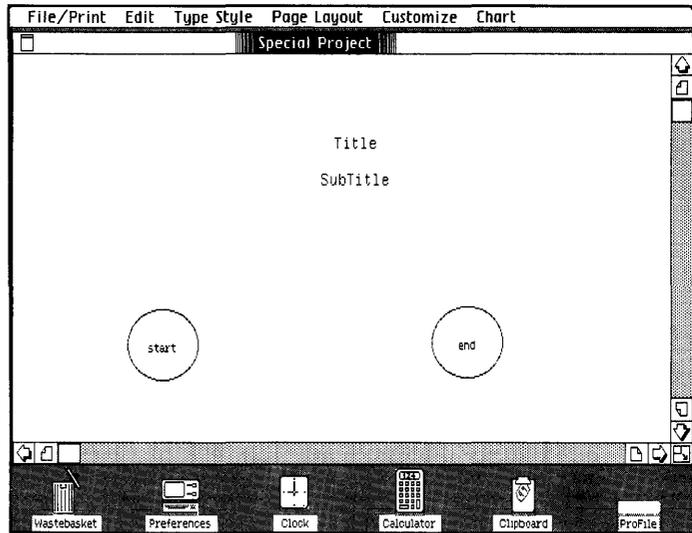


- 2 Don't worry right now about moving the untitled document out of the way. Change the name of the untitled document to **Special Project**. (Make sure the icon is selected; then type.)



## Do This

- 3 Open the piece of LisaProject paper you named Special Project as you would any document. (Choose Open "Special Project" from the File/Print menu.)
- 4 Once the blank piece of LisaProject paper appears, you are ready to begin scheduling a new project. Some things you should do when creating a new project schedule are described in the next several pages.



# Creating a New Project Schedule

---

## What You're About To Do

---

Anytime you begin a new project schedule, you need to:

- Give the Schedule chart your own title.
- Move the “start” and “end” circles apart to give yourself more room to draw task boxes.
- Draw and enter information into the task boxes that all together make up your project.
- Draw connecting arrows between dependent tasks, from left to right.
- Display the project dates and set a scheduled start date for the project.

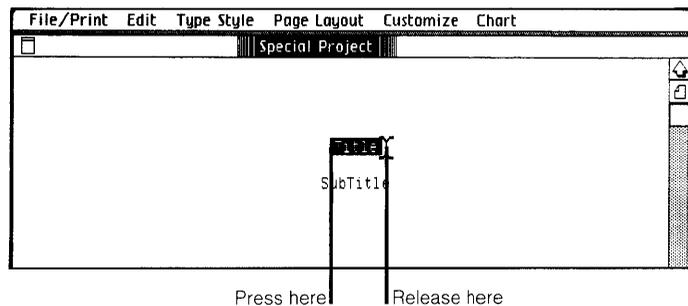
This work flow will be illustrated with a very brief example. The example concerns a special project — your vacation.

---

## Do This

---

- To give the Schedule chart the title, “Special Project”, and the subtitle, “My Vacation”:
  - 1 Select the word “Title” by pressing and holding with the text pointer just before the “T”, and then moving the pointer across and releasing after the “e”, as shown. (Didn't get it? Just try again.)



## Do This

### 2 Type Special Project.

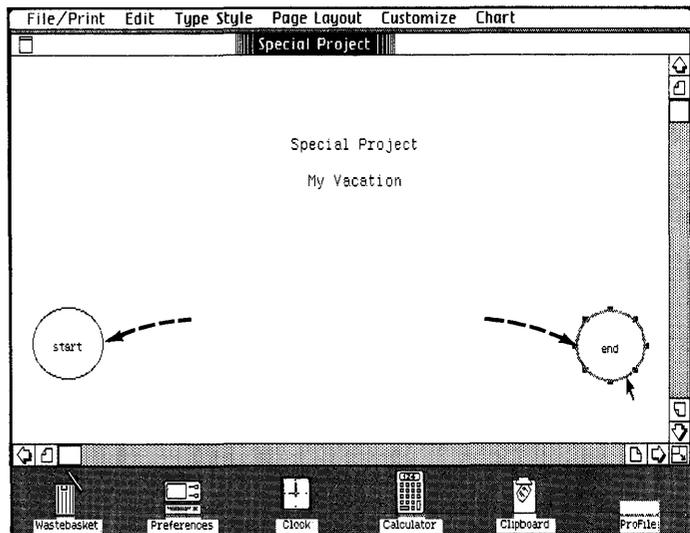
Now follow the same procedure to replace the word “Subtitle” with **My Vacation**, as shown. (Typing mistake? Use the **Backspace** key to correct it.)



### ■ To move the “start” and “end” circles apart:

1 Move the tip of the arrow pointer to the edge of the “start” circle. Press and hold down the mouse button, move the circle to the left, and then release. (Circle didn’t move? Make sure you press with the tip of the arrow pointer on the circle’s edge.)

2 Follow the same procedure to move the “end” circle to the right, as shown. (The small black squares around the circle are called **handles**; they show that the circle is selected.)

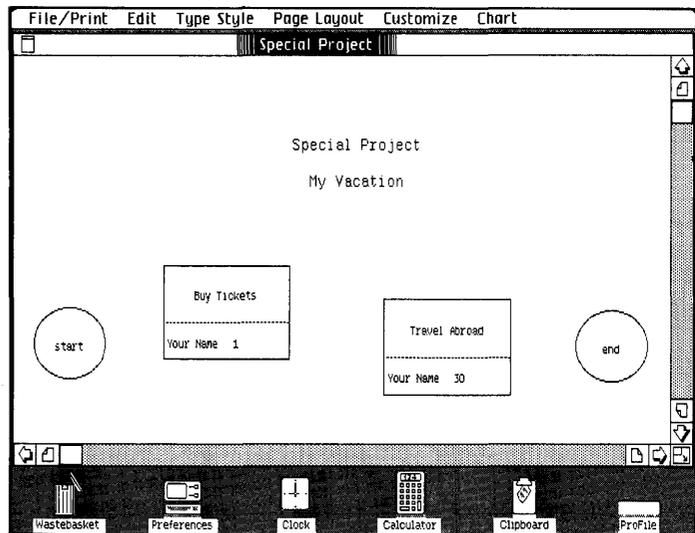


**Note:** You can also use this procedure to move task boxes.

## Do This

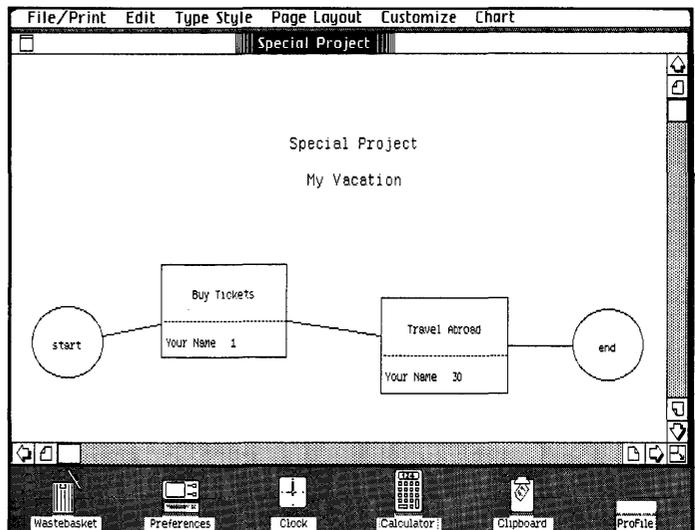
- To draw and enter information into your task boxes:

- 1 Draw a task box next to the “start” circle, and enter the following information: Type **Buy Tickets**, (**Tab**), Your Name, (**Tab**), **1**, (**Tab**).
- 2 Draw another task box to the right of the one you just drew, and enter this information: Type **Travel Abroad**, (**Tab**), Your Name, (**Tab**), **30**, (**Tab**). (The “30” in this case stands for 30 working days.)



- To draw the connecting arrows for your project:

- 1 Start in the middle of the “start” circle and draw a connecting arrow to the “Buy Tickets” task box. Draw the remaining arrows as shown, remembering to draw each arrow from left to right.



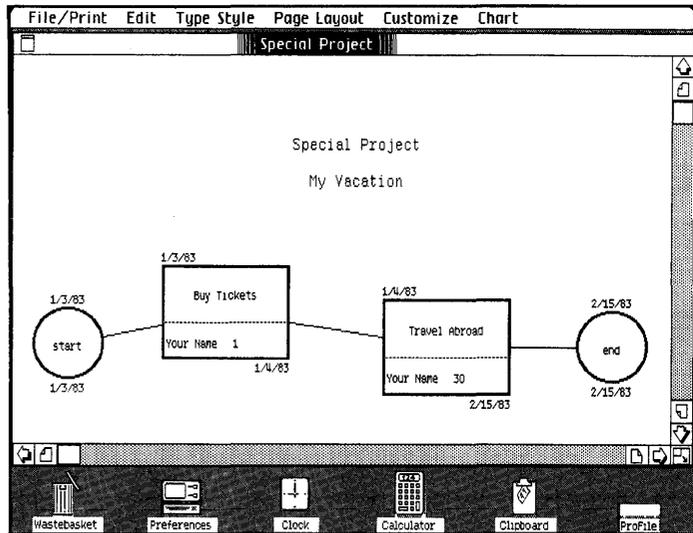
## Do This

- To display the project dates for your vacation:

- 1 Choose Display Dates from the Customize menu. When you see the Display Dates dialog box, check the “On” box for just the Early Start and Late Finish dates, and then check the “OK” button so the dates displayed look like those shown to the right.

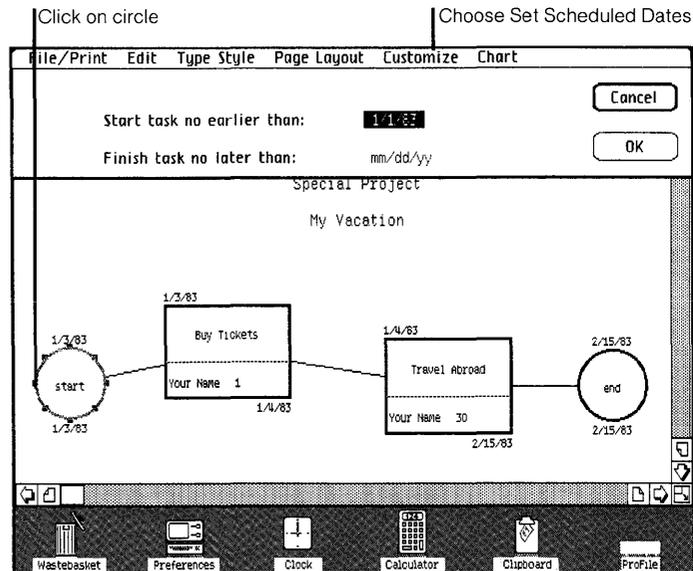
*Notice that your vacation's start date is shown as 1/3/83, the first Monday of the calendar range set for this piece of LisaProject stationary.*

**Note:** You can reset the calendar range by choosing Calendar from the Customize menu.



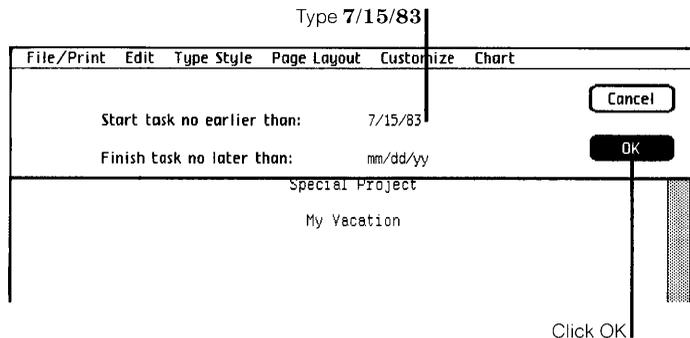
- You want your vacation's start date to be 7/15/83. To set your own scheduled start date:

- 1 Select the “start” circle by clicking on its edge with the tip of the arrow pointer. (The small black squares, called handles, show that the circle is selected.)
- 2 Choose Set Scheduled Dates from the Customize menu to bring up the dialog box shown to the right.



## Do This

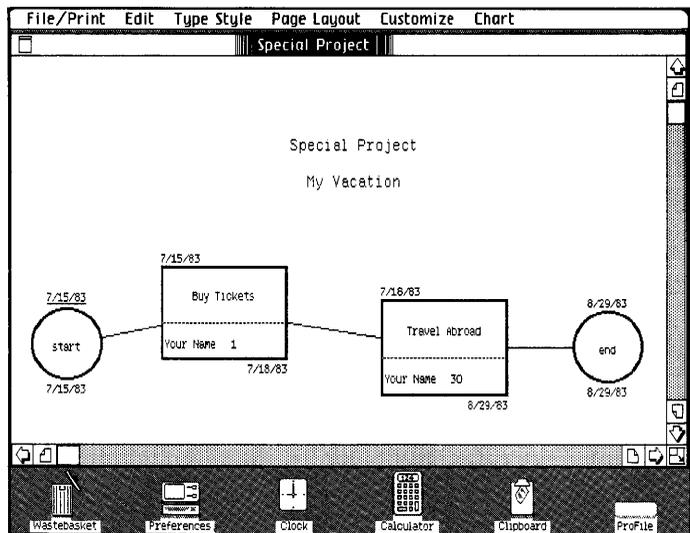
- The start date in the dialog box, “1/1/83”, is already selected (highlighted), so just type **7/15/83** and check “OK”. (Typing mistake? Use the **Backspace** key to correct it.)



- Notice the recalculated dates and the new date now above the “start” circle, “7/15/83”. The underlining of the date indicates that you’ve set a scheduled date.

**Note:** You can also set scheduled dates for other tasks and milestones.

Your Special Project schedule is complete. To see it without the “start” circle selected, click on a blank part of the Schedule chart. Now if you’d like to experiment with LisaProject, do so — try different things. Press and move across the menu bar and look at what’s in all your menus. If you want specific information on something, look in the LisaProject Reference Guide, Section C, or check the index.



# Finishing Up

## What You're About To Do

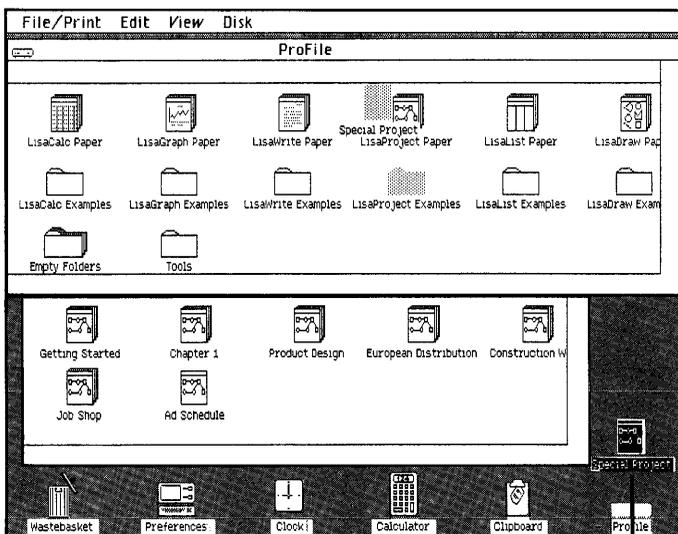
It is a good idea to save all your documents and clear off your Lisa's desktop at least once a day. The steps below illustrate one of the many ways you can manage things on the Lisa desktop.

**Note:** When you are connecting, disconnecting, moving, or servicing equipment, you must turn off the power. But normally, you should turn off your Lisa only at the end of each week, and always leave your ProFile turned on.

## Do This

1 Choose Set Aside "Special Project" from the File/Print menu and notice how Special Project is set aside as an icon on the desktop.

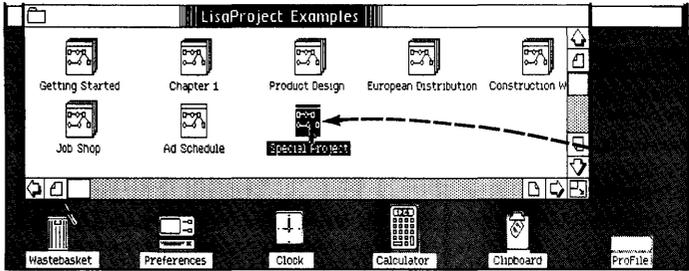
**Note:** When you're working with several documents at the same time, it's often convenient to keep some of them set aside on the desktop, where it's easy to get at them.



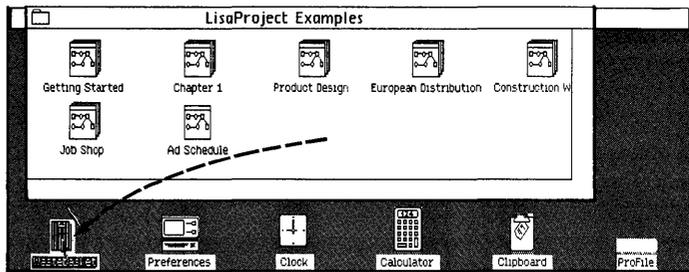
Special Project is Set Aside

## Do This

- 2 If you want to file the Special Project document in a new place, move it to a clear area in the LisaProject Examples folder, as shown. (Press with the pointer on the icon, move it, and release when the icon is where you want it.)



- 3 If you want to throw away the Special Project document, move it to the Wastebasket icon. When the document icon is on the Wastebasket and the Wastebasket icon highlights, release the mouse button and wait for the document to be deposited.



**Note:** You can always get back the last thing you've thrown away by opening the Wastebasket icon and moving the deposited document back out.

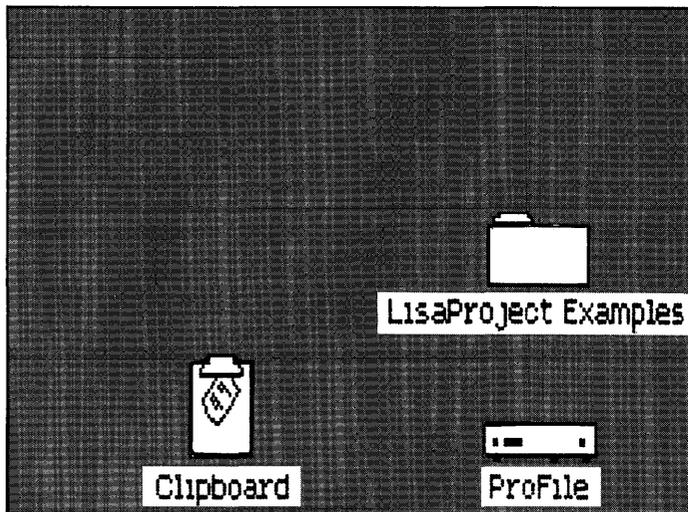
---

## Do This

---

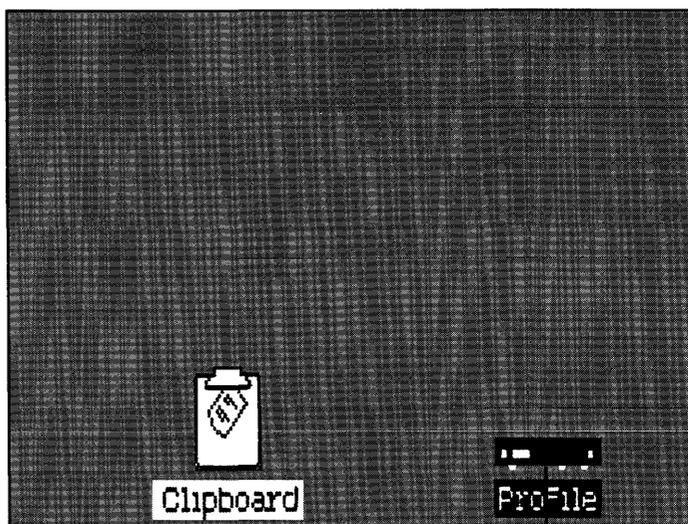
- 4 Now set aside both the LisaProject Examples folder and ProFile by choosing Set Aside Everything from the File/Print menu.

*Notice that both the Folder and ProFile icons are now set aside on the desktop.*



- 5 You can put away the LisaProject Examples folder back in its filing home in the ProFile even when the ProFile window is closed. To do so, select the LisaProject Examples folder and choose Save & Put Away "LisaProject Examples" from the File/Print menu.

**Note:** *If you want to deselect a selected icon, click once when the pointer is not over the icon.*



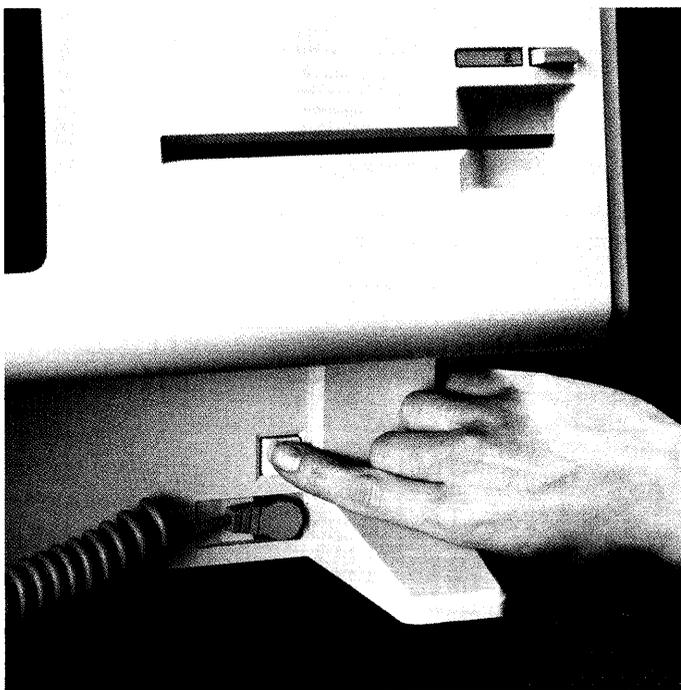
Folder is Saved & Put Away

---

## ***Do This***

---

**6** When you are ready to work on something else, just open the ProFile again. When you want to turn off Lisa's power — for example, over the weekend — press the lit on-off button, as shown. When you turn on the Lisa again, everything will reappear as you left it when you turned the Lisa off, including documents you may have left open on the desktop. Normally, you should leave the ProFile turned on.



# Using LisaProject

---

You now have the basic skills necessary for using LisaProject to produce your own LisaProject documents. Because the concepts for using each Lisa tool are the same, you also have some of the basic skills for using other Lisa tools: LisaDraw, LisaGraph, LisaList, LisaCalc, and LisaWrite.

There is much more you can do with LisaProject. You can learn about other LisaProject features by:

- Going through other exercises in the LisaProject Tutorial, Section B.
- Using the LisaProject Reference Guide, Section C, as you do your work.
- Just experimenting as you use LisaProject. Remember — when experimenting, you usually have to select something before taking action with it. It's safe to experiment because most of the things you do can be undone by choosing Undo Last Change from the Edit menu. And if you're experimenting with a document you've torn off of a stationery pad, you can try almost anything and always start fresh by either choosing Revert to Previous Version from the File/Print menu, or by throwing the document away into the Wastebasket, and tearing off a fresh copy from the same stationery pad.

# ***Other LisaProject Features***

- 
- Assigning several resources to the same tasks.
  - A “reduced to fit” view, allowing large schedule charts to be viewed on the screen all at once.
  - Special project tracking using the Resource chart to indicate the days remaining to complete specific tasks.
  - Being able to specify holidays, and one to seven day work weeks.
  - Choosing from a variety of typestyles for chart titles.
  - Cutting and pasting from LisaProject to LisaDraw.

# ***Guide to Lisa Manuals***

---

Set up your Lisa following the setup procedures in the Lisa accessories box or in Appendix 1, Setup Procedures, in the *Lisa Owner's Guide*.

---

Go through Section A, LisaGuide, in the *Lisa Owner's Guide*, for an introduction to the Lisa.

---

If your dealer or service representative did not set your system Preferences so that the Lisa knows what external devices are attached, follow the instructions in Section D, Desktop Manager Reference Guide, under Set, in the *Lisa Owner's Guide*.

---

Go to Section A, Getting Started, in the manual for each office tool that you want to learn, for the essentials of using that tool.

---

- Go to Section B, Lisa Fundamentals, in the *Lisa Owner's Guide*, for the background information you need before beginning long-term work on the Lisa.
- 

You are now ready to start doing your own work on the Lisa:

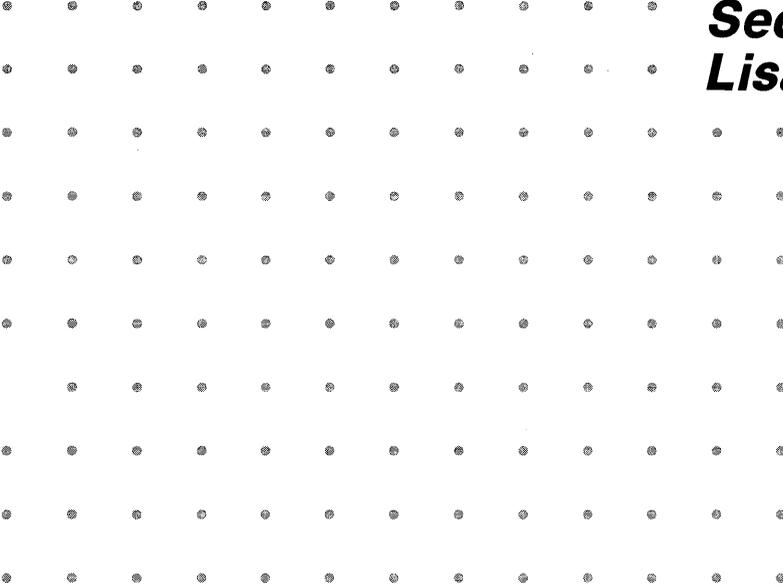
- If you want self-paced instructions for using a tool, go to Section B, Tutorial, in that tool manual.
  - If you want instructions for performing specific tasks with a tool, go to Section C, Reference Guide, in that tool manual.
- 

For specific instructions on filing and desktop management, go to Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*.

---

For more information on the Lisa hardware, tips on caring for the Lisa, and suggestions for troubleshooting when the system isn't working properly, go to the other sections of the *Lisa Owner's Guide*.

**Section B**  
***LisaProject Tutorial***



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#### ***B5 Getting a Blank Schedule Chart***

#### ***B6 Enlarging the Drawing Space***

#### ***B7 Moving Milestone Circles***

#### ***B8 Drawing Task Boxes***

#### ***B9 Draw***

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#### ***B14 Stretch and Shrink***

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#### ***B28 Features of the Resource Chart***

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#### ***B30 Printing Your Document***

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# ***What's in the LisaProject Tutorial?***

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This tutorial teaches you about LisaProject as it guides you step by step through several real-life examples. To get the maximum value from this tutorial, you should try out the examples on your Lisa as you go through it.

All major LisaProject features are covered in the tutorial, but not always in fine detail. A complete description of each LisaProject feature can be found in Chapter 2 of Section C, the LisaProject Reference Guide, in this manual.

Before you start this tutorial, be sure you have completed LisaGuide, in which Lisa introduces Lisa; you can find the LisaGuide diskette in the front pocket of the *Lisa Owner's Guide*. Also, you should have completed Section A, Getting Started with LisaProject, in this manual. If you haven't completed one or both already, now is a good time to do so.

To complete the activities in this tutorial, you need

- The blank LisaProject stationery pad that is on your Profile.
- The sample documents for this tutorial, that are in the LisaProject Examples folder on your Profile.

The arrow symbol (▶) appears before each activity in the tutorial, and it means "Do something." For example,

- ▶ Turn the page to begin the tutorial.

**Chapter 1**  
**Creating a Chart**

---

# Creating a Chart

---

This chapter leads you step by step through the creation of a Schedule chart and its resulting Resource and Task charts.

By following the activities in Chapter 1, you learn most of the standard procedures of resource management. In this chapter you learn how to

- Get a blank Schedule chart.
- Expand the drawing space.
- Move milestone circles.
- Draw task boxes.
- Enter text into boxes and circles.
- Draw arrows.
- Get the resulting Resource and Task charts.
- Print the charts.
- Put the charts away.

Throughout this chapter you assume the role of a corporate Director of Research and Development, keeping track of new product development.

---

## **Creating a Schedule Chart**

LisaProject helps you plan and monitor projects. Based on information that you provide, LisaProject shows you the earliest and latest dates each task in your project can be started and finished. LisaProject also produces a Resource chart showing the order in which “resources” (people or equipment) are scheduled, and a Task chart showing the order in which tasks are scheduled.

To create a Schedule chart, you first draw boxes or circles to represent, respectively, the “tasks” and “milestones” in your project; tasks have associated resources and time durations, milestones are events with no associated resources and no time duration. Then, you tell LisaProject the interdependence between the tasks and milestones. That is, you specify which ones come before others by drawing connecting lines that are called “arrows.”

Once you create a Schedule chart, the resulting Resource and Task charts are generated automatically. All three charts together are called a “LisaProject document.”

Figure 1 illustrates a Schedule chart, with its various components identified. These components will be described in more detail later, as you learn how to create them. The Resource and Task charts are illustrated and described later in Figures 19 and 22.

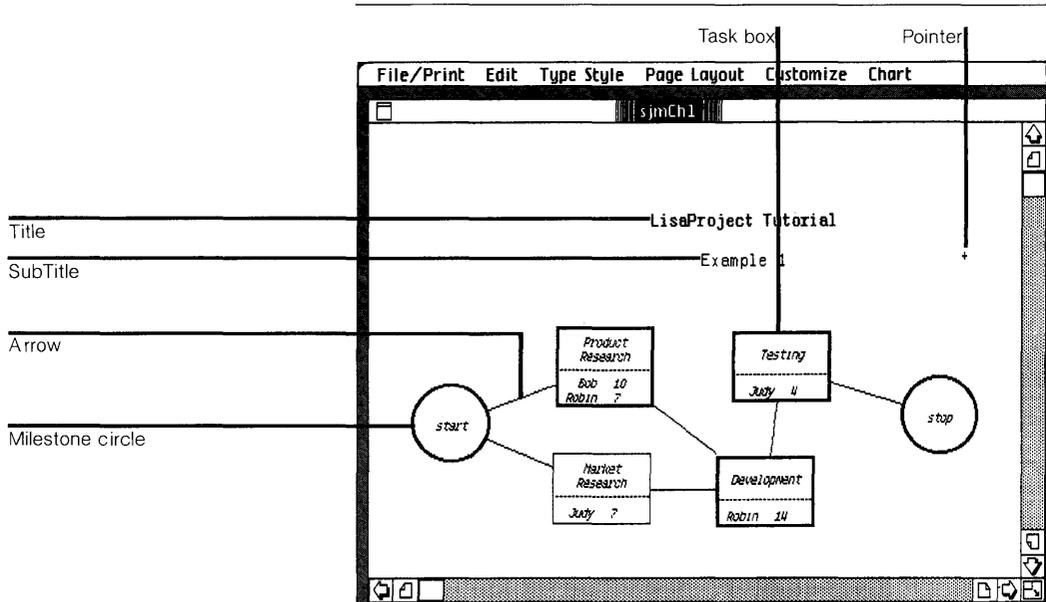


Figure 1. A Schedule Chart for Example 1

## Getting a Blank Schedule Chart

To create a new LisaProject Schedule chart,

- ▶ Open the ProFile window by clicking twice on the ProFile icon.
- ▶ Tear off a sheet of paper for the new document by clicking twice on the LisaProject stationery pad icon.
- ▶ Name the new document by typing your initials followed by Ch1. This allows other people to use the same ProFile and not get their documents confused.



LisaProject Paper



LisaProject Paper

- ▶ Open the new document's window by clicking twice on the document icon.



Your screen should then look like Figure 2. The document name you have just entered is at the top, in the black band beneath the menu bar. Within the drawing area of the chart, there are reserved spaces for a title and subtitle, and there are milestone circles labeled "start" and "end."

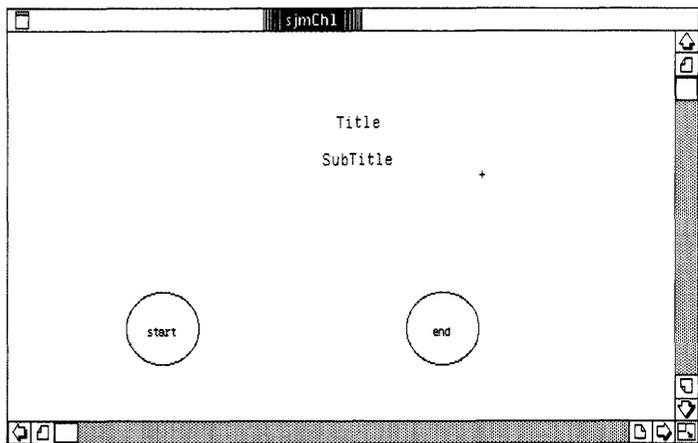


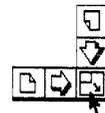
Figure 2. A Blank Schedule Chart

## ***Enlarging the Drawing Space***

When the blank Schedule chart appears on your screen, the drawing area allocated to it may not be enough to suit your needs. You may want to enlarge it.

To do this,

- ▶ Move the pointer to the size control box.



- ▶ Press and hold the mouse button as you pull the pointer down toward the bottom of the screen.
- ▶ Release the mouse button when your chart looks like Figure 3.

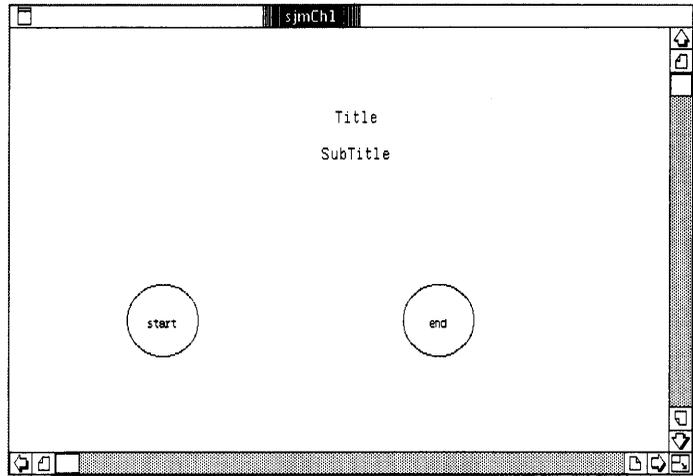


Figure 3. Enlarged Drawing Space

### ***Moving Milestone Circles***

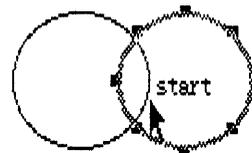
When the blank Schedule chart appears on your screen, the “start” and “end” milestones are located near the bottom of the screen, relatively close together. You may need to spread them out to provide more room for task boxes.

Milestone circles are selected and moved by using the mouse to position the pointer. To do this,

- ▶ Position the pointer on any part of the “start” circle’s outline and click once. The circle’s outline appears shaded with eight dark handles around it. This indicates that the circle is selected.



- ▶ Press the mouse button and hold it down as you move the pointer to the left. A ghost of the milestone circle follows the pointer. Move it to the position shown in Figure 4.



- ▶ Release the mouse button. The circle will remain selected.



- ▶ Move the “end” circle in the same manner to the position shown in Figure 4.

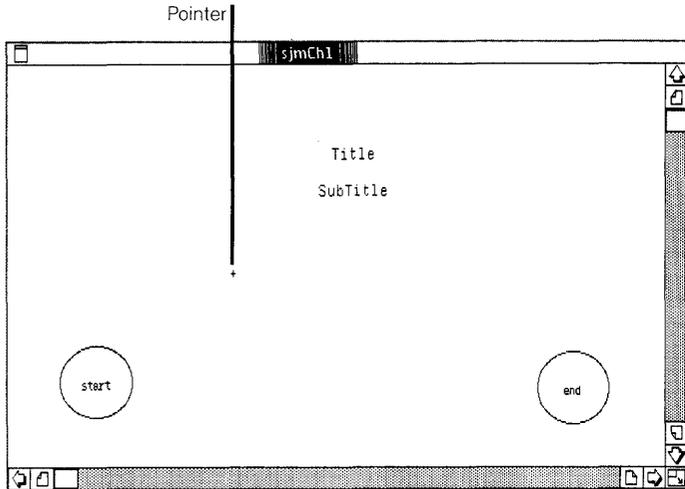


Figure 4. Repositioned Milestone Circles

Notice that the selected circle remains selected after you release the mouse button. It becomes unselected when you select another object, or click in an empty area of the drawing space.

### ***Drawing Task Boxes***

Task boxes are drawn with the mouse, which is also used to select, move, stretch, and shrink existing boxes.

Follow each step below to draw the task boxes shown in Figure 1.

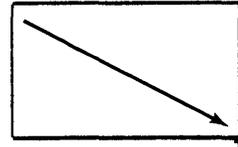
---

## Draw

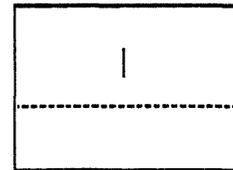
To draw a box,

- ▶ Move the pointer to the approximate position indicated for the pointer in Figure 4, then press and hold the mouse button down.

- ▶ While holding the mouse button down, move the pointer diagonally. The box grows as you move the pointer.



- ▶ Release the mouse button. Your box should look like the one in Figure 5. When you release the mouse button, a horizontal line and a blinking vertical insertion point will appear in the box you just drew.



The horizontal line through the middle of the box divides the box into separate areas for different kinds of text, as explained later. The blinking insertion point shows where text would be inserted if you were to type on the keyboard.

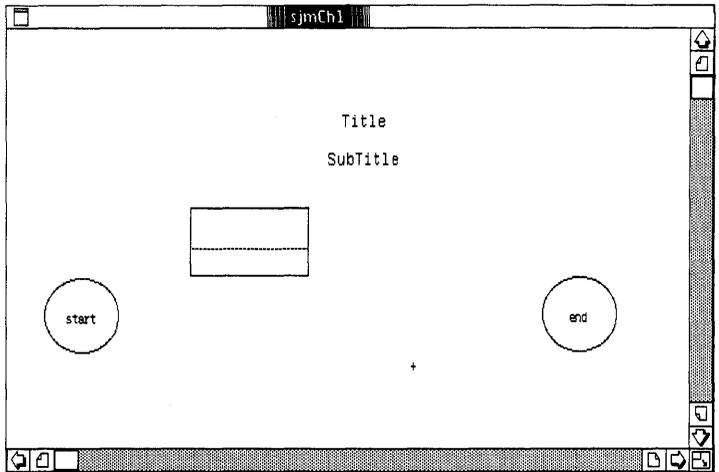


Figure 5. Drawing the First Task Box

Now, draw a second box a little smaller than the first box,

- ▶ Draw the second box using the same steps given above, but make it smaller and position it as shown in Figure 6.

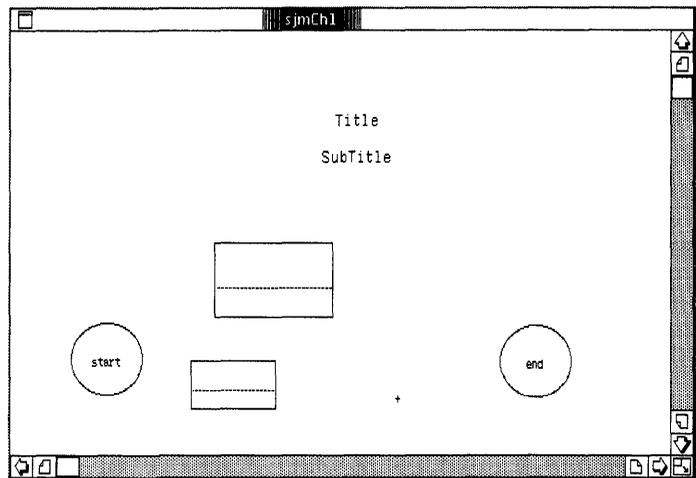


Figure 6. Drawing a Smaller Task Box

---

## Move

As with milestone circles, the shaded outline of a selected box is used to move the box. To move the small box you just drew,

- ▶ Select it by clicking once on it.
- ▶ Position the pointer on any side of the object. Avoid touching any of the eight dark handles.



- ▶ While pressing and holding the mouse button down, move the pointer. A ghost of the box follows the pointer. Move the box to the position shown in Figure 7, then release the mouse button.

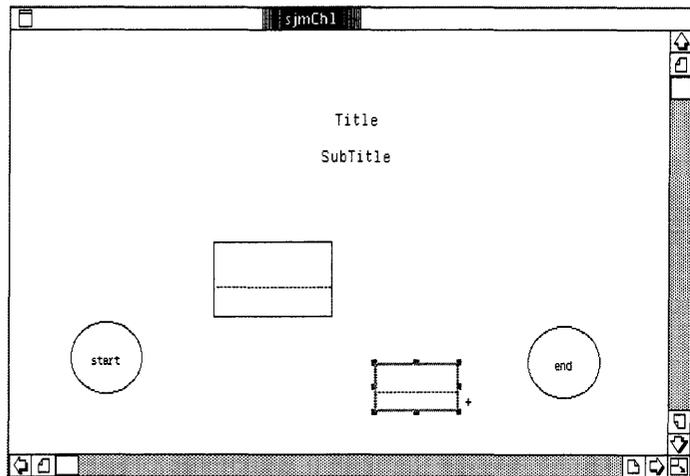
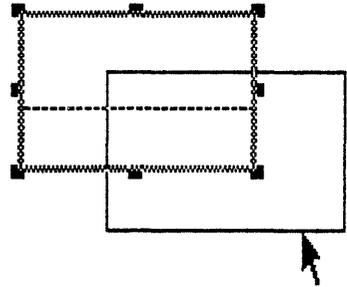


Figure 7. Moving a Task Box

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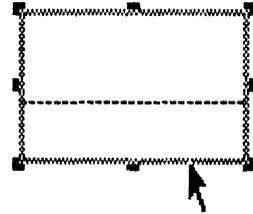
## Copy and Paste

A box can be duplicated by selecting the box, copying it to the Clipboard, indicating the position it is to be copied to, and pasting it from the Clipboard to the new position.

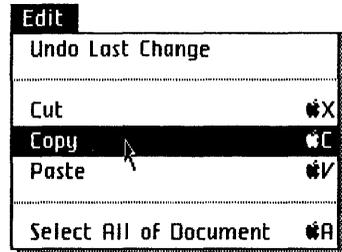
When a box is copied, the original version still remains where it was.

To copy the first box to another position,

- ▶ Select the first (upper-left) task box by clicking once on it.



- ▶ Choose Copy from the Edit menu. This copies the selected box to the Clipboard.



- ▶ Move the pointer to the center of where the copied box is to be pasted, as shown in Figure 8, and click the mouse button once.

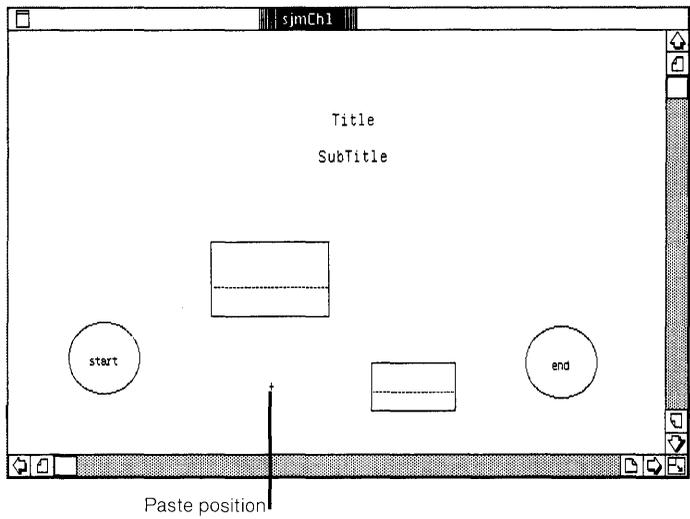


Figure 8. Indicating the Paste Position

- Choose Paste from the Edit menu. The box will then be copied, as shown in Figure 9.

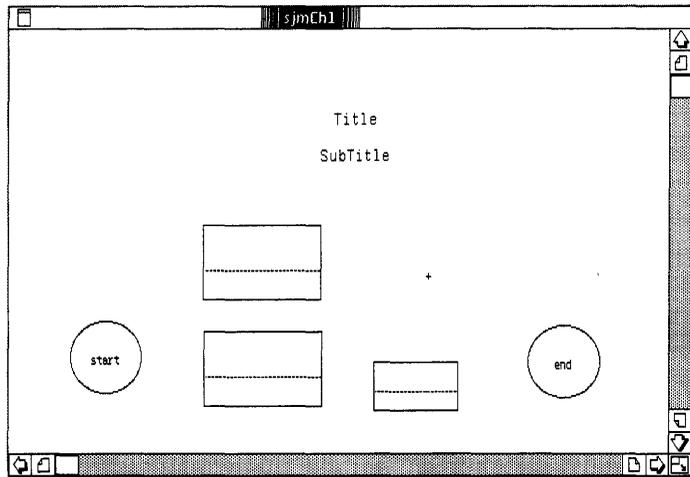


Figure 9. Pasting a Copied Task Box

To complete the drawing of task boxes for this example, repeat the copy operation to get the fourth box, assuming the third box is still on the Clipboard,

- ▶ Move the pointer to the position where the center of the next box is to be pasted and click the mouse button once.
- ▶ Choose Paste from the Edit menu. Your chart will now look like Figure 10.

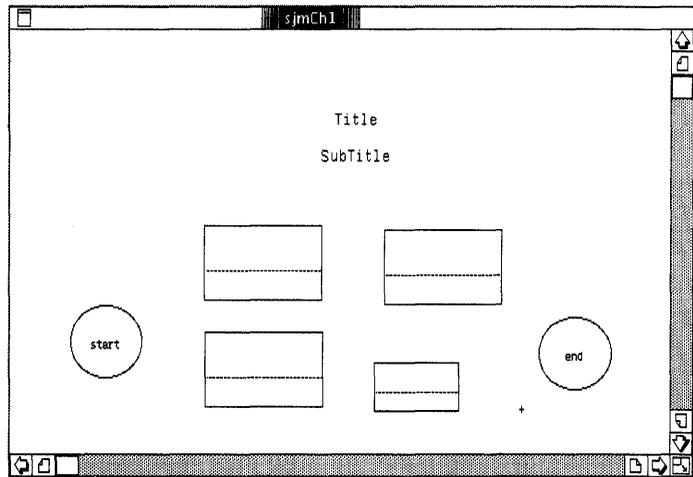


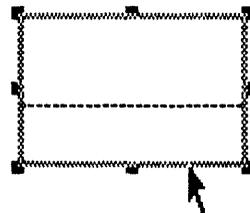
Figure 10. Pasting the Fourth Task Box

### ***Stretch and Shrink***

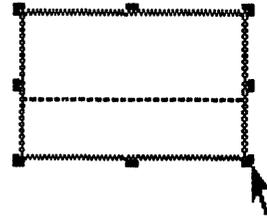
The eight dark handles on the outline of a selected box are used to stretch or shrink the box. Stretching and shrinking is done by first selecting the box, then pulling or pushing on one of the eight dark handles with the pointer until the box is the right size.

To stretch the smallest task box in Figure 10,

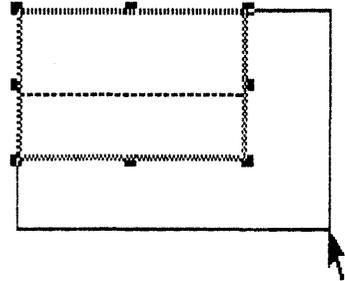
- ▶ Select the box by clicking once on its edge.



- Move the pointer onto the bottom-right corner handle, then press and hold the mouse button down.



- While holding the mouse button down, move the pointer. A ghost of the box will stretch. When the box is the desired size, release the mouse button. Try to make it look like the one in Figure 11.



Boxes can be stretched in one dimension by pulling the middle handle on any side. They can be stretched in two dimensions by pulling on a corner handle.

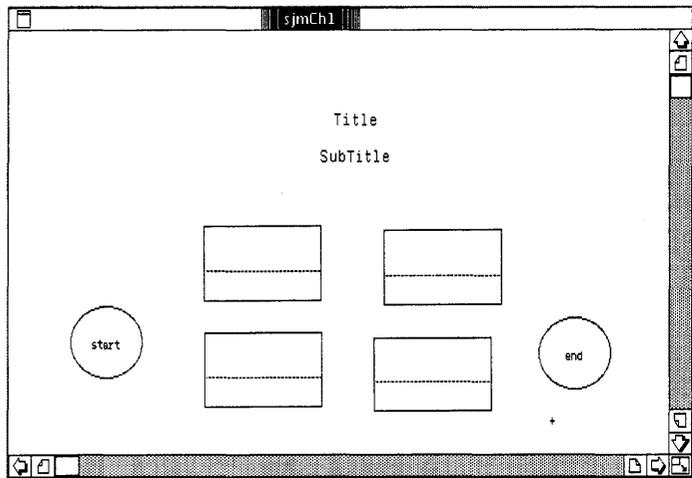


Figure 11. Stretching a Task Box

---

## Entering Text

---

There are three areas where text can be entered on a Schedule chart:

- Title and subtitle text, for which space is reserved at the top of the chart, as shown in Figure 1.
- Task text, which consists of a label, resource name, and duration entered inside a task box, as shown in Figure 12.
- Milestone text, which consists of a label entered inside a milestone circle, as shown in Figure 13.

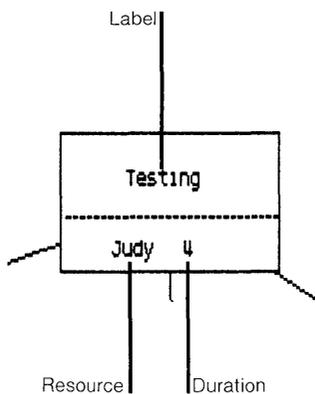


Figure 12. Task Text

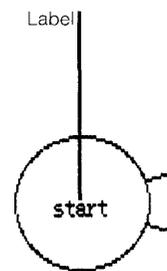


Figure 13. Milestone Text

You begin text entry by moving the pointer to a text area and clicking the mouse button once, twice, or three times:

- One click places an insertion point.
- Two clicks selects a word.
- Three clicks selects an entire title, label, or resource line.

You can tell where the text areas of the chart are located because the pointer changes shape when it is in them:

When the pointer is in a drawing area, it looks like this:



When the pointer can be used to select something such as a task box or menu, it looks like this:



When the pointer is in a text area, it looks like this:



---

### ***Title and Subtitle***

The areas reserved for title and subtitle text are the two lines at the top of the chart labeled “Title” and “SubTitle.”

To replace the words “Title” and “SubTitle” with new text,

- ▶ Move the pointer to the word “Title” and click the mouse button twice to select it.

Title

SubTitle

- ▶ Type

**LisaProject Tutorial**

- ▶ Press the **(Tab)** key to advance to the subtitle area.

LisaProject Tutorial

SubTitle

- ▶ Type

**Example 1**

If you make an error, use the **(Backspace)** key to erase the character and retype.

---

### **Milestone Labels**

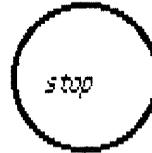
The areas reserved for milestone text are inside the milestone circles.

To replace the word “end” in the right-hand milestone,

- ▶ Select the word “end” by clicking twice on it.

- ▶ Type

**stop**

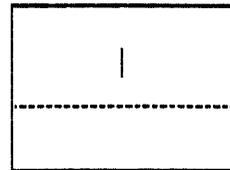


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### **Task Labels, Resources, and Durations**

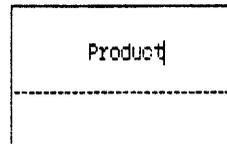
To enter a label into the upper-left task box of your example,

- ▶ Move the pointer to the upper portion of the task box and click the mouse button once. A blinking insertion point will appear.



- ▶ Type

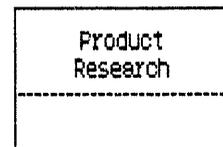
**Product**



- ▶ Press the **Return** key to create a second line for the title. Your task box will expand if more room is needed.

- ▶ Type

**Research**



To enter a resource name and duration into the task box,

- ▶ Press the **Tab** key after entering the task label, or place an insertion point in the lower-left side of the box.

- ▶ In the resource area, type **Bob**

Product Research
Bob

- ▶ Press the **(Tab)** key to advance to the duration area, which is the lower-right side of the box.

- ▶ In the duration area, type **10**

Product Research
Bob 10

- ▶ Press the **(Return)** key to open up a second line for a second resource and duration. Your task box may expand if more room is needed.

- ▶ In the resource area, type **Robin**

Product Research
Bob 10 Robin

- ▶ Press the **(Tab)** key to advance to the duration area, which is the lower-right side of the box.

- ▶ In the duration area, type **7**

Product Research
Bob 10 Robin 7

In the steps above, it is not necessary to use the **(Tab)** key to advance to the duration area. As an alternative, you can place an insertion point in any text area, at any time, by moving the pointer there and clicking the mouse button once, then you can enter the text.

Whenever you need to enter multiple lines for labels or resources, use the **(Return)** key to create those lines.

- ▶ Enter all additional text shown in Figure 14 to complete the Example 1 chart.

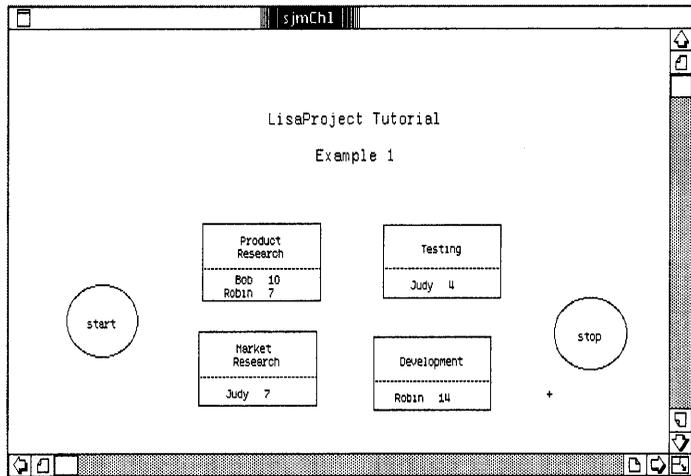


Figure 14. Text for Example 1

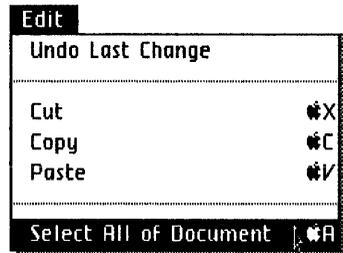
### Changing Type Style

Type style, both font and pitch, may be changed for:

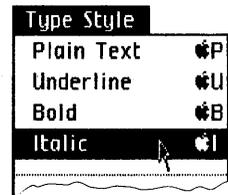
- All text in all boxes and all circles.
- The entire title or the entire subtitle.
- Single characters in the title or subtitle.

To change the style of all boxes and circles,

- ▶ Choose Select All of Document from the Edit menu. All task boxes and milestone circles appear dark when you do this as shown in Figure 15.



- ▶ Choose a type style, such as Italic, from the Type Style menu.



- ▶ Click once in the empty space of the chart to deselect the entire document. Your chart will now look like Figure 16.

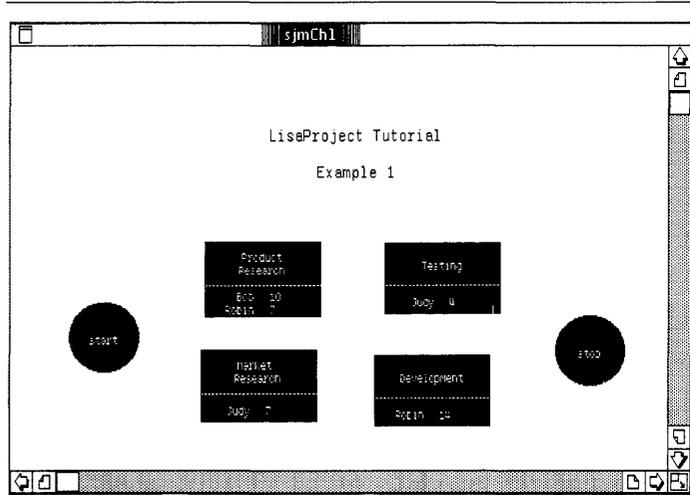


Figure 15. Selecting All of the Document

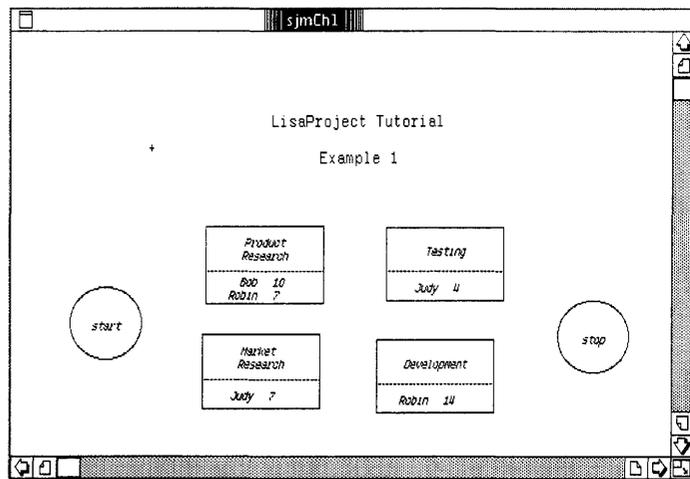


Figure 16. Type Style Change

To change the type style of the title,

- ▶ Select the title by moving the pointer to it and clicking the mouse button three times.
- ▶ Choose Bold from the Type Style menu.

---

## Drawing Arrows

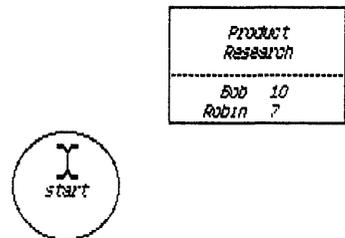
---

Arrows are actually lines, without arrow heads, that connect tasks and milestones. The arrows show the dependencies between tasks and milestones. By following the arrows from left to right, you can see which tasks and milestones must be completed before others can be started.

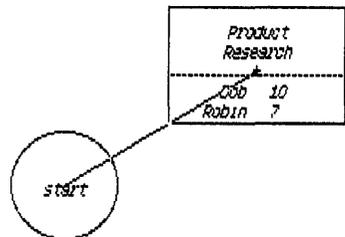
Arrows can only be drawn from left to right, because this is the direction in which time moves in a Schedule chart. That is, the origin of the arrow must be a task box or milestone circle that is located to the left of the arrow's destination box or circle.

To draw the first arrow in Example 1,

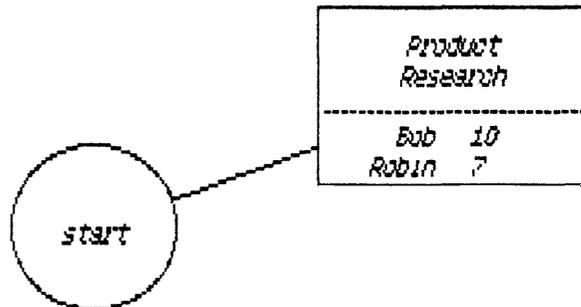
- ▶ Move the pointer inside the "start" milestone, then press and hold the mouse button down.



- ▶ Move the pointer to the first task box.

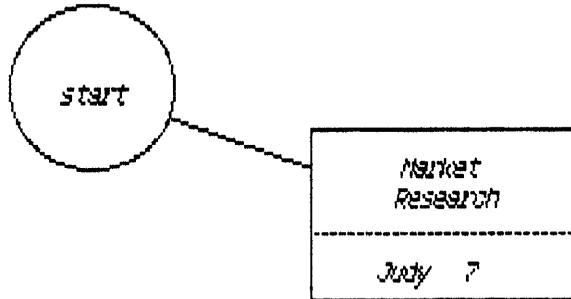


- ▶ Release the mouse button.

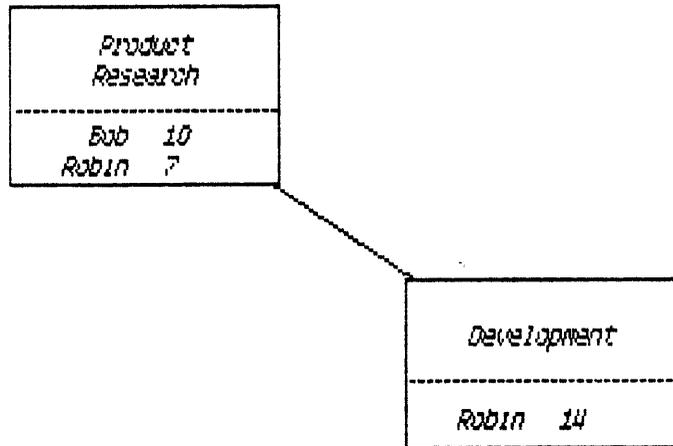


Finish drawing all the arrows for Example 1, as shown in Figure 17:

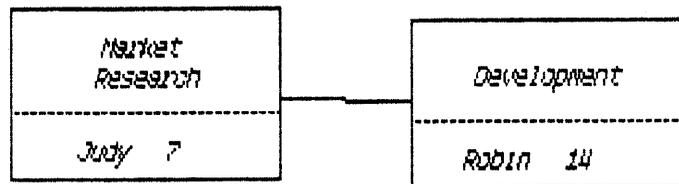
- ▶ Draw an arrow from the “start” milestone to the second task box.



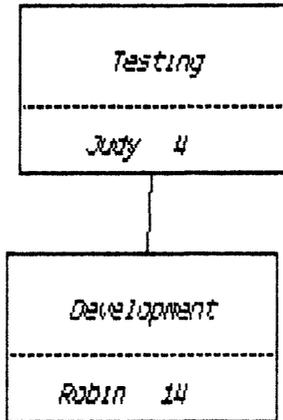
- ▶ Draw an arrow from the task box labeled “Product Research” to the task box labeled “Development.”



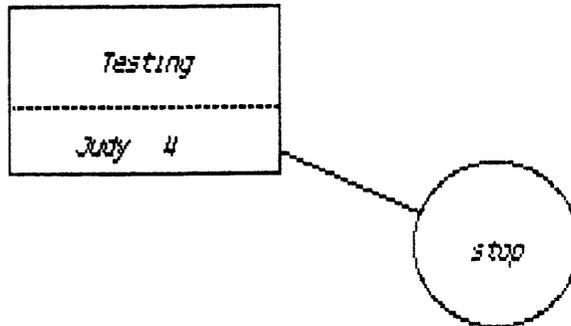
- ▶ Draw an arrow from the task box labeled “Market Research” to the task box labeled “Development.”



- ▶ Draw an arrow from the task box labeled “Development” to the task box labeled “Testing.” Be sure that the third task box is located to the left of the fourth box, otherwise an alert box will appear on your screen.



- ▶ Draw an arrow from the task box labeled “Testing” to the “end” or “stop” milestone.



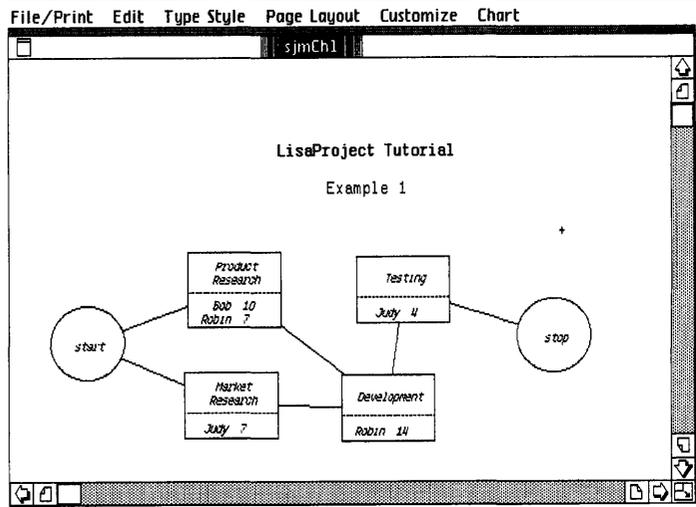


Figure 17. Complete Example 1 Schedule Chart

If you try to draw an arrow from right to left, the alert box shown in Figure 18 will appear. If this happens, position the pointer over the word "Cancel" and click the mouse button to dismiss the alert box. Then move one or both of the boxes you are trying to connect so that the origin box is clearly to the left of the destination box.

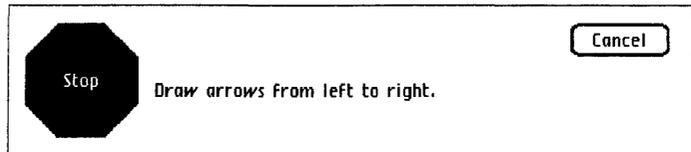


Figure 18. Alert Box for Arrow Drawing

If you draw an arrow in the wrong place, you can delete it by moving the pointer to it and clicking once to select it, and then choosing Cut from the Edit menu.

## Getting the Resource Chart

Whenever you create a Schedule chart, a Resource and a Task chart are automatically generated as by-products.

To get the Resource chart that has resulted from the example you have just created,

- ▶ Choose Resource from the Chart menu.



Your Resource chart should look like the one shown in Figure 19. Just as you did with the Schedule chart, replace the words "Title" and "SubTitle" with "LisaProject Tutorial" and "Example 1," respectively.

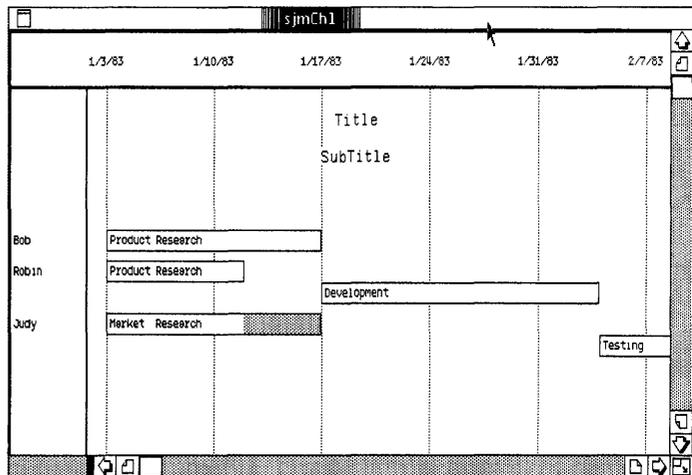


Figure 19. A Resource Chart

If your Resource chart doesn't look like Figure 19, get the example chart provided in the LisaProject Examples folder. To do this,

- ▶ Choose Set Aside from the File/Print menu so that you can see the ProFile window.
- ▶ Open the LisaProject Examples folder.
- ▶ Tear off a chart from the stationery pad called Chapter 1.

- ▶ To name the chart, type your initials, followed by Ch1.
- ▶ Open the chart by clicking twice on it.
- ▶ Choose Resource from the Chart menu.

---

## **The Time Scale**

---

The Resource chart in Figure 19 has a time line at the top. The time starts with January 3, 1983, or the nearest working day to the first day of the year date, and continues at one-week, two-week, four-week, or eight-week intervals.

You can change the Resource scale so that all bars become visible. To do this,

- ▶ Choose Time Scale on the Customize menu. A dialog box like Figure 20 will appear.

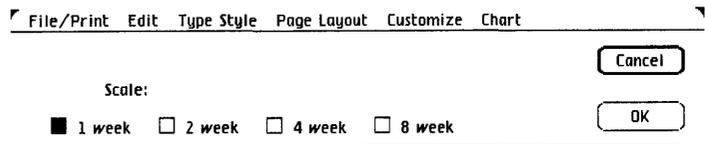
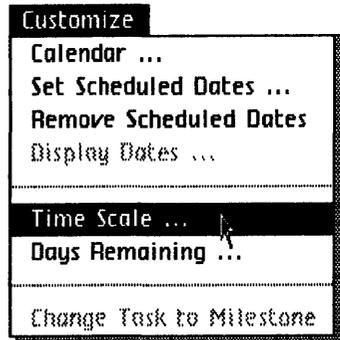


Figure 20. Time Scale Dialog Box

- ▶ Check 2 Week.
- ▶ Click OK.

Your Resource chart will look like Figure 21.

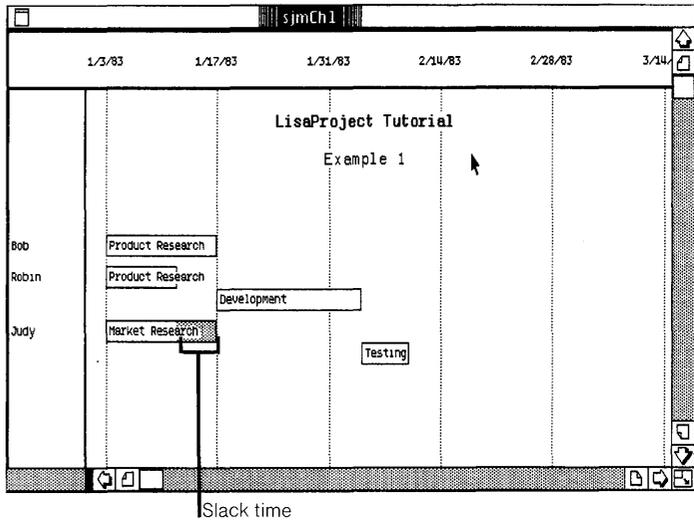


Figure 21. Rescaled Resource Chart

### ***Features of the Resource Chart***

Resource charts are used to schedule resources. The tasks, which are shown as horizontal bars, are organized by resources, which are shown along the left side of the chart.

The length of a bar represents the duration of the task, and all tasks to be performed by a given resource are grouped together.

The shaded area on the “Market Research” task bar indicates “slack time.” Slack time is the additional time the task may last without affecting overall completion time for the entire project. Tasks that have slack time are not “critical tasks,” and therefore are not highlighted with dark outlines on the Schedule chart.

The title and subtitle of the Resource chart must be entered independently of the Schedule chart’s title and subtitle. The steps for doing this are the same as those described in the Titles and SubTitles section earlier in this chapter.

There are occasions when resource scheduling does not reflect the optimal allocation of resources, since LisaProject does not use the time-consuming linear programming approach that classical scheduling programs use.

Nonoptimal scheduling may occur when a single resource is needed by two or more separate tasks. If this occurs, it can be adjusted by using Scheduled Dates, as described in Chapter 2 of this tutorial.

## Getting the Task Chart

Whenever you create a Schedule chart, a Resource and a Task chart are automatically generated as by-products.

To get the Task chart that has resulted from the example you have just created,

- Choose Task from the Chart menu.

Your Task chart should look like the one shown in Figure 22.

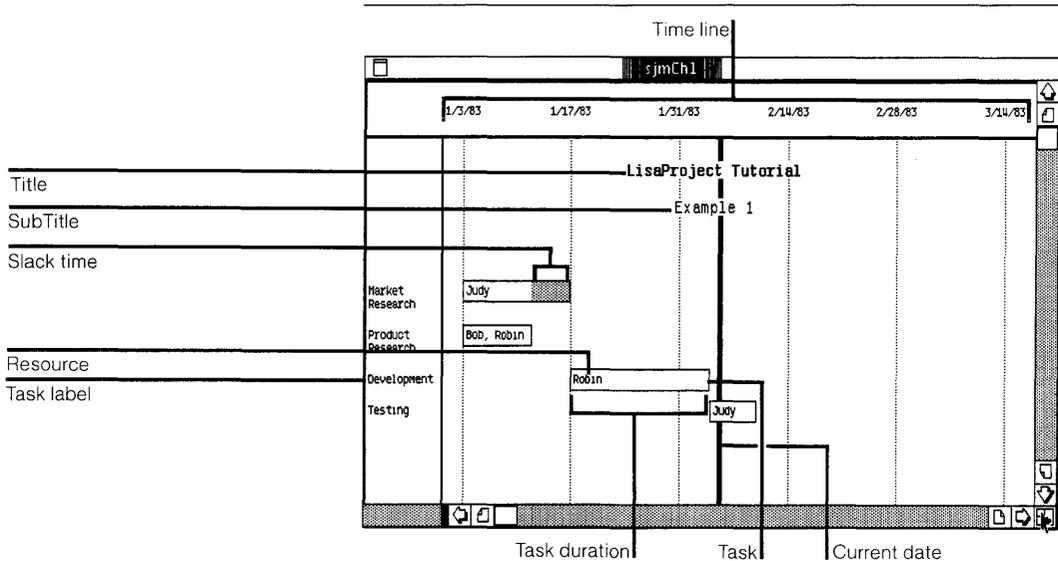


Figure 22. A Task Chart

If your Task chart doesn't look like Figure 22, get the example chart provided in the LisaProject Examples folder. To do this,

- ▶ Choose Set Aside from the File/Print menu so that you can see the ProFile window.
- ▶ Open the LisaProject Examples folder, if it's not open.
- ▶ Tear off a chart from the stationery pad called Chapter 1.
- ▶ To name the chart, type your initials, followed by Ch1.
- ▶ Open the chart.
- ▶ Choose Task from the Chart menu.

Task charts are very similar to Resource charts, but the resources and tasks are organized differently.

In the Resource chart shown in Figure 19, tasks are grouped according to the resource which performs them; within this group, they are sorted by early start time.

In the Task chart shown in Figure 22, tasks are sorted by early start time and resources appear as labels in the horizontal bars. These charts are used to schedule tasks.

---

## **Printing Your Document**

To print your document, you naturally have to have a printer connected to your Lisa. If you don't have a printer, or it is not set up, you may skip this section for now, and proceed to Filing the LisaProject Document, later in this chapter.

To find out how to set up your printer and hook it up to your Lisa, refer to the manual that came with your printer.

You may also need to set up Preferences correctly for your printer. If you have not already done this, do it now. To set up Preferences for your printer, refer to Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*, under Set Printer Configuration.

Once the printer and Preferences have been set up, printing your first document is very easy.

- ▶ Just choose Print from the File/Print menu.

A Print dialog box appears on your screen, like Figure 23.

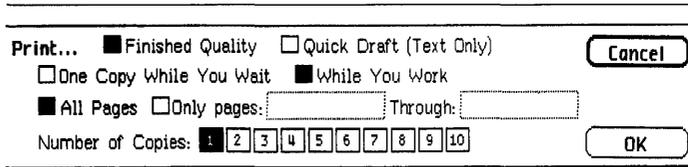


Figure 23. Print Dialog Box

All printer settings are as you need them right now. You learn to use the different settings available in the Print dialog box and the Format for Printer dialog box in Section C, *LisaProject Reference Guide*, Chapter 2, under Print.

- ▶ Click OK in the dialog box.

Your Lisa then displays a message saying that it is preparing to print your document and allow you to continue working, since the Print dialog box specified that you wanted to print your document while you work. After that message, the Lisa displays an alert box asking you if you want to cancel the printing or proceed with it. To respond to the message,

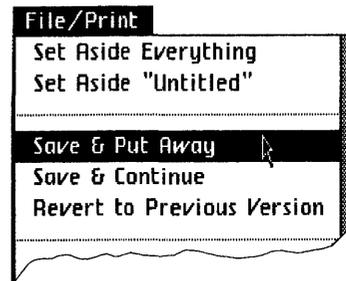
- ▶ Click Proceed to continue working while your document is being printed.

If your Lisa cannot print the document while you work, it will display a message to let you know that, and you will have to wait until the document is finished printing and the message disappears.

## ***Filing the LisaProject Document***

To save the charts that you just created,

- ▶ Choose Save & Put Away from the File/Print menu.



The document window closes automatically, and its document icon goes back beside the stationery pad in the disk window.

Now you can move the document icon to an empty place in the disk window.

- ▶ Move the pointer into the LisaProject document icon. Press and hold the mouse button while moving the icon to an empty place in the disk window.
- ▶ Release the mouse button.

This completes Chapter 1. Go on to the next chapter, if you like, or come back to it at a later time.

## **Chapter Summary**

- 
- |                         |  |
|-------------------------|--|
| Get a new chart         | <ul style="list-style-type: none"><li>■ Open the ProFile window.</li><li>■ Tear off a chart from the LisaProject stationery pad.</li><li>■ Name the chart.</li><li>■ Open the new chart.</li></ul>                         |
| Expand the drawing area | <ul style="list-style-type: none"><li>■ Press and hold the mouse button on the size control box.</li><li>■ Move the pointer.</li><li>■ Release the mouse button.</li></ul>   |
| Move an object          | <ul style="list-style-type: none"><li>■ Select the object and hold the mouse button down.</li><li>■ Move the pointer.</li><li>■ Release the mouse button.</li></ul>  |
| Draw a task box         | <ul style="list-style-type: none"><li>■ Press and hold the mouse button.</li><li>■ Move the pointer diagonally.</li><li>■ Release the mouse button.</li></ul>  |
| Copy and paste          | <ul style="list-style-type: none"><li>■ Select the object.</li><li>■ Choose Copy from the Edit menu.</li><li>■ Click once at the center of where you want to copy to.</li><li>■ Choose Paste from the Edit menu.</li></ul> |
-

---

Stretch and shrink

- Select the object.
- Move the pointer onto a handle.
- Press and hold the mouse button.
- Move the pointer.
- Release the mouse button.

---

Enter title and subtitle

- Select the "Title" area.
- Enter the title.
- Press the **Tab** key.
- Enter the subtitle.

---

Enter milestone label

- Position the pointer in the circle and click the mouse button once.
- Enter the label.

---

Enter task label

- Position the pointer in the label area of the box and click the mouse button once.
- Enter the label.

---

Enter task resource and duration

- Position the pointer in the resource area of the box and click the mouse button once.
- Enter the resource name.
- Press the **Tab** key.
- Enter the duration.

---

Change type style

- Select the text to be changed.
- Choose the style from the Type Style menu.

---

Draw an arrow

- Position the pointer in the left-hand circle or box and hold the mouse button down.
- Move the pointer to the right-hand circle or box and release the mouse button.

---

Get Resource chart

- Choose Resource from the Chart menu.

---

Change Resource time scale

- Choose Resource on the Chart menu.
- Choose Time Scale on the Customize menu.
- Check time period for scale.
- Click OK.

---

Get Task chart

- Choose Task from the Chart menu.

---

Put the charts away

- Choose Save & Put Away from the File/Print menu.

---

Discard the charts

- Choose Set Aside from the File/Print menu.
- Move the icon for the chart to the Wastebasket icon.

---

## Print the chart

- If you haven't set up your printer yet, see the manual that came with your printer.
- If you haven't set printer Preferences yet, see Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*, under Set Printer Configuration.
- If you need to change any of the options in the Format for Printer dialog box for your document, choose Format for Printer from the File/Print menu and change the options.
- Choose Print from the File/Print menu.
- Respond to any dialog boxes that may appear.
- Click OK.

# ***Chapter 2***

## ***Entering Dates***

---

# ***Entering Dates***

---

This chapter leads you step by step through the methods of entering and updating dates for a Schedule chart and Resource chart. By following the activities in Chapter 2, you learn how to,

- Create the calendar.
- Display dates.
- Enter scheduled start and finish dates.
- Enter work days remaining for a task.
- Perform “what if” analysis.

This chapter uses the same example that was used in Chapter 1. Again, you assume the role of a corporate Director of Research and Development, keeping track of new product development.

---

## Getting an Existing Document

- To retrieve your filed chart,
- ▶ Open the ProFile window.
  - ▶ Open the chart that you created in Chapter 1.



sjmCh1

If you didn't complete Chapter 1, or if your chart doesn't look like Figure 17,

- ▶ Open the LisaProject Examples folder.



LisaProject Examples

- ▶ Tear off a sheet of paper from the stationery pad named Chapter 1.



Chapter 1

- ▶ Name the chart.
- ▶ Open the chart.

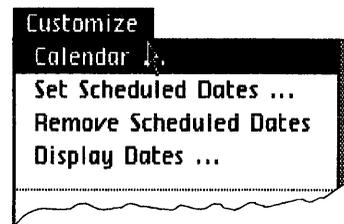
---

## Creating the Calendar

Creating the calendar consists of specifying the years during which the project will occur, the number of working days in a week, and the dates of nonworking holidays.

To create the calendar, first look at the calendar dialog box,

- ▶ Choose Calendar from the Customize menu. A dialog box like the one in Figure 24 appears.



Several entries in the calendar appear as "mm/dd/yy." These entries stand for month, day, and year, with two digits for each.

---

Calendar: From January 1 19   
to December 31 19

Working Days per Week:

Current day of project:

Holidays:

<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				

---

Figure 24. Calendar Dialog Box

---

## ***Calendar-Year Range***

LisaProject assumes that projects start on January 1 of a year, or the nearest working day to that date. This date can be changed.

At this point, you will only change the years in which the project starts and ends. In a later section, Entering Scheduled Dates, you will change the month and day that the project starts and ends.

To change the starting and ending year to 1984,

- ▶ Move the pointer to the two-digit start year and click the mouse button twice to select it, if it is not already selected.
- ▶ Type  
84
- ▶ Press the **(Tab)** key to select the next field, which is the two-digit end year.
- ▶ Type  
84

---

## ***Days Per Week***

Days Per Week defines the number of working days in a week. The usual number is 5. If you enter 6, then Saturday is a working day. If you enter 7, then every day including Sunday is a working day.

LisaProject assumes that resources are available 5 days per week. You can enter a different number of days per week, by selecting the days per week field and entering another number between 1 and 7.

Part-time resources are to be treated the same as full-time resources. Since LisaProject is a calendar-oriented scheduling system, it only tracks elapsed time on a project. Therefore, no distinction is made between full- and part-time workers or equipment usage.

---

## **Current Date**

---

The current date is the date on which you are viewing the charts. Typically, it is changed each day that you display the charts.

To enter this date, assuming the calendar dialog box as shown in Figure 24 is displayed,

- ▶ Move the pointer to the current date and click the mouse button three times to select the date. Alternatively, press the **(Tab)** key until this date becomes selected.
- ▶ Type

1/27/84

The current date will appear as a dark vertical bar in the Resource and Task charts. This date will not affect any scheduling; it is only a reminder of the current date.

---

## **Holidays**

---

Holidays are nonworking days. LisaProject will not schedule any work on days which you specify as holidays.

If you are using 5 or fewer days per week for working days as explained in the Days Per Week Section, then you don't need to enter holiday dates that fall on weekends; LisaProject will recognize these weekend days as nonworking days, whether or not they are specified as holidays.

To enter holidays, assuming the calendar dialog box is still displayed,

- ▶ Select the first "mm/dd/yy" entry reserved for holidays by pressing the **(Tab)** key or by clicking on it three times.
- ▶ Type

1/1/84

- ▶ Press the **(Tab)** key to select the next holiday.

- ▶ Type

2/14/84

---

## ***Saving the Calendar***

---

When you are finished entering or changing dates in the calendar dialog box, you can save them and cause recalculation of any displayed dates by clicking the OK box:

- ▶ Click OK.

If you click Cancel instead of OK, the changes you have made to the calendar will be ignored.

---

## ***Displaying Dates***

Now that the calendar is set up, you can display the task and milestone dates LisaProject has calculated for you.

Before you begin, make sure that the Schedule chart is displayed on your screen. If it is not,

- ▶ Choose Schedule from the Chart menu.

To display the dates,

- ▶ Choose Display Dates from the Customize menu. A dialog box like Figure 25 appears.

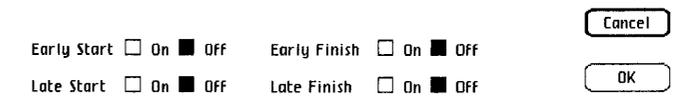
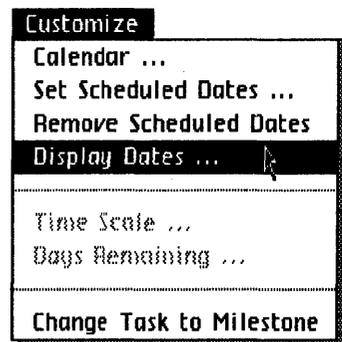


Figure 25. Dates Dialog Box

- ▶ Check all of the On boxes by moving the pointer to each box and clicking once.
- ▶ Click OK.

The dates for tasks and milestones will be displayed in the positions shown in Figure 26.

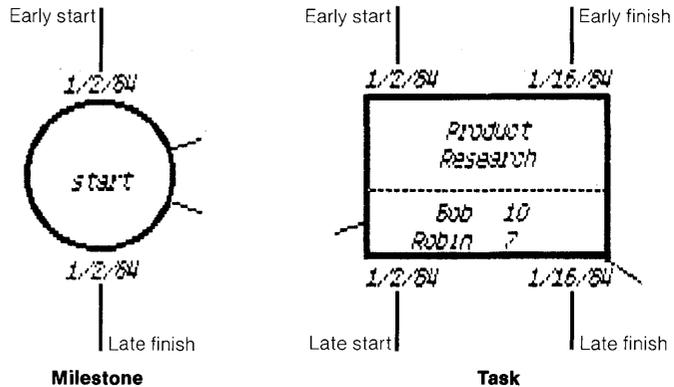


Figure 26. Display Format for Dates

Each milestone has two dates: early start on top, late finish on the bottom. Each task has four dates: early start and early finish on top, late start and late finish on the bottom.

**Early Start:** The date a task or milestone will start, given the early finish dates of preceding tasks or milestones.

**Early Finish:** The date a task will finish, given the early finish dates of preceding tasks or milestones. Since milestones have no duration, their early start and early finish dates are the same.

**Late Start:** The date a task will start, given the late finish dates of following tasks or milestones.

**Late Finish:** The date a task or milestone will finish, given the late finish dates of following tasks or milestones. Since milestones have no duration, their late start and late finish dates are the same.

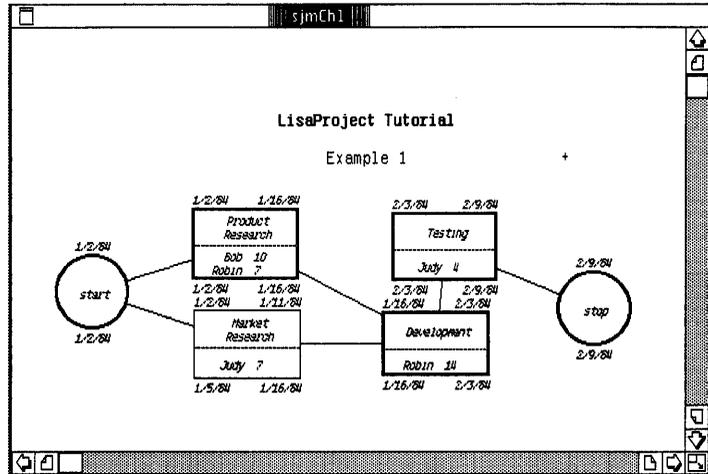


Figure 27. Schedule Chart with Dates

## Entering Scheduled Dates

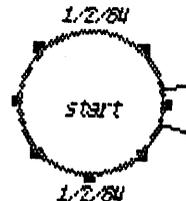
Scheduled dates are dates that you enter. They override dates that LisaProject has calculated based on the calendar, the task durations, and the eligibility of resources. You can override any date that is displayed, as long as the date you enter is possible to achieve, given the other constraints of scheduling. For more information on scheduled dates, see Appendix 5, LisaProject Scheduling, in this manual.

Scheduled dates are typically entered to reflect real-life dates or to control the allocation of scarce resources.

The scheduled dates you enter appear underlined in the Schedule chart. They replace the dates that were in those positions before; all subsequent dates will be recalculated.

To enter a scheduled date for the project start,

- ▶ Select the “start” milestone.



- ▶ Choose Set Scheduled Dates from the Customize menu. The dialog box shown in Figure 28 appears.

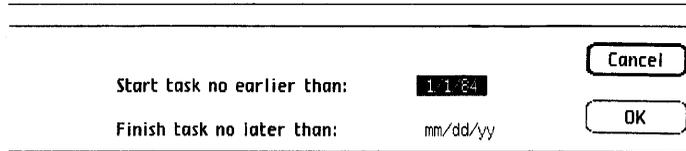
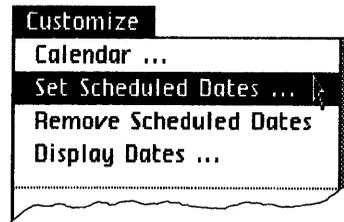


Figure 28. Scheduled Dates Dialog Box

- ▶ To replace the early start date, type

1/17/84

- ▶ Click OK.

To enter a scheduled date for the project finish,

- ▶ Select the "stop" milestone.
- ▶ Choose Set Schedule Dates from the Customize menu.
- ▶ Select the Late Finish entry, which currently has an "ASAP" value.

ASAP

- ▶ Type

2/27/84

- ▶ Click OK.

For a project finish date of "ASAP," which means as soon as possible, LisaProject will calculate the earliest finish date possible, based on the project start date and the task durations you have entered. The project finish date is associated both with the end milestone and with the finish of the last task in the project.

Display the Schedule chart now, if you are not already doing so, to see the change that scheduled dates produce. Your Schedule chart should look like Figure 29.

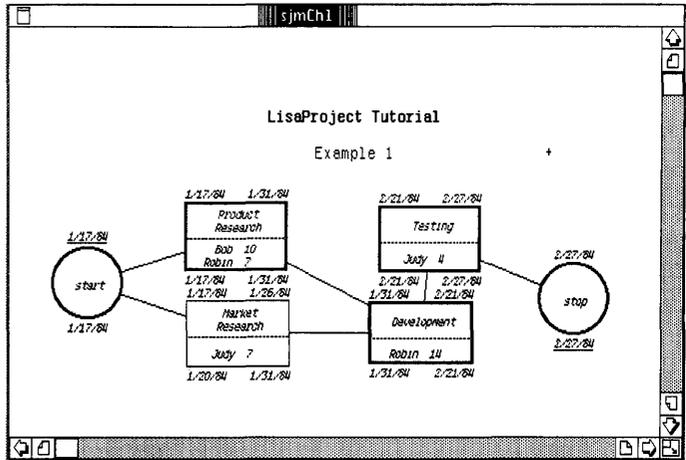


Figure 29. Schedule Chart with Rescheduled Dates

Now switch to the Resource chart:

- Choose Resource from the Chart menu. Your chart should look like Figure 30.

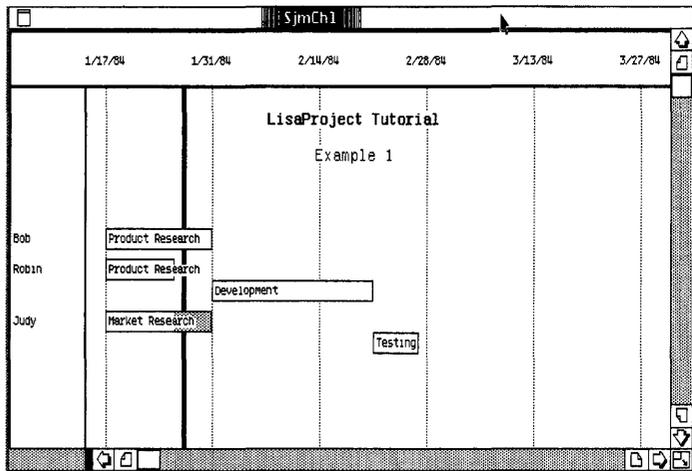


Figure 30. Resource Chart with Rescheduled Dates

The current date, as it was entered on the calendar, is represented by the dark vertical line.

If you enter a later than ASAP project finish date, the horizontal bars of the Resource chart will extend to include more stack time. In this case, none of the tasks is highlighted with a dark edge in the Schedule chart.

---

## ***Entering Work Days Remaining***

As tasks are started, you can update the the Resource chart by specifying the number of days remaining in the task.

To update work days remaining for the second task in Example 1,

- ▶ Choose Resource on the Chart menu.
- ▶ Select the bar labeled “Market Research” by moving the pointer to it and clicking the mouse button once. The bar will appear dark.
- ▶ Choose Days Remaining from the Customize menu. A dialog box like that in Figure 31 will appear.

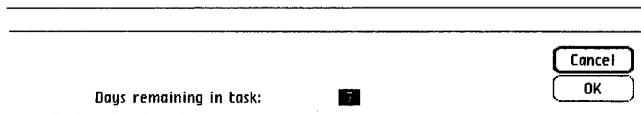


Figure 31. Work Remaining Dialog Box

- ▶ Type  
2
- ▶ Click OK.
- ▶ Deselect the task bar by clicking in an empty area of the Resource chart.

The Resource chart will look like Figure 32. The heavy shading on the left side of the bar shows the completed portion of the task if you assume the duration as originally entered. The white area in the middle of the bar represents work remaining. The light shading on the right side still represents slack time.

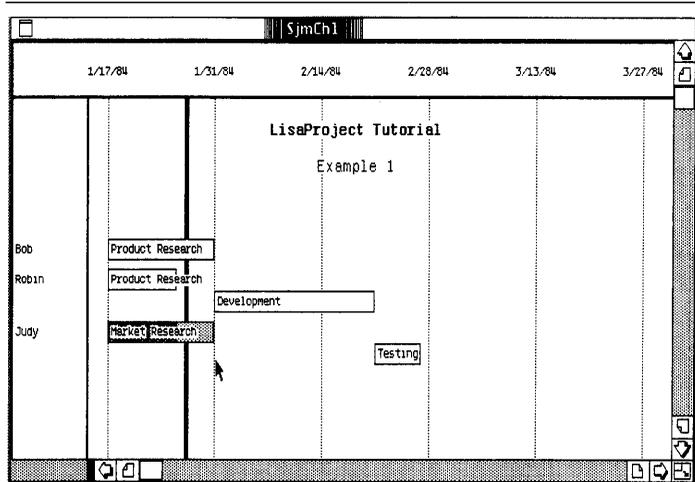


Figure 32. Resource Chart with Updated Task

## **“What If” Analysis**

At the beginning of a project, you may want to determine the effects of longer or shorter task durations. For example, if certain tasks take fifty percent longer than their expected durations, what will be the effect on total project completion time?

You can also test the effect of different scheduled dates. For example, if the project finish date is to be earlier, what will be the impact on task slack time?

This type of “what if” analysis can be done by simply creating two sets of charts, each with different task durations or scheduled dates, and comparing the results.

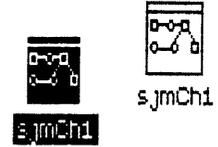
By selecting optimistic or minimum task durations for one set of charts, and pessimistic or maximum durations for the other set of charts, you can arrive at a range of project completion times. You may also wish to create a third set of charts showing expected task durations.

To create a “what if” example using Example 1,

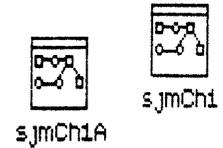
- ▶ Close the Ch1 document you are currently working with by choosing Save and Put Away from the File/ Print Menu.

▶ Choose Duplicate from the File/Print menu.

▶ Move the flashing duplicate Ch1 icon to a new location. A message may appear saying that the document is being duplicated.



▶ Name the duplicate with your initials, followed by Ch1A



▶ Open the chart.

▶ Move the pointer to the duration for the "Market Research" task and click the mouse button twice to select it.

▶ Type

15

▶ Choose Resource from the Chart menu.

Your Resource chart will now look like Figure 33.  
Compare this with Figure 32.

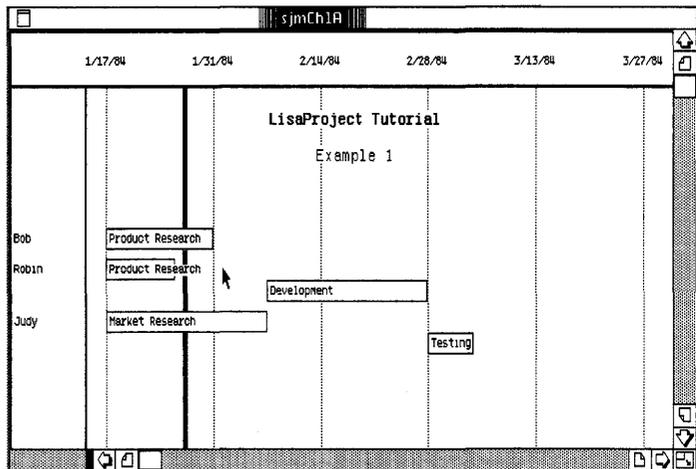


Figure 33. Resource Chart with Revised Task Duration

## Filing the LisaProject Document

Now file the document that you have just worked with. To do this,

- ▶ Choose Save & Put Away from the File/Print menu.

You can leave the document where it is in the disk window, or you can create a folder to contain all the related documents.

- ▶ Move the pointer into the empty folder pad icon and click the mouse button twice.



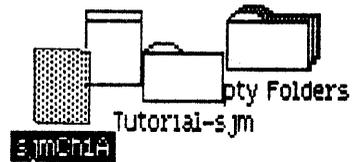
- ▶ Type

**Tutorial-**

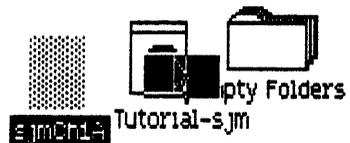
followed by your initials.

To file the document in your new folder,

- ▶ Move the pointer into the document icon. Press and hold the mouse button while moving the document icon over the folder icon.



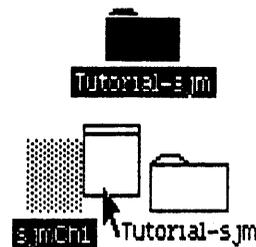
- ▶ Release the mouse button when the folder icon flashes.



- ▶ Move the folder icon to an empty place in the disk window.



- ▶ Move the document that you worked with in Chapter 1 into your new folder to keep all your examples together.



This completes Chapter 2. Go on to the next chapter, if you like, or come back to it later.

## **Chapter Summary**

- 
- |                           |  |
|---------------------------|--|
| Create the calendar       | <ul style="list-style-type: none"><li>■ Choose Calendar from the Customize menu.</li><li>■ Select the date field.</li><li>■ Type the new date.</li><li>■ Click OK.</li></ul>   |
| Display dates             | <ul style="list-style-type: none"><li>■ Choose Display Dates from the Customize menu.</li><li>■ Check the dates you want to see.</li><li>■ Click OK.</li></ul>   |
| Enter scheduled dates     | <ul style="list-style-type: none"><li>■ Select the task or milestone.</li><li>■ Choose Scheduled Dates from the Customize menu.</li><li>■ Select the date to be scheduled.</li><li>■ Enter the scheduled date.</li><li>■ Click OK.</li></ul> |
| Enter work days remaining | <ul style="list-style-type: none"><li>■ Choose Resource on the Chart menu.</li><li>■ Select the task bar.</li><li>■ Enter the work days remaining.</li><li>■ Click OK.</li></ul>   |
| Analyze “what if”         | <ul style="list-style-type: none"><li>■ Duplicate your chart.</li><li>■ Change task durations or scheduled dates.</li><li>■ Compare the two versions.</li></ul>  |
-

# **Chapter 3**

## **Creating Large Charts**

---

# Creating Large Charts

---

This chapter leads you step by step through the methods of expanding a small chart into a large, more detailed chart. By following the activities in Chapter 3, you learn the details of large-scale resource management. In this chapter you learn how to,

- Enlarge the Schedule drawing space.
- Scroll and zoom.
- Rearrange charts.
- Break tasks into subtasks.
- Add milestones.
- Copy charts to LisaDraw.
- Enlarge paper size for printing.
- Reduce chart size by reducing type size.

This chapter begins with the same example that was used in Chapters 1 and 2, but expands it into a larger example. Again, you assume the role of a corporate Director of Research and Development, keeping track of new product development.

---

## Getting the Example Chart

To get the example chart used in Chapter 1, get it from the LisaProject Examples folder. To do this,

- ▶ Open the ProFile window.
- ▶ Open the LisaProject Examples folder.
- ▶ Tear off a chart from the Chapter 1 stationery pad.
- ▶ To name the chart, type your initials, followed by Ch3.
- ▶ Open the chart.

---

## Enlarging the Drawing Space

For the expansion of Example 1 into a larger chart, you need a drawing space larger than one page. The drawing space can be expanded to any size you wish. This is done by adding pages to the right or bottom of the first, original, page as shown in Figure 34.

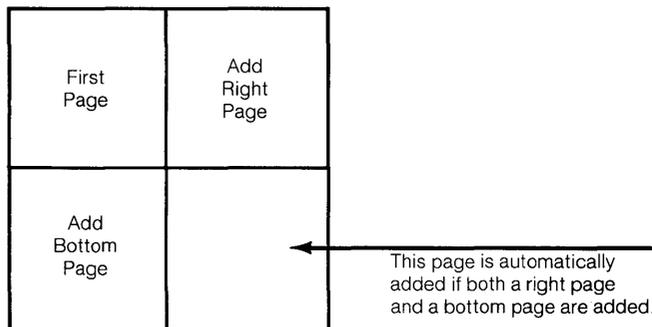


Figure 34. Adding Pages

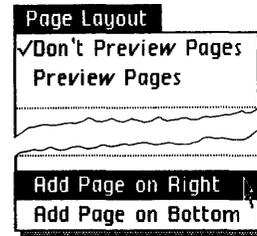
After adding pages, you can choose to have the page edges either displayed, called “previewed,” or hidden. Displaying the page edges lets you see where you are in the available drawing space. Hiding the display of page edges is useful when you want to draw without being distracted by edge lines.

During printing, each page of a multi-page chart is printed separately. You can then tape them all together or pin them to a wall.

If you add pages but leave them blank, the blank pages will be removed when the chart is saved.

To enlarge the drawing space for your chart and to display the page edges,

- ▶ Choose Add Page on Right from the Page Layout menu.



- ▶ Choose Preview Pages from the Page Layout menu.

---

## ***Scrolling and Zooming***

---

The page edges that you made visible in the last step, above, can be viewed by scrolling the drawing space with the view buttons, which look like pages with folded edges.

To scroll to the right and back again,

- ▶ Move the pointer to the view button in the lower-right corner of the screen and click the mouse button once. The vertical page break between the left and right pages will appear when you do this.



- ▶ Click on the same view button again. The edge of the right-hand page will just barely become visible along the right edge of the window.

- ▶ Move the pointer to the bottom-left view button and click once to return to the page break, then again to return to where you started from.



To zoom out, so that all pages in the drawing space are displayed together,

- ▶ Choose Reduce to Fit from the Page Layout menu.

You will see an image like that in Figure 35.

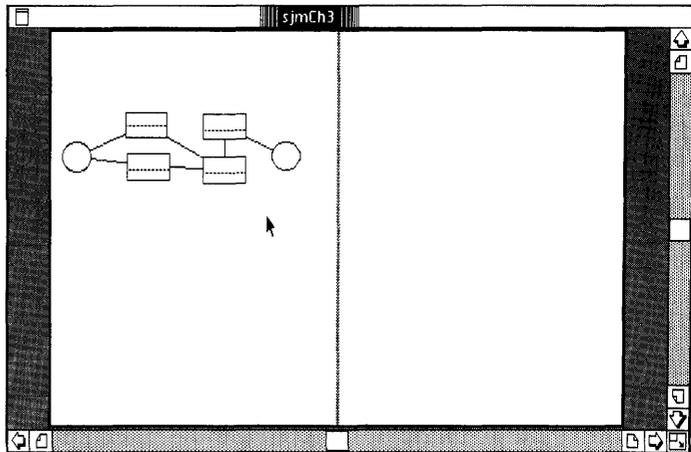


Figure 35. Reducing a Chart to Fit

You can get back to the original size of the chart by choosing Show Actual Size from the Page Layout menu. You may be surprised by seeing nothing on your screen when you do this. If nothing appears, use the view button or other view controls to bring your chart into view.

A partial reduction of the original can be obtained by choosing Reduce 70% from the Page Layout menu. You can choose Reduce 70% multiple times to get a smaller drawing.

### ***Filling the Available Space***

Now that your Schedule drawing space is enlarged, you can fill it up by moving the objects as shown in Figure 35. As you move objects, the arrows connecting them to adjacent objects will stretch to accommodate the move, always preserving the left-to-right order of the objects.

To do this,

- ▶ Move the objects individually until your chart looks like Figure 36.

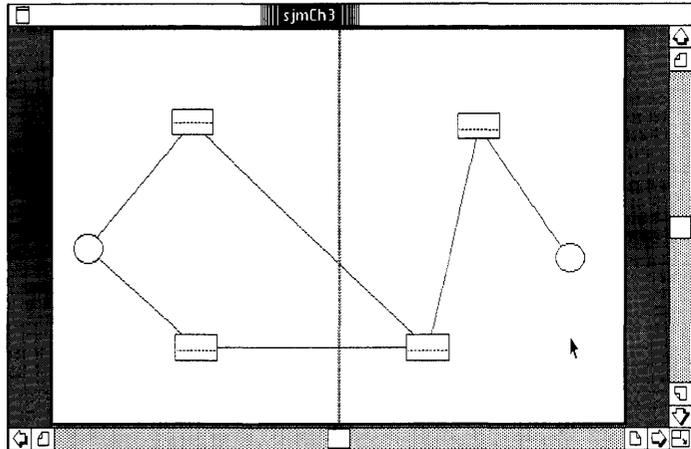


Figure 36. Filling the Available Space

## ***Breaking Tasks into Subtasks***

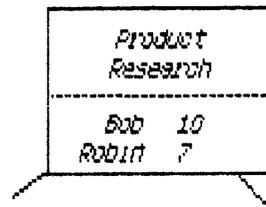
It is often useful to separate tasks into two or more subtasks, as when a task is composed of subtasks that are

- Performed by separate resources.
- Managed by separate people.
- Funded by separate departments.
- Subject to separate constraints.
- Situated around an internal task review.

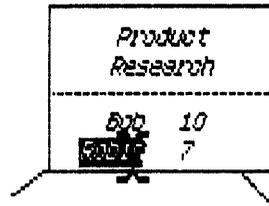
For example, the “Product Research” task in the example you are working with is performed by two resources, Bob and Robin. It may be clearer if this task were broken into two separate tasks, each performed by a separate resource.

To do this,

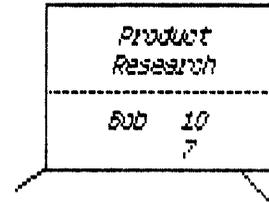
- ▶ Choose Show Actual Size from the Page Layout menu.
- ▶ Scroll the “Product Research” task box into view, if it is not already there.



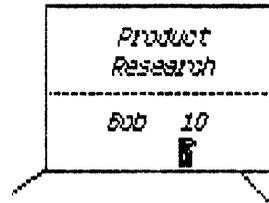
- ▶ Move the pointer to the name "Robin" and click the mouse button twice to select it.



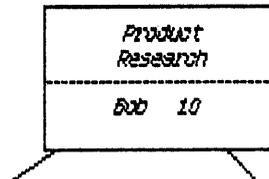
- ▶ Choose Cut from the Edit menu. The selected name disappears.



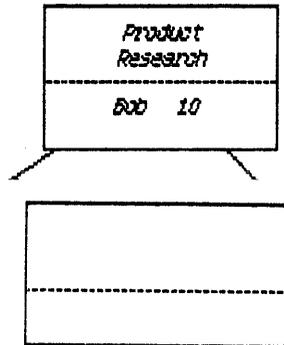
- ▶ Press the **Tab** key to select the duration field.



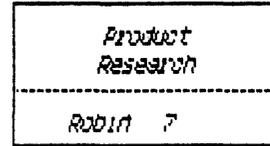
- ▶ Choose Cut from the Edit menu. The selected duration disappears.



- ▶ Draw a new box below the original one.



- ▶ Enter “Product Research” as the label for the new task. Press the **(Tab)** key and enter “Robin” as the resource. Press the **(Tab)** key again and enter “7” as the duration.



- ▶ Choose Reduce to Fit from the Page Layout menu.
- ▶ Draw arrows between the start milestone and the new task box, and between the new task box and the lower-right task box.

Your chart should now look like Figure 37.

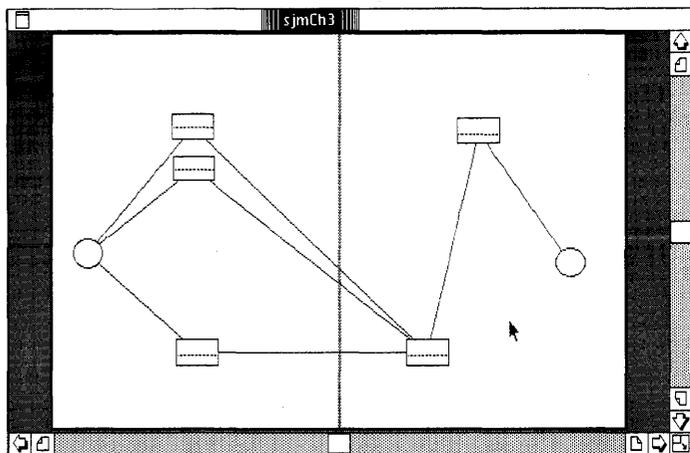


Figure 37. Breaking Tasks into Subtasks

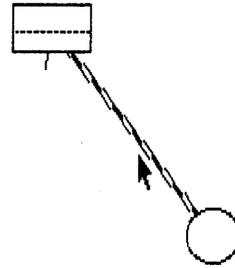
**Adding Milestones** You can put milestones anywhere in a chart to represent such things as

- Release dates
- Due dates
- Funding dates
- Partial completion dates
- Resource availability dates

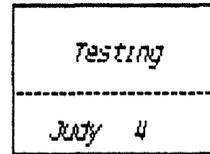
In your example, try changing the “Testing” task by breaking it into two subtasks and adding a milestone between them.

To do this,

- ▶ Move the pointer to the arrow connecting the “Testing” task, which is the upper-right task box, with the “stop” milestone and click the mouse button once to select the arrow.



- ▶ Choose Cut from the Edit menu.
- ▶ Cut the second arrow on the “Testing” in the same manner.
- ▶ Choose Show Actual Size from the Page Layout menu.
- ▶ Click the lower-right view button to bring the “Testing” box into view.



- ▶ Draw two task boxes to the right of the “Testing” task and select the middle box, as in Figure 38.



Figure 38. Adding Task Boxes

- ▶ Choose Change Task to Milestone from the Customize menu. The selected task box is automatically converted to a milestone circle as in Figure 39.

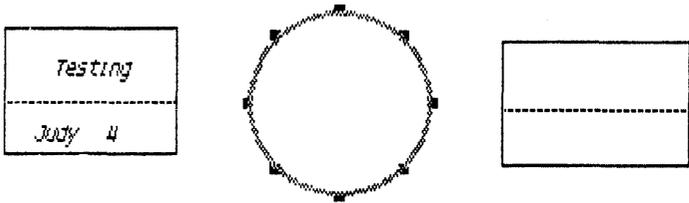


Figure 39. Changing a Task to a Milestone

- ▶ Change the text in these three objects so that it looks like Figure 40.



Figure 40. Revised Text

- ▶ Choose Reduce to Fit from the Page Layout menu.
- ▶ Connect the objects with arrows as in Figure 41. You may have to move the "stop" milestone to the right a bit in order to draw an arrow to it.

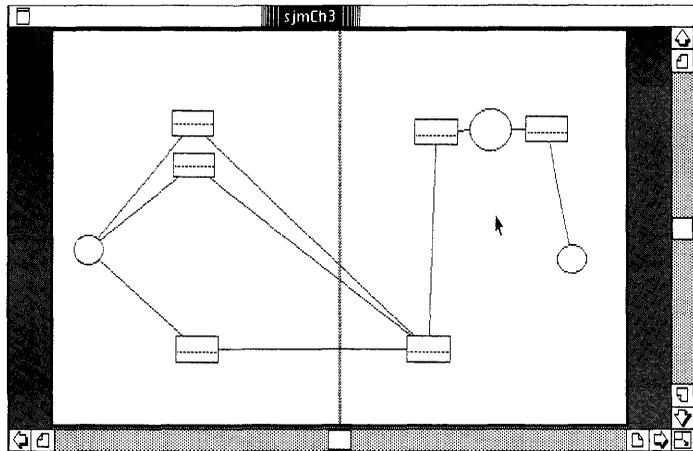


Figure 41. Revised Arrows

Schedule charts may have multiple milestones at the beginning or the end of the chart. Multiple milestones at the beginning would imply that several events have to occur before the project begins. Multiple milestones at the end of the project would imply that several events occur simultaneously upon completion of the project.

You can create charts using nothing but milestones. The specification of tasks, together with their resources and durations, may be too time-consuming in the initial stage of a planning effort that is subject to substantial changes.

## **Rearranging Charts**

Two types of rearrangement are sometimes advantageous in a chart:

- Consolidation of tasks, to bring together tasks that are performed by the same resource.
- Rearrangement of the entire chart, to increase its visual simplicity and readability.

Consolidation of tasks by the same resource is the opposite of breaking tasks into subtasks, which was discussed above. Consolidation is advisable when there is no useful purpose served by differentiating the parts of the tasks. It has the advantage of showing a single bar for the task in the Resource chart, rather than showing several bars ordered according to the length of the task.

Rearrangement of the entire chart is always a good practice, if it is possible, since it increases the communication impact of the chart. Figure 42 shows the example chart after rearrangement.

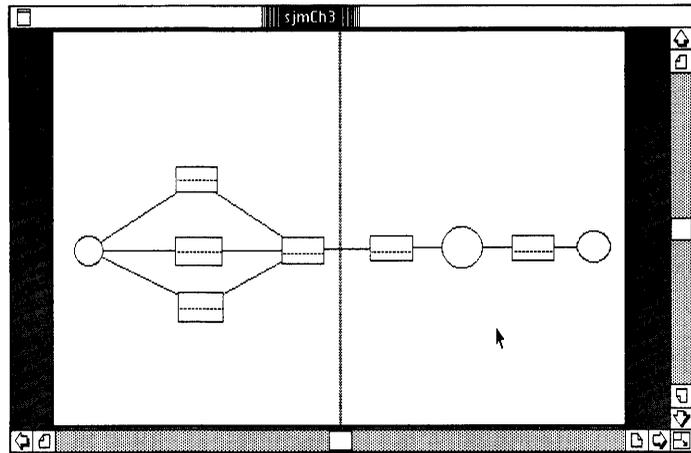


Figure 42. The Chart After Rearrangement

## ***Copying Charts to LisaDraw***

You can copy charts created by LisaProject into LisaDraw. This makes it possible to include charts in other types of presentations, and to annotate and otherwise edit the chart.

When copying charts, the Schedule chart, Resource chart, and Task chart need to be copied separately if you want all three. Copying only one will not automatically cause the other two to be copied.

To copy the Schedule chart into LisaDraw,

- ▶ Choose Select All of Document from the Edit menu.
- ▶ Choose Copy from the Edit menu. This copies the chart onto the Clipboard.
- ▶ Put away or set aside the Schedule chart.
- ▶ Tear off a new piece of drawing paper from the LisaDraw stationery pad, name it, and open it.
- ▶ Select the location where you want to copy the chart.
- ▶ Choose Paste from the Edit menu.

Now you can add text and other graphic enhancements to your chart with LisaDraw.

---

## **Printing Large Charts**

There are two things you can do to facilitate the printing of large charts:

- Select a paper size larger than the standard 8-1/2 by 11 inches.
- Change the type size to cause a reduction in the overall size of the printed charts.

Each of these is described below.

---

### **Changing Paper Size**

To select a paper size,

- ▶ Choose Format for Printer from the File/Print menu.
- ▶ In the dialog box that comes up, change the paper size to a larger size.
- ▶ Change the paper in your printer to correspond to the paper size you just chose.
- ▶ Open Preferences and change the paper size.
- ▶ Choose Print from the File/Print menu.
- ▶ Click OK in the dialog box.

---

### **Enlarging and Reducing Type Size**

You can use the Type Style menu to change the appearance of charts on the screen, whether or not you plan to print them.

To enlarge or reduce the type size for printing, you need a dot matrix printer or a daisy wheel printer with different-size type faces such as 10, 12, and 15 pitch. Changing type style and type size is done separately for the Schedule, Resource, and Task charts.

To do this,

- ▶ Choose Select All of Document from the Edit menu.
- ▶ Choose 10 pitch from the Type Style menu. The chart will be redisplayed in a larger size.
- ▶ Choose Preview Pages from the Page Layout menu.
- ▶ Choose Reduce to Fit from the Page Layout menu, and examine the resulting page layout after reduction. If necessary, move objects on Schedule charts to improve the page layout.

- ▶ If you are using a daisy wheel printer, change the print wheel to a 10 pitch print wheel.
- ▶ Open Preferences and specify the new print wheel.
- ▶ Choose Print from the File/Print menu.
- ▶ Click OK in the dialog box.

## **Chapter Summary**

Enlarge drawing space	<ul style="list-style-type: none"><li>■ Choose Add Page Right or Add Page Bottom from the Page Layout menu.</li><li>■ Choose Preview Pages from the Page Layout menu.</li></ul>
Scroll in view-sized increments	<ul style="list-style-type: none"><li>■ Click the mouse button once on the view button.</li></ul>
Zoom	<ul style="list-style-type: none"><li>■ Choose Reduce to Fit from the Page Layout menu.</li><li>■ Choose Show Actual Size from the Page Layout menu.</li></ul>
Fill available space	<ul style="list-style-type: none"><li>■ Move the right-most objects first.</li><li>■ Move other objects to fill the space.</li></ul>
Break tasks into subtasks	<ul style="list-style-type: none"><li>■ Cut the existing arrows.</li><li>■ Draw new tasks boxes.</li><li>■ Enter the text.</li><li>■ Draw new arrows.</li></ul>
Add milestones	<ul style="list-style-type: none"><li>■ Draw a task box and select it.</li><li>■ Choose Milestone Circle from the Customize menu.</li><li>■ Enter the text.</li></ul>
Rearrange chart	<ul style="list-style-type: none"><li>■ Combine tasks that have the same resource.</li><li>■ Move objects to simplify visual appearance.</li></ul>

---

### Copy charts to LisaDraw

- Choose Select All of Document from the Edit menu.
- Choose Copy from the Edit menu.
- Get or activate the LisaDraw document.
- Select the location for copying.
- Choose Paste from the Edit menu.

---

### Enlarge type size

- Choose Select All of Document from the Edit menu.
- Choose 12 or 10 pitch from the Type Style menu.
- Choose Preview Pages from the Page Layout menu.
- Choose Reduce to Fit from the Page Layout menu.
- Open Preferences and specify the new print wheel.
- Change print wheel in daisy wheel printer.
- Choose Print from the File/Print menu.

---

## Change paper size

- Choose Format for Printer from the File/Print menu.
- Specify new paper size in dialog box.
- Open Preferences and specify the new paper size.
- Change paper in printer.
- Choose Print from the File/Print menu.

# ***Chapter 4***

## ***Applying LisaProject***

---

# ***Applying LisaProject***

---

This chapter presents four relatively simple examples of Schedule, Resource, and Task charts, drawn from different industry applications.

By getting these examples from the LisaProject Examples folder and experimenting freely with them, you will gain a feeling for manipulation of the various elements in different charts.

No attempt is made to guide you step by step through this experimentation. This is simply an opportunity to practice the techniques you've learned in Chapters 1, 2, and 3 on complex charts that have already been created.

## Getting the Example Charts

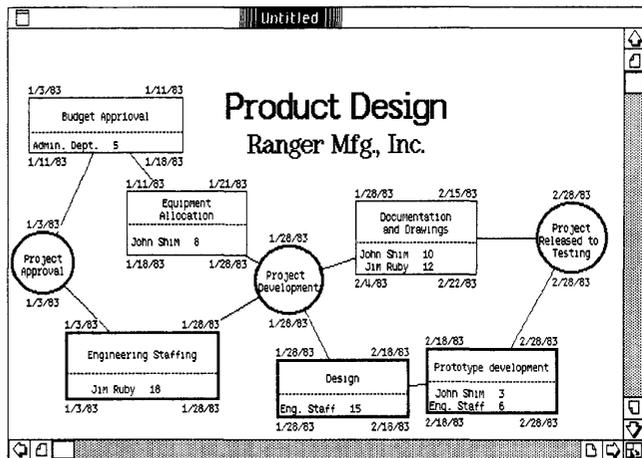
The example charts illustrated in this chapter are named:

- Product Design Example.
- European Distribution Example.
- Construction Work Example.
- Job Shop Example.

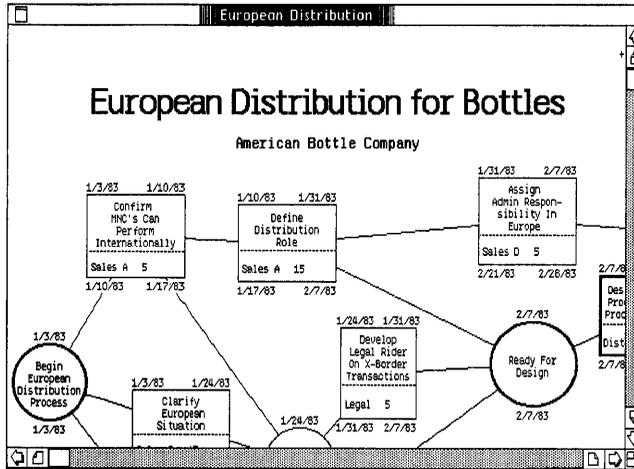
Get these example charts from the LisaProject Examples folder. To do this,

- ▶ Open the ProFile window.
- ▶ Open the LisaProject Examples folder.
- ▶ Tear off a chart from one of the example stationery pads.
- ▶ Name the chart.
- ▶ Open the chart.

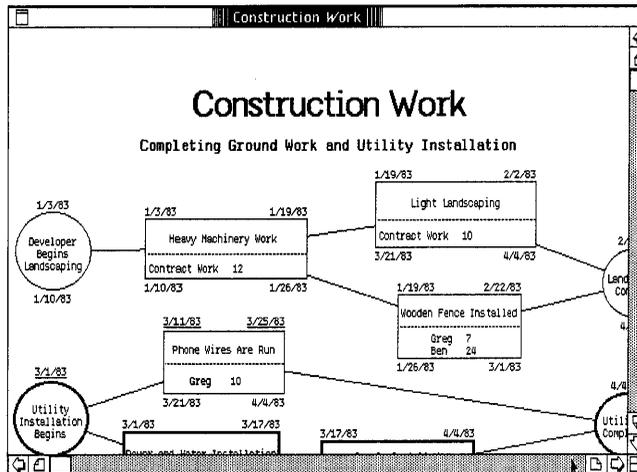
## Product Design Example



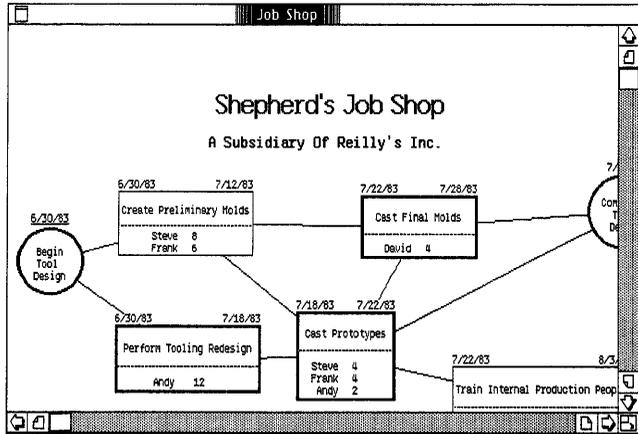
# European Distribution Example

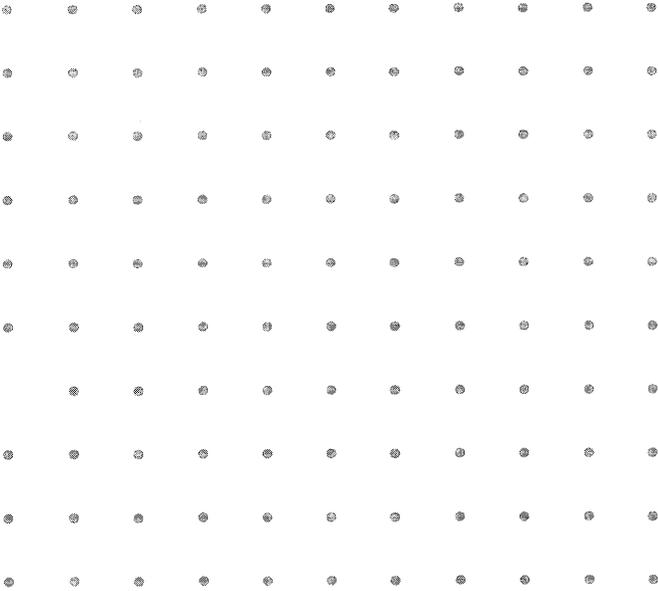


# Construction Work Example



# Job Shop Example





# **Section C**

## **LisaProject**

### **Reference Guide**

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# ***What's in the LisaProject Reference Guide?***

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This LisaProject Reference Guide contains complete information about LisaProject and is divided into two parts. Chapter 1 briefly explains basic LisaProject concepts. Read Chapter 1 for an overview of LisaProject and how to use it. Chapter 2 is divided into categories. Within each category there are directions for accomplishing specific tasks and some examples. Use Chapter 2 for step-by-step instructions on how to complete a particular task within LisaProject.

You can look for specific topics in the Index, in the table of contents of this Reference Guide, or at the beginning of each category of Chapter 2 of this Reference Guide.

The information in the LisaProject Reference Guide is based on the assumption that you have completed LisaGuide, for an introduction to the Lisa, and Section A, Getting Started with LisaProject, for a brief introduction to the basic skills needed to use LisaProject. For more self-paced instructions on LisaProject, you can use the LisaProject Tutorial, Section B.

# ***Chapter 1***

## ***Overview***

---

# Overview

## What's in Chapter 1?

Chapter 1 covers the basic concepts and terminology in LisaProject. It introduces you to the LisaProject screens, selecting, drawing, entering text, and the LisaProject work flow.

## The LisaProject Screens

There are three screens or charts associated with each document. These include the Schedule chart, the Resource chart, and the Task chart.

### Schedule Chart

The Schedule chart is shown in Figure 1.

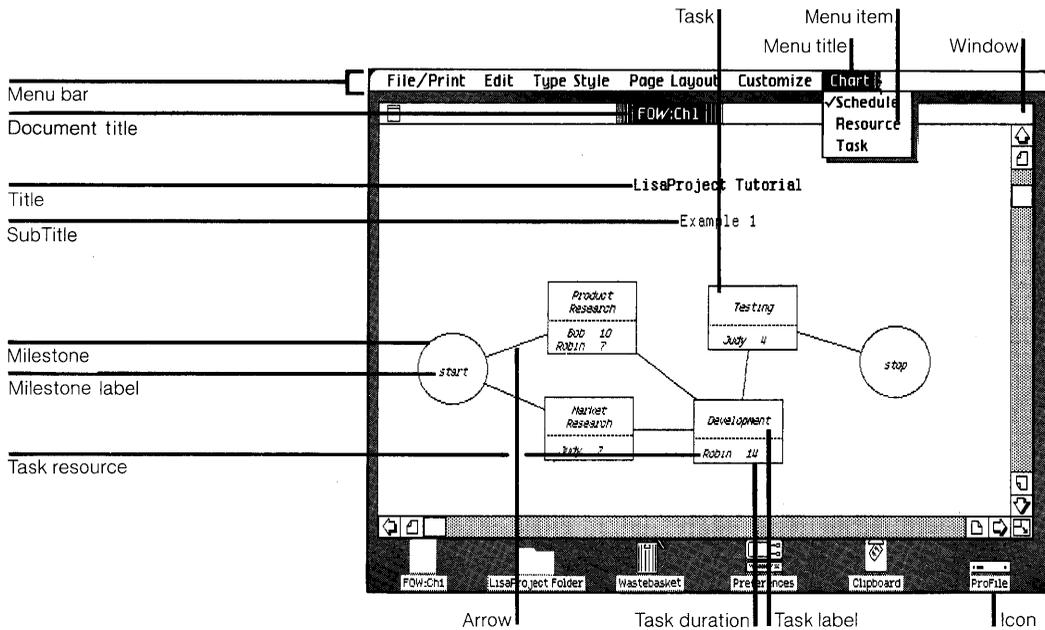


Figure 1. Schedule Chart

The following brief descriptions explain the functions of the items you see in Figure 1.

Document title	The title of the document that contains the Schedule, Resource, and Task charts. One LisaProject document has three different charts.
Menu bar	Shows the menus available in LisaProject.
Icon	Graphic symbol representing something on the Lisa desktop.
Menu title	Shows the name of a list of menu items.
Menu item	An option, command, or instruction that affects the current selection when you choose it.
Window	Displays the contents of an open icon.
Title	An area at the top of the chart reserved for a title.
SubTitle	An area at the top of the chart reserved for a subtitle.
Task	A box representing one job in the project, the resources that it takes to get the job done, and the time it takes for each resource.
Milestone	A circle representing an important event in the project; for example, the completion of a portion of the tasks.

Arrow	A straight line connecting tasks and milestones and defining the relative order in which they must be completed. The priority for completing tasks and milestones always flows from left to right across the chart.
Task duration	The duration of a task, in working days. Nonworking days, such as weekends and holidays, are added automatically from LisaProject's internal calendar.
Task resource	The name of a person, equipment, vendor, or any facility that will be necessary to perform the task. A task may have more than one resource.
Task label	The name of the task.
Milestone label	The name of the milestone.

Schedule charts can be multi-page. To see a multi-page chart, you need to either scroll through the pages or reduce the page layout so that the chart fits in a single screen display.

---

## ***Resource Chart***

---

The Resource chart is shown in Figure 2. This chart was generated automatically by LisaProject from the Schedule chart in Figure 1. You never create a Resource chart; LisaProject always does it for you.

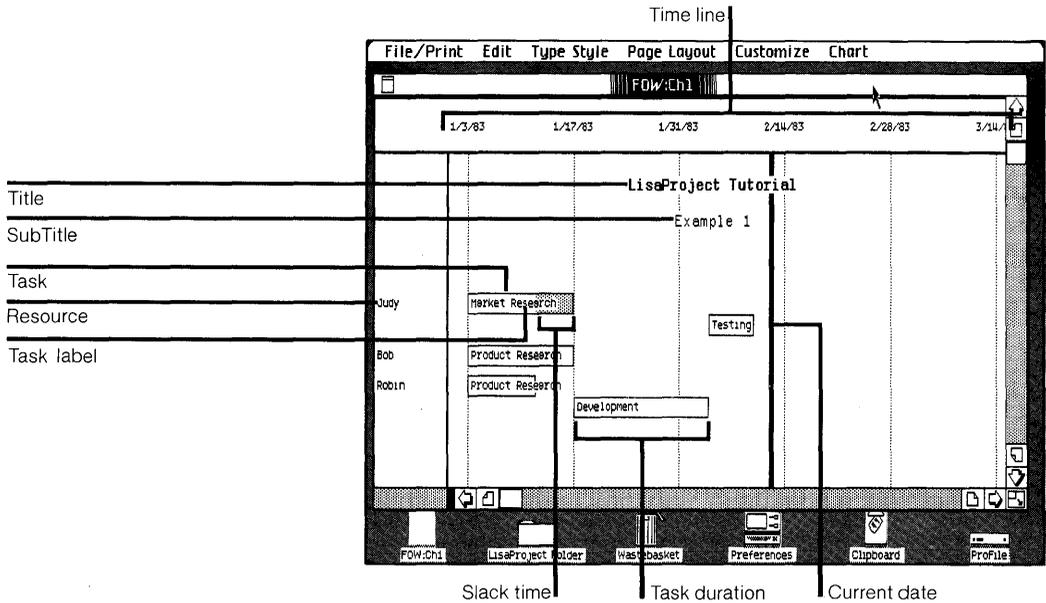


Figure 2. Resource Chart

The following brief descriptions explain the functions of the items you see in Figure 2.

- |           |  |
|-----------|--|
| Title     | An area at the top of the chart reserved for a title. The Resource chart may be named differently from the Schedule chart.                 |
| SubTitle  | An area at the top of the chart reserved for a subtitle. Like the chart title, this may be different for each chart.                       |
| Time line | A set of dates associated with the thin vertical lines through the chart. The vertical divisions represent periods of 1, 2, 4, or 8 weeks. |
| Task      | A bar representing a task that was drawn on the Schedule chart.  |

Task label	The task label that was entered in the Schedule chart.
Task duration	The length of a task bar representing the elapsed-time duration of the task. Nonworking days, such as weekends and holidays, that occur during the task are added to the duration entered in the Schedule chart to derive the elapsed-time duration of the task.
Slack time	The amount of time, if any, that the task completion may be late without affecting the completion time of the entire project. Tasks that have slack are not critical tasks. Those that have no slack are critical.
Resource	The name of a person, equipment, vendor, or any facility that will be necessary to perform the task.
Current date	A dark vertical line representing the date last entered in the calendar as the current date.

In the Resource chart, tasks are grouped according to the resources that are used by them; within this group, they are sorted by early start time.

Resource charts can be multi-page. To see a multi-page chart, you need to either scroll through the pages or reduce the page layout so that the chart fits in a single screen display.

## Task Chart

The Task chart is shown in Figure 3. This chart was generated automatically by LisaProject. You never create a Task chart; LisaProject always does it for you.

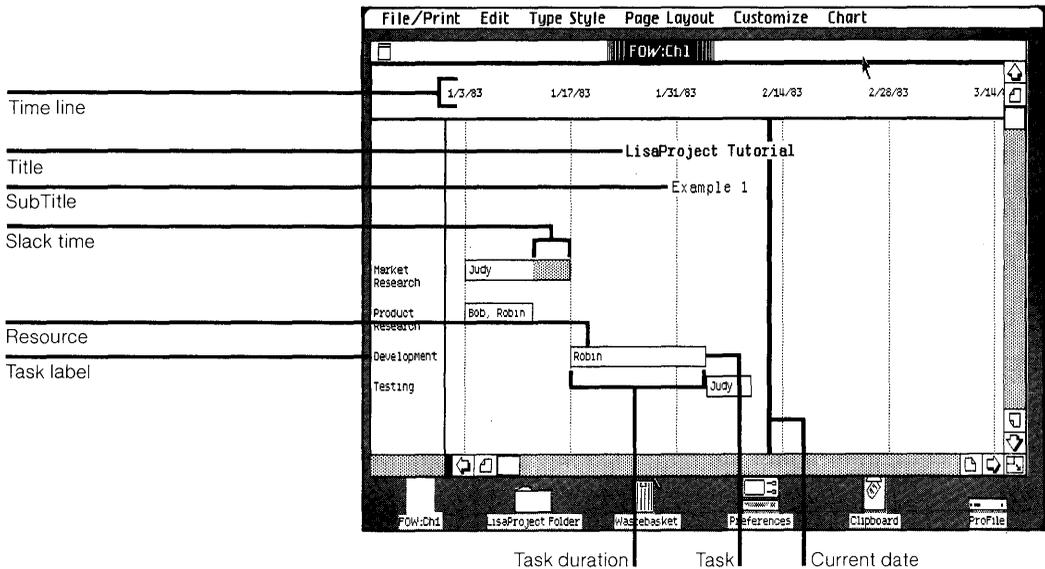


Figure 3. Task Chart

The following brief descriptions explain the functions of the items you see in Figure 3.

### Title

An area at the top of the chart reserved for a title. The Task chart may be named differently from the Schedule or Resource chart.

### SubTitle

An area at the top of the chart reserved for a subtitle. Like the chart title, this may be different for each chart.

Time line	A set of dates associated with the thin vertical lines through the chart. The vertical divisions represent periods of 1, 2, 4, or 8 weeks, and they are the same dates that appear in the Resource chart time line.
Task	A bar representing a task that was drawn on the Schedule chart. In the Task chart, tasks are sorted by early start time.
Task label	The task label that was entered in the Schedule chart.
Task duration	The length of a task bar representing the elapsed-time duration of the task. Nonworking days, such as weekends and holidays, that occur during the task are added to the duration entered in the Schedule chart to derive the elapsed-time duration of the task.
Slack time	The amount of time, if any, that the task completion may be late without affecting the completion time of the entire project. Tasks that have slack are not critical tasks. Those that have no slack are critical.
Resource	The name of a person, equipment, vendor, or any facility that will be necessary to perform the task. Tasks may have more than one resource.
Current date	A dark vertical line representing the date last entered in the calendar as the current date.

Task charts can be multi-page. To see a multi-page chart, you need to either scroll through the pages or reduce the page layout so that the chart fits in a single screen display.

---

## ***LisaProject Concepts***

LisaProject enables you to create a Schedule chart and then automatically obtain the associated Resource and Task charts.

The Schedule chart is created by drawing tasks and milestones, entering resources and durations for each task, and connecting the tasks and milestones with arrows to show the priority of events.

LisaProject calculates a schedule of dates for all tasks and milestones. You can override any of the dates that are calculated by entering “scheduled” dates.

You may modify your drawing of tasks and milestones in the Schedule chart at any time. When you do, the Resource and Task charts will automatically change. Tasks and milestones are modified by first selecting them and then moving, stretching, shrinking, copying, or cutting them. You may also add pages to the Schedule chart to make a bigger chart.

You may change the style of text in a chart; this is called formatting. Changing the content of text is called editing, which includes adding to, rearranging, replacing, and removing existing text. Before you may edit or format, however, you must select the text to be changed.

---

## **Pointers**

---

As you move the mouse, the pointer moves around the screen. Depending on what you're doing, the pointer can have any of the following shapes:



The drawing pointer is used to draw boxes and arrows in Schedule charts.



The text pointer appears whenever you can enter text.



The arrow pointer is used for view controls, menu items, and selecting icons, tasks, milestones, and arrows.



The check pointer is used to choose items within a dialog box or the Preferences window.



The hourglass appears when you need to wait while the Lisa finishes what it is doing.

---

## **Selecting**

---

You tell LisaProject that you want to work with an object by selecting that object. You can change the selection as often as you like. You can either select a single object or all of the document.

Table 1 explains how to select things. A shaded outline shows that an object is selected. On task boxes or milestone circles that are selected, eight dark handles also appear on the outline. Text that is selected appears highlighted on the screen.

Table 1. Selecting in LisaProject

To Select	Do the Following
Task box	<ul style="list-style-type: none"><li>■ Move the pointer so that it touches the box. The pointer changes to an arrow pointer.</li><li>■ Click the mouse button; a gray outline with handles appears to show that the box is selected.</li></ul>
Milestone circle	<ul style="list-style-type: none"><li>■ Move the pointer so that it touches the circle. The cursor changes to an arrow pointer.</li><li>■ Click the mouse button; a gray outline with handles appears to show that the circle is selected.</li></ul>
Task bar	<ul style="list-style-type: none"><li>■ Move the pointer inside the bar.</li><li>■ Click the mouse button; the bar becomes dark to show that it is selected.</li></ul>
Arrow	<ul style="list-style-type: none"><li>■ Move the pointer so that it touches the arrow. The pointer changes to an arrow pointer.</li><li>■ Click the mouse button; the line becomes gray.</li></ul>
One or more characters	<ul style="list-style-type: none"><li>■ Move the pointer to the left of the first character.</li><li>■ Press and hold the mouse button.</li><li>■ Pull through to the last character and release the mouse button.</li></ul>

---

Table 1. Selecting in LisaProject, continued

---

To Select	Do the Following
One word	■ Move the pointer to the word and click the mouse button twice.
One line of text	■ Move the pointer to the line and click the mouse button three times.
Text field	■ You may be able to use the <b>(Tab)</b> key as an alternative to clicking over the text field. Pressing the <b>(Tab)</b> key selects the next text field in a group of text fields. Pressing <b>(Shift)</b> and <b>(Tab)</b> together selects the prior text field.
Select everything	■ Choose Select All of Document from the Edit menu.
Deselect; select nothing in the document	■ Click the mouse button in a blank area of the chart.

## Scrolling

The window of the active document has view controls, shown in Figure 4, that you may use to bring hidden portions of the document into view.

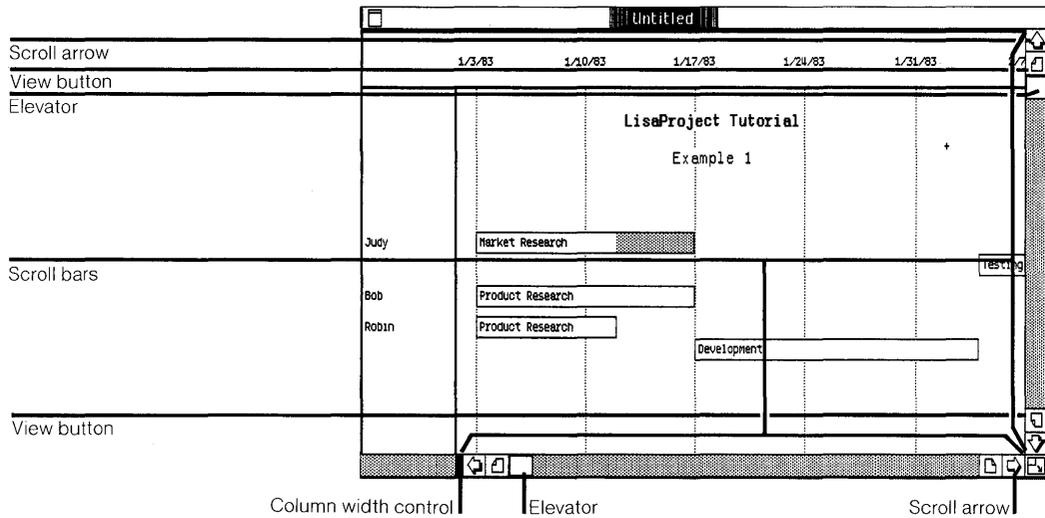


Figure 4. Window with View Controls

The following brief descriptions explain the functions of the items you see in Figure 4.

Scroll arrows	Enable you to bring hidden portions of a document into view in small increments.
Column width control	In the Resource and Task charts, enables you to adjust the width of the left-hand column where Resource or Task names are displayed.
Elevators	Indicate where the current view is in relation to the rest of the document.
Scroll bars	Contain controls that let you change the view of the document.
View buttons	Scroll the document one window at a time.

Table 2 shows the different ways to scroll in LisaProject.

Table 2. Scrolling in LisaProject

To Scroll	Do the Following
In small increments	■ With the pointer on the scroll arrow, press the mouse button and release it when the document is positioned where you want it.
Window-sized increments	■ Click on the view button.
Continuous window-sized increments	■ With the pointer on the view button, press the mouse button and release it when the document is positioned where you want it.
Large jumps	■ With the pointer on the elevator, move the elevator and release the mouse button when the document is positioned where you want it.

## ***About Menus***

Most of the operations that you can perform in LisaProject you do by choosing an item from a menu. The menus available are listed on the menu bar as shown in Figure 5. A description of all LisaProject menu items can be found in Appendix 1, Menu Items, in this manual.



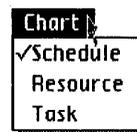
Figure 5. Menu Bar

To choose a menu item,

- ▶ Move the pointer to the menu bar and position it over the name of the menu you want.



- ▶ Press the mouse button and hold it down. Notice that the menu is now showing.



- ▶ Move the pointer to the menu item you want.



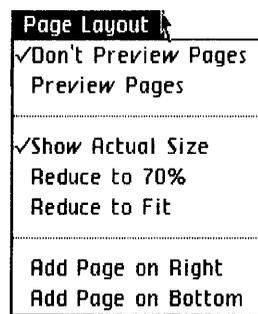
- ▶ Release the mouse button.

Some menu items have an Apple symbol and a letter beside them. This means that you can hold down the  key and the letter to choose a menu item rather than choosing the item with the mouse. For a list of menu items that you can choose using the  key, refer to Appendix 2, Apple Keys, in this manual.

Some menu items are followed by an ellipsis (. . .). When you choose one of these menu items, you must respond to a dialog box before the item takes effect. Dialog boxes are explained later in this chapter.

When a menu item is shown in gray instead of black, it cannot be chosen at that time. This is usually because the menu item does not apply to the current selection.

Some menu items are grouped together and represent the available choices for a particular menu setting. For example, in the Page Layout menu you can choose Don't Preview Pages or Preview Pages; the current setting has a check mark next to it, while the other one doesn't. If you choose another setting, the current one automatically turns off.

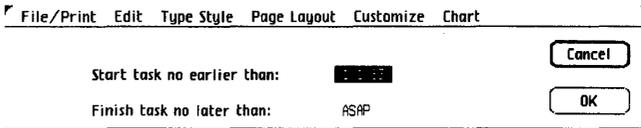


---

## Dialog Boxes

---

A dialog box is a box that appears on the screen in response to certain menu items. It allows you to accept or change various options that apply to the command. A dialog box for LisaProject is shown in Figure 6.



---

Figure 6. LisaProject Dialog Box

---

To fill in a dialog box,

- ▶ For each option that you wish to change, check the box next to the option you want by moving the pointer to the box and clicking the mouse button.
- ▶ When the dialog box reflects the options you want, click OK.
- ▶ If you change your mind and decide not to perform the operation called for by the menu item, click Cancel.

---

## Alert Boxes

---

An alert box is a box in which a message from the Lisa is displayed. The message can be Wait, Note, Caution, Stop, or ?, as described below. You can usually respond to these messages by clicking the OK or Cancel button. To do this, move the pointer to the OK or Cancel button and click the mouse button.

---

### Wait Message

The Wait message tells you that your Lisa is carrying out an operation that may take some time. You don't need to respond to a message of this type. However, some Wait messages give you the option of being able to terminate the operation by holding down the  key while typing a period. Figure 7 is an example of a Wait message.

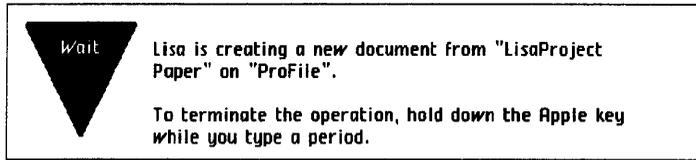


Figure 7. Wait Message

### **Note Message**

The Note message tells you that something might need your attention. Most likely, everything is all right, but the Lisa wants to tell you about something just in case. To dismiss the alert box with a Note message, you just click OK. Figure 8 is an example of a Note message.

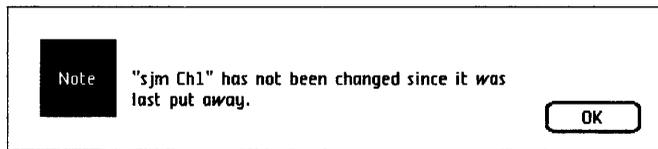


Figure 8. Note Message

### **Caution Message**

The Caution message tells you that you are about to do something risky that cannot be undone or something that may take a long time. To dismiss the alert box with a Caution message, you click OK or Cancel. Figure 9 is an example of a Caution message.

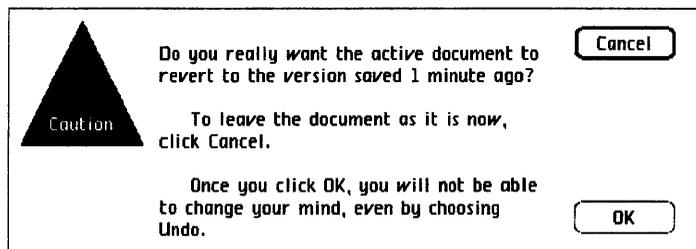


Figure 9. Caution Message

---

### **Stop Message**

The Stop message tells you that something you requested cannot be done and why. To dismiss the alert box with a Stop message, you click Cancel. Figure 10 is an example of a Stop message.

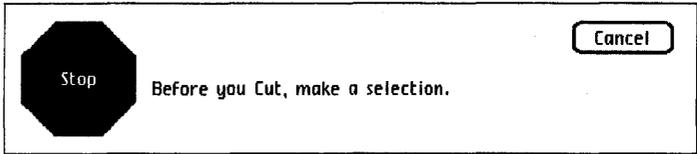


Figure 10. Stop Message

---

### **? Message**

The ? message tells you that you can choose one of a number of alternative actions. Most ? messages have two or three choices. You dismiss the alert box with a ? message by clicking on one of the choices. Figure 11 is an example of a ? message.

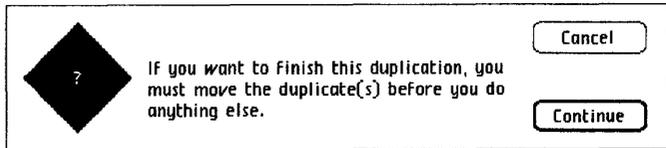


Figure 11. ? Message

---

---

## Dates

---

Figure 12 shows the dates that are displayed for tasks and milestones.

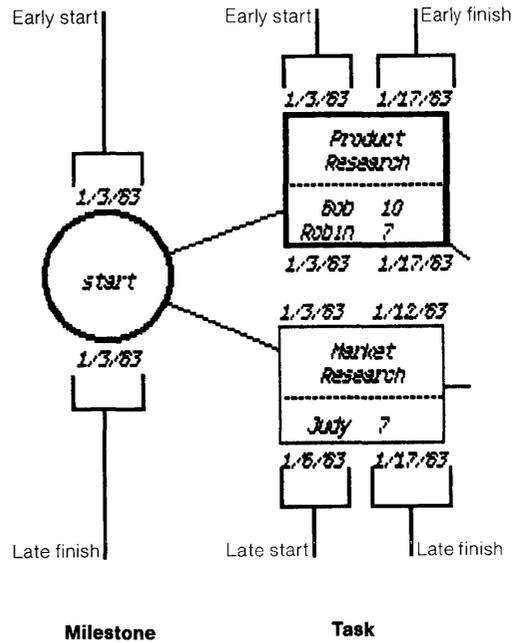


Figure 12. Display Format for Dates

Each milestone has two dates: early start on top, late finish on the bottom. Each task has four dates: early start and early finish on top, late start and late finish on the bottom.

To have dates actually displayed on the screen, you also need to choose Display Dates from the Customize menu.

For details about dates, see the Date procedures in Chapter 2 of this Reference Guide.

---

## ***Critical Tasks***

---

When you add arrows to a Schedule chart that has the dates turned on, dark outlines appear around certain tasks and milestones. This illustrates the critical tasks.

Critical tasks are those that have no slack time. They are tasks that must be finished on time if the entire project is to be finished in the earliest possible time. The sequence of critical tasks forms the longest time path through the project. This path is critical either because its tasks have long durations or the tasks use resources which are shared with other tasks in the project.

By contrast, a task that is not critical may take longer, up to the limit of its slack time, with no effect on the overall project completion time.

# LisaProject Work Flow

The following sections outline how to start a new LisaProject document and how to work with an existing LisaProject document. For specific information and step-by-step instructions, refer to Chapter 2 of this Reference Guide and Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*.

## Starting a New Document

To start a new LisaProject document,

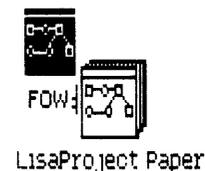
- ▶ Open the ProFile window.



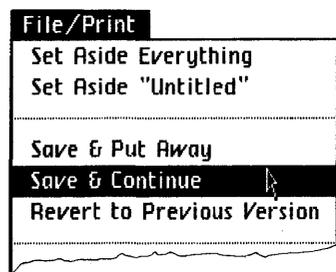
- ▶ Tear off a sheet of paper from the LisaProject stationery pad.



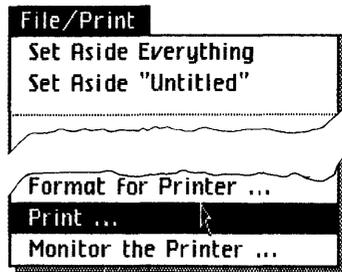
- ▶ Type the new document's name.



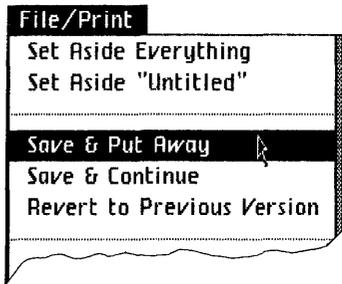
- ▶ Open the new document's window.
- ▶ Enter tasks, dates, and other information to create your LisaProject charts.
- ▶ Save all changes about every 15 minutes and continue working.



- ▶ Print the document, if you like.

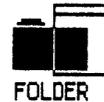


- ▶ Put away the completed document.



To organize your document into a folder and to keep the disk window uncluttered, you might want to

- ▶ Move the saved document into a folder of related documents, or tear a folder from the folder pad, name the folder, and move the document into it.



---

## ***Working with an Existing Document***

---

To work with a filed LisaProject document,

- ▶ Open the ProFile window.



- ▶ If the document is in a folder, open the folder that contains the document that you want to work with.



- ▶ Open the document.
- ▶ Edit and format the document, saving it every 15 minutes.
- ▶ Print the document, if you like.
- ▶ Put away the document in its original location.

# **Chapter 2**

## **Procedures**

---

# Procedures

---

## **What's in Chapter 2?**

Chapter 2 contains procedures for using all the features of LisaProject. To make the procedures easier to find, they have been divided into categories according to function. The categories are:

---

### **Date**

Look here to learn how to enter dates, in all their forms.

- C32 Display Dates
- C34 Enter Calendar Dates
- C36 Enter Scheduled Dates
- C39 Enter Work Days Remaining

---

### **Draw**

Look here to learn how to draw all the objects used in LisaProject.

- C42 Arrows
- C44 Milestone Circles
- C45 Task Boxes

---

### **Edit**

Look here to learn how to change the content of your chart.

- C48 Copy
- C49 Cut
- C50 Insert Object Labels
- C51 Insert Task Durations
- C52 Insert Task Resources
- C53 Insert Titles
- C54 Move Objects
- C55 Revert to Previous Version
- C56 Stretch/Shrink Objects
- C57 Undo Last Change

---

**Format**

Look here to learn how to work with the arrangement and layout of your charts.

C60 Add/Remove Pages

C62 Reduce/Expand Document

C63 Specify Time Scale

C64 Type Styles

---

**Print**

Look here to learn how to print your charts.

C68 Format for Specific Printers

C73 Preview Chart

C74 Print Chart

---

**Other Tools**

Look here to learn how to use LisaProject with other tools.

C80 LisaDraw

# ***Date***

- 
- C32 Display Dates
  - C34 Enter Calendar Dates
  - C36 Enter Scheduled Dates
  - C39 Enter Work Days Remaining

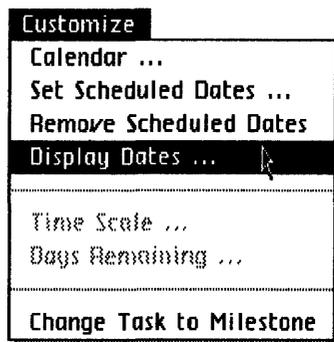
# Date

---

## Display Dates

To turn on or turn off the display of dates on the Schedule chart

- ▶ Choose Display Dates from the Customize menu. A dialog box appears.

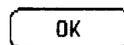


- ▶ Check the dates you want to see displayed.

Early Start  On  OFF      Early Finish  On  OFF

Late Start  On  OFF      Late Finish  On  OFF

- ▶ Click OK.



---

The following dates can be displayed:

## **Display Dates**

*(continued)*

**Early Start:** The earliest possible time a task or milestone will start, given the early finish dates of preceding tasks or milestones.

**Early Finish:** The earliest possible time a task will finish, given the early finish dates of preceding tasks or milestones. Since milestones have no duration, their early start and early finish dates are the same.

**Late Start:** The latest possible time a task will start, given the late finish dates of following tasks or milestones.

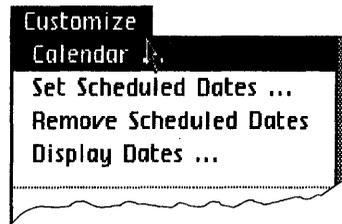
**Late Finish:** The latest possible time a task or milestone will finish, given the late finish dates of following tasks or milestones. Since milestones have no duration, their late start and late finish dates are the same.

# Date

## Enter Calendar Dates

To enter dates that LisaProject can use for schedule calculations

- ▶ Choose Calendar from the Customize menu. A dialog box appears.



- ▶ Select and enter the two-digit calendar start year, and press the **(Tab)** key.

---

Calendar: from January 1 19   
to December 31 19

Working Days per Week:

Current day of project:

Holidays:

<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				
<input type="text" value="mm/dd/yy"/>				

---

- ▶ Enter the calendar end year, and press the **(Tab)** key.
- ▶ Enter the days of work per week, and press the **(Tab)** key.
- ▶ Enter the current date, and press the **(Tab)** key.
- ▶ Enter the first holiday during the project period, if there is one, and press the **(Tab)** key to enter any additional holidays.
- ▶ Click OK.

OK

---

## **Enter Calendar Dates** *(continued)*

The first two entries in the calendar specify only the start and end years of the calendar for your project, not the actual start and end dates.

Unless you schedule a different early start date for the first task or milestone in the project, LisaProject will assume a project start date of January 1 for the year specified in the calendar, although January 1 is not always the first working day of the year. See the Enter Scheduled Dates procedure, under Date, in this chapter.

Your entry for days per week is interpreted as follows:

<b>Days Per Week</b>	<b>Working Days</b>
5	Mon–Fri
6	Mon–Sat
7	Mon–Sun

If a holiday falls on a nonworking day, as determined by your days per week entry, then that holiday has no effect on scheduling calculations.

When you enter calendar dates, LisaProject calculates the early start, early finish, late start and late finish dates for each task, based on their durations, dependencies, and resources required. LisaProject also calculates the early start and late finish dates for each milestone, based on the dependencies of the milestone.

If you change the calendar information, the dates on your charts may also change, since the chart dates are recalculated based on the new calendar dates.

To have dates displayed on the screen, you also need to choose Display Dates from the Customize menu.

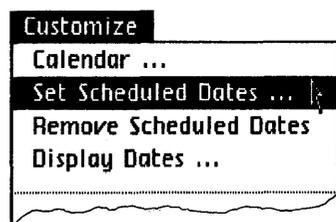
# Date

---

## Enter Scheduled Dates

To enter your own dates for a task or milestone, thereby overriding the dates calculated by LisaProject

- ▶ Select the task or milestone you want to schedule.
- ▶ Choose Set Scheduled Dates from the Customize menu. A dialog box appears.



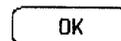
- ▶ Select and enter the dates you want to schedule.

---

Start task no earlier than:	<input type="text" value="1-1-87"/>	<input type="button" value="Cancel"/>
Finish task no later than:	<input type="text" value="ASAP"/>	<input type="button" value="OK"/>

---

- ▶ Click OK.



---

To change or delete a scheduled date

- ▶ Choose Set Scheduled Dates from the Customize menu.
  - ▶ Set dates in the format  
mm/dd/yy
-

---

## **Enter Scheduled Dates** *(continued)*

A special feature of the Lisa allows you to set the scheduled late finish date of the end or stop milestone in the mm/dd/yy format or with ASAP.

Scheduled dates are dates that you enter. They override dates that LisaProject has calculated and displayed.

Scheduled dates appear as underlined dates in the Schedule chart. When scheduled dates are entered, they replace the prior dates and all subsequent dates are recalculated.

If you enter a scheduled date that is impossible to achieve, given the calendar, task durations, and any other scheduled dates you've entered, LisaProject will override it.

The Display Dates procedure describes the manner in which early and late dates are calculated. Basically, the early dates are linked together and, separately, the late dates are linked together. The early dates are determined by the early start of the first task or milestone in the project, the durations of the tasks that follow, and any constraints imposed by resource competition. Similarly, the late dates are determined by the late finish of the last task or milestone, the durations of the tasks that precede it, and any resource competition.

Because early and late dates are more or less separate from one another, it is possible to schedule a late date that is inconsistent with early dates, and therefore end up with a task that has an early start later than a late finish. This means that given all the constraints, the task must be finished before it is started, thereby showing that the schedule is impossible to meet.

# Date

---

## **Enter Scheduled Dates** (continued)

If you try to schedule an early date that is inconsistent with some other early date that occurs before it, LisaProject will simply not accept the entry and will use its own calculation instead.

The late finish date for the last task or milestone in the project is assumed to be ASAP, which means as soon as possible, unless you schedule it differently. Your entry for this date is interpreted as follows:

**ASAP:** LisaProject calculates the date based on task durations. Critical tasks are highlighted with darkened outlines in the Schedule chart.

A finish date of ASAP, which means as soon as possible, means that LisaProject will calculate the earliest finish date possible.

**Scheduled date:** LisaProject uses the late finish date you enter to calculate slack times for all preceding tasks. If the late finish date is later than the ASAP date, all tasks have slack and thus none is critical. If the late finish date is earlier than the ASAP date, some tasks will have late dates that occur before early dates. The difference between the late dates and the early dates indicates that the schedule can't be met; it also indicates how far behind the project is.

For more information on scheduled dates, see Appendix 5, LisaProject Scheduling, in this manual.

---

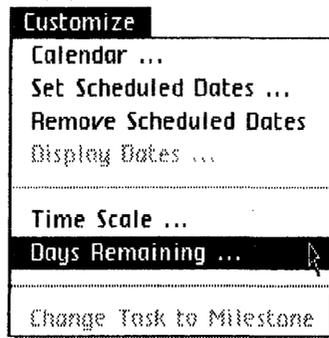
To enter work days remaining for a task

## Enter Work Days Remaining

- ▶ Choose Resource from the Chart menu.



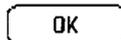
- ▶ Select the task bar that you want to update.
- ▶ Choose Days Remaining from the Customize menu. A dialog box appears.



- ▶ Enter the work days remaining.  
Days remaining in task:

7

- ▶ Click OK.



# Date

---

## **Enter Work Days Remaining** *(continued)*

Your entries for work days remaining affect the shading of task bars on the Resource chart: the heavy shading on the left side of the task bars represents the work completed. The white area still represents work remaining, and slack time, if any is still shown, in light shading on the right side of the bars.

If any task bar has white area (work remaining) to the left of the dark vertical line that represents the current date, that task is behind schedule.

# ***Draw***

- 
- C42 Arrows
  - C44 Milestone Circles
  - C45 Task Boxes

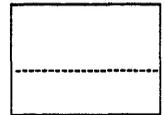
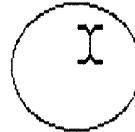
# Draw

---

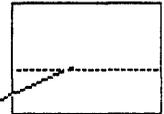
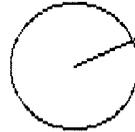
## Arrows

To draw an arrow

- ▶ Move the pointer inside the left-hand (origin) object, then press and hold the mouse button down.



- ▶ Move the pointer to the right-hand (destination) object and release the mouse button.



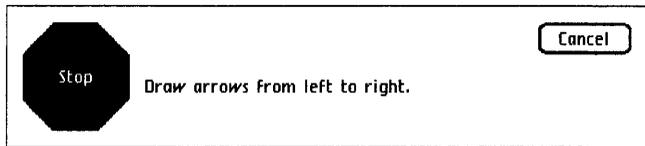
## **Arrows** (continued)

An arrow signifies that the origin task or milestone must be finished before the destination task or milestone can be started.

Any task or milestone can have multiple preceding or succeeding tasks or milestones.

If you begin to draw an arrow and decide you don't want it, just back up to the origin object or to any point in the blank drawing area and release the mouse button. The arrow will disappear.

Arrows can only be drawn from left to right. If you try drawing one from right to left, the following alert box will appear:



If this happens, first cancel the alert then move the objects you are trying to connect so that a left-to-right arrow can be drawn.

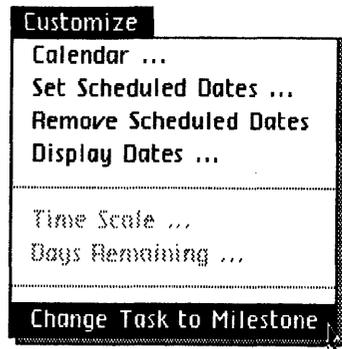
# Draw

---

## **Milestone Circles**

To draw a milestone circle

- ▶ Draw a task box.
- ▶ Select the task box.
- ▶ Choose Change Task to Milestone from the Customize menu.



---

A milestone signifies an event that has no time duration and uses no resources.

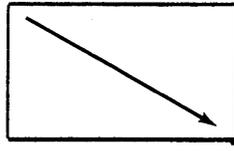
You can adjust the position and size of a milestone circle; see the Move Objects and Stretch/Shrink Objects procedures, under Edit, in this chapter.

---

## ***Task Boxes***

To draw a task box

- ▶ Move the pointer to where you want one of the corners of the box, then press and hold the mouse button down.
- ▶ While holding the mouse button down, move the pointer diagonally until the box is as large as you want it, then release the mouse button.



---

You can continue to change the shape of the box until you release the mouse button.

- 
- C48 Copy
  - C49 Cut
  - C50 Insert Object Labels
  - C51 Insert Task Durations
  - C52 Insert Task Resources
  - C53 Insert Titles
  - C54 Move Objects
  - C55 Revert to Previous Version
  - C56 Stretch/Shrink Objects
  - C57 Undo Last Change

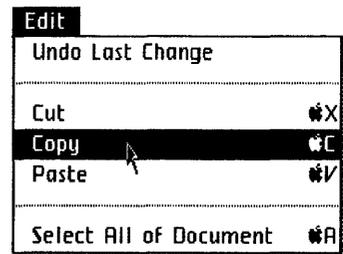
# Edit

---

## Copy

To copy task boxes, milestone circles, or text within the same document

- ▶ Select the object or text that you want to copy.
- ▶ Choose Copy from the Edit menu.



- ▶ Select the new location for the object or text
- ▶ Choose Paste from the Edit menu.

---

Copying differs from cutting in the following way: with copy, the selected object remains in your original chart, whereas with cut the selected object is erased. In both cases, however, the object appears on the Clipboard.

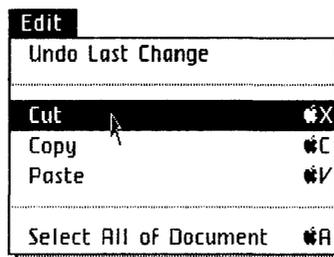
By choosing Select All of Document from the Edit menu before you copy, your entire chart will be copied to the Clipboard. This can be used to transfer charts between LisaProject and LisaDraw. See the LisaDraw procedure, under Other Tools, in this chapter.

---

To delete objects or text

## Cut

- ▶ Select what you want to delete.
- ▶ Choose Cut from the Edit menu.



---

When you cut an object or text, it is moved to the Clipboard, where it stays until you do another cut or copy.

You cannot cut when you have chosen Select All of Document from the Edit menu. To delete an entire document, close it and move it to the Wastebasket.

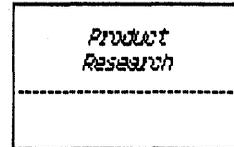
# Edit

---

## ***Insert Object Labels***

To label a task or milestone

- ▶ Select the area in the task box or milestone circle that is reserved for the label.
- ▶ Enter the label.



---

The area reserved for the task label is in the upper half of the task box.

The area reserved for the milestone label is in the center of the milestone circle.

Multi-line labels can be created by entering the first line of the label, pressing the **Return** key, and continuing with the entry.

---

## ***Insert Task Durations***

To enter a duration for a task

- ▶ Select the duration area of the task box.
- ▶ Enter the duration.

<i>Product Research</i>
<i>Bob 10</i>

---

The area reserved for the duration is in the lower half of the task box, on the right-hand side.

You can select the duration area of a task box either by moving the pointer to it and clicking twice or by pressing the **(Tab)** key when the resource label is selected.

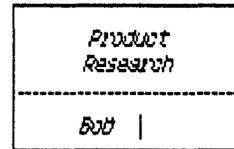
# Edit

---

## ***Insert Task Resources***

To enter a resource name for a task

- ▶ Select the area in the task box that is reserved for resource names.
- ▶ Enter the resource name.



---

The area reserved for the resource names is in the lower half of the task box, on the left-hand side.

More than one resource can be associated with a single task. To enter multiple resources and durations, use the **(Return)** key to create new lines after a duration is entered.

You can select the resource area of a task box either by moving the pointer to it and clicking twice or by pressing the **(Tab)** key when the task label is selected.

---

To insert a title or subtitle on a chart

## ***Insert Titles***

- ▶ Select the title or subtitle area on the chart.
- ▶ Enter the new text.

---

The areas reserved for title and subtitle text are the two lines at the top of the chart labeled “Title” and “SubTitle.” You can tell when the pointer is over one of these areas because it appears like an I-beam.

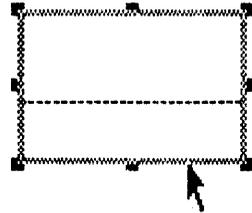
# Edit

---

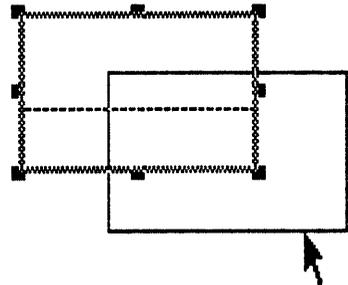
## Move Objects

To move a task box or milestone circle

- ▶ Move the pointer to the outline of the object to be moved, then press and hold the mouse button.



- ▶ While holding the mouse button down, move the pointer. A ghost of the object will follow the pointer.



- ▶ When the object is in the desired location, release the mouse button.

---

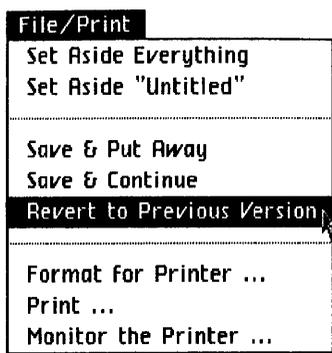
The pointer can be on any side of the object's outline in order to move the object in any direction, but do not let the pointer touch one of the eight darker handles on the outline.

If you try to move an object to the right of succeeding objects, or to the left of preceding objects in a network, and if there is room on the page, LisaProject will automatically move the succeeding or preceding objects.

---

To cancel all changes made to a document since it was last saved or put away

- Choose Revert to Previous Version from the File/Print menu.



## ***Revert to Previous Version***

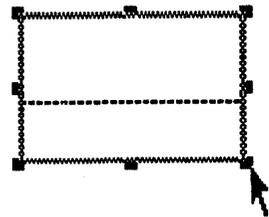
# Edit

---

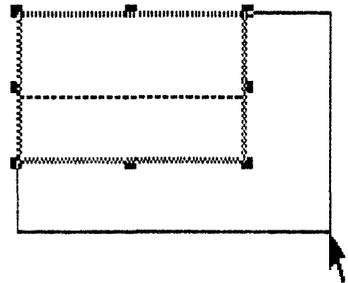
## Stretch/Shrink Objects

To stretch or shrink a task box or milestone circle

- ▶ Select the object.
- ▶ Move the pointer so that it touches any of the eight dark handles, then press and hold the mouse button down.



- ▶ Move the pointer to stretch or shrink the object.



- ▶ When the object is the desired size, release the mouse button.

---

On task boxes, you can change the width, the height, or both simultaneously. To change only the width, use a handle in the middle of either side of the box.

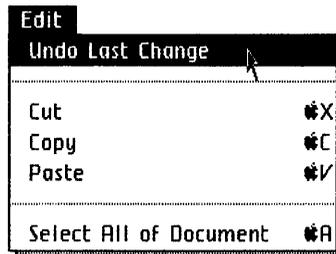
To change only the height, use a handle in the middle of the top or bottom of the box.

To change both the width and the height simultaneously, use one of the corner handles.

---

To undo the last change

- ▶ Choose Undo Last Change from the Edit menu.



## ***Undo Last Change***

# ***Format***

- 
- C60 Add/Remove Pages
  - C62 Reduce/Expand Document
  - C63 Specify Time Scale
  - C64 Type Styles

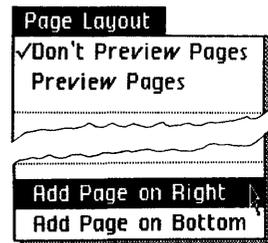
# Format

---

## **Add/Remove Pages**

To add a page to the right of your chart

- ▶ Choose Add Page on Right from the Page Layout menu.



---

To add a page to the bottom of your chart

- ▶ Choose Add Page on Bottom from the Page Layout menu.

---

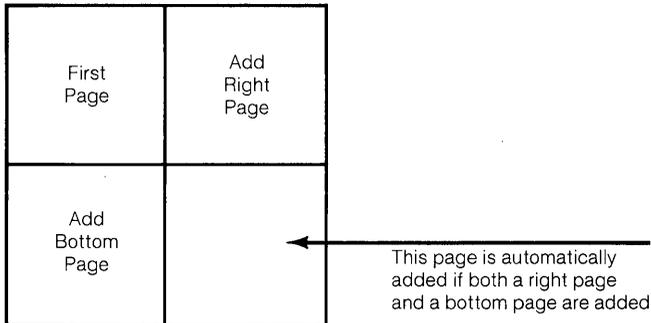
To remove blank pages from the bottom or right side of a Schedule Chart

- ▶ Choose Save & Put Away from the File/Print menu.
-

## **Add/Remove Pages** *(continued)*

The Page Layout menu applies only to the Schedule chart. Adding a page to the Schedule chart will not add a page to the Resource or Task chart.

When you add a right page to a chart which has already had a bottom page added, a page will automatically be added to fill in the lower-right corner.



Normally, page edges are not displayed, although they can be. See the Preview Chart procedure, under Print, in this chapter.

During printing, each page of a multi-page chart is printed separately. You can then tape them together or pin them to a wall.

You have to put your chart away to remove blank pages on the bottom and right side of a Schedule chart. When you open the chart the next time, the blank pages will have been discarded.

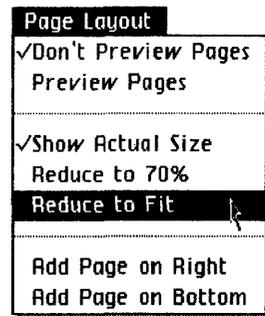
# Format

---

## **Reduce/Expand Document**

To reduce the displayed size of a document so that all pages in the drawing space are displayed together

- ▶ Choose Reduce to Fit from the Page Layout menu.



---

When a document is reduced to fit, all controls in the scroll bars are inactive

---

To reduce the displayed size of a document to 70% of its current size

- ▶ Choose Reduce to 70% from the Page Layout menu.

---

To display the document in its original size

- ▶ Choose Show Actual Size from the Page Layout menu.

---

If you have chosen Reduce to Fit and then you want the 70% size, first choose Show Actual Size and then choose Reduce to 70%.

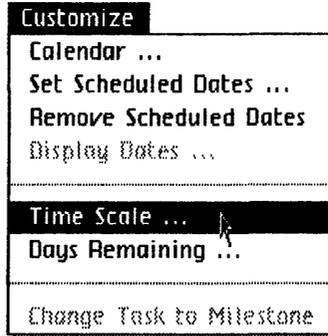
## Specify Time Scale

To specify the time scale for Resource and Task charts

- ▶ Choose Resource from the Chart menu.



- ▶ Choose Time Scale from the Customize menu. A dialog box appears.

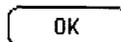


- ▶ Check the number of weeks you want each vertical division in the Resource and Task charts to represent.

Scale:

1 week     2 week     4 week     8 week

- ▶ Click OK.



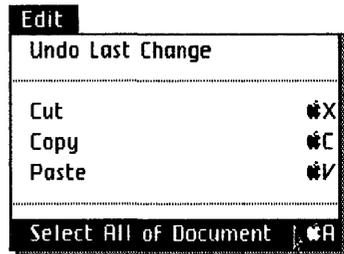
# Format

---

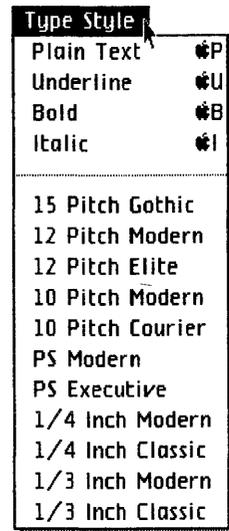
## Type Styles

To change the type style of all task and milestone text

- ▶ Choose Select All of Document from the Edit menu.



- ▶ Choose a type style from the Type Style menu.



---

## **Type Styles** *(continued)*

To change the type style of individual lines, words, or characters in the title or subtitle areas

- ▶ Select the line, word, or character.
- ▶ Choose a type style from the Type Style menu.

---

New text that you add to your chart will be in the “plain” text style until you change it.

When you select a new type style, LisaProject reduces or expands the Schedule task boxes and milestone circles to accommodate the size of the new type style.

You can, therefore, reduce or expand the size of your charts by reducing or expanding the size of the type in the charts.

For example, the normal type size for LisaProject charts is 15 pitch, which prints 15 characters per inch. By changing to the 10-pitch type size, 10 characters per inch, you expand the size of the chart.

To change the type size for printing, you need a dot matrix printer or a daisy wheel printer capable of printing in different type sizes. See the Format for Specific Printers procedure, under Print, in this chapter.

---

C68 Format for Specific Printers  
C73 Preview Chart  
C74 Print Chart

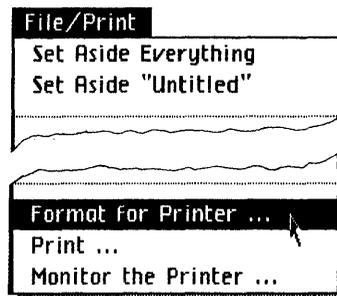
# Print

---

## **Format for Specific Printers**

To format your document for a specific printer

- ▶ Choose Format for Printer from the File/Print menu.



- ▶ Check the type of printer that this document will print on.
- ▶ If you are using a dot matrix printer, check the orientation and resolution that you want to use for this document.
- ▶ If you are using a daisy wheel printer, check the paper size and print wheel style that you want to use for this document.
- ▶ Check the response you want the Lisa to make if no printer matches the settings you've picked.
- ▶ Click OK.

OK

---

---

## **Format for Specific Printers** (continued)

The settings you check in the Format for Printer dialog box work with the formats you set in your document as you enter and edit text. These printer settings are saved with each document, and become part of the settings that determine how your document displays on the screen, as well as how it prints out.

It's a good idea to choose the Format for Printer settings for a document before you add other formats to your document, because some Format for Printer settings limit the other formatting settings available to you.

These are discussed under the individual settings below.

Printer format settings take effect in the text of your document after you click OK in the dialog box.

---

### **Settings in the Format for Printer Dialog Box**

The Format for Printer dialog box lets you check the kind of printer you want this document to print on, and then lets you specify some details on size of paper and type style.

You can tell the Lisa to print your document on a dot matrix or daisy wheel printer. The items that follow Print Method in the dialog box change when you change your printer preference from dot matrix to daisy wheel, or back.

# Print

## Format for Specific Printers (continued)

### Dot Matrix Printer Settings

When you choose Dot Matrix printer in the Format for Printer dialog box, you see these additional choices:

---

Format For Printer... Cancel

On which printer do you intend to print this document?  
Print Method:  Dot Matrix  Daisy Wheel  
Paper Length:  11"  14"  
Orientation:  Portrait (tall)  Landscape (wide)  
Resolution:  Normal  High

What do you want done if the printer you've specified does not appear to be connected to this machine?  
 Tell Me  Pick an Available Printer for Me  Disregard it OK

---

**Paper Length:** With a dot matrix printer, you can print on 11 or 14 inch paper.

**Orientation:** This setting tells the Lisa whether to print your document horizontally or vertically on the paper in your printer. When the orientation is Landscape, your Lisa treats the length of the paper, whether it is 11 or 14 inches as the width. In other words, it treats the paper as though it could turn it on its side before printing.

**Resolution:** This tells your Lisa what quality you want the document to print with. Normal resolution gives you a standard character image. High resolution produces a much finer quality character image, but takes longer to print.

When using landscape orientation and normal resolution, the font size of the text will be smaller when it is printed than it was shown on the screen. In order to print the largest portion of your chart on the smallest size of paper, use landscape orientation, normal resolution, and 15 pitch.

## Format for Specific Printers (continued)

### Daisy Wheel Printer Settings

When you choose Daisy Wheel printer in the Format for Printer dialog box, you see these additional choices:

---

Format For Printer... Cancel

On which printer do you intend to print this document?

Print Method:  Dot Matrix  Daisy Wheel

Paper Size:  8.5x11"  11x8.5"  
 8.5x14"  14x8.5"  14x11"

Print Wheel:  15 Pitch  12 Pitch  10 Pitch  Executive  
 Multi-Font  Multi-Pitch  Lisa Complete

What do you want done if the printer you've specified does not appear to be connected to this machine?

Tell Me  Pick an Available Printer for Me  Disregard it OK

---

**Paper Size:** When you print with a daisy wheel printer, you have five choices for paper size: 8-1/2 x 11 inches; 11 x 8-1/2 inches; 8-1/2 x 14 inches; 14 x 8-1/2 inches; and 14 x 11 inches.

**Print Wheel:** You have a range of choices in print wheels. The wheel you decide to use does limit the range of type styles and fonts that you may use in your document. For instance, if the print wheel you choose does not contain italic characters, italics will not display in the text of your document. When you try to use a type style or font that is incompatible with the current printer settings, you'll see an alert box.

**When Settings Don't Match a Printer:** In order for the Lisa to follow your instructions in this Format for Printer dialog box, two other factors must be true: Preferences must show that the type of printer with the settings you choose here is attached to your Lisa, and such a printer must be attached.

Whenever you click OK in the Format for Printer dialog box, the Lisa checks the new settings against the printer settings listed in Preferences. If they don't match, your Lisa then looks at the bottom line of the dialog box to see what you want done.

# Print

---

## **Format for Specific Printers** (continued)

**Tell Me:** When Tell Me is checked, your Lisa notifies you that no printer specified in Preferences meets the settings you have checked. An alert box appears, so that you can decide what you want to do next. Here is what it looks like:

---

**Intended Printer Unavailable!**

According to the Preferences Window's list of Device Connections, the Intended Printer for this document is not connected to this machine.

**On which printer do you intend to print this document?**

- A printer that is not listed in Preferences right now.  
 Slot 2 Upper -- Dot Matrix -- 11"

What do you want done if the printer you've specified does not appear to be connected to this machine?

- Tell Me     Pick an Available Printer for Me     Disregard it

OK

---

**Pick an Available Printer:** When Pick an Available Printer is checked, the Lisa will choose an alternative printer if one doesn't match the settings you requested exactly. For instance, if you've specified a daisy wheel printer but only a dot matrix is attached and checked in Preferences, your Lisa formats your document for the dot matrix printer, rather than for a daisy wheel printer.

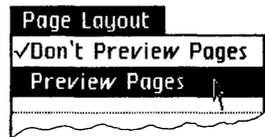
**Disregard It:** When Disregard It is checked, the Lisa notes the difference in printer settings and available printers, but doesn't do anything. This allows you to continue working with your document without being interrupted to make a decision about print formats now. You should check this box when you intend to print the document on a different printer from the one that is connected to your Lisa now.

---

## Preview Chart

To preview a document

- ▶ Choose Preview Pages from the Page Layout menu.



---

To cancel

- ▶ Choose Don't Preview Pages from the Page Layout menu.

---

Preview shows you how your document will look when printed, based on the current printer specifications and the current page layout settings.

When you choose Preview Pages, the current view of your document doesn't change. You can use the view controls to see the rest of your text.

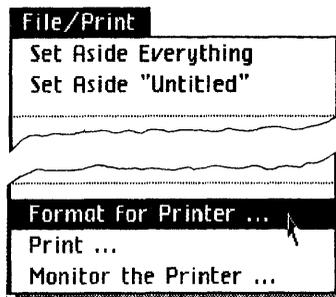
You may enter, edit, and format text while preview is on, just as at any other time while using LisaProject.

# Print

## Print Chart

To print a chart

- ▶ Make sure your printer is set up and connected to your Lisa. For assistance, see the manual that came with your printer.
- ▶ If you have not previously specified the printer you use in Preferences, do so now. For assistance, refer to Section D, Desktop Manager Reference Guide, in the *Lisa Owner's Guide*, under Set Printer Configuration.
- ▶ Get or activate the document.
- ▶ If you need to change any of the options in Format for Printer dialog box for this chart, choose Format for Printer from the File/Print menu.



- ▶ Make any necessary changes in the Format for Printer dialog box that appears.

Format For Printer...

On which printer do you intend to print this document? Cancel

Print Method:  Dot Matrix  Daisy Wheel

Paper Length:  11"  14"

Orientation:  Portrait (tall)  Landscape (wide)

Resolution:  Normal  High

What do you want done if the printer you've specified does not appear to be connected to this machine?

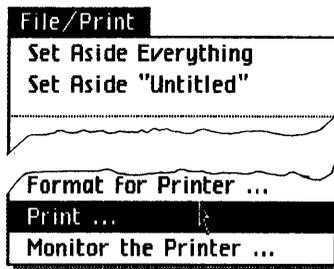
Tell Me  Pick an Available Printer for Me  Disregard it OK

## **Print Chart** (continued)

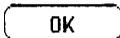
- ▶ Click OK.



- ▶ Choose Print from the File/Print menu.



- ▶ Make any necessary changes in the Print dialog box that appears.
- ▶ Click OK.



Using the current printer settings and the formats you specified in the text, your document begins printing.

For how to make changes in the Format for Printer dialog box, see the Format for Specific Printers procedure, under Print, in this chapter.

If the printer settings and printer don't match, an alert box appears. Alert boxes resulting from a mismatch are discussed in the Format for Specific Printers procedure in this chapter.

Sometimes a dialog box titled Monitor the Printer will appear. See While You Work, later in this chapter, for information on this alert box.

# Print

## Print Chart (continued)

### Print Dialog Box Settings

---

Print...  Finished Quality  Quick Draft (Text Only) Cancel

One Copy While You Wait  While You Work

All Pages  Only pages:  Through:

Number of Copies:  1  2  3  4  5  6  7  8  9  10 OK

---

The Print dialog box lets you specify some final details about how your document will print. The choices in the Print dialog box are discussed below.

### Quality

**Finished Quality:** Finished Quality prints your document as you have formatted it on the screen, including special type styles and fonts.

**Quick Draft:** Quick Draft lets you get a printed copy of the text faster, but without any special type styles and fonts used in your document. On a dot matrix printer, the built-in font is used for Quick Draft. On a daisy wheel printer, whatever print wheel is on the printer will be used, even if you've specified a different one in your document.

---

### Speed

**While You Wait:** You can have the Lisa use most of its attention to print your document while you wait. A document will print more quickly if you choose While You Wait, but you won't be able to use your Lisa for any other tasks.

**While You Work:** You can have the document print while you continue to use your Lisa for other tasks. Some printing conditions make printing while you work inconvenient, however. For example, if you are single sheet feeding paper into your printer, and printing a Quick Draft, you won't have time to do other activities on the Lisa.

When you choose While You Work, the Monitor the Printer dialog box appears.

---

Monitor the Printer.. Terminate

Document being printed: The printer is currently inactive.  
Copy being printed: 1 OF 1  
Page being printed: 0 OF 1

If you want to do other work while the document is being printed, click Proceed. Otherwise, just wait.

If you do decide to Proceed, you can get back here by choosing Monitor the Printer from the File/Print menu. You should do that if you hear a whistle or if you want to terminate printing. Proceed

---

This dialog box tells you the name of the document, the copy, and the page now being printed. Click Proceed to return to LisaProject and continue working. Click Terminate if you want to stop the printing. If you decide to proceed, you can return to this dialog box at any time to stop the printing by choosing Monitor the Printer from the File/Print menu.

Note that if you hear a whistle, there is a problem with printing while you work. Choose Monitor the Printer from the File/Print menu to see what the problem is.

# Print

---

## **Print Chart**

*(continued)*

### **Number of Pages**

**All Pages:** You can print all pages of a document. Just make sure All Pages is checked in the Print dialog box.

**Selective Pages:** To print selective pages of a document, check Only Pages and then fill in the boxes with the starting and ending pages to print.

When you want to print from the beginning of a document through some page number, say 8, you enter "8" in the second box after Through. Similarly, if you want to start at a given page number and print to the end, you need to enter the starting page number in the box after Only Pages.

---

### **Number of Copies**

You can print from 1 to 10 copies of any document. Just check the box with the number of copies you want printed.

# ***Other Tools***

---

C80 LisaDraw

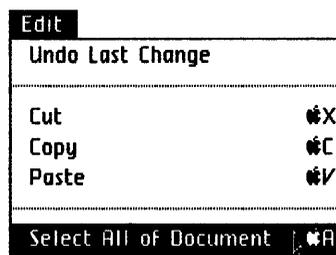
# Other Tools

---

## **LisaDraw**

To copy a chart from LisaProject into the LisaDraw

- ▶ Get or activate the chart that you want to copy.
- ▶ Choose Select All of Document from the Edit menu.

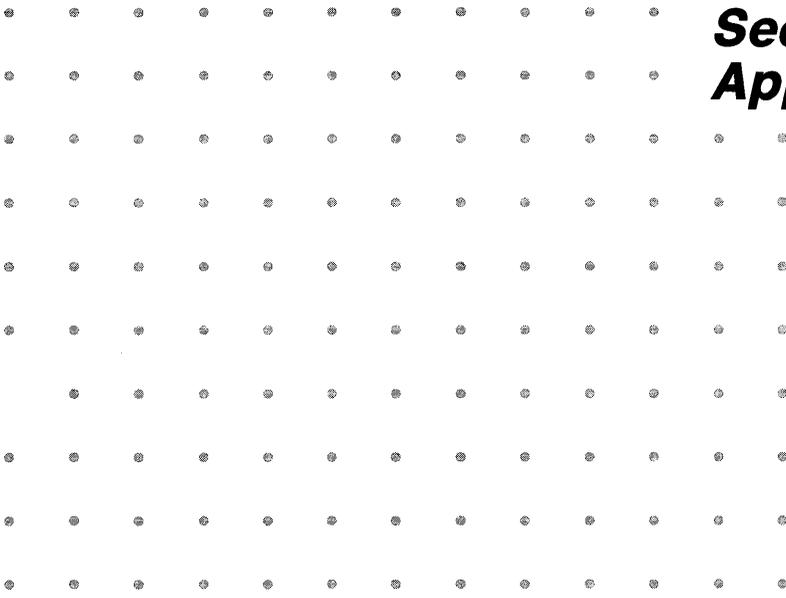


- ▶ Choose Copy from the Edit menu.
- ▶ Get or activate the LisaDraw document that you want to copy to or tear off a new piece of drawing paper and open it.
- ▶ Choose Paste from the Edit menu.

---

Now you can add text and other graphic enhancements to your chart with LisaDraw. Note that you have to copy each chart into LisaDraw separately. For example, copying a Schedule chart into LisaDraw does not copy the Resource or Task chart.

***Section D***  
***Appendixes***



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***D9 Appendix 4. Technical Specifications***

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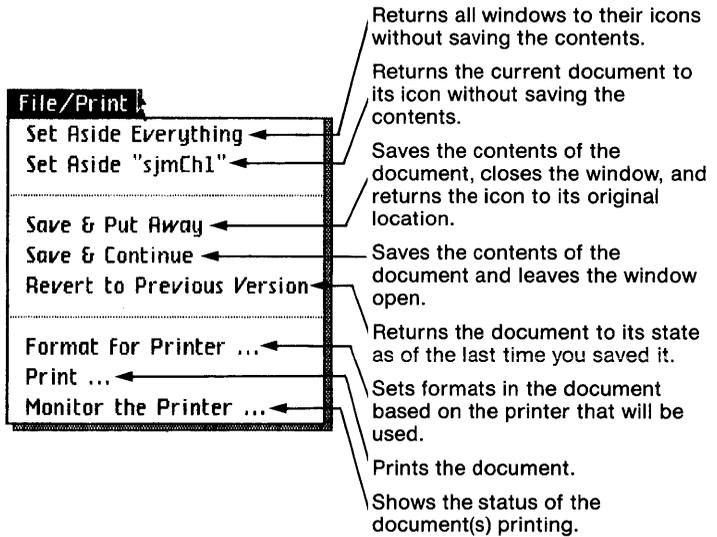
***D11 Appendix 5. LisaProject Scheduling***

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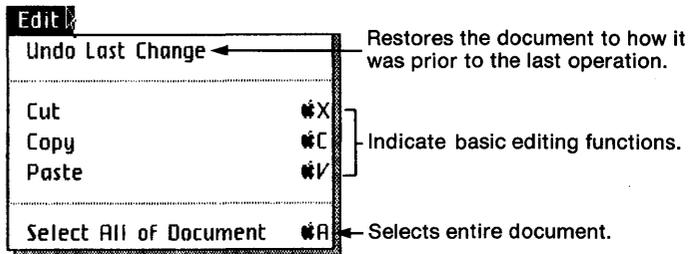
# Appendix 1 Menu Items

---

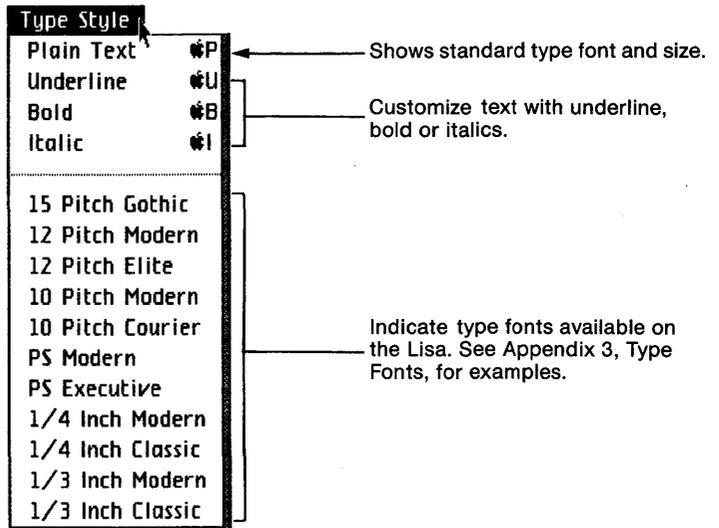
## File/Print Menu



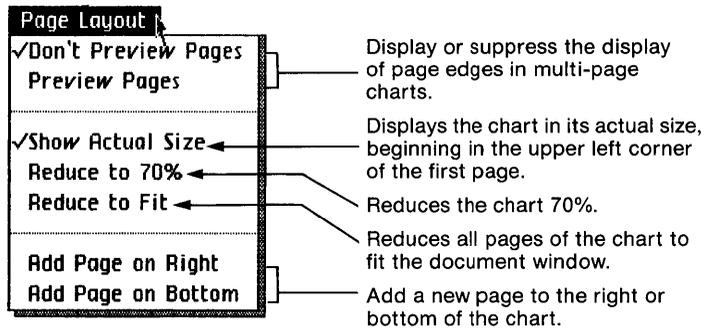
## Edit Menu



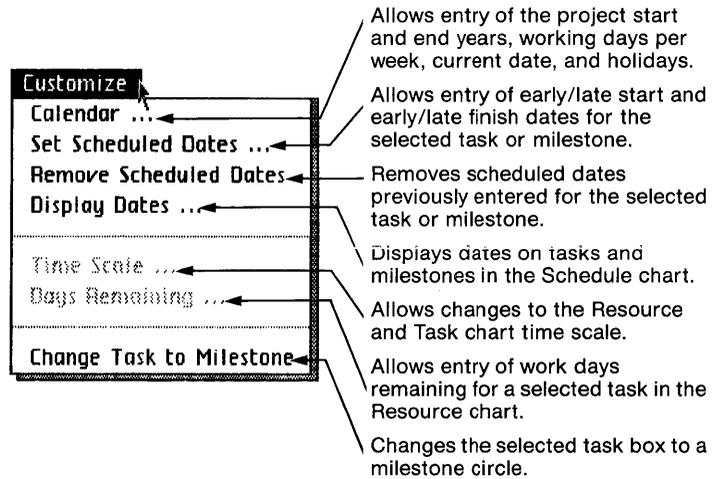
## Type Style Menu



## Page Layout Menu

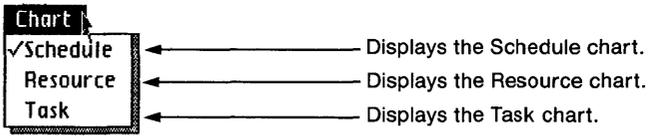


## Customize Menu



---

## Chart Menu



# **Appendix 2**

## **Apple Keys**

---

Some LisaProject menu items contain the Apple key symbol followed by a character.

Menu items that appear with the Apple key symbol can be chosen by using the mouse or by pressing the  key and the character associated with that menu item. For example, to use the Cut menu item, you first select what you want to delete, press the  key, and while holding it down, press the X key.

The following list shows the characters that can be used in combination with the  key in LisaProject:

- A    Select All of Document
- B    Bold
- C    Copy
- I    Italics
- P    Plain Text
- U    Underline
- V    Paste
- X    Cut
- .    Terminate

# Appendix 3

## Type Fonts

---

Type of one size and face is called a font. The “face” is the portion of the character that displays and prints. On the Type Style menu, some font names are preceded by a number that indicates character size. This number indicates how many characters will print per inch when you use that type font. “PS” in front of a font name stands for proportionally spaced.

The list below shows the fonts as they print. The type style of each font is “plain.” Each of these fonts also may be bold, underlined, and italic.

You can print any combination of type fonts and styles on a dot matrix printer. In order to use them with a daisy wheel printer, however, you must have the appropriate print wheel for each font. If you choose a font that your printer is not set up to use, an alert message is displayed on the screen.

15 Pitch Gothic  
12 Pitch Modern  
12 Pitch Elite  
10 Pitch Modern  
10 Pitch Courier  
PS Modern  
PS Executive  
1/4 Inch Modern  
1/4 Inch Classic  
1/3 Inch Modern  
1/3 Inch Classic

# **Appendix 4**

## **Technical Specifications**

---

Maximum length of any text string:

50 characters

Maximum Drawing Size of Schedule Chart:

96 inches wide by 48 inches long

Maximum number of tasks to start on any one day:

100 tasks

Maximum number of years in the calendar:

10 years

Maximum tasks duration:

999 days

Maximum number of holidays:

20 holidays

Maximum size of Schedule, Resource, or Task Chart that can be pasted into LisaDraw:

96 inches wide by 48 inches long

# **Appendix 5**

## **LisaProject Scheduling**

---

LisaProject is a powerful and flexible interactive scheduling tool that permits you to easily add tasks and milestones and adjust resource requirements. To permit this interactive use, LisaProject uses a scheduling algorithm that calculates the earliest possible completion of the project except when two or more tasks that are in parallel require the same resource. In the cases when LisaProject does not calculate the schedule that allows you to finish the project at the earliest possible date, you can set the scheduled dates to adjust the schedule to finish earlier or even at the earliest date.

In the following example, you will see how the completion date changes when LisaProject calculates the schedule compared to when you set the scheduled dates.

- ▶ Open the LisaProject Examples folder.
- ▶ Tear off a piece of paper from the Construction Work stationery pad.
- ▶ Name the document “Construction Work Example.”
- ▶ Open the document.

Notice the “Greg” is working on two tasks that are in parallel: “Phone Wires Are Run” and “Power and Water Installation.” “Phone Wires Are Run” has an early scheduled start date of 3/11/83, and the project is scheduled to be completed on 4/4/83. You are now going to remove the early scheduled start date for “Phone Wires Are Run.” As you will see, the project will then be scheduled to be completed on 4/18/83.

- ▶ Select the task “Phone Wires Are Run.”
- ▶ Choose Set Scheduled Dates from the Customize menu.
- ▶ Press the spacebar to remove the scheduled date.
- ▶ Click OK.

LisaProject has now scheduled the task “Phone Wires Are Run” to be performed before “Power and Water Installation.” “Phone Wires Are Run” is scheduled to be completed on 3/15/83, and “Power and Water Installation” is scheduled to be completed on 3/31/83. The entire project is scheduled to be completed on 4/18/83.

The Construction Work Example that you started with had been adjusted to finish on 4/4/83 (as early as possible) because scheduled dates had been set. After you removed the scheduled date on “Phone Wires Are Run,” the entire project is scheduled to be completed on 4/18/83. With larger and more complex LisaProject charts, it becomes more difficult to adjust the schedule to get the earliest possible project finish date, but by setting scheduled dates properly, you can approach an optimum schedule.

When a Schedule chart has two tasks in parallel that require the same resource, LisaProject decides the order in which the tasks will be performed by analyzing the following information:

- Scheduled dates for each task.
- Earliest time that each task can be performed.
- Task duration for each task.
- Position of each task in the chart.

LisaProject attempts to meet all scheduled dates and will delay other tasks so that a scheduled date can be satisfied.

It is not always possible for LisaProject to meet all scheduled dates. For example, if two parallel tasks that required the same resource were given identical scheduled start dates, it would be impossible for LisaProject to schedule both of the tasks on the same date. When scheduled dates cannot be met, the dates on the tasks will be underlined, but they will not match the scheduled date as it was specified. You may check to see if one of your scheduled dates has not been met by comparing the dates displayed with the task and dates entered in the Set Scheduled Dates dialog box.



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# ***LisaProject Update Release 2.0***

## ***Read This First***

Please insert these pages in front of the table of contents of your *LisaProject* manual.

### **INTRODUCING THE LISA 2**

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#### **New Hardware on the Lisa 2**

As you go through the *LisaProject* manual, you'll notice a few differences between your Lisa 2 and the Lisa shown. Because most changes from the Lisa to the Lisa 2 involve new hardware and a new Lisa operating system, your owner's guide has been completely rewritten. Few changes have been made to *LisaProject*; those changes are described in the next few pages.

#### **New Icons on the Desktop**

Some of the icons on the desktop of the Lisa have changed since the *LisaProject* manual was written. The table on the next page shows the differences between the icons shown in the manual and those you see on the Lisa screen.

For a complete explanation of the functions of the new icons, refer to Section B, Desktop Manager Reference Guide, in the *Lisa 2 Owner's Guide*.

## COMPARISON OF LISA ICONS

Use the table below to identify differences between your Lisa 2 desktop and the desktop shown in the *LisaProject* manual.

Manual	Lisa 2/10	Lisa 2/5
 Profile	 Internal Hard Disk	 Disk
 Diskette	 Diskette	 Diskette
<b>View</b> <input checked="" type="checkbox"/> Pictorial Alphabetical Chronological <hr/> Straighten up Icons	<b>Housekeeping</b> Eject "Diskette" <hr/> <input checked="" type="checkbox"/> Pictorial View Alphabetical View Chronological View Straighten up Icons <hr/> Repair "Diskette" Erase "Diskette" <hr/> Empty "Wastebasket"	<b>Housekeeping</b> Eject "Diskette" <hr/> <input checked="" type="checkbox"/> Pictorial View Alphabetical View Chronological View Straighten up Icons <hr/> Repair "Diskette" Erase "Diskette" <hr/> Empty "Wastebasket"
<b>Disk</b> Repair Erase		

# *LisaProject Enhancements*

## MORE HOLIDAYS

LisaProject now can accommodate up to 40 specific holidays per year. This is twice the number indicated in the *LisaProject* manual.

## CONVERTING BRITISH AND FOREIGN-LANGUAGE MICRO DISKETTES

You now can use micro diskettes created on British and foreign-language Lisa systems.

When you open a non-US LisaProject document, the system recognizes a different format for dates. Consequently, a new item on the **File/Print** menu is available: **Data Format** (most of the time this item will be gray).

If you want LisaProject to convert the existing date format, choose **Data Format** from the **File/Print** menu. After you do, you'll get a dialog box asking, "Change dates to local format?" If you click Yes, all the dates are converted to the US format, which is mm/dd/yy.

If you click No, the document retains its original format. Each time you open that document, the **Data Format** item will be available, so you will have another opportunity to convert the format.

*After you save a converted document, you cannot change back to the original format. If you use a converted document with a Lisa tool in yet a different language, however, you will be asked if you wish to convert the document *again*.*

**Note:** You also have the option of converting the format temporarily, working with the document, changing back to the original format, and saving the document in its original format.

Here are two guidelines to remember about conversion:

1. The format a document had *when it was saved* determines its current format.
2. A format can always be changed to match the conventions of a new LisaProject tool.

## **PRINTER FORMATS**

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You now can select common metric sizes of printing paper in the dialog box that appears when you choose **Format for Printer** from the **File/Print** menu.

Also, some printing terminology has changed. You now have a choice of High Resolution (better quality but slower) or Low Resolution (faster).