

HyperProject™ v1.4 Project Management Mini Manual

**A brief Introduction to HyperProject™, HyperProject Lite™,
and for use with HyperProject™ Demo Disks**

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HyperProject, Inc. current offerings include HyperProject™ and HyperProject Lite™ project management programs for the Macintosh. They both combine fast calculation and drawing speed, sophisticated graphics for powerful presentations, and several window views for convenient data entry and flexible reporting. They support PERT, Gantt, spreadsheet, and histogram window views. Their features include equal emphasis on layout and presentation of project schedules and full critical path scheduling capabilities. HyperProject Lite™ supports all of the features of HyperProject™

with only two exceptions--the program is limited to the display of one project with a maximum of 30 activities.

The name "HyperProject" was devised from the terms "Hypertext" and "Project Management" to emphasize the design approach and key features of the company's flagship products. It is a self-contained program that does not require or use HyperCard.

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Features Overview for both HyperProject™ and HyperProject Lite™

Features common to all HyperProject™ windows

- There is no program limit to the number of project windows that can be displayed and edited.
- Any symbols (activities, notes, text, pictures) can be copied/pasted or cut/pasted between windows.
- There is no program limit to the number of symbols that can be created.
- All windows maintain their own formatting, font, zoom, scroll, and other relevant display characteristics.
- Activities and milestones can be added at any time from the menu or tool palette, while in any window. Addition of activities in any window also updates the other related windows.
- There are several formats for numeric information and calendar dates.
- All graphics annotation can be saved separately for later recall.
- Any window can be printed or saved as a PICT - compatible file for editing by Macintosh drawing programs.
- Notes, pictures, and text are supported in all window views. Note contents can be printed.
- Font type, size, and style can be changed for all windows.

- Any time that multiple symbols are selected, their data entry dialogs have next/previous buttons to cycle among them.
- Calendar-based notes are provided.
- Data can be dynamically moved and altered, when appropriate. Freeform text can be dragged into note symbols to become the new note text, and notes can be dragged into activities to become activity notes.
- All symbols can be automatically snapped to a logical grid.
- Any time a symbol is duplicated, relevant information is copied to the new symbol.

Features of the HyperProject™ PERT window (the main planning window)

- This is the primary modeling view. The window displays activities in the computation of a critical path.
- There are two modes of critical path computation: manual (calculate now), or automatic (auto-calculate).
- All four types of activity constraints (dependencies between activities) can be modeled: Finish-to-Finish, Finish-to-Start, Start-to-Start, and Start-to-Finish.

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- The drawing of activity constraints is maintained and updated automatically by the program. Dragging any activity symbol causes the activity constraint lines to be redrawn. Constraint lines are always updated to enforce a left-to-right connection of activities.
- Critical path calculations support multiple start and end project activities. There is no program limit to the number of predecessors or successors for each activity.
- There is no upper limit to calendar dates.
- Double-clicking on activities allows detailed editing of activities in a mini-spreadsheet where both the data can be edited and the type of data displayed can be changed.
- Double-clicking on activity constraints brings up a dialog where the lag and constraint type can be edited.
- The type of data displayed, and the appearance of each activity can be individually modified.
- Multiple levels of zoom are supported. Full editing is allowed at any level of zoom.
- PERT diagrams can be printed zoomed out.
- Overlays are supported, allowing selective filtering and display of activities, and critical path calculation of subnetworks.
- Presentation features supported include: align activities, change activity and text font attributes, change symbol colors, cut/paste, copy/paste, and duplicate for all symbols, resizing of text and pictures, activity connectors (constraints) can be dragged and repositioned, symbol grid snap, and data display can be customized for each individual activity.
- Activity constraints can be repositioned (dragged). The position can be locked.
- Activity symbols automatically resized to accommodate display of all symbol data.

- Calculations support multiple critical paths, and multiple starting and ending activities.

Features of the HyperProject™ spreadsheet window

- Two types--one for activity data entry, one for activity constraint data entry.
- Double-clicking on an activity entry brings up the same mini-spreadsheet available in the PERT window view.
- Activity entries use the same color as their related PERT chart activities.
- Popup boxes along top border allow selection of any database information to be displayed in the column, combining the capabilities of spreadsheet and customizable report generator.
- Columns can be resized, added, deleted, or duplicated.
- Multiple columns of the same data type are allowed.
- Column text justification can be controlled individually for each column.
- Spreadsheet font and color can be changed.
- Two modes of operation are provided--spreadsheet entry and graphics entry. Graphics are treated as an overlay that allows for full object editing while ignoring the spreadsheet beneath.
- Spreadsheet format style (including data types displayed in each column, each column position and size) can be saved in a file for later recall.

- Five user-definable text fields are provided. The names of the fields can be edited.
- Critical activities are shown in bold red.
- Auto-calculate mode provides instant updating of the spreadsheet any time that date or duration values are changed.
- There is no program limit to the number of data rows and columns that can be created.
- If activities are selected in the PERT view, only those activity entries are displayed.
- Activity changes cause the PERT and Gantt windows to be updated.
- Attributes allow the control of activity and activity constraint PERT layout.

Features of the HyperProject™ Gantt window

- Double-clicking on an activity timeline brings up the same mini-spreadsheet available in the PERT window view.
- The graph font, color, and date format can be changed.
- Any changes to activity dates, durations, or completion status in other windows instantly updates the Gantt.
- The timeline scale can be set to one of several values.
- Critical activities are shown in bold red.
- Gantt appearance of activity duration bars, starting activity times, ending activity times, and milestones is selectable from popup lists.

Features of the HyperProject™ activity data window

- The window is provided in PERT, Gantt, and spreadsheet windows.
- Allows editing of all data for an activity.
- Allows editing of data types shown in PERT activity symbols, supporting individual customization of PERT activities.

Features of the HyperProject™ histogram window

- The window displays total costs, hours, or activity durations.
- The window displays a subgraph of these totals for critical activities.
- The graph font, color, and date format can be
- If activities are selected in the PERT view, the histogram is displayed with only the data in those

activities.

- The timeline scale can be set to one of several values.
- The graph is automatically resized to fit the current window height.

HyperProject Lite™ Features Overview

Has all the features of the full HyperProject with two exceptions:

1. Only one PERT window view can be displayed at a time.
2. A PERT window is limited to the modeling of 30 activities.

If HyperProject Lite™ is purchased, the price paid for the HyperProject Lite™ version can be applied to the HyperProject™ upgrade purchase.

Installing HyperProject

Explanation of HyperProject Disk Files

There are several files on the HyperProject disk. There is the HyperProject application program itself, several example project files, and a folder named "HyperProject". This folder contains the help files (called "Definitions Table" and "Keywords Table"). If you have renamed these files, HyperProject will prompt you for their new names.

Copying HyperProject to a Hard Drive

The files located in the HyperProject disk are installed on your hard drive by simply selecting and dragging them to the hard disk window. No formal installation procedure is required. HyperProject is not copy protected.

Running HyperProject

HyperProject is started by double-clicking on the HyperProject program icon, or on one of the project files created by HyperProject. Double-clicking on files that contain annotation or spreadsheet formats will cause HyperProject to be launched while creating a blank window (the same result as if double-clicking on the HyperProject program icon).

IMPORTANT

The Demo and Lite versions of HyperProject limit you to 30 activities.

HyperProject Symbology

The Activity Symbol

The symbology used for activities in HyperProject follows the convention of identifying project activities as rectangles, then placing pertinent activity data inside of them. This follows what is frequently called an Activity-on-Node style of representation.

Within each activity there are eight positions where the data for an activity can be stored. The top two are reserved for activity name and activity id information. The other six positions can hold any type of activity data. The data values stored in all eight positions are editable. "Buttons" on the sides of the activities have been added to act as connection points for activity relationships (represented as lines connecting successive pairs of activities).

Activity Name	
Activity Id	
ES Date	EF Date
LS Date	LF Date
Duration	Activity Type

ES : Earliest Start
EF : Earliest Finish
LS : Latest Start
LF : Latest Finish

The default data types shown in a project activity.

Activity Name--000	
Activity Id	
03/10/1991	03/11/1991
03/10/1991	03/11/1991
1	Normal

Example of a project activity with its data loaded by HyperProject. These symbols are displayed in PERT-type windows.

The Started and Completed Activity Symbol

Started activities follow the convention that a strike-through line is drawn across the activity. Completed activities have an "X" drawn through them.

Activity Name--001	
Activity Id	
12/29/1991	12/30/1991
12/29/1991	12/30/1991
1.00	Normal

Symbol for a started activity.

Activity Name--000	
Activity Id	
12/29/1991	12/30/1991
12/29/1991	12/30/1991
1.00	Normal

Symbol for a completed activity.

The Milestone Symbol

By convention, milestones have zero duration. They are used in PERT diagrams to specify major events in a project. Milestones are drawn as rectangles with rounded corners.

Activity Name--001	
Activity Id	
03/10/1991	03/11/1991
03/10/1991	03/11/1991
0	Milestone

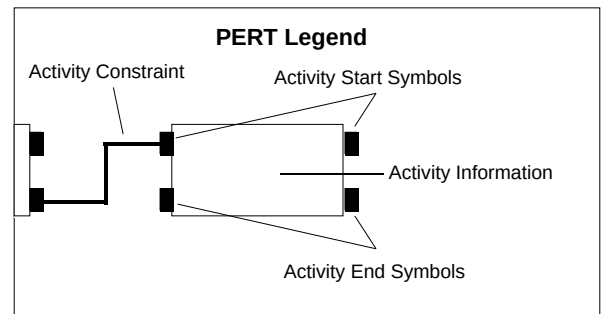
Example of a milestone.

Showing Activity Relationships (Activity Constraints)

A connector is a graphic symbol that is used to show that a relationship exists between two given activities. There are four types of relationships (often called "constraints" or "dependencies") that HyperProject models. They are:

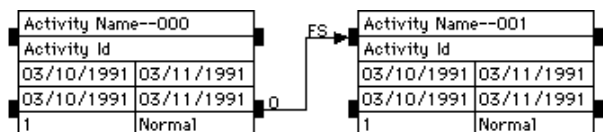
finish-to-start, finish-to-finish, start-to-start, and start-to-finish.

A connector's type is shown symbolically according to the following convention. On either side of the top of an activity are two connection points ("buttons") that are used to represent the start of an activity. On either side of the bottom of an activity they represent the end of an activity. Connectors join activities at the connection points. The type of connection points indicates the type of constraint.



Activity symbol layout.

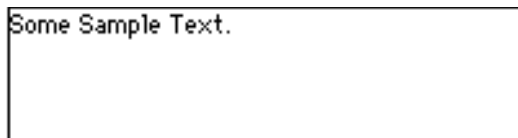
In the figure below, a connector starts at the finish button of the left activity. It ends at the start button of the right activity. It symbolically shows that the left activity must finish before the right activity can start. In abbreviated notation it is called a finish-to-start constraint. The three other types of constraints work similarly.



A Finish-to-Start constraint.

The Text Block

Text Blocks are text strings that are typed in from the keyboard for display in a window.



Example of a text block. In this example, the option to enable drawing a frame around the text was selected.

The Project Note

Project notes are short messages that are represented by the note icon. Notes are provided in all window views. There are also activity notes and calendar notes.



Example of a project note.

The Project Picture

Pictures can be pasted from the Clipboard for display in any window.

HyperProject Data

The data tracked by HyperProject focuses on project activities and their attributes. When it is possible to specify activity data types in the program it is possible to specify "no data". It is also possible to name 5 user-defined character string data types. Originally, they are named User-1 to User-5.

The activity data types are as follows:

{no data}	Current Duration	Planned Finish Date
Activity Id	(Earliest Finish Date)	Planned Start Date
Activity Name	(Earliest Start Date)	(Selection Status)
Activity Type	(Earned Value)	Short Text
Actual Cost	(Finish Path Float)	(Start Path Float)
Actual Duration	(Last Modify Date)	Start Status
Actual Finish Date	(Last Modify Time)	Top-Left X
Actual Start Date	(Latest Finish Date)	Top-Left Y
(Behind Status)	(Latest Start Date)	Total Cost
Budget	Must Finish Date	Total Duration
Color	Must Start Date	User-1
Completion Status	Network Number	User-2
(Create Date)	Overlay Number	User-3
(Create Time)	Percent Complete	User-4
(Critical Status)	Planned Cost	User-5
Current Cost	Planned Duration	

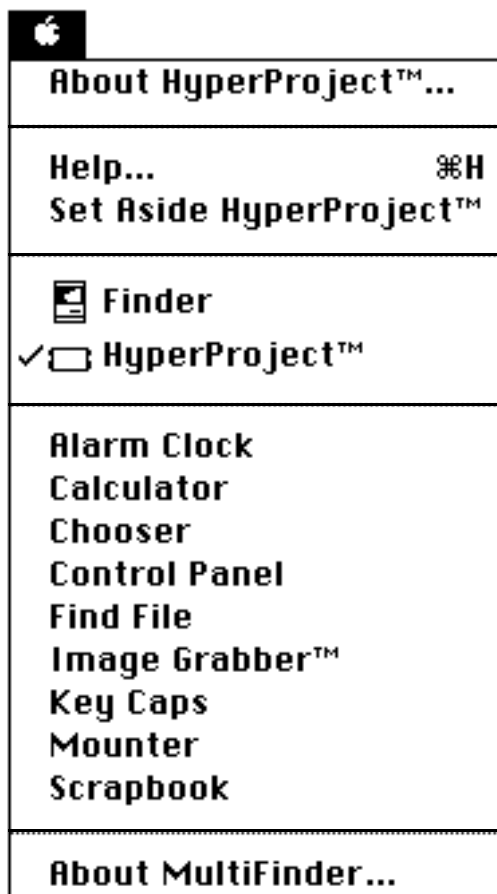
The types of activity data tracked by HyperProject. Those items in parenthesis are computed by the program, and cannot be directly changed by the user.

The connector data types modeled by HyperProject are as follows:

{no data}	(Selection Status)
Color	Short Text
(Critical Status)	Successor Activity
Lag	Type
Left-Coordinate	User-1
Lock Status	User-2
Network Number	User-3
Overlay Number	User-4
Predecessor Activity	User-5

The types of connector data tracked by HyperProject. Those items in parenthesis are computed by the program, and cannot be directly changed by the user.

The the definition. Apple® Menu



About HyperProject:

Dialog showing the creator of HyperProject™, and the company address.

Help:

A keyword/definition type of help. Select a keyword to see

The

File Menu



Close the topmost program window.

Close All:

Close all open program windows and the Tool Palette.

Save (disabled in demo):

Save the current PERT window. The standard Macintosh Save File dialog appears. This option is disabled in this demo.

Save As (disabled in demo):

Save the current PERT window using a specified filename. The standard Macintosh Save As File dialog appears. This option is disabled in this demo.

New PERT Window:

Create a new PERT window. Can also be performed from the Tool Palette.

Open PERT Window:

Open an existing PERT window. The standard Macintosh Open File dialog appears.

Close:

Revert to Saved:

Undo all changes made since the last save.

Export (disabled in demo):

Export the spreadsheet window activity data as a tab-delimited file. This option is disabled in this demo.

Page Setup:

Standard Macintosh Page Setup dialog.

Page Preview:

Preview the current PERT window, and change Page Setup options as desired.

Print Window (disabled in demo):

Print the current window (a single page only). This option is disabled in this demo.

Print (disabled in demo):

Print the entire, current window document. This may be several pages in size. This option is disabled in this demo.

Quit:

Quit HyperProject™ while being prompted to save modified windows.

Fast Quit:

Quit HyperProject™ without saving anything. No Save dialog appears.

The

Edit Menu

Edit	
Undo	⌘Z
Cut	⌘H
Copy	⌘C
Paste	⌘V
Clear	
Duplicate	⌘D
Select Symbols	▶
Power Select...	
Go To Activity...	⌘G
Show Overlays...	
Hide Annotation	
Edit Activity	▶

Undo:

Undo is currently provided to allow compatibility with desk accessories.

Cut:

Cut the selected symbols.

Copy:

Copy the selected symbols.

Paste:

Paste the previously cut or copied symbols to the current window.

Clear:

Delete the currently selected symbols in the current window.

Duplicate:

Duplicate the currently selected symbols in the current window.

Select Symbols:

A menu list providing selection of different symbol types.

Power Select:

Dialog to select various types of activities having specified characteristics.

Go To Activity:

Dialog showing a list of activities. Selecting one will cause the screen to scroll to show that activity.

Show Overlays:

Dialog to specify the active activity overlays. All activities in active overlays are shown with full data, the others are shown as an outline only. They are also excluded from any critical path calculations.

Hide Annotation:

Hide the current window annotation. This menu item toggles between "Hide" and "Show" annotation. Annotation includes notes, text, and pictures.

Edit Activity:

A menu list allowing activity movement, connection, duplication, and selection via dialogs. (All of these functions can be performed by direct activity selection/action in the PERT.

The Options Menu

Options	
Hide Tool Palette	
Zoom	▶
Set Fonts...	
Justify Text	▶
Set Grid Snap...	
Set Project Scale	▶
Set Drawing Size...	
Set Color	▶
Hide Page Breaks	
Set Overlays...	
Set Date Format...	
Set Workdays...	▶
Set Numeric Format...	
Set Preferences...	
Customize Data Fields...	
Earned Value Method...	

Hide Tool Palette:

Hide the Tool Palette. This menu item toggles between "Hide" and "Show" Tool Palette. The Tool Palette provides fast access to frequently used menu options.

Zoom:

A menu list providing five zoom levels to view a PERT

window. Full editing capabilities exist at all levels of zoom.
Zoom can also be activated by the Tool Palette.

Set Fonts:

Set the font attributes of the current window (as for a Gantt, Histogram, or spreadsheet), or for the currently selected activity or text symbols.

Justify Text:

Menu list providing left, right, or center text justification of selected text symbols, or column data in the spreadsheet.

Set Grid Snap:

Dialog to turn grid snap on/off, and show/hide the grid snap lines.

Set Project Scale:

Menu list to set the project scale (days, months, weeks, quarters, or years) in controlling the horizontal scaling of Gantt and Histogram windows.

Set Drawing Size:

Set the maximum allowed number of horizontal and vertical PERT document pages. For the Gantt, Histogram, and spreadsheet windows, the document size is controlled by the program.

Set Color:

Set the background color of the Gantt, Histogram, or spreadsheet windows, or the activity, note or text color in the PERT window.

Hide Page Breaks:

Hide the page breaks. This menu item toggles between "Hide" and "Show" page breaks.

Set Overlays:

Set the overlay number for the currently selected activities.

Set Date Format:

Set the date format for the current window. The format

applies to all dates displayed in a window. Each window retains its own format.

Set Workdays:

Set the workdays within a week, and define any of 10 Federal holidays, or user-defined vacation days as non-work days.

Set Numeric Format:

Set the Numeric format for the current window. The format applies to all numbers displayed in a window. Each window retains its own format.

Set Preferences:

Set HyperProject™ program options.

Customize Data Fields:

Specify the names for five customizable data fields. These fields are text only fields.

Earned Value Method:

Set one of three earned value methods to be used to compute and display earned value.

The Project Menu

Project
Calculate Critical Path ▶
Make Spreadsheet ▶
Import Spreadsheet...
Create Project Text...
Edit Project Text...
Make Legend
Edit Project Summary...
Project Statistics...
Make Gantt Window
Set Gantt Parameters...
Read Annotation...
Save Annotation As...
Read Spreadsheet Format...
Save Spreadsheet Format As...

Import Spreadsheet:

Import a tab-delimited file, making a spreadsheet to display that data.

Create Project Text:

Create a text symbol. Can also be performed from the Tool Palette.

Calculate Critical Path:

A menu list of options for setting up critical path calculations. Trigger the critical path to be computed.

Make Spreadsheet Window:

Make a spreadsheet from the activity data in the topmost PERT window. Can also be performed from the Tool Palette.

Edit Project Text:

Edit the text within all selected text symbols. Double-clicking on a text symbol will also reveal this edit dialog.

Make Legend:

Make a picture showing the legend for the current window. There are separate legend types for the Gantt, Histogram, and PERT windows.

Edit Project Summary:

Edit general project information. This data can be saved in a picture for display in any window.

Project Statistics:

Show basic project statistics.

Make Gantt Window:

Make a Gantt window from the activity data in the topmost PERT window. Can also be performed from the Tool Palette.

Set Gantt Parameters:

A dialog showing several options to control the appearance of the current Gantt window symbology.

Read Annotation:

Read in a file of annotation (notes, text, and pictures), and display that in the current window.

Save Annotation As (disabled in demo):

Save the current window annotation in a file. This option is disabled in this demo.

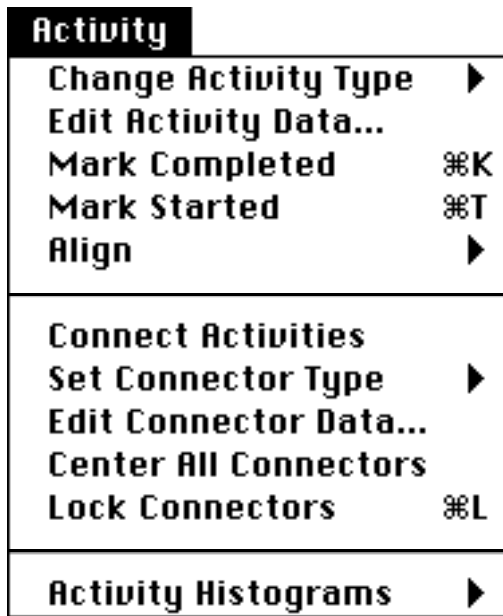
Read Spreadsheet Format:

Read in a file containing a spreadsheet format template. The format includes column data types, column width and justification.

Save Spreadsheet Format As (disabled in demo):

Save the current spreadsheet format in a file. This option is disabled in this demo.

The Activity Menu



Create/Change Activity:

Toggles between "Create" and "Change" an activity.

Activity creation also be performed from the Tool Palette.

Edit Activity Data:

Edit the currently selected activities. This dialog also appears after double-clicking on an activity symbol, a Gantt activity timeline, or an activity row in a spreadsheet.

Mark Completed:

Mark the currently selected activities as completed.

Mark Started:

Mark the currently selected activities as started.

Align:

Align the currently selected symbols. All symbols (of any type) will be aligned. Also aligns the vertical leg of activity connectors.

Connect Activities:

Connect two selected activities. Activities can also be connected by clicking on an activity button and dragging to another activity button.

Set Connector Type:

A menu list of connector types. Change the type of all selected connectors to the connector type menu selection.

Edit Connector Data:

Edit all currently selected connectors. This dialog also appears after double-clicking on a connector symbol.

Center All Connectors:

Center all PERT activity connectors, whether locked or not.

Lock All Connectors:

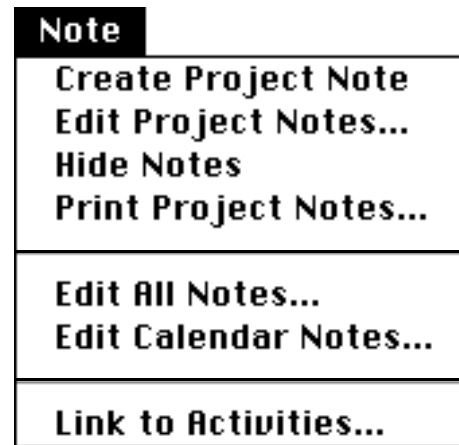
Locks the vertical leg of all selected activity connectors. Normally, when activities are dragged their connectors are re-centered. Locking the connectors will prevent this.

Activity Histograms:

A menu list of ten histogram types that can be created.

If activities are selected in the PERT view, only those activities are tallied and graphed in the histogram.

The Note Menu



Create Project Note:

Create a project note. Can also be performed from the Tool Palette.

Edit Project Notes:

Edit all selected project notes. This dialog also appears after double-clicking on a note symbol.

Hide Notes:

Hide all notes show in the current window. This menu item toggles between "Hide" and "Show" Notes.

Print Project Notes (disabled in demo):

Print all project (PERT window) notes. This option is disabled in this demo.

Edit All Notes:

Edit all notes. This includes project (PERT window) notes, calendar notes, and notes linked to activities.

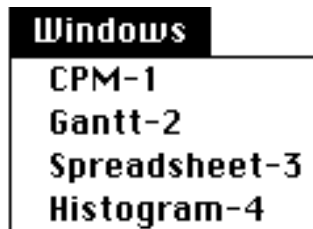
Edit Calendar Notes:

A calendar appears. Double-clicking on any day in the calendar shows the note for that date.

Link to Activities:

Associate (link) notes to activities. Or, unlink them. Also supports create and delete options for activities and notes.

The Window Menu



A dynamic list of current windows. The default naming is the window type followed by its number.

computer cartography for oil exploration, real-time display, and computer simulation, to advanced flight simulator design, and the implementation of the computer-based, first flight manuals for the B2 bomber. He holds an MS in Computer Information Systems from Claremont Graduate School, specializing in large scale software development and Project Management.

About the Author

Donald Kasper has been involved with computers since 1977, and has been involved with Project Management and the Macintosh since 1987. For the past 16 years he has specialized in the study of computer graphics in various disciplines covering the spectrum from 2-D and 3-D

