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PALO ALTO RESEARCH CENTER
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To: Alto Users

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Subject: Alto interaction nomenclature

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As more and more Alto systems intended for novice users become available, it is increasingly important to use uniform and unambiguous terminology for describing interactions with the programs. If each manual uses different terms for describing mouse and keyboard interaction, users will be hopelessly confused.

This memo proposes conventional terminology, using Butler's novice Bravo guide as pattern. It is fluid, and will be amended from time to time.

Terms with special meaning or of preferred usage are italicized.

Manuals should usually contain a brief summary of whatever portions of this terminology are actually used in the document. (This makes documents self-contained, and seems preferable to a "how to use the Alto devices" document.) Someone could do the world a service by writing standard boilerplate describing Alto interactions that could be tailored by individual authors and included in their manuals.

Nomenclature

The *Alto* has a *display* or *screen*. Often the screen is divided into *windows*. *Menu* windows are common. A *cursor* is usually present on the screen.

The *keyboard* (one word) has 61 *keys*. The *keyset* has 5 keys (NOT buttons). The *mouse* has 3 *buttons* (the plural of mouse is *mice*).

Key naming. Keys are named either (1) by the character that should be typed in (e.g. A or ← or =) provided that the character is visible on the label on the key top; or (2) by the label that appears on the key top (e.g., RETURN or BS or CTRL; the spelling should match the lettering on the key top). If the SHIFT key at the left of the keyboard needs to be distinguished from the other shift key, use LEFT-SHIFT. Unlabeled keys have the following conventional names

space bar:	SPACE
keyset keys:	KEYSET1 KEYSET2 KEYSET3 KEYSET4 KEYSET5; left to right
keyboard spares:	TOP-BLANK MIDDLE-BLANK BOTTOM-BLANK

If a program uses unlabeled keys, mnemonic names can be established and explained (preferrably with pictures).

Key name typography: There are several acceptable ways to refer to keys that have

more than one character in their labels (in order of decreasing preference):

> Spell the name in small caps (long strings of large caps are not usual in the printing business): "Strike the RETURN key when the command is finished."
>
> Spell the name in small caps, and superscript it: "Type COPY$^{\text{RETURN}}$."
>
> Surround the name with brackets -- <name>: "Type COPY<return>."

A common convention for distinguishing text typed by the user from that typed by the program is to underline the characters typed by the user.

User notes relating to the keyboard: The use of the CTRL key needs to be explained. It may help to draw analogy with the use of a shift key on the typewriter.

Key actions. The usual action is to *strike* a key on the keyboard (i.e., to depress it and release it quickly). To *chord* a set of keys is to depress the set in any order and then to release them all (just like a piano chord). To *modify* a key by some others is to depress the "others" and then strike the key. Thus "control A" is A modified by CTRL.

Button naming. Buttons are named RED, YELLOW and GREEN. Whenever these terms appear in all caps (or better still, small caps) in the document, they refer to mouse buttons. (Note: RED=top or left; YELLOW=middle; GREEN=bottom or right. New mice will have keys molded in the appropriate colors. Until then, colored tape can be attached to the mouse to identify the keys.)

Button actions. The terminology used to describe mouse interactions is intentionally coupled with the position of the cursor as the action is undertaken:

> To *position* the mouse or cursor is to move the mouse until the cursor is at some desired spot. Thus "position the cursor over the word you wish to delete."
>
> To *point* at an object with a button is to position the cursor to coincide with the object and strike the specified button. Thus "point at the word with RED." One can also speak of *clicking* a button: "click RED." (Or "point at the word with the chord RED and YELLOW.") One can also speak of *sensitive* objects; pointing at these objects on the screen causes some specific action to be taken
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> To *draw* over a trajectory with a button is to position the cursor over the beginning of a trajectory, to depress the specified button, to propel the cursor over the trajectory with the button depressed, and finally to release the button. Thus "using RED, draw the curve you wish to see."
>
> To *bound* a desired thing, use the draw action, but the trajectory itself is unimportant. Usually only the endpoints are retained. Thus RED is used in Gypsy to bound a selection. Markup's "box" symbol for deleting picture areas might be described: "Bound the diagonal of the window you wish to delete, using the GREEN button."
>
> To *double-click* or *double-point* at an object with a button is to position the cursor over the object and strike the specified button twice in rapid succession. Thus "double-click RED to select the entire word."
>
> If more detailed terminology needs to be invented, use *position*, *depress* (or *hold down*) and *release* as primitives.

Boot button: Pushing the boot button causes the Alto to be reinitialized. (Note: This term is less than ideal, as it has pejorative and cruel connotations: "He booted the Alto into oblivion;" or "He booted the somnolent cat to arouse it." However, it is a very graphic word!)

Words with special meanings when describing most command languages: *command*, *Alto Executive* (refers to the command processor invoked as a result of booting), *selection.*

Words to avoid: *string* (as applied to text; it is a computer-science term), *buffer* (another computing term), *bug* (as a verb).

Programs as actors: Do not hesitate to make your program the subject of sentences: "BRAVO shows the text just deleted in buffer 2;" "DDS now expects you to type the remainder of the command." These are preferable to passive constructions like "The command is displayed..."