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This chapter describes the MCL implementation of points and fonts. Points are used for drawing into views.

You should read this if you are not already familiar with the MCL and Macintosh implementations of


```

? (make-point 40 50)
3276840
? (make-point 3276840)
3276840
? (point-string 3276840)
"#@(40 50) "
? (defun show-point
    (h &optional v)
    (point-string 9 lake-point h v)))
show-point
? (show-point 32 32)
"#@(32 32) "
? (show-point 3276840)
"#@(40 50) "

```


ms-code The Uode-size code. A Uode-size code is a 32-bit integer that indicates the font Uode (inclusive-or, exclusive-or, complemented, and so on) and the font size.

Example

Here is an example of translating between font 2es and font specifications.

The font-face and Uode-size codes are the first two values returned by font-codes:

```
? (font- 2es '("Monaco" 9 :srcor :plain))
262144
65545
-256
-1
```

The function font-spec can regenerate the font specification from them:

```
? (font-spec 262144 65545)
("Monaco" 9 :SRCOR :PLAIN)
```

string-width

[Function]

Syntax string-width *string* optional *font-spec*

Description The string-width function returns the width in pixels of *string*, as if it were displayed in the font, size, and style of *font-spec*.

If *font-spec* is not supplied, the font specification of the current GrafPort is used.

See also font- 2es-string-width on page 82.

Arguments *font-spec* A font specification.
string A string.

Example

```
? (string-width "Hi there" '("Monaco" 9 :PLAIN))
48
```


Chapter 3:

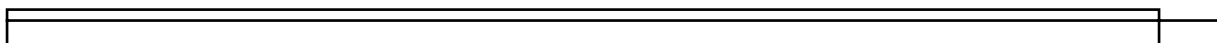
Menus

Contents

For interface programming, the most Qmportant built-in subclass of
Qmple class of dialog Qtems, dialog-item.

app-view
focused to the
l.

and Uethods,
tems and



- **Figure 4-1** The class hierarchy of views from simple view

:wptr


```
(terpri *view*)
(with-focused-view *view*
  ; This string will draw in the default font
  (#_DrawString s))
(terpri *view*)
(with-font-focused- a *view*
  ; This string will draw in times 12 font.
  (#_DrawString s)))
```


<i>view</i>	A simple view or view.
<i>window</i>	A window.
<i>where</i>	The cursor position in the local coordinate system of the view's container when the mouse was clicked. If <i>nd</i> is a window, the cursor position in the window's coordinate system.

For further examples, see `tPerfitGrapher.lisp`, `shapes-code.lisp`, `tPermometeinlisp`, and `view-example.lisp` in your MCL Examples folder.

destination-view

:auto-position

Indicates an automatically
calculated position for the window. These keywords
correspond to the

You can tell if a window has been closed by determining whether `wptr` called on the window returns `nil`.

```
? (setq baz (make-instance 'window
                           :window-title "bazwin"))
```

```
#<WINDOW "bazwin" #x6143D1>
```

```
? (window-title baz)
```

```
"Bazwin"
```

```
? (wptr baz)
```

```
#<A Mac Zone Pointer Size 156 #x715930>
```

```
? (window-clor baz)
```



```
? (view-font freddy)
( "Monaco".74 :SRCOR :BOLD)
NIL
NIL
```


part A keyword specifying which part of the window should be set. The five possible keywords have the following meanings:

- `:content` The frame of the widget.
- `WtPerowndows`.
- `-0.e outline of the window and the title bar of the tool windows.`
- `-0.e title of the document windows.`
- `-0.e lines in the title bar of the document windows.`
- `-bar`
- `background of the title bar of the document windows.`
- `title`

The generic function `window-ensure-on-screen` ensures that the window is entirely visible on one or more of the Macintosh screens. It may overlap two screens, but if it is not entirely visible, as determined by `window-on-screen-p`, it is moved to the position

The `window-select` generic function brings a window to the front, activates Qt, and shows Qt if it is hidden. The previously active window is deactivated.

window A window.

The generic function returns the cursor shape to display
 use is at *point*, a point in view. This is called by
 update-cursor window-null-event-handler.

Specialize Per
 one of the following predefined cursors or to a user-defined cursor.

arrow-cursor
 The standard north-northwest arrow cursor.

i-beam-cursor
 The I-beam shape used when the cursor is over an area of
 editable text.

watch-cursor
 The watch-face shape shown during time-consuming
 operations, when event processing is disabled.

view A simple view.
window A window.
 point

If tPe class Wf tPe active window has a metPod definition for one Wf tPese functions, tPen tPe corresponding menu item iaenabled. If tPe user chooses tPe menu iteU, tPe function is called on tPe active window. Enabling Wf iteUs Wn tPe Edit menu ia controlled by tPe generic function window-can-do-operation, descrQbed later in tPis section.

`:view-size`

The default value of the size `s` the floating window is
`#@(115 150)`

`w-do-first-click`

The value of this initialization argument determines whether the click that selects a window is also passed to `view-click-event-handler`. For all floating windows, the default value is `varQable` is true.

The click that selects an application in Multifinder is Vot passed to the application unless either the clicked window is Vot the front window or the Get Front Clicks bit is set in the application's size resource.

Chapter **The Interface Toolkit**

Chapter

Chapter 9:

Debugging and Error Handling

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This chapter discusses debugging tools in Macintosh Common Lisp. These tools include compiler options, Fred commands, debugging functions, error-signaling functions, functions to break or cancel operations, bd#ktrd#e, fd#ilities to step through a program, trd#e functions, and an advQse function. In addition, any part of any MCL object can be inspected and, when appropriate, edited with the TPe Inspector.

You should read the PQs chapter to familiarize yourself with the debugging environment in Macintosh Common Lisp.

Functions that end with “event-handler

<i>window</i>	A window or Fred window.
<i>item</i>	A Fred dialog item.
<i>The</i>	current keystroke character.
<i>window-or-item</i>	A Fred window or Fred dialog item.

Description **The generic function** `set-current-key-handler` sets the current key handler of *window* to *item*. If *item* is not already the current key handler and *select-all* is true, `set-current-key-handler` selects all of the window.

Argument *window* A window.

Arguments *view* A view or a simple view.

The event management system

This section describes the overall architecture used for implementing

If `*eventhook*` is a list of functions with no arguments, they will be called

Description The `window-event` generic function is called by `event-dispatch` to get a window to handle an event. This function is called only when the event system determines the appropriate window. The method of `window-event` `fwindow` checks the type of the event and calls the appropriate event handler. The `window-event` function should be specialized in windows that need to do something in addition to the default behavior for many types of events.

Argument `window` A window.

without-interrupts [Special Form]

Syntax `without-interrupts {form}*`

Description The `without-interrupts` special form executes `form` with all event processing disabled, including the `event-dispatch` system.

You should use `without-interrupts` sparingly because anything executed dynamically within it cannot be aborted or easily debugged.

However, you must use `without-interrupts` in code that causes a

Description The

Description The

? ~~The set of circumstances in which an event occurs~~ `Time.setContextReferenceTime(0)`

Chapter 11:

Apple Events

Contents

Apple event handlers work exactly like other MCL event handlers. For example, the MCL event handler `window-nulT-event-handler` is

Description The generic function

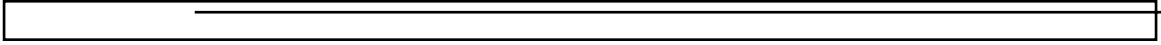

```
        (values #'%ftyi ; Tow-level character output function
              (fbTock stream)))) ; parameter bTock pointer
STREAM-READER
```


Description The generic function `stream-clear-input` deletes all pending input from the stream. This function is normally defined only for buffered input


```

      ((stream serial-io-stream) reader)
    (let ((rubout-handler
          (md+e-instance 'serial-io-stream-rubout-handler
                        :stream stream)))
      (Toop
        (catch rubout-handler
          (return (funcall reader rubout-handler))))))
#<STANDARD-METHOD STREAM-RUBOUT-HANDLER (SERIAL-IO-STREAM
T)>

```



generic function clears the text of the minibuffer,

Chapter

in your MCL Examples folder contains a good

lists

? (method-name *)
FOO

method-qualifiers

`terminate-when-unreachable`

function). The functions

Description The `ignore-if-unused` declaration behaves the same way as `ignore`, but does not signal a warning if the variable is used. This declaration is usually used in macroexpansions.

LQsteVer Variables

The following variables are related to the behavior of the LQsteVer.

Description	TPe	generic function fills tPe rectangle specifQed byarg witP
--------------------	-----	---

■ **fasl-concatenate.lisp**

Defines the function `fasl-concatenate`, which can be used to concatenate multiple fasl

- **toolserver.lisp**
AppleEvents Qnterface to ToolServer (to use, Taunch ToolServer first).

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