New Technical Notes

Macintosh

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Developer Support

Control Panel Q&As
Toolbox

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Control Panel devices on the Macintosh SE
Date Written: 5/30/90
Last reviewed: 7/25/91

I'm rewriting a Macintosh II cdev for the Macintosh SE. I have changed the 'mach' (-4064) resource from $3FFF $0000 to $FFFF $0000 so the device will appear on all machine types, but it still doesn't show up on the Macintosh SE.What else should I check for?

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Try rebuilding your Control Panel cache, by holding down the option and command keys while opening the Control Panel. This will rebuild the list of things that the Control Panel is able to open. Because there's no Control Panel DA under System 7, this technique works only for operating systems prior to System 7.

Main versus application screens with multiple displays
Date Written: 8/20/91
Last reviewed: 9/16/91

On a multiple-display system, most commercial software comes up on the primary screen,

even though it may need the color screen next door. Is there a utility for changing the default screen

to a different one *after* startup so I can switch to a color screen for certain applications without having to reboot?

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A user can use Monitors to change the main screen (the one with the menu bar).If an application or utility were to change the main screen whenever it wants, then every time you run a new application, the menu bar would be moved on you.This would get reeeeeeally ugly. If commercial applications need (or run better on) one screen over another, they should do the right thing and look for the right screen instead of the main screen. The code to do this is very easy. This is not the job for a utility package.

You need to reboot the machine each time you change the main screen, because the Macintosh does a lot of caching of information and building internal structures early in the boot process, which need to be changed each time the screen information is changed. It might be possible to do this, but it would require a lot of patches to the system, as well as a deep knowledge of the internals of the ROM and OS. You'll also run into a lot of compatibility problems.

System 7 Finder filters Command-key messages from cdevs
Date Written: 9/25/91
Last reviewed: 10/22/91

Our cdevs no longer receive key-down messages with the Command key held down in System 7. Why is this?

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This is true under System 7.0. Under System 6.0.x, when a cdev is brought up with the Control Panel active, the cdev is the only possible recipient of key-down or auto-key events. Under System 7.0, the Finder has become the event-switching center and now handles the passing of events to the cdev(s). You'll note that you can now have multiple cdevs open simultaneously. This design raised the potential problem that, with the Finder and other cdevs active at once, which one would be the target of the any command-key sequence.

If you use Command-F while a cdev is open, the Find dialog box appears under System 7.0. If a cdev is designed to respond to Command-F, should the Finder handle the command sequence as a command to Find, or send the sequence to the cdev?

To maintain the Finder user interface, engineering decided to translate all Command-key events to their respective cdev equivalents for those sequences which were published in *Inside Macintosh* Volume V. This means that instead of having to process Command-Z, V, C, or X, the cdev receives the appropriate undoDev, pasteDev, copyDev, or cutDev message. The Finder knows to send these messages to the cdev with the currently active window. Otherwise, the Finder filters Command-key messages from the cdev(s).

You can still determine whether the command key is held down by using the GetKeys function at the cdev's entry point, as shown in the following code sample:

```
pascal Handle
CDEVEntry(short message, short item, short numItems, short CPanelID,
   EventRecord *theEvent, Handle cdevValue, DialogPtr CPDialog)
{
  #pragma unused (CPanelID)   /* unused formal parameters */
```

```
  KeyMap  myKeys;
  CDEVHdl cdevStorage;
...

  cdevStorage = (CDEVHdl) cdevValue;
  if (message == macDev) {
  return( (Handle) 1); /*  run on all systems */
  }

  else if (cdevStorage != nil) {
  GetKeys(myKeys);
  if (myKeys[1] & 0x00008000)
  {
    /* Command key presently down */
  }
  …
}
```

After determining whether the command key is held down, you need to determine the complete command key sequence by checking for other keys currently pressed in the KeyMap variable.

This solution doesn't resolve problems such as responding to Command-F or Command-G. Also, it's not clear what new keys might be grabbed by the Finder team for use in future system versions.

'fwst' is window-position resource for cdevs
Date Written: 8/25/91
Last reviewed: 9/24/91

What's the 'fwst' resource found in several System 7 cdevs as well as on the System 7 Golden Master CD? We want to make sure it's not a virus.

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The 'fwst' resource is the window position resource for cdevs. Under System 7.0, each cdev now appears in its own window. This is unlike previous systems where they appeared in the Control Panel window. Well, since each cdev now has its own window, it is expected that the user will want to place the window in a location that is suited to the user and the cdev. To keep this information for the next time the cdev is called up, the Finder now keeps an 'fwst' resource in the cdev, whether or not you placed one in there yourself.

7.0 Finder intercepts Control Panel command key menu events
Date Written: 3/14/91
Last reviewed: 6/17/91

Under System 7, Macintosh command key menu events no longer are passed to a Control Panel's main window and instead intercepted as Finder command key menu equivalents. Can I get around this?

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Under System 7, all command-key equivalents refer to the menu bar. The problem lies in the fact that, if the Control Panel handles a command-keystroke, there is no way for the Finder to

realize it. Although it's not really recommended, you could conceivably patch KeyTrans and, upon finding that your Control Panel is up and that a command-keystroke is being pressed, queue those in your own private queue that the Control Panel could then search in addition to the normal event queue. This is probably much more trouble than it is worth.