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# 1990 World Wide Developers Conference

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MacDTS

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# **System 7.0 Compatibility Cookbook**

System 7.0 Compatibility

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## **A Useful Definition**

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- Capable of living or performing in a harmonious, agreeable, or congenial combination with another or others

# Applications Work

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- Strange bugs are probably the System's fault at this point
- Remember the system is alpha. Your App is shipping
- Report problems

# Don't Call Me MultiFinder

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- Long live a cooperative, multi-tasking System
- If you've got MultiFinder problems, you've got 7.0 problems

# Old Ways Change

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Little changes are there that make things you've had to work at easier to do

- Alias Manager
- Folder Manager
- Bubble Help
- MultiFinder (whoops) traps are documented

# Where's the File

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How do I store a files location?

- Before
  - Full pathname
  - DirID, FileName, VolumeName
- 7.0
  - An alias.



# Where's the Folder

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Let the Folder Manager do the work

- `err = FindFolder (kOnSystemDisk, kPreferencesSpecialty, true, &FoundVRef, &FoundDirID);`
- One call and you've got the info

# Color Me Icon

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## Icon families

- icl8: 8 bit ICN#
- icl4: 4 bit ICN#
- ICN#: 1 bit

# Color Me Icon

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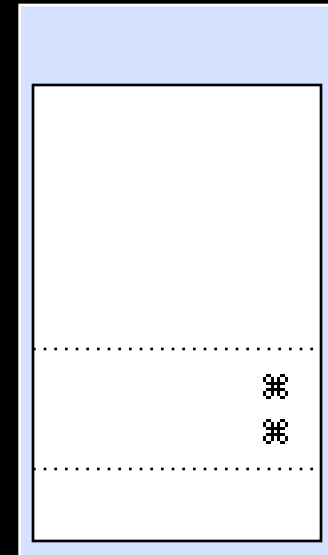
## Icon families

- ics8: 8 bit SICN
- ics4: 4 bit SICN
- ics#: 1 bit SICN
- Each member of the family shares the same mask

# Font Size

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- Remove the 127 pt. size limit
- Give the user the ability of increment or decrement pt. size 1 point at a time
- A simple method to let the user know its an outline font (see IM VI for more)



# MultiScript Concerns

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- 7.0 supports multiple scripts
- Can't assume that the script you started in is the one you are in now

# Sorting

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- You may have to sort text from different Scripts or languages in one list
  - IUScriptOrder
  - IULangOrder
  - IUTextOrder
- Will help. Just ask the Finder or Standard File.

# Truncation

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- Tables and lists may need to truncate text. Save your localizer some work.
- Don't hardwire things like: ...
- TruncText and TruncString will do the right thing

# Script Codes

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- Low byte of the fourth Integer in the fdUnused array of the FXInfo now contains a file's script code



# FXInfo Changes

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## New FXInfo

```
FXInfo = RECORD
  fdIconId: Integer;
  fdUnused: ARRAY[1..3] OF Integer;
  script: Char;
  fdComment: Integer;
  fdPutAway: LongInt;

END;
```

# Standard File

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4 enhanced Standard File calls

And

A new standard file data structure

# SF Enhancements

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New Reply Record contains a script code.

Custom routines take ptr to "globals",  
which is passed to your  
filters.

# A Little Help

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- Context sensitive help by simply adding resources
- What about that old help system?

# Network Bit is Back

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- Tech Note #142 designated Networks events as generally useless
- Beginning with 7.0 you need to call `GetNextEvent` or `WaitNextEvent` with a mask that includes `NetworkMask` if you want the new high-level events

# Don't Bogart the FCBPtr

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- Number of files that can be opened limited only by Memory
- That means File Control Block can move and that the \_Open trap could move memory even if you are just opening a file

# Launch

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- Fully defined launch parameter block
- Inline code for launch trap now in .h and .p files. By release time there should be glue for launch
- Error codes now defined and documented

# Open From Finder

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- High-level event aware applications will not be passed documents to open or print in the AppParmHandle
- AppleEvents are the new way
  - New
  - Open
  - Print
  - Quit



# Gestalt

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- Design for feature testing
- Not for testing System, Machine etc
- If you need a feature ask specifically about that feature. Don't beat around the bush.

## VM, What's it Mean?

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- If you're an application writer, all it means is that your application is going to be able to run with a lot more apps concurrently
- It shouldn't mean very much else
- Drivers, vbl tasks, and Time Manager tasks may be impacted

# To Applications

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- One Caveat
  - Anything that needs to happen in psuedo-Real Time is going to potentially be slowed by the time it takes VM to load pages from disk

# VBL and Time Manager

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- Same thing here
  - You write VBL or Time Manager tasks because you want something to happen at a specified time
  - Page faults are completely legal, but they slow things down

# I/O

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- VM watches I/O core
  - Parameter Blocks and their associated Completion routines and buffers cannot be paged out until the `_Read` or `_Write` call completes

# Drivers

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- Drivers that do I/O via `_Status` or `_Control` calls could get a case of disappearing Parameter blocks
- Drivers for NuBus cards may need to be sure that buffers are locked and contiguous

# NuBus Masters

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- Don't go through the MMU then transfer buffers must be locked and contiguous
- You can skip the contiguous part with a little intelligence

# Sound

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Many, Many new enhancements.

'snth's won't support

Move away from the Driver and  
direct hardware access.



## Why No snth

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Writing 'snth's in flux.

Enhancements may not be supportable.

Only need if you are doing your own hardware.

# Really New Things

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These are what really make  
7.0 new and different

- AppleEvents
- Edition Manager
- Database Access Manager
- Other IAC things

# Required AppleEvents

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You have to support these in a 7.0 friendly application.

- New
- Open
- Print
- Quit

# **Edition Manager**

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It isn't that easy

- But supporting the Edition Manager is going to be the most visible part of being a 7.0 friendly application.

# Which Menu?

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- Applications should think of publishing and subscribing as dynamic extensions of Cut and Paste
- So New Publisher... and New Subscriber... go in the Edit Menu

# How to Store

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- A little tricky
- Data needs to somehow link up with SectionRecords
- Make sections resources seems to be the general consensus now

## How to Show

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- Sections get borders. Default behaviour is to show border only when Section is clicked on.
- You may want a Show/Hide borders menu item so a user can get a quick look at all the sections

# Import and Export

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- Many Applications already offer this feature
- Admittedly very close to Publish and Subscribe
- The difference is that Import and Export are static. Publishing or Subscribing is dynamic.





The power to be your best