

Inter-Office Memorandum

To	Wendell Shultz	Date	Aug. 30, 1977
From	Dave Redell	Location	Palo Alto
Subject	Comments on Janus-1 filing	Organization	SDD/SD

XEROX

Filed on: <Redell>janusfiling.memo

Below are my comments on the Document Filing System chapter of the Janus-1 Functional Spec. Since I have not read the entire document with equal thoroughness, some of these comments may be based on lack of understanding, but for the most part, I think they are valid questions, and in a few cases, criticisms.

Disk volumes vs File grouping:

- The exact correspondence of a physical volume to single file drawer seems open to question, although I suppose the user will have to think of the removable volume as a logical unit, whether that is convenient or not.
- The notion of a "folder" as an intermediate grouping between documents and drawers seems to have gone away. I think this is too bad; folders seem like a useful idea, and would tend to lessen somewhat the impact of the artificial nature of the fixed-size drawer as a logical entity.
- I don't think we should refuse to remember anything about files on offline volumes. Certainly, such information could not be guaranteed up-to-date, but the poor user with 87 floppy disks would probably find it helpful, and it shouldn't be very hard to retain a snapshot of recently-seen directories (perhaps a list of the user's favorite folders, if there are such things) This shouldn't be much of a storage problem, especially if we have a rigid system disk.
- Are there any problems with allowing non-uniqueness of file-drawer names? This seems like the right idea, since global uniqueness would be essentially impossible to guarantee, but is there any impact on systems which can access several document disks at once. (E.g. multiple floppy drives, or via the X-wire).

Selection:

- I don't understand why the type-in mode of selection is necessary. I thought the original idea was to *always point* with the mouse. Isn't this sufficient? Wouldn't it eliminate the need for uniqueness of document names?
- The single notion of Current File Selection to apply to both documents and drawers seems a little clumsy. This seems to be motivated essentially by the desire to share the "Show Options" button; is there perhaps a more graceful alternative?
- Perhaps the notion of multi-document selection would be useful (as in DDS). This seems to be what is actually going on when "Delete" is applied to the entire file

drawer, for example (rather than deleting the drawer itself, whatever that would mean) but deleting everything is seldom useful.

- The "Reselect" command seems perverse; why not just do this automatically. (i.e. selections would be unaffected by shrink + re-expand)

Sorting:

- The fancy manual "Move" command is OK, but I can't imagine that it will be used heavily (probably just as well; manual sorting is not a particularly pleasant task.) Perhaps the provision of additional automatic sorting criteria would be more useful (e.g. I use "sort by size" in DDS all the time.) This also seems like another place where folders might be useful: to retain groupings during a sort, if desired.
- DDS allows sorting on several criteria at once; has this been thoughtfully rejected? (I don't find it very useful in DDS.)

Access Control:

- The effective value of "Protected Status" is a little hard to assess, since the exact context and goals of the mechanism are not stated. Is this only to catch errors, or is it supposed to stop some sort of malicious behavior as well? (Is "privileged user" defined somewhere?)
- The Pilot group has been thinking about an "immutable file" feature, which would prevent a given file from ever being modified again, thus allowing it to be physically distributed without worrying about consistency of the copies. (e.g. for fonts, code, etc.) Would this be a useful notion for Janus-1? If not, are there any upward-compatibility issues?

"File" command:

- It seems a little confusing to invoke the same action in three separate ways depending on the circumstances. Perhaps they are all necessary, but I wonder, particularly about filing by selection within the File Drawer.

Loading/Initializing disk volumes:

- I think we should be cautious about overly automatic initialization of a disk. It isn't clear, for example, that any user ought to be able to re-initialize a system disk. (If someone else did it to my disk, I'd be real mad.) Similarly, if a disk is not recognizable as a Xerox disk, proceeding directly to a disk initialization sequence seems hasty. Might it not be a foreign disk of some unanticipated format?
- On the other hand, I did not see anything which allowed re-initialization of an existing (Xerox) document disk. (Is this discussed elsewhere?)
- It would appear that the Pilot file system, upon seeing a disk which was not properly Unloaded (e.g. through a system element failure) will want to perform some sort of reconstruction process (ala scavenger) before proceeding. Presumably this should be mentioned, along with any other times at which an automatic (or manual?) scavenge may be initiated.

xc: Pilot Group