Inter-Office Memorandum

To	Distribution	Date	15 August 77
From	Jim White (for Bob Metcalfe)	Location	Palo Alto
Subject	Comments on Janus Applications Software Functional Specification	Organization	SDD/SD/CS

XEROX

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This memo responds to the request for written internal comments from SDD/SD on *Janus Release 1, Applications Software Functional Specification, Version 2,* dated 22 July 77.

Must Change

Filing, Printing, Document Transfer

Addressing Workstations

The user should be able to address non-Janus workstations in the same way he addresses other Janus workstations to which he is connected by the Xerox Wire: by *name,* rather than by *description.* Janus should provide a directory facility by which the user (e.g., at system configuration time) can name the workstations with which he interacts and declare their types (e.g., IBM MCST/I), locations (e.g., telephone number), and default conversion parameters. Once a workstation has been so declared, the user should be allowed to designate it as the source or destination for a document transfer simply by giving its name; Janus should assume responsibility for retrieving the workstation's type and location from the directory. (For RS-232-C connections without AutoDial, Janus could then even remind the *user* of the telephone number to be dialed.)

Careful, early attention must be given in OIS to how objects (e.g., files and users, as well as workstations) are named within the office environment. Janus-1 naming conventions should be ones that can be extended naturally to support the more complex office information systems that will follow it.

Must be Discussed

Filing, Printing, Document Transfer

Specifying Document Transfer Participants

The final paragraph on page 5 of "Manual Document Transfer" states that one Janus workstation can orchestrate the transfer of a document between two other workstations only if one is another Janus workstation connected by the Xerox Wire and the other is a workstation connected by an RS-232-C interface. This restriction seems arbitrary. Surely both source and destination can be Janus workstations connected to the orchestrator by the Xerox Wire. Also, cannot both be workstations (whether Janus or non-Janus) connected to the orchestrator by RS-232-C interfaces, with the orchestrator's workstation serving as middleman?
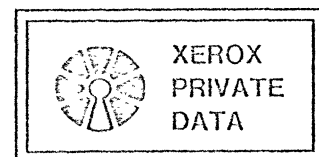
Naming and Storing Incoming Documents

Rather than automatically assign names like "MAIL-10/16-22:05-Smith" to incoming documents, allow the user to name each document himself as he removes it from his mailbox. Even if newly arrived documents are placed on the user's *document disk*, they should not be placed in his *file drawer* except under his control. The name of the sender and the date and time of delivery, of course, are important pieces of information which should be accessible to the user, but let's not construct document names from them. (The naming scheme proposed in the functional specification is not even sufficient to guarantee uniqueness, since two documents from the same user could easily arrive within a minute of one another.) (Is there any possibility that incoming documents could be placed on the *system disk* until processed by the user?)

The functional specification also states that the recipient of a document will be shown the name under which the document was stored by the sender. It would seem more appropriate and useful for the sender, as part of the send operation, to supply a document title or subject line to be communicated to the recipient.

Converting Documents Between Formats

Who has responsibility for describing in detail the document format conversions to be supported by Janus-1? The last paragraph on page 1 of "Manual Document Transfer" places this information in the *Communications Functional Specification,* yet it is not clear that such high-level matters fall within the domain of communication.

Dedicating System Elements to Printing and Distributing Documents

The "Printing" and "Automatic Document Transfer" sections of the functional specification provide that documents are always printed and distributed by the *user's* workstation. Janus-1 seems to provide no assistance to the customer who wishes to decicate workstations to one or both of these functions. Is remote printing, for example, to be supported in the initial release of the system?

At very least, the user should be able to manually transfer a document to another workstation and initiate its printing from there. This requires that the printer page of the document option sheet travel with the document from one workstation to another. In a more sophisticated implementation, remote printing would be directly supported by Janus, and the printer window would report the status of the remote operation.

Suggestions for Improvement

Text Editing

Preserving the Edited File from Session to Session

To preserve his edits, must the user explicitly store his file before leaving the editor (as Bravo requires him to do), or does his document survive on the desktop from one session to another? The user should not lose his work if, for example, a hardware or software failure interrupts his session.

Reformatting Automatically After Edits

Many users will find it a nuisance to have to explicitly reformat a paragraph after deleting characters from it. If preserving the hole caused by a deletion is an important capability (no justification for it is given in the functional specification), the user should be given the option of automatic reformatting as well.

Providing an Undo Facility

The ability to remove the effects of the previous operation, as provided by Bravo's undo command, is a useful feature.

Filing, Printing, Document Transfer

Inferring and Transmitting Distribution Lists

Documents (e.g., inter-office memoranda) often *contain* their distribution lists. It would seem important, therefore, for Janus to be able to infer a document's distribution list from the document itself, yet Janus requires that distribution lists be typed by the user or stored as records in other documents. Why not allow a mode in which Janus determines the distribution list, for example, by looking for a "workstationAddress" field in the document being sent or by searching for "To:" at the head of the document or "c:" at its tail?

It is also important to be able to transmit a distribution list with the document whose delivery it controls. Among other things, this permits implementation of forward and answer functions like those present in the Tenex MSG subsystem.

Also, can one distribution list contain a pointer to another? That is, can one group of workstations be defined in terms of other, previously defined groups?

Verifying the Sender's Identity in a Document Transfer

What guarantees that the call received by the destination workstation in a manual document transfer (especially a workstation equipped with an RS-232-C connection with AutoAnswer) is from the intended party? The eighth paragraph on page 4 of "Manual Document Transfer" alludes to an exchange of user names, but this area seems to need clarification.

Recognizing Disk Types Automatically

It is presumably some Pilot facility that underlies the document transfer facility's ability to automatically distinguish between Janus, Troy, and System 6 floppy disks. Is this really feasible and well thought out?

*Being More Specific Than "In Use"*

The document status indicator on the cover page of the document option sheet flags as "In Use" a document queued for transfer or printing. Why not indicate more specifically why the document is unavailable to the user (e.g., "Being Printed", "Awaiting Printing", "Being Transferred")? It also might be desireable to flag documents that originated at non-Janus workstations, were not converted to Janus format, and hence cannot be edited.

Ordering the Print Queue

The document filing system automatically sorts the contents of the file drawer on the basis of criteria specified by the user. Similar sorting facilities might be offered in connection with the print queue. For example, a user might wish his print requests executed in increasing order of document size.

Defining Priviledged Users

Priviledged users are alluded to at several points in the functional specification (e.g., in the first paragraph on page 4 of "Document Filing System"), but never defined. More should be said about them. A login procedure is also alluded to in connection with the AutoUser field described on page 8 of "Field Definition", but is not described in the functional specification. It seems clear that more attention needs to be given to the development of a model of the OIS user.
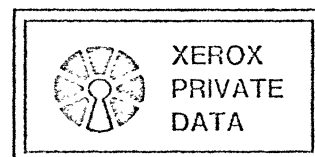
Handling Graphics on the Jason Printer

The functional specification describes the manual font switch procedure for the Jason printer. How is graphical data such as transfer symbols handled, if at all?

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