

Inter-Office Memorandum

To R. Spinrad Date April 19, 1977

From David E. Liddle Location Palo Alto

Subject Progress Through April 20 Organization SDD/SD

XEROX

Processor Architecture

The review draft of the Principles of Operation was released on April 9. Progress continued as well as could be expected on D0 and D1. The reorganization was discussed with all involved parties. More details on this will be available shortly.

Janus Application Software

Janus: The draft of the Janus Software Requirements Specification was distributed to SDD on schedule. The Janus Technical Program Team has asked for a major scaling down of features. Work on this is in progress.

Work on Janus 1 Functional Specifications has begun. The Diamond user interface is being studied. Competitive products are also being evaluated. Joint effort with the prototype software group on Diamond is continuing.

Testing and development environment activity is progressing with no major milestones to report.

Janus 2: A draft of a work plan for the requirements phase has been distributed. Site studies have begun.

Advanced Design: A work plan has been prepared. System Software specifications are being analyzed.

System Software

Overall: LRP inputs are complete. Staffing is going well. We have one open offer and three other openings under consideration.

Tools: A major revision of the Development Tools Work Plan was distributed on April 1. Unit test for portions of the Test Executive has begun. Coding and unit test, and some integration, has begun on the Program Librarian. The program monitor (performance) analysis work is constrained by the lack of free microcode space on Alto. The Cross Reference program is still waiting on a portion of the Mesa Compiler.

Mesa Compiler & Run-Time: An updated version of the compiler & system was released March 23. The Mesa Style seminars are well attended in Palo Alto. The Mesa Language working group has several remaining issues to resolve. Implementation of a new Binder is top priority for the next release. A design document on the Binder has been distributed for comment. The reliability of the new (March 23) release of the debugger is much improved. A review of the general release procedure is underway.

Pilot: Work on the functional specification is somewhat behind schedule. The April draft has been rescheduled for the end of May. The external release for the end of June looks tight but feasible. The file system design team is meeting regularly.

Hardware I/O requirement specifications and I/O design documents are being reviewed. This area is still in early definition. Updates are being made to the Pilot Functional Specification in the I/O area. We are still trying to obtain specifications on IBM's OS/6 floppy disk formats for compatibility analysis.

File Utilities & Boottime: Requirements specifications are being prepared. More manpower will be applied to this area when the two remaining positions are filled.

Diagnostics: A software support proposal was circulated for comment. A Diagnostic Work Plan is being prepared.

Data Management: The data management group is participating in the file design team effort and will release some data management functional specifications along with the Pilot release.

User Interface: Work is going into the Janus 1 and Janus 2 release specifications and reviews and into preparing for the Early Bird tests. A work plan was distributed on March 30. Some Additional effort is going into longer range planning for user interface to insure smooth growth from Janus 1 to future OIS products.

Communication Systems

Hiring is nearly complete for 1977. Nine of 13 people are on board.

Task #1, Transmission Devices: Early experimental results and preliminary analysis indicates that our Xerox Wire design goals will be difficult to achieve. (These goals are 20 Mbps through 1,000 meters of repeaterless coaxial cable past 128 taps.) This is being analyzed and simulated, and validating experiments will follow.

Task #2, Processor Interface: Four people are working on the design of the Janus D0/Xerox Wire interface. Two more people are working on functional specifications for the Janus-A D0/RS232C interface.

Task #3, Transport Protocols: An early Alto/Mesa protocol implementation is being used to refine OIS protocols.

Task #4, Communication Applications: Mesa implementation of the Federal Data Encryption Standard is being explored. Work is also going on with PARC to explore a distributed message system to support SDD development and to learn about electronic mail for OIS.

Task #5, Gateway Functions: A draft of a requirements document for the Janus D0/RS232C interface is complete and work is proceeding for Janus program team concurrence. An overall development gateway strategy is being formulated.

Participation in communication standards is underway, with a representative on the ANSI's working group X3S34 in Austin, Texas. This will be coordinated with corporate R & D (Jack Wheeler) and the Corporate Telecommunications Policy Council.

Prototype Software

The Diamond Minimum Configuration milestone was reached in early April. It took five elapsed months instead of the three planned to reach this milestone.

An important design activity has just been completed: Diamond now has a complete accounting of the formatting properties associated with characters, graphical elements, tabs, paragraphs, frames, and classes.

In May Diamond will demonstrate for the first time the combination of graphics and text in a document.

Image Processing

Modifications to the 9200 controller for the image processing breadboard are virtually complete. It is now performing well and allows complete control of the 9200 via the ROS adapter. The Dipole III ROS has been completely aligned on the 9200.

The Press printing software for Durango, Dover, and Sequoia is proceeding well. An initial package will be complete by the end of June.

Wendell Shultz for David Liddle

c: SD Managers