Whole ALTO World Newsletter

Technology and Tools

XEROX

December 31, 1977

SPECIAL ANNOUNCEMENTS

WHOLE ALTO WORLD MEETING - The next Whole Alto World meeting is scheduled to be held from 9AM-3PM, February 7, 1977 at XEOS in Pasadena. Liz Bond is our hostess. The last page of the newsletter is a flyer announcing the meeting. Please detach your copy and post it on an appropriate bulletin board. See you all at the meeting!

GENERAL NOTES

WRC JOINS THE NETWORK - On December 17th the line connecting the gateway at Webster with the gateway at PARC became operational. This, and the soon to be installed IFS, will promote the sharing of tools and information, much of which is currently under development at WRC. Attached to the newsletter is a diagram of the current network.

HARDWARE CATALOG - The first edition of the Alto Hardware Catalog is included with this issue of the newsletter. It lists by hardware type, e.g. Printers, Scanners, etc., devices that have been hooked to an Alto or the Ethernet. For an item to be included at least one working, reproducable copy must exist. Gathering this type of information tends to be a hit-or-miss proposition so if you know of an item that should be included, please contact the coordinator. It could save someone a lot of time and effort searching for or designing and building something that already exists.

TIME STANDARD CHANGE - The Alto's internal date and time standard is going to be changed because it is: 1) location dependent (WRC's Altos indicate PST), and 2) not monotonic (daylight saving time). The change will involve modifications to the Operating System and subsystems that deal with dates and times.

It is suggested that users update their disks promptly as subsystems are rereleased. Version 14 of the Operating System and a new release of BRAVO are expected at the end of January. Subsystems that incorporate the time standard changes, such as the afore mentioned BRAVO, will SWAT on the current Operating System (version 13). Old subsystems will continue to operate in the current manner on the new Operating System until April 30th when they begin reporting in GMT.

If you maintain such subsystems you should read <Taft>AltoTime.bravo and <Taft>Time.tty. Briefly, the current standard is a 32-bit integer denoting the number of seconds since midnight, January 1, 1901, PST. It is manually reset for Daylight Savings time as appropriate. The new standard will denote the number of seconds since midnight, January 1, 1901, GMT. This time will be modified by local time zone, begin daylight savings date, and end daylight savings date. These parameters will be kept in server hosts (gateways, IFSs, etc.) and in reserved locations in Alto main memory and on Alto disk (for the convenience of stand-alone Altos), and updated whenever a timeserver is accessible.

PROPRIETARY INFORMATION - The patent department, in response to specific questions of general interest and after consulting with appropriate members of management, has made the following recommendations on Alto, Dover, and Sequoia.

What can we tell job applicants during an interview?

Only information that Xerox has made public or is otherwise in the public domain.

Can we demonstrate Alto to outsiders using University of Rochester software?

Yes. (Ed note: A list of public software is being developed.)

Can Consultants and/or Co-op students work on Alto?

Yes, providing they each sign an appropriate agreement containing a confidential disclosure provision.

Can outsiders see Dover or Sequoia?

They may be shown the outside of the units providing each has signed an appropriate agreement containing a confidential disclosure provision. *The internals may not be shown.*

Can consultants be shown Dover or Sequoia?

Only information absolutely necessary to perform the consulting services may be shown, and then only if the consultant has signed an appropriate agreement containing a confidential disclosure provision.

Can the output from Dover or Sequoia be distributed outside Xerox?

Yes, provided the copy does not identify its source or method of generation.

TOOLS

HARDWARE

DEAD ALTO'S - The following text was received in a memo from Ron Cude this last month. It is filed on [MAXC]<SPG>DeadAlto.memo.

This memo is intended to point out a potential problem that some of you may be experiencing with your Alto II's. Have you ever had your Alto not want to re-boot after running out of the Cram? If so there may be a fix. To see if this is your problem, you will need two files:

Ramload.run and AltoIICode2.mb

Try the following:

Ramload AltoIICode2.mb/F 0/V cr

Ramload will display some information and ask for a confirm. After confirming, it will load the Cram with the .mb file. When it comes back and says Boot?, confirm with a carriage return. The .mb file is now running out of the Cram. Type Ramload/T and confirm with a cr. Ramload will write random numbers into the Cram blowing up your Alto (not literally, just the microcode). If you can now re-boot, you don't have the problem. If you can't re-boot, you have the problem and should investigate as shown below.

Check your Cram module (assy. #216365) to make sure that note K. (page 2 of the Cram module print) has been done. This note is an etch cut to hole next to label "R7". If this etch cut has not been made, it will blow one and possibly two components on the Disk Control module. If the cut has not been made, please make it and also install a new MPQ3303 in A1 on the Disk Controller and a new 74H00 in A11 also on the Disk Controller. If your Cram module already has the etch cut but you are experiencing the problem anyway, try replacing the same two components on the Disk Controller.

ALTO II ENGINEERING CHANGES - A list of the current revision levels for Alto II components was mailed this last month to the people that perform Alto maintainence. Future Engineering Orders will also be mailed as they are ready for distribution. If you maintain Altos and have not received the current revision level list, contact the coordinator.

SOFTWARE

In general, the subsystems, packages, and documentation indicated here will be available from your local IFS under the directories <Alto> and <AltoDocs>. If they are not available or if you are in doubt about the version, they may be retrieved from [MAXC] under the appropriate directory. Files stored under other directories are on [MAXC] unless otherwise indicated, such as [XEOS].

NEW RELEASE: CALCULATOR - This boot program from Joe Maleson pictures a TI SR-52 on the display which is operated by using the mouse to select the appropriate keys. Not all functions are implemented (i.e. it is not programmable). It may be run by booting the NetExec and entering "calculator" or by booting while depressing the <BS>, ",], and <blank-middle> keys. Documentation is the SR-52 manual.

NEW RELEASE: MICROFLOAT - Joe Maleson has made available a microcoded version of the FLOAT package. It is four to six times faster than the assembly language version (about 80 μsec for multiply and divide, 40 μsec for add and subtract). The documentation, <AltoDocs>Float.tty, is appended.

NEW RELEASE: SIGMA/ETH - This is a pair of subsystems by Thomas Holladay and Keith Knox to transfer arbitrary files between an Alto and a SIGMA 3 over the Ethernet. They will be made available on request. The documentation, a Xerox Internal Report "Ethernet Software for Data Transfer between the SIGMA 3 and an ALTO", Accession No. X7704459, has not been included with the newsletter.

NEW RELEASE: SPLINE - This is a set of packages by Patrick Baudelaire to both compute cubic splines and to map them onto an Alto display bitmap. The documentation, <Altodocs>Spline.tty, is appended.

NEW RELEASE: TYPE - This is a small subsystem by Roger Bates for use in place of the Executive supplied "type.~" that displays a larger page, suppresses Bravo trailer information, can backup, etc. It can be retrieved from <Alto>Type.run and is documented under <AltoDocs>Type.tty. The documentation is appended.

ReReleases - Subsystems

COPYDISK - This version fixes a bug which prevented copying the second disk of a two-disk system. *The change makes this new version incompatible with previous version.* The new version is available on boot servers or may be retrieved from <Alto>CopyDisk.run(18-

Dec-77).

DMT - The new version has been enhanced for extended memory machines in addition to many internal changes. It is available from <Alto>DMT.boot(17-Dec-77) and boot servers (Gateways are boot servers). If you have access to a Gateway, simply delete DMT.boot from your disks and the executive will automatically retrieve it when you "quit".

EMPRESS - In addition to several bug fixes, the new version applies the /c option to press files, will merge two or more single page press files appending one additional press or text file if specified, and can personalize individual copies of a document. It is filed on <Alto>Empress.run(14-Dec-77). The documentation, <AltoDocs>Empress.tty (14-Dec-77), has been revised.

PEEKSUM - Peek disks should be rebuilt periodically using PeekDisk.cm. See the revised documentation <AltoDocs>DMT.tty.

TECHNOLOGY

Several methodolgies of information retrieval are being investigated at the Webster Research Center. One of them, QUANSY, is an empirical natural language question-answering system by Avi Ben David. Currently operating at the forth grade level over a narrow range of subjects (as measured by standard tests), the next level of QUANSY is expected to show substantially improved capability.

Three papers have been written and will soon be available as Xerox Internal Reports (Accession numbers are not yet assigned). The first, "A Parser Analyser of Emperical Design for Question-Answering", AFIPS Conference Proceedings, NCC, Vol. 46, pp. 669-678, is easily available and so is not reproduced here. The second paper, "A Memory Structure of Empirical Design for Question-Answering", presents the relationship between natural language and the empirically developed memory structures.

The most recent of the papers "Memory Interaction and Question-Answering in the QUANSY Question-Answering System" provides a sample dialog, an overview of the system, brief descriptions of the parser-analyser, memory structures and question-answering routines, and an in-depth discussion of concepts behind the interaction between the parser-analyser and memory structures.