

The KAMAS Report

Issue Number 8

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IN THIS ISSUE

Welcome to KAMAS Report 8. In this issue, we have articles describing a new utility disk, articles on outline processing in KAMAS, application tips from you out there in KAMAS-land, and solutions we've learned from manning our support lines. There's also a corrected and improved version of the LSIZE program that we printed in issue 6.

IN THE NEWS

The biggest news is our latest utility disk for KAMAS - Utility Disk 4. It's full of interesting and useful programs described below.

Utility Disk 4 Now Available

Utility Disk 4 for KAMAS contains a varied collection of programs from games to KAMAS language extensions. With contributions pouring in from all corners of the earth, we are certainly seeing the benefits of having the programming language in KAMAS. It's one more great example of the kind of leverage we can achieve within the KAMAS User Community.

Of course, those deserving the most thanks are the contributors. Here is Adam Trent's summary of the contributors and their contributions.

Evan Antworth

Center Stage for Utility Disk 4 is an outstanding formatting and printing utility for KAMAS topics. KAMASPRINT by Evan Antworth has an amazing set of features that include margin control; block and hanging indentation; centering; headers and footers; pagination control including forced page breaks, conditional page breaks, and automatic page numbering; tabs; and printer controls.

Stems that are formatted for left justification obey dot commands embedded within the leaf. Other stems can still be printed with margin control, headers and footers, and pagination. Output can be printed, displayed on the screen, or sent to a CP/M disk file in either standard ASCII format or WordStar/NewWord Document file format.

An entire topic file on the utility disk is dedicated to the KAMASPRINT utility. The topic includes its own excellent User Guide branch.

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George Richards

George Richards provided a word count utility and two utilities that print topics with Roman numeral section numbers in two different styles. Here it is -- for all you attorneys and English majors that have requested such a utility. And the word count job shows you the number of words in a leaf as well as the number of characters used and the number free. Remember the LSIZE job from Issue 6; well, word count builds on that idea. (By the way, be sure to check out the LSIZE correction later in this issue.)

Timothy Ide

Timothy Ide's FOUTPUTJOB helps KAMAS file conversions. It outputs the topic with the same "dot" codes on the titles that FINPUTJOB (from Utility Disk 3) uses when reading in an outside text file. So you can write the file with FOUTPUTJOB, run a spelling checker on it, and read it back into KAMAS with FINPUTJOB, reconstructing the outline as it is read back in. That's a neat idea!

Walter Hawn

Here's an excellent article from Walter Hawn on how to set up KAMAS to use the real time clock in the Kaypro 4. The KAMAS code is included, but I think the article is equally valuable for showing how to develop a KAMAS application: how to approach the task, develop and test the code, and polish up the finished product.

Elliott Goodman

Elliott Goodman has the honors for sending in the first KAMAS game program. It's a slot machine game and you guessed it -- the odds are not in your favor.

Joe Davison

Joe Davison provides us with an elegant string array extension to the KAMAS programming language. This one is for the technically inclined; it's a fine example of how Moore Class Languages encourage the modular tool-box approach to programming. You can quite easily extend the KAMAS language to handle new data types. Joe used an ingenious method to get the internal Type Manager Address that KAMAS uses for string data types. Then, he stored it with each string in the string array. That way each string in the array obeys all the normal KAMAS string modifiers. This STARRAY code is also an excellent example of the KAMAS BUILDS .. TORUN command pair that support object oriented programming.

How to Order

We had more contributions that will have to wait until next time because of space constraints. Utility Disk 4 is completely filled up to our 125K limit and is a real bargain. There are three ways to get a copy:

1) Send in your order for UD4 only with \$10.00.

2) Order UD4 with one or more other utility disk and pay \$10.00 for the first utility disk and \$5.00 for each additional one.

3) Include your UD4 order with anything else (e.g., OUT-THINK) and pay only \$5.00 for UD4.

In any case, be sure to specify your disk format. Send your order to KAMASOFT, Inc., PO Box 5549, Aloha, OR 97007.

FOCUS ON OUTLINE PROCESSING

Combining Stems

By combining two stems, we actually mean combining the two leafs and then deleting the title for one of them. You can accomplish this manually in the Outline Editor by editing the stem you want to append. Use ESC M at the very top of the leaf to mark the starting point. Move your cursor to the end of the leaf and type ESC W to delete the leaf and save it in the swap buffer.

Exit from that leaf and delete the entire stem. Now, go to the stem that you want to append the leaf to and edit it. Go to the end of the stem and type CTRL-U (CTRL-Y if you use the Perfect Writer configuration) to yank back the saved leaf. Now, save this leaf and you're done.

The following program accomplishes the same thing. You can type these commands into a leaf and jex it.

```
LANG SYS
NEWLINE "Append what leaf? " STOUT WORKST STIN
WORKST KG GETLEAF DELSTEM
NEWLINE "Append to what leaf? " STOUT WORKST STIN
WORKST KG APPLEAF
```

Of course in all cases, the two leafs combined must not exceed the maximum leaf size of 2420 characters.

Here's a shorter version of the same program that assumes that you are combining two adjacent stems. It assumes you are currently located on the stem being appended and you are appending to the previous stem. You can't jex this one from ROVE or the Outline Editor. You have to go to the language and type in the commands at the language prompt.

```
LANG SYS GETLEAF DELSTEM GP APPLEAF
```

Combining Leafs

The previous article describes how to combine stems, but what if you want to combine the two leafs and you want both titles to remain intact. There are two possible cases to consider. First, you may wish to move one leaf and append it to another and delete the moved leaf without deleting its title. Second, you may wish to copy one leaf and append it to another without deleting the source leaf or title. Here are the commands for a move:

```
LANG SYS
NEWLINE "Move what leaf? " STOUT WORKST STIN
WORKST KG GETLEAF DELLEAF
NEWLINE "Move to what leaf? " STOUT WORKST STIN
WORKST KG APPLEAF
```

You can type these commands in a leaf and jex it. And for the copy, you just leave out the DELLEAF:

```
LANG SYS
NEWLINE "Move what leaf? " STOUT WORKST STIN
WORKST KG GETLEAF
NEWLINE "Move to what leaf? " STOUT WORKST STIN
WORKST KG APPLEAF
```

You can put these commands in another leaf and jex it to run it.

If you assume you are moving or copying adjacent leaves, the following shortcut will work. It assumes that you are currently located on the leaf being moved and you are moving to the previous stem. For a move:

```
LANG SYS GETLEAF DELLEAF GP APPLEAF
```

For a copy, leave out the DELLEAF. This shortcut cannot be jexed as shown. Go to the leaf to be moved and exit to the language prompt by typing TE in ROVE mode and type the commands in on one line followed by RETURN.

Moving Part of a Branch

You can move a branch within the same topic using the various Move options in KAMAS. And, with the Copy job included on Utility Disk 3, you can move a branch between topics. But what if the stems you want to move are not all in one branch. What if you want to move just a few of the stems in a branch. For example, assume that part of your outline looks like the following:

```
+ PHOTOGRAPHY
+ CAMERAS
+ FILM
+ COLOR
+ BLACK-AND-WHITE
+ FILM SPEEDS
+ FILM PROCESSING
. HOW TO TAKE PICTURES
```

Suppose you want to move FILM SPEEDS and FILM PROCESSING to the branch HOW TO TAKE PICTURES leaving COLOR and BLACK-AND-WHITE where they are. In a topic this small, you could probably move the two stems one at a time. But here's another technique that is useful if the outline is larger.

First, in the Outline Editor, move the topic cursor to BLACK-AND-WHITE. Type IN to insert next a new key with the key name TEMP-BRANCH and no subtitle. Your outline now appears:

- + PHOTOGRAPHY
 - + CAMERAS
 - + FILM
 - + COLOR
 - + BLACK-AND-WHITE
 - . TEMP-BRANCH
 - + FILM SPEEDS
 - + FILM PROCESSING
 - . HOW TO TAKE PICTURES

With the cursor still located at the newly created TEMP-BRANCH, type ML to promote TEMP-BRANCH.

- + PHOTOGRAPHY
 - + CAMERAS
 - + FILM
 - + COLOR
 - + BLACK-AND-WHITE
 - + TEMP-BRANCH
 - + FILM SPEEDS
 - + FILM PROCESSING
 - . HOW TO TAKE PICTURES

Now, you have created a temporary branch that can be moved. Use MS to select the branch, change your location to the HOW TO TAKE PICTURES branch and type MD to move down from there.

- + PHOTOGRAPHY
 - + CAMERAS
 - + FILM
 - + COLOR
 - + BLACK-AND-WHITE
 - + HOW TO TAKE PICTURES
 - + TEMP-BRANCH
 - + FILM SPEEDS
 - + FILM PROCESSING

Finally, delete the TEMP-BRANCH title to get the final outline:

- + PHOTOGRAPHY
 - + CAMERAS
 - + FILM
 - + COLOR
 - + BLACK-AND-WHITE
 - + HOW TO TAKE PICTURES
 - + FILM SPEEDS
 - + FILM PROCESSING

This technique of creating a temporary branch can be used with the COPYJOB utility on Utility Disk 3 also. In that case, you copy the temporary branch after you create it. Then, delete the TEMP-BRANCH title.

FROM THE SUPPORT LINE

As many of you know if you call for support, you'll most likely talk to the author of KAMAS himself. Adam Trent reports that he picks up many useful tips and suggestions from talking to those of you who call in with questions. One thing for sure is that if one of you has a question and calls in with it, many more of you out there often have the same question. So this part of the newsletter contains Adam's answers to common questions that we get asked.

How can I learn to program in KAMAS?

The KAMAS User's Guide contains extensive documentation on the programming language. Chapter 3 of the KAMAS User's Guide contains some simple walk-through examples that illustrate how to program in the KAMAS language. Chapter 4 gives an overview of the programming language. Chapter 7 describes many of the programming commands in detail, while Chapter 11 completes the task with detailed descriptions of advanced commands. Chapter 10 contains a fully worked out programming example that illustrates the style and approach to programming in the KAMAS language. The Bibliography contains a section on programming that references further sources.

Besides the manual, Utility Disk 2 contains a topic from Tom Almy that provides online documentation for the commands in the programming language.

One of the best ways to learn to program in KAMAS is to look at the code that others have written. The utility disks provide an excellent source of KAMAS code that you can study. Look at the code and try to figure out what the programmer was accomplishing with each line and each command. Two good examples stand out on Utility Disk 4.

I suggest you take the SLOTJOB game by Elliott Goodman and attempt to re-create it from the simple FRUIT-LOOPS example on page 7-78 of the KAMAS User's Guide.

The KAMASPRINT utility (on UD4) from Evan Antworth is one of the best examples of KAMAS code that I have seen. The code is very high quality and illustrates a good programming style. It is also very well documented. Try modifying it to see how it works. And if you get real familiar with KAMASPRINT, try incorporating George Richard's Roman numeral output code into KAMASPRINT.

With all this Utility Disk source material, I'm expecting a generation of KAMAS programmers to bring even more Utility Disks our way.

What an adventure we are all in -- these little personal computers serve as a certain kind of common bond. It's like the saying that music is a "universal language" of feeling. Personal Computers are instruments that play the music of epistemology.

And there's leverage in group dynamics. Mix up acute mental angles and truth becomes a many faceted jewel.

How do I run KAMAS programs from utility disks?

Releasing Utility Disk 4 brings up a question that we often get asked: how to run KAMAS programs in the first place.

It's easy really. In KAMAS Version 1.2, simply edit the topic containing the stem that has the program. Move the outline cursor to the stem with the program in it. Type ESC J to jex the stem. Jex is the KAMAS term for running a program and is short for job execute.

If the program is on Utility Disk 1 or 3, we have provided a nice menu system for running the jobs. You can set up this type of menu system for your own programs as well.

To run programs from UD1 or UD3, just copy the utility topic to your KAMAS Working System Disk. The utility topic file on UD1 or UD3 is called UTILITIE.TOP and can be copied using PIP, the CP/M command for copying files.

For example, if the utility disk is in drive B and your KAMAS Working System Disk is in drive A, use the command:

```
PIP A:=B:UTILITIE.TOP[OV]
```

to copy the file. Before using PIP, you have to make sure that the PIP command is on one of the two disks. PIP is not a built-in CP/M command; it has to be run from the PIP.COM file.

Another way to copy files is the use the NSWEEP utility. NSWEEP is a public domain utility program for managing CP/M files.

Once the UTILITIE.TOP file is copied, run KAMAS in the normal way. Version 1.2 of KAMAS automatically loads the utility menu from UTILITIE.TOP. Then, to run a utility job, type U at the ROVE prompt to get the utility menu. Finally, run the job of your choice from the menu.

There is a file called READ.ME on every utility disk. It is a short text file that tells you how to get started in running the jobs on that utility disk. It also tells you how to print the longer documentation on the utility disk. For example, Utility Disk 3 contains a topic file called UD3DOC.TOP which contains a user's guide for the programs on Utility Disk 3. You can print out the READ.ME file or look at it with your word processor (e.g., WordStar). Then, use KAMAS to print the longer user's guide.

For programs listed in the newsletter, create a topic for miscellaneous programs, insert a title containing the title as shown in the newsletter article, and edit the code as shown into the leaf. Then, run the program as described above by going to the new title and typing ESC J to run the program in its leaf.

CORRECTED LSIZE PROGRAM FROM ISSUE 6

Several of you caught the errors in the LSIZE program printed in issue 6 of The KAMAS Report. Thanks to Roger Golub, George Richards, and Bob Cartright for catching the typos and to Bob Cartright for sending this corrected and enhanced LSIZE. The first line is the title with "LSIZE" as the key and "- Leaf sizing program" as the subtitle.

LSIZE - Leaf sizing program

```
LANG SYS
'LSIZE-JOB :JOB
'LSIZE : LOOP CLSOUT NEWLINE "KEY: " STOUT WORKST STIN
        WORKST KFINL UNTILT NEWLINE
        "???? NOTFOUND, Try Again " STOUT
        BEEPOUT .LOOP
        NEWLINE GETKEY STOUT
            " contains " STOUT
        GETLEAF IFSO
            CUELEAF DUPW WOOUT
            " characters, with " STOUT
            2420 SWAPW WO- WOOUT "characters remaining" STOUT
            DROPW CRFLOUT
        ELSE 0 WOOUT " characters, with " STOUT
            2420 WOOUT "characters remaining" STOUT CRLFOUT
        .IFSO .
LSIZE
LOOP LSIZE 'DONE? STOUT NOYES IFSO DONE .IFSO .LOOP
ROVE
```

By the way, see an even better enhancement (the word count job) by George Richards on Utility Disk 4.

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