

SAGE News is getting ready for an overhaul. Beginning next month look for several changes including many more pages and increased technical coverage to meet the needs of SAGE computer users.

SAGE Looks To The Future

(The following is the text of a discussion conducted by SAGE News with SAGE President Rod Coleman, Vice President of Marketing, William R. Delaney and Vice-President of R & D, Paul J. Lima. The subject was the future of microcomputers in the next 12 months.)

SAGE News: Where are we headed?

Coleman: We're still on the threshold. The IBM clone wars are beginning to wind down, but no one really won. IBM captured the battlefield, of course, but what they've now defined as the Personal Computer is really a very boring piece of technology. I think that market is still ripe for those who take advantage of what microcomputers really have to offer. No one has yet seriously explored a true 32-bit operating system that takes advantage of chips like the 68000, nor has anyone really marketed the existing technology that would permit large memories and storage capacities to dominate the micro world. IBM and the 8088 actually set back the timetable on future products.

Lima: I agree. Probably because of the marketing success of the PC, technology has actually been slowed. Only a few of us have been dabbling in high performance multi-user systems, different operating systems, and the new languages. Speed has been a dirty word. Our 68000 is still one of the fastest micros available, even without using the potential of a 10 or 12 MHz clock.

Delaney: Actually, there's more of a market out there than you may think. The non-IBM clone share is currently 60%, and even if that diminishes, analysts still predict at least 45% of the 5.3 million units sold in 1988 will be non-IBMables. That's a big chunk. You've also got to consider that the mini-computer crowd is going to be taking a second look at micros in the future. Especially when items such as multi-user, networking, tape backup, floating point, memory management, and large Winchester become standard on microcomputers.

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President Rod Coleman previewed some future hardware prototypes at the SAGE Faire held last February.

Modula-2 Newsclips

If you're interested in knowing more about Modula-2, you might refer to the August issue of *BYTE*. The bulk of the magazine is devoted to the subject.

You might also be interested in the article describing the upcoming release of an operating system written in Modula-2, mentioned in the *New Products* section. They call it Moses. We have learned that the correct spelling is MOSYS which stands for Modula-2 Operating System. This product originated from the pen of Pascal author Nicklas Writh and is being developed by SAGE's United Kingdom distributor, TDI.

Look for more news on this important development in the operating system world in upcoming issues of *SAGE News*.

recently among other manufacturers toward more powerful micro systems. Currently, most of these are still priced like "minis", but once products like these are more realistically priced for microcomputer users, I think you'll see a real shift in buying trends. Finally, I might say that SAGE has always been a leader in terms of price/performance, and I can guarantee that we'll remain that way for some time to come.

SAGE News: How about all the talk on 256K RAMs and true 32-bit CPU's?

Lima: They are definitely part of the future, but maybe further away than many people think. The 256K byte RAM's are here now, but they are not really affordable in production quantities. At least they're not affordable in terms of price/performance. In six months, that will probably change. It's similar with the 32-bit processors. The ones available, like the AT&T's WE32000 don't really act like 32-bit chips in terms of performance. The speed is about the same as the current 68000. Here at SAGE, we're very excited about the Motorola 68020, but it simply isn't available yet. Prototypes may be out this fall, but don't look for them in real machines for about 18 months.

SAGE News: You've all mentioned multi-user systems. Where do you see them headed during the next year?

Coleman: Multi-user has been the sleeper of the 80's. I think it still has a bright future when more consumers realize the obvious benefits in terms of cost efficiency and the unique aspects like achieving concurrent processing. Also the recent upswing of interest in networking may actually boost multi-user sales as consumers start to think in terms of shared or distributed processing. The biggest benefits may actually come from combinations of both technologies, taking advantage of the best features of each.

Sadly, the lack of really good software has hurt both. We think we produced an exception with our own powerful multi-user BIOS, but until recently there was no networking software that stood out. That's one reason that we've been examining the new Liaison product from SofTech Microsystems; it may fit the bill.

Future (continued from Page 1)

SAGE News: Will the success of MS-DOS cut into your market share?

Coleman: Yes, somewhat. But a lot of other people have been making big strides without making so much noise. We're not convinced that *UNIX* is the ultimate answer, but it will certainly be a commercial contender. *RM-COS* is another one. They've got excellent portability, and there's a surprising number of vertical market applications available. But as I said earlier, there's also the potential for even better operating systems in the future. There's no reason one can't get power and ease-of-use in one package. If you were to combine the p-System's portability, Macintosh's friendliness, *UNIX*'s system flexibility and *HyperFORTH*'s speed, you'd really have something.

SAGE News: Is there anything like that on the horizon?

Lima: Several people have been talking about such a project, and I've actually seen a few prototypes, but so far nothing has been made public. However, I'm confident we'll see something along the lines Rod discussed by the end of the year.

SAGE News: Returning to hardware, what's going to happen between now and the end of the year? Is SAGE working on new machines?

Delaney: Yes. We're always working on either new products or improvements to our existing machines. As far as your first question, there's been quite a bit of activity

Passage

by Sheri Coleman

Passage is an advanced multi-user communications package that includes features that are not currently supported by *Teletalker* (*Teletalker* is the standard communications package bundled with most Sage microcomputers).

The most impressive "goodie" is Autolog, which gives you the power to talk to another computer with just a single keystroke off of a menu. *Passage* will automatically reconfigure, dial and log-on to a remote system. You can store up to 26 pre-set computers here. It is quite easy to add, delete or change any aspect of the menu to handle changes on the other end. Autolog is a real time-saver, if you're in a habit of using different services that switch between half and full duplex, or that have different baud rates. It really pays off when using abstract parameters, such as when accessing specialized links, like mainframe protocol or proprietary data bases.

The more common features include: communications switching to disk or printer; multiple file transfer modes, allowing transfer of text, code, and data files; high-level CRC error-correcting protocol (Hayes-compatible); character translation table; filters; line-feed controls; UCSD disk format filer; hex display; buffer functions; true break signal, timer, full/half duplex, and access to operating system while on line. Low-level error detection, upload-throttles, echo verification and Xon/Xoff protocol are all fully supported.

Besides being flexible and powerful, *Passage* is relatively easy-to-use for a computer-literate person. If you are a beginner, you may find *Teletalker* easier to start with. (Beware that *Teletalker* and *Passage* are both unforgiving of operator errors). *Passage* devotes little time to explaining the mysteries of baud rates, parity, and other communication protocols. This may be a snag for the novice, experimenting with his first modem.

My biggest complaint with *Passage*, like many other popular programs today, is not with the software. It's the



documentation that is difficult to follow and often downright confusing. (The authors at Arisbe Communications have promised a rewrite in the near future.)

If your only communication need is to log onto the commercial services such as Telemail, CompuServe, The Source or the other large electronic billboards, you'll probably never justify the expense of adding *Passage*. However, it can come in really handy if you spend a fair amount of time in the electronic mail world. Especially if you require multi-user capability and a lot of flexibility.

Overall, *Passage* is a powerful communication tool that is especially useful for those with sophisticated needs.

For more information on *Passage*, contact: Arisbe Communications, 10935 Peninsula Drive, Traverse City, MI 49684. (619) 947-0651.

Skycam Off Olympic Team

Skycam, the computer-controlled aerial camera featured in last month's *SAGE News*, was scratched from the Olympic schedule at the last moment.

According to the developers at *Skyworks*, they had a problem with their Kevlar cables that suspend the camera. The cables frayed and allowed the thin copper power wire inside to break. Thus *Skycam* had to run just on its internal batteries and could only remain airborne for 15 minute periods. They switched to stainless steel cables to solve the fraying, but couldn't solve the power transmission problem in time for the Olympics.

They've now licked the problem, but it was too late for any medals in Los Angeles. Your next chance to see the

SAGE-controlled camera in action on TV, will be the upcoming NFL football season.

As a side note, SAGE microcomputers were in use at the Olympics, despite the loss of *Skycam*. Our Norwegian distributor, *Programvarehuset*, reports that press representatives of their country used a SAGE IV to file news reports from the Olympic Press Center in Los Angeles to editors in Oslo via a satellite link in Sweden. This is a similar set up that members of *Scandiapress* also used to transmit reports from the recent Wimbledon tennis tournament in London using a direct dial modem.

We'll have more on this story, and perhaps a few photos next month.

Questions and Answers

What happened to SAGE News this month? It seems to have shrunk.

You caught us? Actually, we are going to use so much ink and paper next month that we decided to skimp just a bit this time. Be sure and look for a very special, unbelievably-large edition next month. (Would you believe 16-pages?)

Another Benchmark

We agree with the critics who claim that benchmarks can be misleading and do not always represent a valid scientific comparison of all aspects of a computer's performance. Nonetheless, they are fun to run and fun to compare.

Here's one of the latest we received from Chuck Emery, SAGE's distributor in Eastern Canada, at TDI Computer Systems Inc. in Toronto. He ran an APL test program under the Mirage Operating System:

Machine	Time (seconds)
IBM 3031	17
Amdahl 470	20
DEC 2060	25
SAGE IV	42
DEC 10	50
Wicat 150	88
VAX 11/780	88
IBM PC	150

Sorry, we did not get a copy of the APL code to add more credibility to this exercise, but any way you look at it, the SAGE IV is in pretty impressive territory.

Subscriptions are \$12 for one year. All correspondence should be addressed to **SAGE News**, 4905 Energy Way, Reno, NV 89502.
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Vol. II/No. 8

August 1984

SAGE NEWS
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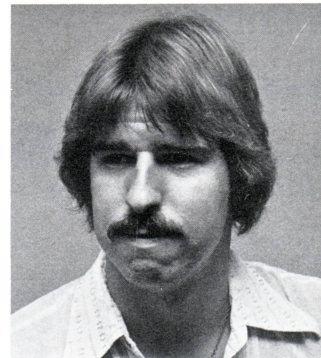
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Coleen Haworth



Steve Mathwig

People

When a new compiler or utility arrives at SAGE, **Steve Mathwig** is usually the first to know, especially if they involve CP/M-68K. Steve is a programmer with a background that covers everything from FORTRAN to machine language. His current love is "C", where he does most of the work in evaluating new products written for CP/M.

He is now working on low-level BIOS and utility routines connected with new products in our Research and Development department. By the way, you've probably seen Steve's work more than you realize. The SAGE logo that now appears upon initialization is one of his creations.

Steve is married, and he and his wife Jean both enjoy volleyball, pocket billiards and weekend drives.

One of several ex-school teachers working for SAGE, **Coleen Haworth** says she enjoyed the switch from classes to computers.

She is now an Engineering Aide specializing in handling administrative functions for Customer Support. If your machine should come back to the factory for service, Coleen is generally the first one to tackle the problems, from system level diagnostics to board repair. She also works the phones for low-level software support.

Her favorite recreations are walking, rafting, watching movies, reading science fiction (current favorite is author Ursula Le Guin), and — buying shoes?

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