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Dear Colleague,

As you can see, there are only two issues of Lisp Pointers for this Volume. We had hoped to have at least one more but it didn't happen. We have a very large set of technical articles for our next issue so that should be in your post boxes in a much more timely fashion. We're also hoping for a special issue in this next Volume year.

As Pavel notes in his (algorithms) section, he is planning to only continue one department in the future. We desperately need YOU. Whether you are interested in running a department or just contributing to one of our existing ones, your help is both necessary and welcome. We're interested in hearing from readers who might want to comment about the present and future potentials for Lisp and Scheme -- both technically and commercially. We're also interested in small pieces that fit within our humor boxes.

Almost anything is fair game. After all, we even published the X3J13 fortune cookies. Come to think of it, we should look back at those in another few years and see how good they were. There is a class of folk songs known as "filk" songs written about computers. If you know of any relevant ones, we'd be interested.

The back page of this issue shows an order form for back issues.

As we noted in our last issue, we are now an official technical publication of the ACM SIGPLAN (Special Interest Group in Programming Languages). After this, you will only get Lisp Pointers by subscribing using the form on the inside back cover. NOTE that joining SIGPLAN does not get you a copy of Lisp Pointers and becoming a subscriber of Lisp Pointers does not make you a member of SIGPLAN. If you have questions, the membership department of ACM should be able to help. Their number is 1-212-869-7440.

I should remind you that technical articles should be submitted to Jon L White unless they fit specifically into one of the areas described by a particular department. The strength of this publication is due to the high quality of these department chairs. All articles are reviewed for acceptance. If you have an idea for a submission, send it to one of them. They're anxious to hear from you.

Sincerely,

Mary S. Van Deusen

Mary S. Van Deusen
Editor

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* *
* **This is the last issue of LISP POINTERS for people who were original subscribers. All future issues will only come to those who have filled out a subscription form, which can be found in the back of this issue.** *
* *
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To: maida@ibm.com, gls@think.com
Subject: Attribution

Greetings, Mary and Guy

In the latest Lisp Pointers, (3:1), on page III-1.33 (end of Guy's *standard output* column), there is a box containing ``The World According to Sir Blooper'', attributed to an anonymous donor.

Actually, it's taken almost verbatim from the book:

    ``Anguished English''
    by Richard Lederer

who is an English teacher in New Hampshire. I don't remember the publisher's name offhand, though I can get it for you if you want. It was published in 1988 or 89.

Cheers,

Nikhil

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I just got my SIGPLAN Lisp Pointers issue today; congratulations! I was reading the ERROR MESSAGES I REMEMBER box and thought of something you'd like. The last one reminded me of the old "woodchuck" tongue-twister, but it wasn't quite close enough, so I came up with: "How much class would a metaclass have if a metaclass could have class?"

Also, in the second error message, PDP-10 is typoed "PDPIC" (sounds like the name for a single-chip minicomputer).

barmar

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Once upon a time, in a kingdom not far from here, a king summoned two of his advisors for a test. He showed them both a shiny metal box with two slots in the top, a control knob, and a lever. "What do you think this is?"

One advisor, an engineer, answered first. "It is a toaster," he said. The king asked, "How would you design an embedded computer for it?" The engineer replied, "Using a four-bit microcontroller, I would write a simple program that reads the darkness knob and quantizes its position to one of 16 shades of darkness, from snow white to coal black. The program would use that darkness level as the index to a 16-element table of initial timer values. Then it would turn on the heating elements and start the timer with the initial value selected from the table. At the end of the time delay, it would turn off the heat and pop up the toast. Come back next week, and I'll show you a working prototype."

The second advisor, a computer scientist, immediately recognized the danger of such short-sighted thinking. He said, "Toasters don't just turn bread into toast, they are also used to warm frozen waffles. What you see before you is really a breakfast food cooker. As the subjects of your kingdom become more sophisticated, they will demand more capabilities. They will need a breakfast food cooker that can also cook sausage, fry bacon, and make scrambled eggs. A toaster that only makes toast will soon be obsolete. If we don't look to the future, we will have to completely redesign the toaster in just a few years."

"With this in mind, we can formulate a more intelligent solution to the problem. First, create a class of breakfast foods. Specialize this class into subclasses: grains, pork, and poultry. The specialization process should be repeated with grains divided into toast, muffins, pancakes, and waffles; pork divided into sausage, links, and bacon; and poultry divided into scrambled eggs, hard-boiled eggs, poached eggs, fried eggs, and various omelet classes."

"The ham and cheese omelet class is worth special attention because it must inherit characteristics from the pork, dairy, and poultry classes. Thus, we see that the problem cannot be properly solved without multiple inheritance. At run time, the program must create

(CONTINUED)

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(CONTINUED)

the proper object and send a message to the object that says, 'Cook yourself.' The semantics of this message depend, of course, on the kind of object, so they have a different meaning to a piece of toast than to scrambled eggs."

"Reviewing the process so far, we see that the analysis phase has revealed that the primary requirement is to cook any kind of breakfast food. In the design phase, we have discovered some derived requirements. Specifically, we need an object-oriented language with multiple inheritance. Of course, users don't want the eggs to get cold while the bacon is frying, so concurrent processing is required, too."

"We must not forget the user interface. The lever that lowers the food lacks versatility, and the darkness knob is confusing. Users won't buy the product unless it has a user-friendly, graphical interface. When the breakfast cooker is plugged in, users should see a cowboy boot on the screen. Users click on it, and the message 'Booting UNIX v. 8.3' appears on the screen. (UNIX 8.3 should be out by the time the product gets to the market.) Users can pull down a menu and click on the foods they want to cook."

"Having made the wise decision of specifying the software first in the design phase, all that remains is to pick an adequate hardware platform for the implementation phase. An Intel 80386 with 8MB of memory, a 30MB hard disk, and a VGA monitor should be sufficient. If you select a multitasking, object oriented language that supports multiple inheritance and has a built-in GUI, writing the program will be a snap. (Imagine the difficulty we would have had if we had foolishly allowed a hardware-first design strategy to lock us into a four-bit microcontroller!)."

The king had the computer scientist thrown in the moat, and they all lived happily ever after.

This net item was passed along to me. Perhaps a start for an OOPSLA keynote?
stu
From: sif@lachesis.bellcore.com (Stuart I Feldman)

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