

PASCAL USER'S GROUP

USER'S
GROUP

PASCAL NEWSLETTER

NUMBER 5

COMMUNICATIONS ABOUT THE PROGRAMMING LANGUAGE PASCAL BY PASCALERS

SEPTEMBER, 1976

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POLICY -- PASCAL USER'S GROUP AND PASCAL NEWSLETTER

USER'S GROUP POLICIES

Membership - is open to anyone: particularly Pascal users, teachers, maintainers, implementors, distributors, or just plain fans. Institutional memberships, especially libraries are encouraged. The cost of membership is \$4 per academic year ending June 30. Anyone joining anytime for a particular year will receive all 4 quarterly issues of Pascal Newsletter for that year. (In other words back issues are sent automatically). See ALL PURPOSE COUPON on back cover. First time members receive a receipt for membership; renewers do not to save money for PUG on postage.

Purposes - are to promote the ideas behind Pascal as well as the use of the programming language Pascal. Pascal is a practical language with a small, systematic, and general purpose structure which is being used for:

- * teaching programming concepts
- * developing reliable "production" software
- * implementing software efficiently on today's machines
- * writing portable software

Let's get more users involved - urge your Pascal friends to join PUG whether face to face or maybe through an announcement in your installation's local newsletter.

NEWSLETTER POLICIES

The Pascal Newsletter is the official but informal publication of the User's Group. It is produced quarterly (usually September, November, February, and May). A complete membership list is printed in the November issue. Single back issues are available for \$1 each. Out of print: #s 1,2,3.

The contribution by PUG members of ideas, queries, articles, letters, and opinions for the Newsletter is important. Articles and notices concern: Pascal philosophy, the use of Pascal as a teaching tool, uses of Pascal at different computer installations, portable (applications) program exchange, how to promote Pascal usage at your computer installation, and important events (meetings, publication of new books, etc.).

Implementation information for the programming language Pascal on different computer systems is provided in the Newsletter out of the necessity to spread the use of Pascal. This includes contacts for maintainers, documentors, and distributors of a given implementation as well as where to send bug reports. Both qualitative and quantitative descriptions for a given implementation are publicized. Proposed extensions to Standard Pascal for users of a given implementation are aired. Announcements are made of the availability of new program writing tools for a Pascal environment.

Miscellaneous features include bibliographies, questionnaires, and membership lists.

ALL WRITTEN INFORMATION FOR THE Newsletter IS EASIER TO PRINT IF YOU WILL TYPE ALL MATERIAL $1\frac{1}{2}$ OR DOUBLE SPACED SO THAT IT IS IN "CAMERA-READY", "PHOTO-REDUCIBLE" FORM FOR THE PRINTER. REMEMBER, ALL LETTERS TO ME WILL BE PRINTED IN THE Newsletter UNLESS THEY CONTAIN A REQUEST TO THE CONTRARY. AN OVERRIDING GUIDE SEEN IN AN OLD MAD MAGAZINE APPLIES: "all the news that fits, we print!" - Andy Mickel, editor, August 5, 1976.

John P. Strait, assoc. editor



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PART I - In General

Hi! And here is the first issue of the Pascal User's Group Pascal Newsletter. Very important: read POLICY on inside front cover. My editorial comments appear throughout the newsletter as Pascal style comments enclosed in "(*" and "*)". At this writing, PUG has a phenomenal 317 members. We have grown steadily since we began soliciting members in April. Some members have had so much faith in our continued existence that they have signed up for several years!

There were two members who suggested that the word "user's" in PUG's name be changed to "users'" instead (see HERE AND THERE). To me it doesn't really matter. I could argue that PUG belongs to each individual member - it is more like a federation.

For the record here are some of the events which led to PUG. We have much to owe George Richmond, of the University of Colorado (and Lyle B. Smith before him) for tending the fire nearly alone in North America for several years. George began Pascal Newsletter with issues in January and May of 1974 and February, 1975. In the third (February) issue he sent a sort of "SOS" to all persons listening: "...there is a need for a strong Pascal Users Group...the present mechanism for distribution and support will become more inadequate." After talking with other Pascalers - namely Alfred Towell at Indiana University, Dave Tarabar at the University of Massachusetts, and George - John Strait and I sent a letter to the editor in July, 1975 stating our desire to participate in a User's Group.

A year ago at ACM '75 in Minneapolis, a Pascal User's Group meeting was held spontaneously on October 22 at the urging of Richard Cichelli of Lehigh University and R. Warren Johnson of St. Cloud State University. Thirty-five persons attended and we decided to work toward a more permanent organization using Pascal Newsletter as a communications medium. I organized a mailing list and little happened. When I talked to George in December about the newsletter editorship, he said he wanted to do one more issue himself. So we planned our first issue for April '76.

But as things turned out, George was delayed by terrific work loads at his computer center which incidentally hurt his other Pascal duties. After a few months we decided to organize more thoroughly and push the date for our first newsletter to September. In April and May we sent out 400 general solicitations to join PUG

EDITOR'S CONTRIBUTION

to computer centers and computer science departments at universities in the United States and Canada. We also placed an announcement in SIGPLAN Notices for May. In the mean time we were hoping that George's Newsletter #4 would appear to announce the transition to the persons on his already established mailing list of more than 500.

As it stands, George's last newsletter will be appearing just before this one, and to avoid the complication of excessive requests for back issues and duplicating material, we will purchase copies of his newsletter to send as a free "bonus extra" to persons in the United States and Canada who are not on George's list. Persons on Georges list who are not PUG members should read the transition information in Newsletter #4 and join PUG hopefully. I estimate we will gain at least another hundred members this way.

Those of you who received a receipt for membership may be interested that the pug dog is a sort of joke - I for one would not feel secure having such a weakling for my guardian (a sort of a pig of a pug the way it was drawn). Actually Pascal User's Group is a shoestring operation run right now in the spare time of a couple of systems programmers. The important implication here is that John and I cannot be very responsive to individual requests - all we can promise to do is the newsletter and rest assured we'll print everything that comes to our attention.

With this issue of the newsletter we hope things begin to improve, because I realize all is not good with Pascal right now. I can tell from PUG's mail. Confusion reigns. But I'm an optimist - we'll pull through.

Next issue I will supply an accounting of our costs so far. (In the post-Watergate spirit of full disclosure.)

Now I must give credit where credit is due for PUG and Pascal Newsletter #5:

John Eisenberg for his idea of collecting phone numbers,
Richard Cichelli for suggesting guidelines for the cost of membership,
Wilhelm Bürger for suggesting user's group memberships rather than newsletter subscriptions,
Al Towell for miscellaneous encouragement and suggestions,
SICDOC Systems Documentation Newsletter for the idea for an "ALL PURPOSE COUPON",
Christi Mickel for doing the mass mailing of 400 and for processing memberships in PUG,
Computers and People "Computer Directory and Buyer's Guide" for an organizing and reference tool,
SIGPLAN Notices for publicity in their May issue,
Les Kerr for the suggestion to print a roster of members in an early issue of the newsletter (see next issue),
John Strait for ~~creating the mailing list data base~~ and for innumerable suggestions,
Michael Schneider for helping design our cover letter and SIGPLAN announcement,
James Dorr (editor of Indiana University's Random Bits) for producing our front cover title,
Niklaus Wirth and Urs Ammann for encouragement,

George Richmond and Jan Hurst for providing last minute transition suggestions in August.

The computer center newsletters of Lawrence Berkeley Labs (Ed Fourt), the Middle-Illinois Computer Coop (Don Klett), Purdue University, and the University of Minnesota for articles publicizing PUG, Twin Cities ACM's *Bits and Bytes* (Judith Kruntorad) for announcing PUG, and finally the University Computer Center, University of Minnesota for providing a warm home for PUG.

PART II - Pascal at the University of Minnesota

Our computer installation consists of a CDC Cyber 74 running large scale batch and 30 interactive terminals, and a CDC 6400 running 150-200 interactive terminals only. Pascal has been available here since summer of 1972 when a colleague of mine (and now PUG member) Steve Legenhausen suggested we obtain the Pascal compiler. Usage here has been boosted mainly by applying William Waite's principles for giving a language processor (organism) support at a computer installation (ecosystem). Now after the Computer Science Department's very successful initial year of replacing FORTRAN with Pascal in its curriculum, usage is respectable. In the last fiscal year (July-June) at Minnesota the major FORTRAN compiler (MNF) was run 810,000 times on both machines; BASIC 477,000; Pascal (#3!) 103,000; FTM (CDC FORTRAN) 69,000; COBOL 49,000; Assembler 44,000, SNOBOL 40,000; and etc.

John Strait, Lawrence Liddiard and I have cooperated with Urs Ammann of ETH Zürich over the past year in producing the second release of Pascal 6000-3.4. We helped mainly in the effort to reduce core requirements for the compiler. Our group continues to maintain the compiler for the KRONOS/NOS operating system for CDC 6000/Cyber 70,170 series machines and in fact several other sites run our version. The main changes have been for interactive access because 85% of Pascal's use here is interactive. We are now cooperating with George Richmond to make our mods for KRONOS/NOS available with the distributed version.

PART III - My Concerns

As I mentioned earlier, all is not well with Pascal. Mainly, considering the design goals of the language (reiterated in the POLICY section inside the front cover) we are suffering.

First, people continue to ignore the combination of these design goals when making suggested "improvements" to the language. These are the subject of several letters and comments which appear in this issue of the newsletter.

Secondly, several bad implementations are being circulated and in turn are giving Pascal an unnecessary, bad reputation as a language. See IMPLEMENTATION NOTES. Also many implementors have taken the liberty to implement something significantly less than Standard Pascal and call it Pascal. What about portable software then?

Finally, confusion proliferates as to what the next developments will be and where implementations will come from. This situation should improve with the regular appearance of this newsletter.

We all need to pull together to help remove a major obstacle to our being able to respectably use Pascal; its low percentage of usage in the world's computing. We can do it; it will happen. A major indicator is the "Pascal explosion" in the current computer science literature.

I consider the IMPLEMENTATION NOTES section to be very important. Here we will hope to find increasingly complete and usable information for spreading the "virus" of Standard Pascal.

Andy
August 10, 1976

CONFERENCES

Pascal User's Group session at ACM '76...Wally Wedel, PUG member from the University of Texas at Austin will chair a PUG meeting at this year's ACM conference in Houston, Texas. The conference extends from Wednesday, October 20 to Friday, October 22 in the Hyatt Regency Hotel. Wally has made arrangements with the conference organizers and SIGPLAN; the exact time of the meeting will be printed in the schedule handed out at the conference on Wednesday. Proposed topics of discussion are: Interactive I/O conventions/Extended character set treatment/Implementations and user experience with implementations/Documentation standards for variations.

Pascal: Implementation and Application...D. W. Barron has announced a two day Symposium organised by the Computer Studies Group, University of Southampton, United Kingdom during 24-25 March 1977. Sessions include: The language and its implementation/Pascal in systems programming/Pascal in research and education/Pascal, the future. Well known authorities have been invited to speak. To receive further details when available - write to: Conference Secretary, Department of Mathematics, The University, Southampton, SO9 5NH, United Kingdom.

NEW BOOKS

Algorithms + Data Structures = Programs by Niklaus Wirth, Prentice Hall, 1976, 366 pages, hardcover, \$15.

A Primer on Structured Programming Using PASCAL by Richard Conway, David Gries, and E. C. Zimmerman, Winthrop Pub., 1976, 420 pages, paperbound.
(*Note: for price write to PUG member Michael Meehan, Winthrop Pub., 17 Dunster St., Cambridge, MA 02138.*)

Introduction to Problem Solving and Programming with Pascal by G. Michael Schneider, David Perlman, and Steven W. Weingart, Wiley, to be published in 1977.
(*Note: for more info write to PUG member Michael Schneider, C. Sci. Dept., 114 Lind Hall, Univ. of Minnesota, Minneapolis, MN 55455.*)

Study Guide, Introduction to Computer Science by Kenneth L. Bowles, to be published.
(*Note: for more info write to K. Bowles, Univ. of California, San Diego, La Jolla, CA 92093.*)

Standard Pascal by J. W. Atwood, to be published. (*Note: for more info write to J. W. Atwood, Dept. of Comp. Sci., Sir George Williams Campus, Concordia Univ., Montreal, Quebec, Canada H3G 1M8.*)

NEWS (alphabetical by last name)

O. Beaufays, Mathematiques Appliques, Universite Libre de Bruxelles, Bruxelles 1050 Belgium (PUG member): "...we are using this language for teaching..."

Scott Bertilson, RR 2, Spicer, MN 56288 (PUG member): "James Martinson and I are interested in microcomputer versions of Pascal, Pascal-S, or Concurrent Pascal"

Albrecht Biedl, Institut fuer Softwaretechnik, Technische Universitat Berlin, 1000 Berlin 10, Germany VSH 419 (PUG member): "I enclose copies of the PASCAL Info we have published in 76 for a growing Pascal community at the Technical University of Berlin" (Numbers 0 (1976-01-05), 1 (1976-02-26), 2 (1976-03-03), and 3 (1976-06-15))

Richard J. Cicchelli, 901 Whittier Drive, Allentown, PA 18103 (PUG member):

"What we need next is a program which reads up Pascal relocatable binaries and proposes overlay structures. It should report field lengths vs. various overlay alternatives. It really is about time that many of the clerical and record keeping tasks of programming be automated. Pascal users should have the best tools for program development. Do you have any suggestions in this area? (source and object file maintenance systems?)

"Pascal users accumulate 25% of all charges on Lehigh's system.

"The last correspondence of the Zurich-Minnesota letters that I have was dated November 25. Incidentally I think your letters should be more supportive to them. I feel that reasoned discussion with the community at large is the way to resolve some of these technical issues. Let Wirth and Hoare set the principles and ideals. Help Urs with his implementations and help create a forum for information interchange. We need to promote growth and change in an environment of mutual cooperation.

"I believe any changes in implementation should be discussed with the users. Only organizers like you can facilitate the necessary communication. Note, I am not opposed to changes per se. If Pascal 6000 is to grow it must be a living, changing language. Rational change is possible only with the cooperation of the user community.

"I like the name PUG. See how Wirth likes it.

"I would like to see a user profile on PUG members: usage statistics, application environments, etc."

Kurt Cockrum, 3398 Utah, Riverside, CA 92507 (PUG member): "I am particularly interested in microprocessor (8080) implementations of Pascal."

