

Pascal News

NUMBER 14

COMMUNICATIONS ABOUT THE PROGRAMMING LANGUAGE PASCAL BY PASCALERS

JANUARY, 1979

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POLICY: PASCAL NEWS (78/10/01)

- * Pascal News is the official but informal publication of the User's Group.

Pascal News contains all we (the editors) know about Pascal; we use it as the vehicle to answer all inquiries because our physical energy and resources for answering individual requests are finite. As PUG grows, we unfortunately succumb to the reality of (1) having to insist that people who need to know "about Pascal" join PUG and read Pascal News - that is why we spend time to produce it! and (2) refusing to return phone calls or answer letters full of questions - we will pass the questions on to the readership of Pascal News. Please understand what the collective effect of individual inquiries has at the "concentrators" (our phones and mailboxes). We are trying honestly to say: "we cannot promise more than we can do."

- * An attempt is made to produce Pascal News 3 or 4 times during an academic year from July 1 to June 30; usually September, November, February, and May.
- * ALL THE NEWS THAT FITS, WE PRINT. Please send material (brevity is a virtue) for Pascal News single-spaced and camera-ready (use dark ribbon and 18.5 cm lines!).
- * Remember: ALL LETTERS TO US WILL BE PRINTED UNLESS THEY CONTAIN A REQUEST TO THE CONTRARY.
- * Pascal News is divided into flexible sections:

POLICY - tries to explain the way we do things (ALL-PURPOSE COUPON, etc.).

EDITOR'S CONTRIBUTION - passes along the opinion and point of view of the editor together with changes in the mechanics of PUG operation, etc.

HERE AND THERE WITH PASCAL - presents news from people, conference announcements and reports, new books and articles (including reviews), notices of Pascal in the news, history, membership rosters, etc.

APPLICATIONS - presents and documents source programs written in Pascal for various algorithms, and software tools for a Pascal environment; news of significant applications programs. Also critiques regarding program/algorithm certification, performance, standards conformance, style, output convenience, and general design.

ARTICLES - contains formal, submitted contributions (such as Pascal philosophy, use of Pascal as a teaching tool, use of Pascal at different computer installations, how to promote Pascal, etc.)

OPEN FORUM FOR MEMBERS - contains short, informal correspondence among members which is of interest to the readership of Pascal News.

IMPLEMENTATION NOTES - reports news of Pascal implementations: contacts for maintainers, implementors, distributors, and documentors of various implementations as well as where to send bug reports. Qualitative and quantitative descriptions and comparisons of various implementations are publicized. Sections contain information about Portable Pascals, Pascal Variants, Feature-Implementation Notes, and Machine-Dependent Implementations.

- * Volunteer editors are (addresses in the respective sections of Pascal News):

Andy Mickel - editor

Jim Miner, Tim Bonham, and Scott Jameson - Implementation Notes editors

Sara Graffunder and Tim Hoffmann - Here and There editors

Rich Stevens - Books and Articles editor

Rich Cichelli - Applications editor

Tony Addyman and Rick Shaw - Standards editors

Scott Bertilson, John Easton, Steve Reisman, and Kay Holleman - Tasks editors

PASCAL USER'S GROUP

USER'S

GROUP

ALL-PURPOSE COUPON

(78/10/01) • •

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University of Minnesota
Minneapolis, MN 55455 USA

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// Please enter me as a new member of the PASCAL USER'S GROUP for ___ Academic year(s) ending June 30, _____ (not past 1982). I shall receive all the issues of Pascal News for each year. Enclosed please find _____. (* Please see the POLICY section on the reverse side for prices and if you are joining from overseas, check for a PUG "regional representative." *)

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(* The U.S. Postal Service does not

// You messed up my ^{address} _{phone}. See below. forward Pascal News. *)

// Enclosed please find a contribution (such as what we are doing with Pascal at our computer installation), idea, article, or opinion which I wish to submit for publication in the next issue of Pascal News. (* Please send bug reports to the maintainer of the appropriate implementation listed in the Pascal News IMPLEMENTATION NOTES section. *)

// None of the above. _____

Other comments: From: name _____

mailing address _____

phone _____

computer system(s) _____

date _____

(* Your phone number aids communication with other PUG members. *)

JOINING PASCAL USER'S GROUP?

- membership is open to anyone: particularly the Pascal user, teacher, maintainer, implementor, distributor, or just plain fan.
- please enclose the proper prepayment (checks payable to "Pascal User's Group"); we will not bill you.
- please do not send us purchase orders; we cannot endure the paper work! (If you are trying to get your organization to pay for your membership, think of the cost of paperwork involved for such a small sum as a PUG membership!)
- when you join PUG anytime within an academic year: July 1 to June 30, you will receive all issues of Pascal News for that year unless you request otherwise.
- please remember that PUG is run by volunteers who don't consider themselves in the "publishing business." We produce Pascal News as a means toward the end of promoting Pascal and communicating news of events surrounding Pascal to persons interested in Pascal. We are simply interested in the news ourselves and prefer to share it through Pascal News, rather than having to answer individually every letter and phone call. We desire to minimize paperwork, because we have other work to do.
- American Region (North and South America): Join through PUG(USA). Send \$6.00 per year to the address on the reverse side. International telephone: 1-612-376-7290.
- European Region (Europe, North Africa, Western and Central Asia): Join through PUG(UK). Send £4.00 per year to: Pascal Users' Group/ c/o Computer Studies Group/ Mathematics Department/ The University/ Southampton SO9 5NH/ United Kingdom. International telephone: 44-703-559122 x700.
- Australasian Region (Australia, East Asia -incl. Japan): Join through PUG(AUS). Send \$A8.00 per year to: Pascal Users Group/ c/o Arthur Sale/ Dept. of Information Science/ University of Tasmania/ Box 252C GPO/ Hobart, Tasmania 7001/ Australia. International Telephone: 61-02-23 0561.

PUG(USA) produces Pascal News and keeps all mailing addresses on a common list. Regional representatives collect memberships from their regions as a service, and they reprint and distribute Pascal News using a proof copy and mailing labels sent from PUG(USA). Persons in the Australasian and European Regions must join through their regional representatives. People in other places can join through PUG(USA).

RENEWING? (Costs the same as joining.)

- please renew early (before August) and please write us a line or two to tell us what you are doing with Pascal, and tell us what you think of PUG and Pascal News to help keep us honest. Renewing for more than one year saves us time.

ORDERING BACKISSUES OR EXTRA ISSUES?

- our unusual policy of automatically sending all issues of Pascal News to anyone who joins within an academic year (July 1 to June 30) means that we eliminate many requests for backissues ahead of time, and we don't have to reprint important information in every issue--especially about Pascal implementations!
- Issues 1, 2, 3, and 4 (January, 1974 - August, 1976) are out of print.
- Issues 5, 6, 7, and 8 (September, 1976 - May, 1977) are out of print.
(A few copies of issue 8 remain at PUG(UK) available for £2 each.)
- Issues 9, 10, 11, and 12 (September, 1977 - June, 1978) are available from PUG(USA) all for \$10 and from PUG(AUS) all for \$A10.
- extra single copies of new issues (current academic year) are:
\$3 each - PUG(USA); £2 each - PUG(UK); and \$A3 each - PUG(AUS).

SENDING MATERIAL FOR PUBLICATION?

- check the addresses for specific editors in Pascal News. Your experiences with Pascal (teaching and otherwise), ideas, letters, opinions, notices, news, articles, conference announcements, reports, implementation information, applications, etc. are welcome. "All The News That Fits, We Print." Please send material single-spaced and in camera-ready (use a dark ribbon and lines 18.5 cm wide) form.
- remember: All letters to us will be printed unless they contain a request to the contrary.

MISCELLANEOUS INQUIRIES?

- Please remember that we will use Pascal News as the medium to answer all inquiries, and we regret to be unable to answer individual requests.

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The Draft Pascal Standard

We're devoting a whole issue to this BSI/ISO Working Draft 3 for Standard Pascal. (BSI is the British Standards Institute; ISO is the International Standards Organization.) As Tony Addyman says in his "covering note", the draft is presented for public comment, and comments should be sent to him. When the final draft is submitted to BSI and approved, it will be disseminated through ISO to member bodies such as ANSI (the American National Standards Institute) for adoption. An ISO Standard will avoid the horror of national variants for Pascal.

Pascal standards have been a topic in every issue of Pascal News since issue #6. The PUG membership through Tony will soon benefit from the standardization of Pascal in a form preserving the Revised Report. For an important programming language, this is an unusual event, because it will now spur on manufacturer interest in Pascal.

We have always contended that Pascal standards should be given special consideration, because the language and its development have been unique:

1. Pascal was designed by a single computer scientist--Niklaus Wirth--not by a committee inside or outside a computer manufacturer.
2. Pascal has been used widely and successfully not only to teach the art of programming, but also as an acceptable systems-implementation language.
3. Pascal incorporates machine-independent programming concepts with the goal of program portability. It is an increasingly-used, respectable vehicle for writing portable, systems software. Unlike other programming languages, a clear distinction was made between the language Pascal and any particular implementation of Pascal.
4. Toward this end, there are aspects of Pascal which are explicitly left up to an implementation to define, and there may be cases where an individual implementation may add machine-dependent extensions.
5. Pascal represents a combination of design compromises whose balance was well-considered: simplicity, power, generality, efficiency, portability, clarity, conciseness, redundancy, and robustness. In the late 60's and early 70's, ideas in programming languages and existing machine designs influenced but did not determine the form of Pascal. There exists a delicate equilibrium among these conflicting design goals.

It is important, then, that the BSI/ISO Standard was not meant to incorporate any change to the language with the single exception that the formal parameters of procedures and functions which are themselves parameters be fully specified. The results of the International Working Group on Pascal Extensions (see Pascal News #13) will be included as a non-binding, supplemental Appendix to the Standard.

Finally, it seems only appropriate that a language with European origins has been standardized through the efforts of Europeans: The British Standards Working Group DPS/13/4, The Swedish Technical Committee on Pascal, the French AFCET Subgroup on Pascal, the Pascal Group within the German ACM, and Niklaus Wirth.

Editor's Contribution

Andy - 78/12/01



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24th November, 1978.

Dear Andy,

Since sending out a large number of copies of the third working draft, one of the members of DPS/13/4 (Brian Wichmann) has noticed a serious, unintentional error on page 13. I am including a corrected version of this page for you but I cannot afford to send corrections to all the forty or so recipients of the draft. This error will be corrected in the BSI/ISO draft and in any other copies I send out. (I currently have none left!)

Please print this letter or draw the essential contents of the letter to your readers for the benefit of those already in receipt of the draft.

Yours sincerely,

A. M. Addyman.

(* Note: the new page 13 has been included in this issue (page 21). *)

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COVERING NOTE

This document has been sent for processing by B.S.I. and will be the basis of a draft for public comment. The official draft will be available through the usual channels. I will be unable to informally circulate the official draft myself. For this reason, together with the further delay caused by the B.S.I. processing, I am sending you a copy of this working draft.

This document has no official status within B.S.I. Any comments concerning this document should be sent to the address below. If you wish to delay your consideration of this matter until the official draft for public comment becomes available you should acquire the official draft from, and send your comments to, an official standards organisation.

I expect that the official draft will be distributed to ISO member bodies.

A.M.Addyman

8.11.78

Address:

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A Commentary on Working Draft/3

At the September meeting of DPS/13/4 it was agreed that the second working draft with certain corrections would be sent to B.S.I. for processing to form a draft for public comment. This decision does not indicate that the group are completely satisfied with the document. In fact, there are several areas of detail in which many of the group are unhappy with the draft, but feel that we must stay with the currently accepted definitions.

The rest of this document lists the main areas which caused concern and also draws the attention of the reader to items in Working Draft/3 which are likely to be of interest.

Areas of Concern

- 6.1.3 and 6.6 Should directives be reserved words?
- 6.2 Should the ordering of the definition and declaration parts be relaxed? This would permit any number of such parts in any order.
- 6.4.2.1 and 6.5.2.1 Are the array equivalence rules of any benefit?
- 6.6.4.1.1 Should the use of rewrite be mandatory? Should its omission have a defined effect?
- 6.6.4.2.3. and 6.9 Should there be default file parameters? To which procedures and functions do these apply?
- 6.7.1.1 Should DIV have an implementation-dependent effect for negative operands?
- 6.9 What are the correct definitions of the form of Pascal output? In particular - leading spaces on numbers and strings in a small field width.
- 6.9.5. Should the page procedure be removed from the definition of Pascal.

Areas to Note

- 6.3.2.1 The definitions and subsequent uses of the terms error, implementation defined, implementation dependent and undefined.
- 6.4.2.2 and 6.8.2.4 Concerning the scope rules.
- 6.4.2.4 Defines the structure of a textfile
- 6.4.4 and 6.4.5 Define type compatability etc.
- 6.6.3.2. VAR parameters are defined as having the effect of a reference implementation.
- 6.6.3.3 and 6.6.3.4 The only language change - the specification of procedural and functional parameters. This change was introduced after repeated requests to do so from Prof. N. Wirth.
- 6.7 Defines the type of an expression.
- 6.8.2.3.3 Note the definition of the for-statement.

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