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PASCAL USERS GROUP

# PASCAL NEWS

NUMBER 18

COMMUNICATIONS ABOUT THE PROGRAMMING LANGUAGE PASCAL BY PASCALERS

MAY, 1980

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- \* 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!
  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 that we can do."
- \* Pascal News is produced 3 or 4 times during an academic year; usually in September, November, February, and May.
- \* ALL THE NEWS THAT'S FIT, 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 - explains 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.

Po icy

**Purpose:** The Pascal User's Group (PUG) promotes the use of the programming language Pascal as well as the ideas behind Pascal through the vehicle of Pascal News. PUG is intentionally designed to be non political, and as such, it is not an "entity" which takes stands on issues or support causes or other efforts however well-intentioned. Informality is our guiding principle; there are no officers or meetings of PUG.

The increasing availability of Pascal makes it a viable alternative for software production and justifies its further use. We all strive to make using Pascal a respectable activity.

**Membership:** Anyone can join PUG, particularly the Pascal user, teacher, maintainer, implementor, distributor, or just plain fan. Memberships from libraries are also encouraged. See the ALL-PURPOSE COUPON for details.

#### Facts about Pascal, THE PROGRAMMING LANGUAGE:

Pascal is a small, practical, and general-purpose (but not all-purpose) programming language possessing algorithmic and data structures to aid systematic programming. Pascal was intended to be easy to learn and read by humans, and efficient to translate by computers.

Pascal has met these goals and is being used successfully for:

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

Pascal implementations exist for more than 105 different computer systems, and this number increases every month. The "Implementation Notes" section of Pascal News describes how to obtain them.

The standard reference and tutorial manual for Pascal is:

Pascal - User Manual and Report (Second, study edition)  
by Kathleen Jensen and Niklaus Wirth.  
Springer-Verlag Publishers: New York, Heidelberg, Berlin  
1978 (corrected printing), 167 pages, paperback, \$7.90.

Introductory textbooks about Pascal are described in the "Here and There" section of Pascal News.

The programming language, Pascal, was named after the mathematician and religious fanatic Blaise Pascal (1623-1662). Pascal is not an acronym.

Remember, Pascal User's Group is each individual member's group. We currently have more than 3357 active members in more than 41 countries. this year Pascal News is averaging more than 120 pages per issue.

POLICY

## 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 (check payable to "Pascal User's Group"); we will not bill you.
- Please do not send us purchase orders; we cannot endure the paper work!
- When you join PUG any time within an academic year: July 1 to June 30, you will receive all issues of Pascal News for that year.
- 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. We desire to minimize paperwork, because we have other work to do.

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- American Region (North and South America): Send \$6.00 per year to the address on the reverse side. International telephone: 1-404-252-2600.
  - 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; or pay by direct transfer into our Post Giro account (28 513 4000); International telephone: 44-703-559122 x700.
  - Australasian Region (Australia, East Asia - incl. Japan): PUG(AUS). Send \$A8.00 per year to: Pascal Users Group, c/o Arthur Sale, Department of Information Science, University of Tasmania, Box 252C GPO, Hobart, Tasmania 7001, Australia. International telephone: 61-02-23 0561 x435

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?

- 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. Renewing for more than one year saves us time.

## ORDERING BACK ISSUES OR EXTRA ISSUES?

- Our unusual policy of automatically sending all issues of Pascal News to anyone who joins within a 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 .. 8 (January, 1974 - May 1977) are out of print. (A few copies of issue 8 remain at PUG(UK) available for £2 each.)
- Issues 9 .. 12 (September, 1977 - June, 1978) are available from PUG(USA) all for \$10.00 and from PUG(AUS) all for \$A10.
- Issues 13 .. 16 are available from PUG(UK) all for £6; from PUG(AUS) all for \$A10; and from PUG(USA) all for \$10.00.
- Extra single copies of new issues (current academic year) are: \$3.00 each - PUG(USA); £2 each - PUG(UK); and \$A3 each - PUG(AUS).

## SENDING MATERIAL FOR PUBLICATION?

- Your experiences with Pascal (teaching and otherwise), ideas, letters, opinions, notices, news, articles, conference announcements, reports, implementation information, applications, etc. are welcome. Please send material single-spaced and in camera-ready (use a dark ribbon and lines 18.5 cm wide) form.
- All letters will be printed unless they contain a request to the contrary.

APPLICATION FOR LICENSE TO USE VALIDATION SUITE FOR PASCAL

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Richard J. Cichelli  
On behalf of A.H.J. Sale & R.A. Freak

Pascal User's Group, c/o Rick Shaw  
Digital Equipment Corporation  
5775 Peachtree Dunwoody Road  
Atlanta, Georgia 30342 USA

**\*\*NOTE\*\***

- Membership is for an academic year (ending June 30th).
- Membership fee and All Purpose Coupon is sent to your Regional Representative.
- SEE THE POLICY SECTION ON THE REVERSE SIDE FOR PRICES AND ALTERNATE ADDRESS if you are located in the European or Australasian Regions.
- Membership and Renewal are the same price.
- The U. S. Postal Service does not forward Pascal News.

- 
- [ ] Enter me as a new member for:
    - [ ] 1 year ending June 30, 1980
    - [ ] 2 years ending June 30, 1981
    - [ ] 3 years ending June 30, 1982

[ ] Send Back Issue(s)  

[ ] My new/correct address/phone is listed below

[ ] Enclosed please find a contribution, idea, article or opinion which is submitted for publication in the Pascal News.

[ ] Comments: \_\_\_\_\_  
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0 POLICY, COUPONS, INDEX, ETC.

1 EDITOR'S CONTRIBUTION

2 SPECIAL ARTICLE

2 "ISO DP/7185 -- A Draft Proposed Standard for  
the Programming Language Pascal" -- A. Addyman, et al.




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Contributors to this issue (#18) were:

EDITOR	Rick Shaw
Here & There	John Eisenberg
Books & Articles	Rich Stevens
Applications	Rich Cichelli, Andy Mickel
Standards	Jim Miner, Tony Addyman
Implementation Notes	Bob Dietrich
Administration	Moe Ford, Kathy Ford, Jennie Sinclair

# Editor's Contribution

Wow! Bet ya didn't expect to see another edition of Pascal News so soon! Actually, PN #17 was so late that we printed both editions at the same time.

## ABOUT THIS ISSUE

In an effort to keep our members up to date with activity on the standards front, we have devoted this whole issue to the proposed ISO draft standard.

It is very important that our members review this proposal and comment if they feel it necessary. The national standards body in your country, or a member of the standards committee is the best person to send any comments. (See also Tony Addyman's comments on returning comments.)

## ON BEING ON TIME

As you have probably noticed, Pascal News is still not back on a proper schedule. So, what are we doing about it? Well I'll tell you. We are working very hard. Honest! The plan is to publish PN #19 in June. This would get us almost up to date for this year. Then work through the summer to get PN #20 out by September. This would make us almost on schedule, right? The reason that we can be so optimistic is that all the set up work for an operation in Atlanta (as opposed to Minneapolis) has been completed. Now all we have to do is crank out the news!

## THE BAD NEWS

Inflation has hit PUG. As of 1-July-80 the membership fee for Pascal Users Group will have to be raised. It will not be much, but at least enough to cover the cost of printing and mailing. We are loosing money every issue now. In the U.S. at the moment it is only a few cents a copy. But at \$1.43 a copy for returned issues by the Post Office we are getting killed. Note that you members can help with this problem, by always informing us of your new address when you move.

## THANKS

We all owe Tony Addyman a debt of gratitude, for the years (literally!) of work that has gone into the proposal for an ISO standard for the language Pascal. Without his drive and enthusiasm, the standard for Pascal would still be just a good idea.

A Draft Proposal for Pascal

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## 0. FOREWORD TO THE DRAFT

The language Pascal was designed by Professor Niklaus Wirth to satisfy two principal aims:

- (a) to make available a language suitable for teaching programming as a systematic discipline based on certain fundamental concepts clearly and naturally reflected by the language.

- (b) to define a language whose implementations could be both reliable and efficient on then available computers.

However, it has become apparent that Pascal has attributes which go far beyond these original goals. It is now being increasingly used commercially in the writing of both system and application software. This standard is primarily a consequence of the growing commercial interest in Pascal and the need to promote the portability of Pascal programs between data processing systems.

## 1. SCOPE OF THIS STANDARD

### 1.1 This Standard specifies requirements for

- (a) the syntax of Pascal;
- (b) the semantic rules for interpreting the meaning of a program written in Pascal;
- (c) the form of input data to be processed by a program written in Pascal;
- (d) the form of output data produced by a program written in Pascal.

### 1.2 This standard does not specify

- (a) the size or complexity of a program and its data that will exceed the capacity of any specific data processing system or the capacity of a particular processor;
- (b) the minimal requirements of a data processing system that is capable of supporting an implementation of a processor for Pascal;
- (c) the set of commands used to control the environment in which a Pascal program is transformed and executed;
- (d) the mechanism by which programs written in Pascal are transformed for use by a data processing system.

## 2. REFERENCES

None.

## 3. DEFINITIONS

- (a) error. A violation by a program of the requirements of this standard.
- (b) implementation-defined. Those parts of the language which may differ between processors, but which will be defined for any particular processor.
- (c) implementation-dependent. Those parts of the language which may differ between processors, and for which there need not be a definition for a particular processor.
- (d) processor. A compiler, interpreter, or other mechanism which accepts the program as input and either executes it, prepares it for execution, or both.
- (e) scope. The text for which the declaration or definition of an identifier or label is valid.
- (f) totally-undefined. If a variable is of a structured-type, the state of the variable when every component of the variable is totally-undefined. Totally-undefined is synonymous with undefined if the variable is not of a structured-type.

