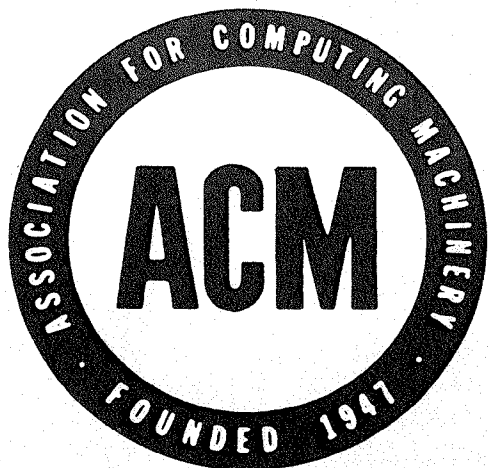


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# SIGPLAN Notices

A Monthly Publication of the  
SPECIAL INTEREST GROUP ON PROGRAMMING LANGUAGES

Volume 13, Number 11, November 1978

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## official sigplan messages

### Chairman's Comments

It is once again almost time for the ACM Annual Conference. This year it will be in Washington, D. C. on December 4-6. SIGPLAN, via the excellent efforts of John Knight of NASA Langley, has put together a solid, varied and pragmatically oriented series of sessions, the details of which appeared in the October issue of SIGPLAN Notices. This program encompasses language design, language usage, language implementation and the standardization and development of existing languages. I hope that many of you will be able to attend. My thanks go to John Knight for his tireless, imaginative work (often under difficult circumstances) in putting together a program that should be of interest to and useful to the whole SIGPLAN membership.

In addition to the sessions in the technical program, SIGPLAN is sponsoring two evening meetings of interest to users of FORTRAN and PASCAL. On Monday evening in the Adams/Hamilton Suite, there will be an informal meeting devoted to PASCAL. This meeting, which is scheduled from 8 to 10 PM, will feature short (about 10 minute) presentations on PASCAL related topics and will be a forum for discussing problems, possibilities and experience with PASCAL.

On Tuesday evening from 8 to 10 PM in the Franklin Room of the Sheraton Park Hotel, there will be a Technical/Business meeting of the SIGPLAN Adhoc FORTRAN Committee. This meeting will begin with a presentation on The Portability Aspects of the New FORTRAN 77 Language Standard by F. E. Holberton of the National Bureau of Standards. This will be followed by a discussion of the plans for the creation of a fullfledged SIGPLAN Technical Committee on FORTRAN. The SIGPLAN Executive Committee is currently considering this step and is expected to act on the petition at its ACM Conference meeting. The Tuesday evening meeting should be of interest to all people interested in "whither FORTRAN?" and how might they influence future developments.

Just prior to the FORTRAN meeting and just after the last technical session of the day on Tuesday, SIGPLAN is sponsoring a Member-Officer Reception from 5:30 to 7:00 PM in the Vinson Room of the Sheraton. Those members who attended the reception we held at NCC in Anaheim know that this is a good event to attend to quiz the officers (both SIGPLAN's and other ACM officials), to meet with your colleagues to talk shop or discuss where to eat, and to be refreshed from the long conference day. To meet our formal requirement for a business meeting, the officers will be available to present and discuss our plans for future SIGPLAN activities. I hope those of you who will attend the conference will come and enjoy yourselves.


Coming up shortly after the ACM Conference is the SIGPLAN/SIGACT Conference on Principles of Programming Languages. It will be held in San Antonio, Texas on January 29-31, 1979. The program includes such topics as program optimization, analysis of programs, analysis of algorithms used in translators and run time systems, logic for programs, semantic definition of programming languages, description and analysis of concurrent programs and data languages. More details

will appear in the December issue of SIGPLAN Notices.

Further off in the future is a Symposium on Compiler Construction that will be held in Boulder, Colorado the week of August 6-10, 1979. This week will begin with a two day pre-conference tutorial program that will help update attendees on the techniques being used in more advanced compilers and translators. Then, the final three days will be devoted to a state-of-the-art conference on new techniques for compiler construction. Boulder in August is delightful so you should plan to attend SIGPLAN's first compiler technology conference since 1965. I am confident that conference chairman Fran Allen (IBM Research), program chairman Steve Johnson (Bell Labs) and tutorial chairman Frank DeRemer (U.C. Santa Cruz) will assemble an excellent program. Further details on the conference are elsewhere in this issue.

The plan to publish extra, special issues of SIGPLAN Notices has been temporarily suspended because the efforts to create a new formal publication in the area of programming languages have proceeded more rapidly than was initially anticipated. The ACM Council, at their June meeting at NCC, approved in principle the creation of an ACM Transactions on Programming Languages and Systems (TOPLAS). This new Transactions will be broader in scope than the current programming languages and techniques sections of the Communications of the ACM. It will include material ranging from the current content of CACM to the better articles that appear in SIGPLAN Notices. The categories of material this Transactions will encompass include Analysis (of languages, translators and methods), Experience Reports, Implementation Techniques, Language Descriptions, Language Design Criteria, Programming Methods, Semantics, Software Engineering, and Usage (ways to perform a particular task in a given class of languages). If everything proceeds according to the plan, the ACM Council should approve the proposal at their December meeting and the first issue should appear in July of 1979. Because this new Transactions should include some of the material that would have gone into special issues of SIGPLAN Notices, those special issues will be held in abeyance until the effects of creating the Transactions are apparent.

I hope to see many of you at ACM '78 and I look forward to your comments and suggestions.

  
Stephen N. Zilles  
Chairman

# CALL FOR PAPERS

## SIGPLAN Symposium on Compiler Construction

Boulder, Colorado, August 8 — 10, 1979

The symposium considers methods of, and experience with, constructing compilers. In contrast to the annual Principles of Programming Languages conference, the emphasis is less on theoretical methods, and more on techniques applied to real compilers. Especially welcome are papers on the application of theoretical methods and practices to practical compilers. Some typical (but not exclusive) topics of interest are: compiler-compilers; code generation techniques; compiler generation for particular languages, language constructs, or system architectures; compiler portability and bootstrapping; compiler testing and verification; code optimization and its practical effect; measuring, and achieving, compile time and execution time efficiency.

Please send *six copies* of a summary (not a complete paper) to the program chairman:

Dr. Stephen C. Johnson  
Room 2C-559  
Bell Telephone Laboratories  
600 Mountain Avenue  
Murray Hill, New Jersey 07974

Submissions will be read by each member of the program committee:

Susan L. Graham, Univ. of Calif., Berkeley  
David R. Hanson, University of Arizona, Tucson  
William Harrison, I.B.M.  
John Hennessy, Stanford University  
James G. Mitchell, Xerox P.A.R.C.  
Stephen C. Johnson, chairman, Bell Labs

**Summaries should *not* indicate author name and address. This information should appear *only* in a cover letter to the chairman, who will withhold it from the rest of the committee during the selection process. Summaries should explain what is new and interesting about the work and what has actually been accomplished. The committee will consider the appropriateness, clarity, originality, practicality, significance, and overall quality of each summary. Time does not permit consideration of complete papers. A length of 8 to 12 *double spaced* typed pages is strongly suggested.**

**February 1, 1979 is the deadline for submission of summaries. Authors will be notified of acceptance or rejection by March 15, 1979. The accepted papers must be typed on special forms and received by the program chairman at the above address by May 1, 1979.**

Proceedings will be distributed at the symposium and will subsequently be available for purchase from ACM. The local arrangements chairman is:

Professor Leon Osterweil  
Department of Computer Science  
University of Colorado  
Boulder, Colorado 80309

## publications

### Compiled by

Ronald L. Lancaster  
Computer Science Department  
Bowling Green State University  
Bowling Green, Ohio 43403

#### Improvements to SEMANOL. Volume I.

Paul T. Berning.

TRW Defense and Space Systems Group Redondo Beach  
Calif Nov 77, 64p RADC-TR-77-365-VOL-1

AD-A049 472/4WC Price code: PC A04/MF A01  
5.25 3.00

This report describes the work that was performed in meeting the goals of this contract, provides a brief introduction to the SEMANOL method, and discusses issues in formal semantic description that arose in performing these tasks. This project accomplished the definition of an improved semantic specification metalanguage, SEMANOL(76), corollary upgrading of the interpreter program to process the new metalanguage; substantial improvement of the processing efficiency of this new SEMANOL interpreter; implementation of a powerful new user command language for the SEMANOL(76) interpreter; writing of a comprehensive formal specification of the JOVIAL(J3) programming language; and presentation of a three-day course in the use of SEMANOL(76). The effectiveness of the SEMANOL system was greatly improved as a result of this work. In addition, a basis for control of the JOVIAL(J3) programming language was established by production of a formal specification of JOVIAL(J3). SEMANOL(76) can now be a useful working tool in the USAF Higher Order Language Control Facility.

#### SEMANOL (76) Specification of Jovial (J3). Volume III.

Frank C. Belz, and Ira M. Green.

TRW Defense and Space Systems Group Redondo Beach  
Calif Nov 77, 372p RADC-TR-77-365-VOL-3

AD-A049 474/0WC Price code: PC A16/MF A01  
12.50 3.00

This report contains a formal specification of the JOVIAL(J3) programming language. The formal specification is written in TRW's SEMANOL(76) metalanguage, and so is a specification given in operational (i.e., interpretive) terms. The specification is generally complete and extremely detailed. This level of detail is unavoidable if JOVIAL(J3) semantics are to be comprehensively treated, as was done here. It also results from producing a specification that can actually produce operational results. However, by having an operational form of specification, it was possible to test the JOVIAL(J3) specification through use of the SEMANOL(76) interpreter program. This testing insured the syntactic correctness of the entire metaprogram, and that much of the semantics yielded correct results for inputs of varying complexity. (Author)

#### Introduction to the 'RS' Portable Algol 68 Compiler.

S. G. Bond, and P. M. Woodward.

Royal Radar Establishment Malvern (England) Aug 77,  
31p RRE-TN-802, DRIC-BR-59078

AD-A049 572/1WC Price code: PC A03/MF A01  
4.50 3.00

This paper describes the portable compiler for Algol 68 developed at RSRE by Currie and Morison. Chapter 2 defines the language extensions handled by the compiler, and the system of modular compilation as seen by the user. Chapter 3 outlines the structure of a complete system, emphasizing the design of the intermediate language produced by the compiler for input to a machine-dependent translator. Though factual, this paper is not the system documentation. (Author)

#### Structured Software Study.

J. David McGonagle.

Anderson (James P) and Co Fort Washington PA 31 Oct 74, 94p AFAL-TR-73-40 Distribution limitation now removed.

AD-B015 698/4WC Price code: PC A05/MF A01  
6.00 3.00

This study reports an evaluation of Structured Programming as an aid in the production of highly reliable computer programs. An approach to problem analysis and program composition which organizes the program text to clearly reflect the order of execution for the program. The resultant program text reflects the subdivision of the problem into smaller tasks which are clearly identifiable. The rules for performance and ordering of these sub-tasks are reflected in the limited but sufficient set of controls used in the program construction. A set of Principles of Structured Programming are developed together with guides for determining an optimal upper and lower bounds on a program size. The applications of the Principles to a program are illustrated in the study report. A set of observations and conclusions drawn from the experience of developing a program in this way are presented. A bibliography of structured programming is reported. (Author)

#### Structured Simulation Programming.

Jacob Palme.

Research Inst. of National Defense, Stockholm (Sweden)  
Mar 78, 26p FOA-C10081-M3(E5)

PB-280 259/3WC Price code: PC A03/MF A01  
4.50 3.00

This report discusses how structured programming techniques can be applied to the programming of simulation programs. It tries to isolate special circumstances in simulation programming which will affect the way in which such programs are structured. Topics discussed include the following: Why structured simulation programs: Structuring dimension - the real world; Structuring dimension - program tasks; Structuring dimension - levels; Level structuring in Simula; An example of level structuring - GPSS. An example of level structuring - QSIM: Structuring of large Simula programs into separately compiled modules

Note: Papers with an NTIS report number are available from the National Technical Information Service, Springfield, Virginia 22151, at the prepaid prices indicated for paper copy (PC) and microfiche (MF).

**Graphic Programming in COBOL.**

Y. Onuma, K. Isozaki, and Y. Nakamura.  
Japan Atomic Energy Research Inst., Tokyo. Jan 77. 45p  
Available in microfiche only. U.S. Sales Only.  
JAERI-M-6885 Price code: MF A01<sub>2.00</sub>

A FORTRAN program GCOBOL has been developed, which enables computer graphics in COBOL. The GCOBOL reads graphic instructions one by one written on a disk by a COBOL program, and outputs graphic figures to plotter, COM, F6233A or T4014 graphic display. An outline of the GCOBOL is given and the method of graphic programming in COBOL is described. (Atomindex citation 08:344344)

**Macrogenerator with the Optimization of Macrodefinition Search During the Translation Process.**

V. A. Zaginajko, and M. Yu. Popov.  
Joint Inst. for Nuclear Research, Dubna (USSR). 1975. 9p  
Available in microfiche only. U.S. Sales Only.  
JINR-11-9109 Price code: MF A01<sub>3.00</sub>

An algorithm of macrogenerator operation elaborated with BESM-6 computer is described. The macrogenerator is a translator from 'MACROS' language. As a result of the translation a 'MADLEN' autocode program is formed. A method of automatic generation of the macrodetermination search program is employed so as to reduce a macrodetermination search period for the translator described. (Atomindex citation 08:341282)

**ORT-1 Optimizing Variant of Cycle Processing During Translation from the FORTRAN Language on the BESM-6 Computer.**

O. En Ii, and V. P. Shirikov.  
Joint Inst. for Nuclear Research, Dubna (USSR). 1975.  
18p Available in microfiche only. U.S. Sales Only.  
JINR-11-9220 Price code: MF A01<sub>3.00</sub>

An algorithm is described for an optimization of cycle processing in the course of translation from FORTRAN language with BESM-6 computer employed. The optimization is ensured through a rational determination of index function values as well as an efficient application of computer index registers. Programs of matrix multiplication are considered as an example of the cycle organization (Atomindex citation 08:341266)

**Specifying Abstract Data Types by Restriction.**

National Bureau of Standards, Washington, D.C. Apr 78, 7p Pub. in ACM SIGSOFT, Software Eng. Notes 3, n2 p7-13, Apr 78.  
PE-281 047/1WC Not available NTIS

Restrictions are one instance of mathematically-based relationships between types that can be used to simplify program specifications. Restriction of an abstract data type provides a theoretical justification for the concept of a hidden function that appears in some current specification methodologies. The use of type restrictions to simplify formal specifications is illustrated by the example of traversible stacks.

**User Requirements Language (URL) User's Manual. Part I. (Description) H6180/Multics/Version 3.2.**

D. Teichroew, A. Hershey, and S. Spewak.  
Michigan Univ Ann Arbor Dept of Industrial and Operations Engineering Mar 77, 200p ESD-TR-78-127-VOL-1 Availability: Document partially illegible.  
AD-A054 096/3WC Price code: MF A01<sub>3.00</sub>

This report is part of a series that deals with a Computer-Aided Design and Specification Analysis Tool (CADSAT). The purpose of the tool is to describe the requirements for information processing systems and to record such descriptions in machine-processable form. The major components of CADSAT are the User Requirements Language (URL) and the User Requirements Analyzer (URA) which can operate in an interactive computer environment. This report describes how the formal URL may be used to define systems. It explains the language statements available, their use and application on a Honeywell 6180 Multics Computer.

**GENESIS: A Language for Describing the Development of Programs.**

W. B. Tyler, and W. M. McKeeman.  
California Univ Santa Cruz Information Sciences Feb 78, 27p TR-78-2-002  
AD-A054 282/9WC Price code: PC A03/MF A01<sub>4.50</sub><sub>3.00</sub>

A language, named GENESIS, is proposed for describing the program development process and bootstrapped programs in particular. It is concise (a seven line grammar) and general. The report contains syntax, semantics, examples and an approach to a formal semantics for the language. (Author)

**The Specification of Code Generation Algorithms.**

Christopher J. Terman.

Massachusetts Inst of Tech Cambridge Lab for Computer Science Jan 78, 93p MIT/LCS/TR-199

**AD-A054 301/7WC** Price code: PC A05/MF A01

This thesis addresses the problem of <sup>6.00</sup> automatically <sup>3.00</sup> constructing the code generation phase of a compiler from a specification of the source language and target machine. A framework for such a specification is presented in which information about language and machine-dependent semantics is incorporated as a set of transformations on an internal representation of the source language program. The intermediate language which serves as the internal representation, and the metalanguage in which the transformations are written are discussed in detail. The major goal of this approach is to separate machine and language-dependent knowledge (as embodied in a transformation catalogue) from general knowledge about code generation. This general knowledge is supplied by the third component of the framework: a metainterpreter incorporating a fairly complete repertoire of language and machine-independent optimization algorithms for intermediate language programs. The metainterpreter is also capable of selecting and applying transformations from the transformation catalogue. The three-component framework described in the thesis provides a specification that can easily be tailored to new languages and machine architectures without compromising the ability to generate optimal code. (Author)

**Design and Implementation of a High-Level Language for a Programmable Frame Buffer.**

D. R. Faul.

California Univ., Livermore. Lawrence Livermore Lab. 29 Oct 77, 129p

**UCID-17745** Price code: MF A01 <sup>3.00</sup>

The design and implementation of a language for a programmable frame buffer are presented. The language provides the facilities of a symbolic machine language, yet displays high-level block and control structure. This report describes the hardware peculiarities of the Programmable Picture Processor (PPP), the programmable module of the frame buffer, and how the language design compensates for its restrictions and utilizes its special characteristics. The implementation of the language, as outlined in this report, is structured around the use of a syntax analyzer/parser generator program for SLR(1) and LALR(1) grammars. Translated code is compared to hand-code for a representative PPP program. The results indicate the language allows quick, concise, and readable PPP programming. The translated programs are also compact in storage and reasonably efficient in execution time compared to hand-code. A language description, implementation description, and hardware summary are included in separate appendices. 2 figures. (ERA citation 03:032524) (Portions of this document are not fully legible)

## news of past events

### Los Angeles SIGPLAN Chapter SEPTEMBER Meeting

Topic: SOFTWARE  
QUALITY ASSURANCE TOOLS  
AND TECHNIQUES

Speaker: Donald J. Reifer, TRW  
Defense & Space Systems Group  
Redondo Beach, California

#### Abstract:

This presentation reported the results of a survey conducted to ascertain the applicability of modern software development tools and techniques to software quality assurance. Applicable state-of-the-art tools and techniques were categorized by functional area and also described generically. An assessment of the state of the technology was made, and recommendations for developing new and promising tools and techniques were offered.

### Boston SICPLAN October Meeting

Topic: TECHNICAL REQUIREMENTS  
for the DoD Common HOL

Speaker: David A. Fisher  
Institute for Defense Analyses

#### Abstract:

The common programming language effort of the Department of Defense (DoD) is an attempt to reduce the development and maintenance cost and to improve the quality of the resulting software in new embedded computer systems within the DoD.

A significant portion of the effort thus far has been devoted to the development of a set of technical requirements for programming languages that would be appropriate for wide use in embedded computer applications within the military environment. The resulting requirements

reflect the special needs of embedded computer applications for parallel processing and real time control, for automatic error recovery, and for interfacing special purpose peripheral devices. They also have been strongly influenced by the facts that the majority of DoD software costs are for maintenance rather than development and that the unnecessarily duplicative costs in existing systems are primarily for support rather than operational systems. The technical requirements also prescribe a framework in which the user can control the trade-offs among reliability, maintainability, and the various forms of efficiency.

This talk included a brief review of the first four years of the common language effort, discussed the major trade-offs that have been considered in developing the technical requirements, and provided a rationale for some of the major requirements that have resulted.

### Boston SICPLAN November Meeting

Topic: PQCC: A PRODUCTION  
QUALITY COMPILER-COMPILER

Speaker: Bill Wulf  
Carnegie-Mellon University  
Pittsburgh, PA.

#### Abstract:

The PQCC Project at Carnegie-Mellon is attempting to fully automate the generation of high-quality compilers. The goal is to accept two inputs, a formal language specification and a formal machine specification, and to produce from these a compiler that is competitive with the very best hand-crafted compilers.

Previous "compiler-compilers" have been little more than parser-generators. Although parsing is interesting and necessary, it constitutes a very small fraction of a real compiler. Thus the PQCC group has focused its attention on the automatic generation of optimization and code generation phases. This talk described the target compiler structure, some of its algorithms, and some of the ways in which machine descriptions are used to tailor the compiler to specific machines.



## NOTICES

### ALGOL 68 Compiler for IBM S/370

A high-performance checkout compiler for Algol 68 is now available for the IBM S/370. The system was developed in consultation with Dr. B. J. Mailloux of the Department of Computing Science at the University of Alberta.

FLACC (Full Language Algol 68 Checkout Compiler) implements the complete revised language and hardware representation as defined in SIGPLAN Notices, Volume 12, Number 5 (May 1977). This includes all of formatted, unformatted and binary transput, all of the standard prelude, parallel processing, united modes, long and short modes, and heap allocation: features generally omitted in subset implementations.

The program checkout features include a fully symbolic dump, a trace function, profile gathering, and a traceback of active locales at termination. Checks include use of uninitialized or undeclared values, arithmetic overflows, subscripts out of bounds, scope errors, and deadlock of parallel processes.

All system-related routines have been gathered into a single module with a rigidly-defined interface. FLACC runs under OS/VS, MVS, and MTS.

Licensing details are available upon request.

Inquiries should be addressed to:

C. Thomson  
Chion Corporation  
P. O. Box 4942, South Edmonton  
Edmonton, Alberta, Canada  
T6E 5G8

### NEW STANDARD FOR DETERMINING COMMUNICATION SYSTEM PERFORMANCE

Determination of Performance of Data Communications Systems That Use Bit-Oriented Communication Control Procedure is the jaw-breaking title of a proposed new standard. Identified as BSR X3.79, the draft document has been accepted by the X3 Standards Committee for public review and comment. The comment period ends January 22, 1979.

This new proposal was developed by Technical Task Group X3S35, for which George J. McCallister of Bell Laboratories is the acting chairman. This is the group which also prepared the earlier standard, X3.44-1974, which applies only to performance of character-oriented

continued from p. 11

communications systems which use the control characters of ASCII for link control. While the previous standard covered only the performance of data communications links, the new BSR X3.79 is applicable to links and data networks using the emerging bit-oriented communications control procedures.

The performance measurement criteria defined in the earlier X3.44-1974 have been retained and expanded. The values of these criteria can be calculated and can be measured. They can be used to specify, evaluate, and compare the performance of links or of networks. It is further intended that they be used to evaluate performance on an operating basis and be sufficiently sensitive to deterioration in performance as to aid the user in applying corrective measures.

Copies of the proposed standard may be obtained from the X3 Secretariat, the Computer and Business Equipment Manufacturers Association. Orders should be sent with prepayment of \$3.00 to:

CBEMA/Standards, 1828 L Street, N. W., Washington, D. C. 20036

ROBERT W. FLOYD TO RECEIVE 1978 A. M. TURING AWARD  
FROM ASSOCIATION FOR COMPUTING MACHINERY

Robert W. Floyd of Stanford University has been named the recipient of ACM's Turing Award for 1978. In making the selection, the ACM Awards Committee cited Professor Floyd for "having a clear influence on methodologies for the creation of efficient and reliable software" and for "helping to found the following important subfields of computer science: the theory of parsing, the semantics of programming languages, automatic program verification, automatic program synthesis, and analysis of algorithms."

Professor Floyd will deliver the A. M. Turing Lecture at the opening session of the 1978 ACM Annual Conference on December 4 at the Sheraton Park Hotel in Washington, D. C.

Professor Floyd has worked in many areas of computer science: programming language design, sorting algorithms, language and compiler theory, formal linguistics, and mechanical theorem proving. His present research involves primarily the area of analysis of algorithms, in particular the theory of minimal algorithms. He is also working on the design and implementation of a programming language (Chiron) primarily for student use, to be suitable for teaching structured programming systematically to novices, and to be nearly universal in its capabilities. His experience with current languages and methods for teaching introductory programming suggests that technical details tend to overwhelm question of systematic design. Chiron represents an attempt to provide a programming environment in which, to the largest extent possible, one designs a program by designing the process which the program carries out.

The Turing Award is presented in commemoration of Dr. A. M. Turing, an English mathematician who made many important contributions to the field of computing. It is ACM's most prestigious award for technical contributions to the computing community and carries a remuneration of \$2,000.

The A. M. Turing Award has been given annually since 1966. The committee members responsible for the selection this year are Walter Carlson, Thomas Cheatham, Michael Harrison, Daniel Teichroew, and Donald Knuth, Chairman of the Subcommittee on General Technical Achievement Awards.

ACM ELEMENTARY AND SECONDARY  
SCHOOLS SUBCOMMITTEE SEEKS PARTICIPANTS

The recently formed Elementary and Secondary Schools Subcommittee of the Association for Computing Machinery is seeking participants to help foster and guide the study of and instructional use of computers at the elementary and secondary school levels. Among the tasks which the subcommittee has set for itself are:

- (1) To develop specific and detailed recommendations for computer related content to be taught at the precollege level,
- (2) To develop specific and detailed recommendations on teacher training, and
- (3) To address the topic of deciding what microcomputer facilities can help meet school needs.

David Moursund, Committee Chairman, has indicated three ways to participate in the work of this committee:

1. Passively. Send your name, address, and a brief description of your involvement in the computer education field to the chairman. You will be put on a mailing list to receive copies of the documents produced by the committee.
2. Actively, via correspondence. Write a description of one or more of the major problems you would like the committee to work on. Suggest what the committee might do, and how you are willing to help. Your thoughts on the three tasks listed above and how these problems are being solved in your school, school district or state would be appreciated.
3. Actively, via correspondence and attending meetings. The committee will meet during the ACM Conference December 4-6 in Washington, DC. It will also meet during the Computer Science Conference February 20-23, 1979, in Dayton, Ohio, and will meet during the National Computer Conference, June 4-7, 1979 in New York.

Persons who are interested in participating should communicate their ideas in writing to:

Dr. David Moursund  
Dept. of Computer Science  
University of Oregon  
Eugene, Oregon 97403

FORTRAN Technical Committee

To meet at ACM Conference

The SIGPLAN Technical Committee on FORTRAN will hold a meeting at the ACM Conference, in Washington DC, beginning at 8:00 PM on Wednesday evening, December 5th. The meeting will consist of a technical program and a business session.

The technical program will include a presentation on portability aspects of the new FORTRAN 77 language standard, to be given by F. E. Holberton, of the National Bureau of Standards.

The business session will concern organizational matters, future publication plans, dues and subscription rates, proposed By-Laws, and other topics relating to a transition from "Provisional" status to that of an ACM "TEC". (New ACM Policies define a "TEC" as a chartered Technical Committee, within a SIG. At present, STAPL is the only established "TEC" within ACM.)

Further information will appear in "FOR-WORD". If you do not already receive "FOR-WORD", you may contact its editor:

Loren F. Meissner  
50B 3239  
Lawrence Berkeley Laboratory  
Berkeley, CA 94720

The committee is also sponsoring a panel session within the regular Conference program, on the following day (at 1:30 PM). This session, entitled "Whither soeth FORTRAN?", will explore the future evolution of the language - particularly with regard to such application areas as graphics, process-control, database, and array-processors - and will discuss the "modular" approach being taken by X3J3 in its development of FORTRAN 82.

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ANNOUNCING: The JOVIAL USERS GROUP, UPGRADE TO J73, & NOV. 13-14 MEETING

In accordance with JOVIAL Control Procedures implementing recent DoD policy initiatives for HOL standardization, a JOVIAL Users Group has been formed. Membership is open to all individuals interested in the JOVIAL programming language.

The first meeting of the JOVIAL Users Group was held at Wright Patterson AFB (Dayton, OH) on Nov. 4-5 for the purpose of participating in a merger of the J73/I and J3B dialects (both modernizations of 1960's Jovials) directed by AF Systems Command. The upgraded dialect will be called "J73" or J73\*" and will become the Air Force standard as defined by an updated MIL-STD-1589, targeted to be coordinated by 1 Jan 1979. At this meeting, the differences between J73/I and J3B were identified, alternative resolutions presented, and recommendations solicited from attendees.

The second JOVIAL Users Group meeting will be held NOV 13-14 (again at WPAFB) for critical technical review of a recommended specification of the upgraded J73. Anyone interested in participating contact Lt. Col. Robert Dessert, (513/255-5694).

Further work of the JOVIAL Users Group includes forming and activating the committees: Validation (of compilers), DoD-1 Compatibility, Implementation, Specification, User Concerns, Experience (like SHARE), and Support Tools. For further information on the JOVIAL Users Group, committee affairs, or the J73 upgrade, contact Users Group secretary, Dr. Judy Edwards (General Dynamics, PO Bx 748, MZ 2212, Fort Worth, Texas 76101) at 817/732-4811 x3195.