Bibliography of Numbered SNOBOL4 Documents

Compiled by Ralph E. Griswold

Starting in 1967, documents produced in conjunction with SNOBOL4 language development have been assigned identifying codes. These documents are referred to in SNOBOL4 publications as ‘‘numbered documents’’.

There are six series of documents, each identified by a different prefix. Within a series, ascension numbers identify distinct documents. Letter suffixes, in alphabetic ascension, identify different versions of a document. (This scheme has not always been strictly followed; there are exceptions, especially among early documents.) The series are:

prefix    series
S4B        Information Bulletins
S4D        Project Documents
S4N        Installation Notes
S4PC       Program Corrections
S4PD       Program Descriptions
S4PL       Program Listings

Documents in this bibliography are arranged alphabetically by prefix. Within each prefix classification, the documents are arranged in ascending numerical order.

In preparing this bibliography, certain conventions have been followed to provide uniformity. Author’s names are given last name first, followed by initials. The same form has been used for all occurrences of a name, even if the form given on separate documents is different. Square brackets ( [ ] ) enclose information that is known to be correct, but which does not appear on the document itself. Information that is believed to be correct, but for which the document itself is not available, is enclosed in braces ( { } ).

Most numbered SNOBOL4 documents are now out of print. Their status is indicated by codes opposite the document numbers as follows:

• Out of print: copies are no longer available
Z Limited number in stock: copies available until stock is exhausted
O Open stock: copies available for foreseeable future

Copies of available documents are provided free of charge. Send requests to

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SNOBOL4 Information Bulletins


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S4B15 • SNOBOL4 Information Bulletin. Griswold, R. E. The University of Arizona. October 6, 1975. 3 pages. Information bulletin distributed to addressees on SNOBOL4 mailing list maintained at the University of Arizona. Listed news of implementations, distribution information on SNOBOL4 material, requested return of loaned tapes, listed new publications, announced SL5 project, and suspension of some SNOBOL4 projects.


SNOBOL4 Information Bulletins

maintained at the University of Arizona. Listed results of survey from S4B16. Listed information about SITBOL, SPITBOL, and new implementations. Announced new distribution policy for SNOBOL4 material. Listed new publications.


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the IBM PC, new MACRO SPITBOL and SIL implementations, revision of SNOBOL bibliography. Order forms for Minnesota SNOBOL4 and PC MACRO SPITBOL attached.


SNOBOL4 Project Documents


S4D3  ●  Keywords. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. No date. 3 pages. Describes keywords in SNOBOL4.


S4D5  ●  JCL for SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. No date. 3 pages. Installation information for the IBM 360 implementation of SNOBOL4.

S4D5a  ●  JCL for SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. No date. 3 pages. Minor revision of S4D5.

S4D5b  ●  Version 1 of SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. No date. 4 pages. Revision and expansion of S4D5a to accompany IBM 360 implementation of Version 1 of SNOBOL4.

S4D5c  ●  Version 1 of SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. No date. 10 pages. Revision of S4D5b to accompany Version 1, Release 2 of SNOBOL4. Includes list of errors corrected in previous release.


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<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
<th>Author(s)</th>
<th>Publisher</th>
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<th>Pages</th>
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<tr>
<td>S4D7a</td>
<td><em>Tracing Facilities for SNOBOL4</em></td>
<td>Dickman, B.N. and Jensen, P.D.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>March 27, 1968</td>
<td>13</td>
<td>Revision of S4D7.</td>
</tr>
<tr>
<td>S4D8</td>
<td><em>A Guide to the Macro Implementation of SNOBOL4</em></td>
<td>Griswold, R. E.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>December 27, 1968</td>
<td>177</td>
<td>A description of the macro system used to implement SNOBOL4. Contains a brief overview of the approach to the implementation, list of syntax tables, and detailed instructions for implementing each macro.</td>
</tr>
<tr>
<td>S4D8a</td>
<td><em>A Guide to the Macro Implementation of SNOBOL4</em></td>
<td>Griswold, R. E.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>May 7, 1969</td>
<td>180</td>
<td>Minor revision of previous version of S4D8. No minor revision letter was assigned, although documents are different.</td>
</tr>
<tr>
<td>S4D8c</td>
<td><em>A Guide to the Macro Implementation of SNOBOL4</em></td>
<td>Griswold, R. E.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>July 16, 1971</td>
<td>177</td>
<td>Minor revision of S4D8c.</td>
</tr>
<tr>
<td>S4D8d</td>
<td><em>A Guide to the Macro Implementation of SNOBOL4</em></td>
<td>Griswold, R. E.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>February 27, 1970</td>
<td>175</td>
<td>Minor revision of S4D8d.</td>
</tr>
<tr>
<td>S4D8e</td>
<td><em>A Guide to the Macro Implementation of SNOBOL4</em></td>
<td>Griswold, R. E.</td>
<td>The University of Arizona</td>
<td>March 19, 1976</td>
<td>127</td>
<td>Minor revision of S4D8e.</td>
</tr>
<tr>
<td>S4D9</td>
<td><em>The SNOBOL4 Programming Language</em></td>
<td>Griswold, R. E., Poage, J. F., and Polonsky, I. P.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>August 8, 1968</td>
<td>221</td>
<td>The first complete, self-contained description of SNOBOL4. This document was the basis for the SNOBOL4 Programming Language, published by Prentice-Hall.</td>
</tr>
<tr>
<td>S4D10</td>
<td><em>External Functions for SNOBOL4</em></td>
<td>Strauss, H.J.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>October 10, 1968</td>
<td>69</td>
<td>A description of the external function facility in SNOBOL4 with specific reference to the IBM 360 implementation. Five sample programs, including code for external functions, are given in the appendix.</td>
</tr>
<tr>
<td>S4D10b</td>
<td><em>External Functions for SNOBOL4</em></td>
<td>Strauss, H.J.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>December 1, 1969</td>
<td>69</td>
<td>Revision of S4D10a to correspond to Version 3.</td>
</tr>
<tr>
<td>S4D10c</td>
<td><em>External Functions for SNOBOL4</em></td>
<td>Strauss, H.J.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>July 31, 1970</td>
<td>69</td>
<td>Minor revision of S4D10b.</td>
</tr>
<tr>
<td>S4D11a</td>
<td><em>A User Manual for BLOCKS</em></td>
<td>Gimpel, J. F.</td>
<td>Bell Labs, Holmdel, New Jersey</td>
<td>May 1, 1969</td>
<td>53</td>
<td>A description of SNOBOL4B, an extension of SNOBOL4 incorporating a 3-dimensional string data type called BLOCK. Appendices include</td>
</tr>
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S4D11b • A User Manual for BLOCKS (version 1.2). Gimpel, J. F. Bell Labs, Holmdel, New Jersey. April 1, 1970. 56 pages. Revision of S4D11a to describe a new version of SNOBOL4B.


S4D12 • A Bibliography of SNOBOL Publications (excluding Bell Telephone Laboratories documents). Shapiro, M. D. Bell Labs, Holmdel, New Jersey. August 1, 1969. 9 pages. The first bibliography of SNOBOL. Includes two sections: (1) descriptions of SNOBOL or SNOBOL-like programs, and (2) applications of SNOBOL.


S4D13 • A Guide to the Implementation of SNOBOL4B. Gimpel, J. F. Bell Labs [Holmdel, New Jersey]. August 11, 1969. 11 pages. Description of the macro implementation of SNOBOL4B. Includes description of additional macros needed, in style of S4D8d.


S4D16a • SNOBOL4 Address Lists. [Griswold, R. E.] July 9, 1971. 100 pages. Revision of S4D16 to bring list up to date. In three sections: (1) basic address list with domestic and foreign parts, (2) addresses of IBM 360 SNOBOL4 installations, and (3) SNOBOL4 implementors.

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S4D16b • SNOBOL4 Address List. Griswold, R. E. (compiler) The University of Arizona. April 18, 1974. 9 pages. Recompilation of S4D16a to bring list up to date as a result of responses to questionnaire in S4B10.


S4D16d ○ SNOBOL4 Address List. Griswold, R. E. (compiler) The University of Arizona. September, 1980. 20 pages. Recompilation of S4D16c to bring list up to date.


S4D18 • Catalog of Bell Laboratories SNOBOL4 Publications. Shapiro, M. D. Bell Labs, Holmdel, New Jersey. July 31, 1970. 6 pages. Listing of numbered SNOBOL4 documents as of date of publication.

S4D18a • Catalog of Bell Laboratories SNOBOL4 Publications. Shapiro, M. D., revised by Griswold, M. T. Bell Labs, Holmdel, New Jersey. August 27, 1971. 6 pages. Revision and updating of S4D18.


S4D21 • Catalog of Bell Laboratories SNOBOL Publications. Shapiro, M. D. Bell Labs, Holmdel, New Jersey. July 31, 1970. 7 pages. Same as S4D18 with addition of publications on SNOBOL and SNOBOL3.

S4D21a • Catalog of Bell Laboratories SNOBOL Publications. Shapiro, M. D., revised by Griswold, M. T. Bell Labs, Holmdel, New Jersey. August 27, 1971. 7 pages. Revision and updating of S4D21.


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S4D30b • *SITBOL Version 3.0*. Gimpel, J. F. Bell Labs, Holmdel, New Jersey. June 1, 1973. 65 pages. Revision of S4D30a, updating documentation to correspond to Version 3.0 of SITBOL.


S4D33 • *Nonlinear Pattern Theory*. Gimpel, J. F. Bell Labs, Holmdel, New Jersey. October 1, 1973. 39 pages. Extension of the theory of patterns described in S4D24 to nonlinear patterns such as ABORT and FENCE.


S4D36 • *An Extended Function Definition Facility for SNOBOL4*. Druseikis, F. C. and Griswold, R. E. The University of Arizona. October 11, 1973. 29 pages. Description of an extension to the defined function mechanism of SNOBOL4 to provide generalized parameter transmission methods. Includes listing of SIL code to add the facility to the macro implementation of SNOBOL4.

S4D37 • *Additions to SNOBOL4 to Facilitate Programming Language Research*. Hallyburton, J. C., Jr. and Griswold, R. E. The University of Arizona. October 12, 1973. 12 pages. Description of a number of features added to the macro implementation of SNOBOL4 to aid research in programming language features.


S4D37b • *Additions to SNOBOL4 to Facilitate Programming Language Research*. Hallyburton, J. C., Jr. and Griswold, R. E. The University of Arizona. August 8, 1974. 13 pages. Revision of S4D37a, including new features to capture expression evaluation.


S4D38 • *A New Approach to the Analysis and Synthesis of Strings*. Doyle, J. N. The University of Arizona. October 26, 1973. 67 pages. Description of extensions to pattern matching to provide directional symmetry, new control structures, and additional primitives. Also includes features for synthesis. Appendix includes examples of use.


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S4D39 ● The Window to Hell, A Source-Language Mechanism for Accessing SNOBOL4 Internal Structures. Griswold, R. E. The University of Arizona. [April 1, 1974]. 27 pages. Description of facilities added to the macro implementation of SNOBOL4 to access internal structures from a running SNOBOL4 program.

S4D40 ● Some Highlights of the SITBOL Language Extensions to SNOBOL4. Gimpel, J. F. Bell Labs, Holmdel, New Jersey. April 1, 1974. 11 pages. Description of language extensions to SNOBOL4 included in SITBOL.


S4D41 ● A Hierarchical Approach to the Design of Linkage Conventions. Gimpel, J. F. Bell Labs, Holmdel, New Jersey. May 1, 1974. 16 pages. Description of subroutine linkage and register conventions used in the implementation of SITBOL.


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Extensions to SNOBOL4 described in S4D35a and S4D37b are included.


S4D47a • Corrections and Additions to SNOBOL4 Project Documents. Griswold, R. E. The University of Arizona. April 4, 1975. 4 pages. Minor revision of S4D47.


S4D48 A Generalized Facility for the Analysis and Synthesis of Strings, and a Procedure-Based Model of an Implementation. Doyle, J. N. The University of Arizona. February 11, 1975. 99 pages. Revision of S4D38a extended to include a coroutine model of the implementation of pattern matching.

S4D49 The Design of Transportable Interpreters. Druseikis, F. C. The University of Arizona. February 27, 1975. 188 pages. Characterization of interpretive implementations of programming languages with special reference to SNOBOL4. Includes the design and implementation of Sil/2, a procedural language for implementing SNOBOL4-like interpreters.

S4D50 Programmer-Defined Variable Associations in SNOBOL4. Hanson, D. R. The University of Arizona. April 3, 1975. 16 pages. Description of programmer-defined trapping of fetches and stores of variables similar to the built-in tracing and I/O association facilities. The implementation of these facilities in SITBOL is described.

S4D51 Additions to the SITBOL Implementation of SNOBOL4 to Facilitate Interactive Program Debugging. Hanson, D. R. The University of Arizona. April 22, 1975. 27 pages. Describes interactive debugging facilities for SITBOL based on extensions to the programmer-variable associations described in S4D50. A listing of a SITBOL program using these facilities is included.

S4D52 Dynamic Allocation and Reclamation of Variable-Size Storage Elements in SITBOL. Hanson, D. R. The University of Arizona. June 13, 1975. 12 pages. Description of storage management in SITBOL.

S4D52a Dynamic Allocation and Reclamation of Variable-Size Storage Elements in SITBOL. Hanson, D. R. The University of Arizona. July 21, 1975. 15 pages. Minor revision of S4D52.

S4D53 An External Function Facility for SITBOL. Brandt, Donald R. The University of Arizona. February 7, 1976. 21 pages. Description of an extension of SITBOL to support routines written in assembly language and FORTRAN. Examples are included.

S4D54 Transporting the Macro Implementation of SNOBOL4; An Overview. Griswold, R. E. The University of Arizona. March 1, 1976. 5 pages. Description of the process involved in the porting of the SIL implementation of SNOBOL4. Includes list of programs and documents.


SNOBOL4 Project Documents


S4D57d  ●  *Implementations of SNOBOL4.* Griswold, R. E. The University of Arizona. March 13, 1983. 14 pages. Updating of S4D57c with addition of forms to request SIL and the IBM 360 implementation from the University of Arizona.


S4D59  ○  *Comparison of Terminologies for the SIL Implementation of SNOBOL4.* Griswold, R. E. March, 1981. 5 pages. Revision of and replacement for S4D27.

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S4N1 • Notice to Installations Running Version 2.0 of SNOBOL4 on the IBM System/360 Or

S4N1a • Notice to Installations Running Version 2.0 of SNOBOL4 on the IBM System/360 Or

S4N2 • Notice to Installations Running Version 2.0 of SNOBOL4 on the IBM System/360 Or


S4N3b • Extended Distribution Tape for Version 3 of SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. March 10, 1970. 6 pages. Revision of S4N3a to include corrections for Version 3.2.


S4N3g • Extended Distribution Tape for Version 3 of SNOBOL4. [Griswold, R. E.] The University of Arizona. March 5, 1984. 2 pages. Revision of S4N3e to reflect change from SUPERZAP cards to tape.

S4N4 • Version 3 of SNOBOL4, Installation Information for the IBM 360 Operating under OS.

S4N4a • Version 3 of SNOBOL4, Installation Information for the IBM 360 Operating under OS.

S4N4b • Version 3 of SNOBOL4, Installation Information for the IBM 360 Operating under OS.

S4N4c • Version 3 of SNOBOL4, Installation Information for the IBM 360 Operating under OS.

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SNOBOL4 Installation Notes

S4N4d  •  Version 3 of SNOBOL4, Installation Information for the IBM 360 Operating under OS. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. July 16, 1971. 11 pages. Revision of S4N4c to correspond to Version 3.5.


S4N6a  •  Updating to Version 3.3 of SNOBOL4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. June 25, 1970. 2 pages. Revision of S4N6 to correspond to Version 3.3.


S4N7b  •  SNOBOL4 MAIN1 Updates to Convert Version 3.3 to 3.4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. July 13, 1970. 1 page. Covering letter sent with additional deck of cards to update Version 3.3 to Version 3.4.

S4N8  •  Updates to SNOBOL4 Source Files. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. July 9, 1970. 1 page. Description of editor used to update SNOBOL4 source files. Deck of the editor enclosed with S4N8.

S4N9  •  SNOBOL4 MAIN1 Updates to Convert Version 3.0 to 3.4. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. July 14, 1970. 2 pages. Covering letter with deck of cards to update Version 3.0 to Version 3.4. Differs from S4N7b in referencing complete update deck to be applied to original source.


S4N9b  •  SNOBOL4 MAIN1 Updates to Convert Version 3.0 to 3.7. [Griswold, R. E.] [Bell Labs, Holmdel, New Jersey]. July 12, 1971. 4 pages. Revision of S4N9a to correspond to Version 3.7.

S4N9c  •  SNOBOL4 MAIN1 Updates to Convert Version 3.7 to 3.9. [Griswold, R. E.] [The University of Arizona], May 19, 1972. 1 page. Covering letter accompanying updates to convert Version 3.7 to Version 3.9.

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S4N18  ❄  Converting SNOBOL4 to SNOBOLX. Griswold, R. E. The University of Arizona. March 21, 1974. 15 pages. Describes installation of updates to add SNOBOLX features (see S4D35a) to the macro implementation of SNOBOL4. Includes listing of alters.


S4N18d  ❄  Converting SNOBOL4 to SNOBOLX. Griswold, R. E. The University of Arizona. May 6, 1975. 7 pages. Minor revision of S4N18c.

the extended definition facility (see S4D36) to the macro implementation of SNOBOL4. Includes listing of alters.

**S4N19a**

**S4N20**
*Adding The Window to Hell to SNOBOLX*. Griswold, R. E. The University of Arizona. July 9, 1974. 9 pages. Describes installation of updates to add The Window to Hell (see S4D39) to SNOBOLX. Includes listing of the alters.

**S4N20a**

**S4N21**

**S4N21a**

**S4N21b**

**S4N21c**

**S4N21d**

**S4N21e**

**S4N21f**

**S4N21g**

**S4N21h**
*Sources of Implementations of SNOBOL4*. Griswold, R. E. The University of Arizona. June 1, 1980. 9 pages. Minor revision of S4N21g.

**S4N22**
*Updating the SIL Implementation of SNOBOL4 from Version 3.10 to 3.11*. Griswold, R. E. The University of Arizona. May 20, 1975. 2 pages. Update 11 to the SIL implementation of SNOBOL4, including list of errors corrected.

**S4N23**

**S4N24**
*Correction to Versions 3.10 and 3.11 of the SIL Implementation of SNOBOL4*. Griswold, R. E. The University of Arizona. August 1980. 1 page. Lists correction to an error that appears in some instances of the SIL source for Versions 3.10 and 3.11.

**S4N24a**

**S4N24b**
SNOBOL4 Installation Notes


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SNOBOL4 Program Corrections

S4PC1  z  Corrections to Program Material from “String and List Processing in SNOBOL4”. Griswold, R. E. The University of Arizona. September 1, 1975. 3 pages. List of corrections to the program material from the Prentice-Hall book *String and List Processing in SNOBOL4* as distributed in S4PL1.

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SNOBOL4 Program Descriptions

S4PD1 ● **CREATOR.** Griswold, R. E. The University of Arizona. March 8, 1973. 9 pages. Description of a SNO12 program to create ASCII text from encoded BCD input.


S4PD1b ● **CREATOR.** Griswold, R. E. The University of Arizona. May 7, 1973. 10 pages. Revision of S4PD1a, including additional features.


S4PD2a ● **FORMATTER, A Document Preparation Program.** Griswold, R. E. The University of Arizona. March 8, 1974. 35 pages. Revision of S4PD2, including new features.


S4PD4 ● **SPIDER, A Program for Displaying SNOBOL4 Structures.** Griswold, R. E. The University of Arizona. February 6, 1974. 37 pages. Description of a SNOBOLX program for creating diagrams of SNOBOL4 internal structures. Includes program listings.


S4PD4b ● **SPIDER-10.** Griswold, R. E. The University of Arizona. September 13, 1974. 34 pages. Major revision of S4PD4a, including a number of new features. This document describes the DEC-10 version of the program.

S4PD5 ● **PRECOM, A General Purpose Preprocessor.** Hanson, D.R. The University of Arizona. May 21, 1974. 31 pages. Description of a SITBOL utility program to process common-deck files. Includes program listing.


S4PD6 ● **TEXT, A Program for Formatting Text Files.** Hanson, D.R. The University of Arizona. May 21, 1974. 31 pages. Description of a SITBOL program for formatting text. Includes program listing.


S4PD7 ● **LABELS, A Program for Formatting Mailing Labels.** Griswold, R. E. The University of Arizona. July 21, 1974. 7 pages. Description of a SITBOL program for formatting mailing labels. Includes program listing.

S4PD8 ● **RSG, A Random Sentence Generator.** Griswold, R. E. The University of Arizona. October 4, 1974. 23 pages. Description of a program for constructing grammars and generating sentences from the corresponding languages. Appendices include sample output and a program listing.


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SNOBOL4 Program Descriptions

S4PD9a  

S4PD10  
*GENLAB II; A Program for Synthesizing Text.* Griswold, R. E. The University of Arizona. December 3, 1974. 8 pages. Description of program for generating mailing labels, form letters, etc.

S4PD10a  

S4PD10b  

S4PD11  

S4PD11a  

S4PD11b  

S4PD12  

S4PD12a  

S4PD13  
*GSPOOL — A Program to Control the GSI-300.* Druseikis, F. C. The University of Arizona. April 22, 1975. 14 pages. Description of a program to format and control output to a GSI-300 daisy-wheel printer. Includes program listing.

S4PD14  
*SOSLST; A Program for Generating SOS Listings.* Griswold, R. E. The University of Arizona. August 20, 1975. 2 pages. Description of a program to generate spooled listings in SOS editor format on a DEC-10 operating under TOPS-10.

S4PD14a  

S4PD14b  

S4PD15  
*DDT.SNO.* Druseikis, F. C. [The University of Arizona]. September 16, 1975. 8 pages. Description of a collection of SNOBOL4 functions that are useful in debugging SNOBOL4 programs. Includes program listing.
SNOBOL4 Program Listings