

B3890000	000	AB	SIGMA 5/7	XDS NUMERICAL SUBROUTINE PACKAGE (COVER)	P UC
	010	AUTHOR	XEROX		
	020		890000-11A00 901505	DESCRIPTION PRINTED	
	030		890000-36B00 *	SOURCE MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	THE XDS NUMERICAL SUBROUTINE PACKAGE CONSISTS OF 132 FORTRAN SUBROUTINES DIVIDED INTO 7 CLASSES: 1		
	050		MISCELLANEOUS ROUTINES 2. MATRICES 3. POLYNOMIALS 4. PROBABILITY AND STATISTICS 5. MATHEMATICAL ROUTINES		
	060		6. ANALYSIS 7. REGRESSION THESE SUBROUTINES ARE WRITTEN IN THE FORTRAN IV-H LANGUAGE AND WILL OPERATE IN		
	070		ANY CONFIGURATION WHICH WILL SUPPORT THE COMPILER AND RUN-TIME PACKAGES.		
	080	COMMENTS	THIS PROGRAM INCLUDES CATALOG NUMBER 890001-890132. ALL PROGRAM DESCRIPTIONS ARE INCLUDED IN XDS MANUAL		
	090		901505. SOURCE IMAGES ARE AVAILABLE ON MAGNETIC ONLY.		
B3890143	000	AB	SIGMA 5-9	ROM BREAKDOWN TRANSLATOR (ROMBUST)	P UC
	010	AUTHOR	XEROX		

020 890143-11B00 DESCRIPTION PRINTED  
 030 890143-24B00 RELOCATABLE BINARY CARDS  
 040 890143-44B00 \* COMPRESSED CARDS  
 050 ABSTRACT RELOCATABLE OBJECT MODULE (ROM) RECORDS FROM SOURCE INPUT (SI) ARE ANALYZED AND INTERPRETED INTO PLAIN  
 060 TEXT ON THE LO DEVICE. ALL RECORD CONTROL INFORMATION AND EACH ROM LOAD ITEM IS DISPLAYED AS A GROUP.  
 070 ALL LOAD ITEM BYTES ARE ALSO DISPLAYED IN HEXADECIMAL FORM ABOVE EACH LOAD ITEM INTERPRETATION.

B3890144 000 AA SIGMA 5/7 SYMMETRIC LIST PROCESSOR (32K) P UC  
 010 AUTHOR VANDERBILT UNIV  
 020 890144-11A00 DESCRIPTION PRINTED  
 030 890144-24A00 RELOCATABLE BINARY CARDS  
 040 890144-34A00 \* SOURCE CARDS  
 050 890144-36A00 SOURCE MAG TAPE, 9 CHANNELS  
 060 ABSTRACT SLIP-I IS THE XDS VERSION OF THE SYMMETRIC LIST PROCESSOR AS DESCRIBED IN COMMUNICATIONS OF ACM - VOLUME  
 070 6/NUMBER 9/SEPT-63. THE PACKAGE CONSISTS OF TWO PARTS, ONE PART CONSISTS OF COMPILER LANGUAGE  
 080 SUBROUTINES, THE SECOND PART CONSISTS OF ASSEMBLY LANGUAGE PRIMITIVES. THE PACKAGE IS DESIGNED AS A SET  
 090 OF LIBRARY ROUTINES TO BE LOADED WITH A USER'S PROGRAM OR INCLUDED AS PART OF A STANDARD LIBRARY SLIP-I  
 100 IS DESIGNED TO OPERATE IN A 32K MACHINE.  
 110 COMMENTS SOURCE LANGUAGE: FORTRAN IV-H AND SYMBOL

B3890145 000 AA SIGMA 5/7 SYMMETRIC LIST PROCESSOR (OVER 32K) P UC  
 010 AUTHOR VANDERBILT UNIV  
 020 890145-11A00 DESCRIPTION PRINTED  
 030 890145-24A00 RELOCATABLE BINARY CARDS  
 040 890145-34A00 \* SOURCE CARDS  
 050 890145-36A00 SOURCE MAG TAPE, 9 CHANNELS  
 060 ABSTRACT SLIP-II IS THE XDS VERSION OF THE SYMMETRIC LIST PROCESSOR AS DESCRIBED IN COMMUNICATIONS OF ACM -  
 070 VOLUME 6/NUMBER 9/SEPT-63. THE PACKAGE CONSISTS OF TWO PARTS, ONE PART CONSISTS OF COMPILER LANGUAGE  
 080 SUBROUTINES, THE SECOND PART CONSISTS OF ASSEMBLY LANGUAGE PRIMITIVES. THE PACKAGE IS DESIGNED AS A SET  
 090 OF LIBRARY ROUTINES TO BE LOADED WITH A USER'S PROGRAM OR INCLUDED AS PART OF A STANDARD LIBRARY.  
 100 SLIP-II IS DESIGNED TO OPERATE IN A MACHINE WITH OVER 32K.  
 110 COMMENTS SOURCE LANGUAGE: FORTRAN IV-H AND SYMBOL.

B3890146 000 AA SIGMA 5/7 SIGMA 5/7 FOR LINEAR PROGRAMMING CODE P UC  
 010 AUTHOR XEROX  
 020 890146-11A00 DESCRIPTION PRINTED  
 030 890146-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT SOLUTION TO LINEAR PROGRAMMING PROBLEMS USING THE PRODUCT FORM OF THE INVERSE METHOD. THE COMPUTATION IS  
 050 DONE ALL-IN-CORE, AND THE PROGRAM WILL ATTEMPT TO SOLVE PROBLEMS WITH UP TO 511 ROWS, 2000 COLUMNS, AND

060 6000 MATRIX ENTRIES.  
 070 COMMENTS THIS PROGRAM REQUIRES 32K DECIMAL LOCATIONS AND OPERATES UNDER THE BASIC CONTROL MONITOR. THE  
 080 DISTRIBUTED SOURCE TAPE INCLUDES ALL NECESSARY CONTROL CARDS FOR RUNNING UNDER RAD-75 BCM. IN ORDER TO  
 090 RUN IT IS NECESSARY TO ISYST C,91XYZ (WHERE X, Y, AND Z ARE VALTD IOP, CHANNEL, AND UNIT NOS  
 100 RESPECTIVELY). IN ORDER TO KEEP THIS PROGRAM FROM EXCEEDING 32K MEMORY, IT IS NECESSARY TO COMPILE IT  
 110 USING THE FORTRAN-H VERSION 6 COMPILER. INCLUDED ON THE DISTRIBUTED SOURCE TAPE ARE DATA FOR THE SAMPLE  
 120 PROBLEM SHOWN IN THE PROGRAM DESCRIPTION.

B3890147 000 AA SIGMA 5/7 BATCH MONITOR CROSS REFERENCE GENERATOR P UC  
 010 AUTHOR JAMES R. GREENWOOD RUTGERS NUCLEAR PHYSICS LAB  
 020 890147-11A00 DESCRIPTION PRINTED  
 030 890147-34A00 \* SOURCE CARDS  
 040 890147-51A00 890147-11 LISTING PRINTED  
 050 ABSTRACT THIS PROGRAM GENERATES A CROSS REFERENCE DICTIONARY OF DEFINITIONS AND REFERENCES WHICH APPEAR IN  
 060 PROGRAMS IN THE SIGMA 5/7 BATCH MONITOR. THE MODIFICATION OF THE MONITOR THEN CAN BE ACCOMPLISHED,  
 070 KNOWING EXACTLY HOW IT IS INTERCONNECTED.

B3890157 000 AA SIGMA 5/7 CROSS REFERENCE SYMBOL LISTING PROG. P UC  
 010 AUTHOR UC BERKELEY-SPACE SCIENCES LAB J. MC CONNEL  
 020 890157-11A00 DESCRIPTION PRINTED  
 030 890157-24A00 RELOCATABLE BINARY CARDS  
 040 890157-34A00 \* SOURCE CARDS  
 050 ABSTRACT THIS PROGRAM LISTS ALL INTERNAL AND EXTERNAL SYMBOLS AND WHERE THEY ARE REFERENCED WITHIN A SYMBOL DECK.  
 060 COMMENTS PROGRAM RUNS UNDER BCM.

B3890158 000 AA 9-SERIES ARCSIN AND ARCCOS FUNCTIONS P UM  
 010 AUTHOR XEROX  
 020 890158-11A00 DESCRIPTION PRINTED  
 030 890158-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS FORTRAN II SUBROUTINE COMPUTES THE ARC SINE AND ARC COSINE OF A VALUE AND RETURNS THE ANGLE IN  
 050 RADIANS.  
 060 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY NO. 890180. PROGRAM REQUIRES 234 DECIMAL MEMORY LOCATIONS. REQUIRES  
 070 THE XDS FORTRAN II SYSTEM.

B3890159 000 AA 9-SERIES FACTORIAL ROUTINE P UM  
 010 AUTHOR XEROX  
 020 890159-11A00 DESCRIPTION PRINTED  
 030 890159-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS FORTRAN II SUBROUTINE CALCULATES THE FACTORIAL OF A FIXED POINT VALUE.

050 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY NO. 00B00002. PROGRAM REQUIRES 39 DECIMAL MEMORY LOCATIONS AND THE  
060 FORTRAN II SYSTEM.

B3890160 000 AA 9-SERIES HYPERBOLIC SINE, COSINE AND TANGENT P UM

010 AUTHOR XEROX  
020 890160-11A00 DESCRIPTION PRINTED

030 890160-34A00 \* SOURCE CARDS

040 ABSTRACT FORTRAN II ROUTINE TO CALCULATE HYPERBOLIC SINE, COSINE AND TANGENT.

050 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY NUMBER 00B20001. PROGRAM REQUIRES 38 DECIMAL LOCATIONS FOR HSIN AND  
060 HCOS AND 40 DECIMAL LOCATIONS FOR HTAN. TOTAL OF 116 DECIMAL LOCATIONS AND FORTRAN II SYSTEM REQUIRED.

B3890161 000 AA 9-SERIES POLYNOMIAL ADDITION OR SUBTRACTION P UM

010 AUTHOR XEROX  
020 890161-11A00 DESCRIPTION PRINTED

030 890161-34A00 \* SOURCE CARDS

040 ABSTRACT ADDS OR SUBTRACTS TWO POLYNOMIALS. ONE POLYNOMIAL MAY BE MULTIPLIED BY A SCALAR DURING THE PROCESS.

B3890162 000 AA 9-SERIES POLYNOMIAL PRODUCT P UM

010 AUTHOR D. C. BAXTER - NATIONAL RESEARCH COUNCIL  
020 890162-11A00 DESCRIPTION PRINTED

030 890162-34A00 \* SOURCE CARDS

040 ABSTRACT A FORTRAN II SUBROUTINE TO FORM THE PRODUCT OF TWO POLYNOMIALS WHOSE COEFFICIENTS ARE AVAILABLE AS  
050 LINEAR ARRAYS.

060 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY NUMBER 00C00002. PROGRAM REQUIRES 100 DECIMAL LOCATIONS OF STORAGE.  
070 RUNS UNDER THE FORTRAN II SYSTEM.

B3890163 000 AA 9-SERIES POLYNOMIAL DIVISION, POLYDIV P UM

010 AUTHOR BAXTER  
020 890163-11A00 DESCRIPTION PRINTED

030 890163-34A00 \* SOURCE CARDS

040 ABSTRACT CALCULATES THE QUOTIENT AND REMAINDER FORMED ON DIVIDING TWO POLYNOMIALS.

050 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY NO. 00C00003.

B3890164 000 AA 9-SERIES LINEAR POLYNOMIAL SUBSTITUTION. POLYSUBS P UM

010 AUTHOR D. C. BAXTER  
020 890164-11A00 DESCRIPTION PRINTED

030 890164-34A00 \* SOURCE CARDS

040 ABSTRACT COMPUTES THE RATIONAL POLYNOMIAL IN Z WHICH RESULTS FROM SUBSTITUTING ANOTHER RATIONAL POLYNOMIAL FOR  
050 THE VARIABLE S IN A POLYNOMIAL F(S).

B3890165	000	AA 9-SERIES	RATIONAL POLYNOMIAL SUBSTITUTION	P UM
	010	AUTHOR	D. C. BAXTER	
	020		890165-11A00 DESCRIPTION PRINTED	
	030		890165-34A00 * SOURCE CARDS	
	040	ABSTRACT	COMPUTES THE RATIONAL POLYNOMIAL IN Z, $XN(Z)/XD(Z)$ , WHICH RESULTS FROM SUBSTITUTING ANOTHER RATIONAL	
	050		POLYNOMIAL FOR THE VARIABLE S IN A RATIONAL POLYNOMIAL FUNCTION OF S, $P(S)/Q(S)$ .	
B3890166	000	AA 9-SERIES	SERIES EXPANSION OF RATIONAL POLYNOMIAL	P UM
	010	AUTHOR	R. GAGNE, D. C. BAXTER	
	020		890166-11A00 DESCRIPTION PRINTED	
	030		890166-34A00 * SOURCE CARDS	
	040	ABSTRACT	EXPANDS A RATIONAL POLYNOMIAL INTO A TAYLOR SERIES.	
B3890167	000	AA 9-SERIES	CLIMB A HILL-CLIMBING SUBROUTINE	P UM
	010	AUTHOR	C. M. WOODSIDE	
	020		890167-11A00 DESCRIPTION PRINTED	
	030		890167-34A00 * SOURCE CARDS	
	040	ABSTRACT	A FORTRAN II SUBROUTINE SUBPROGRAM TO FIND THE SET OF ARGUMENTS WHICH MAXIMIZES OR MINIMIZES A FUNCTION,	
	050		SUBJECT TO CONSTRAINTS ON THE ARGUMENTS OR ON OTHER FUNCTIONS OF THEM.	
	060	COMMENTS	PREVIOUSLY XDS USERS GROUP LIBRARY NUMBER 00C00007. PROGRAM REQUIRES 2134 DECIMAL LOCATIONS OF MEMORY	
	070		AND THE FORTRAN II SYSTEM.	
B3890168	000	AA 9-SERIES	PATTERN OPTIMIZER	P UM
	010	AUTHOR	PAUL G. FRIEDMAN	
	020		890168-11A00 DESCRIPTION PRINTED	
	030		890168-34A00 * SOURCE CARDS	
	040	ABSTRACT	A FORTRAN II PROGRAM TO MINIMIZE A FUNCTION OF UP TO 5 VARIABLES.	
	050	COMMENTS	PREVIOUSLY XDS USERS GROUP LIBRARY NUMBER 00C00008. PROGRAM REQUIRES 276 WORDS OF MEMORY. REQUIRES A	
	060		SUBROUTINE LABELED EVAL, CODING INDICATED IN THE WRITE-UP.	
B3890169	000	AA 9-SERIES	BAIRSTOW ROOTFINDER	P UM
	010	AUTHOR	D. C. BAXTER	
	020		890169-11A00 DESCRIPTION PRINTED	
	030		890169-34A00 * SOURCE CARDS	
	040	ABSTRACT	A FORTRAN II SUBROUTINE SUBPROGRAM TO CALCULATE THE REAL OR COMPLEX ROOTS OF A POLYNOMIAL EQUATION.	
	050	COMMENTS	PREVIOUSLY XDS USERS GROUP LIBRARY PROGRAM 00C20001 PROGRAM REQUIRES 748 DECIMAL MEMORY LOCATIONS AND	
	060		SUBROUTINE SQRT.	

B3890170 000 AA 9-SERIES ROOTS OF POLYNOMIALS P UM  
 010 AUTHOR D. C. BAXTER - NATIONAL RESEARCH COUNCIL  
 020 890170-11A00 DESCRIPTION PRINTED  
 040 890170-34A00 \* SOURCE CARDS  
 050 ABSTRACT TO ALLOW INPUT OF THE COEFFICIENTS OF A POLYNOMIAL FROM PAPER TAPE OR TYPEWRITER, AND TO COMPUTE AND  
 060 TYPE OUT ITS REAL OR COMPLEX ROOTS. THE EFFECT OF AN ACCURACY PARAMETER EPS AND OF A CONVERGENCE LIMIT  
 070 CAN ALSO BE TESTED.  
 080 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY PROGRAM 00C20002 REQUIRES BAIRSTOW ROOTFINDER PROGRAM (PREV. NO.  
 090 00C20001) AND A TOTAL OF 3171 (DEC) MEMORY LOCATIONS

B3890171 000 AA 9-SERIES ROOTS, ROOTFINDING BY BISECTION P UM  
 010 AUTHOR MISS F. T. STOCK - NATIONAL RESEARCH COUNCIL  
 020 890171-11A00 DESCRIPTION PRINTED  
 030 890171-34A00 \* SOURCE CARDS  
 040 ABSTRACT A FORTRAN II SUBROUTINE TO EVALUATE ONE REAL ROOT OF A FUNCTION IN THE VICINITY OF AN INITIAL GUESS.  
 050 THIS METHOD SHOULD BE USED ONLY WHERE OTHER METHODS FAIL AS IT IS NOT TIME EFFICIENT.  
 060 COMMENTS PREVIOUSLY XDS USERS GROUP LIBRARY PROGRAM 00C20003 REQUIRES SUBROUTINES (FUNCTION) F(X) AND ABS. 168  
 070 (DEC) MEMORY LOCATIONS.

B3890172 000 AA 9-SERIES LEGENDRE POLYNOMIAL P UM  
 010 AUTHOR MISS F. T. STOCK  
 020 890172-11A00 DESCRIPTION PRINTED  
 030 890172-34A00 \* SOURCE CARDS  
 040 ABSTRACT THE PROGRAM EVALUATES THE LEGENDRE POLYNOMIAL  $P_N(X) = (1/2^N N!) d^N/dx^N (x^2-1)^N$  BY THE RECURSION FORMULA  
 050  $P_{N+1} = P_N X + (N/(N+1))(X P_N - P_{N-1})$ .

B3890173 000 AA 9-SERIES GAMMA FUNCTION P UM  
 010 AUTHOR MISS F. T. STOCK  
 020 890173-11A00 DESCRIPTION PRINTED  
 030 890173-34A00 \* SOURCE CARDS  
 040 ABSTRACT EVALUATION OF THE FUNCTION  $\Gamma(I+F)$  WHERE I IS THE INTEGRAL PORTION OF A NUMBER AND F IS THE FRACTIONAL  
 050 PORTION, OR ALTERNATIVELY TO COMPUTE THE FACTORIAL OF AN INTEGER.

B3890174 000 AA 9-SERIES BESSEL FUNCTION  $J_0, J_1, Y_0, Y_1$  P UM  
 010 AUTHOR MISS F. T. STOCK  
 020 890174-11A00 DESCRIPTION PRINTED  
 030 890174-34A00 \* SOURCE CARDS  
 040 ABSTRACT EVALUATION OF BESSEL FUNCTIONS OF THE FIRST AND SECOND KIND OF ORDER ZERO AND ONE.

B3890175	000	AA 9-SERIES	REAL EXPONENTIAL INTEGRAL	P UM
	010	AUTHOR	MISS F. T. STOCK	
	020		890175-11A00 DESCRIPTION PRINTED	
	030		890175-34A00 * SOURCE CARDS	
	040	ABSTRACT	THE PROGRAM COMPUTES THE REAL EXPONENTIAL INTEGRAL $-E(-x) = \int_0^x e^{-t} dt$ FOR ANY REAL ARGUMENT GREATER	
	050		THAN ZERO BY EVALUATING AN APPROXIMATING POLYNOMIAL.	
B3890176	000	AA 9-SERIES	BESSEL FUNCTION KN(X),	P UM
	010	AUTHOR	MISS F. T. STOCK	
	020		890176-11A00 DESCRIPTION PRINTED	
	030		890176-34A00 * SOURCE CARDS	
	040	ABSTRACT	THE PROGRAM EVALUATES THE MODIFIED BESSEL FUNCTION OF THE SECOND KIND FOR INTEGRAL AND HALF-INTEGRAL	
	050		ORDER.	
B3890177	000	AA 9-SERIES	BESSEL FUNCTION-FIRST KIND, ORDER ZERO	P UM
	010	AUTHOR	XEROX	
	020		890177-11A00 DESCRIPTION PRINTED	
	030		890177-34A00 * SOURCE CARDS	
	040	ABSTRACT	TO COMPUTE THE BESSEL FUNCTION OF THE FIRST KIND, ORDER ZERO, OF A FLOATING POINT ARGUMENT, X.	
B3890178	000	AA 9-SERIES	BESSEL FUNCTION SUBROUTINE	P UM
	010	AUTHOR	G. V. LONGGLIO - BAUSCH + LOMB	
	020		890178-11A00 DESCRIPTION PRINTED	
	030		890178-34A00 * SOURCE CARDS	
	040	ABSTRACT	TO COMPUTE THE VALUES OF THE BESSEL FUNCTIONS $J_p(x)$ FOR REAL ARGUMENT X AND THE SET OF ALL INTEGER	
	050		ORDERS FROM 0 TO N.	
B3890179	000	AA 9-SERIES	BESSEL FUNCTIONS-J0,J1,Y0,Y1,I0,I1,K0,K1	P UM
	010	AUTHOR	P. VIFILLARD - CAF, CITEC	
	020		890179-11A00 DESCRIPTION PRINTED	
	030		890179-34A00 * SOURCE CARDS	
	040	ABSTRACT	TO COMPUTE THE FLOATING POINT BESSEL FUNCTIONS, J0, J1, Y0, Y1, I0, I1, K0, OR K1, OF A SPECIFIED	
	050		FLOATING POINT ARGUMENT.	
B3890180	000	AA 9-SERIES	GRADIENT MINIMIZATION ROUTINE - FPMIN	P UM
	010	AUTHOR	C. M. WOODSIDE - NATIONAL RESEARCH COUNCIL	
	020		890180-11A00 DESCRIPTION PRINTED	
	030		890180-34A00 * SOURCE CARDS	
	040	ABSTRACT	A FORTRAN II SUBROUTINE TO FIND THE MINIMUM OF A DIFFERENTIABLE FUNCTION.	

B3890181	000	AA	9-SERIES	DEFINITE INTEGRAL EVALUATION	P UM
	010	AUTHOR	MISS F. T. STOCK		
	020		890181-11A00	DESCRIPTION PRINTED	
	030		890181-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THE PROGRAM CALCULATES THE INTEGRAL OF A FUNCTION BETWEEN SPECIFIED LIMITS AND WITH SPECIFIED INTERVALS.		
	050		THE OPERATOR MUST PROVIDE A FUNCTION F(X) WHICH EVALUATES THE INTEGRAND.		
B3890182	000	AA	9-SERIES	DOUBLE INTEGRATION BY SIMPSONS	P UM
	010	AUTHOR	MISS F. T. STOCK		
	020		890182-11A00	DESCRIPTION PRINTED	
	030		890182-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THE PROGRAM CALCULATES THE DOUBLE INTEGRAL OF A FUNCTION GIVEN THE INNER AND OUTER LIMITS OF INTEGRATION		
	050		AND THE NUMBER OF INTERVALS TO BE USED BY APPLYING SIMPSONS RULE. THE OPERATOR MUST PROVIDE A FUNCTION		
	060		V(X,Y,Z) WHICH EVALUATES THE INTEGRAND.		
B3890183	000	AA	9-SERIES	RUNGE-KUTTA INTEGRATION	P UM
	010	AUTHOR	XEROX		
	020		890183-11A00	DESCRIPTION PRINTED	
	030		890183-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO PROVIDE A SOLUTION FOR FIRST-ORDER, SECOND-ORDER, OR COMBINATION OF FIRST AND SECOND ORDER		
	050		DIFFERENTIAL EQUATIONS.		
B3890184	000	AA	9-SERIES	SOLUTION OF DIFFERENTIAL EQUATIONS R-K-G	P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL		
	020		890184-11A00	DESCRIPTION PRINTED	
	030		890184-34A00 *	SOURCE CARDS	
	040	ABSTRACT	A PAIR OF FORTRAN IT SUBROUTINE SUBPROGRAMS TO ALLOW THE FINITE DIFFERENCE SOLUTION OF A SET OF		
	050		SIMULTANEOUS, FIRST-ORDER, ORDINARY DIFFERENTIAL EQUATIONS BY THE RUNGE-KUTTA-GILL PROCEDURE. A MAIN		
	060		PROGRAM IS ALSO INCLUDED AS AN EXAMPLE, WHICH COULD BE USED TO INPUT AND SOLVE COMPLETE EQUATIONS.		
B3890185	000	AA	9-SERIES	LAGRANGE INTERPOLATION	P UM
	010	AUTHOR	MISS F. T. STOCK		
	020		890185-11A00	DESCRIPTION PRINTED	
	030		890185-34A00 *	SOURCE CARDS	
	040	ABSTRACT	GIVEN N+1 CORRESPONDING PAIRS OF DATA POINTS, WHERE THE VALUES OF THE INDEPENDENT VARIABLE MAY OR MAY		
	050		NOT BE EQUIDISTANT, THE PROGRAM EVALUATES THE FUNCTION OF ANY SPECIFIED POINT USING LAGRANGE'S FORMULA		
	060		OF INTERPOLATION.		



B3890186	000	AA 9-SERIES	POLYNOMIAL CURVE FIT	P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL	
	020		890186-11A00 DESCRIPTION PRINTED	
	030		890186-34A00 * SOURCE CARDS	
	040	ABSTRACT	THE PROGRAM FITS A POLYNOMIAL OF DEGREE LESS THAN 11 THROUGH A SET OF DATA POINTS USING THE METHOD OF LEAST SQUARES. PROVISION IS MADE FOR CHOOSING DEGREE, NUMBER OF POINTS, AND FIRST POINT TO BE USED.	
	050			
B3890187	000	AA 9-SERIES	LEAST SQUARES POLYNOMIAL	P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL	
	020		890187-11A00 DESCRIPTION PRINTED	
	030		890187-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROGRAM READS IN FROM PAPER TAPE OR TYPEWRITER UP TO 200 DATA POINTS. LEAST SQUARES POLYNOMIAL IS COMPUTED AND COEFFICIENTS TYPED OUT. MAXIMUM AND ROOT-MEAN-SQUARE DEVIATION OF THIS CURVE FROM DATA POINTS IS TYPED OUT. DEGREE, NUMBER OF DATA POINTS TO BE USED, AND FIRST POINT TO BE USED ARE TYPED IN.	
	050			
	060			
B3890188	000	AA 9-SERIES	FOURIER COEFFICIENTS PERIODIC FUNCTIONS	P UM
	010	AUTHOR	W. B. LENG - IMC	
	020		890188-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	A FORTRAN PROGRAM FOR COMPUTING THE FOURIER SERIES COEFFICIENTS OF A PERIODIC FUNCTION AND THE CURVE DERIVED FROM THEM.	
	040			
B3890189	000	AA 9-SERIES	FREQUENCY BY PRONY'S METHOD	P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	
	020		890189-11A00 DESCRIPTION PRINTED	
	030		890189-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROVIDES AN APPROXIMATE FREQUENCY COMPUTATION FOR EMPIRIC DATA REPRESENTABLE BY A SINE WAVE.	
B3890190	000	AA 9-SERIES	SINE WAVE MONITOR	P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	
	020		890190-11A00 DESCRIPTION PRINTED	
	030		890190-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROVIDES A LEAST SQUARE CURVE FIT, INCLUDING THE FREQUENCY, TO A SINE WAVE OF EMPIRIC DATA. ALSO PROVIDES A FOURIER COEFFICIENT RETRIEVAL WHEN ONE USES THE ROUTINE TO SUBTRACT OUT THE LOWER HARMONICS.	
	050			
B3890191	000	AA 9-SERIES	CURVE/SURFACE FIT ARBITRARY FUNCTION	P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	
	020		890191-11A00 DESCRIPTION PRINTED	
	030		890191-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS ROUTINE IS USED TO CURVE FIT EMPIRIC DATA TO ANY USER SELECTED COMPUTABLE FUNCTION. BESIDES THE	

050 USUAL POLYNOMIAL FITTING, THIS ROUTINE IS ALMOST AS EASILY USED TO CURVE FIT WITH EXPONENTIALS, FOURIER  
060 EXPANSIONS, ALSO DATA SMOOTHING, INSTRUMENT CALIBRATION CURVES, DAMPED SINE WAVES, SAWTOOTH WAVES,  
070 DOPPLER CURVES, ETC.

B3890192 000 AA 9-SERIES NON-LINEAR CURVE FIT PROGRAM P UM  
010 AUTHOR R. E. AUSTIN - NASA  
020 890192-11A00 DESCRIPTION PRINTED  
030 890192-34A00 \* SOURCE CARDS  
040 ABSTRACT TO DETERMINE TYPE OF CURVE THAT IS REPRESENTATIVE OF PARTICULAR INPUT POINTS AND COMPUTE ADDITIONAL  
050 POINTS.

B3890193 000 AA 9-SERIES MATRIX MULTIPLICATION P UM  
010 AUTHOR D. C. BAXTER  
020 890193-11A00 DESCRIPTION PRINTED  
030 890193-34A00 \* SOURCE CARDS  
040 ABSTRACT COMPUTES THE PRODUCT OF TWO MATRIX ARRAYS.

B3890194 000 AA 9-SERIES REAL MATRIX INVERSION (RMINV) P UM  
010 AUTHOR XEROX  
020 890194-11A00 DESCRIPTION PRINTED  
030 890194-34A00 \* SOURCE CARDS  
040 ABSTRACT TO COMPUTE THE INVERSE AND DETERMINANT OF ANY SQUARE MATRIX OF REAL ELEMENTS.

B3890195 000 AA 9-SERIES REAL MATRIX MULTIPLY (RMMUL) P UM  
010 AUTHOR XEROX  
020 890195-11A00 DESCRIPTION PRINTED  
030 890195-34A00 \* SOURCE CARDS  
040 ABSTRACT TO COMPUTE AND STORE THE PRODUCT OF TWO MATRICES OF REAL ELEMENTS.

B3890196 000 AA 9-SERIES REAL MATRIX TRANSPOSE (RATRA) P UM  
010 AUTHOR XEROX  
020 890196-11A00 DESCRIPTION PRINTED  
030 890196-34A00 \* SOURCE CARDS  
040 ABSTRACT TO COPY A RECTANGULAR MATRIX OF REAL ELEMENTS, IN TRANSPOSED FORM, INTO ANOTHER REGION OF MEMORY. THE  
050 TRANSPOSED MATRIX MAY NOT OVERLAY THE ORIGINAL MATRIX.

B3890197 000 AA 9-SERIES REAL MATRIX ADDITION (RMADD) P UM  
010 AUTHOR XEROX  
020 890197-11A00 DESCRIPTION PRINTED

	030		890197-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO COMPUTE AND STORE THE SUM OF TWO RECTANGULAR MATRICES.		
B3890198	000	AA 9-SERIES	REAL MATRIX SUBTRACTION (REMSUB)		P UM
	010	AUTHOR	XFRDX		
	020		890198-11A00	DESCRIPTION PRINTED	
	030		890198-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO COMPUTE AND STORE THE DIFFERENCE OF TWO RECTANGULAR MATRICES		
B3890199	000	AA 9-SERIES	BOOLEAN MATRIX (FLAG PACKING)		P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CORP.		
	020		890199-11A00	DESCRIPTION PRINTED	
	030		890199-34A00 *	SOURCE CARDS	
	040	ABSTRACT	SAVES CORE STORAGE WHEN LARGE ARRAYS OF YES-NO FLAGS ARE REQUIRED. FOUR POSSIBLE OPERATIONS (INVERT, SET TO ZERO, SET TO ONE, AND TEST) CAN BE PERFORMED ON A DECISION MATRIX WHICH NEEDS ONLY 1/24TH THE USUAL CORE STORAGE.		
	050				
	060				
B3890200	000	AA 9-SERIES	DETERMINANT EVALUATION		P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL		
	020		890200-11A00	DESCRIPTION PRINTED	
	030		890200-34A00 *	SOURCE CARDS	
	040	ABSTRACT	COMPUTES THE DETERMINANT OF A MATRIX USING THE METHOD OF TRIANGULARIZATION.		
B3890201	000	AA 9-SERIES	MATRIX INVERSION, DETERMINANT CALCULATION		P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL		
	020		890201-11A00	DESCRIPTION PRINTED	
	030		890201-34A00 *	SOURCE CARDS	
	040	ABSTRACT	GAUSS-JORDAN ELIMINATION METHOD IS USED TO INVERT MATRIX AND CALCULATE DETERMINANT. ROW AND COLUMN ARE SEARCHED FOR LARGEST ELEMENT TO BE USED AS PIVOT.		
	050				
B3890202	000	AA 9-SERIES	SOLUTION OF SIMULTANEOUS EQUATIONS		P UM
	010	AUTHOR	D. C. BAXTER - NATIONAL RESEARCH COUNCIL		
	020		890202-11A00	DESCRIPTION PRINTED	
	030		890202-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THE GAUSS-JORDAN ELIMINATION METHOD IS USED TO SOLVE SIMULTANEOUS ALGEBRAIC EQUATIONS. ROW INTERCHANGING IS USED TO PRODUCE A NON-ZERO PIVOT ELEMENT.		
	050				
B3890203	000	AA 9-SERIES	PRINCIPAL AXES FACTOR ANALYSIS		P UM
	010	AUTHOR	SHELDON KLEE - XDS		

020 890203-11A00 DESCRIPTION PRINTED  
030 890203-34A00 \* SOURCE CARDS  
040 ABSTRACT A PROGRAM THAT EXTRACTS ANY NUMBER OF FACTORS FROM A CORRELATION MATRIX.

B3890204 000 AA 9-SERIES MATRIX PACKAGE FOR ARITHMETIC OPERATIONS P UM  
010 AUTHOR XEROX

020 890204-11A00 DESCRIPTION PRINTED  
030 890204-34A00 \* SOURCE CARDS  
040 ABSTRACT PROVIDES THE USER WITH A SET OF SUBROUTINES ENABLING HIM TO PERFORM ARITHMETIC OPERATIONS ON MATRICES OF ANY SIZE AND TO FACILITATE THE MANIPULATION OF THESE ARRAYS IN STORAGE.

B3890205 000 AA 9-SERIES GAUSSIAN NORMAL PROBABILITY ORDINATE P UM  
010 AUTHOR XEROX

020 890205-11A00 DESCRIPTION PRINTED  
030 890205-34A00 \* SOURCE CARDS  
040 ABSTRACT TO COMPUTE THE GAUSSIAN NORMAL PROBABILITY FUNCTION ORDINATE OF AN ARGUMENT.

B3890206 000 AA 9-SERIES GAUSSIAN NORMAL PROBABILITY INTEGRAL P UM  
010 AUTHOR XEROX

020 890206-11A00 DESCRIPTION PRINTED  
030 890206-34A00 \* SOURCE CARDS  
040 ABSTRACT TO COMPUTE THE GAUSSIAN NORMAL PROBABILITY INTEGRAL OF AN ARGUMENT USING AN APPROXIMATION FORMULA.

B3890207 000 AA 9-SERIES SUPERCOMPRESSIBILITY FACTORS NATURAL GAS P UM  
010 AUTHOR TOM WYRICK - TEXAS GAS TRANSMISSION CORP.

020 890207-11A00 DESCRIPTION PRINTED  
030 890207-34A00 \* SOURCE CARDS  
040 ABSTRACT A FORTRAN PROGRAM TO CALCULATE AMERICAN GAS ASSOCIATION SUPERCOMPRESSIBILITY FACTORS FOR NATURAL GAS FROM 0 TO 5000 PSIG OVER A RANGE OF -40 TO 240 F.

B3890208 000 AA 9-SERIES MULTIPLE LINEAR REGRESSION P UM  
010 AUTHOR P. G. FRIEDMAN

020 890208-11A00 DESCRIPTION PRINTED  
030 890208-34A00 \* SOURCE CARDS  
040 ABSTRACT A FORTRAN II PROGRAM FOR MULTIPLE LINEAR REGRESSION. THIS PROGRAM ACCEPTS INPUT DATA AND SETS UP THE NORMAL EQUATION MATRIX, WHICH IS THEN INVERTED IN THE LSG SUBROUTINE.

B3890209 000 AA 9-SERIES LEAST SQUARE SUBROUTINE, LSG P UM  
010 AUTHOR XEROX

020 890209-11A00 DESCRIPTION PRINTED  
 030 890209-34A00 \* SOURCE CARDS  
 040 ABSTRACT A FORTRAN II SUBPROGRAM TO INVERT THE NORMAL EQUATION MATRIX AND TYPE IN REGRESSION COEFFICIENTS AND  
 050 OTHER STATISTICAL DATA.

83890210 000 AA 9-SERIES PSEUDO-RANDOM NUMBER SUBROUTINE (IRAND) P UM  
 010 AUTHOR XEROX  
 020 890210-11A00 DESCRIPTION PRINTED  
 030 890210-34A00 \* SOURCE CARDS  
 040 ABSTRACT IRAND IS A FORTRAN FUNCTION SUBROUTINE OF ONE PARAMETER, THE SEED OF A RANDOM NUMBER SEQUENCE. THE  
 050 VARIABLE I IN THE FUNCTION CALL IRAND (I) IS THE SEED AND IS ORIGINALLY SET BY THE USER. EACH TIME IRAND  
 060 (I) IS USED, THE RANDOM NUMBER IS LEFT IN I AND IF I IS UNDISTURBED BETWEEN IRAND (I) USES, A SEQUENCE OF  
 070 FULL, SINGLE PRECISION INTEGERS WITH TOTAL PERIOD OF 224 IS GENERATED. THE SEQUENCE CAN BE  
 080 RE-INITIALIZED OR CHANGED BY SETTING I TO THE DESIRED VALUE. CALLING SEQUENCE IS IRAND (I). RESULT IS  
 090 THE RANDOM NUMBER IN I. RANGE OF VALUES IS -8388608 TO +8388607.

83890211 000 AA 9-SERIES RANDOM NUMBER GENERATOR P UM  
 010 AUTHOR MICHAEL LINDENMEYER - NASA  
 020 890211-11A00 DESCRIPTION PRINTED  
 030 890211-34A00 \* SOURCE CARDS  
 040 ABSTRACT A FORTRAN II FUNCTION WHICH GENERATES (A) RANDOM NUMBERS FROM THE UNIFORM DISTRIBUTION, NORMALIZED  
 050 BETWEEN -1.0 AND +1.0, OR (B) RANDOM NUMBERS TAKEN FROM THE NORMAL (GAUSSIAN) DISTRIBUTION WITH MEAN 0.0  
 060 AND VARIANCE 1.0. A FORTRAN TEST PROGRAM IS PROVIDED AS A DEMONSTRATION OF THE USE OF THE PROGRAM AND  
 070 TO COMPUTE RANDOM NUMBERS AS A CHECK OF THE VALIDITY OF THE ROUTINE.

83890212 000 AA 9-SERIES RANDOM NUMBER GENERATOR, RANDU P UM  
 010 AUTHOR BERNARD A. SOBEL - ETHYL CORP.  
 020 890212-11A00 DESCRIPTION PRINTED  
 030 890212-34A00 \* SOURCE CARDS  
 040 ABSTRACT INITIALLY ENTER THE FUNCTION WITH THE FOLLOWING TYPE STATEMENT: X=RANDU(1). THIS ENABLES THE PROGRAM TO  
 050 CYCLE SO THAT THE STARTING NUMBERS ARE INDETERMINATE. SENSE SWITCHES 4 AND 3 ARE INITIALLY RESET AND  
 060 MAY BE SET AT ANY TIME AFTER FIRST ENTRY (IN ORDER OF SSW4 AND THEN SSW3). ONCE USED, THE SENSE  
 070 SWITCHES ARE NEVER RECALLED AND MAY BE USED FOR OTHER PURPOSES. ALL SUBSEQUENT ENTRIES TO THIS FUNCTION  
 080 ARE AS FOLLOWS: X= RANDU(2).

83890213 000 AA 9-SERIES UNCORRELATED RANDOM NUMBER GENERATOR P UM  
 010 AUTHOR WILLIAM B. KENDALL - JET PROPULSION LABS  
 020 890213-11A00 DESCRIPTION PRINTED  
 030 890213-34A00 \* SOURCE CARDS

040 ABSTRACT A FAST AND SIMPLE ROUTINE FOR THE GENERATION OF UNCORRELATED PSEUDO-RANDOM NUMBERS (47-BITS), UNIFORMLY  
050 DISTRIBUTED BETWEEN ZERO AND ONE. THIS ROUTINE IS SELF-LOADING, RELOCATABLE AND IS LOADED BY THE NORMAL  
060 FILL PROCEDURE. THE ROUTINE IS ENTERED BY A BRM INSTRUCTION. THE CONTENTS OF THE A AND B REGISTERS ARE  
070 DESTROYED AND REPLACED WITH THE NEXT POSITIVE DOUBLE PRECISION 47-BIT PSEUDO-RANDOM NUMBER, THE MOST  
080 SIGNIFICANT 23 BITS IN THE A REGISTER, THE LEAST SIGNIFICANT 24 BITS IN THE B REGISTER.

B3890214 000 AA 9-SERIES PSEUDO-RANDOM NUMBER GENERATOR (RANDX) P UM

010 AUTHOR C. M. WOODSIDE - NATIONAL RESEARCH COUNCIL

020 890214-11A00 DESCRIPTION PRINTED

030 890214-34A00 \* SOURCE CARDS

040 ABSTRACT GENERATES A SINGLE FLOATING-POINT NORMAL PSEUDO-RANDOM VARIATE, WITH UNIT STANDARD DEVIATION.

B3890215 000 AA 9-SERIES PSEUDO-RANDOM NUMBER SUBROUTINE (RAND) P UM

010 AUTHOR XEROX

020 890215-11A00 DESCRIPTION PRINTED

030 890215-34A00 \* SOURCE CARDS

040 ABSTRACT PROVIDES A RANDOM NUMBER GENERATOR IN THE FORM OF A MACHINE LANGUAGE SUBROUTINE.

B3890217 000 AA 9-SERIES LINEAR REGRESSION ANALYSIS P UM

010 AUTHOR XEROX

020 890217-11A00 DESCRIPTION PRINTED

030 890217-34A00 \* SOURCE CARDS

040 ABSTRACT DESIGNED AS AN AID TO LINEAR REGRESSION ANALYSIS TO DETERMINE THE BEST FIT OF COMBINATIONS OF DEPENDENT  
050 AND INDEPENDENT VARIABLES, WHERE LITTLE IS KNOWN OF THE FUNCTIONAL RELATIONSHIPS, OR OF THE VARIABLES

060 THAT ARE IMPORTANT. A SUPPLEMENTARY PROGRAM IS PROVIDED THAT WILL COMPUTE THE REGRESSION COEFFICIENTS

070 ASSOCIATED WITH SELECTED OUTPUT VARIABLE COMBINATIONS FROM THE ABOVE PROGRAM.

B3890219 000 AA 9-SERIES FORTRAN II MAGNETIC TAPE I/O ROUTINE P UM

010 AUTHOR R. P. ROSE - DOUGLAS AIRCRAFT CO.

020 890219-11A00 DESCRIPTION PRINTED

030 890219-34A00 \* SOURCE CARDS

040 ABSTRACT A FORTRAN CALLABLE SUBROUTINE TO PROVIDE I/O CONTROL FOR A MAGNETIC TAPE UNIT, NUMBER 0 THROUGH 7, ON  
050 THE W, Y, C, OR D CHANNEL.

B3890220 000 AA 9-SERIES READ BLOCKED INPUT FROM MAG. TAPE P UM

010 AUTHOR MARY SPENCER - UNIV. OF CHICAGO

020 890220-11A00 DESCRIPTION PRINTED

030 890220-34A00 \* SOURCE CARDS

040 ABSTRACT A SUBROUTINE FOR THE MODIFICATION OF THE FORTRAN SYSTEM WHICH WILL ALLOW THE SYSTEM TO ACCEPT BLOCKED

	050		LOGICAL RECORDS AS BCD INPUT.	
B3890221	000	AA 9-SERIES	CONVOLUTION & FILTERING UNIT I/O ROUTINE	P UM
	010	AUTHOR	XEROX	
	020		890221-11A00 DESCRIPTION PRINTED	
	030		890221-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROGRAM TO FACILITATE INPUT/OUTPUT TO THE XDS CFE-1 UNIT TO COMPUTE (1) THE CORRELATION OF TWO TIME	
	050		SERIES, (2) THE CONVOLUTION OF A TIME SERIES WITH A FILTER OPERATOR, AND (3) THE OPERATION OF A	
	060		TIME-REVERSED FILTER ON A TIME SERIES.	
B3890222	000	AA 9-SERIES	CONVOLUTION, CORR, FILTER., OF TIME SERIES	P UM
	010	AUTHOR	XEROX	
	020		890222-11A00 DESCRIPTION PRINTED	
	030		890222-34A00 * SOURCE CARDS	
	040	ABSTRACT	ROUTINE COMPUTES THE CORRELATION OF TWO TIME SERIES, THE CONVOLUTION OF A TIME SERIES WITH A FILTER, OR	
	050		THE OPERATION OF A TIME-REVERSED FILTER ON A TIME SERIES.	
B3890223	000	AA 9-SERIES	BLANK PAPER TAPE LEADER GENERATOR	P UM
	010	AUTHOR	DR. D. GOSPODNETIC	
	020		890223-11A00 DESCRIPTION PRINTED	
	030		890223-34A00 * SOURCE CARDS	
	040	ABSTRACT	PUNCHES 12 CHARACTERS OF BLANK PAPER TAPE LEADER.	
B3890224	000	AA 9-SERIES	FAST FORTRAN PRINT SUBROUTINE	P UM
	010	AUTHOR	JOHN LOBDELL - SOUTHERN METHODIST UNIV.	
	020		890224-11A00 DESCRIPTION PRINTED	
	030		890224-34A00 * SOURCE CARDS	
	040	ABSTRACT	INCREASES THE SPEED OF THE XDS FORTRAN PRINT ROUTINE. THIS PROGRAM CHECKS FOR ZONES AND PRINTS ONLY	
	050		THOSE REQUIRED.	
B3890225	000	AA 9-SERIES	OSCILLOSCOPE DISPLAY ROUTINE	P UM
	010	AUTHOR	XEROX	
	020		890225-11A00 DESCRIPTION PRINTED	
	030		890225-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROVIDES FORTRAN CALLABLE SUBROUTINES TO UTILIZE SCOPE SYSTEM, INCLUDING VECTOR AND CHARACTER	
	050		GENERATORS.	
B3890226	000	AA 9-SERIES	PLOT PACKAGE FOR XDS 9175 PLOTTER	P UM
	010	AUTHOR	A. SAVITZKY - PERKIN-ELMER	

	020		890226-11A00	DESCRIPTION PRINTED	
	030		890226-34A00 *	SOURCE CARDS	
	040	ABSTRACT	PROVIDES USERS OF XDS 900 SERIES COMPUTERS AND XDS 9175 PLOTTERS (CALCOMP) THE CAPABILITY OF		
	050		COMPREHENSIVE GRAPHICAL OUTPUT DISPLAY; OR TO USE ANY PART OF THE PACKAGE AS NECESSARY		
B3890227	000	AA 9-SERIES	SCOOP TAPE PLOTTING ROUTINE, SCOOP-2		P UM
	010	AUTHOR	G. LENTZ - UNIV. OF CHICAGO		
	020		890227-11A00	DESCRIPTION PRINTED	
	030		890227-34A00 *	SOURCE CARDS	
	040	ABSTRACT	PROGRAM TO PLOT TAPES PREPARED BY THE CALCOMP SCOOP PROGRAMMING PACKAGE ON THE XDS ON-LINE PLOTTER.		
B3890228	000	AA 9-SERIES	GENERAL GRAPHIC GENERA-PLOTTER		P UM
	010	AUTHOR	R. T. MACINTYRE - BAUSCH + LOMB, INC.		
	020		890228-11A00	DESCRIPTION PRINTED	
	030		890228-34A00 *	SOURCE CARDS	
	040		890228-84A00	ABSOLUTE BINARY CARDS	
	050	ABSTRACT	PROVIDES GENERAL PURPOSE PRODUCTION OF MASTER COPIES OF FORMS, CHARTS, DIAGRAMS, ETC. ON THE CALCOMP		
	060		PLOTTER.		
B3890229	000	AA 9-SERIES	ON-LINE PRINT ROUTINE, PRNLN		P UM
	010	AUTHOR	L.A. LITTLETON, UNIVERSITY OF CHICAGO		
	020		890229-11A00	DESCRIPTION PRINTED	
	030		890229-44A00 *	COMPRESSED CARDS	
	040	ABSTRACT	PRNLN PROVIDES A CONVENIENT CALLING SEQUENCE FORMAT FOR PRINTING ON THE TYPEWRITER AND/OR PRINTER.		
B3890232	000	AA 9-SERIES	PLOT PACKAGE WITH LABELING		P UM
	010	AUTHOR	K. M. JAMERSON - HONEYWELL, INC.		
	020		890232-11A00	DESCRIPTION PRINTED	
	030		890232-34A00 *	SOURCE CARDS	
	040	ABSTRACT	FACILITATES CREATION OF SCALED, LABELED PLOTS. THIS FORTRAN SUBROUTINE COMPUTES NEW VALUES OF VMIN AND		
	050		VMAX WITH VARIABLE UNITS/IN. SELECTED FROM 1, 2, 4, 5 AND A POWER OF TEN. LONG IS THE DESIRED LENGTH OF		
	060		THE AXIS IN INCHES AND IVSC IS THE POWER OF TEN FOUND BY THE SUBROUTINE.		
B3890233	000	AA 9-SERIES	SEMI-LOG/LINEAR PLOT PACKAGE		P UM
	010	AUTHOR	J. DARSTIE - HONEYWELL, INC.		
	020		890233-11A00	DESCRIPTION PRINTED	
	030		890233-34A00 *	SOURCE CARDS	
	040	ABSTRACT	FACILITATES PROGRAMMING SEMI-LOG PLOTS IN FORTRAN. A CALL TO A211AXIS SETS UP THE AXIS, DRAWS AND		
	050		LABELS IT, AND SETS UP A211PLOT. A CALL THEN TO A211PLOT PLOTS THE CURVE.		



B3890234	000	AA 9-SERIES	PLOT PACKAGE SPECIAL CHART A03	P UM
	010	AUTHOR	K. M. JAMERSON - HONEYWELL, INC.	
	020		890234-11A00 DESCRIPTION PRINTED	
	030		890234-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS PACKAGE ALLOWS USE OF THE SPECIAL CHART =A03. IT DRAWS THE AXIS, SCALES AS NECESSARY TO MAKE THE	
	050		DATA FIT THE PAPER, AND SETS UP A200PLOT. THEN A200PLOT SHOULD BE CALLED TO PLOT THE CURVES. THESE	
	060		SYMBOLS ARE .1 INCH IN SIZE. INTERRUPTS ON THE W BUFFER	
B3890235	000	AA 9-SERIES	PLOT PACKAGE - NON-LABELING	P UM
	010	AUTHOR	K. M. JAMERSON - HONEYWELL, INC.	
	020		890235-11A00 DESCRIPTION PRINTED	
	030		890235-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS IS A NONLABELING FORTRAN PLOTTING SUBROUTINE WHICH WILL SET UP FOR PLOTTING AND DO AUTOMATIC	
	050		SCALING FOR USE WITH A200 PLOT. TO OBTAIN MULTIPLE CURVES ON ONE AXIS(FRAME), ENTER A201 AXIS ONCE AND	
	060		A200 PLOT ONCE FOR EACH CURVE.	
B3890236	000	AA 9-SERIES	POLAR PLOT PACKAGE	P UM
	010	AUTHOR	J. DARSIE - HONEYWELL, INC.	
	020		890236-11A00 DESCRIPTION PRINTED	
	030		890236-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS PACKAGE SETS UP A FRAME FOR A POLAR PLOT BY A CALL TO A212 AXIS AND THEN PLOTS IN A POLAR FASHION	
	050		BY CALLING THE A212PLOT ROUTINE. IT ALSO LABELS THE AXIS.	
B3890237	000	AA 9-SERIES	CALCOMP PLOTTER SUBROUTINE PACKAGE	P UM
	010	AUTHOR	W. G. PECK, R. T. MACINTYRE - BAUSCH AND LOMB, INC.	
	020		890237-11A00 DESCRIPTION PRINTED	
	030		890237-24A00 RELOCATABLE BINARY CARDS	
	040		890237-34A00 * SOURCE CARDS	
	050	ABSTRACT	GENERAL PURPOSE PLOTTING SUBROUTINES WITH MINIMUM SPACE REQUIREMENTS AND MAXIMUM OPERATING SPEED.	
B3890239	000	AA 9-SERIES	CORE DUMP TO MAGNETIC TAPE PROGRAM	P UM
	010	AUTHOR	JOHN LOBDELL - SOUTHERN METHODIST UNIV.	
	020		890239-11A00 DESCRIPTION PRINTED	
	030		890239-34A00 * SOURCE CARDS	
	040	ABSTRACT	ALLOWS USER TO DUMP ALL OR ANY PORTION OF CORE MEMORY TO MAGNETIC TAPE. LOAD PROGRAM BY STANDARD FILL	
	050		FROM EITHER CARDS OR PAPER TAPE. BRU TO LOCATION 37675, SET A REGISTER WITH STARTING LOCATION TO BE	
	060		DUMPED AND B REGISTER WITH ENDING LOCATION, CLEAR HALF AND GO.	

B3890240	000	AA 9-SERIES	CORE DUMP TO UNBUFFERED LINEPRINTER	P UM
	010	AUTHOR	JOHN LOBDELL - SOUTHERN METHODIST UNIV.	
	020	890240-11A00	DESCRIPTION PRINTED	
	030	890240-34A00 *	SOURCE CARDS	
	040	ABSTRACT ALLOWS USER TO DUMP ALL OR ANY PORTION OF CORE MEMORY TO UNBUFFERED LINEPRINTER.		
B3890241	000	AA 9-SERIES	FORTRAN CALCOMP PLOTTER ROUTINE	P UM
	010	AUTHOR	JOHN LOBDELL - SOUTHERN METHODIST UNIVERSITY	
	020	890241-11A00	DESCRIPTION PRINTED	
	030	890241-24A00	RELOCATABLE PRIMARY CARDS	
	040	ABSTRACT THIS SUBROUTINE IS CALLED FROM A FORTRAN II PROGRAM AND CAN DRAW AXES (LINEAR OR LOGARITHMIC), PLOT		
	050	TITLES, LABEL AXES AND PLOT EITHER CONTINUOUS LINE PLOTS OR POINT PLOTS.		
B3890242	000	AA 9300	OSCILLOSCOPE DISPLAY ROUTINE	P UM
	010	AUTHOR	XEROX	
	020	890242-11A00	DESCRIPTION PRINTED	
	030	890242-34A00 *	SOURCE CARDS	
	040	ABSTRACT TO PROVIDE FORTRAN CALLABLE SUBROUTINES TO UTILIZE SCOPE SYSTEM, INCLUDING VECTOR AND CHARACTER		
	050	GENERATORS.		
	060	COMMENTS COMPUTER CONFIGURATION: XDS 9300 WITH 21 INCH CRT DISPLAY. SOURCE LANGUAGE: META-SYMBOL. STORAGE:278 DEC		
B3890243	000	AA 9-SERIES	XDS 920/930 SYMBOL MNEMONIC TABLE	P UM
	010	AUTHOR	XDS - W.F. KENDALL - JET PROPULSION LABS	
	020	890243-11A00	DESCRIPTION PRINTED	
	030	890243-23A00	RELOCATABLE BINARY PAPER TAPE, 8 LEVELS	
	040	890243-24A00	RELOCATABLE PRIMARY CARDS	
	050	890243-34A00 *	SOURCE CARDS	
	060	ABSTRACT PROVIDES SYMBOL WITH THE MNEMONIC TABLE OF THE TARGET MACHINE. LOCALIZES OTHER ASSEMBLER FEATURES WHICH		
	070	ARE ORIENTED SPECIFICALLY TO THE TARGET MACHINE. ESTABLISHES THE RETURN LINKAGE FOR EXIT FROM SYMBOL.		
B3890244	000	AA 9-SERIES	COMPUTER ASSEMBLY PROGRAM FOR 2K-910	P UM
	010	AUTHOR	JOHN H. OKERLUND - UNIV. OF WASHINGTON	
	020	890244-11A00	DESCRIPTION PRINTED	
	030	ABSTRACT AN ABBREVIATED ASSEMBLY PROGRAM FOR THE XDS 910 WITH 2K CORE MEMORY.		
B3890245	000	AA 9-SERIES	AC-DC CIRCUIT ANALYSIS COMPILER	P UM
	010	AUTHOR	CLIFFORD J. VANDERYACHT - SPARTAN ELECTRONICS	
	020	890245-11A00	DESCRIPTION PRINTED	
	030	ABSTRACT COMPILES STATEMENTS DESCRIBING AN ELECTRONIC CIRCUIT WRITTEN IN A BRANCH NOTATION INTO A FORTRAN PROGRAM		

040 CONTAINING MATRIX EQUATIONS.  
050 COMMENTS COMPUTER CONFIGURATION: ANY XDS 900 SERIES COMPUTER WITH 4096 WORD OF MEMORY WITH PAPER TAPE READER, AND  
060 PUNCH AND CONSOLE TYPEWRITER. PAPER TAPE COMES IN FOUR PARTS

B3890246 000 AA 9-SERIES MONITOR INPUT/OUTPUT PACKAGE-NOINPUT P UM  
010 AUTHOR XEROX  
020 890246-11A00 DESCRIPTION PRINTED  
030 890246-34A00 \* SOURCE CARDS  
040 ABSTRACT DESIGNED TO HANDLE BUFFERED MAGNETIC TAPE, LINE PRINTER, CARD READER, OR TYPEWRITER I/O FOR FORTRAN IV  
050 AND META-SYMBOL PROGRAMS.

B3890247 000 AA 9-SERIES FORTRAN SEARCH ARRAY P UM  
010 AUTHOR K. M. JANERSON - HONEYWELL, INC.  
020 890247-11A00 DESCRIPTION PRINTED  
030 ABSTRACT SEARCHES A FIXED-POINT ARRAY FOR A MATCHING ITEM AND RETURNS THE LOCATION OF THE ITEM.

B3890248 000 AA 9-SERIES SORT SUBROUTINE P UM  
010 AUTHOR GORDON LENTZ - UNIVERSITY OF CHICAGO  
020 890248-11A00 DESCRIPTION PRINTED  
030 890248-34A00 \* SOURCE CARDS  
040 ABSTRACT ROUTINE TO SORT AN ARRAY OR ARRAYS OF NUMBERS STORED IN CORE INTO ASCENDING SEQUENCE BASED ON SORT KEY.

B3890249 000 AA 9-SERIES EDIT, CHARACTER STREAM EDITING PROGRAM P UM  
010 AUTHOR JACK MACHANIK  
020 890249-11A00 DESCRIPTION PRINTED  
030 890249-34A00 \* SOURCE CARDS  
040 ABSTRACT TO MORE EASILY EDIT FORTRAN SOURCE TAPES, SYMBOL SOURCE TAPES, AND FORTRAN BCD DATA TAPES, BY CONTENT AS  
050 WELL AS LOCATION.

B3890250 000 AA 9-SERIES LABEL TRACE ROUTINE, L-FORTRAN P UM  
010 AUTHOR PAUL JORGENSEN - AUTOMATIC ELECTRIC LABS  
020 890250-11A00 DESCRIPTION PRINTED  
030 890250-34A00 \* SOURCE CARDS  
040 ABSTRACT THIS PROGRAM IS A REVISION OF THE LABEL TRACE ROUTINE (SYS160) CONTAINED IN THE FORTRAN LIBRARY.  
050 BREAKPOINT SWITCH 1 IS USED TO PERMIT OR SUPPRESS THE LABEL TRACE AT EXECUTION TIME.

B3890251 000 AA 9-SERIES REAL TIME FORTRAN OCTAL DUMP SUBROUTINE P UM  
010 AUTHOR T. H. VIND  
020 890251-11A00 DESCRIPTION PRINTED

	040		890251-34A00 *	SOURCE CARDS	
	050		ABSTRACT PROVIDES AN OCTAL DUMP FOR DEBUGGING		
B3890252	000	AA 9-SERIES	MEMORY DUMP FOR 9372 PRINTER		P UM
	010	AUTHOR	K. JAMERSON - HONEYWELL, INC.		
	020		890252-11A00 DESCRIPTION PRINTED		
	030		890252-24A00 RELOCATABLE BINARY CARDS		
	040		ABSTRACT PRINTS SPECIFIED SECTIONS OF MEMORY, 8 WORDS PER LINE, ON THE 9372 LINE PRINTER. BIT PATTERNS WHICH		
	050		REPEAT ARE INDICATED RATHER THAN PRINTED REDUNDANTLY.		
B3890253	000	AA 9-SERIES	FORTRAN TO SYMBOL LANGUAGE RUN-TIME LIST		P UM
	010	AUTHOR	R. F. ULRICH, DOUGLAS AIRCRAFT CO.		
	020		890253-11A00 DESCRIPTION PRINTED		
	030		890253-34A00 * SOURCE CARDS		
	040		ABSTRACT GIVES A RUN-TIME SYMBOLIC LISTING OF ANY FORTRAN ROUTINE IN SYMBOL 8 LANGUAGE.		
B3890254	000	AA 9-SERIES	SHIFT ROUTINE FOR A AND B REGISTERS		P UM
	010	AUTHOR	L. A. LITTLETON - UNIV. OF CHICAGO		
	020		890254-11A00 DESCRIPTION PRINTED		
	040		890254-34A00 * SOURCE CARDS		
	050		ABSTRACT SHE POP CONSISTS OF ALS, ARS, BLS AND BRS. THE PACKAGE PROVIDES SINGLE-REGISTER SHIFT INSTRUCTIONS IN		
	060		EACH DIRECTION FOR BOTH THE A AND B REGISTERS.		
B3890255	000	AA 9-SERIES	HALT AND TRANSFER SIMULATION ROUTINE		P UM
	010	AUTHOR	L. A. LITTLETON - UNIV. OF CHICAGO		
	020		890255-11A00 DESCRIPTION PRINTED		
	030		890255-34A00 * SOURCE CARDS		
	040		ABSTRACT PROVIDES A POP TO SIMULATE AN INTERRUPT-PROTECTED 'HALT AND TRANSFER' INSTRUCTION.		
B3890256	000	AA 9-SERIES	SIMULATION OF SKIP ON COMPARISON INST.		P UM
	010	AUTHOR	L. A. LITTLETON - UNIV. OF CHICAGO, LASR		
	020		890256-11A00 DESCRIPTION PRINTED		
	030		890256-34A00 * SOURCE CARDS		
	040		ABSTRACT PROVIDES A POP TO SIMULATE A SINGLE INSTRUCTION 'SKIP IF A LESS THAN OR EQUAL TO M.'		
B3890257	000	AA 9-SERIES	SINGLE INSTRUCTION FLAG OPERATION, FLGPO		P UM
	010	AUTHOR	L. A. LITTLETON - UNIV. OF CHICAGO		
	020		890257-11A00 DESCRIPTION PRINTED		
	030		890257-34A00 * SOURCE CARDS		

	040	ABSTRACT CONSISTS OF 5 POPS WHICH PROVIDE SINGLE INSTRUCTION FLAG SETTING, RESETTING, AND TESTING FOR WHICH THE	
	050	FLAG DOES NOT REQUIRE EXTRA STORAGE.	
B3890258	000	AA 9-SERIES LINE PRINTER PLOTTING PACKAGE	P UM
	010	AUTHOR MRS. PATRICIA GRASSLER, THE MITRE CORP.	
	020	890258-11A00 DESCRIPTION PRINTED	
	030	890258-34A00 * SOURCE CARDS	
	040	ABSTRACT ROUTINES FOR PLOTTING DATA ON A LINE PRINTER.	
B3890259	000	AA 9-SERIES GRAPH ROUT FOR THE LINEPRINTER-PLOTTING	P UM
	010	AUTHOR B. BUND, PERKIN-ELMER AND R.R. ROSE, DOUGLAS AIRCRAFT CO.	
	020	890259-11A00 DESCRIPTION PRINTED	
	030	890259-34A00 * SOURCE CARDS	
	040	ABSTRACT EIGHT SUBROUTINES PROVIDE CAPABILITY FOR ON-LINE GRAPHING USING THE LINE PRINTER. THESE ROUTINES ALLOW	
	050	THREE METHODS OF PLOTTING POINTS WITH VERTICAL AND HORIZONTAL AXES WHICH ARE SCALED AND TITLED. THE	
	060	AXES ARE ALONG THE LEFTHAND AND BOTTOM EDGES OF THE PAGE.	
B3890260	000	AA 9-SERIES GRAPH ROUTINES FOR LINE PRINTER-PLOTTING	P UM
	010	AUTHOR BARBARA BUND - PERKIN-ELMER CORP.	
	020	890260-11A00 DESCRIPTION PRINTED	
	030	890260-34A00 * SOURCE CARDS	
	040	ABSTRACT PROVIDES CAPABILITY FOR ON-LINE PLOTTING USING THE LINE PRINTER	
B3890261	000	AA 9-SERIES TAPE HANDLING ROUTINE - TAPE	P UM
	010	AUTHOR C. A. BURNS - UNIV. OF CHICAGO	
	020	890261-11A00 DESCRIPTION PRINTED	
	030	890261-34A00 * SOURCE CARDS	
	040	ABSTRACT A ROUTINE TO PROVIDE CONVENIENT MAGNETIC TAPE HANDLING.	
B3890262	000	AA 9-SERIES TYPEWRITER (STD) LISTING OUTPUT SUBR	P UM
	010	AUTHOR W. B. KENDALL - JET PROPULSION LABS	
	020	890262-11A00 DESCRIPTION PRINTED	
	030	890262-34A00 * SOURCE CARDS	
	040	ABSTRACT TO OUTPUT ON THE TYPEWRITER (STANDARD SELECTRIC) THE SYMBOL OUTPUT LISTING, EITHER UNCONDITIONALLY OR IN	
	050	A DIAGNOSTIC MODE, UNDER RPT4 CONTROL.	
B3890263	000	AA 9-SERIES TYPEWRITER (15" CARRIAGE) LISTING OUTPUT	P UM
	010	AUTHOR W. B. KENDALL - JPL SUBROUTINE.	
	020	890263-11A00 DESCRIPTION PRINTED	

	030	ABSTRACT TO OUTPUT ON A 15" WIDE CARRIAGE SELECTRIC, EITHER UNCONDITIONALLY OR IN A DIAGNOSTIC MODE, UNDER	
	040	BREAKPOINT & CONTROL.	
B3890264	000	AA 9-SERIES SET OR DETECT ITH BIT OF A WORD	P UM
	010	AUTHOR MISS G. P. GREEN - NATIONAL RESEARCH COUNCIL	
	020	890264-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT A SUBPROGRAM TO SET OR DETECT THE ITH BIT OF A WORD.	
B3890265	000	AA 9-SERIES CARD READER END OF FILE TEST	P UM
	010	AUTHOR P. J. WELLENSTEIN	
	020	890265-11A00 DESCRIPTION PRINTED	
	030	890265-34A00 * SOURCE CARDS	
	040	ABSTRACT FORTRAN SUBROUTINE TO TEST FOR EOF CONDITION ON CARD READER.	
B3890266	000	AA 9-SERIES LINE PRINTER LISTING SUBROUTINE	P UM
	010	AUTHOR W. B. KENDALL - JET PROPULSION LABS	
	020	890266-11A00 DESCRIPTION PRINTED	
	030	890266-34A00 * SOURCE CARDS	
	040	ABSTRACT PERMITS OUTPUT LISTING ON A LINE PRINTER, EITHER UNCONDITIONALLY OR IN A DIAGNOSTIC MODE, UNDER	
	050	BREAKPOINT CONTROL.	
B3890267	000	AA 900-SERIES FORTRAN FLOWCHART PROGRAM	P UM
	010	AUTHOR D. PIXLEY, BAUSCH & LOMB, INC.	
	020	890267-11A00 DESCRIPTION PRINTED	
	030	890267-34A00 * SOURCE CARDS	
	040	ABSTRACT PRODUCES A FLOWCHART FROM ANY GIVEN FORTRAN II PROGRAM.	
	050	COMMENTS COMPUTER CONFIGURATION: ANY 900 SERIES COMPUTER WITH CARD READER AND LINE PRINTER, 3179 DECIMAL MEMORY	
	060	SOURCE LANGUAGE: FORTRAN II	
B3890268	000	AA 9-SERIES PRINTER UTILITY PROGRAM	P UM
	010	AUTHOR D. PIXLEY - BAUSCH + LOMB	
	020	890268-11A00 DESCRIPTION PRINTED	
	030	890268-24A00 RELOCATABLE BINARY CARDS	
	040	890268-34A00 * SOURCE CARDS	
	050	ABSTRACT PROVIDES A GENERAL MEANS FOR LISTING CARDS ON A HIGH-SPEED PRINTER WITH A VARIETY OF SPECIAL-PURPOSE	
	060	OPTIONS WHICH WOULD OTHERWISE HAVE TO BE PROGRAMMED SPECIFICALLY FOR A GIVEN TYPE LISTING.	
B3890269	000	AA 9-SERIES CARD RESEQUENCE - DUPLICATOR (REPRO)	P UM
	010	AUTHOR K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	

	020		890269-11A00	DESCRIPTION PRINTED	
	030		890269-34A00 *	SOURCE CARDS	
	040	ABSTRACT	PROVIDES A CONVENIENT IN-HOUSE METHOD OF RESEQUENCING A SYMBOLIC PROGRAM CARD DECK, AND TO PRODUCE A		
	050		FINAL RESEQUENCED VERSION OF A CARD DECK WITHOUT RELEASING THE DECK TO EAM.		
B3890270	000	AA 9-SERIES	LIBRARY UPDATE EXAMPLE		P UM
	010	AUTHOR	K. P. AMBROSE, DOUGLAS AIRCRAFT CO.		
	020		890270-11A00	DESCRIPTION PRINTED	
	030		890270-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO PROVIDE A SKELETON FORM, FOR REFERENCE, OF A COMPLETE USERS' FORTRAN LIBRARY PACKAGE INCLUDING ALL		
	050		CONTROL CARDS NECESSARY TO COMPILE-ASSEMBLE AND INSERT THE BINARY OUTPUT AS THE FIRST ROUTINES IN THE		
	060		FORTRAN LIBRARY.		
B3890271	000	AA 9-SERIES	PSI OR TSI SYMBOLIC INPUT/OPTIONAL MAG.		P UM
	010	AUTHOR	W. B. KENDALL - JPL TAPE INTERM. OUTPUT SUBROUTINE		
	020		890271-11A00	DESCRIPTION PRINTED	
	030		890271-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO READ SYMBOLIC INPUT RECORDS FOR SYMBOL. DURING PASS 1 THESE RECORDS MAY BE COPIED, IF BPT 3 IS SET,		
	050		FROM PAPER TAPE (OR TYPEWRITER) TO MAGNETIC TAPE UNIT 1, FROM WHICH THEY ARE READ DURING PASS 2.		
B3890272	000	AA 9-SERIES	CARD SYMBOLIC INPUT/OPTIONAL MAG. TAPE		P UM
	010	AUTHOR	W. B. KENDALL - JPL INTERM. OUTPUT SUBROUTINE (CSI)		
	020		890272-11A00	DESCRIPTION PRINTED	
	030		890272-34A00 *	SOURCE CARDS	
	040	ABSTRACT	TO READ SYMBOLIC INPUT RECORDS FOR SYMBOL. DURING PASS 1 THESE RECORDS MAY BE COPIED FROM CARDS TO		
	050		MAGNETIC TAPE UNIT 1 (BPT 3 SET), FROM WHICH THEY ARE READ DURING PASS 2.		
B3890273	000	AA 9-SERIES	BINARY TO DECIMAL CONVERSION		P UM
	010	AUTHOR	H.P. BRIAR - AEROJET-GENERAL CORP.		
	020		890273-11A00	DESCRIPTION PRINTED	
	030	ABSTRACT	BID A BINARY TO DECIMAL SUBROUTINE WILL CONVERT THE CONTENTS OF A AND B INTO 7 DECIMAL DIGITS AND		
	040		DECIMAL POINT OR A - SIGN, DECIMAL POINT AND 6 DIGITS. THE CONVERTED BID WILL BE PACKED 2 CH/WD READY		
	050		FOR OUTPUT WITH LEADING ZEROS SUPPRESSED.		
B3890274	000	AA 9-SERIES	XDS 92 PAPER TAPE EDITOR		P UM
	010	AUTHOR	H. P. BRIAR - AEROJET-GENERAL CORP		
	020		890274-11A00	DESCRIPTION PRINTED	
	030	ABSTRACT	PROPER SETTING OF THE BREAKPOINT SWITCHES WITH AUXILIARY TYPING OF THE NUMBER OF RECORDS TO BE PROCESSED		
	040		ALLOWS REPRODUCTION, LISTING, INSERTION OR DELETION OF SYMBOL SOURCE OR FORTRAN SOURCE STATEMENTS.		

B3890275 000 AA 9-SERIES FREQUENCY RESPONSE OF DIGITAL TRANSFER P UM  
010 AUTHOR D. C. BAXTER FUNCTION  
020 890275-11A00 DESCRIPTION PRINTED  
030 890275-34A00 \* SOURCE CARDS  
040 ABSTRACT COMPUTATION OF AMPLITUDE AND PHASE OF THE RESPONSE OF A LINEAR SAMPLED-DATA SYSTEM TO AN INPUT SINUSOID  
050 OF FREQUENCY  $\omega$ .

B3890276 000 AA 9-SERIES INVERSE Z-TRANSFORM P UM  
010 AUTHOR R. E. GAGNE  
020 890276-11A00 DESCRIPTION PRINTED  
030 890276-34A00 \* SOURCE CARDS  
040 ABSTRACT CALCULATION OF THE FIRST  $M+1$  TERMS OF THE POWER SERIES INVERSION OF A Z TRANSFORM.

B3890277 000 AA 9-SERIES D-T-L CIRCUIT DESIGN P UM  
010 AUTHOR W. B. LENG AND G. ROGOFF  
020 890277-11A00 DESCRIPTION PRINTED  
030 ABSTRACT CALCULATES  $R_1$ ,  $R_2$ ,  $R_3$ , FAN-OUT AND DISSIPATED POWER FOR THE FAMILIAR D-T-L NAND GATE CIRCUIT, GIVING  
040 ANSWERS IN EXACT CALCULATED VALUES OR IN COMMERCIALY AVAILABLE STANDARD RESISTANCES FOR WORST-CASE  
050 CONDITIONS.

B3890278 000 AB 9-SERIES BASIC CRITICAL PATH PROGRAM P UM  
010 AUTHOR R. ROWMAN - XDS  
020 890278-11A00 DESCRIPTION PRINTED  
030 890278-34B00 \* SOURCE CARDS  
040 ABSTRACT A BASIC PROGRAM THAT CALCULATES THE CRITICAL PATH OF A SPECIFIC PROJECT ON A MINIMUM XDS 900 SERIES  
050 COMPUTER; ALSO, SLACK TIMES ARE COMPUTED FOR ALL TASKS WITHIN THE PROJECT.

B3890279 000 AA 9-SERIES U.S. STANDARD EARTH MODEL ATMOSPHERE P UM  
010 AUTHOR XEROX  
020 890279-11A00 DESCRIPTION PRINTED  
030 890279-34A00 \* SOURCE CARDS  
040 ABSTRACT CALCULATE PRESSURE, DENSITY, MOLECULAR-SCALE TEMPERATURE AND SPEED OF SOUND AT ANY GIVEN EARTH ALTITUDE,  
050 AT A LATITUDE OF  $45^\circ$ .

B3890280 000 AA 9-SERIES U.S. STANDARD EARTH ATMOSPHERE ROUTINE P UM  
010 AUTHOR XEROX  
020 890280-11A00 DESCRIPTION PRINTED  
030 890280-34A00 \* SOURCE CARDS



040 ABSTRACT ROUTINE TO CALCULATE PRESSURE, DENSITY, MOLECULAR-SCALE TEMPERATURE, AND SPEED OF SOUND, AT ANY GIVEN  
050 ALTITUDE AND AT ANY GIVEN LATITUDE.

83890281 000 AA 9-SERIES U.S. STANDARD MARS ATMOSPHERE ROUTINE (196 P UM  
010 AUTHOR XEROX  
020 890281-11A00 DESCRIPTION PRINTED  
030 890281-34A00 \* SOURCE CARDS  
040 ABSTRACT CALCULATES PRESSURE, DENSITY, MOLECULAR-SCALE TEMPERATURE, AND SPEED OF SOUND, AT ANY GIVEN ALTITUDE  
050 WITHIN THE SPHERE OF INFLUENCE OF MARS.

83890282 000 AA 9-SERIES U.S. STANDARD VENUS ATMOSPHERE ROUTINE P UM  
010 AUTHOR XEROX  
020 890282-11A00 DESCRIPTION PRINTED  
040 890282-34A00 \* SOURCE CARDS  
050 ABSTRACT CALCULATES PRESSURE, DENSITY, MOLECULAR-SCALE TEMPERATURE, AND SPEED OF SOUND AT ANY GIVEN ALTITUDE OF  
060 VENUS' SPHERE-OF-INFLUENCE.

83890283 000 AA 9-SERIES CIRCUIT DESIGN ANALYSIS CIRC DC P UM  
010 AUTHOR XEROX  
020 890283-11A00 DESCRIPTION PRINTED  
030 890283-25A00 RELOCATABLE BINARY MAG TAPE, 7 CHANNELS  
040 890283-35A00 890283-25 SOURCE MAG TAPE, 7 CHANNELS  
050 ABSTRACT A FORTRAN II BASED SOFTWARE PACKAGE TO PERFORM DC CIRCUIT DESIGN ANALYSIS

83890284 000 AA 9-SERIES AIRPLANE LAT-DIR TIME HISTORY P UM  
010 AUTHOR JAMES L. SAMUELS  
020 890284-11A00 DESCRIPTION PRINTED  
030 ABSTRACT SOLVES THE THREE DEGREE-OF-FREEDOM LATERAL-DIRECTIONAL AIRPLANE EQUATIONS OF MOTION, USING FOURTH ORDER  
040 RUNGE-KUTTA INTEGRATION AND TYPES A TIME HISTORY. USEFUL FOR CHECKING LAT-DIR PORTION OF ANALOG  
050 SIMULATIONS.

83890285 000 AA 9-SERIES UTILITIES INDUSTRY PACKAGE P UM  
010 AUTHOR C. PASTEL AND V. WRAY - SOUTHERN CALIFORNIA EDISON  
020 890285-11A00 DESCRIPTION PRINTED  
030 890285-34A00 \* SOURCE CARDS  
040 ABSTRACT PACKAGE OF SEVEN ROUTINES TO PROVIDE THE FOLLOWING: (1) GENERALIZED METHOD FOR SOLVING POWER SYSTEM LOAD  
050 FLOWS; (2) RATE AND REVENUE EVALUATION; (3) LINE PROFILE SURVEY; (4) VOLTAGE DROP AND LOSS EVALUATION.  
060 (5) RULING SPAN CALCULATION; (6) PROBABILITY OF LOSS OF LOAD COMPUTATION; (7) TRANSFORMER HEAT RUN.

B3890286	000	AA 9-SERIES	RPL, A DATA REDUCTION LANG. PRECOMPILER	P UM
	010	AUTHOR	FRANK C. BEQUAERT - MITRE CORP.	
	020		890286-11A00 DESCRIPTION PRINTED	
	030		890286-25A00 890286-35 RELOCATABLE BINARY MAG TAPE, 7 CHANNELS	
	040		890286-35A00 * SOURCE MAG TAPE, 7 CHANNELS	
	050	ABSTRACT	RPL IS A PRECOMPILER WRITTEN IN FORTRAN II THAT GENERATES FORTRAN II OUTPUT STATEMENTS ON MAGNETIC TAPE.	
	060		THE PROGRAM ALLOWS THE USE OF A DATA BASE DICTIONARY THAT MAKES IT UNNECESSARY FOR THE USER TO KNOW	
	070		WHERE WITHIN A MAGNETIC TAPE RECORD PIECES OF DATA ARE RECORDED. RPL PROVIDES A NUMBER OF PROGRAM	
	080		GENERATION FUNCTIONS WHICH GENERATE AS OUTPUT FORTRAN PROGRAM SEGMENTS THAT PERFORM DATA REDUCTION	
	090		OPERATIONS.	
B3890287	000	AA 9-SERIES	ON-LINE MATHEMATICAL COMPILER	P UM
	010	AUTHOR	R. L. SCHWARTZ - XDS	
	020		890287-11A00 DESCRIPTION PRINTED	
	030		890287-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROVIDES THE USER WITH THE CAPABILITY OF USING HIS XDS 900 SERIES COMPUTER AS A SOPHISTICATED DESK	
	050		CALCULATOR.	
B3890288	000	AA 9-SERIES	LOGICAL, BIT, AND CHARACTER MANIPULATION	P UM
	010	AUTHOR	H. PACHON - AUTOMATIC ELECTRIC LABS	
	020		890288-11A00 DESCRIPTION PRINTED	
	030		890288-34A00 * SOURCE CARDS	
	040	ABSTRACT	A PACKAGE OF ROUTINES TO EXTEND THE FLEXIBILITY OF THE XDS FORTRAN II PROGRAMMING SYSTEM TO INCLUDE THE	
	050		ENCODING OF NON-NUMERICAL PROGRAMS.	
B3890289	000	AA 9-SERIES	LINE PRINTER PLOTTING ROUTINE	P UM
	010	AUTHOR	P. JORGENSEN - AUTOMATIC ELECTRIC LABORATORIES, INC.	
	020		890289-11A00 DESCRIPTION PRINTED	
	030		890289-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROVIDES A PLOT OF A SET OF POINTS WHOSE COORDINATES ARE STORED IN X AND Y ARRAYS.	
B3890290	000	AA 9-SERIES	HISTOGRAPH PLOT LINE PRINTER-HSTPLOT	P UM
	010	AUTHOR	P. JORGENSEN - AUTOMATIC ELECTRIC LABORATORIES, INC.	
	020		890290-11A00 DESCRIPTION PRINTED	
	030		890290-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS SUBROUTINE PLOTS A HISTOGRAPH AND COMPUTES STATISTICAL PARAMETERS OF AN ARBITRARY ARRAY OF FLOATING	
	050		POINT NUMBERS.	
B3890291	000	AA 9-SERIES	WINNIM - PROGRAM TO PLAY NIM	P UM

	010	AUTHOR	P. JORGENSEN - AUTOMATIC ELECTRIC LABORATORIES, INC.	
	020		890291-11A00 DESCRIPTION PRINTED	
	030		890291-34A00 * SOURCE CARDS	
	040	ABSTRACT	THIS IS A DEMONSTRATION PROGRAM THAT ALLOWS THE USER TO PLAY NIM WITH THE COMPUTER.	
B3890292	000	AA 9-SERIES	SAMPLE DATA FROM ANALOG INPUT AND STORE	P UM
	010	AUTHOR	I. RAUDZIN - NATIONAL RESEARCH COUNCIL.	
	020		890292-11A00 DESCRIPTION PRINTED	
	030		890292-34A00 * SOURCE CARDS	
	040	ABSTRACT	A FORTRAN II SUBROUTINE TO SAMPLE DATA FROM A SPECIFIED ANALOG INPUT UNDER EXTERNAL CLOCK CONTROL AND STORE IN MEMORY, TWO SAMPLES/WORD. CALCULATES THE SUMS OF THE FIRST FOUR POWERS.	
B3890293	000	AA 9-SERIES	BCD CONVERSION, XDS - UNIVAC - XDS	P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	
	020		890293-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	PROVIS BCD CONVERSION BETWEEN THE UNIVAC CHARACTER SET AND THE IBM COMPATIBLE CHARACTER SET USED BY XDS	
B3890294	000	AA 9-SERIES	MAG TAPE POSITION ROUTINE	P UM
	010	AUTHOR	MISS I. RAUDZINS - NATIONAL RESEARCH COUNCIL	
	020		890294-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	POSITIONS THE MAG TAPE ON UNIT 0 AT THE NTH FILE, AND OPTIONALLY TO SIMULATE A MAG TAPE FILE TO LOAD THAT FILE.	
B3890295	000	AA 9-SERIES	INTERPOLATION OR EXTRAPOLATION ROUTINE	P UM
	010	AUTHOR	R. M. WELCH - DOUGLAS AIRCRAFT CO.	
	020		890295-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	ROUTINE TO INTERPOLATE OR EXTRAPOLATE. TO RETURN EITHER X AS A FUNCTION OF Y OR Y AS A FUNCTION OF X, AND A ROUTINE TO READ DATA CARDS IN AND SET UP NECESSARY TABLES.	
B3890296	000	AA 9-SERIES	PAPER TAPE DUPLICATOR	P UM
	010	AUTHOR	H.P. BRIAR - AEROJET GENERAL CORP.	
	020		890296-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	WHEN THE XDS 92 IS EQUIPPED WITH 60 CS PUNCH AND 300 CS READER, THE PROGRAM FURNISHES A READ TAPE/PUNCH TAPE OPERATING MODE FOR THE 300 CS READER TO THE 60 CS PUNCH. THIS PROVIDES A DUPLICATE PAPER TAPE.	
B3890297	000	AA 9-SERIES	UNIVERSAL GRAPHIC PACKAGE-CRT4-PLOTTING	P UM
	010	AUTHOR	K. P. AMBROSE - DOUGLAS AIRCRAFT CO.	
	020		890297-11A00 DESCRIPTION PRINTED	
	030		890297-34A00 * SOURCE CARDS	

040 890297-35A00 SOURCE MAG TAPE, 7 CHANNELS  
050 ABSTRACT PROVIDES A CONVENIENT SOFTWARE GRAPHIC PACKAGE (USING THE XDS 9185 GRAPHIC LANGUAGE) FOR PLOTTING ON THE  
060 FOLLOWING FIVE DEVICES: XDS 9185 CATHODE RAY TUBE DISPLAY UNIT, LINE PRINTER, TYPEWRITER, CALCOMP, AND  
070 SC4020.

B3890298 000 AA 9-SERIES FORTRAN II RAD LINKING PROCESSOR-RADLNK P UM

010 AUTHOR O. PIXLEY - XDS  
020 890298-11A00 DESCRIPTION PRINTED  
030 890298-34A00 \* SOURCE CARDS  
040 890298-44A00 \* COMPRESSED CARDS  
050 ABSTRACT THE ENTIRE SYSTEM ALLOWS THE USER TO CREATE A LINK TAPE PROCESSOR WHICH WHEN FILLED FROM TAPE 0, ACCEPTS  
060 A STANDARD FORTRAN II LINK TAPE FROM TAPE UNIT 2, PLACES EACH LINK ON THE RAD AND ACCEPTS A TWO DIGIT  
070 DECIMAL NUMBER FROM A CARD TO DETERMINE WHICH LINK TO EXECUTE FIRST. SUCCESSIVE LINKS ARE EXECUTED BY  
080 THE CALL LINK(N) OR CALL NEXTLINK FORTRAN II STATEMENTS.

B3890299 000 AA 9-SERIES SC4020 SUBROUTINES FOR XDS 920/930 P UM

010 AUTHOR GENERAL DYNAMICS-CONVAIR DIVISION  
020 890299-11A00 DESCRIPTION PRINTED  
030 890299-34A00 \* SOURCE CARDS  
040 ABSTRACT THE SUBROUTINE PACKAGE IS A SUBSET OF THE STANDARD SC SCORS PACKAGE. MOST OF THE CAPABILITIES AS  
050 DESCRIBED IN THE SC DOC. 9500056 ARE PRESENT IN THE XDS PACKAGE. A MINIMUM OF 16K MEMORY WITH A MONARCH  
060 CONFIGURATION IS NEEDED TO COMPILE AND EXECUTE USING THE PACKAGE. OUTPUT IS A FORMATED SC4020 TAPE  
070 READY FOR PLOTTING.

B3890300 000 AA 9-SERIES DISK (RAD) HANDLER P UM

010 AUTHOR R. MADDEN - CHEVRON  
020 890300-11A00 DESCRIPTION PRINTED  
030 890300-34A00 \* SOURCE CARDS  
040 ABSTRACT TO PROVIDE INPUT AND OUTPUT TO A DISK ON CHANNEL E (DACC)

B3890301 000 AA 9-SERIES LABEL TRACE, MODIFIED 160 SYS P UM

010 AUTHOR E. A. SEAMAN - PRINCE ALBERT RADAR LAB  
020 890301-11A00 DESCRIPTION PRINTED  
030 890301-34A00 \* SOURCE CARDS  
040 ABSTRACT A PROGRAM THAT INITIALIZES THE OPERATION OF A MODIFIED VERSION OF 160SYS TO PROVIDE: 1. A SELECTIVE  
050 TRACE OF UP TO 10 LABELS AS SPECIFIED BY THE OPERATOR AT RUN TIME. 2. A TRACE OF NO LABELS. 3. A TRACE  
060 OF ALL LABELS.  
070 COMMENTS USED BY PROGRAM PACKAGE (160SYS,SELTRA,ALLTRA,NOTRA)

B3890302	000	AA 9-SERIES	SELECTIVE LABEL TRACE, 160SYS	P UM
	010	AUTHOR	E. A. SEAMAN - PRINCE ALBERT RADAR LAB	
	020		890302-11A00 DESCRIPTION PRINTED	
	030		890302-34A00 * SOURCE CARDS	
	040	ABSTRACT	A MODIFICATION OF THE STANDARD XDS VERSION OF 160SYS PLUS THREE ASSOCIATED ROUTINES TO PROVIDE A	
	050		SELECTIVE TRACE OF STATEMENT LABELS IN A FORTRAN PROGRAM.	
	060	COMMENTS	REQUIRES SUBROUTINE TRACE.	
B3890303	000	AA 9-SERIES	INSPECTION/CORRECTION BY TYPEWRITER	P UM
	010	AUTHOR	D. DUNN, S. SKLAR	
	020		890303-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	THE PROGRAM ALLOWS INSPECTION AND/OR CORRECTIONS OF MEMORY LOCATIONS BASED ON TYPEWRITER INPUT.	
B3890304	000	AA 9-SERIES	FORTRAN MEMORY SAVE ON MAG TAPE	P UM
	010	AUTHOR	DR. K. DAWSON - UNIV. OF ALBERTA	
	020		890304-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	DUMP FORTRAN L OR REAL TIME FORTRAN MEMORY ON A MAG TAPE WITH OPTIONS FOR DUMPING COMMON AND RUN TIME.	
	040	COMMENTS	SEPARATE TAPES ARE PROVIDED FOR FORTRAN L AND REAL TIME FORTRAN	
B3890305	000	AA 9-SERIES	B>SORT-BUSINESS LANGUAGE SORT ROUTINE	P UM
	010	AUTHOR	L.R. BRENTON - DOUGLAS SPACE CENTER	
	020		890305-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	XDS B>SORT WAS MODIFIED TO PRESERVE THE ORIGINAL SORT SEQUENCE, THUS PROVIDING FOR MORE THAN ONE LEVEL	
	040		OF SORTING. I.E. MAJOR, INTERMEDIATE, MINOR.	
B3890306	000	AA 9-SERIES	FORTRAN CARD READ SUBROUTINE (216 SYS)	P UM
	010	AUTHOR	B.E. ANDREWS	
	020		890306-11A00 DESCRIPTION PRINTED	
	030		890306-34A00 * SOURCE CARDS	
	040	ABSTRACT	UPON READING A CARD CONTAINING A ~ IN THE FIRST COLUMN, PROGRAM CONTROL IS RETURNED TO MONARCH.	
	050	COMMENTS	REVISION OF XDS 216 SYS	
B3890307	000	AA 9-SERIES	MUSIC BOX	P UM
	010	AUTHOR	E.A. SEAMAN - PRINCE ALBERT RADAR LAB	
	020		890307-11A00 DESCRIPTION PRINTED	
	030	ABSTRACT	A DEMONSTRATION PROGRAM WHICH ENABLES THE COMPUTER TO READ MUSIC IN CODED FORM FROM PUNCHED TAPE AND	
	040		THEN TO PLAY IT.	
	050	COMMENTS	REQUIRES SOME HARDWARE MODIFICATION.	

B3890308	000	AA	9-SERIES	FORTRAN LABEL TRACE POP (160 SYS)	P UM
	010	AUTHOR	B.E. ANDREWS		
	020		890308-11A00	DESCRIPTION PRINTED	
	030		890308-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THIS PROGRAM IS USED TO GIVE A CONDITIONAL LABEL TRACE OF A FORTRAN PROGRAM AND PACKS THE LABELS AT		
	050		20/LINE.		
	060	COMMENTS	REVISION OF XDS 160 SYS POP.		
B3890309	000	AA	9-SERIES	TIC-TAC-TOE ROUTINE	P UM
	010	AUTHOR	A. SEAMAN - PRINCE ALBERT RADAR LAB		
	020		890309-11A00	DESCRIPTION PRINTED	
	030	ABSTRACT	A DEMONSTRATION PROGRAM FOR PLAYING TIC-TAC-TOE WITH THE COMPUTER.		
B3890310	000	AA	9300	FORTRAN EXTENDER LIB.-BIT HANDLING & I/O	P UM
	010	AUTHOR	UNIVERSITY OF DELAWARE		
	020		890310-11A00	DESCRIPTION PRINTED	
	030		890310-44A00 *	COMPRESSED CARDS	
	040	ABSTRACT	THIS PACKAGE OF LIBRARY ROUTINES PROVIDE ADDITIONAL CAPABILITY TO THE FORTRAN USER. THEY INCLUDE CHARACT		
	050		ER MANIPULATION, BIT MANIPULATION, INPUT/OUTPUT, AND TIMING.		
B3890311	000	AA	SIGMA 5/7	DEBUG ROUTINE-ON-LINE	P UC
	010	AUTHOR	XEROX		
	020		890311-11A00	DESCRIPTION PRINTED	
	030		890311-84A00	ABSOLUTE BINARY CARDS	
	040	ABSTRACT	ASSISTS IN THE DEBUGGING OF LARGER PROGRAMS. IT ENABLES THE USER TO DISPLAY AND/OR ENTER DATA INTO		
	050		MEMORY, VIA KEYBOARD PRINTER, TO SEARCH WITHIN LIMITS FOR KNOWN DATA, TO ANALYZE AND EXECUTE		
	060		INSTRUCTIONS AT ANY MEMORY LOCATION, TO ALTER MEMORY, AND TO TRACE.		
	070	COMMENTS	USES 350 LOCATIONS.		
B3890312	000	AA	SIGMA 5/7	FOCAL, FORTRAN-CALCULATOR, DESK CALC.	P UC
	010	AUTHOR	J.D. LARSON, BROOKHAVEN NATIONAL LABORATORIES		
	020		890312-11A00	DESCRIPTION PRINTED	
	030		890312-34A00 *	SOURCE CARDS	
	040		890312-51A00	890312-11 LISTING PRINTED	
	050	ABSTRACT	PERFORMS ARITHMETIC COMPUTATIONS USING FORTRAN STATEMENTS ENTERED DIRECTLY FROM A KEYBOARD DEVICE. IN		
	060		ADDITION, FOCAL ASSIMULATES AND STORES CONTROL, BRANCHING, AND ARITHMETIC		
B3890313	000	AB	9-SERIES	FAST FOURIER TRANSFORM--FOURT	P UM
	010	AUTHOR	N. BRENNER, MIT DEPARTMENT OF GEOPHYSICS		

	020		890313-11A00	DESCRIPTION PRINTED	
	030		890313-34A01 *	SOURCE CARDS	
	040	ABSTRACT	SUBROUTINE FOR FFT OF MULTI-DIMENSIONAL COMPLEX OR REAL ARRAY IN CORE WHOSE LENGTH IS ARBITRARY. RUNNING		
	050		TIME IS PROPORTIONAL TO $N \cdot \log(N)$ , MUCH FASTER THAN NON-FFT $N^2$ .		
B3890314	000	AA 9-SERIES	FAST FOURIER TRANSFORM--FOURG		P UM
	010	AUTHOR	NORMAN BRENNER MIT DEPARTMENT OF GEOPHYSICS		
	020		890314-11A00	DESCRIPTION PRINTED	
	030		890314-34A00 *	SOURCE CARDS	
	040	ABSTRACT	VERY SHORT SUBROUTINE FOR FFT OF ONE-DIMENSIONAL COMPLEX ARRAY WHOSE LENGTH IS ARBITRARY. RUNNING TIME		
	050		IS PROPORTIONAL TO $N \cdot \log(N)$ , MUCH FASTER THAN NON-FFT $N^2$ .		
B3890315	000	AB 9-SERIES	FAST FOURIER TRANSFORM--FOURZ		P UM
	010	AUTHOR	NORMAN BRENNER - MIT		
	020		890315-11P00	DESCRIPTION PRINTED	
	030		890315-34B00 *	SOURCE CARDS	
	040	ABSTRACT	SUBROUTINE FOR FFT OF MULTI-DIMENSIONAL COMPLEX OR REAL ARRAY IN CORE WHOSE LENGTH IS A POWER OF TWO.		
	050		RUNNING TIME IS A POWER OF TWO. RUNNING TIME IS PROPORTIONAL TO $N \cdot \log(N)$ , MUCH FASTER THAN NON-FFT		
	060		$N^2$ .		
B3890316	000	AA 9-SERIES	FAST FOURIER TRANSFORM--FOUR1		P UM
	010	AUTHOR	NORMAN BRENNER, MIT DEPARTMENT OF GEOPHYSICS		
	020		890316-11A00	DESCRIPTION PRINTED	
	030		890316-34A00 *	SOURCE CARDS	
	040	ABSTRACT	VERY SHORT SUBROUTINE FOR FFT OF ONE-DIMENSIONAL COMPLEX ARRAY IN CORE WHOSE LENGTH IS A POWER OF TWO.		
	050		RUNNING TIME IS PROPORTIONAL TO $N \cdot \log(N)$ , MUCH FASTER THAN NON-FFT $N^2$ .		
B3890317	000	AA 9-SERIES	FAST FOURIER TRANSFORM--FOR2D		P UM
	010	AUTHOR	NORMAN BRENNER, MIT DEPARTMENT OF GEOPHYSICS		
	020		890317-11A00	DESCRIPTION PRINTED	
	030		890317-34A00 *	SOURCE CARDS	
	040	ABSTRACT	SUBROUTINE FOR FFT OF MULTI-DIMENSIONAL COMPLEX ARRAY ON DESK OR DRUM WHOSE LENGTH IS A POWER OF TWO.		
	050		RUNNING TIME IS PROPORTIONAL TO $N \cdot \log(N)$ , MUCH FASTER THAN NON-FFT $N^2$ .		
B3890318	000	AA 900-SERIES	CIRCUIT DESIGN ANALYSIS - CIRC-AC		P UM
	010	AUTHOR	XEROX		
	020		890318-11A00	DESCRIPTION PRINTED	
	030		890318-24A00	RELOCATABLE BINARY CARDS	
	040		890318-34A00 *	SOURCE CARDS	

050 890318-35A00 \* SOURCE MAG TAPE, 7 CHANNELS  
 060 901651 CIRC-AC USERS MANUAL-900 SERIES CIRC AC  
 070 ABSTRACT A GENERAL PURPOSE PACKAGE FOR CIRCUIT DESIGN ANALYSIS. CIRC-AC ALLOWS QUICK AND ACCURATE ANALYSIS OF THE  
 080 AC (SMALL SIGNAL, SINUSOIDAL DRIVE) PERFORMANCE OF CIRCUITS CONTAINING MANY PASSIVE OR ACTIVE COMPONENTS.  
 090 CIRC-AC HAS A STORED MODEL FOR TRANSISTORS THAT IMPLEMENTS TWO POLE CURRENT DEPENDENCE UPON FREQUENCY.  
 100 CIRC-AC DOES NOMINAL SOLUTIONS, FREQUENCY ITERATION SOLUTIONS, AND AUTOMATIC OPEN LOOP SOLUTIONS. CIRC-  
 110 AC HANDLES LARGE CIRCUITS (OVER 50 MODES) AND PLOTS PERFORMANCE CURVES ON THE LINE-PRINTER. CIRC-AC HAS  
 120 DEPENDENT CURRENT SOURCE MODELS AND VOLTAGE SOURCE MODELS AND EASILY IMPLEMENTS Y AND H EQUIVALENT  
 130 CIRCUITS.  
 140 COMMENTS CIRC-AC IS A FORTRAN + SYMBOL PROGRAM THAT OPERATES AS A LINKED PROGRAM. CIRC WORKS EFFECTIVELY ON A 16K  
 150 MEMORY MACHINE (ASSUMED IN THE RELEASE). A SMALL VERSION CAN OPERATE ON 12K. FOUR MAG TAPES ARE IDEAL,  
 160 THREE MAG TAPES ARE GOOD, AND TWO MAG TAPES COULD SUPPORT A WEAK VERSION WITH AWARD OF NO PLOTTING. A  
 170 CARD READER AND LINE PRINTER ARE IDEAL. CIRC-AC OPERATES ON ANY 900-SERIES COMPUTER.

B3890319 000 AA SIGMA 5/7 REGISTRATION STATISTICS PACKAGE P UC  
 010 AUTHOR UNIVERSITY OF NEVADA  
 020 890319-11A00 DESCRIPTION PRINTED  
 030 890319-34A00 \* SOURCE CARDS  
 040 890319-36A00 SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT THIS REGISTRATION PACKAGE PERFORMS VARIOUS SORTS ON THE REGISTRATION INFORMATION AND PRINTS SELECTIVE  
 060 REPORTS. EACH PROGRAM IS STAND ALONE!  
 070 COMMENTS APPENDIX A CONTAINS THE GLOSSARY OF PROGRAM TERMS. APPENDIX B CONTAINS THE FORMATS FOR VARIOUS DATA  
 080 CARDS.

B3890321 000 AA SIGMA 5/7 CN704852 MODGFORTIV COMP BCD CONVERSION P UC  
 010 AUTHOR P. C. ROGERS, BROOKHAVEN NATIONAL LABORATORY  
 020 890321-11A00 DESCRIPTION PRINTED  
 030 890321-34A00 \* SOURCE CARDS  
 040 890321-51A00 890321-11 LISTING PRINTED  
 050 ABSTRACT PROVIDES PROPER FORTRAN BCD CONVERSION SO THAT OLD BCD DECKS MAY BE UPDATED WITH EBCDIC CARDS

B3890322 000 AC SIGMA 5-9 FREE FIELD FORTRAN IV INPUT SUBROUTINE P UC  
 010 AUTHOR PC ROGERS BROOKHAVEN NATIONAL LABORATORY UPTON NEW YORK  
 020 890322-11C00 DESCRIPTION PRINTED  
 030 890322-34C00 \* SOURCE CARDS  
 040 ABSTRACT FREEFLD FORTRAN PROVIDES A CONVENIENT MEANS OF READING ALPHANUMERIC DATA IN A FREE FIELD FORM AND  
 050 ENCODING THE INPUT INTO CHARACTER STRINGS, INTEGERS AND DOUBLE PRECISION VALUES

B3890323 000 AB SIGMA 5/7 FORTRAN IV KEYED FILE I/O ROUTINES P UC



010 AUTHOR P.C. ROGERS BROOKHAVEN NATIONAL LABORATORY UPTON NEW YORK  
020 890323-11B00 \* DESCRIPTION PRINTED  
030 890323-34B00 \* SOURCE CARDS  
040 890323-51B00 890323-11 LISTING PRINTED  
050 ABSTRACT USED TO READ/WRITE KEYED FILES FROM RAD. MODIFIED FROM BUFFERIN/BUFFEROUT ROUTINES

B3890324 000 AB SIGMA 5-9 FORTRAN IV BCD-EBCDIC CONVERSION SUBR. P UC  
010 AUTHOR PC ROGERS BROOKHAVEN NATIONAL LABORATORY UPTON NEWYORK  
020 890324-11B00 DESCRIPTION PRINTED  
030 890324-34B00 \* SOURCE CARDS  
040 ABSTRACT THIS ROUTINE CONVERTS BYTE STRINGS FROM BCD TO EBCDIC(HTOE)OR EBCDIC TO BCD(ETOB)

B3890325 000 AA SIGMA 5/7 TIME AND/OR DATE SUBROUTINE P UC  
010 AUTHOR S. WHEELER, UNIVERSITY OF TEXAS AT ARLINGTON  
020 890325-11A00 DESCRIPTION PRINTED  
030 890325-34A00 \* SOURCE CARDS  
040 890325-51A00 890325-11 LISTING PRINTED  
050 890325-74A00 DATA CARDS  
060 ABSTRACT THIS THREE-ENTRY-POINT SUBROUTINE ALLOWS THE XDSFORTRAN IV CALLER TO OBTAIN THE CURRENT TIME, DATE, OR  
070 BOTH IN A PRINTABLE (I.E ALPHANUMERIC) FORM BY CALLING THE APPROPRIATE ENTRY POINT.  
080 COMMENTS THE SUBROUTINE USES BPM SYSTEM PROCEDURES AND BYTE STRING INSTRUCTIONS.

B3890326 000 AA SIGMA 5/7 COMPRESSED SOURCE MERGE PROGRAM P UC  
010 AUTHOR M. COBB, RCA INTERNATIONAL SERVICE CORP.  
020 890326-11A00 DESCRIPTION PRINTED  
030 890326-24A00 RELOCATABLE BINARY CARDS  
040 890326-34A00 \* SOURCE CARDS  
050 890326-51A00 890326-11 LISTING PRINTED  
060 ABSTRACT THIS PROGRAM MERGES TWO SEPARATE COMPRESSED SOURCE VERSIONS OF A PROGRAM INTO A SINGLE OUT PUT. IT  
070 GENERATES A LISTING OF THE MERGED OUTPUT AT THE SAME TIME, NUMBERS THE LINES, AND FLAGS THOSE LINES THAT  
080 DIFFER BETWEEN THE TWO INPUT SOURCES. IT IS USED WHERE ONE LARGE BPM-CONFIGURATION COMPUTER SYSTEM  
090 SUPPORTS ANOTHER SMALLER BPM-CONFIGURATION AT A REMOTE SITE.

B3890327 000 AB SIGMA 7 INTEGER BOOLEAN FUNCTIONS FOR SIGMA 7 P UC  
010 AUTHOR DONALD V. HIRST, BROOKHAVEN NATIONAL LABORATORY.  
020 890327-11B00 DESCRIPTION PRINTED  
030 890327-34B00 \* SOURCE CARDS  
040 890327-51B00 890327-11 LISTING PRINTED  
050 890327-64B00 UPDATE ON CARDS

060 ABSTRACT THESE FUNCTIONS MAY BE PLACED IN THE FORTRAN IV-H RUN TIME LIBRARY AND MAY BE CALLED UPON BY FORTRAN  
070 ROUTINES.

B3890328 000 AA SIGMA 2/3 COGO COORDINATE GEOMETRY LANG.-CIVIL ENG P UM

010 AUTHOR XEROX  
020 890328-11A00 DESCRIPTION PRINTED  
030 890328-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
040 890328-74A00 DATA CARDS  
050 890328-84A00 ABSOLUTE BINARY CARDS

060 ABSTRACT COGO IS A PROBLEM ORIENTED LANGUAGE THAT PROVIDES ENGINEERS WITH THE MEANS OF SOLVING COORDINATE  
070 GEOMETRY PROBLEMS BY COMPUTER WITHOUT THE NECESSITY OF PRIOR COMPUTER EXPERIENCE. PROBLEMS ARE STATED IN  
080 TERMS THAT ARE FAMILIAR TO THE ENGINEER AND NO PROGRAMMING IN THE USUAL SENSE OF THE WORD IS NECESSARY.  
090 DESIGNED SPECIFICALLY FOR CIVIL ENGINEERING GEOMETRY PROBLEMS. COGO MAY ACTUALLY BE USED IN OTHER  
100 APPLICATION AREAS AS WELL. IT CAN BE APPLIED FOR EXAMPLE TO PROBLEMS ENCOUNTERED IN HIGHWAY DESIGN,  
110 INTERCHANGE DESIGN, CONTROL SURVEYS, BRIDGE GEOMETRY, CONSTRUCTION LAYOUT, LAND SURVEYING, AND MANY  
120 OTHERS.

130 COMMENTS PROGRAM TYPE:PROCESSOR LANGUAGE:BASIC FIV SYSTEM:PRM STORAGE:16K MIN SYSTEM DOC,PAGES:104

B3890329 000 AA 900-SERIES SEMILOG PLOTTING ROUTINES P UM

010 AUTHOR BRETT VALIQUET - MOTOROLA INC.  
020 890329-11A00 DESCRIPTION PRINTED  
030 890329-34A00 \* SOURCE CARDS  
040 890329-51A00 890329-11 LISTING PRINTED

050 ABSTRACT SEMIMULT-DRAWS A LINEAR Y-AXIS AND LOGARITHMIC X-AXIS AND PLOTS UP TO 8 CURVES ON THE SAME GRAPH.  
060 SEMIAXI - DRAWS A LINEAR Y-AXIS AND A LOGARITHMIC X-AXIS. REPLTZ - THIS SUBROUTINE PLOTS UP TO 10  
070 CURVES ON THE AXES PREVIOUSLY DRAWN BY SEMIAXI.

B3890330 000 AA 900-SERIES PLOT '8 VECTOR' PLOTTING PACKAGE P UM

010 AUTHOR MOTOROLA INC.  
020 890330-11A00 DESCRIPTION PRINTED  
030 890330-34A00 \* SOURCE CARDS  
040 890330-51A00 890330-11 LISTING PRINTED

050 ABSTRACT USED FOR TAPE WRITING FOR OFF LINE SYSTEMS. THIS IS THE STANDARD CALCOMP PACKAGE FOR 8 VECTOR PLOTS  
060 COMMENTS LANGUAGE:SYMBOL ADDITIONAL INFORMATION:INCLUDES SUBROUTINES: PLOTS,WHERE, FACTOR, OFFSET, CLRPLT.  
070 EACH SUBROUTINE ALLOWS ON-LINE OR OFF-LINE PLOTTING.

B3890331 000 AA 900-SERIES PLOT (24 VECTOR) PLOTTING PACKAGE P UM

010 AUTHOR MOTOROLA INC.  
020 890331-11A00 DESCRIPTION PRINTED

030 890331-34A00 \* SOURCE CARDS  
040 890331-51A00 890331-11 LISTING PRINTED  
050 ABSTRACT USED FOR TAPE WRITING FOR OFF-LINE SYSTEMS. THIS IS THE STANDARD CALCOMP PLOTTING PACKAGE FOR 24 VECTOR  
060 PLOTS.  
070 COMMENTS PROGRAM TYPE: PACKAGE LANGUAGE:SYMBOL SYSTEM:MONARCH. ADDITIONAL INFORMATION:INCLUDES SUBROUTINES  
080 PLOT, PLOTS, WHERE, FACTOR, OFFSET, CLRPLT. EACH SUBROUTINE ALLOWS ON-LINE OR OFF-LINE PLOTTING.

B3890332 000 AA 900-SERIES WORD/BIT ORIENTED FUNCTION & SUBROUTINE P UM  
010 AUTHOR JOHN DOLS, MOTOROLA, INC.  
020 890332-11A00 DESCRIPTION PRINTED  
030 890332-34A00 \* SOURCE CARDS  
040 890332-51A00 890332-11 LISTING PRINTED  
050 ABSTRACT WORD ORIENTED FUNCTIONS AND SUBROUTINES. SUBROUTINE FORM WHICH CALLS FUNCTION MULT, FUNCTION IPART, AND  
060 FUNCTION IPARTA, ALLOWS MULTIPLE VARIABLE STORAGE IN INTEGER WORD FORMAT. THE BIT CONFIGURATION TO BE  
070 USED BY THE VARIABLES MUST BE SPECIFIED  
080 BIT ORIENTED FUNCTIONS AND SUBROUTINES, FUNCTION AIF, SUBROUTINES EXC, FILL, MLW, AND PUT ALL ARE CALLED  
090 USING SEQUENCE: NAME (ARG1, ARG2, ARG3)  
100 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:FORT/SYMB SYSTEM:MONARCH

B3890333 000 AA 900-SERIES SUBROUTINE SLZDEQ P UM  
010 AUTHOR J. HERRFELL - MOTOROLA  
020 890333-11A00 DESCRIPTION PRINTED  
030 890333-34A00 \* SOURCE CARDS  
040 890333-51A00 890333-11 LISTING PRINTED  
050 ABSTRACT THIS SUBROUTINE WILL SOLVE UP TO 20 SIMULTANEOUS COMPLEX EQUATIONS.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH

B3890334 000 AA 900-SERIES NOPRINT, READ AND REREAD PACKAGE (TO) P UM  
010 AUTHOR JOHN DOLS / BOB STEPHENS - MOTOROLA INC.  
020 890334-11A00 DESCRIPTION PRINTED  
030 890334-34A00 \* SOURCE CARDS  
040 890334-51A00 890334-11 LISTING PRINTED  
050 ABSTRACT THE NOPRINT, READ, AND REREAD PACKAGE ALLOWS MANIPULATION AND INING THE PREVIOUS DATA TO BE MANIPULATED.  
060 (AS IN 'DECODE'). NOPRINT INHIBITS THE NEXT PRINT STATEMENT, ALLOWING REFORMATTING (AS IN 'ENCODE').  
070 STATEMENT, ALLOWING REFORMATTSUBROUTINE READ UTILIZES INTERLACE DURING I/O, ALLOWING COMPUTATION  
080 DURING I/O.  
090 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:METASYMBOL SYSTEM:MONARCH STORAGE:56WORDS DOC. PAGES:13 DATE:11/26/69

B3890335 000 AA 900-SERIES FORTRAN READ AND WRITE TAPE ROUTINES. P UM

010 AUTHOR JOHN DOLS / BOB STEPHENS - MOTOROLA INC.  
020 890335-11A00 DESCRIPTION PRINTED  
030 890335-34A00 \* SOURCE CARDS  
040 890335-51A00 890335-11 LISTING PRINTED  
050 ABSTRACT ALLOW FORTRAN TO READ OR WRITE RECORD BLOCKS OF ANY LENGTH IN BCD OR BINARY ON MAGNETIC TAPE.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:METASYMBOL SYSTEM:MONARCH STORAGE: DOC.PAGES:12 DATE:11/26/69

B3890336 000 AA 900-SERIES SORT-MODIFIED SHELL MERGE-EXCHANGE P UM  
010 AUTHOR JOHN DOLS - MOTOROLA  
020 890336-11A00 DESCRIPTION PRINTED  
030 890336-34A00 \* SOURCE CARDS  
040 890336-51A00 890336-11 LISTING PRINTED  
050 ABSTRACT PERFORMS DESCENDING OR ASCENDING SORTS ON BCD, INTEGER, OR REAL ARRAYS. PROGRAM TYPE:FORT SUB LANG:  
060 SYMBOL SYSTEM:MONARCH STORAGE:202 DOC.PAGES:12 DATE:11/26/69.

B3890337 000 AA 900-SERIES PACKING AND UNPACKING OF FLOATING POINT P UM  
010 AUTHOR BOB STEPHENS / JOHN DOLS - MOTOROLA  
020 890337-11A00 DESCRIPTION PRINTED  
030 890337-34A00 \* SOURCE CARDS  
040 890337-51A00 890337-11 LISTING PRINTED  
050 ABSTRACT A CONVERSION MEDIA BETWEEN DOUBLE AND SINGLE PRECISION FLOATING POINT NUMBERS - CONSERVES STORAGE.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:METASYMBOL SYSTEM:MONARCH STORAGE:24 DOC.PAGES:3 DATE:11/26/69

B3890338 000 AA 900-SERIES END-OF-FILE TEST P UM  
010 AUTHOR JOHN DOLS - MOTOROLA INC.  
020 890338-11A00 DESCRIPTION PRINTED  
030 890338-34A00 \* SOURCE CARDS  
040 890338-51A00 890338-11 LISTING PRINTED  
050 ABSTRACT TESTS FOR END-OF-FILE ON TAPE WRITTEN IN EITHER CODE AND BRANCHES TO SOME SPECIFIED STATEMENT WHEN EOF  
060 FOUND:  
070 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTTRAN SYSTEM:MONARCH STORAGE:21 DOC.PAGES:2 DATE:11/26/69

B3890339 000 AA 900-SERIES END-OF-PAGE TEST ROUTINE P UM  
010 AUTHOR BOB STEPHENS / JOHN DOLS - MOTOROLA  
020 890339-11A00 DESCRIPTION PRINTED  
030 890339-34A00 \* SOURCE CARDS  
040 890339-51A00 890339-11 LISTING PRINTED  
050 ABSTRACT TESTS LOCATION OF PRINTER TO DETERMINE IF PRINTER IS READY TO GO TO A NEW PAGE  
060 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:METASYMBOL SYSTEM:MONARCH STORAGE:9 DOC.PAGES:2 DATE:11/26/69.

B3890340	000	AA	900-SERIES	MAGNETIC TAPE POSITIONING ROUTINES	P UM
	010	AUTHOR	BOB STEPHENS - MOTOROLA INC.		
	020		890340-11A00	DESCRIPTION PRINTED	
	030		890340-34A00 *	SOURCE CARDS	
	040		890340-51A00	890340-11 LISTING PRINTED	
	050	ABSTRACT	FORTRAN SUBROUTINES ALLOWING THE USER TO SKIP A SPECIFIED NUMBER OF FILES OR RECORDS EITHER FORWARD OR		
	060		BACKWARD		
	070	COMMENTS	PROGRAM TYPE:FORT SUB LANGUAGE: FORTRAN II SYSTEM: MONARCH STORAGE:126 DOC. PAGES:6 DATE:11/26/69		
B3890341	000	AA	900-SERIES	COUNT FILES/RECORDS ON MAGNETIC TAPE	P UM
	010	AUTHOR	BOB STEPHENS - MOTOROLA INC.		
	020		890341-11A00	DESCRIPTION PRINTED	
	030		890341-34A00 *	SOURCE CARDS	
	040		890341-51A00	890341-11 LISTING PRINTED	
	050	ABSTRACT	ALLOWS THE USER TO COUNT THE RECORDS IN A FILE, OR THE FILES ON A MAGNETIC TAPE.		
	060	COMMENTS	PROGRAM TYPE:FORT SUB LANGUAGE:SYMBOL SYSTEM: STORAGE:85 DOC.PAGES:4 DATE:11/26/69		
B3890342	000	AA	900-SERIES	TAPE LABEL AND POSITIONING	P UM
	010	AUTHOR	BOB STEPHENS - MOTOROLA INC.		
	020		890342-11A00	DESCRIPTION PRINTED	
	030		890342-34A00 *	SOURCE CARDS	
	040		890342-51A00	890342-11 LISTING PRINTED	
	050	ABSTRACT	SUBROUTINES CONSTRUCT AND RECOGNIZE LEVEL 1 MONARCH LABELS.		
	060	COMMENTS	PROGRAM TYPE:FORT SUB. LANGUAGE:SYMBOL SYSTEM:MONARCH STORAGE:28 WORDS DOC.PAGES:7 DATE:11/26/69		
B3890343	000	AA	900-SERIES	ERROR	P UM
	010	AUTHOR	JOHN DOLS - MOTOROLA INC.		
	020		890343-11A00	DESCRIPTION PRINTED	
	030		890343-34A00 *	SOURCE CARDS	
	040		890343-51A00	890343-11 LISTING PRINTED	
	050	ABSTRACT	A FORTRAN SUBROUTINE WHICH ALLOWS PROGRAMMED INTERVENTION ON ANY FORTRAN II RUNTIME ERROR NORMALLY CAUS-		
	060		ING AN ERROR NOTIFICATION.		
	070	COMMENTS	PROGRAM TYPE:FORT SUB. LANGUAGE:SYMBOL SYSTEM:MONARCH STORAGE:71WORDS DOC.PAGES:6 DATE:11/26/69		
B3890344	000	AA	900-SERIES	PLOTTER SUBROUTING BLOWUP	P UM
	010	AUTHOR	RON KOLE - MOTOROLA INC.		
	020		890344-11A00	DESCRIPTION PRINTED	
	030		890344-34A00 *	SOURCE CARDS	

040 890344-51A00 890344-11 LISTING PRINTED  
050 ABSTRACT ENLARGES A PORTION OF A CURVE THAT IS DIFFICULT TO READ WHEN PLOTTED BY 'CALPLOT' (CAT NO 890350)  
060 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH DOC. PAGES:4 DATE:11/26/69  
070 ADDITIONAL INFORMATION: REQUIRES CALPLOT -890350

B3890345 000 AA 900-SERIES HISTPRINT AND HISTPLOT P UM  
010 AUTHOR MOTOROLA, INC.  
020 890345-11A00 DESCRIPTION PRINTED  
030 890345-34A00 \* SOURCE CARDS  
040 890345-51A00 890345-11 LISTING PRINTED  
050 ABSTRACT PROCESS RAW DATA INTO HISTOGRAM REPRESENTATIONS OF FREQUENCY VERSUS INTERVAL ACCORDING TO SPECIFICATION.  
060 HISTPRINT OUTPUTS ON THE LINE PRINTER WHILE HISTPLOT OUTPUTS ON THE CALCOMP PLOTTER. PLOTTING REQUIRES  
070 THREE TIMES AS MUCH COMPUTER TIME AS PRINTING.  
080 COMMENTS PROGRAM TYPE:FORT.SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH DOC.PAGES:12 DATE:11/26/69.  
090 REQUIRES PLOT-CAT NO 890330 SYMBOL CALCOMP SCOP PACKAGE SORT 890336

B3890346 000 AA 900-SERIES PLOTTER ROUTINE FOR ON-LINE PRINTER P UM  
010 AUTHOR JOHN DOLS - MOTOROLA INC.  
020 890346-11A00 DESCRIPTION PRINTED  
030 890346-34A00 \* SOURCE CARDS  
040 890346-51A00 890346-11 LISTING PRINTED  
050 ABSTRACT WILL PLOT ONE OR TWO CURVES ON LINE-PRINTER USING 8-1/2" X 11" PAPER. IT LABELS ALL AXES AND PRINTS A  
060 TITLE.  
070 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH DOC.PAGES:9 DATE:11/26/69

B3890347 000 AA 900-SERIES PROBABILITY FUNCTIONS - ERFF, ZGAUSSF, P P UM  
010 AUTHOR JIM HERRELL - MOTOROLA INC.  
020 890347-11A00 DESCRIPTION PRINTED  
030 890347-34A00 \* SOURCE CARDS  
040 890347-51A00 890347-11 LISTING PRINTED  
050 ABSTRACT ERFF-RETURNS VALUE OF ERROR FUNCTION FOR POSITIVE VALUES OF X. PROBFUNC-RETURNS VALUE OF NORMAL  
060 PROBABILITY INTEGRAL. ZGAUSS-INVERSE OF PROBFUNC.  
070 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE:76,83,96 DOC.PAGES:7 DATE:11/26/69

B3890348 000 AA 900-SERIES REVERSE SEMILOG PLOTTING PACKAGE P UM  
010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890348-11A00 DESCRIPTION PRINTED  
030 890348-34A00 \* SOURCE CARDS  
040 890348-51A00 890348-11 LISTING PRINTED

050 ABSTRACT SEMIREV DRAWS THE AXES FOR A SEMILOG PLOT THAT HAS THE Y-AXIS LOGARITHMIC. THE REPLOT4 PLOTS UP TO 10  
060 CURVES ON AXES GENERATED BY SEMIREV.  
070 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:7 DATE:11/26/69  
080 ADDITIONAL INFORMATION: REQUIRES SUBROUTINES: PLOT 890330, LOG4 890351, LOGSCALE 890353, PLUS CALCOMP  
090 ROUTINES:SCALE, CIRPLT, LINE, SYMBOL, AXIS

B3890349 000 AA 900-SERIES STATPAK-STATISTICAL PACKAGE P UM  
010 AUTHOR BRETT VALIGUET - MOTOROLA INC.  
020 890349-11A00 DESCRIPTION PRINTED  
030 890349-34A00 \* SOURCE CARDS  
040 890349-51A00 890349-11 LISTING PRINTED  
050 ABSTRACT STATPAK IS A PACKAGE DESIGNED TO ANALYZE, SUMMARIZE AND STANDARDIZE RELIABILITY DATA. PROGRAMS INCLUDED:  
060 LINK 1 THRU LINK 10 HISTPRINT INPLOT  
070 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:FORTRAN II SYSTEM:MONARCH  
080 ADDITIONAL INFORMATION:SUBROUTINES REQUIRED: AIF(890332) COMPARE, NOPRINT(890333), HISTPRINT (890345),  
090 REREAD (890334), ALOG10, LINK, NEXLINK, SGRI, INPLOT, ALOG, COS, SIN, IBCZ, CALPLOT, SEMILOG, AMIN,  
100 AMAX, ABS, FLOAT.

B3890350 000 AA 900-SERIES GENERAL PLOTTING PACKAGE P UM  
010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890350-11A00 DESCRIPTION PRINTED  
030 890350-34A00 \* SOURCE CARDS  
040 890350-51A00 890350-11 LISTING PRINTED  
050 ABSTRACT PLOTS ONE OR TWO CURVES ON 10" X 7" AXES WITH TITLE AND AXIS LABELS.  
060 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH DOC.PAGES:6 DATE:11/26/69  
070 REQUIRES CALCOMP ROUTINES: SCALE, PLOT, AXIS, SYMBOL, LINE.

B3890351 000 AA 900-SERIES SEMILOG PLOTTING PACKAGE P UM  
010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890351-11A00 DESCRIPTION PRINTED  
030 890351-34A00 \* SOURCE CARDS  
040 890351-51A00 890351-11 LISTING PRINTED  
050 ABSTRACT WILL PLOT ONE OR TWO CURVES ON 10" X 7" AXIS, WITH X-AXIS LOGARITHMIC.  
060 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:5 DATE:11/26/69  
070 ADDITIONAL INFORMATION: REQUIRES PROGRAM CAT NO 890353 - LOGSCALE, 890352 - LOGAXIS PLUS CALCOMP  
080 PLOTTING ROUTINES.- LOGSCALE, 890352 - LOGAXIS

B3890352 000 AA 900-SERIES LOGAXIS PLOTTING SUBROUTINE P UM  
010 AUTHOR R. KOLE, MOTOROLA

020 890352-11A00 DESCRIPTION PRINTED  
030 890352-34A00 \* SOURCE CARDS  
040 890352-51A00 890352-11 LISTING PRINTED  
050 ABSTRACT DRAWS A LOGARITHMIC AXIS AT EITHER 0 OR 90, 'TICS' OFF THE INCREMENTS, AND WRITES THE POWER OF 10  
060 INCREMENTS AT THE BEGINNING OF EACH DECADE.  
070 PROGRAM TYPE:FORT SUB. LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:4 DATE:11/26/69  
080 ADDITIONAL INFORMATION: 11/26/69 REQUIRES: PROGRAMS FROM CALCOMP PACKAGE - PLOT, TIC, WHERE,  
090 COMMENTS SYMBOL, WHERE, NUMBER.  
100 DRAWS A LOGARITHMIC AXIS AT EITHER 0 OR 90, 'TICS' OFF THE INCREMENTS, AND WRITES THE POWER 10  
110 INCREMENTS AT THE BEGINNING OF EACH DECADE.  
120 PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH  
130 STORAGE: DOC.PAGES:4 DATE:11/26/69  
140 REQUIRES: PROGRAMS FROM CALCOMP PACKAGE PLOT, TIC, WHERE, SYMBOL, WHERE, NUMBER

B3890353 000 AA 900-SERIES PLOTTING SUBROUTINE LOGSCALE P UM  
010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890353-11A00 DESCRIPTION PRINTED  
030 890353-34A00 \* SOURCE CARDS  
040 890353-51A00 890353-11 LISTING PRINTED  
050 ABSTRACT CONVERTS VALUES OF A DATA ARRAY TO LOG FORM. USED IN PLOTTING ON LOG PAPER.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:4 DATE:11/26/69

B3890354 000 AA 900-SERIES COMPLEX ARITHMETIC FUNCTIONS P UM  
010 AUTHOR BOB STEPHENS - MOTOROLA INC.  
020 890354-11A00 DESCRIPTION PRINTED  
030 890354-34A00 \* SOURCE CARDS  
040 890354-51A00 890354-11 LISTING PRINTED  
050 ABSTRACT FUNCTIONS USED FOR COMPLEX ARITHMETIC MAGNITUDE AND ANGLE; REAL AND IMAGINARY CONVERSIONS;  
060 MULTIPLICATION, DIVISION, ADDING AND SUBTRACTING.  
070 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE:8 DOC.PAGES:15 DATE:11/26/69

B3890355 000 AA 900-SERIES BCD CONVERSION OF NUMERIC DATA P UM  
010 AUTHOR BOB STEPHENS / JOHN DOLS - MOTOROLA  
020 890355-11A00 DESCRIPTION PRINTED  
030 890355-34A00 \* SOURCE CARDS  
040 890355-51A00 890355-11 LISTING PRINTED  
050 ABSTRACT CONVERSION OF FIXED OR FLOATING POINT NUMERIC DATA TO A4 OR A8 FORMATS AS REQUIRED.  
060 COMMENTS PROGRAM TYPE:FORT SUB. LANGUAGE:METASYMBOL SYSTEM:MONARCH STORAGE:197 DOC.PAGES:10 DATE:11/26/69



B3890356	000	AA 900-SERIES	ERASE MAGNETIC TAPE IN FORTRAN	P UM
	010	AUTHOR	BOB STEPHENS - MOTOROLA INC.	
	020		890356-11A00 DESCRIPTION PRINTED	
	030		890356-34A00 * SOURCE CARDS	
	040		890356-51A00 890356-11 LISTING PRINTED	
	050	ABSTRACT	SUBROUTINES USED TO ERASE MAGNETIC TAPE TO A SPECIFIED LENGTH.	
	060	COMMENTS	PROGRAM TYPE:FORT SUB. LANGUAGE:FORT II SYSTEM:MONARCH STORAGE:133 DOC.PAGES:5 DATE:11/26/69	
B3890363	000	AE SIGMA 5-9	SOL-SIMULATION-ORIENTED LANGUAGE	P UC
	010	AUTHOR	R.B. COOK, G.J. HANSEN, G.E. HAYNAM - VANDERBILT UNIVERSITY	
	020		890363-11E00 DESCRIPTION PRINTED	
	030		890363-26E00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	SOL IS A GENERAL PURPOSE LANGUAGE PROCESSOR USEFUL FOR DESCRIBING AND SIMULATING COMPLEX SYSTEMS.	
	050		INCLUDED ARE CAPABILITIES FOR EXPRESSING PARALLEL COMPUTATION, NOTATIONS FOR EMBEDDING RANDOM QUANTITIES	
	060		WITHIN ARITHMETIC EXPRESSIONS AND AUTOMATIC MEANS FOR GATHERING STATISTICS ABOUT THE ELEMENTS INVOLVED.	
	070		SOL IS CAPABLE OF DESCRIBING MODELS WITHOUT INCLUDING COMPUTER-ORIENTED CHARACTERISTICS.	
	080		NECESSARY TO FORM THE SOL COMPILER, DCBS AND LIBRARIES IS ELEMENT (-26).	
	090	COMMENTS	PROGRAM TYPE:PROCESSOR LANGUAGE:METASYMBOL SYSTEM:BPM/BTM/CP-V STORAGE: DOCU.PAGES:26	
B3890366	000	AB SIGMA 5/7	LISP 1.5-LANGUAGE FOR LIST PROCESSING	P UC
	010	AUTHOR	G. ROBERTSON, VANDERBILT UNIVERSITY	
	020		890366-11R00 DESCRIPTION PRINTED	
	030		890366-26R00 890366-46 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS	
	040		890366-46R00 * COMPRESSED MAG TAPE, 9 CHANNELS	
	050		890366-86R00 890366-46 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS	
	060	ABSTRACT	LISP 1.5 IS A PROGRAMMING LANGUAGE SUITABLE FOR LIST PROCESSING BASED ON LISP-A MATHEMATICAL LANGUAGE	
	070		DESIGNED FOR MEANINGFUL MANIPULATION OF LIST STRUCTURES. THE EXTENSIONS WHICH HAVE BEEN MADE, MAKE IT A	
	080		PROGRAMMING LANGUAGE, ALSO 1.5 IS AN INTERPRETIVE SYSTEM. THERE ARE NO RESTRICTIONS IN THIS VERSION.	
	090		THE PRIMARY USE HAS BEEN IN THE FIELD OF ARTIFICIAL INTELLIGENCE RESEARCH. IT IS USED FOR SYMBOLIC	
	100		CALCULATIONS IN CALCULUS, MATHEMATICAL LOGIC, GAME PLAYING, AND OTHER FIELDS. THE LISP TAPE (-46)	
	110		CONTAINS THE COMPLETE COMPRESSED SOURCE, THE ENTIRE SET OF RELOCATABLE OBJECT MODULES (-26) NECESSARY TO	
	120		FORM THE LISP COMPILER AS WELL AS THE COMPLETE LISP BINARY SYSTEM (-86).	
	130	COMMENTS	MEMORY REQUIREMENT FOR LISP 1.5 MAY BE ADJUSTED, UP OR DOWN, BY REASSEMBLING LISP WITH A CHANGE TO THE	
	140		VALUE OF LISPSYS. ELEMENT 86 PRESENT OF LISP-BIAS 4A00. NOTE: FILE 1-DIRECTORY ELEMENT 16- CONTAINS	
	150		DIRECTORY OF THE USES DCBROM TO GENERATE ITS DATA CONTROL BLOCKS. INCLUDED IS INTERACTIVE LISP 1.5 (14K	
	160		BTM LISP). ELEMENT 86 PRESENT OF LISP: BIAS 10800.	
B3890377	000	AA 900-SERIES	SUBROUTINE RE20EQ	P UM
	010	AUTHOR	J. HERRELL, MOTOROLA INC.	

020 890377-11A00 DESCRIPTION PRINTED  
030 890377-34A00 \* SOURCE CARDS  
040 890377-51A00 890377-11 LISTING PRINTED  
050 ABSTRACT THIS SUBROUTINE WILL SOLVE UP TO 20 SIMULTANEOUS EQUATIONS WITH REAL COEFFICIENTS AND 20 UNKNOWN.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH  
070 STORAGE: DOC.PAGES:6 DATE:12/04/69

B3890378 000 AA 900-SERIES SUBROUTINE DASHPLOT PLOTTER P UM

010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890378-11A00 DESCRIPTION PRINTED  
030 890378-34A00 \* SOURCE CARDS  
040 890378-51A00 890378-11 LISTING PRINTED  
050 ABSTRACT DRAWS A DASHED LINE FROM LOCATION OF PEN AT THE TIME OF CALL TO THE POINT(X,Y).  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH DOC. PAGES:2 DATE:11/26/69.  
070 REQUIRES CATALOG NUMBER 890330 PLOT

B3890379 000 AA 900-SERIES LINEAR PLOTTING PACKAGE P UM

010 AUTHOR BRETT VALIQUET - MOTOROLA INC.  
020 890379-11A00 DESCRIPTION PRINTED  
030 890379-34A00 \* SOURCE CARDS  
040 890379-51A00 890379-11 LISTING PRINTED  
050 ABSTRACT PLOTS UP TO 10 CURVES ON LINEAR, LABELED AXIS. CONSISTS OF THREE SUBROUTINES=LINEAR, REPLOT 1, LINAXI.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:11 DATE:11/26/69  
070 ADDITIONAL INFORMATION: REQUIRE PLOTTING PACKAGE FROM CALCOMP AND CATNO 890331 OR EQUIVALENT.

B3890380 000 AA 900-SERIES ALPHAXIS PLOTTING ROUTINE P UM

010 AUTHOR RON KOLE - MOTOROLA INC.  
020 890380-11A00 DESCRIPTION PRINTED  
030 890380-34A00 \* SOURCE CARDS  
040 890380-51A00 890380-11 LISTING PRINTED  
050 ABSTRACT DRAWS AXIS OF SPECIFIED LENGTH AND ANNOTE WITH LABELS INSTEAD OF NUMBERS.  
060 COMMENTS PROGRAM TYPE:FORT SUB LANGUAGE:FORTRAN II SYSTEM:MONARCH STORAGE: DOC.PAGES:4 DATE:11/26/69  
070 ADDITIONAL INFORMATION: USES CATALOG NO 890331 AND CALCOMP ROUTINE SYMBOL

B3890383 000 AA SIGMA 5/7 MESSAGE WRITER FOR PRINTER OR TYPEWRITER P UM

010 AUTHOR XEROX  
020 890383-11A00 DESCRIPTION PRINTED  
030 890383-34A00 \* SOURCE CARDS  
040 ABSTRACT PRINTS ANY MESSAGE ENTERED IN LARGE LENGTHWISE LETTERS ON THE LO DEVICE. IF A LINE PRINTER IS USED THE

050 CARRIAGE CONTROL TAPE SHOULD BE REMOVED. THE MESSAGE WILL BE FORMED BY ASTERISK CHARACTERS.  
060 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:SYMBOL SYSTEM:BPM STORAGE: DOC.PAGES:10 DATE:12/13/69.

B3890384 000 AA 900-SERIES FORTRAN PRECOMPILER FORT II-FORT IVH P UA  
010 AUTHOR G. SAGER, HONEYWELL, INC.  
020 890384-11A00 DESCRIPTION PRINTED  
030 890384-34A00 \* SOURCE CARDS  
040 ABSTRACT THE PRECOMPILER CONVERTS FORTRANII PROGRAMS TO BASIC FORTRAN IVH, ANNOTATES, GENERATES STATEMENTS  
050 CONVERTING FORTRAN II NEGATIVE DO LOOPS TO AN EQUIVALENT POSITIVE DO, AND FLAGS IRREGULARITIES WHICH ARE  
060 NOT CONVERTIBLE.  
070 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:FORTRANII SYSTEM:MONARCH STORAGE:7537 DOCU.PAGES:2 DATE:  
080 10/10/70 THE PACKAGE CONSISTS OF A MAIN PROGRAM AND 37 FUNCTIONS AND SUBROUTINES.

B3890387 000 AA SIGMA 5/7 PLOT DRIVER PACKAGE P UC  
010 AUTHOR G. SIMON, SACRAMENTO PEAK OBSERVATORY  
020 890387-11A00 DESCRIPTION PRINTED  
030 890387-34A00 \* SOURCE CARDS  
040 890387-51A00 890387-11 LISTING PRINTED  
050 890387-74A00 DATA CARDS  
060 ABSTRACT PLOT DRIVER PACKAGE FOR CALCOMP PLOTTER ON SIGMA 5/7. DRIVES THE PLOTTER FROM (X1,Y1) TO (X2,Y2) IN ANY  
070 OF 52 MODES. ALSO CONTAINS ENTRIES OF FSET, WHERE, CLRPLT, AND PEN. WRITTEN AS A FORTRAN IV-H CALLABLE  
080 SUBROUTINE FOR RBM MONITOR.  
090 COMMENTS INCLUDED IS THE SOURCE DECK AND LISTING FOR THE FORTRAN IV-H PROGRAM WHICH PREPARED THE ATTACHED DATA  
100 SHEET TO ILLUSTRATE THE USE OF PLOT AND SYMBOL, THE LATER BEING A ROUTINE WHICH ANNOTATES CHARTS.

B3890388 000 AB SIGMA 5/7 SYMBOL LAB. ROUTINE FOR CALCOMP PLOTTER P UC  
010 AUTHOR G. SIMON - SACRAMENTO PEAK OBSERVATORY  
020 890388-11B00 DESCRIPTION PRINTED  
030 890388-34B00 \* SOURCE CARDS  
040 890388-51B00 890388-11 LISTING PRINTED  
050 ABSTRACT LABELING ROUTINE FOR CALCOMP PLOTTER ON SIGMA 5/7. PLOTS VALUE OF ANY INTEGER OR REAL VARIABLE, OR ANY  
060 OF 150 SPECIFIED SYMBOLS, INCLUDING ENGLISH AND GREEK UPPER AND LOWER CASE ALPHABETIC, MATHEMATICAL,  
070 SCIENTIFIC, PUNCTUATION, AND COMMERCIAL CHARACTER. WRITTEN AS A FIV-H CALLABLE SUBROUTINE- REQUIRES SUB-  
080 ROUTINE PLOT  
090 COMMENTS LANGUAGE: SYMBOL STORAGE: 701 DOC.PAGES: 38 DATE: 1/7/70

B3890389 000 AA SIGMA 2/3 TEXT EDITOR FOR SIGMA 2 P UH  
010 AUTHOR B. SHERWOOD & M. CHEN, INSTITUTE OF TECH.  
020 890389-11A00 DESCRIPTION PRINTED

	030		890389-33A00 *	SOURCE PAPER TAPE, 8 LEVELS	
	040		890389-34A00 *	SOURCE CARDS	
	050		890389-51A00 890389-11	LISTING PRINTED	
	060	ABSTRACT	THIS TEXT EDITOR IS A COLLECTION OF FORTRAN SUBROUTINES WHICH FACILITATE MANIPULATION OF LARGE BLOCKS OF		
	070		TEXT IN CORE WHICH IS MUCH MORE CONVENIENT THAN THE SEQUENTIAL EDITING OF UTILITY RECDITT. THE EDITOR		
	080		PERMITS SELECTIVE INPUT, OUTPUT, AND LISTING OF TEXT AS WELL AS DELETION, INSERTION, AND REPLACEMENT OF		
	090		LINES.		
B3890400	000	AB	SIGMA 5-9	VUL2-VANDERBILT STATISTICAL PACKAGE	P UC
	010	AUTHOR	VANDERBILT UNVIERSITY COMPUTER CENTER		
	020		890400-11B00	DESCRIPTION PRINTED	
	030		890400-36B00 *	SOURCE MAG TAPE, 9 CHANNELS	
	040		890400-74B00	DATA CARDS	
	050	ABSTRACT	INCLUDED ARE TWO SYSTEMS: THE COMPUTER PROGRAMS FOR STATISTICAL ANALYSIS PACKAGE, PROVIDING 50 PROGRAMS		
	060		AND ALLOWING THE USER A VERY COMPREHENSIVE CAPABILITY FOR ANALYSIS; AND THE MINISTAT SYSTEM, ALLOWING		
	070		BTM TIME-SHARING USERS 10 SUCH PROGRAMS FOR JOBS WHICH ARE SUFFICIENTLY SMALL SO THAT ALL INPUT AND		
	080		OUTPUT CAN OCCUR AT THE TELETYPE. A QUALITY ASSURANCE DECK IS PROVIDED (-74) WHICH PERMITS USERS TO		
	090		CHECK ANY OR ALL PROGRAMS AGAINST TEST DATA.		
	100		NOTE: 800 VERSION OF FLAG COMPILER IS REQUIRED TO RUN THIS PACKAGE.		
	110	COMMENTS	PROGRAM TYPE:PACKAGE	LANGUAGE:FORTRAN IV	SYSTEM:BPM/BTM DOCU.PAGES:185
B3890427	000	AA	SIGMA 5-9	COCHRAN Q-TEST	S UC
	010	ABSTRACT	CALCULATES THE COCHRAN Q-TEST STATISTIC, GIVEN A MATRIX OF DICHOTOMOUS. ROW AND COLUMN TOTALS ARE		
	020		CALCULATED, THEN THE Q-STATISTIC IS COMPUTED.		
	030	COMMENTS	ORDERABLE UNDER COVER NUMBER 890400.		
B3890428	000	AA	SIGMA 5-9	PARTIAL CORRELATIONS	S UC
	010	ABSTRACT	COMPUTES PRODUCT MOMENT CORRELATIONS FOR UP TO 50 VARIABLES AND CALCULATES REGRESSION COEFFICIENTS,		
	020		MULTIPLE CORRELATIONS AND PARTIAL CORRELATION COEFFICIENTS FOR ANY SPECIFIED COMBINATION OF THESE		
	030		VARIABLES.		
	040	COMMENTS	ORDERABLE UNDER COVER NUMBER 890400.		
B3890429	000	AA	SIGMA 5-9	FRIEDMAN TWO-WAY ANALYSIS	S UC
	010	ABSTRACT	PROGRAM READS EITHER RANKED OR UNRANKED DATA AND COMPUTES THE FRIEDMAN TWO-WAY ANALYSTS OF VARIANCE		
	020		STATISTIC.		
	030	COMMENTS	ORDERABLE UNDER COVER NUMBER 890400.		
B3890430	000	AA	SIGMA 5-9	KENDALL COEFFICIENT OF CONCORDANCE	S UC
	010	ABSTRACT	PROGRAM READS EITHER RANKED OR UNRANKED DATA AND COMPUTES THE KENDALL COEFFICIENT OF CONCORDANCE.		

020 COMMENTS ORDERABLE UNDER COVER NUMBER 890400.

B3890431 000 AA SIGMA 5-9 MANN-WHITNEY U-TEST S UC

010 ABSTRACT PROGRAM COMPUTES THE MANN-WHITNEY U STATISTIC TESTING WHETHER TWO INDEPENDENT GROUPS ARE FROM THE SAME POPULATION.

020

030 COMMENTS ORDERABLE UNDER COVER NUMBER 890400.

B3890432 000 AA SIGMA 5-9 MAXPLANE S UC

010 ABSTRACT PROGRAM ACCEPTS A FACTOR MATRIX OR A FACTOR MATRIX WITH A TRANSFORMATION MATRIX AND ROTATES IT TO AN

020 OBLIQUE SOLUTION. UP TO 100 VARIABLES IN THE FACTOR MATRIX AND 25 FACTORS ARE ACCEPTED.

030 COMMENTS ORDERABLE UNDER COVER NUMBER 890400.

B3890433 000 AA SIGMA 5-9 SCATTERGRAM HISTOGRAM S UC

010 ABSTRACT PROGRAM WILL GENERATE BOTH SCATTERGRAMS FOR PAIRS OF VARIABLES AND HISTOGRAMS FOR SINGLE VARIABLES. THE

020 NUMBER OF VARIABLES IS LIMITED TO 50 AND THE NUMBER OF VARIABLES TIMES THE NUMBER OF CASES MAY NOT

030 EXCEED 20,000. THE PROGRAM WILL DO AS MANY AS 100 SCATTERGRAMS AND/OR HISTOGRAMS FROM ONE DATA SET.

040 COMMENTS ORDERABLE UNDER COVER NUMBER 890400.

B3890434 000 AA SIGMA 5/7 AXB LEAST SQUARES S UC

010 ABSTRACT THIS PROGRAM PERFORMS A TWO-WAY ANALYSIS OF VARIANCE WITHOUT ASSUMPTIONS OF PROPORTIONACITY OR EQUALITY

020 OF CELL FREQUENCY. THE METHOD OF LEAST SQUARES IS USED. EACH FACTOR MAY HAVE UP TO 50 LEVELS. THE

030 MAXIMUM NUMBER OF ENTITIES PER ANALYSIS IS 1000. UP TO 5 DEPENDENT VARIABLES MAY BE PROCESSED AT THE

040 SAME TIME.

050 COMMENTS CPSA01-890434 - ORDERABLE UNDER COVER NUMBER 890400.

B3890435 000 AA SIGMA 5/7 A\*B\*C - DESIGN ANALYSIS S UC

010 ABSTRACT THIS PROGRAM ANALYZES DESIGNS HAVING TWO OR THREE "SUBJECTS" FACTORS. IT ACCEPTS UNEQUAL CELL

020 FREQUENCIES AND MAKES ADJUSTMENTS BY THE METHOD OF UNWEIGHTED MEANS. THIS METHOD IS APPROPRIATE IF THE

030 LOSS OF OBSERVATIONS IS ESSENTIALLY RANDOM AND NOT DIRECTLY RELATED TO THE EXPERIMENTAL VARIABLES

040 (CF. WINER, P. 199F). EACH OF THE FACTORS MAY HAVE UP TO 25 LEVELS. THE MAXIMUM NUMBER OF DEPENDENT

050 VARIABLES TO BE ANALYZED IS 100.

060 COMMENTS CPSA05-890435 - ORDERABLE UNDER COVER NUMBER 890400.

B3890436 000 AA SIGMA 5/7 A\*B\*S ANALYSIS OF VARIANCE S UC

010 ABSTRACT A\*B\*S ANALYSIS OF VARIANCE

020 COMMENTS CPSA03-890436 - ORDERABLE UNDER COVER NUMBER 890400.

B3890437 000 AA SIGMA 5/7 ANOVA - A\*S ANAL. OF VARIANCE HIGH SPEED S UC

010 ABSTRACT THE PROGRAM CALCULATES AN ANALYSIS OF VARIANCE WITH ONE REPEATED MEASURE CONSISTING OF UP TO 10000

	020		VALUES PER ENTITY. THE PROGRAM TAKES LESS RUNNING TIME THAN THE USUAL PROGRAM.	
	030		COMMENTS CPSA04-890437 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890438	000	AA SIGMA 5/7	ANOVA - CONVARIANCE	S UC
	010	ABSTRACT	THE PROGRAM TAKES UP TO EIGHT CONVARIATES AND PERFORMS AN ANALYSIS OF VARIANCE WITH UP TO 6 FACTORS ON	
	020		THE SINGLE DEPENDENT MEASURE FOR UP TO 1500 ENTITIES PER CELL. THE PROGRAM TAKES TWO MINUTES FOR A SMALL	
	030		PROBLEM AND 3 TO 4 FOR A MODERATE SIZE PROBLEM.	
	040	COMMENTS	CPSA05-890438 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890439	000	AA SIGMA 5/7	ANOVA - GENERAL BALANCE DESIGNS	S UC
	010	ABSTRACT	THIS PROGRAM PERFORMS AN ANALYSIS OF VARIANCE ACCORDING TO A BALANCED DESIGN SUPPLIED BY THE USER. IT	
	020		WILL NOT HANDLE INCOMPLETE DESIGNS (E.G., LATIN SQUARES). THE PROGRAM REQUIRES AN EQUAL NUMBER OF	
	030		ENTITIES IN EACH OF THE SMALLEST CELL. THE TOTAL NUMBER OF 'BETWEEN SUBJECTS' FACTORS AND 'WITHIN	
	040		SUBJECTS' FACTORS MUST NOT EXCEED EIGHT. SEVERAL SETS OF DEPENDENT VARIABLES INVOLVING THE SAME ENTITIES	
	050		AND THE SAME DESIGN MAY BE PROCESSED ON THE SAME JOB.	
	060	COMMENTS	CPSA06-890439 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890440	000	AA SIGMA 5/7	ANOVA - GENERALIZED ANALYSIS OF VARIANCE	S UC
	010	ABSTRACT	THIS IS A GENERALIZED ANALYSIS OF VARIANCE PROGRAM THAT WILL ANALYZE INCOMPLETE DESIGNS (LATIN OR	
	020		GRECO-LATIN SQUARES) AND ANY FACTORIAL OR SINGLY NESTED DESIGN. AN EQUAL NUMBER OF SUBJECTS PER CELL IS	
	030		REQUIRED. TO DESCRIBE A DESIGN, THE USER SUPPLIES AN APPROPRIATE MATRIX OF COEFFICIENTS FOR ORTHOGONAL	
	040		COMPARISONS (HENCEFORTH REFERRED TO AS TREATMENT COEFFICIENTS) COVERING EVERY DEGREE OF FREEDOM FOR MAIN	
	050		EFFECTS AS WELL AS INTERACTION TERMS IN THE DESIGN.	
	060	COMMENTS	CPSA07-890440 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890441	000	AA SIGMA 5/7	ANOVA-LINDQUIST TYPE I ANAL. OF VARIANCE	S UC
	010	ABSTRACT	THIS PROGRAM ANALYZES UP TO 250 SCORES FOR EACH ENTITY IN UP TO 250 GROUPS.	
	020	COMMENTS	CPSA08-890441 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890442	000	AA SIGMA 5/7	ANOVA - LINDQUIST TYPE III	S UC
	010	ABSTRACT	THE PROGRAM ANALYZES UP TO 100 SCORES FOR THE ENTITIES IN EACH OF BC GROUPS. THE A-DIMENSION IS A WITHIN	
	020		SUBJECTS DIMENSION AND THE B AND C DIMENSIONS ARE BETWEEN SUBJECTS. UP TO 20 LEVELS OF B AND 50 LEVELS	
	030		OF C ARE ALLOWED. THE NUMBERS OF ENTITIES PER CELL ARE ASSUMED TO BE PROPORTIONAL.	
	040	COMMENTS	CPSA09-890442 - ORDERABLE UNDER COVER NUMBER 890400.	
B3890443	000	AA SIGMA 5/7	ANOVA - LINDQUIST TYPE III EXTENDED	S UC
	010	ABSTRACT	THE PROGRAM ANALYZES UP TO 20 SCORES PER ENTITY IN EACH BCD GROUP. THE A DIMENSION IS A WITHIN ENTITIES	
	020		(SUBJECTS) DIMENSION AND THE B, C, AND D DIMENSIONS ARE BETWEEN ENTITIES (SUBJECTS). THE PROGRAM PERMITS	
	030		UP TO 20 LEVELS OF A, 10 LEVELS OF B, 8 LEVELS OF C, AND 50 LEVELS OF D. THE NUMBER OF ENTITIES IN EACH	

040 BCD GROUP IS UNLIMITED. THE NUMBER OF ENTITIES IN EACH CELL IS ASSUMED TO BE PROPORTIONAL. THE PROGRAM  
050 TAKES TWO MINUTES FOR A MODERATE SIZE PROBLEM.  
060 COMMENTS CPSA10-890443 - ORDERABLE UNDER COVER NUMBER 890400.

B3890444 000 AA SIGMA 5/7 LINDQUIST TYPE IV ANALYSIS OF VARIANCE S UC  
010 ABSTRACT THE TYPE VI DESIGN INVOLVES C INDEPENDENT REPLICATIONS OF THE AXBXS DESIGN. EACH OF THE ENTITIES AT A  
020 GIVEN LEVEL OF THE C DIMENSION HAS A SCORE OF EACH AB COMBINATION OF THE A AND B DIMENSIONS. THE PROGRAM  
030 PERMITS UP TO 50 LEVELS OF A, 20 LEVELS OF B, AND 50 LEVELS OF C. NUMBER OF ENTITIES IS UNRESTRICTED.  
050 COMMENTS CPSA11-890444 - ORDERABLE UNDER COVER NUMBER 890400.

B3890445 000 AA SIGMA 5/7 LINDQUIST TYPE EXT. ANAL. OF VARIANCE S UC  
010 ABSTRACT THIS DESIGN HAS 2 WITHIN MEASURES (A,B) AND 2 BETWEEN MEASURES (C,D). THE PROGRAM ACCEPTS UP TO 20  
020 LEVELS OF A, 10 LEVELS OF B, 8 LEVELS OF C AND 50 LEVELS OF D. THE NUMBER OF SUBJECTS IN EACH OF THE CD  
030 GROUPS IS ASSUMED TO BE PROPORTIONAL. NUMBER OF ENTITIES IS UNRESTRICTED. THE PROGRAM TAKES TWO MINUTES  
040 FOR A MODERATE SIZED PROBLEM.  
050 COMMENTS CPSA12-890445 - ORDERABLE UNDER COVER NUMBER 890400.

B3890446 000 AA SIGMA 5/7 SIMPLE RANDOMIZED S UC  
010 ABSTRACT MAY CONSIST OF UP TO 150 GROUPS WITH UP TO 2400 SCORES PER GROUP. THE NUMBER OF ENTITIES MAY BE UNEQUAL  
020 ACROSS GROUPS. UP TO FIVE DEPENDENT VARIABLES MAY BE READ FROM THE SAME ENTITY CARD. RUNNING TIME IS  
030 ABOUT HALF THAT GIVEN FOR THE AVERAGE PROGRAM.  
040 COMMENTS CPSA13-890446 - ORDERABLE UNDER COVER NUMBER 890400.

B3890447 000 AA SIGMA 5/7 AUTOMATIC INTERACTION DETECTION (AID) S UC  
010 ABSTRACT THE PROGRAM SELECTS THE OPTIMAL COMBINATION OF CATEGORIES OF INDEPENDENT VARIABLES TO PREDICT ONE  
020 DEPENDENT VARIABLE.  
030 COMMENTS CPSA14-890447 - ORDERABLE UNDER COVER NUMBER 890400.

B3890448 000 AA SIGMA 5/7 AUTO-R CROSS-LAG INTERCORRELATION S UC  
010 ABSTRACT THIS PROGRAM COMPUTES INTERCORRELATION MATRICES FROM UP TO 400 REPEATED MEASUREMENTS OR UP TO 75  
020 VARIABLES. IT COMPUTES INTERCORRELATIONS FOR EACH DEGREE OF LAG FROM ZERO TO A LIMIT SPECIFIED BY THE  
030 USER.  
040 COMMENTS CPSA15-890448 - ORDERABLE UNDER COVER NUMBER 890400.

B3890449 000 AA SIGMA 5/7 BINOMIAL SIGNIFICANCE TEST S UC  
010 ABSTRACT THE PROGRAM COMPUTES THE PROBABILITY THAT THE OBSERVED NUMBER (OR LESS) OF ENTITIES COULD HAVE FALLEN IN  
020 THIS ONE OF TWO POSSIBLE CATEGORIES BY CHANCE.  
030 COMMENTS CPSA16-890449 - ORDERABLE UNDER COVER NUMBER 890400.

B3890450 000 AA SIGMA 5/7 CANONICAL ANALYSIS - CPSA S UC  
 010 ABSTRACT THIS PROGRAM ACCEPTS TWO ENTITY-BY-VARIABLE MATRICES (SET A AND SET B) WHERE THE ENTITIES ARE THE SAME  
 020 FOR EACH SET. AFTER COMPUTING CORRELATION MATRICES FOR EACH SET, THE PROGRAM CROSS-CORRELATES THE TWO  
 030 SETS OF VARIABLES. THE PROGRAM THEN CALCULATES THE SETS OF WEIGHTS WHICH WILL YIELD TWO COMPOSITE  
 040 VARIABLES (ONE FOR EACH SET OF ORIGINAL VARIABLES) WHICH WILL CORRELATE MAXIMALLY. THE MAXIMUM NUMBER OF  
 050 VARIABLES FOR EACH SET CANNOT EXCEED 60. THE NUMBER OF ENTITIES IS NOT RESTRICTED.  
 060 COMMENTS CPSA17-890450 - ORDERABLE UNDER COVER NUMBER 890400.

B3890451 000 AB SIGMA 5-9 CORRELATIONS: PRODUCT MOMENT S UC  
 010 ABSTRACT THE PROGRAM COMPUTES THE MEANS, STANDARD DEVIATIONS, AND THE PRODUCT-MOMENT CORRELATION MATRIX FOR UP TO  
 020 200 VARIABLES. N IS USED IN COMPUTING THE STANDARD DEVIATIONS RATHER THAN N-1. RANK, PHI, AND  
 030 POINT-BISERIAL C COEFFICIENTS RESULT IF THE DATA ARE RANKS, DICHOTOMOUS-DICHOTOMOUS, OR  
 040 DICHOTOMOUS-CONTINUOUS, RESPECTIVELY. THE NUMBER OF ENTITIES IS UNLIMITED.  
 050 COMMENTS CPSA18-890451 - ORDERABLE UNDER COVER NUMBER 890400.

B3890452 000 AB SIGMA 5-9 PRODUCT MOMENT / 200-300 VARIABLES S UC  
 010 ABSTRACT THIS PROGRAM IS IDENTICAL TO CORRELATIONS: PRODUCT MOMENT EXCEPT THAT IT TAKES UP TO 300 VARIABLES, AND  
 020 REQUIRES APPROXIMATELY 50K WORDS OF STORAGE. A 277-VARIABLE, 341-ENTITY PROBLEM TOOK 25 MINUTES WHEREAS  
 030 A 277-VARIABLE, 4-ENTITY PROBLEM TOOK 6 1/2 MINUTES.  
 040 COMMENTS CPSA19-890452 - ORDERABLE UNDER COVER NUMBER 890400.

B3890453 000 AA SIGMA 5/7 CORRELATIONS WITH MISSING DATA S UC  
 010 ABSTRACT THIS PROGRAM CALCULATES MEANS, STANDARD DEVIATIONS, AND PRODUCT MOMENT CORRELATION COEFFICIENTS FOR ALL  
 020 ENTITIES WHICH HAVE THE DATA NEEDED FOR THAT CALCULATION. THE NUMBER OF ENTITIES UPON WHICH EACH  
 030 STATISTIC IS BASED IS REPORTED. THE PROGRAM ACCEPTS A MAXIMUM OF 70 VARIABLES. THE NUMBER OF ENTITIES IS  
 040 UNRESTRICTED  
 050 COMMENTS CPSA20-890453 - ORDERABLE UNDER COVER NUMBER 890400.

B3890454 000 AA SIGMA 5/7 CROSS TABS, CHI-SQUARES, CONTING. COEFF. S UC  
 010 ABSTRACT THIS PROGRAM DETERMINES THE CHI-SQUARE, CONTINGENCY COEFFICIENTS AND THE TOTAL NUMBER OF SUBJECTS PER  
 020 CATEGORY FOR UP TO 100 VARIABLES. FOR EACH DESIGNATED PAIR OF VARIABLES, A CROSSTABULATION TABLE IS  
 030 PRINTED. THE TABLE'S DEGREES OF FREEDOM AND CONTINGENCY COEFFICIENT ARE ALSO PRINTED IF A MEANINGFUL  
 040 CHISQUARE EXISTS (CF. SIEGEL, P. 110).  
 050 COMMENTS CPSA21-890454 - ORDERABLE UNDER COVER NUMBER 890400.

B3890456 000 AA SIGMA 5/7 CROSS CLASSIFICATION ANALYSIS S UC  
 010 ABSTRACT THIS PROGRAM PRODUCES UP TO 72 CROSS-CLASSIFICATION TABLES IN TWO, THREE, OR FOUR DIMENSIONS.  
 020 PERCENTAGES, CHI-SQUARES AND SEVERAL CORRELATION COEFFICIENTS (SEE OUTPUT) ARE REPORTED FOR ALL TABLES  
 030 COMMENTS CPSA22-890456 - ORDERABLE UNDER COVER NUMBER 890400.



B3890457	000	AA SIGMA 5/7	DISTRIBUTION ANALYSIS	S UC
	010	ABSTRACT THIS PROGRAM PROVIDES DESCRIPTIVE STATISTICAL INFORMATION ABOUT EACH OF UP TO 120 VARIABLES. THE NUMBER		
	020	OF ENTITIES IS UNRESTRICTED.		
	030	COMMENTS CPSA23-890457 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890458	000	AA SIGMA 5/7	EDIT DATA CARDS FOR ILLEG. PUNCHES & SEQ.	S UC
	010	ABSTRACT THIS PROGRAM CHECKS DATA CARDS FOR NON-NUMERIC PUNCH CODES AND /OR CORRECT CARD SEQUENCE.		
	020	COMMENTS CPSA24-890458 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890459	000	AA SIGMA 5/7	ENTITY SELECTION	S UC
	010	ABSTRACT TWO METHODS FOR SELECTING ENTITIES FROM A TOTAL ENTITY POOL ARE PROVIDED. THE USER SPECIFIES EITHER THE		
	020	PROPORTION OF ENTITIES TO BE RANDOMLY SELECTED OR THE CRITERIA BY WHICH TO INCLUDE OR EXCLUDE AN ENTITY		
	030	BY UP TO 1000 CRITERIA.		
	040	COMMENTS CPSA25-890459 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890460	000	AA SIGMA 5/7	FACTOR ANALYSIS (PRINCIPLE COMPONENTS)	S UC
	010	ABSTRACT UP TO 50 PRINCIPAL COMPONENTS AND LATENT ROOTS ARE EXTRACTED FROM A CORRELATION MATRIX WITH UP TO 280		
	020	VARIABLES. THE USER MAY SPECIFY THE NUMBER OF FACTORS HE DESIRES OR HAVE THE PROGRAM USE GUTTMAN'S		
	030	CRITERION TO DETERMINE THE NUMBER TO EXTRACT		
	040	COMMENTS CPSA26-890460 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890461	000	AA SIGMA 5/7	HIERARCHICAL TRANSFORMATION	S UC
	010	ABSTRACT THE HIERARCHICAL TRANSFORMATION PROGRAM UTILIZES THE RESULTS FROM FACTOR ANALYSIS AND ROTATION PROGRAMS		
	020	TO COMPUTE THE RELATIONSHIP OF EACH VARIABLE IN THE FIRST ORDER ANALYSIS TO EACH HIGHER ORDER FACTOR.		
	030	COMMENTS CPSA27-890461 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890465	000	AA SIGMA 5/7	FACTOR ANALYSIS WITH ROTATION	S UC
	010	ABSTRACT BEGINNING WITH THE RAW DATA OR THE CORRELATION MATRIX, THE PROGRAM EXTRACTS THE PRINCIPAL COMPONENTS,		
	020	PRINCIPAL AXIS FACTORS USING ESTIMATED COMMUNALITIES IMPROVED BY ITERATION, OR IMAGE ANALYSIS FACTORS.		
	030	COMMENTS CPSA28-890465 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890466	000	AA SIGMA 5/7	FACTOR EXTENSION	S UC
	010	ABSTRACT THE LOADINGS OF UP TO 100 VARIABLES NOT IN THE ORIGINAL FACTOR ANALYSIS ARE COMPUTED FROM THE		
	020	CORRELATIONS OF THESE NEW, EXTENSION VARIABLES WITH THE VARIABLES IN THE INITIAL FACTOR ANALYSIS. THE		
	030	ORIGINAL FACTOR ANALYSIS MAY CONTAIN UP TO 300 VARIABLES AND 50 FACTORS. A SMALL PROBLEM TOOK LESS THAN		
	040	1/2 MINUTE TO RUN.		
	050	COMMENTS CPSA29-890466. - ORDERABLE UNDER COVER NUMBER 890400.		

B3890467	000	AA	SIGMA 5/7	FACTOR HYPOTHESIS TESTING	S UC
	010	ABSTRACT GIVEN A HYPOTHESIZED REFERENCE VECTOR STRUCTURE, THE TRANSFORMATION MATRIX NECESSARY TO ROTATE THE			
	020	ORTHOGONAL FACTOR MATRIX TO THE CLOSEST POSITION TO THE HYPOTHESIZED STRUCTURE IS FOUND. THE ERROR			
	030	BETWEEN THIS CLOSEST FIT IS COMPARED TO THE ERROR FROM A SET OF RANDOM 'HYPOTHESIS' MATRICES. IF THE			
	040	ACTUAL HYPOTHESIS STRUCTURE FITS THE FACTOR MATRIX SIGNIFICANTLY BETTER THAN THE RANDOM STRUCTURES, IT			
	050	IS CONSIDERED TO BE CONFIRMED.			
	060	COMMENTS CPSA30-890467 - ORDERABLE UNDER COVER NUMBER 890400.			
B3890468	000	AA	SIGMA 5/7	FACTOR RELATING	S UC
	010	ABSTRACT THE PROGRAM ROTATES UP TO 200 VARIABLE VECTORS OF ONE STUDY AS CLOSELY AS POSSIBLE TO THE SAME VARIABLE			
	020	VECTORS FROM ANOTHER STUDY AND THEN COMPUTES THE CORRELATIONS BETWEEN TWO SETS OF UP TO 30 PRIMARY			
	030	FACTORS. IT ALSO COMPUTES THE CORRELATIONS BETWEEN THE PAIRED VARIABLE VECTORS. THE PROGRAM ACCEPTS			
	040	OBLIQUE FACTORS AS WELL AS ORTHOGONAL FACTORS.			
	050	COMMENTS CPSA31-890468 - ORDERABLE UNDER COVER NUMBER 890400.			
B3890469	000	AA	SIGMA 5/7	FACTOR ROTATION	S UC
	010	ABSTRACT THIS PROGRAM READS AN ORTHOGONAL FACTOR MATRIX AND ROTATES THE FACTORS FIRST TO THE NORMALIZED			
	020	ORTHOGONAL VARIMAX CRITERION, AND THEN, USING THE VARIMAX RESULTS AS A TARGET MATRIX, IT COMPUTES AN			
	030	OBLIQUE SOLUTION USING THE PROMAX PROCEDURE. THE PROGRAM WILL ACCEPT UP TO 300 VARIABLES AND UP TO 30			
	040	FACTORS. A 277 VARIABLE BY 30 FACTOR PROBLEM TOOK 11-1/2 MINUTES WHILE A 24 VARIABLE, 4 FACTOR PROBLEM			
	050	TOOK ONE MINUTE.			
	060	COMMENTS CPSA32-890469 - ORDERABLE UNDER COVER NUMBER 890400.			
B3890470	000	AA	SIGMA 5/7	FACTOR SCORING	S UC
	010	ABSTRACT THIS PROGRAM COMPUTES FACTOR SCORES BY CALCULATING A WEIGHT FROM THE FACTOR STRUCTURE AND APPLYING IT TO			
	020	A SET OF RAW SCORES. THE WEIGHT MATRIX IS CALCULATED ACCORDING TO ONE OF THREE PROCEDURES.			
	030	(1)LEASTSQUARES (MULTIPLE CORRELATION) PROCEDURE, (2)SALIENT VARIABLE PROCEDURE (ALL VARIABLES			
	040	CORRELATING WITH THE FACTOR ABOVE THE USER SPECIFIED LEVEL ARE WEIGHTED 1.0 AND ALL OTHERS 0.0), OR, (3)			
	050	HIGHEST SALIENT VARIABLE PROCEDURE (THE HIGHEST FACTOR STRUCTURE LOADING FOR EACH VARIABLE IS GIVEN A			
	060	WEIGHT OF 1.0, WHILE ALL OTHER LOADINGS FOR THAT VARIABLE ARE SET TO 0.0). THE PROGRAM ACCEPTS A MAXIMUM			
	070	OF 100 VARIABLES AND 50 FACTORS.			
	080	COMMENTS CPSA33-890470 - ORDERABLE UNDER COVER NUMBER 890400.			
B3890471	000	AA	SIGMA 5/7	FILE PROCESSING	S UC
	010	ABSTRACT THE FILE PROCESSING PROGRAM IS AN AID TO THE HANDLING OF NONCARD DATA FILES (E.G., TAPES). IT PLACES DATA			
	020	FROM CARDS INTO A FILE, UPDATES, PRINTS, COPIES A SET OF FILES FROM ONE DEVICE TO ANOTHER, MERGES TWO			
	030	FILES, MERGES TWO FILES WHILE CHECKING FOR INAPPROPRIATE ENTITY ID'S IN THE SECOND FILE, AND ORDERS THE			
	040	RECORDS OF A FILE CONTAINING UP TO 1200 RECORDS ACCORDING TO THE FIRST ID CHARACTERS IN EACH RECORD. ALL			
	050	RECORDS ARE ASSUMED TO BE UNBLOCKED, 80-COLUMN EBCDIC CARD IMAGES.			

060 COMMENTS CPSA34-890471 - ORDERABLE UNDER COVER NUMBER 890400.

B3890472 000 AB SIGMA 5-9 CLUSTER ANALYSIS : HIERARCHICAL GROUPING S UC

010 ABSTRACT THIS PROGRAM CLUSTERS A SET OF ENTITIES INTO SUCCESSIVELY FEWER GROUPS ON THE BASIS OF A LEAST SQUARES  
020 CRITERION WHICH COMBINES THOSE ENTITIES SEPARATED BY THE LEAST DISTANCE. DISTANCE IS DEFINED INITIALLY  
030 BY SUMMING THE SQUARED DIFFERENCES BETWEEN TWO ENTITIES FOR EACH VARIABLE.

040 COMMENTS CPSA35-890472 - ORDERABLE UNDER COVER NUMBER 890400.

B3890473 000 AA SIGMA 5/7 ITEM ANALYSIS S UC

010 ABSTRACT THIS PROGRAM SCORES TESTS CONSISTING OF UP TO 500 CATEGORICAL (ONE CORRECT ANSWER, AS IN MULTIPLE CHOICE  
020 QUIZZES) OR INTERVAL (RANGE OF 'CORRECT' ANSWERS, AS IN RATING SCALES) ITEMS. IT ALSO CALCULATES ITEM  
030 AND TEST STATISTICS AND WILL CORRELATE EACH ITEM WITH UP TO 5 ADDITIONAL CRITERIA.

040 COMMENTS CPSA36-890473 - ORDERABLE UNDER COVER NUMBER 890400.

B3890474 000 AA SIGMA 5/7 MULTIPLE CLASSIFICATION ANALYSIS S UC

010 ABSTRACT MULTIPLE CLASSIFICATION ANALYSIS IS A TECHNIQUE FOR EXAMINING THE INTER-RELATIONSHIPS BETWEEN SEVERAL  
020 PREDICTOR VARIABLES AND A DEPENDENT VARIABLE WITHIN THE CONTEXT OF AN ADDITIVE MODEL.

030 COMMENTS CPSA37-890474 - ORDERABLE UNDER COVER NUMBER 890400.

B3890475 000 AA SIGMA 5/7 MULTIPLE DISCRIMINANT ANALYSIS S UC

010 ABSTRACT A MULTIPLE DISCRIMINANT ANALYSIS IS CALCULATED ON A SET OF UP TO 85 VARIABLES FOR TWO TO 50 PREVIOUSLY  
020 DEFINED GROUPS. RUNNING TIME IS SLIGHTLY LONGER THAN THAT OF THE USUAL PROGRAM.

030 COMMENTS CPSA38-890475 - ORDERABLE UNDER COVER NUMBER 890400.

B3890476 000 AA SIGMA 5/7 MULTIPLE REGRESSION ANALYSIS S UC

010 ABSTRACT THIS PROGRAM READS EITHER RAW SCORES OF A CORRELATION MATRIX AND PERFORMS ONE OR MORE MULTIPLE  
020 REGRESSION ANALYSES USING SUBSETS OF VARIABLES SPECIFIED BY THE USER. F-TESTS BETWEEN THE DIFFERENT  
030 REGRESSION MODELS MAY ALSO BE COMPUTED.

040 COMMENTS CPSA39-890476 - ORDERABLE UNDER COVER NUMBER 890400.

B3890477 000 AA SIGMA 5/7 MULTIPLE REGRESSION ANALYSIS, STEPWISE S UC

010 ABSTRACT INDEPENDENT VARIABLES ARE ADDED INTO OR DELETED FROM THE REGRESSION EQUATION ACCORDING TO THEIR  
020 RELATIVE IMPORTANCE AS JUDGED BY THEIR INCREMENTAL EFFECT ON THE MULTIPLE CORRELATION COEFFICIENT.  
030 OPTIONS ARE PROVIDED TO TRANSFORM VARIABLES, TO CREATE NEW VARIABLES, AND TO OMIT THE CONSTANT TERM FROM  
040 THE EQUATION.

050 COMMENTS CPSA40-890477 - ORDERABLE UNDER COVER NUMBER 890400.

B3890478 000 AA SIGMA 5/7 SIMULTANEOUS LINEAR EQUATIONS S UC

010 ABSTRACT THE PROGRAM READS SYSTEMS OF UP TO 40 LINEAR EQUATIONS IN MATRIX FORM AND COMPUTES THE UNKNOWN'S. CROUT'S

	020	VARIATION OF THE GAUSSIAN ELIMINATION METHOD IS USED.		
	030	COMMENTS CPSA41-890478 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890479	000	AA SIGMA 5/7	TEST SCORING	S UC
	010	ABSTRACT THE PROGRAM READS UP TO 600 ITEM RESPONSES PER ENTITY, SCORES THEM FOR UP TO 50 SCALES, AND CALCULATES A		
	020	SCORE FOR EACH ENTITY ON EACH SCALE. TOTAL NUMBER OF ITEMS MULTIPLIED BY THE NUMBER OF SCALES CANNOT		
	030	EXCEED 5000.		
	040	COMMENTS CPSA42-890479 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890480	000	AA SIGMA 5/7	TRANSGENERATION	S UC
	010	ABSTRACT THIS PROGRAM WILL TRANSFORM OR TRANSGENERATE UP TO 99 VARIABLES PER SUBJECT. EITHER A SPECIFIED SUBSET		
	020	OF VARIABLES OR ALL VARIABLES CAN BE TRANSGENERATED.		
	030	COMMENTS CPSA43-890480 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890481	000	AA SIGMA 5/7	T-TESTS AND F-RATIOS	S UC
	010	ABSTRACT THIS PROGRAM COMPUTES T-TESTS AND F-RATIOS FOR EITHER RELATED OR UNRELATED DATA FOR UP TO 500 VARIABLES.		
	020	COMMENTS CPSA44-890481 - ORDERABLE UNDER COVER NUMBER 890400.		
B3890523	000	AA SIGMA 2	DEBUG/TRACE (SIGMA 2)	P UM
	010	AUTHOR	H.H. BLACKER, LEEDS & NORTHRUP COMPANY	
	020	890523-11A00	DESCRIPTION PRINTED	
	030	890523-51A00	890523-11 LISTING PRINTED	
	040	ABSTRACT THE TRACE WAS ADDED DIRECTLY TO THE DEBUG PACKAGE BY MODIFYING THREE LOCATIONS. FIRST, THE NUMBER OF		
	050	CONTROL COMMANDS WAS CHANGED TO 10. SECOND, A LITERAL 'Q' WAS ADDED TO THE LIST OF ALLOWABLE COMMAND		
	060	CHARACTERS. THIRD, AN ADDRESS LITERAL POINTING TO TRACE WAS ADDED TO THE ROUTINE BRANCHING TABLE IN A		
	070	POSITION CORRESPONDING TO THE POSITION OF 'Q' ABOVE. ALSO, THE LOCATIONS LABELLED DUMPX AND INTLOC WERE		
	080	MOVED TO THEIR PRESENT LOCATIONS TO FACILITATE THE USE OF THE PANEL INTERRUPT.		
	090	AS WRITTEN, THE TRACE WILL TREAT THE WORD INSTRUCTIONS AS NOP'S, HOWEVER I/O CAN BE TRACED IF THE		
	100	RESTRICTIONS POINTED OUT IN THE DOCUMENTATION ARE FOLLOWED. ON THE OUTPUT LISTING, THE COMMANDS ARE		
	110	SELF-EXPLANATORY, HOWEVER RTOR IS A COPY-TYPE COMMAND AND CNDR IS A CONDITIONAL BRANCH.		
B3890524	000	AA 940	940 TELETYPE PLOT ROUTINES	P UM
	010	AUTHOR	XEROX	
	020	890524-11A00	DESCRIPTION PRINTED	
	030	890524-23A00	RELOCATABLE BINARY PAPER TAPE, 8 LEVELS	
	040	890524-51A00	890524-11 LISTING PRINTED	
	050	ABSTRACT 940 FORTRAN II PLOTTING ROUTINES (TELETYPE PLOTTING). PLOTTING IS DONE ON A 51 X 51 CHARACTER GRID.		
B3890525	000	AA 900-SERIES	NODE OPTIMIZATION ROUTINE	P UM

010 AUTHOR D. MACNAK, MOTOROLA, INC.  
020 890525-11A00 DESCRIPTION PRINTED  
030 890525-34A00 \* SOURCE CARDS  
040 890525-51A00 890525-11 LISTING PRINTED  
050 890525-74A00 DATA CARDS  
060 ABSTRACT DECREASES THE SIZE OF THE MATRIX AS GENERATED BY CIRL. THIS IS DONE RENUMBERING THE NODES AND PRINTING A  
070 CONNECTION LIST.

B3890526 000 AA 920 REAL-TIME FORTRAN RUN-TIME DEBUG P UM

010 AUTHOR J.W. SCHWARTZENBERG, LEEDS AND NORTHRUP  
020 890526-11A00 DESCRIPTION PRINTED  
030 890526-34A00 \* SOURCE CARDS  
040 890526-51A00 890526-11 LISTING PRINTED  
050 ABSTRACT A RUN-TIME DEBUG SUBROUTINE FOR USE WITH REAL-TIME FORTRAN II.

B3890527 000 AA 92 DDI-92 DEBUGGING ROUTINE P UM

010 AUTHOR MARC OBERLY - CAMBRIDGE ELECTRON  
020 890527-11A00 DESCRIPTION PRINTED  
030 890527-34A00 \* SOURCE CARDS  
040 ABSTRACT AN IN-CORE DEBUGGING PROGRAM OFFERING A COMPUTE-AND-HALT ROUTINE, DIRECT OCTAL OR SYMBOLIC I/O TO AND  
050 FROM CORE VIA TYPEWRITER, SYMBOLIC REFERENCING OF STORAGE, PAPER-TAPE SAVE OF THE LABEL TABLE AND PRO-  
060 DUCTON OF A SELF-FILLING, SELF-STARTING PAPER-TAPE OF THE PROGRAM IN CORE.

B3890528 000 AA 910 CONVERSATIONAL FUNCTIONAL ASSEMBLER P UM

010 AUTHOR GERALD CAHILL, RPFTP, EDWARDS, CALIFORNIA  
020 890528-11A00 DESCRIPTION PRINTED  
030 890528-34A00 \* SOURCE CARDS  
040 890528-51A00 890528-11 LISTING PRINTED  
050 ABSTRACT THIS PROGRAM WAS WRITTEN TO ALLOW ENGINEERS AND MATHEMATICANS TO USE THE XLS 910 (OR WHAT YOU) AS THEY  
060 WOULD A MEMORY TYPE OF DESK CALCULATOR WITH THE ADDITIONAL CAPABILITY OF BUILT IN FUNCTIONS AND AN IN-  
070 CREASE OF PRECISION. THIS PROGRAM ALSO SERVES TO INTRODUCE ASSEMBLY LANGUAGE PROGRAMMING TO THOSE INTER-  
080 ESTED IN GETTING CLOSER TO THE MACHINE.  
090 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:FORTAN II STORAGE:8K DOC.PAGES:45

B3890529 000 AA 900-SERIES PRINTX-PRINTER SUBROUTINE P UM

010 AUTHOR D.F. KOENIG BROOKHAVEN NATIONAL LABORATORY  
020 890529-11A00 DESCRIPTION PRINTED  
030 890529-51A00 890529-11 LISTING PRINTED  
040 ABSTRACT PRINT VARIABLE LENGTH RECORDS (120 CHARACTERS MAXIMUM OUTPUT) ON 9372 UNBUFFERED LINE PRINTERFROM

	050		VARIABLE-LENGTH BCD MAG TAPE RECORDS WITH SSW OPTIONS FOR HALT/PROCEED/REPEAT AT SINGLE AND DOUBLE	
	060		END-OF-FILES.	
B3890530	000	AA	900-SERIES PUNCHX PUNCH SUBROUTINE	P UM
	010	AUTHOR	D.F. KOENIG BROOKHAVEN NATIONAL LABORATORY	
	020		890530-11A00 DESCRIPTION PRINTED	
	030		890530-51A00 890530-11 LISTING PRINTED	
	040	ABSTRACT	TO PUNCH VARIABLE LENGTH (80 CHARACTERS MAXIMUM) PAPER TAPE RECORDS FROM VARIABLE LENGTH BCD MAG TAPE	
	050		RECORDS WITH SSW OPTIONS FOR HALT/PROCEED/REPEAT AT SINGLE AND DOUBLE END-OF-FILES.	
B3890531	000	AA	SIGMA 5/7 FILE EDITOR (METAMEDIA)	P UC
	010	AUTHOR	XEROX	
	020		890531-11A00 DESCRIPTION PRINTED	
	030		890531-24A01 RELOCATABLE BINARY CARDS	
	040		890531-44A00 * COMPRESSED CARDS	
	050		890531-51A00 890531-11 LISTING PRINTED	
	060	ABSTRACT	TO ALLOW THE USER TO PERFORM A VARIETY OF FILE-EDITING TASKS CONVERTING DATA TYPES OF SOURCE, COMPRESSED	
	070		AND BINARY. IT ALLOWS BLOCKING AND DEBLOCKING, COMPRESSION AND DECOMPRESSION, UPDATING BY FILE, RECORD,	
	080		AND/OR CONTENT OF RECORDS, AND VERIFICATION OF COPIES.	
	090	COMMENTS	PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:BCP	
	100		STORAGE:3800 WORDS DOC.PAGES:89 DATE:11/26/69	
	110		ADDITIONAL INFORMATION:THIS PROGRAM WILL RUN UNDER BCM, RRM2 AND RPM.	
B3890532	000	AA	SIGMA 5/7 JANUS TIMESHARING SYSTEM	P UC
	010	AUTHOR	MICHIGAN STATE	
	020		890532-11A00 DESCRIPTION PRINTED	
	030		890532-36A00 SOURCE MAG TAPE, 9 CHANNELS	
	040		890532-86A00 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS	
	050	ABSTRACT	JANUS IS A TIMESHARED OPERATING SYSTEM. PERMITS SIMULTANEOUS EXECUTION OF TASKS, INVOKED BY THE OPERATOR	
	060		FROM A LIBRARY OF TASKS ON THE DISC. TASKS CONSIST OF JBCM (JANUS BASIC CONTROL MONITOR), JFCM (JANUS	
	070		FILE CONTROL MONITOR), AND JPCM (JANUS PROCESS CONTROL MONITOR).	
	080	COMMENTS	PROGRAM TYPE:SYSTEM LANGUAGE:SYMBOL* SYSTEM:RPM DOCU.PAGES:36 DATE:12/29/69. ADDITIONAL	
	090		INFORMATION:*JANUS MUST BE ASSEMBLED USING MODIFIED SYMBOL FILE 5 JANUS SOURCE MAG. TAPE. THIS IS DUE TO	
	100		THE IMPL. OF THE LIST/NOLIST OPTIONS IN JANUS SYMBOL AND THE USE OF THEM IN THE JANUS SOURCE ELEMENTS.	
B3890533	000	AA	SIGMA 7 LORDU TIME SHARED GRAPHICS FACILITY	P UC
	010	AUTHOR	G. B ANDERSON, LAWRENCE RADIATION LABORATORY	
	020		890533-11A00 DESCRIPTION PRINTED	
	030		890533-36A00 * SOURCE MAG TAPE, 9 CHANNELS	

040 ABSTRACT GORDO PROVIDES INTERACTIVE GRAPHIC SERVICE TO UP TO 8 USER TERMINALS. EACH TERMINAL SHOULD CONSIST OF A  
 050 CRT WITH KEYBOARD, FUNCTION BUTTONS, AND A LIGHT PEN. THE SYSTEM PROVIDES HIGH RATES OF INTERACTION FOR  
 060 A SMALL NUMBER OF USERS AND A HIGH DEGREE OF SECURITY IN HANDLING USER FILES AND PROCESSES.  
 070 COMMENTS PROGRAM TYPE:SYSTEM LANGUAGE:SYMBOL DOCU.PAGES:44 DATE 12/69 SYSTEM WILL RUN IN A 32K SIGMA 7

B3890534 000 AA SIGMA 5/7 PHORMER - DATAFORM GENERATOR BY PLOTTER P UM  
 010 AUTHOR TCHELL - P. HUGHES MD ANDERSON HOSPITAL  
 020 890534-11A00 DESCRIPTION PRINTED  
 030 890534-34A00 \* SOURCE CARDS  
 040 890534-51A00 890534-11 LISTING PRINTED  
 050 ABSTRACT PHORMER ENABLES THE PROGRAMMER TO SPECIFY THE FORM IN COMPUTER TERMS FROM A ROUGH SKETCH. THESE SPECIFI-  
 060 CATIONS SERVE AS INPUT TO PHORMER WHICH THEN PLOTS THE FINISHED FORM ON THE CALCOMP PLOTTER. THIS PLOT  
 070 CAN BE DIRECTLY PHOTOCOPIED AND REPRODUCED FOR IMMEDIATE USE.  
 080 COMMENTS NGUAGE: FORTRAN IV-H, SYSTEM: RRR.

B3890538 000 AA 92 TABLCON P UM  
 010 AUTHOR MARC OBERLY - CAMBRIDGE ELETRON  
 020 890538-11A00 DESCRIPTION PRINTED  
 030 890538-34A00 \* SOURCE CARDS  
 040 ABSTRACT A PROGRAM FOR CONVERTING THE PUNCHED MEMORY MAP FROM \*GUBLDR-DD\*\* TO A PUNCHED SYMBOL TABLE ACCEPTABLE  
 050 FOR READING INTO \*DDI-92\*. IT WILL ADDITIONALLY LIST THE MAP ON THE CONSOLE TYPEWRITER IN BOTH ALPHABET-  
 060 IC AND ADDRESS VALUE SEQUENCE FLAGGING ANY UNDEFINED REF ITEMS FOUND DURING READ-IN OF THE MAP.  
 070 COMMENTS LANGUAGE: SYMBOL STORAGE: 017341

B3890539 000 AA 92 GUBLDR DD-OPT PUNCH FOR INPUT TABLCON P UM  
 010 AUTHOR MARC OBERLY - CAMBRIDGE ELECTRON  
 020 890539-11A00 DESCRIPTION PRINTED  
 030 890539-34A00 \* SOURCE CARDS  
 040 ABSTRACT A MODIFIED VERSION OF GUBLDR (XDS PROGRAM NO. 720004) OFFERING: OPTIONAL PUNCHING OF THE MAP FOR INPUT  
 050 TO THE PROGRAM \*TABLCON\*, NO LOADING OF PROGRAMS FROM CARDS, THE AUTOMATIC INITIALIZATION OF SCRATCHPAD  
 060 FOR ITSELF AFTER FILLING OR USER CALL.  
 070 COMMENTS LANGUAGE: SYMBOL STORAGE:00844

B3890540 000 AA 930 MONARCH SYSTEM UPDATE P UM  
 010 AUTHOR SALLY BRECKENRIDGE UNIV. OF MICHIGAN  
 020 890540-11A00 DESCRIPTION PRINTED  
 030 890540-24A00 RELOCATABLE BINARY CARDS  
 040 890540-34A00 \* SOURCE CARDS  
 050 890540-51A00 890540-11 LISTING PRINTED

	060	ABSTRACT	UPDATE (850032) AND BOOTSTRAP (890031) COMPRISE THE SYSTEM UPDATE PROGRAM TO CREATE NEW MONARCH SYSTEM T	
	070		APES AND TO UPDATE EXISTING SYSTEM TAPES. UPDATED FROM A PROGRAM DEVELOPED BY BARRY MACRAE.	
B3890541	000	AA 930	A GENERAL MAG TAPE ROUTINE	P UM
	010	AUTHOR	SALLY BRECKENRIDGE - UNIVERSITY OF MICHIGAN	
	020		890541-11A00 DESCRIPTION PRINTED	
	030		890541-24A00 RELOCATABLE BINARY CARDS	
	040		890541-34A00 * SOURCE CARDS	
	050		890541-51A00 890542-11 LISTING PRINTED	
	060	ABSTRACT	A GENERAL EASY-TO-USE MAGNETIC TAPE ROUTINE FOR THE 930. DEVELOPED FROM A PROGRAM BY DONALD WYCHE.	
B3890542	000	AA 930	EDIT (SERVICE PROGRAM) FOR MAGNETIC TAPE	P UM
	010	AUTHOR	SALLY BRECKENRIDGE - UNIVERSITY OF MICHIGAN	
	020		890542-11A00 DESCRIPTION PRINTED	
	030		890542-24A00 RELOCATABLE BINARY CARDS	
	040		890542-34A00 * SOURCE CARDS	
	050		890542-51A00 890542-11 LISTING PRINTED	
	060	ABSTRACT	PROVIDES A METHOD FOR UPDATING SOURCE PROGRAMS ON MAGNETIC TAPE. UPDATED FROM A PROGRAM DEVELOPED BY	
	070		DONALD WYCHE AND BARRY MACRAE.	
B3890543	000	AA SIGMA 5/7	TIC TAC TOE -3D	P UC
	010	AUTHOR	XEROX	
	020		890543-11A00 DESCRIPTION PRINTED	
	030		890543-33A00 * SOURCE PAPER TAPE, 8 LEVELS	
	040		890543-34A00 * SOURCE CARDS	
	050		890543-51A00 890543-11 LISTING PRINTED	
	060	ABSTRACT	THE PROGRAM PLAYS 3-D TIC TAC TOE WITH A HUMAN OPPONENT. IT WILL OPERATE UNDER ANY SYSTEM SUPPORTING	
	070		FORTRAN IVH, INCLUDING BTM.	
	080	COMMENTS	PROGRAM TYPE:GAME LANGUAGE:FORTRAN IV SYSTEM:PCM,RBM,BTM DOCU.PAGES:10 DATE:01/23/70 ADDITIONAL	
	090		INFORMATION:MODIFIED FROM 1620 PROGRAM.	
B3890544	000	AA SIGMA 5/7	UTILITY PACKAGE 'HELP'	P UC
	010	AUTHOR	XEROX	
	020		890544-11A00 DESCRIPTION PRINTED	
	030		890544-24A00 RELOCATABLE BINARY CARDS	
	040	ABSTRACT	PROVIDES AN EASILY EXPANDED COLLECTION OF UTILITY ROUTINES, SHARING A COMMON EXECUTIVE ROUTINE AND MANY	
	050		SUBROUTINES. THE ROUTINES INCLUDED IN THE BASIC PACKAGE ARE DESIGNED TO FACILITATE THE PREPARATION,	
	060		LOADING, DEBUGGING AND DUMPING OF MACHINE LANGUAGE PROGRAMS. THIS IS A STAND-ALONE PACKAGE.	



B3890545 000 AB SIGMA 5-9 FORTRAN CROSS REFERENCE PROGRAM P UC  
 010 AUTHOR P. SHERROD, VANDERBILT UNIVERSITY  
 020 890545-11C00 DESCRIPTION PRINTED  
 030 890545-44C00 \* COMPRESSED CARDS  
 040 ABSTRACT CROSS IS A UTILITY PROCESSOR WHICH WILL PRODUCE A CROSS REFERENCE LISTING OF A FORTRAN SOURCE PROGRAM.  
 050 ALL VARIABLES AND STATEMENT NUMBERS ARE LISTED IN ALPHA-NUMERIC ORDER WITH THE NUMBERS OF THE LINES ON  
 060 WHICH THEY APPEAR. THE MAIN PROGRAM AND ANY SUBPROGRAMS ARE CROSS REFERENCED SEPARATELY. CROSS WILL  
 070 ACCEPT THE EXTENDED FORTRAN LANGUAGE WHICH IS LEGAL TO XEROX EXTENDED FORTRAN-IV.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM AND UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY.  
 090 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN META-SYMBOL.  
 100 THE B00 VERSION OF THIS PROGRAM CORRECTS A NUMBER OF BUGS WHICH CAUSED THE FIRST VERSION TO MISS SYMBOLS  
 110 IN THE SOURCE PROGRAM. IT ALSO IMPLEMENTS AN OPTION WHICH ALLOWS THE CROSS REFERENCE TO BE PERFORMED  
 120 WITH RESPECT TO EDIT KEYS IF THE FORTRAN SOURCE PROGRAM IS IN AN EDIT KEYED FILE. THE SIGMA 5 MUST HAVE  
 130 MBS AND CVS SIMULATION.  
 140 THE C00 VERSION OF CROSS CORRECTS A FEW MINOR PROBLEMS WHICH EXISTED IN THE  
 150 EARLIER VERSION AND ADDS CROSS REFERENCING FOR DEFINE FILE, FIND, AND DIRECT  
 160 READ/WRITE STATEMENTS.

B3890546 000 AC SIGMA 5-9 GETFILE P UC  
 010 AUTHOR SHERROD, NASHVILLE TENNESSEE - LIPFORD, XEROX  
 020 890546-11C00 DESCRIPTION PRINTED  
 030 890546-44C00 \* COMPRESSED CARDS  
 040 ABSTRACT GETFILE IS A UTILITY PROCESSOR WHICH MAY BE USED TO MOVE GROUPS OF FILES FROM LABELED TAPE TO DISC,  
 050 FROM DISC TO LABELED TAPE, OR FROM ONE LABELED TAPE TO ANOTHER LABELED TAPE.

B3890547 000 AA SIGMA 5/7 SNAP TRANSLATOR P UC  
 010 AUTHOR M. P. BARNETT,  
 020 890547-11A00 DESCRIPTION PRINTED  
 030 890547-26A00 890547-36 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890547-36A00 SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT THIS IS A FORTRAN PROGRAM WHICH TRANSLATES PROGRAMS WRITTEN IN SNAP (STYLIZED NATURAL PROCEDURAL LANGUAGE  
 060 SNAP WAS DESIGNED AS A KIND OF BASIC ENGLISH TO APPEAL TO STUDENTS WHO USE WORDS RATHER THAN SYMBOLS AS  
 070 THEIR NATURAL FORM OF EXPRESSION.  
 080 COMMENTS LANGUAGE: FORTRAN SYSTEM: BPM STORAGE: 23K

B3890548 000 AB 930 REGEN-A BINARY TO SYMBOLIC TRANSLATOR P UC  
 010 AUTHOR J.W. LAYLAND, JET PROPULSION LABORATORY  
 020 890548-11B00 DESCRIPTION PRINTED  
 030 890548-24B00 RELOCATABLE BINARY CARDS

	040		890548-34800 *	SOURCE CARDS	
	050		890548-44800 *	COMPRESSED CARDS	
	060	ABSTRACT	REGEN IS A PROGRAM FOR TRANSLATING BETWEEN THE XDS 900 SERIES UNIVERSAL BINARY LANGUAGE AND A SYMBOLIC		
	070		EQUIVALANT. THE PROGRAM OPERATES UNDER A BASIC MONARCH SYSTEM WITH ONE SCRATCH TAPE AND USES THE SYSTEM		
	080		INPUT/OUTPUT ASSIGNMENTS. BREAKPOINTS 3 AND 4 SELECT THE PRODUCTION OF EITHER A LIST OUTPUT OR AN		
	090		ASSEMBLABLE SYMBOLIC DECK OUTPUT. EXTERNAL REFERENCE AND DEFINITION ITEMS IN THE BINARY TEXT PROVIDE		
	100		NAMES AND MAKE THE REGENERATED TEXT AS CLOSE AS POSSIBLE TO THE ORIGINAL SOURCE.		
	110	COMMENTS	ADDITIONAL INFORMATION:NEEDS 1 SCRATCH TAPE.		
B3890549	000	AA SIGMA 5/7	FREE-FIELD EBCDIC INPUT ROUTINE		P UC
	010	AUTHOR	M. CORB, RCA INTERNATIONAL		
	020		890549-11A00	DESCRIPTION PRINTED	
	030		890549-24A00	RELOCATABLE BINARY CARDS	
	040		890549-34A00 *	SOURCE CARDS	
	050		890549-51A00	890549-11 LISTING PRINTED	
	060	ABSTRACT	THIS ROUTINE READS IN CARD IMAGES AND, USING A FREE-FIELD FORMAT, DECODES THE EBCDIC INTO MACHINE		
	070		DOUBLEWORDS OF DATA.		
B3890550	000	AA SIGMA 5/7	GENERALIZED EBCDIC OUTPUT ROUTINE		P UC
	010	AUTHOR	M. CORB, RCA INTERNATIONAL		
	020		890550-11A00	DESCRIPTION PRINTED	
	030		890550-24A00	RELOCATABLE BINARY CARDS	
	040		890550-34A00 *	SOURCE CARDS	
	050		890550-51A00	890550-11 LISTING PRINTED	
	060	ABSTRACT	THIS ROUTINE PERFORMS THE CONVERSIONS FROM MACHINE WORDS TO AN EBCDIC LINE IMAGE REPRESENTATION FOR		
	070		LISTING AND OUTPUTS THE LINE TO A SPECIFIED DESTINATION.		
B3890554	000	AA SIGMA 5/7	CARD LISTER USING SIG 5/7 (STAND-ALONE)		P UC
	010	AUTHOR	XEROX		
	020		890554-11A00	DESCRIPTION PRINTED	
	030		890554-84A00	ABSOLUTE BINARY CARDS	
	040	ABSTRACT	ONE CARD PROGRAM THAT ALLOWS PROGRAMMER TO LIST EBCDIC CARDS ON LINEPRINTER.		
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:BIN	SYSTEM:STAND-ALONE
	060		STORAGE:50 WORDS	DCC PAGES:1	DATE:01/20/70.
B3890556	000	AA SIGMA 5/7	CARD DUPLICATOR - USES 7160 PUNCH		P UC
	010	AUTHOR	XEROX		
	020		890556-11A00	DESCRIPTION PRINTED	
	030		890556-84A00	ABSOLUTE BINARY CARDS	

040 ABSTRACT ONE CARD PROGRAM USING THE 7160 CARD PUNCH. PROGRAM WILL PUNCH DUPLICATION OF CARDS FOLLOWING IT IN CARD  
050 READER.  
060 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:BIN CARD SYSTEM:STAND-ALONE  
070 STORAGE:50 WORDS DOC.PAGES:2 DATE:01/20/70

B3890557 000 AA SIGMA 5/7 BIRD WHISTLING-SIMULATION P UC

010 AUTHOR XEROX  
020 890557-11A00 DESCRIPTION PRINTED  
030 890557-84A00 ABSOLUTE BINARY CARDS

040 ABSTRACT SOUNDS LIKE MANY BIRDS WHISTLING, CHIRPING, ETC.  
050 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:MACHINE SYSTEM:STAND-ALONE  
060 STORAGE:50 WORDS DOC.PAGES:1 DATE:01/09/70

B3890558 000 AB SIGMA 5/7 BUSINESS POLICY GAME P UC

010 AUTHOR DR. R.V. COTTER, UNIV. OF NEVADA  
020 890558-11B00 DESCRIPTION PRINTED  
030 890558-36B00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THE PROGRAM CONSTITUTES A BUSINESS SIMULATION EXERCISE (COVERING UP TO 20 QUARTERLY PERIODS) WHICH  
050 PERMITS 3 TO 6 MANAGEMENT TEAMS TO COMPETE IN A HYPOTHETICAL OLOGOPOLISTIC INDUSTRY (LITTLE PRODUCT  
060 DIFFERENTIATION AMONG COMPETITORS). THE GAME REQUIRES MANAGEMENT DECISIONS REGARDING FINANCE, MARKETING,  
070 PRODUCTION, OTHER VARIABLES COVERING A WIDE SPECTRUM OF BUSINESS.  
080 COMMENTS PROGRAM TYPE:PROG. LANGUAGE:FORTRAN IV  
090 STORAGE:16K DOC. PAGES:8 DATE:4/13/70

B3890559 000 AA SIGMA 5/7 BTM/3 GASP II P UC

010 AUTHOR XEROX  
020 890559-11A00 DESCRIPTION PRINTED  
030 890559-34A00 \* SOURCE CARDS

040 ABSTRACT BTM/3 GASP II IS AN EVENT ORIENTED GENERALIZED ACTIVITY SIMULATION PROGRAM WHICH MAY BE USED FROM A  
050 REMOTE TERMINAL ATTACHED TO A MINIMUM CONFIGURATION BATCH TIME SHARING SYSTEM. BTM/3 GASP II IS USED FOR  
060 DISCRETE SIMULATION, THE USER WRITES IN FORTRAN, THE EVENTS TO BE SIMULATED. APPLICATIONS INCLUDE  
070 INVENTORY MODELS, COMPUTER SYSTEMS AND AREAS WHERE SIMULATION IS EVENT ORIENTED VERSUS QUEING.

B3890560 000 AA SIGMA 5/7 BPM/3 GASP II SIMULATION PACKAGE P UC

010 AUTHOR XEROX  
020 890560-11A00 DESCRIPTION PRINTED  
030 890560-34A00 \* SOURCE CARDS

040 ABSTRACT BPM/3 GASP II IS AN EVENT ORIENTED GENERALIZED ACTIVITY SIMULATION PROGRAM. IT IS USED FOR DISCRETE  
050 SIMULATION, THE USER WRITES IN FORTRAN, THE EVENTS TO BE SIMULATED. APPLICATIONS INCLUDE INVENTORY

	060		MODELS, COMPUTER SYSTEMS AND AREAS WHERE SIMULATION IS EVENT ORIENTED VERSUS QUEING.	
B3890561	000	AB	SIGMA 5/7 ANALOG DIGITAL SIMULATION PROGRAM	P UC
	010	AUTHOR	R. MANNING, VANDERBILT UNIVERSITY	
	020		890561-11B00 DESCRIPTION PRINTED	
	030		890561-36B00 * SOURCE MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	ANALOG IS AN INTERPRETIVE SIMULATION PROGRAM WITH THE PROVISION FOR REPEATING PROBLEMS WITH NEW	
	050		PARAMETERS. ANALOG IS USEFUL FOR SOLVING BOUNDARY VALUE AND OTHER TYPES OF ITERATIVE PROBLEMS. FOR	
	060		SIMPLICITY ONLY THE COMMON ANALOG COMPUTER ELEMENTS ARE INCLUDED WITH PROVISION FOR THE USER TO ADD	
	070		OTHER USEFUL DEVICES. OUTPUT INCLUDES PUNCHING, PLOTTING AND PRINTING.	
	080	COMMENTS	PROGRAM TYPE:PROGRAM LANGUAGE:FORTRAN IV SYSTEM:BPM	
	090		STORAGE:30-45K WORDS DOC.PAGES:43 DATE:06/08/70.	
B3890562	000	AA	SIGMA 5/7 PAYROLL SYSTEM	P UC
	010	AUTHOR	BUCKNELL UNIVERSITY	
	020		890562-11A00 DESCRIPTION PRINTED	
	030		890562-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS	
	040		890562-34A00 890562-26 SOURCE CARDS	
	050		890562-74A00 890562-26 DATA CARDS	
	060	ABSTRACT	THE PAYROLL SYSTEM CONSISTS OF THREE PARTS: PAYROLL RUN, TIME REPORTS, AND QUARTERLY REPORTS. THE	
	070		PACKAGE CONTAINS 16 PROGRAMS, THREE OF WHICH ARE IN XDS COBOL AND THE REST IN XDS FORTRAN IV. CHECKS ARE	
	080		PRODUCED, PAYROLL DISTRIBUTIONS PRINTED, CHECK REGISTERS PRINTED, TIME REPORTS, SOCIAL SECURITY REPORTS,	
	090		LOCAL TAX REPORTS AND ALL ASSOCIATED RECORD KEEPING.	
	100	COMMENTS	PROGRAM TYPE: PACKAGE LANGUAGE: FORTRAN/COBOL SYSTEM: BPM DOC. PAGES: 236 DATE: 05/15/70.	
	110		THIS PACKAGE CONTAINS CATALOG NUMBERS 890563 - 890578. DOUBLE PRECISION OPTION MUST BE USED ON ALL	
	120		FORTRAN PROGRAMS.	
B3890563	000	AA	SIGMA 5/7 PAYROLL TOTALS CONFIRMATION	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	MAKES SURE THAT THE VALUES ON THE INPUT CARDS ARE EQUAL TO CHECKSUMS PROVIDED BY THE PAYROLL OFFICE.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890564	000	AA	SIGMA 5/7 GENERAL PAYROLL REGISTER	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	PRODUCES A CHECK REGISTER WITH THE INFORMATION THAT IS ON EACH CHECK PRINTED AND TOTALS.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	

B3890565	000	AA SIGMA 5/7	PAYROLL ERROR CHECK	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	WHEN TOTALS FROM PAYROLL TOTALS ARE INCORRECT, THIS PROGRAM IS USED. IT PRINTS OUT SUMS(HOURS, GROSS) BY	
	030		EMPLOYEE NUMBER.	
	040	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	050		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890566	000	AA SIGMA 5/7	PAYROLL CHECKS	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	PRINTS PAYROLL CHECKS.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890567	000	AA SIGMA 5/7	EXTRACT WAGE CARDS	S UC
	010	AUTHOR	JOHN KOCH - BUCKNELL UNIVERSITY	
	020	ABSTRACT	EXTRACTS PAYROLL WAGE CARDS AND *P* CARDS PRIOR TO RUNNING THE PAYROLL DISTRIBUTION PROGRAM.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890568	000	AA SIGMA 5/7	PAYROLL DISTRIBUTION	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	PRINTS THE STRAIGHT PAYROLL DISTRIBUTION AND THE BUILDING AND GROUNDS DISTRIBUTION	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890569	000	AA SIGMA 5/7	DEDUCTION REGISTER	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	GENERATES THE DEDUCTION REGISTER FOR STANDARD AND SPECIAL DEDUCTIONS.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890570	000	AA SIGMA 5/7	EXTRACT PAYROLL S CARDS	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	
	020	ABSTRACT	EXTRACTS PAYROLL *S* CARDS PRIOR TO RUNNING THE SPECIAL DEDUCTION REGISTER.	
	030	COMMENTS	PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.	
	040		PART OF PAYROLL SYSTEM CATALOG NO. 890562.	
B3890571	000	AA SIGMA 5/7	SPECIAL DEDUCTION REGISTER	S UC
	010	AUTHOR	MRS. CAROL VARGAS - BUCKNELL UNIVERSITY	

020 ABSTRACT GENERATES THE SPECIAL DEDUCTION REGISTER.  
030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.  
040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890572 000 AA SIGMA 5/7 INSERT DEPARTMENT NUMBER S UC

010 AUTHOR MRS. CAROL VARGAS - BUCKNELL UNIVERSITY

020 ABSTRACT PUTS DEPARTMENT NUMBER ON ALL CARDS PRIOR TO SORTING INTO DEPARTMENT NO. ORDER.

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890573 000 AA SIGMA 5/7 GENERATE PAYROLL TIME REPORTS S UC

010 AUTHOR HOMER ELDRIDGE - BUCKNELL UNIVERSITY

020 ABSTRACT GENERATES THE BUILDING AND GROUNDS AND THE CLERICAL PAYROLL TIME REPORTS.

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: COBOL SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890574 000 AA SIGMA 5/7 CREATE QUARTERLY REPORT RECORD S UC

010 AUTHOR MRS. CAROL VARGAS - BUCKNELL UNIVERSITY

020 ABSTRACT GENERATE 160 CHARACTER RECORD FOR USE IN QUARTERLY REPORTS.

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890575 000 AA SIGMA 5/7 PAYROLL QUARTERLY PROOF AND LOCAL TAX S UC

010 AUTHOR CARLTON DEPNER - BUCKNELL UNIVERSITY

020 ABSTRACT PRINTS OUT EITHER THE PAYROLL QUARTERLY PROOF OR THE LOCAL TAX REPORT

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: COBOL SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890576 000 AA SIGMA 5/7 SOCIAL SECURITY QUARTERLY REPORT S UC

010 AUTHOR CARLTON DEPNER - BUCKNELL UNIVERSITY

020 ABSTRACT PRINTS THE QUARTERLY REPORT FOR SOCIAL SECURITY.

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: COBOL SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890577 000 AA SIGMA 5/7 PAYROLL PROOF TEST S UC

010 AUTHOR CARLTON DEPNER - BUCKNELL UNIVERSITY

020 ABSTRACT IS USED TO PROVE THAT THE INPUT CARDS ARE IN THE CORRECT ORDER.

030 COMMENTS PROGRAM TYPE: PROGRAM LANGUAGE: FORTRAN IV SYSTEM: BPM DATE: 05/15/70.

040 PART OF PAYROLL SYSTEM CATALOG NO. 890562.

B3890579 000 AB SIGMA 2/3 COMMERCIAL SUBSET FOR BUS. APPLICATIONS P UH  
 010 AUTHOR XEROX  
 020 890579-11A00 DESCRIPTION PRINTED  
 030 890579-34A01 \* SOURCE CARDS  
 040 890579-36A01 \* SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT A GROUP OF 20 SUBROUTINES DESIGNED TO SUPPLY A PRACTICAL METHOD OF PROGRAMMING BASIC BUSINESS  
 060 APPLICATIONS. CAN BE USED IN EITHER BASIC FORTRAN IV OR EXTENDED SYMBOL. THE USE OF THESE ROUTINES  
 070 REMOVES THE MAGNITUDE PROBLEM (EXTENDED PRECISION LIMITED TO NINE DIGITS) AND ACCURACY PROBLEM (THE  
 080 INACCURATE REPRESENTATION OF FRACTIONS). THERE IS NO PRACTICAL LIMIT TO THE NUMBER OF DIGITS WHICH CAN  
 090 BE HANDLED.  
 100 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:FORTRAN/XSM SYSTEM:RBM DUCU.PAGES:44 DATE:05/18/70  
 110 THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
 120 THE -11 IS BEING REVISED WITH THIS VERSION. THE -34 (CARD DECK) AND -36 (MAG TAPE) VERSION A01 STILL  
 130 APPLY.

B3890581 000 AA SIGMA 5/7 SOP-STUDENT ONLINE PREREGISTRATION PROG. P UC  
 010 AUTHOR XEROX  
 020 890581-11A00 DESCRIPTION PRINTED  
 030 890581-34A00 \* SOURCE CARDS  
 040 ABSTRACT THE SOP PROGRAM IS DESIGNED TO PROVIDE A MEANS OF GATHERING STUDENT INFORMATION FOR COLLEGE AND  
 050 UNIVERSITY CLASS REGISTRATION. INPUT IS VALIDITY CHECKED AT THE TIME OF ENTRY THEREBY ELIMINATING HUMAN  
 060 ERROR SUCH AS COURSE CONFLICTS INCORRECT NAME SPELLING OR WRONG STUDENT NUMBER.  
 070 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:SYM.,METASYM. SYSTEM:RPM/BTM STORAGE:1179 WORDS DOC.PAGES:11  
 080 DATE:05/29/70. SEE DESCRIPTION PRINTED FOR ADDITIONAL INFORMATION.

B3890582 000 AA SIGMA 5/7 BLDCRSE-S-O-P COURSE NAME PROGRAM P UC  
 010 AUTHOR XEROX  
 020 890582-11A00 890581-11 DESCRIPTION PRINTED  
 030 890582-34A00 890581-34 SOURCE CARDS  
 040 ABSTRACT PROGRAM BLDCRSE USES CARDS AS INPUT TO CREATE A FILE OF COURSES TO BE USED BY STUDENT ONLINE  
 050 PREREGISTRATION (S-O-P PROGRAM)  
 060 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:METASYMBOL SYSTEM:BPM/BTM.

B3890583 000 AA SIGMA 5/7 BLDNAME - S-O-P STUDENT NAME PROGRAM P UC  
 010 AUTHOR XEROX  
 020 890583-11A00 890581-11 DESCRIPTION PRINTED  
 030 890583-34A00 890581-34 SOURCE CARDS  
 040 ABSTRACT BLDNAME USES CARDS AS INPUT TO CREATE A FILE OF STUDENT NAMES, ADDRESSES, AND TELEPHONE NUMBERS TO BE

	050		USED BY STUDENT ONLINE PREREGISTRATION PROGRAM (S-O-P PROGRAM).					
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM/BTM	DATE:05/29/70.		
B3890584	000	AB	SIGMA 2/3	TIME-OF-DAY SUBROUTINE			P	UH
	010	AUTHOR	XEROX					
	020		890584-11R00	DESCRIPTION PRINTED				
	030		890584-34B00 *	SOURCE CARDS				
	040	ABSTRACT	ALLOWS FORTRAN AND XSYMBOL USERS TO OBTAIN MILITARY TIME OF DAY AS AN INTEGER BINARY VALUE, AND SECONDS					
	050		THEREOF AS A FLOATING POINT VARIABLE.					
	060	COMMENTS	PROGRAM TYPE:SUBROUTINE	LANGUAGE:XSYMBOL	SYSTEM:RBM	STORAGE:56	DOC.PAGES:2	
B3890585	000	AA	SIGMA 5/7	BPM SELF SCORE- CARD READER SYMB. START			P	UC
	010	AUTHOR	A. MITCHELL, BUCKNELL UNIVERSITY					
	020		890585-11A00	DESCRIPTION PRINTED				
	030		890585-34A00 *	SOURCE CARDS				
	040	ABSTRACT	SELF SCORE AUTOMATICALLY INITIATES THE SCRA03 SYMBOLIC DEVICE AFTER THE SYSTEM HAS RECEIVED A !FIN CARD					
	050		WHEN THE START BUTTON IS DEPRESSED.					
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM/BTM			
	070		STORAGE:60 WORDS	DOC.PAGES:1	DATE:06/01/70			
	080		ADDITIONAL INFORMATION:THIS PROGRAM WITH PATCH IS FOR D01 OPERATING SYSTEM.					
B3890586	000	AA	900-SERIES	CROSS REFERENCE FOR FORTRAN PROGRAMS			P	UH
	010	AUTHOR	G. SAGER, HONEYWELL, INC.					
	020		890586-11A00	DESCRIPTION PRINTED				
	030		890586-34A00 *	SOURCE CARDS				
	040	ABSTRACT	CROSS REFERENCE-LABEL, SUBROUTINE, VARIABLE, BY LINE NUMBER PRINTS FORTRAN PROGRAM, AS IT IS INPUT FROM					
	050		THE CARD READER, ON THE LINE PRINTER. PRINTS TABLES FOR REFERENCE FOLLOWING LISTING.					
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN II	SYSTEM:MONARCH	DOC.PAGES:1	DATE:06/01/70.	ADDITIONAL
	070		INFORMATION:FUNCTIONS INCL. ICOMP,NXTANC.	SUBROUTINES INCL. VSCAN, CREF, READCD, READTP, PRINTCD,				
	080		INPUT, OUTPUT, LFIELD, LSCAN, CRUNCH, SCAN					
B3890587	000	AA	SIGMA 5/7	EBCDIC-HEXDUMP MAG TAPE / RAD FILE			P	UC
	010	AUTHOR	R. LOFQUIST, TRANSDATA CORP.					
	020		890587-11A00	DESCRIPTION PRINTED				
	030		890587-34A00 *	SOURCE CARDS				
	040	ABSTRACT	PROGRAM DUMPS IN HEXIDECIMAL AND EBCDIC, MAG TAPE OR RAD FILES ON THE LISTING OUT DEVICE.					
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM	STORAGE:8500 WORDS	DOC.PAGES:1	
	060		DATE:06/01/70.	ADDITIONAL INFORMATION:PROGRAM USES M:EI, M:SI, M:L0 DCBS.				



83890588	000	AA	SIGMA 5/7	DELETE RAD FILE PROGRAM	P UC
	010	AUTHOR	R. LOFQUIST, TRANSDATA CORP.		
	020		890588-11A00	DESCRIPTION PRINTED	
	030		890588-34A00 *	SOURCE CARDS	
	040	ABSTRACT	USED TO DELETE FILES IN THE CURRENT ACCOUNT BY FILE NAME, WITH A SINGLE CARD OR CARDS.		
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM/BTM
	060		STORAGE:28 WORDS	DOC.PAGES:2	DATE:06/01/70
83890589	000	AA	SIGMA 5/7	FORTIV-SCATTER READ/WRITE MAG TAPE PACK.	P UC
	010	AUTHOR	SACRAMENTO PEAK OBSERVATORY		
	020		890589-11A00	DESCRIPTION PRINTED	
	030		890589-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THIS PACKAGE CONTAINS FORTRAN-IV CALLABLE ROUTINES FOR READING A 7 OR 9 TRACK TAPE NOT WRITTEN BY A		
	050		FORTRAN PROGRAM. THE PACKAGE IS BASED ENTIRELY ON BYTE TRANSFERS, NOT WORDS. BLOCKED TAPES, LONG RECORDS		
	060		AND PACKED BINARY CAN BE HANDLED EASILY.		
	070	COMMENTS	PROGRAM TYPE: PACKAGE	LANGUAGE: METASYMBOL	SYSTEM: RPM/BTM DATE: 06/02/70.
83890590	000	AA	SIGMA 5/7	PERSPECTIVE PLOT	P UC
	010	AUTHOR	RICHARD RUSH, DENNIS RUFF - SACRAMENTO PEAK OBSERVATORY		
	020		890590-11A00	DESCRIPTION PRINTED	
	030		890590-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THE PURPOSE OF THIS PROGRAM IS TO PLOT SURFACES WHICH CAN BE EXPRESSED AS A FUNCTION OF TWO VARIABLES:		
	050		Y= F(X,Y). PERSPECTIVE INSTEAD OF CONTOUR PLOT, IS USED IN THIS PROGRAM GIVING THE PLANAR PROJECTION		
	060		WHICH BEST REPRESENTS REAL OBJECTS AS VIEWED BY THE NAKED EYE.		
	070	COMMENTS	PROGRAM TYPE: PROGRAM	LANGUAGE: FORTRAN IV-B	SYSTEM: RBM/BPM.
83890591	000	AA	SIGMA 5/6/7	GENERAL LEDGER SYSTEM (COVER)	P UC
	010	AUTHOR	BUCKNELL UNIVERSITY		
	020		890591-11A00	DESCRIPTION PRINTED	
	030		890591-24A00	890591-36	RELOCATABLE BINARY CARDS
	040		890591-36A00 *	SOURCE MAG TAPE, 9 CHANNELS	
	050		890591-74A00	890591-36	DATA CARDS
	060	ABSTRACT	THE GENERAL LEDGER SYSTEM IS A RECORD OF ALL GENERAL LEDGER TRANSACTIONS OF THE UNIVERSITY. THE PACKAGE		
	070		CONTAINS SIX PROGRAMS TWO OF WHICH ARE IN XDS COBOL AND THE REST IN XDS FORTRAN IV. DISTRIBUTION TRIAL		
	080		BALANCE, MONTHLY BUDGET STATEMENTS, GENERAL LEDGER TOTALS, GENERAL LEDGER PROOF, GENERAL LEDGER MONTHLY		
	090		STATEMENT, AND OUTSTANDING CHECK LISTING ARE CREATED AND PRINTED BY THE SYSTEM.		
	100	COMMENTS	PROGRAM TYPE:PACKAGE	LANGUAGE:FORTRAN/COBOL	SYSTEM:BPM DATE:09/11/70. THIS PACKAGE CONTAINS
	110		CATALOG NUMBERS 890592- 890597.		

B3890592	000	AA	SIGMA 5/6/7	DISTRIBUTION LEDGER TRIAL BALANCE DP0215	P UC
	010	AUTHOR	C. DEPNER, BUCKNELL UNIVERSITY		
	020		890592-11A00 890591-11 DESCRIPTION PRINTED		
	030		890592-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS		
	040	ABSTRACT	PRODUCES A TRIAL BALANCE LISTING OF DISTRIBUTION LEDGER.		
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV	SYSTEM:PPM
	060		DATE:09/11/70. PART OF GENERAL LEDGER		
			SYSTEM CATALOG 890591		
B3890593	000	AA	SIGMA 5/6/7	MONTHLY BUDGET STATEMENTS (DP0222)	P UC
	010	AUTHOR	C. VARGAS, BUCKNELL UNIVERSITY		
	020		890593-11A00 890591-11 DESCRIPTION PRINTED		
	030		890593-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS		
	040	ABSTRACT	PRINTS THE MONTHLY DEPARTMENTAL BUDGET STATEMENTS.		
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:COBOL-65	SYSTEM:PPM
	060		DATE:09/11/70. PART OF GENERAL LEDGER		
			SYSTEM CATALOG NUMBER 890591		
B3890594	000	AA	SIGMA 5/6/7	GENERAL LEDGER TOTALS (DP0311)	P UC
	010	AUTHOR	C. VARGAS, BUCKNELL UNIVERSITY		
	020		890594-11A00 890591-11 DESCRIPTION PRINTED		
	030		890594-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS		
	040	ABSTRACT	COMPUTES THE TOTALS OF THE GENERAL LEDGER BY GENERAL LEDGER NUMBER.		
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV	SYSTEM:BPM
	060		DATE:09/11/70. PART OF GENERAL LEDGER		
			SYSTEM CATALOG NUMBER 890591.		
B3890595	000	AA	SIGMA 5/6/7	GENERAL LEDGER PROOF	P UC
	010	AUTHOR	C. VARGAS, BUCKNELL UNIVERSITY		
	020		890595-11A00 890591-11 DESCRIPTION PRINTED		
	030		890595-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS		
	040	ABSTRACT	GENERATES A PROOF LISTING FOR THE GENERAL LEDGER PRIOR TO LEDGER ENTRIES.		
	050	COMMENTS	DATE:09/11/70. PART OF GENERAL LEDGER SYSTEM CATALOG NUMBER 890591.		
B3890596	000	AA	SIGMA 5/6/7	GENERAL LEDGER MONTHLY STATEMENT (DP0316)	P UC
	010	AUTHOR	C. DEPNER, BUCKNELL UNIVERSITY		
	020		890596-11A00 890591-11 DESCRIPTION PRINTED		
	030		890596-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS		
	040	ABSTRACT	GENERATES THE MONTHLY GENERAL LEDGER.		
	050	COMMENTS	DATE:09/11/70. PART OF GENERAL LEDGER SYSTEM CATALOG NUMBER 890591.		
B3890597	000	AA	SIGMA 5/6/7	OUTSTANDING CHECK LISTING (DP0512)	P UC

010 AUTHOR C. DEPNER, BUCKNELL UNIVERSITY  
 020 890597-11A00 890591-11 DESCRIPTION PRINTED  
 030 890597-36A00 890591-36 SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT GENERATES A LISTING OF THE AMOUNT OF OUTSTANDING CHECKS.  
 050 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:FORTRAN IV SYSTEM:RPM DATE:09/11/70. PART OF GENERAL  
 060 LEDGER SYSTEM CATALOG NUMBER 890591.

B3890598 000 AC SIGMA 5-9 COBOL KEYED-FILE UTILITY SUBROUTINES P UC  
 010 AUTHOR XEROX  
 020 890598-11B00 DESCRIPTION PRINTED  
 030 890598-34B01 \* SOURCE CARDS  
 040 ABSTRACT THIS A SERIES OF SUBROUTINES TO AID USERS OF COBOL-65. NINE SEPARATE ROUTINES COMPRISE THE PACKAGE: REL-  
 050 FILE (890599), DELREC (890600), GETCOM (890601), GETKEY (890602), KEYSART (890603), ADDSEQ (890604),  
 060 PAPERCHG (890605), RDP&PRT (890606), BINARY SEARCH (890607), A DESCRIPTION OF EACH SUBROUTINE IS LISTED  
 070 IN THE PAL MANUAL UNDER INDIVIDUAL CATALOG NUMBERS.  
 080 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:META-SYMBOL DOCU.PAGES:13

B3890599 000 AB SIGMA 5/6/7 COBOL RELEASE FILES (RELFILES) P UC  
 010 AUTHOR XEROX  
 020 890599-11B00 890598-11 DESCRIPTION PRINTED  
 030 890599-34B00 890598-34 SOURCE CARDS  
 040 ABSTRACT THIS ROUTINE WILL CLOSE AND RELEASE DISC FILES TO THE MONITOR WHEN THE USER IS THROUGH WITH THEM.  
 050 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:RPM STORAGE:33 DOCU.PAGES:1

B3890600 000 AB SIGMA 5/6/7 COBOL SUBROUTINE DELREC P UC  
 010 AUTHOR XEROX  
 020 890600-11B00 890598-11 DESCRIPTION PRINTED  
 030 890600-34B00 890598-34 SOURCE CARDS  
 040 ABSTRACT THIS ROUTINE WILL DELETE RECORDS FROM KEYED FILES.  
 050 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:RPM STORAGE:32 DOCU.PAGES: 1

B3890601 000 AB SIGMA 5/6/7 COBOL SUBROUTINE GETCOM P UC  
 010 AUTHOR XEROX  
 020 890601-11B00 890598-11 DESCRIPTION PRINTED  
 030 890601-34B00 890598-34 SOURCE CARDS  
 040 ABSTRACT THIS ROUTINE WILL PICK UP THE CURRENT DATE, TIME AND SWITCH SETTING AND INSERT SAME INTO THE WORKING  
 050 STORAGE SECTION OF THE COBOL PROGRAM. THE ROUTINE WILL ALSO OPTIONALLY PICK UP THE CURRENT LINES PER  
 060 PAGE FROM THE PRINTER DCB.  
 070 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:RPM STORAGE:81 DOCU.PAGES: 2

B3890602	000	AB	SIGMA 5/6/7	COBOL SUBROUTINE GETKEY	P UC	
	010	AUTHOR	XEROX			
	020		890602-11B00	890598-11 DESCRIPTION PRINTED		
	030		890602-34B00	890598-34 SOURCE CARDS		
	040	ABSTRACT	THIS ROUTINE ELIMINATES THE NECESSITY OF DEFINING THE KEY VALUE AS PART OF THE DATA RECORD BY OBTAINING			
	050		THE KEY VALUE OF THE LAST RECORD READ AND RETURNING THIS VALUE TO THE USER SPECIFIED WORKING AREA.			
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:META-SYMBOL	SYSTEM:BPM	STORAGE:35 DOCU.PAGES: 1
B3890603	000	AB	SIGMA 5/6/7	COBOL SUBROUTINE KEYSTART	P UC	
	010	AUTHOR	XEROX			
	020		890603-11B00	890598-11 DESCRIPTION PRINTED		
	030		890603-34B00	890598-34 SOURCE CARDS		
	040	ABSTRACT	THIS ROUTINE WILL POSITION A KEYED-FILE TO A SPECIFIC OR GENERIC KEY.			
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM	STORAGE:52 DOCU.PAGES: 2
B3890604	000	AB	SIGMA 5/6/7	COBOL ADD SEQUENTIAL SUBROUTINE	P UC	
	010	AUTHOR	XEROX			
	020		890604-11B00	890598-11 DESCRIPTION PRINTED		
	030		890604-34B00	890598-34 SOURCE CARDS		
	040	ABSTRACT	THIS ROUTINE WILL ADD A RECORD TO A KEYED FILE BEING PROCESSED SEQUENTIALLY.			
	050	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:META-SYMBOL	SYSTEM:BPM	STORAGE:44 DOCU.PAGES:1
B3890605	000	AB	SIGMA 5/6/7	COBOL SUBROUTINE PAPERCHG	P UC	
	010	AUTHOR	XEROX			
	020		890605-11B00	890598-11 DESCRIPTION PRINTED		
	030		890605-34B00	890598-34 SOURCE CARDS		
	040	ABSTRACT	THIS ROUTINE WILL INSTRUCT THE OPERATOR TO CHANGE THE PAPER, CARTRIDGE TAPE OR PUNCH CARD STOCK BETWEEN			
	050		THE TIME THE LAST AND NEXT RECORDS ARE PROCESSED BY THE SYMBOL.			
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:META-SYMBOL	SYSTEM:BPM	STORAGE:72 DOCU.PAGES:1
B3890606	000	AB	SIGMA 5/6/7	COBOL SUBROUTINE RDPSPRT	P UC	
	010	AUTHOR	XEROX			
	020		890606-11B00	890598-11 DESCRIPTION PRINTED		
	030		890606-34B00	890598-34 SOURCE CARDS		
	040	ABSTRACT	THIS PROGRAM WAS WRITTEN TO PROCESS PRINT-TAPES CREATED BY COBOL PROGRAMS USING THE SUBROUTINE 'PAPERCHG			
	050		* #890605. ITS PURPOSE IS TO PRINT REPORTS (PREVIOUSLY WRITTEN TO TAPES) ON FORMS THAT NEED ALIGNMENT.			
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:META-SYMBOL	SYSTEM: BPM	

B3890607 000 AB SIGMA 5/6/7 COBOL SUBROUTINE BINARY SEARCH P UC  
 010 AUTHOR XEROX  
 020 890607-11B00 890598-11 DESCRIPTION PRINTED  
 030 890607-34B00 890598-34 SOURCE CARDS  
 040 ABSTRACT THIS ROUTINE SEARCHES A TABLE FOR AN ELEMENT WITHIN THE TABLE WHICH SATISFIES THE SPECIFIED CONDITION  
 050 AND ADJUSTS THE ASSOCIATED INDEX NAME TO INDICATE THAT TABLE ELEMENT.  
 060 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:44 DOCU.PAGES: 2

B3890612 000 AA SIGMA 5/7 HIERARCHICAL TEXT EDITOR P UC  
 010 AUTHOR XEROX  
 020 890612-11A00 DESCRIPTION PRINTED  
 030 890612-24A00 RELOCATABLE BINARY CARDS  
 040 890612-44A00 \* COMPRESSED CARDS  
 050 ABSTRACT THE HIERARCHICAL TEXT EDITOR PROGRAM ALLOWS THE USER TO CREATE, UPDATE AND MANIPULATE VERY LARGE OR  
 060 SMALL TEXT WHILE CREATING A FINAL DRAFT DOCUMENT. THE TEXT EDITOR CAN BE VERY USEFUL FOR GENERATING  
 070 SYSTEM DISCUSSIONS AND USER GUIDES AS EXEMPLIFIED BY THE TEXT EDITORS OWN USER GUIDE.  
 080 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:METASYMBOL SYSTEM:BTM STORAGE:6000 DOCU.PAGES:29

B3890614 000 AA SIGMA 5/7 RAD FILES IN/OUT P UC  
 010 AUTHOR J.F. MOLLENAVER-BELL LABS, S. ANTFBY-X.D.S.  
 020 890614-11A00 DESCRIPTION PRINTED  
 030 890614-34A00 \* SOURCE CARDS  
 040 890614-51A00 890614-11 LISTING PRINTED  
 050 ABSTRACT THIS PROCESSOR WRITES OUT ALL FILES IN THE CURRENT ACCOUNT TO MAGNETIC TAPE THROUGH THE M:ED PCB, OR REA  
 060 DS IN ALL THE FILES ON A TAPE AND RESTORES THEM TO THE CURRENT ACCOUNT.  
 070 COMMENTS LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:7A HEX DOCU.PAGES:7. READS IN A TAPE WRITTEN UNDER  
 080 ANOTHER ACCOUNT, ASSIGN M:EI AS FOLLOWS: !ASSIGN M:EI,(LABEL,X,ACCT)

B3890615 000 AA SIGMA 5/7 PROCEDURES FOR ASSEMBLY OF SIGMA 2 PROG. P UC  
 010 AUTHOR R. HUBER, RUTGERS UNIVERSITY  
 020 890615-11A00 DESCRIPTION PRINTED  
 030 890615-34A00 \* SOURCE CARDS  
 040 890615-51A00 890615-11 LISTING PRINTED  
 050 ABSTRACT SYSTEM SIG2 IS A SET OF META-SYMBOL PROCEDURES FOR ASSEMBLING SIGMA 2 PROGRAMS ON A SIGMA 5 OR 7. EACH  
 060 SIGMA 2 WORD IS GENERATED AS A 32-BIT SIGMA 5/7 WORD WITH THE FIRST HALFWORD FILLED WITH ZEROS OR  
 070 BLANKS. IT IS ASSUMED THAT THE TRANSMISSION ROUTINES WILL REMOVE THEM. SEVERAL RESTRICTIONS EXIST,  
 080 COMPARED TO SIGMA 2 SYMBOL.  
 090 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:BPM DOCU.PAGES:11

B3890616	000	AA	SIGMA 5/7	DISC DUMP PROGRAM	P UC
	010	AUTHOR	R. HUBER, RUTGERS UNIVERSITY		
	020		890616-11A00	DESCRIPTION PRINTED	
	030		890616-34A00 *	SOURCE CARDS	
	040		890616-51A00 890616-11 LISTING PRINTED		
	050	ABSTRACT	PROGRAM DUMPS RAD ADDRESS DISC TO MAGNETIC TAPE ADDRESS MT. DISC AND MT ARE EQU'S IN THE PROGRAM.		
	060		PROGRAM WRITES AN IDENTIFICATION AND BOOTSTRAP ON TAPE. BOOTSTRAP ALLOWS RESTORE OF RAD FROM TAPE.		
	070	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:META-SYMBOL	SYSTEM:STAND-ALONE DOCU.PAGES:12
B3890617	000	AB	SIGMA 5/6/7	DTTTO - SIGMA UTILITY FILE MANIPULATOR	P UC
	010	AUTHOR	R. JUGEL - I.M.T., W. SCHNECK - X.O.S.		
	020		890617-11B00	DESCRIPTION PRINTED	
	030		890617-44B00 *	COMPRESSED CARDS	
	040		890617-74B00 890617-44 ASSEMBLY & LOAD CARDS		
	050	ABSTRACT	TO PROVIDE THE SIGMA USER WITH A DEVICE TO DEVICE CAPABILITY, UNDER BPM, SIMILAR TO THAT OF THE DEBE		
	060		PROGRAM ON SYSTEM/360. A LIST OF THE AVAILABLE FUNCTIONS IS PROVIDED IN THE DOCUMENTATION.		
	070		(NOTE COMPATIBLE IBM FUNCTIONS.)		
	080	COMMENTS	PROGRAM TYPE:UTILITY	LANGUAGE:METASYMBOL	SYSTEM:BPM/BTM STORAGE:5000 DOCU.PAGES:12
	090		LIST OF AVAILABLE FUNCTIONS IS PROVIDED IN DOCUMENTATION.		
B3890657	000	AC	SIGMA 5-9	CHARACTER MANIPULATION ROUTINES--FORTRAN	P UC
	010	AUTHOR	B. MCKEON, S.U.R.C.		
	020		890657-11B00	DESCRIPTION PRINTED	
	030		890657-44B01 *	COMPRESSED CARDS	
	040	ABSTRACT	THESE ROUTINES AND FUNCTIONS SIMPLIFY CHARACTER MANIPULATION IN FORTRAN. INCLUDED ARE ROUTINES TO MOVE,		
	050		COMPARE, MODIFY STRINGS AND INDIVIDUAL BYTES. THEY ARE ESPECIALLY USEFUL IN BUSINESS APPLICATIONS. THERE		
	060		ARE 27 ENTRY POINTS, INCLUDING SUBROUTINES TO 'GET' OR 'PUT' A CHARACTER, MOVE A STRING WITH VARIOUS		
	070		EDITING, COMPARE TWO STRINGS, DETERMINE THE 'TYPE' OF CHARACTER TRANSLATE A STRING AND SEARCH A STRING.		
	080	COMMENTS	PROGRAM TYPE:PACKAGE	LANGUAGE:METASYMBOL	SYSTEM:BPM STORAGE:503 DOCU.PAGES:7
	090		SIGMA 5 TIMINGS APPEAR AS COMMENTS WITHIN THE PROGRAM SOURCE CARDS.		
B3890658	000	AB	SIGMA 5-9	SUBROUTINE PUNCH (COL. BINARY)	P UC
	010	AUTHOR	P. C. ROGERS, BROOKHAVEN NATIONAL LABORATORY		
	020		890658-11B00	DESCRIPTION PRINTED	
	030		890658-34B00 *	SOURCE CARDS	
	040	ABSTRACT	PUNCH CONVERTS 80 BYTES OF DATA IN EBCDIC FORMAT TO 120 BYTES OF BINARY FORMAT. THE ENTRY POINT UNPUNCH		
	050		DECODES 120 BYTES OF COLUMN BINARY CARD CODE TO 80 BYTES OF EBCDIC.		
	060	COMMENTS	THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY.		
	070		BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.		

080 SUBROUTINES USED: LD BYTE, LDHWD, MBYTES CN 890662  
090 FORTRAN OPTIONS S AND NMP ARE REQUIRED.

B3890659 000 AA SIGMA 5/6/7 UTILITIES, SINGLE CARD P UC  
010 AUTHOR P. C. ROGERS, BROOKHAVEN NAT'L LABORATORY  
020 890659-11A00 DESCRIPTION PRINTED  
030 890659-34A00 \* SOURCE CARDS  
040 ABSTRACT PACKAGE CONSISTS OF MANY ONE CARD UTILITIES FOR MOVING DATA FROM ONE MEDIUM TO ANOTHER. THEY ALL OPERATE  
050 AT THE SPEED OF THE SLOWER DEVICE. INCLUDED ARE: CR-TY, CR-LP, CR-9T CR-7T, TY-LP, TY-9T, 9T-LP, 9T-  
060 9T, 7T-9T ET AL. DEVICE ASSIGNMENTS ARE STANDARD BUT MAY EASILY BE CHANGED BY REASSEMBLING.  
070 COMMENTS PROGRAM TYPE: PACKAGE LANGUAGE: META-SYMBOL SYSTEM: S/A DOCU. PAGES: 2 ASSIGNMENTS: TY=1, LP=2,  
080 CR=3, 7T=AF0, 9T=AF0.

B3890660 000 AB SIGMA 5-9 CALS FOR FORTRAN USERS-MONITOR CAL1'S P UC  
010 AUTHOR P. C. ROGERS, BROOKHAVEN NATIONAL LABORATORY  
020 890660-11B00 DESCRIPTION PRINTED  
030 890660-34B00 \* SOURCE CARDS  
040 ABSTRACT SIGMA MONITOR FUNCTION ROUTINE FOR CAL1 FUNCTIONS. FORMS FPT'S FOR AND EXECUTES THE SPECIFIED  
050 MONITOR CAL. INCLUDED ARE: CAL1,1, CAL1,2, CAL1,3, CAL1,4, CAL1,5, CAL1,6, CAL1,8, CAL1,9, CAL1,10.  
060 THIS ROUTINE IS UPDATED THROUGH THE F01 VERSION OF BPM.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEMS. PROGRAM TYPE IS ASSEMBLER OR UTILITY.  
080 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890661 000 AB SIGMA 5-9 SUBROUTINE DATETIME P UC  
010 AUTHOR P. C. ROGERS, BROOKHAVEN NATIONAL LABORATORY  
020 890661-11B00 DESCRIPTION PRINTED  
030 890661-34B00 \* SOURCE CARDS  
040 ABSTRACT SUBROUTINE TO GET DATE AND TIME IN FOUR CONTIGUOUS WORDS IN A4 FORMAT.  
050 COMMENTS PROGRAM TYPE: SUBROUTINE LANGUAGE: META-SYMBOL DOCU. PAGES: 1

B3890662 000 AB SIGMA 5-9 PARTIAL WORD MANIPULATION OR TEST P UC  
010 AUTHOR P. C. ROGERS, BROOKHAVEN NATIONAL LABORATORY  
020 890662-11B00 DESCRIPTION PRINTED  
030 890662-34B00 \* SOURCE CARDS  
040 ABSTRACT THIS PACKAGE CONTAINS FUNCTIONS AND SUBROUTINES CALLABLE FROM FORTRAN WHICH ALLOW THE USER TO: LOAD BYTE  
050 (LD BYTE), LOAD HALFWORD (LDHWD), MOVE BYTES (MBYTES), TRANSLATE BYTES (TRYTES), COMPARE BYTE COUNT  
060 (CBYTES), CONVERT BCD-BIN(CONVA), CONVERT BIN TO BCD (CONVS), FINDS # OF BYTES LAST TRANSFERRED THROUGH  
070 DCB (RECLGT)  
080 COMMENTS PROGRAM TYPE: PACKAGE LANGUAGE: META-SYMBOL SYSTEM: BPM DOCU. PAGES: 4

B3890663	000	AB 920	SHORT RELOCATING LOADER FOR 920/930	P UM
	010	AUTHOR	A. MOFFET, CALTECH	
	020		890663-11A01 DESCRIPTION PRINTED	
	030		890663-82A00 ABSOLUTE BINARY PAPER TAPE, 7 LEVELS	
	040		890663-34A00 * SOURCE CARDS	
	050	ABSTRACT	TO LOAD ABSOLUTE OR RELOCATABLE OBJECT PAPER TAPES IN STANDARD BINARY FORMAT. THIS LOADER REPLACES	
	060		000019 AND IS SHORTENED TO USE LOCATIONS 000 THROUGH 077 ONLY. THUS IT DOES NOT DESTROY THE POP LINKAGE	
	070		TABLE AS DOES 000019. THE "STANDARD CONSTANTS" ARE OMITTED.	
	080	COMMENTS	LANGUAGE:SYMBOL DOCU.PAGES:1	
B3890664	000	AA 920	SATFIX-SATELLITE ANGLE & RANGE COMPUTE	P UM
	010	AUTHOR	R.W. GREAVES, RAYTHEON SERVICE CO.	
	020		890664-11A00 DESCRIPTION PRINTED	
	030		890664-34A00 * SOURCE CARDS	
	040	ABSTRACT	PROGRAM TO COMPUTE ANGLE AND RANGE OF A SATELLITE TO DIRECT A TRACKING SENSOR FOR ACQUISITION PURPOSES.	
	050		REQUIRES BG/BI DEVICE, FORTRAN RUNTIME AND KEYBOARD PRINTER. COMMUNICATION WITH PROGRAM IS WRITTEN TO	
	060		BE SELF-EXPLANATORY. PROGRAM CAN BE MODIFIED TO WRITE INFORMATION COMPUTED TO AN INPUT FILE TO BE READ	
	070		INTO THE SENSOR DRIVE PROGRAM	
	080	COMMENTS	PROGRAM TYPE:PROGRAM LANGUAGE:FORTRAN II STORAGE:948 DOCU.PAGES:2	
B3890665	000	AA SIGMA 5/6/7	LIBUPDAT FORTRAN IV LIBRARY UPDATE	P UC
	010	AUTHOR	XEROX	
	020		890665-11A00 DESCRIPTION PRINTED	
	030		890665-34A00 * SOURCE CARDS	
	040	ABSTRACT	LIBRARY UPDATE ALLOWS A USER TO DELETE A GROUP OR GROUPS FROM THE :SYS ACCOUNT AND THEN REPLACE IT WITH	
	050		ANOTHER	
	060	COMMENTS	LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:200 DOCU.PAGES:1	
B3890666	000	AA SIGMA 5/7	BTM DEMO - GAMES PROGRAMS	P UC
	010	AUTHOR	XEROX	
	020		890666-11A00 DESCRIPTION PRINTED	
	030		890666-36A00 * SOURCE MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	THIS IS A PACKAGE OF DEMO OR GAME PROGRAMS WHICH MAY BE RUN FROM A BTM USER TERMINAL. A FEW OF THE	
	050		PROGRAMS ARE: CRAPS, BANDIT, BLAKJ--BLACKJACK, TICTAC--TIC-TAC-TOE.	
	060	COMMENTS	PROGRAM TYPE:PACKAGE LANGUAGE:BASIC SYSTEM:BTM DOCU.PAGES:2 DATE:09/24/70.	
B3890667	000	AC SIGMA 5-9	1620 ELECTRONIC CIRCUIT ANALYSIS PROGRAM	P UC
	010	AUTHOR	G. WEBER, BUCKNELL UNIVERSITY	



	020	890667-11000	DESCRIPTION PRINTED			
	030	890667-36000 *	SOURCE MAG TAPE, 9 CHANNELS			
	040	ABSTRACT	ECAP IS AN INTEGRATED SYSTEM OF PROGRAMS FOR USE BY ELECTRICAL ENGINEERS IN THE DESIGN AND ANALYSIS OF			
	050		ELECTRONIC CIRCUITS. ECAP CAN PRODUCE DC, AC, AND/OR TRANSIENT ANALYSES OF ELECTRICAL NETWORKS FROM A			
	060		DESCRIPTION OF THE CONNECTIONS OF THE NETWORK, A LIST OF CORRESPONDING CIRCUIT ELEMENT VALUES, A			
	070		SELECTION OF THE TYPE OF ANALYSIS DESIRED, A DESCRIPTION OF THE CIRCUIT EXCITATION, AND A LIST OF OUTPUT			
	080		DESIRED.			
	090	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV	SYSTEM:BPM	DOCU.PAGES:1
B3890668	000	AA 900-SERIES	MUSIC - FOR 910/920			P UM
	010	AUTHOR	C. KENDALL, XDS			
	020	890668-11A00	DESCRIPTION PRINTED			
	030	890668-82A00	ABSOLUTE BINARY PAPER TAPE, 7 LEVELS			
	040	ABSTRACT	PAPER TAPE (PLUS AN FM RECEIVER) COMBINE WITH THE 910/920 TO PRODUCE A MEDLEY OF OVER 25 SONGS. ALSO			
	050		ALLOWS YOU TO ADD TO REPERTOIRE.			
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE: MACHINE	SYSTEM: S/A	STORAGE:2000
B3890669	000	AB 900-SERIES	360 ELECTRONIC CIRCUIT ANALYSIS (FCAP)			P UM
	010	AUTHOR	J. HERRELL, MOTOROLA			
	020	890669-11B00	DESCRIPTION PRINTED			
	030	890669-35B00 *	SOURCE MAG TAPE, 7 CHANNELS			
	040	890669-74B00	CONTROL DECK			
	050	ABSTRACT	ECAP IS AN INTEGRATED SYSTEM OF PROGRAMS FOR USE BY ELECTRICAL ENGINEERS IN THE DESIGN AND ANALYSIS OF			
	060		ELECTRONIC CIRCUITS. ECAP CAN PRODUCE DC, AC, AND/OR TRANSIENT ANALYSES OF ELECTRICAL NETWORKS FROM A			
	070		DESCRIPTION OF THE CONNECTIONS OF THE NETWORK, A LIST OF CORRESPONDING CIRCUIT ELEMENT VALUES, A			
	080		SELECTION OF THE TYPE OF ANALYSIS DESIRED, A DESCRIPTION OF THE CIRCUIT EXCITATION, AND A LIST OF			
	090		OUTPUT DESIRED.			
	100	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN II	SYSTEM:MONARCH	STORAGE:7116 DOCU.PAGES:4
	110		COMMENTS: 900 SERIES MONARCH WITH 12K CORE.			
B3890670	000	AB SIGMA 2/3	SIGMAS-XDS SIGMA 2/3 ASSEMBLER CDC-6400			P UM
	010	AUTHOR	J. RENNO, AURA KITT PEAK NATIONAL OBSERVATORY			
	020	890670-11B00	DESCRIPTION PRINTED			
	030	890670-34B00 *	SOURCE CARDS			
	040	890670-64B00	UPDATE ON CARDS			
	050	ABSTRACT	SIGMAS IS A FORTRAN EXTENDED PROGRAM WHICH ACCEPTS AS INPUT A PROGRAM FOR AN 8K XDS SIGMA 2/3 COMPUTER.			
	060		SIGMAS RUNS ON THE CDC 6400 COMPUTER, PRODUCES AS OUTPUT A NON-SELF-LOADING PUNCHED PAPER TAPE BEARING			
	070		IN ABSOLUTE OR RELOCATABLE FORM THE PROGRAM IN BINARY SIGMA 2/3 MACHINE-CODE AND A LISTING CONTAINING			
	080		THE PROGRAM IN ITS ORIGINAL SYMBOLIC FORM AND ITS TRANSLATED HEXIDECIMAL REPRESENTATION.			

090	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV EXT.	DOCU.PAGES:42.	A BIPARTITE LOADER IS PROVIDED
100			WHEREWITH THE SIGMA 2/3 PROGRAM IS LOADED FOR EXECUTION. EXTENDED FORTRAN IS REQUIRED.		
B3890671	000	AA	SIGMA 2/3	RBM/3 GASP II SIMULATION PROGRAM	P UC
	010	AUTHOR	XEROX		
	020		890671-11A00	DESCRIPTION PRINTED	
	030		890671-34A00 *	SOURCE CARDS	
	040	ABSTRACT	RBM/3 GASP II IS AN EVENT ORIENTED GENERALIZED ACTIVITY SIMULATION PROGRAM. IT IS USED FOR DISCRETE		
	050		SIMULATION; THE USER WRITES, IN FORTRAN, THE EVENTS TO BE SIMULATED. APPLICATIONS INCLUDE INVENTORY		
	060		MODELS, COMPUTER SYSTEMS AND AREAS WHERE SIMULATION IS EVENT VERSUS QUEUING ORIENTED.		
	070	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV	SYSTEM:RBM STORAGE:5000 DOCU.PAGES:8 DATE:09/17/70.
	080		DUE TO THE LARGE STORAGE REQUIREMENTS, THE USER MAY WISH TO SEGMENT THE PROGRAMS. CALLS TO R:SEGLD VIA		
	090		THE SEGLD SUBROUTINE WILL NEED TO BE INSERTED IN THE SOURCE DECK AS REQUIRED.		
B3890672	000	AB	SIGMA 5/6/7	SIGMA 2 BASIC SYMBOL ASSEMBLER	P UC
	010	AUTHOR	K. S. BOOTH; E. LEWIS, UNIVERSITY OF ALABAMA		
	020		890672-11B00	DESCRIPTION PRINTED	
	030		890672-36B00 *	SOURCE MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	THE SIGMA 2 BASIC SYMBOL ASSEMBLER WILL ASSEMBLE SIGMA 2 SOURCE CODE ON THE SIGMA 5/7 AND OUTPUT 1) A		
	050		BINARY OBJECT PROGRAM ON PAPER TAPE, OR PUNCHED CARDS, WHICH CAN BE LOADED INTO THE SIGMA 2 AND 2) AN		
	060		ASSEMBLY LISTING.		
	070	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:SYMBOL	SYSTEM:RBM STORAGE:16128 DOCU.PAGES:3
B3890673	000	AA	SIGMA 5/7	INTERACTIVE SNOBOL4	P UC
	010	AUTHOR	E. SMITH, HARVARD UNIVERSITY		
	020		890673-11A00	DESCRIPTION PRINTED	
	030		890673-46A00 *	COMPRESSED MAG TAPE, 9 CHANNELS	
	040	ABSTRACT	INTERACTIVE SNOBOL4 WAS DEVELOPED FOR USE UNDER BTM. CONVERSATIONAL DEBUGGING FACILITIES INCLUDE BREAK-		
	050		POINTS AND DIRECT STATEMENTS. THE LANGUAGE IS A NEARLY COMPLETE SUBSET OF BELL LABS SNOBOL4, AND THE		
	060		SUBSYSTEM RUNS WELL IN A SMALL (18K) BTM USER AREA.		
	070	COMMENTS	PROGRAM TYPE:SUBSYSTEM	LANGUAGE:METASYMBOL	SYSTEM:BTM STORAGE:18000 DOC.PAGES:7
	080		FILE 1 OF THE TAPE "INSTRUCT" CONTAINS ASSEMBLY AND LOAD INSTRUCTIONS. ATTACHED DOCUMENTATION SHOWS THE		
	090		DIFFERENCES FROM THE LANGUAGE DESCRIBED IN THE BOOK "THE SNOBOL4 PROGRAMMING LANGUAGE", BY GRISWOLD ET.		
	100		AL..		
B3890674	000	AA	SIGMA 5/6/7	RELABL-SOURCE DECK RELABELER&REFORMATTER	P UC
	010	AUTHOR	D. SMITH, XEROX COMPUTER SERVICES		
	020		890674-11A00	DESCRIPTION PRINTED	
	030		890674-34A00 *	SOURCE CARDS	

040 ABSTRACT ALLOWS USER TO CHANGE SPECIFIED LABELS THROUGHOUT A PROGRAM AND TO HAVE A PROGRAM REFORMATTED INTO A  
050 FORM SUITABLE FOR PUBLICATION I.E. COLUMN 1,10,19, 36 FORMAT.  
060 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:METASYMBOL SYSTEM:BPM STORAGE:8311 DOC.PAGES:5

B3890676 000 AA SIGMA 5-9 LINE PLOTTER PLOT SUBROUTINE P UC  
010 AUTHOR J. SCHWARIZ, SYRACUSE UNIVERSITY RESEARCH CORPORATION  
020 890676-11A00 DESCRIPTION PRINTED  
030 890676-11A00 705380-11 DESCRIPTION PRINTED  
040 890676-34A00 \* SOURCE CARDS  
050 ABSTRACT LINE PRINTER PLOT SUBROUTINE RUNS UNDER XDS FORTRAN IV AND PLOTS NUMERIC DATA USING A STANDARD LINE  
060 PRINTER AS THE OUTPUT DEVICE.  
070 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:FORTRAN IV SYSTEM:BPM STORAGE:11326 DOCU.PAGES:3  
080 DATE:09/21/70. THE SUBROUTINE IS A MODIFIED VERSION OF 705380 WHICH RUNS UNDER XDS FORTRAN IV-H. ORDER  
090 705380-11 FOR DOCUMENTION AND SUBROUTINE USAGE.

B3890697 000 AA SIGMA 2/3 ROUTINES - REAL-TIME EXTENSIONS P LH  
010 AUTHOR XEROX  
020 890697-11A00 DESCRIPTION PRINTED  
030 890697-34A00 \* SOURCE CARDS  
040 ABSTRACT THIS PACKAGE CONTAINS 23 ROUTINES WHICH ALLOW THE USER TO EXPAND THE REAL-TIME CAPABILITIES OF FORTRAN.  
050 INCLUDED ARE ROUTINES TO:  
060 START TIMER, CANCEL TIMER, INHIBIT/UNINHIBIT THE INTERRUPTS, PERFORM ALL INTERRUPT OPERATIONS,  
070 LOGICAL AND, LOGICAL INCLUSIVE OR, TEST A BIT, PERFORM SHIFT OPERATIONS ON A WORD AND MANY OTHERS.  
080 COMMENTS PROGRAM TYPE:PACKAGE LANGUAGE:XSMBOL SYSTEM:RBM STORAGE:245 DOCU.PAGES:25 DATE:10/06/70.

B3890698 000 AD SIGMA 5-9 GENERAL I/O PACKAGE - GETPUT P UC  
010 AUTHOR XEROX  
020 890698-11000 DESCRIPTION PRINTED  
030 890698-36000 \* SOURCE MAG TAPE, 9 CHANNELS  
040 890698-46000 890698-36 COMPRESSED MAG TAPE, 9 CHANNELS  
050 890698-76000 890698-36 TEST FILES ON TAPE  
060 ABSTRACT GETPUT PROVIDES THE FORTRAN/COBOL/METASYMBOL USER WITH THE FOLLOWING SERVICES:1)DYNAMICALLY CREATE AND  
070 DELETE FILES WITH OR WITHOUT !ASSIGN CARDS. FILES MAY BE ON TAPE, DISC, OR A DEVICE. A SINGLE DCB MAY  
080 BE OPENED TO MANY DIFFERENCE FILES OR DEVICES DURING THE COURSE OF A JOB; 2)DYNAMICALLY CONTROL ANY OR  
090 ALL ERROR/ABNORMAL CONDITIONS THAT MAY OCCUR DURING THE JOB; 3)USE THE I/O SERVICES OF THE MONITOR TO  
100 DELETE RECORDS, PERFORM KEYED READS/Writes, SKIP RECORDS/FILES, AND READ/WRITE MULTI-VOLUME FILES;  
110 4)OBTAIN THE KEY AND RECORD SIZE OF THE LAST RECORD READ/Written THROUGH A DCB.  
120 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OR UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE  
130 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890699	000	AA SIGMA 5/6/7	GEFORT		P UC
	010	AUTHOR	XEROX		
	020		890699-11A00	DESCRIPTION PRINTED	
	030		890699-44A00 *	COMPRESSED CARDS	
	040	ABSTRACT	THIS PROGRAM CONVERTS GE TIMESHARING FORTRAN TO XDS FORTRAN IVH. CONVERSION INCLUDES FORMATTING, DATA		
	050		STATEMENTS FREEFORM READ STATEMENTS, COMPOUND STATEMENTS, MULTIPLE ASSIGNMENT STATEMENTS, REPLACING		
	060		QUOTES WITH APOSTROPHES, SUPPRESSING "1" SEQUENCES, AND INCLUDING DOUBLE PRECISION STATEMENTS.		
	070	COMMENTS	PROGRAM TYPE:UTILITY	LANGUAGE:SYMBOL	SYSTEM:BPM/BTM STORAGE:639 DOCU.PAGES:6 DATE:10/10/70.
B3890700	000	AA SIGMA 5/6/7	FREEFORM		P UC
	010	AUTHOR	XEROX		
	020		890700-11A00	DESCRIPTION PRINTED	
	030		890700-44A00 *	COMPRESSED CARDS	
	040	ABSTRACT	THIS PROGRAM PROVIDES THE FORTRAN USER WITH FREEFORM INPUT. FREEFORM-4 IS FOR FORTRAN IV, EXTENDED		
	050		FORTRAN IV AND EXTENDED FORTRAN IV-H. FREEFORM 4H IS FOR FORTRAN IV-H. IT ALSO PROVIDES COMPATABILITY		
	060		WITH GE TIMESHARING FORTRAN.		
	070	COMMENTS	PROGRAM TYPE:SUBPROG	LANGUAGE:SYMBOL	SYSTEM:BPM/BTM STORAGE:571 DOCU.PAGES:5 DATE:10/10/70.
B3890701	000	AA SIGMA 5/6/7	FORM		P UC
	010	AUTHOR	XEROX		
	020		890701-11A00	DESCRIPTION PRINTED	
	030		890701-34A00 *	SOURCE CARDS	
	040	ABSTRACT	FORM NOTIFIES THE OPERATOR A FORM CHANGE IS NEEDED, AND SUSPENDS THE PRINTER SYMBOLIC WITH AN F:DEVICE		
	050		M:LD,(FORM) CAL. FORM IS LOADED AS A PROCESSOR AND CALLED VIA CONTROL CARD !FORM. THE MESSAGE FOR THE		
	060		OPERATOR IS INCLUDED ON THE CONTROL CARD, E.G. !FORM CHANGE PRINTER PAPER TO 4 PART CARBON.		
	070	COMMENTS	PROGRAM TYPE:PROCESSOR	LANGUAGE:SYMBOL	SYSTEM:BPM STORAGE:58 DOCU.PAGES:1 DATE:10/10/70.
B3890702	000	AA SIGMA 5/6/7	DETAB/65 PREPROCESSOR		P UC
	010	AUTHOR	ANSON CHAPMAN		
	020		890702-11A00	DESCRIPTION PRINTED	
	030		890702-34A00 *	SOURCE CARDS	
	040		890702-74A00	DATA CARDS	
	050	ABSTRACT	THE DETAB/65 PREPROCESSOR CONVERTS LIMITED-ENTRY DECISION TABLES CONTAINED WITHIN COBOL PROGRAMS INTO A		
	060		FORM ACCEPTABLE BY A COBOL COMPILER. DETAB/65 WOULD BE USEFUL IN THE AREAS OF ANALYSIS, DESIGN AND		
	070		PROGRAMMING OF A COMPUTER SYSTEM.		
	080	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:COBOL	SYSTEM:BPM STORAGE:6975 DOCU.PAGES:55 DATE:10/10/70.
B3890703	000	AA SIGMA 5/6/7	MOTHER-OPERATOR CONSOLE TAPE HANDLER		P UC

010 AUTHOR J. ELMAN, HARVARD UNIVERSITY  
 020 890703-11A00 DESCRIPTION PRINTED  
 030 890703-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THIS PROGRAM ALLOWS INPUTS TO THE OPERATOR CONSOLE TO PERFORM A NUMBER OF OPERATIONS ON 9 TRACK MAGNETIC  
 050 TAPE. OPERATIONS SUCH AS: POSITION FORWARD, POSITION REVERSE, COPY CONDITIONALLY OR UNCONDITIONALLY,  
 060 DUMP, WRITE TAPE MARK MAY BE ACCOMPLISHED VIA MOTHER.  
 070 COMMENTS PROGRAM TYPE:UTILITY LANGUAGE:METASYMBOL SYSTEM:BPM STORAGE:787 DOCU.PAGES:8 DATE:10/10/70.  
 080 PATCH IS REQUIRED FOR E00 AND IS DEPENDENT ON SOME LOCATIONS IN MONITOR. THE E00 VERSION IS A  
 090 CONDITIONAL ASSEMBLY-E00 EQU1. LABEL MOMOPRCO IS THE -16 WRITE-UP FILE FOR MOTHER.

B3890704 000 AB SIGMA 3 SIGMA 3 TO 1108 REMOTE JOB ENTRY (RRM) P OH  
 010 AUTHOR XEROX  
 020 890704-11A00 DESCRIPTION PRINTED  
 030 890704-34A01 \* SOURCE CARDS  
 040 ABSTRACT PROVIDES A STANDARD COMMUNICATIONS PROGRAM BETWEEN THE XDS SIGMA 3 AND UNIVAC 1108 COMPUTERS USING EXEC  
 050 8. THE PROGRAM RUNS IN THE FOREGROUND AS A FOREGROUND PROCESSOR, ALLOWS OVERLAPPED USE OF THE SIGMA 3  
 060 I/O DEVICES AND AMONG OTHER CHARACTERISTICS PROVIDES THE LOCAL OPERATIONS OF A 80/80 LISTING AND  
 070 REPRODUCTIONS IN EITHER BCD OR EBCDIC.  
 080 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:SYMBOL SYSTEM:RBM DOCU.PAGES:26

B3890705 000 AA SIGMA 3 SIGMA 3 TO 1108 REMOTE JOB ENTRY (RCM) P OH  
 010 AUTHOR XEROX  
 020 890705-11A00 DESCRIPTION PRINTED  
 030 890705-34A00 \* SOURCE CARDS  
 040 ABSTRACT PROVIDES A STANDARD COMMUNICATIONS PROGRAM BETWEEN THE XDS SIGMA 3 AND UNIVAC 1108 COMPUTERS USING EXEC  
 050 8. THE PROGRAM RUNS IN THE FOREGROUND AS A FOREGROUND PROCESSOR, ALLOWS OVERLAPPED USE OF THE SIGMA 3  
 060 I/O DEVICES AND AMONG OTHER CHARACTERISTICS PROVIDES THE LOCAL OPERATIONS OF A 80/80 LISTING AND  
 070 REPRODUCTIONS IN EITHER BCD OR EBCDIC.  
 080 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:SYMBOL SYSTEM:RCM DOCU.PAGES:25

B3890706 000 AA SIGMA 5/6/7 SCORE KEEPER FOR CONTINUING TOURNAMENTS P UC  
 010 AUTHOR KATHERINE JAMERSON, COMPUTER SCIENCES CORP.  
 020 890706-11A00 DESCRIPTION PRINTED  
 030 890706-51A00 890706-11 LISTING PRINTED  
 040 ABSTRACT THIS PROGRAM MAINTAINS A FILE WITH AN ENTRY FOR EACH PLAYER IN THE TOURNAMENT. WHEN THE PROGRAM IS RUN  
 050 YOU HAVE THE OPTIONS OF: UPDATING AN EXISTING PLAYER, INSERTING A NEW PLAYER, DELETING A PLAYER, OR  
 060 RUNNING(GETTING A REPORT OF CURRENT STATUS).  
 070 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:BASIC SYSTEM:RTM STORAGE:700 DOCU.PAGES:8

B3890707	000	AA SIGMA 5/6/7	BTM PLOTTING PACKAGE NONLABELING	P UC
	010	AUTHOR	KATHERINE JAMERSON, COMPUTER SCIENCES CORP.	
	020		890707-11A00 DESCRIPTION PRINTED	
	030		890707-33A00 * SOURCE PAPER TAPE, 8 LEVELS	
	040		890707-73A00 DATA PAPER TAPE, 8 LEVELS	
	050	ABSTRACT	THIS IS A NON LABELING FORTRAN PLOTTING SUBROUTINE WHICH WILL DO AUTOMATIC SCALING AND PRINT THE PLOT.	
	060		A CHOICE OF TWO SCALING SUBROUTINES ALLOWS A VARYING OF THE PLOT SIZE AND DATA READABILITY.	
	070	COMMENTS	PROGRAM TYPE:PACKAGE	LANGUAGE:FORTRAN IVH SYSTEM:BTM STORAGE:812 DOCU.PAGES:10
B3890708	000	AA SIGMA 5/6/7	FORTRAN PRECOMPILER FORT II-FORT IVH	P UC
	010	AUTHOR	G. SAGER, HONEYWELL, INC.	
	020		890708-11A00 DESCRIPTION PRINTED	
	030		890708-34A00 * SOURCE CARDS	
	040	ABSTRACT	THE PRECOMPILER CONVERTS FORTRAN II PROGRAMS TO BASIC FORTRAN IVH, ANNOTATES, GENERATES STATEMENTS THAT	
	050		ARE THE BASIC FORTRAN IVH EQUIVALENT I.E. NEGATIVE DO LOOPS, IRREGULARITIES WHICH ARE NOT CONVERTIBLE	
	060		ARE FLAGGED.	
	070	COMMENTS	PROGRAM TYPE:PACKAGE	LANGUAGE:FORTRAN IV SYSTEM:FBM STORAGE:7583 DOCU.PAGES:3
	080		THE PACKAGE CONSISTS OF A MAIN PROGRAM AND 37 FUNCTIONS AND SUBROUTINES.	
B3890709	000	AA SIGMA 5/6/7	TIMER ELAPSED TIME SUBR FOR COBOL	P UC
	010	AUTHOR	XEROX	
	020		890709-11A00 DESCRIPTION PRINTED	
	030		890709-34A00 * SOURCE CARDS	
	040	ABSTRACT	A COBOL CALLABLE SUB-ROUTINE TO START, STOP, AND READ TIME AND DATE CLOCK.	
	050	COMMENTS	PROGRAM TYPE:SUBROUTINE	LANGUAGE:METASYMBOL SYSTEM:RPM STORAGE:48 DOCU.PAGES:3
B3890710	000	AB SIGMA 2/3	SIGDAS- SIGMA DIGITAL ANALOG SIMULATOR	P UH
	010	AUTHOR	XEROX	
	020		890710-11A00 DESCRIPTION PRINTED	
	030		890710-24A01 RELOCATABLE BINARY CARDS	
	040		890710-74A00 890710-24 LOW CORE BOOTSTRAP DECK	
	050	ABSTRACT	A BLOCK-DIAGRAM ORIENTED CONTINUOUS SIMULATION LANGUAGE WHICH PROVIDES A FLEXIBLE ON-LINE CHANGE OR	
	060		'TUNING' CAPABILITY NOT FOUND ON MANY SIMULATION SYSTEMS. THE USER MAY CODE HIS OWN SPECIAL FUNCTION	
	070		SUBROUTINES, EACH OF WHICH IS OVERLAID.	
	080	COMMENTS	PROGRAM TYPE:SIMULATOR	LANGUAGE: FORT/XSYN SYSTEM:RBM STORAGE:7760 DOCU.PAGES:28
	090		OPERATES UNDER RBM MINIMUM CONFIGURATION AND MAY BE EXPANDED AS THE NEED FOR MORE COMPLEX SIMULATIONS	
	100		OCCUR. CURRENT SYSTEM LIMIT IS 75 BLOCKS EACH WITH NO MORE THAN THREE INPUTS, NO MORE THAN 25 UNIT-DELAY	
	110		ELEMENTS, FUNCTION GENERATORS (WITH 11 INTERVALS), OR INTEGRATORS MAY BE SPECIFIED. THESE VALUES MAY BE	
	120		EXPANDED AS CORE CAPACITIES INCREASE.	

B3890711	000	AA	SIGMA 5/6/7	CAL-CONVERSATIONAL ALGEBRAIC LANGUAGE	P UC
	010	AUTHOR	D. GOLUB, HARVARD UNIVERSITY		
	020		890711-11A00	DESCRIPTION PRINTED	
	030		890711-26A00	RELOCATABLE BINARY MAG TAPE, 9 CHANNELS	
	040		890711-36A00	890711-26 SOURCE MAG TAPE, 9 CHANNELS	
	050	ABSTRACT	CAL IS AN INTERACTIVE COMPILER BASED ON SUCH OTHERS AS JOSS AND JOVIAL. IT HAS SOME ADVANTAGES OVER		
	060		OTHER COMPILERS LIKE BASIC, NOTABLY THE ABILITY TO EASILY EXECUTE PORTIONS OF A PROGRAM INTERACTIVELY.		
	070		THIS PARTICULAR IMPLEMENTATION OF CAL WAS WRITTEN TO RUN UNDER RTM.		
	080	COMMENTS	PROGRAM TYPE:SUBSYSTEM LANGUAGE:SYMBOL/METASYM. SYSTEM:RTM D01 STORAGE:12000 DOCU.PAGES:68		
	090		DATE:01/15/71.		
B3890712	000	AA	SIGMA 2/3	PRINTER PLOT SUBROUTINE	P UH
	010	AUTHOR	XEROX		
	020		890712-11A00	DESCRIPTION PRINTED	
	030		890712-34A00 *	SOURCE CARDS	
	040	ABSTRACT	FORTRAN CALLABLE SUBROUTINE ALLOWS USER TO PLOT UP TO 90 CONCURRENT GRAPHS OVER A 100 POINT INTERVAL ON		
	050		THE LINE PRINTER OR OTHER SIMILAR DEVICE. MULTIPLE CALLS WILL CREATE A TWO-DIMENSIONAL EFFECT.		
	060	COMMENTS	PROGRAM TYPE:SUBROUTINE LANGUAGE:FORTRAN IV SYSTEM:RBM STORAGE:325 DOCU.PAGES:4		
B3890713	000	AA	SIGMA 5/6/7	PRINTER PLOT SUBROUTINE	P UC
	010	AUTHOR	XEROX		
	020		890713-11A00	DESCRIPTION PRINTED	
	030		890713-34A00 *	SOURCE CARDS	
	040	ABSTRACT	FORTRAN CALLABLE SUBROUTINE ALLOWS USER TO PLOT UP TO 90 CONCURRENT GRAPHS OVER A 100 POINT INTERVAL ON		
	050		THE LINE PRINTER OR OTHER SIMILAR DEVICE. MULTIPLE CALLS WILL CREATE A TWO-DIMENSIONAL EFFECT.		
	060	COMMENTS	PROGRAM TYPE:SUBROUTINE LANGUAGE:FORTRAN IVH SYSTEM:RBM/BPM STORAGE:325 DOCU.PAGES:4		
B3890714	000	AA	SIGMA 5/6/7	BATCH STREAM CARD LISTER	P UC
	010	AUTHOR	A. BRYANT, BUCKNELL UNIVERSITY		
	020		890714-11A00	DESCRIPTION PRINTED	
	030		890714-24A00	RELOCATABLE BINARY CARDS	
	040		890714-44A00 *	COMPRESSED CARDS	
	050	ABSTRACT	PROGRAM WILL LIST A DECK OF CARDS INCLUDING CONTROL CARDS. ALL EXCLAMATION POINTS (BANGS) PRINT AS		
	060		OVER . IN THE SAME COLUMN. THE MESSAGE "<BINARY CARD(S)>" IS PRINTED WHENEVER ONE OR MORE BINARY CARDS		
	070		IS ENCOUNTERED. THE DECK TO BE LISTED MUST BE REVERSED (LAST CARD READ FIRST, FIRST CARD LAST). THE		
	080		PROGRAM REVERSES CARD AND COLUMN SEQUENCE; LISTING CARDS IN CORRECT ORDER.		
	090	COMMENTS	PROGRAM TYPE:UTILITY LANGUAGE:METASYMBOL SYSTEM:BPM STORAGE:116 DOCU.PAGES:2		

B3890715 000 AB SIGMA 5-9 MIX ASSEMBLER/INTERPRETER SYSTEM P UC  
 010 AUTHOR P. SHERROD, VANDERBILT UNIVERSITY COMPUTER CENTER  
 020 890715-11B00 DESCRIPTION PRINTED  
 030 890715-26P00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890715-74B00 LOAD AND TEST DECK  
 050 ABSTRACT THE MIX ASSEMBLER SIMULATES AS CLOSELY AS POSSIBLE. THE MIX COMPUTER AS DESCRIBED BY DONALD KNUTH  
 060 IN "THE ART OF COMPUTER PROGRAMMING." FLOATING POINT INSTRUCTIONS OF MIX ARE IMPLEMENTED MAKING  
 070 IT A COMPLETE MIX SIMULATOR. REQUIRES 10K OF CORE.  
 080 COMMENTS PROGRAM TYPE:PROCESSOR LANGUAGE:METASYMBOL SYSTEM:BPM/BTM STORAGE:10K DOCU. PAGES:4.

B3890716 000 AA SIGMA 7 DREV APL P UC  
 010 AUTHOR DREV (DEFENSE RESEARCH ESTABLISHMENT AT VALCARTIER, CANADA)  
 020 890716-11A00 DESCRIPTION PRINTED  
 030 890716-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890716-46A00 890716-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 050 890716-76A00 890716-26 SAMPLE SYSGEN AND LOAD DECKS ON MAG TAPE, 9 CHANNELS (4)  
 060 ABSTRACT DREV APL IS A POWERFUL INTERACTIVE PROBLEM-SOLVING LANGUAGE WHICH BRINGS TO THE TIME-SHARING USER NEW  
 070 DIMENSIONS IN PROGRAMMING, ANALYSIS AND SYSTEMS DESIGN CAPABILITIES. DREV APL OPERATES AS A RESIDENT  
 080 FOREGROUND PROGRAM UNDER RBM OR BPM, AND IS ALMOST COMPLETELY COMPATIBLE WITH APL/360. MINIMUM CORE  
 090 REQUIRED--RBM/30K, BPM/56K. ALSO REQUIRED--A DEDICATED 7204, 7212 OR 7232 RAD, A 60-HZ CLOCK, A 7611 WITH  
 100 FORMAT TIMING MODULE FOR 2741-LIKE DEVICES, AND A DEDICATED INTERRUPT.  
 110 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:RBM/BPM STORAGE:30-64 DOCU PAGES:136 BATCH  
 120 BACKGROUND OR OTHER FOREGROUND TASKS MAY TAKE PLACE CONCURRENTLY DEPENDING ON CORE SIZE. APL PROVIDES  
 130 ITS OWN TIME-SHARING MONITOR, SHARING A FIXED PERCENTAGE OF CPU TIME WITH THE BACKGROUND. THE SYSTEM  
 140 PERFORMS ITS OWN COMM I/O AND HANDLES ITS OWN INTERRUPTS. IT INTERFACES ITS RAD I/O AND HANDLING OF  
 150 SYSTEM CALLS WITH THE MONITOR TO PERMIT CONCURRENT BACKGROUND TASKS AND TO ALLOW OPERATOR INTERACTION.

B3890717 000 AA SIGMA 5-9 COBOL RESTART PROGRAM P UC  
 010 AUTHOR XEROX  
 020 890717-11A00 DESCRIPTION PRINTED  
 030 890717-34A00 \* SOURCE CARDS  
 040 ABSTRACT THE PURPOSE OF THIS PROGRAM IS TO RESTART A CHECKPOINTED COBOL PROGRAM.  
 050 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:METASYMBOL SYSTEM:BPM STORAGE:56 DOCU. PAGES:3

B3890718 000 AB SIGMA 5-9 SIGMA PROJECT MANAGEMENT SYSTEM (SPMS) P UC  
 010 AUTHOR NEWPORT NEWS SHIPBUILDING AND DRYDOCK CO./P. BECKER, XEROX DATA SYSTEM  
 020 890718-11A01 DESCRIPTION PRINTED  
 030 890718-36A01 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890718-76A01 890718-36 LOAD AND TEST DECK ON TAPE



	050	ABSTRACT	A SYSTEM BASED UPON THE CRITICAL PATH METHOD IS USED TO DEVELOP AND EVALUATE PROJECT SCHEDULING.				
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN-METASYM	SYSTEM:8PM	STORAGE:12K	DOCU.PAGES:116
B3890719	000	AA SIGMA 2/3	CONTINUOUS SYSTEM SIMULATOR (CSS/3)				P UH
	010	AUTHOR	XEROX				
	020		890719-11A00	DESCRIPTION PRINTED			
	030		890719-36A00 *	SOURCE MAG TAPE, 9 CHANNELS			
	040		890719-74A00	COMPILE, LOAD AND TEST DECK			
	050	ABSTRACT	CSS/3 PROVIDES THE ENGINEER WITH A SIMPLE YET VERSATILE MEANS FOR DIGITAL SIMULATION OF CONTINUOUS				
	060		PROCESSES. IT PROVIDES A LARGE COMPLEMENT OF FUNCTIONAL ELEMENTS AND A BLOCK-ORIENTED LANGUAGE FOR				
	070		SPECIFYING THEIR INTERCONNECTION. IN ADDITION, CSS/3 UTILIZES THE XDS 7530 OR 7531 PLOTTER, IN WHICH				
	080		CASE ALL OUTPUT IS TO THE CONSOLE TYPEWRITER. THE CONSOLE DATA SWITCHES ALLOW THE USER AN ON-LINE				
	090		INTERACTIVE MODE OF OPERATION WHILE DEVELOPING AND TESTING CONTINUOUS SYSTEM MODELS.				
	100	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:FORTRAN IV	SYSTEM:8PM	STORAGE:6800	DOCU PAGES:8
B3890720	000	AA SIGMA 2/3	FCT DUMP ROUTINE (ELABORATED)				P UH
	010	AUTHOR	C. ROSENFELD, CALTECH				
	020		890720-11A00	DESCRIPTION PRINTED			
	030		890720-34A00 *	SOURCE CARDS			
	040	ABSTRACT	AN ELABORATED VERSION OF THE FCT DUMP ROUTINE. DUMPS BOTH OPLABEL TABLES, ALL I/O CONTROL TABLES,				
	050		BLOCKING BUFFERS, AND CHANNEL STATUS TABLES.				
	060	COMMENTS	PROGRAM TYPE:ROUTINE	LANGUAGE:XSYMBOL	SYSTEM:8PM	STORAGE:516	DOCU.PAGES:1 THIS ROUTINE IS
	070		VALID WITH CN705368-C01.				
B3890721	000	AA SIGMA 5/6/7	C36T64 CONVERT 36 BIT WORD TO 64 BIT				P UC
	010	AUTHOR	R. SPENCER, PURDUE UNIVERSITY				
	020		890721-11A00	DESCRIPTION PRINTED			
	030		890721-34A00 *	SOURCE CARDS			
	040	ABSTRACT	USED TO CONVERT IBM 7094 SINGLE PRECISION FLOATING POINT NUMBERS, READ IN BINARY, TO XDS SIGMA 5/6/7 64				
	050		BIT DOUBLE PRECISION FLOATING POINT NUMBERS. C36T64 IS FORTRAN CALLABLE.				
	060	COMMENTS	PROGRAM TYPE:SUBROUTINE	LANGUAGE:SYMBOL	SYSTEM:8PM	STORAGE:90	DOCU.PAGES:2
B3890723	000	AA SIGMA 2/3	SIGMA PLOTTING LIBRARY				P UH
	010	AUTHOR	XEROX				
	020		890723-11A00	DESCRIPTION PRINTED			
	030		890723-24A00	RELOCATABLE BINARY CARDS			
	040		890723-34A00 *	SOURCE CARDS			
	050	ABSTRACT	THE SIGMA PLOTTING LIBRARY IS MADE UP OF FORTRAN SUBROUTINES WHICH PERFORM FREQUENTLY USED FUNCTIONS.				
	060		THE FOLLOWING FUNCTIONS ARE PROVIDED: DRAW LINEAR OR LOG AXIS, DRAW ALPHANUMERIC AXIS, PRINT A NUMBER,				

070 COMPUTE LINEAR OR LOG SCALE FACTORS, PLOT SCALED DATA, DRAW A CIRCLE, ELLIPSE OR RECTANGLE, DRAW A  
 080 DASHED OR CENTER LINE, DRAW DRIFTING DIMENSIONS, OPTIMIZE PEN MOVEMENT, DRAW A CALANDER AND DRAW A  
 090 HISTOGRAM. PLOTTING LIBRARY SUBROUTINES ARE WRITTEN IN BASIC FORTRAN AND WILL WORK ON SIGMA 5/7 IF  
 100 COMPILED FOR THESE COMPUTERS.  
 110 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:FURTRAN IV SYSTEM:RBM DOCU.PAGES:17 THE SUBROUTINES PLOT, WHERE  
 120 AND SYMBOL ARE REQUIRED BY THE SIGMA PLOTTING LIBRARY. THESE SUBROUTINES ARE AVAILABLE IN CN705780 FOR  
 130 SIGMA 2/3 AND CN705657 FOR SIGMA 5/7.

B3890724 000 AA SIGMA 5-9 AUTOMATED MEDICAL HISTORY PROGRAM P UC  
 010 AUTHOR XEROX  
 020 890724-11A00 DESCRIPTION PRINTED  
 030 890724-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THIS SYSTEM CONTAINS A GENERAL-PURPOSE QUESTIONNAIRE DRIVER WITH A SAMPLE AUTOMATED MEDICAL HISTORY  
 050 QUESTIONNAIRE AND A REPORT GENERATOR. THE SAMPLE QUESTIONNAIRE IS MOST APPLICABLE TO A MEDICAL  
 060 SCREENING ENVIRONMENT BUT THE BRANCHING-QUESTION TECHNIQUE IS APPLICABLE TO ANY QUESTION-ANSWER  
 070 SITUATION.  
 080 COMMENTS PROGRAM TYPE:APPLICATION LANGUAGE:FORTRAN SYSTEM:BPM/UTS STORAGE:6K DOCU.PAGES:13

B3890725 000 AB SIGMA 2/3 ROMLIST P UH  
 010 AUTHOR XEROX  
 020 890725-11B00 DESCRIPTION PRINTED  
 030 890725-34B00 \* SOURCE CARDS  
 040 890725-74B00 890725-34 TEST DECK  
 050 ABSTRACT ROMLIST READS RELOCATABLE OBJECT MODULES FROM THE BT DEVICE AND PROVIDES THE FOLLOWING: LIBRARY MODE -  
 060 DISPLAY OF LIBRARY FILE STORAGE REQUIREMENTS FOR EACH FILE AS WELL AS TOTALS, THUS ELIMINATING LABORIOUS  
 070 CALCULATIONS TO LOAD USER LIBRARY. LISTING MODE - DISPLAY OF DEFS, REFS AND PROGRAM IDENTIFICATION FOR  
 080 EACH ROM AS WELL AS THE DFRF FILE SPACE REQUIRED FOR EACH MODULE.  
 090 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:FTV/XSYMBOL SYSTEM:RBM STORAGE:X568 DOCU.PAGES:1

B3890726 000 AA SIGMA 2/3 RBM TRACE PROGRAM P UH  
 010 AUTHOR XEROX  
 020 890726-11A00 DESCRIPTION PRINTED  
 030 890726-34A00 \* SOURCE CARDS  
 040 ABSTRACT THE RBM TRACE PROGRAM PROVIDES PROGRAMMERS WITH A CONVENIENT MEANS OF DEBUGGING PROGRAMS OR PROGRAM  
 050 SEGMENTS WHERE THE ERRORS ARE COMPLEX OR SUBTLE. TRACE CAN OPERATE IN BATCH MODE, BEING CALLED AS A  
 060 SUBROUTINE, OR IN THE ON-LINE MODE. THE SUBROUTINE PRINTS THE INSTRUCTION VALUE, DECODED OP CODE,  
 070 EFFECTIVE ADDRESS, CONTENTS OF THE EFFECTIVE ADDRESS, REGISTER CONTENTS AND STATUS BITS AFTER EXECUTION  
 080 OF EACH INSTRUCTION. IT DOES NOT TRACE MONITOR SERVICES, ONLY THE RETURNED STATUS.  
 090 COMMENTS PROGRAM TYPE:ROUTINE LANGUAGE:XSYMBOL SYSTEM:RBM STORAGE:800 DOCU.PAGES:9

B3890727	000	AA	SIGMA 5-9	CCOPY-PUNCHED CARD COPY/VERIFY PROGRAM	P UC
	010	AUTHOR	XEROX		
	020		890727-11A00	DESCRIPTION PRINTED	
	030		890727-44A00 *	COMPRESSED CARDS	
	040	ABSTRACT	CCOPY IS A UTILITY PROCESSOR WHICH WILL PRODUCE SINGLE OR MULTIPLE COPIES OF A PUNCHED CARD DECK AND		
	050		VERIFY THE OUTPUT DECK(S).		
	060	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM STORAGE:720 DOCU.PAGES:5
B3890728	000	AA	SIGMA 5-9	POSITION TAPE PROGRAM FOR 7T/9T	P UC
	010	AUTHOR	S. WHEELER, UNIVERSITY OF TEXAS AT ARLINGTON		
	020		890728-11A00	DESCRIPTION PRINTED	
	030		890728-11A00 705425-11	DESCRIPTION PRINTED	
	040		890728-24A00	RELOCATABLE BINARY CARDS	
	050		890728-44A00 *	COMPRESSED CARDS	
	060	ABSTRACT	A00 VERSION OF POST(CN705425) ASSUMED ANY LABELED TAPE WAS 9-TRACK. THIS VERSION ALLOWS THE 7-TRACK		
	070		LABELED TAPE USER TO SPECIFY '(DEVICE,7T)' ON AN M:FI ASSIGN CARD IN ORDER TO OVERRIDE POST'S 9-TRACK		
	080		DEFAULT IF THE POST 'LABEL' OPTION IS USED.		
	090	COMMENTS	PROGRAM TYPE:PROGRAM	LANGUAGE:METASYMBOL	SYSTEM:BPM STORAGE:5584 DOCU.PAGES:1
B3890730	000	AA	SIGMA 5-9	SORT INTERFACE	P UC
	010	AUTHOR	XEROX		
	020		890730-11A00	DESCRIPTION PRINTED	
	030		890730-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THIS ROUTINE ALLOWS FORTRAN PROGRAMS TO CALL THE BPM SORT PROCESSOR (REFERENCE MANUAL 901199). THE SORT		
	050		PARAMETERS ARE PASSED AS SOURCE CARD IMAGES IN A 20 TO 60 WORD INTEGER ARRAY. TWO DCB ADDRESSES, ONE		
	060		FOR INPUT, ONE FOR OUTPUT, MUST ALSO BE PASSED TO SORT.		
	070	COMMENTS	PROGRAM TYPE:ROUTINE	LANGUAGE:SYMBOL	SYSTEM:BPM STORAGE:>70 HEX DOCU.PAGES: 3
B3890732	000	AA	SIGMA 5-9	CALCOMP PLOTTER SUBROUTINE PACKAGE	P UC
	010	AUTHOR	J. CABELL MOORE, U. S. NAVAL RESERVE LAB.		
	020		890732-11A00	DESCRIPTION PRINTED	
	030		890732-36A00 *	SOURCE MAG TAPE, 9 CHANNELS	
	040		890732-51A00 890732-11	LISTING PRINTED	
	050	ABSTRACT	A MORE POWERFUL PLOTTER SUBROUTINE PACKAGE FOR FORTRAN USERS OF THE CALCOMP 565 X-Y DRUM PLOTTER.		
	060	COMMENTS	PROGRAM TYPE:SUBROUTINE	LANGUAGE:FORT-METASYMBOL	SYSTEM:BPM STORAGE:1894 DOCU.PAGES:62
B3890733	000	AA	SIGMA 5/6/7	STAND-ALONE RAD EDITOR	P UC
	010	AUTHOR	P. SHERROD, VANDERBILT UNIVERSITY		

020 890733-11A00 DESCRIPTION PRINTED  
 030 890733-44A00 \* COMPRESSED CARDS  
 040 890733-84A00 ABSOLUTE BINARY CARDS  
 050 ABSTRACT BOOTABLE PROGRAM WHICH MAY BE USED TO INSPECT OR CHANGE THE CONTENTS OF A PAD. FUNCTIONS SUCH AS: PAD  
 060 (DEFINE), TYPE (DISPLAY), SEARCH (SEARCH FOR VALUE(S)), INSERT (REPLACE VALUE(S) AT SPEC. ADDR.), ZERO  
 070 (CLEAR TO ZERO) ARE AVAILABLE AND FUNCTION CALLS ARE MADE FROM THE OPERATOR'S CONSOLE.  
 080 COMMENTS PROGRAM TYPE:UTILITY LANGUAGE:METASYMBOL SYSTEM:S/A STORAGE:1153 DOCU.PAGES:4

B3890734 000 AA SIGMA 5/6/7 SYSTEM DISC DUMP/RESTORE/AUTO BOOT P UC

010 AUTHOR B. PHILLIPS, VANDERBILT UNIVERSITY  
 020 890734-11A00 DESCRIPTION PRINTED  
 030 890734-44A00 \* COMPRESSED CARDS  
 040 890734-84A00 ABSOLUTE BINARY CARDS  
 050 ABSTRACT BOOTABLE PROGRAM WHICH OPERATES ON THE BATCH MONITOR. IT SAVES ALL PSA AND ALL USED PFA AREA NECESSARY  
 060 FOR SYSTEM OPERATE. THE PORTIONS OF THE DISC ARE SAVED ON 1-4 TAPES WHICH MAY BE WRITTEN SIMULTANEOUSLY.  
 070 THE SYSTEM MAY BE RESTORED FROM TAPE WITH WRITE CHECKING AND WILL AUTOMATICALLY BE BOOTED FROM DISC IF  
 080 REQUESTED.  
 090 COMMENTS PROGRAM TYPE:UTILITY LANGUAGE:META-SYMBOL SYSTEM:S/A STORAGE:48K DOCU.PAGES:3

B3890735 000 AA SIGMA 5/6/7 FACTORIAL FUNCTIONS FAC AND DFAC P UC

010 AUTHOR T.E. HEITHECKER, UNIVERSITY OF TEXAS AT ARLINGTON  
 020 890735-11A00 DESCRIPTION PRINTED  
 030 890735-34A00 \* SOURCE CARDS  
 040 890735-74A00 TEST DECK  
 050 ABSTRACT TO COMPUTE THE FACTORIAL OF A NUMBER IN THE RANGE 0 TO 56 INCLUSIVE, AND RETURN THE RESULT AS A REAL  
 060 (WHEN USING FAC) OR DOUBLE PRECISION (WHEN USING DFAC) NUMBER.  
 070 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:223 DOCU.PAGES:3

B3890736 000 AA SIGMA 5-9 ECD ENGLISH CODED DECIMAL P UC

010 AUTHOR B. MCKEON, SYRACUSE UNIVERSITY RESEARCH CORPORATION  
 020 890736-11A00 DESCRIPTION PRINTED  
 030 890736-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THIS PROGRAM CONVERTS A PACKED DECIMAL NUMBER TO A CHARACTER STRING CONTAINING THE REPRESENTATION OF THE  
 050 NUMBER IN ENGLISH WORDS.  
 060 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:SYMBOL SYSTEM:BPM STORAGE:92 DOCU.PAGES:3

B3890737 000 AA SIGMA 5-9 XCORE - EXTRA CORE FOR FORTRAN PROGRAMS P UC

010 AUTHOR J. SCHWARZ, SYRACUSE UNIVERSITY RESEARCH CORPORATION  
 020 890737-11A00 DESCRIPTION PRINTED

030 890737-34A00 \* SOURCE CARDS  
040 ABSTRACT A MAIN PROGRAM WHICH MAKES AN EXTRA 1024 WORDS OF CORE AVAILABLE TO FORTRAN PROGRAMS RUNNING UNDER BPM.  
050 ONLY SLIGHT MODIFICATIONS ARE REQUIRED TO USE THIS TECHNIQUE WITH CURRENTLY RUNNING PROGRAMS. THE CORE  
060 IS USED BY THE MONITOR DURING THE READING OF LOAD MODULE. IT IS OBTAINED BY USING AN M:GP CAL.  
070 COMMENTS PROGRAM TYPE:PROGRAM LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:24 DOCU. PAGES: 3

B3890738 000 AA SIGMA 5-9 CALCOMP PLOTTING PACKAGE P UC  
010 AUTHOR J. SCHWARZ, SYRACUSE UNIVERSITY RESEARCH CORPORATION  
020 890738-11A00 DESCRIPTION PRINTED  
030 890738-44A00 \* COMPRESSED CARDS  
040 ABSTRACT MODIFICATION OF 705657. THE PRIMARY PURPOSE OF THE CHANGES IS TO PRODUCE AN ENCODED VERSION OF THE  
050 PLOTTING COMMANDS. FOR STRAIGHT HORIZONTAL, VERTICAL OR 45 DEGREE LINES, ENCODED COMMANDS ARE LESS THAN  
060 1% THE LENGTH OF UNCODED COMMANDS. THIS CAN SAVE RAD SPACE IF THE PLOTTER IS A SYMBIONT DEVICE. THIS  
070 ROUTINE CANNOT BE USED WITH THE STANDARD PLOTTER HANDLER. A HANDLER WHICH ACCEPTS THE ENCODED COMMANDS  
080 IS AVAILABLE AS CN890739.  
090 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:META-SYMBOL SYSTEM:BPM DOCU.PAGES: 2

B3890739 000 AA SIGMA 5-9 PLOTTER HANDLER P UC  
010 AUTHOR J. SCHWARZ, SYRACUSE UNIVERSITY RESEARCH CORPORATION  
020 890739-11A00 DESCRIPTION PRINTED  
030 890739-44A00 \* COMPRESSED CARDS  
040 ABSTRACT A HANDLER WHICH CAN REPLACE THE STANDARD XDS PLOTTER HANDLER. IT ACCEPTS AN ENCODED VERSION OF THE  
050 RECORDS TO BE WRITTEN TO THE PLOTTER, DECODES THEM, AND CONSTRUCTS THE CHANNEL COMMANDS TO SEND THEM TO  
060 THE PLOTTER. IF THE PLOTTER IS A SYMBIONT DEVICE RAD SPACE CAN BE SAVED. ENCODED COMMANDS FOR STRAIGHT  
070 HORIZONTAL, VERTICAL, OR 45 DEGREE LINES ARE LESS THAN 1% THE LENGTH OF THE UNCODED VERSION. THE HANDLER  
080 WILL TREAT UNCODED COMMANDS PROPERLY, PROVIDED THEIR LOW ORDER TWO BITS ARE ZERO.  
090 COMMENTS LANGUAGE:META-SYMBOL SYSTEM:BPM STORAGE:130 DOCU.PAGES: 4

B3890740 000 AB SIGMA 2/3 IDEAL FORTRAN P UH  
010 AUTHOR XEROX  
020 890740-11A00 DESCRIPTION PRINTED  
030 890740-34A01 \* SOURCE CARDS  
040 890740-36A01 \* SOURCE MAG TAPE, 9 CHANNELS  
050 ABSTRACT 36 SUBROUTINES FOR BUSINESS APPLICATIONS. THE ROUTINES INCREASE ARITHMETIC ACCURACY, I/O CHARACTER SET,  
060 AND OUTPUT CAPABILITIES WHILE DECREASING STORAGE REQUIREMENTS AND IO AND EXECUTION TIMES. FORTRAN IV IS  
070 INTENDED AS THE CALLING PROCESSOR BUT XSYMBOL MAY ALSO BE USED.  
080 COMMENTS PROGRAM TYPE:SUBROUTINES LANGUAGE:XSYMBOL SYSTEM: RBM DOCU.PAGES:73 AS DESCRIBED IN ELEMENT NUMBER  
090 -11, THE COMMERCIAL SUBROUTINE PACKAGE CONTAINS ROUTINES WHICH MAY BE INCLUDED FOR INCREASED THROUGHPUT.

B3890741 000 AA SIGMA 2/3 BLOCKED RANDOM FILE ROUTINES P UH  
 010 AUTHOR XEROX  
 020 890741-11A00 DESCRIPTION PRINTED  
 030 890741-34A00 \* SOURCE CARDS  
 040 890741-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT SUBROUTINES FOR FORTRAN IV RANDOM FILE READS AND WRITES. AUTOMATIC BLOCKING OF RECORDS CONSERVES SPACE.  
 060 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:XSYMBOL SYSTEM:RBM DOCU.PAGES:4

B3890742 000 AC SIGMA 2/3-530 PHSORT P UH  
 010 AUTHOR XEROX  
 020 890742-11B00 DESCRIPTION PRINTED  
 030 890742-26B00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890742-36B00 890742-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890742-76B00 890742-26 TEST CASE ON TAPE  
 060 ABSTRACT PHSORT IS A PROGRAM (FORTRAN) CALLABLE SORT WHICH WILL SORT ANY NUMBER OF KEYS WITHIN A RECORD. KEYS  
 070 MAY BE INTEGER, D1 DECIMAL, PACKED DECIMAL (ANY LENGTH), ALPHA-NUMERIC (ANY LENGTH), OR FLOATING POINT -  
 080 BOTH SINGLE AND DOUBLE PRECISION FOR BOTH SIGMA 3 AND SIGMA 5. THE SORT OPTIMIZES ON THE AVAILABLE BT  
 090 DISK AREA AND AVAILABLE BACKGROUND CORE. IT UTILIZES A HIGH SPEED SORT/MERGE TECHNIQUE. IT IS A  
 100 MODIFIED SUCCESSIVE MERGE ALGORITHM ORIGINALLY DEVELOPED BY DONALD L. SHELL. IT COMBINES THE SPEED  
 110 CHARACTERISTICS OF K-WAY MERGING WITH THE SPACE CHARACTERISTICS OF SIFTING.  
 120 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 130 MAIN PROGRAM IS WRITTEN IN XSYMBOL.

B3890743 000 AB SIGMA 5-9 UNIVAC 1108 COMMUNICATIONS CONTROL PROG. P UC  
 010 AUTHOR XEROX  
 020 890743-11A01 DESCRIPTION PRINTED  
 030 890743-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890743-46A00 890743-36 COMPRESSED MAG TAPE, 9 CHANNELS  
 050 ABSTRACT THE SIGMA 5/UNIVAC 1108 COMMUNICATIONS CONTROL PROGRAM (CCP) GIVES THE SIGMA 5-9 HPM/BTM SYMBIOT SYSTEM  
 060 THE CAPABILITY OF DOING REMOTE JOB ENTRY TO A UNIVAC 1108 RUNNING THE EXEC-2 MONITOR. IT ALLOWS THE  
 070 SIGMA 5-9 TO BE RUNNING BATCH AND/OR TIME-SHARING CONCURRENTLY WITH THE CCP.  
 080 COMMENTS REQUIRES HALF-DUPLEX 7601 DATA SET CONTROLLER AND USES SYMBIOT CARD READER, LINE PRINTER, AND CARD  
 090 PUNCH. CURRENTLY RUNNING ON SIGMA 5 WITH 7232 RAD, 7246 DISK DRIVE, 7140 CARD READER, 7165 CARD  
 100 PUNCH, 7440 LINE PRINTER, 7601 DATA SET CONTROLLER AND 8 LINES OF TIME-SHARING.

B3890744 000 AA SIGMA 2/3 AUTOMATED MEDICAL HISTORY PROGRAM P UH  
 010 AUTHOR XEROX  
 020 890744-11A00 DESCRIPTION PRINTED  
 030 890744-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THIS SYSTEM FOR THE SIGMA 2/3 CONTAINS A GENERAL-PURPOSE QUESTIONNAIRE DRIVER WITH A SAMPLE AUTOMATED  
 050 MEDICAL HISTORY QUESTIONNAIRE AND A REPORT GENERATOR. THE SAMPLE QUESTIONNAIRE IS MOST APPLICABLE TO A  
 060 MEDICAL SCREENING ENVIRONMENT BUT THE BRANCHING-QUESTION TECHNIQUE IS APPLICABLE TO ANY QUESTION- ANSWER  
 070 SITUATION.  
 080 COMMENTS PROGRAM TYPE:APPLICATION LANGUAGE:ANS FORTRAN IV SYSTEM:RBM STORAGE:6K DOCU.PAGES:14

83890745 000 AA SIGMA 5-9 CPSH - LOAD MODULE CRUSHER P UC  
 010 AUTHOR D.E. ERICKSON - JET PROPULSION LABORATORY  
 020 890745-11A00 DESCRIPTION PRINTED  
 030 890745-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS PROGRAM REDUCES RAD STORAGE REQUIREMENTS OF LOAD MODULES.  
 050 COMMENTS PROGRAM TYPE:UTILITY LANGUAGE:METASYMBOL SYSTEM:BPM STORAGE:1K DOCU.PAGES:1

83890746 000 AA SIGMA 5-9 COBOL TELETYPE INTERFACE SUBROUTINES P UC  
 010 AUTHOR XEROX  
 020 890746-11A00 DESCRIPTION PRINTED  
 030 890746-34A00 \* SOURCE CARDS  
 040 ABSTRACT THREE SUBROUTINES WHICH ENABLE A COBOL PROGRAM TO INTERFACE IN A NATURAL WAY WITH A USER AT A TELETYPE  
 050 TERMINAL. THE FUNCTIONS THE SUBROUTINES PROVIDE ARE 1.CARRIAGE RETURN AND LINE FEED ISSUED 2.PRINT A  
 060 PROMPT ON TELETYPE 3.READ TELETYPE INTO A BUFFER.  
 070 COMMENTS PROGRAM TYPE:SUBROUTINE LANGUAGE:META-SYMBOL SYSTEM:BPM/UTS STORAGE:133 DOCU.PAGES:4

83890747 000 AA SIGMA 5-9 ADAPT - NUMERICAL CONTROL PROGRAM P UC  
 010 AUTHOR NEWPORT NEWS SHIPBUILDING AND DRYDOCK CO.  
 020 890747-11A00 DESCRIPTION PRINTED  
 030 890747-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890747-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT ADAPT IS A NUMERICAL CONTROL COMPILER FOR THE SIGMA 5-9 LINE. IT IS A SIGMA REWRITE OF THE XDS 9-SERIES  
 060 ADAPT COMPILER, PROGRAM NUMBER 850754.  
 070 COMMENTS PROGRAM TYPE:PROFESSOR LANGUAGE:FORT IV/METASYM SYSTEM:BPM STORAGE:35K DOCU.PAGES:25  
 080 THE ELEMENT -11 OF THIS PROGRAM CONTAINS CORRECTIONS TO REFERENCE MANUAL 901045 WHICH SHOULD BE ORDERED.

83890748 000 AA SIGMA 2/3-530 APT3 (LEVEL 3) P UH  
 010 AUTHOR XEROX  
 020 890748-11A00 DESCRIPTION PRINTED  
 030 890748-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890748-76A00 890748-36 LOAD TEST FILE  
 050 ABSTRACT A NUMERICAL-CONTROL PARTS PROGRAMMING LANGUAGE COMPATIBLE WITH THE LEVEL 3 SUBSET OF THE APT LANGUAGE  
 060 STANDARDS PUBLISHED BY THE APT LONG RANGE PROGRAM OF IITRI. OPERATION IS BATCH, AND CONTROL TAPES,

070 LISTINGS, ETC., ARE PRODUCED AS DESIRED VIA THE USER'S ON-LINE EQUIPMENT.  
080 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS APT LANGUAGE COMPILER. BASE LANGUAGE  
090 MAIN PROGRAM IS WRITTEN IN FORTRAN.  
100 OPERATES USING 24K OVERLAYS UNDER RBM. SOURCE IS 20K FORTRAN STATEMENTS AND 200 META STATEMENTS.

H3890749 000 AA SIGMA 5-9 APT3 (LEVEL 3) P UC

010 AUTHOR XEROX  
020 890749-11A00 DESCRIPTION PRINTED  
030 890749-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890749-36A00 890749-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890749-76A00 890749-26 LOAD TEST FILE  
060 ABSTRACT A NUMERICAL-CONTROL PARTS PROGRAMMING LANGUAGE COMPATIBLE WITH THE LEVEL 3 SUBSET OF THE APT LANGUAGE  
070 STANDARDS PUBLISHED BY THE APT LONG RANGE PROGRAM OF IITRI. OPERATION IS EITHER BATCH OR INTERACTIVE  
080 ON-LINE, AND CONTROL TAPES, LISTINGS, ETC., ARE PRODUCED AS DESIRED VIA THE USER'S TERMINAL OR ON-LINE  
090 EQUIPMENT.  
100 COMMENTS THIS PROGRAM WILL RUN UNDER UTS AND CP-V OPERATING SYSTEMS. PROGRAM TYPE IS APPLICATION-ORIENTED  
110 PROGRAM. BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
120 THIS PROGRAM OPERATES UNDER UTS USING 16K OVERLAYS. SOURCE IS 20K FORTRAN STATEMENTS AND 200 META  
130 STATEMENTS. IT ALSO RUNS UNDER CP-V.

B3890750 000 AA SIGMA 5-9 EXTENDED ALGOL 60 P UC

010 AUTHOR G. HAYNAM, G. HANSEN, R. COOK - VANDERBILT UNIVERSITY  
020 890750-11A00 DESCRIPTION PRINTED  
030 890750-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 ABSTRACT ALGOL 60 IS A LANGUAGE SUITABLE FOR EXPRESSING A LARGE CLASS OF NUMERICAL PROCESSES IN A FORM  
050 SUFFICIENTLY CONCISE FOR DIRECT AUTOMATIC TRANSLATION INTO MACHINE LANGUAGE. THE EXTENSIONS WHICH HAVE  
060 BEEN MADE FACILITATE THE HANDLING OF LARGE, COMPLEX PROGRAMS PLUS MORE FLEXIBLE I/O, DOUBLE PRECISION  
070 ARITHMETIC, STRING OPERATIONS, DEBUGGING, AND BIT OPERATIONS.  
080 COMMENTS PROGRAM TYPE:PROCESSOR LANGUAGE:META-SYMBOL SYSTEM:RPM DOCU.PAGES:143

B3890751 000 AA SIGMA 5-9 XREF P UC

010 AUTHOR XEROX  
020 890751-11A00 DESCRIPTION PRINTED  
030 890751-24A00 RELOCATABLE BINARY CARDS  
040 890751-44A00 \* COMPRESSED CARDS  
050 ABSTRACT XREF PROVIDES INFORMATION ABOUT PROGRAM LINKAGES BY FINDING, SORTING, AND LISTING EXTERNAL REFERENCES  
060 AND DEFINITION FROM SETS OF ROM'S.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER UTS/BPM/BTM OPERATING SYSTEMS. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN SYMBOL.



B3890752	000	AA	SIGMA 5-9	MAP PROCESSOR WITH SHELL SORT	P UC
	010	AUTHOR	XEROX		
	020		890752-11A00	DESCRIPTION PRINTED	
	030		890752-24A00	RELOCATABLE BINARY CARDS	
	040		890752-44A00 *	COMPRESSED CARDS	
	050	ABSTRACT	MAP DISPLAYS LOAD MODULES BY SEGMENTS SHOWING SEGMENT ATTRIBUTES; PRIMARY AND SECONDARY REFERENCES,		
	060		ABSOLUTE, DOUBLY DEFINED, AND LIBRARY DEFINITIONS; PROGRAM SECTIONS; AND RELOCATABLE DEFINITIONS SORTED		
	070		BY HEXADECIMAL VALUE AND/OR NAME. MAP LINKS TO SHELL SORT SUBROUTINE SSSUBR, WHICH IS INCLUDED IN THIS		
	080		PROGRAM.		
	090	COMMENTS	THIS PROGRAM WILL RUN UNDER BPM/BTM/UTS OPERATION SYSTEM. PROGRAM TYPE: ASSEMBLER OR UTILITY. BASE		
	100		LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.		
B3890756	000	AA	SIGMA 5-9	RBPRINT	P UC
	C.	AUTHOR	C. DEPNER, BUCKNELL UNIVERSITY		
	020		890756-11A00	DESCRIPTION PRINTED	
	030		890756-34A00 *	SOURCE CARDS	
	040	ABSTRACT	RBPRINT IS A SUBROUTINE ENABLING A COBOL PROGRAM TO CORRECT SPACE FORMS ON A 7670 REMOTE BATCH PRINTER.		
	050		RBPRINT ELIMINATES THE EXTRA SPACING WHICH NORMALLY OCCURS WHEN A COBOL PROGRAM ADVANCES THE PRINTER.		
	060	COMMENTS	THIS PROGRAM WILL RUN UNDER THE BPM/BTA OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE		
	070		LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.		
B3890757	000	AA	SIGMA 5-9	KEYED/RANDOM FILES FOR FORTRAN IV	P UC
	010	AUTHOR	T.G. SCHULTZ, CUMMINS ENGINE CO.		
	020		890757-11A00	DESCRIPTION PRINTED	
	030		890757-44A00 *	COMPRESSED CARDS	
	040		890757-74A00	TEST RUN DECK	
	050	ABSTRACT	THE FORTRAN IV LIBRARY ROUTINES 9RDISC AND 9WDISC HAVE BEEN REWRITTEN TO HANDLE KEYED FILES (WITH 3 BYTE		
	060		KEY) AND RANDOM FILES BY RECORDS. THE ACCESS METHOD BY RELATIVE WORD DISPLACEMENT HAS BEEN RETAINED.		
	070		DISC I/O IS HANDLED BY THE STANDARD READ DISC, WRITE DISC STATEMENTS, NOT BY THE BUFFERIN, BUFFEROUT		
	080		CALLS.		
B3890758	000	AC	SIGMA 5-9	EXECUTION ANALYZER PROGRAM (EAP)	P UC
	010	AUTHOR	P. SHERROD, VANDERBILT UNIVERSITY		
	020		890758-11C00	DESCRIPTION PRINTED	
	030		890758-44C00 *	COMPRESSED CARDS	
	050	ABSTRACT	THE EXECUTION ANALYZER PROGRAM (EAP) IS A PROGRAM WHICH WILL EXECUTE A SUBJECT PROGRAM AND IDENTIFY		
	060		THOSE LOCATIONS IN THE SUBJECT PROGRAM WHERE MOST OF THE TIME IS BEING SPENT. EAP TAKES CONTROL AND		
	070		EXECUTES THE SUBJECT PROGRAM INSTRUCTION BY INSTRUCTION KEEPING TRACK OF THE TIME SPENT AT EACH		

080 LOCATION. WHEN THE SUBJECT PROGRAM EXITS, EAP PRINTS OUT A HISTOGRAM SHOWING THE TIME SPENT AT VARIOUS  
 090 LOCATIONS. THE RANGE OF LOCATIONS WHICH ARE TO BE KEPT TRACK OF AND THE NUMBER OF LOCATIONS PER  
 100 HISTOGRAM CFLAG ARE PROGRAMMER SUPPLIED PARAMETERS.  
 110 COMMENTS THIS PROGRAM WILL RUN UNDER BPM, CP-V, AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE  
 120 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
 130 THE C00 VERSION OF EAP CORRECTS A NUMBER OF PROBLEMS WHICH EXISTED IN THE  
 140 EARLIER VERSION AND ADDS SEVERAL ENHANCEMENTS. I/O ERRORS AND ABNORMAL  
 150 RETURNS ARE HANDLED PROPERLY FOR ALL KNOWN COASES. EAP-C00 WILL CORRECTLY  
 160 HANDLE ERROR AND ABNORMAL ADDRESSES SPECIFIED IN EITHER THE FPT OR DCR.  
 170 IT IS SUGGESTED THAT YOU USE METASYMBOL RATHER THAN AP WHEN ASSEMBLING EAP.

B3890759 000 AA SIGMA 5-9 FORTRAN RANDOM DISC P UC  
 XER AUTHOR G. POWERS, WOODS HOLE OCEANOGRAPHIC INSTITUTE  
 020 890759-11A00 DESCRIPTION PRINTED  
 030 890759-34A00 \* SOURCE CARDS  
 040 ABSTRACT A SUBROUTINE FOR FORTRAN IV PROGRAMS. IT ALLOWS THE USER TO TREAT DISC STORAGE AS A NUMBER OF VARIABLE  
 050 ARRAYS. EACH OF THESE ARRAYS IS DYNAMICALLY EXTENDABLE. THE USER MAY DIRECTLY ACCESS LOCATIONS WITHIN  
 060 EACH ARRAY. THE ROUTINE USES ONE PAGE OF DYNAMIC STORAGE.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE: ASSEMBLER OR UTILITY. BASE LANGUAGE  
 080 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890763 000 AA SIGMA 6/7/9 FLOPLOT - A UTS FLOWCHARTING PROGRAM P UC  
 XER AUTHOR XEROX CORPORATION  
 020 890763-11A00 DESCRIPTION PRINTED  
 030 890763-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890763-46A00 890763-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 050 890763-76A00 890763-26 TEST DECK ON MAG TAPE  
 060 ABSTRACT FLOPLOT PROVIDES AN EASY TO USE METHOD OF PRODUCING AND MAINTAINING FLOWCHARTS. THE FLOWCHART IS  
 070 DESCRIBED BY A FLOWCHARTING LANGUAGE THAT IS SIMILAR (SYNTACTICALLY) TO AN ASSEMBLY LANGUAGE. THE  
 080 FLOWCHART WHICH IS DRAWN ON THE PLOTTER, CONFORMS TO THE ANS X3.5-1970 STANDARD.  
 090 COMMENTS FLOPLOT RUNS UNDER UTS IN ABOUT 8K OF CORE AND REQUIRES A XEROX 7530 OR 7531 PLOTTER. A USERS GUIDE IS  
 100 INCLUDED AS PART OF THE PRINTED DESCRIPTION (-11).

B3890764 000 AB SIGMA 5-9 HASP REMOTE JOB ENTRY P UC  
 010 AUTHOR BILLING HOSPITAL-UNIV. OF CHICAGO AND XEROX CORP.  
 020 890764-11A00 DESCRIPTION PRINTED  
 030 890764-44A01 \* COMPRESSED CARDS  
 040 890764-64A01 890764-44 UPDATE ON CARDS  
 050 ABSTRACT THE HASP RJE COMMUNICATION HANDLER GIVES THE SIGMA 5/9 BPM F01 SYSTEM THE CAPABILITY TO OPERATE AS A

060 HASP RJE TERMINAL AND CONTINUE TO RUN NORMAL BATCH, REMOTE BATCH OR REAL-TIME OPERATIONS. THE HANDLER  
 070 IS COMPRISED OF THREE PROGRAMS. MONITOR INTERFACE PROGRAM --PROVIDES THE LINE PROTOCOL AND DEVICE  
 080 HANDLING TO SUPPORT HASP MULTI-LEAVING TRANSMISSION IN A MANNER IDENTICAL TO 360/20 WORKSTATION  
 090 PROCEDURES. THIS PROGRAM SUPPORTS SINGLE PRINTER, PUNCH AND CARD-READER DEVICE STREAMS AND UTILIZES THE  
 100 BINARY -SYNCHRONOUS-COMMUNICATIONS TRANSPARENT TEXT MODE.  
 110 ENCODE PROGRAM - PROVIDES MESSAGE COMPRESSIONS AND CONTROL CHARACTER INSERTIONS  
 120 FOR THE HASP SYSTEM INPUT.  
 130 DECODE PROGRAM - EXPANDS THE RECORDS RECEIVED FROM 360 HASP AND ROUTES THEM TO  
 140 THE APPROPRIATE DEVICE.  
 150 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTN. PROGRAM TYPE - ASSEMBLER OR UTILITY. BASE LANGUAGE MAIN PROGRAM  
 160 IS WRITTEN IN METASYMBOL.

B3890766 000 AA SIGMA 5-9 THREE DIMENSION TRANSIENT HEAT TRANSFER P UC  
 010 AUTHOR L. MORDOCK, H. WYMAN  
 020 890766-11A00 DESCRIPTION PRINTED  
 030 890766-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS IS A GENERALIZED COMPUTER PROGRAM CAPABLE OF SOLVING NUMEROUS CLASSES OF THERMAL TRANSPORT  
 050 PROBLEMS. CONDUCTION, CONVECTION, RADIATION, HEAT GENERATION, AND ENERGIES ASSOCIATED WITH FLUID  
 060 TRANSPORT CAN BE SIMULTANEOUSLY CONSIDERED. NUMERICAL INTEGRATION IS ACHIEVED BY USE OF A FORWARD  
 070 FINITE DIFFERENCING TECHNIQUE CAPABLE OF SOLVING STEADY STATE AND TRANSIENT PROBLEMS. DATA INPUT IS BY  
 080 A USER-WRITTEN INPUT SUBROUTINE, ALLOWING CONSIDERABLE FLEXIBILITY OF INPUT DATA FORMATS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTN/UTS OPERATING SYSTEMS. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890767 000 AA SIGMA 2/3 DISK PACK BOOTSTRAP SIMULATOR P UH  
 010 AUTHOR XEROX  
 020 890767-11A00 DESCRIPTION PRINTED  
 030 890767-34A00 \* SOURCE CARDS  
 040 890767-84A00 ABSOLUTE BINARY CARDS  
 050 ABSTRACT A SINGLE CARD BOOTSTRAP TO RESTORE THE DISK UNIT TO THE HOME POSITION AND BOOT FROM THE DISK PACK. THIS  
 060 ALLEVIATES THE NEED TO POWER THE UNIT DOWN AND UP AGAIN.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER THE RRM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY.  
 080 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN XSYMBOL.

B3890768 000 AA SIGMA 6-9 DELETE STANDARD P UC  
 010 AUTHOR XEROX  
 020 890768-11A00 DESCRIPTION PRINTED  
 030 890768-26A00 890768-36 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890768-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

050 890768-86A00 890768-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 060 ABSTRACT READS THROUGH M:SI AND DELETES ALL FILES WHOSE NAMES ARE PRECEDED BY ASTERISKS. THE NUMBER OF FILES  
 070 DELETED AND NUMBER OF GRANULES RELEASED ARE WRITTEN THROUGH M:LO. BREAK CONTROL IS PROVIDED TO  
 080 INTERRUPT EXECUTION. FILES MAY BE DELETED IN ACCOUNTS OTHER THAN USER'S PROVIDED HIS PRIVELEGE EXCEEDS  
 090 X'CO'.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 110 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890769 000 AA SIGMA 6-9 UNITNAME P UC  
 010 AUTHOR D. MACLEMORE, AUTONETICS  
 020 890769-11A00 DESCRIPTION PRINTED  
 030 890769-34A00 \* SOURCE CARDS  
 040 ABSTRACT THE PURPOSE OF THIS ROUTINE IS TO PROVIDE THE USER PROGRAM WITH THE MEANS OF RETRIEVING AT EXECUTION  
 050 TIME THE ACTUAL UNIT NAME OR RAD FILE NAME ASSIGNED TO A GIVEN FORTRAN UNIT NUMBER OR DCB. THIS ROUTINE  
 060 USES BYTE STRING INSTRUCTION.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER RRM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 080 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890772 000 AA 910 910 TRACE MODIFICATION P UM  
 010 AUTHOR T. FINERAN, CHRYSLER CORPORATION  
 020 890772-11A00 DESCRIPTION PRINTED  
 030 890772-24A00 RELOCATABLE BINARY CARDS  
 040 890772-44A00 \* COMPRESSED CARDS  
 050 ABSTRACT TRACE (CN 851012) HAS BEEN MODIFIED TO TRACE PREVIOUSLY ASSEMBLED PROGRAMS AS WELL AS PROGRAMS THAT CALL  
 060 TRACE. THE OUPUT FORMAT HAS BEEN CLEANED UP AN POPS AND EXU'S NOW TRACE PROPERLY.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890773 000 AA 920 920 TRACE MODIFICATION P UM  
 010 AUTHOR T. FINERAN, CHRYSLER CORPORATION  
 020 890773-11A00 DESCRIPTION PRINTED  
 030 890773-24A00 RELOCATABLE BINARY CARDS  
 040 890773-44A00 \* COMPRESSED CARDS  
 050 ABSTRACT TRACE (CN 851012) HAS BEEN MODIFIED TO TRACE PREVIOUSLY ASSEMBLED PROGRAMS AS WELL AS PROGRAMS THAT CALL  
 060 TRACE. THE OUTPUT FORMAT HAS BEEN CLEANED UP AND POPS AND EXU'S NOW TRACE PROPERLY.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890774 000 AA 925 925 TRACE MODIFICATION P UM

010 AUTHOR T. FINERAN, CHRYSLER CORPORATION  
 020 890774-11A00 DESCRIPTION PRINTED  
 030 890774-24A00 RELOCATABLE BINARY CARDS  
 040 890774-44A00 \* COMPRESSED CARDS  
 050 ABSTRACT TRACE (CN 851012) HAS BEEN MODIFIED TO TRACE PREVIOUSLY ASSEMBLED PROGRAMS AS WELL AS PROGRAMS THAT CALL  
 060 TRACE. THE OUTPUT FORMAT HAS BEEN CLEANED UP AND POPS AND EXU'S NOW TRACE PROPERLY.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890775 000 AA 930 930 TRACE MODIFICATION P UM  
 010 AUTHOR T. FINERAN, CHRYSLER CORPORATION  
 020 890775-11A00 DESCRIPTION PRINTED  
 030 890775-24A00 RELOCATABLE BINARY CARDS  
 040 890775-44A00 \* COMPRESSED CARDS  
 050 ABSTRACT TRACE (CN 851012) HAS BEEN MODIFIED TO TRACE PREVIOUSLY ASSEMBLED PROGRAMS AS WELL AS PROGRAMS THAT CALL  
 060 TRACE. THE OUTPUT FORMAT HAS BEEN CLEANED UP AND POPS AND EXU'S NOW TRACE PROPERLY.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890776 000 AA 9-SERIES FORTRAN FLOWCHARTER P UM  
 010 AUTHOR P. CLAAR, MCDONALD DOUGLAS  
 020 890776-11A00 DESCRIPTION PRINTED  
 030 890776-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS PROGRAM CREATES FLOWCHARTS OF FORTRAN PROGRAMS ON THE LINE PRINTER. A MAG TAPE UNIT MUST BE  
 050 AVAILABLE FOR A SCRATCH TAPE DURING PROGRAM EXECUTION.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
 070 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890777 000 AB SIGMA 5-9 EXPAND PROCESSOR P UC  
 010 AUTHOR XEROX  
 020 890777-11B00 DESCRIPTION PRINTED  
 030 890777-44B00 \* COMPRESSED CARDS  
 040 ABSTRACT EXPAND CONVERTS 16-RBM COMPRESSED TAPES TO SOURCE AND/OR LISTINGS IN UNBLOCKED FORM. SOURCE IMAGES ARE  
 050 OUTPUT THROUGH M:EO, LISTINGS THROUGH M:LO. IT TAKES SPECIFIC ADVANTAGE OF SYMBIONTS IF PRESENT.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER BPM, CP-V, RBM, AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE  
 070 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890778 000 AA SIGMA 5-9 INTERACTIVE DMS DEBUG PACKAGE P UC  
 010 AUTHOR S. OHAYON, XEROX

020 890778-11A00 DESCRIPTION PRINTED  
030 890778-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
040 890778-86A00 890778-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
050 ABSTRACT IDDP ALLOWS THE USER TO CALL AND EXECUTE ANY DBM ROUTINE INTERACTIVELY FROM AN ON-LINE TERMINAL BY USING  
060 COMMANDS SIMILAR TO DMS PROCEDURES. IT IS ANALOGOUS TO SUCH SYSTEMS AS FORTRAN DEBUG PACKAGE OR DELTA  
070 EXCEPT THAT IT IS RUN INDEPENDENTLY; I.F. IT CAN BE USED ON ANY DMS DATABASE WITHOUT REGARD TO THE  
080 USER'S PROGRAM.  
090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/UTS OPERATING SYSTEMS. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
100 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
110 ALL DMS PROCEDURES ARE IMPLEMENTED EXCEPT FINDSEQ. PRIOR TO USING IDDP, A QUERY SCHEMA MUST BE CREATED -  
120 SEE CN 890779, QSP.

B3890779 000 AA SIGMA 5-9 QUERY SCHEMA PROCESSOR P UC  
010 AUTHOR XFROX  
020 890779-11A00 DESCRIPTION PRINTED  
030 890779-36A00 890778-36 SOURCE MAG TAPE, 9 CHANNELS  
040 890779-86A00 890778-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
050 ABSTRACT QSP IS A TWO-PASS TRANSLATOR THAT GENERATES A QUERY SCHEMA FROM A DMS SCHEMA AND A COROL COPY FILE. THE  
060 QUERY SCHEMA IS NECESSARY FOR IDDP TO ACCESS THE DMS DATABASE. IDDP IS AVAILABLE AS CN 890778.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTR/UTS OPERATING SYSTEMS. PROGRAM TYPE IS APPLICATION PROGRAM. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
090 BUILT INTO QSP IS A DECISION TABLE PROCESSOR WHICH PRODUCES THE DECISION TABLE FROM RELATIONS BUILT BY  
100 THE SECOND PASS OF THE QUERY SCHEMA PROCESSOR.

B3890783 000 AA SIGMA 6/779 PATCH DCB P UC  
010 AUTHOR D. LASLEY  
020 890783-11A00 DESCRIPTION PRINTED  
030 890783-44A00 \* COMPRESSED CARDS  
040 ABSTRACT PATCHDCB MAKES PERMANENT DCB ASSIGNMENTS TO NORMAL LOADER BUILT OVERLAID, LINK BUILT, AND PAGED LOAD  
050 MODULES, THEREBY NEGATING THE NEED FOR !ASSIGN OR !SET COMMANDS IN RUNNING THE LOAD MODULE.  
060 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
070 IS WRITTEN IN METASYMBOL.

B3890785 000 AA SIGMA 5-9 FUR - FILE UPDATE ROUTINE P UC  
VAN AUTHOR VANDERBILT UNIVERSITY  
020 890785-11A00 DESCRIPTION PRINTED  
030 890785-44A00 \* COMPRESSED CARDS  
040 ABSTRACT FUR IS A UTILITY PROCESSOR FOR UPDATING CARD IMAGES ON MAGNETIC TAPE. THE CONTROL SPECIFICATION COMMANDS  
050 ARE SIMPLE AND THE SEQUENTIAL RECORD POSITION OF EACH RECORD IS THE BASIS FOR RECORD SELECTION.

060 DELETION, OR ADDITION.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM/UTS OPERATING SYSTEM. PROGRAM TYPE: ASSEMBLER OR UTILITY. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890786 000 AB SIGMA 6-9 TOMAS-TERMINAL ORIENTED MERGE & SORT P UC  
010 AUTHOR D. PALMER, VANDERBILT UNIVERSITY  
020 890786-11B00 DESCRIPTION PRINTED  
030 890786-44B00 \* COMPRESSED CARDS  
040 ABSTRACT USING TOMAS, A TIME-SHARING USER CAN SET UP AND SUBMIT A JOB TO THE BACKGROUND BATCH STREAM TO EITHER  
050 SORT A DISK FILE OR MERGE SEVERAL DISK FILES TOGETHER. THIS IS ACCOMPLISHED BY THE USER ANSWERING  
060 SEVERAL QUESTIONS CONCERNING THE REQUIREMENTS OF THE SORT/MERGE OPERATIONS.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V/UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
080 PROGRAM IS WRITTEN IN METASYMBOL.  
090 TOMAS IS WRITTEN FOR USE WITH SORT VERSION E00 OR LATER, AND MERGE  
100 VERSION E00 OR LATER. IF THE E00 VERSIONS ARE USED, THE TECHNICAL BULLETIN(S) CORRECTING ERRORS IN  
110 HANDLING OF CONTROL COMMANDS CONTINUED ONTO SUCCESSIVE RECORDS MUST BE IMPLEMENTED. TOMAS REQUIRES  
120 EITHER THE BYTE STRING INSTRUCTIONS OR THEIR SIMULATION IN THE MONITOR.

B3890787 000 AB SIGMA 6-9 UTS ACCOUNTING SUMMARY P UC  
010 AUTHOR XEROX  
020 890787-11B00 DESCRIPTION PRINTED  
030 890787-26B00 890787-36 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890787-36B00 \* SOURCE MAG TAPE, 9 CHANNELS  
050 ABSTRACT THE MONITOR-CREATED ACCOUNTING LOG IS SEARCHED AND SUMMARIZED FOR BOTH BATCH AND TIME-SHARED USERS.  
060 REPORTS ARE PRODUCED SHOWING TOTAL JOB EXECUTION TIME, CORE USED, JOB THROUGHPUT, AND PARTITION USE.  
070 THESE REPORTS ARE MOST USEFUL FOR SYSTEM TUNING TO PRODUCE MAXIMUM THROUGHPUT IN A PARTICULAR OPERATING  
080 ENVIRONMENT AT AN INSTALLATION.  
090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
100 IS WRITTEN IN COBOL.  
110 THIS PROGRAM SUMMARIZES THE ACCOUNTING LOGS CREATED BY UTS (B01-D00) AND CP-V.

B3890788 000 AA SIGMA 5-9 CALENDAR P UC  
010 AUTHOR D. CROCKETT, DOUGLAS AIRCRAFT COMPANY  
020 890788-11A00 DESCRIPTION PRINTED  
030 890788-34A00 \* SOURCE CARDS  
040 ABSTRACT CALENDAR, WHEN GIVEN THE DATE, RETURNS THE CORRESPONDING DAY OF THE WEEK. IF AN INVALID DATE IS  
050 SPECIFIED, AN ERROR FLAG IS SET AND THE PROGRAM RETURNS TO THE USER WITHOUT PROCESSING THE DATE. LEAP  
060 YEARS AND CENTURIES ARE PROPERLY HANDLED ACCORDING TO THE CONVENTIONS OF THE GREGORIAN CALENDAR.  
070 THE CALENDAR SUB-PROGRAM IS DESIGNED FOR INCLUSION IN BOTH THE STANDARD AND REAL-TIME FORTRAN LIBRARIES

080 SUPPORTED BY ANY OF THE SIGMA 5-9 BATCH MONITORS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM/RBM/UTS/XOS OPERATING SYSTEMS. PROGRAM TYPE IS LIBRARY ROUTINE.  
 100 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL. NOTE: THE DAY RETURNED IS ACCURATE EXCEPT AS  
 110 FOLLOWS: 1.DATES PRIOR TO 1582 - ERROR IS TEN DAYS. 2.ACCORDING TO GREGORIAN CALENDAR CONVENTIONS,  
 120 THERE IS AN ERROR OF THREE DAYS AFTER 10,000 YEARS, INCREASING BY THREE DAYS.

B3890791 000 AA SIGMA 7/8/9 CASPRE BPM P UC

SYS AUTHOR SYSTEMS SOFTWARE, NASA-AMES RESEARCH CENTER

010 890791-11A00 DESCRIPTION PRINTED

020 890791-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS

030 ABSTRACT CASPRE IS AN ON-LINE DEBUG SYSTEM FOR FOREGROUND USERS OPERATING UNDER A BPM SYSTEM ON THE SIGMA 7/8  
 040 COMPUTER. CASPRE OFFERS THE FOREGROUND USER A COMPLETE SET OF DIGITAL COMPUTER DEBUG FEATURES. ALSO  
 050 INCLUDED ARE THE UPDATES REQUIRED FOR THE GOO LOADER AND THE D00 FORTRAN IV COMPILER, AND METAFUM, A  
 060 PROGRAM TO FACILITATE UPDATING THE MONITOR, PROCESSORS, THE LIBRARY OR A USER PROGRAM.

070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE IS ON-LINE DEBUG SYSTEM. BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890793 000 AA SIGMA 5-9 RBM SORT P UC

010 AUTHOR XEROX

020 890793-11A00 DESCRIPTION PRINTED

030 890793-44A00 \* COMPRESSED CARDS

040 ABSTRACT THIS IS A DISK SORT FOR THE FOLLOWING TYPE RECORDS: FIXED LENGTH BLOCKED AND UNBLOCKED; UNBLOCKED  
 050 VARIABLE LENGTH, AND RBM COMPRESSED FILES. THE SORT SUPPORTS ANY DEVICE THAT MAY BE ACCESSED VIA  
 060 STANDARD CAL1, 1 READS AND WRITES. A MAXIMUM OF 16 SORT FIELDS MAY BE SPECIFIED IN ASCENDING OR  
 070 DESCENDING SEQUENCE. SORTING IS DONE ON AN ABSOLUTE BINARY-VALUED COLLATING SEQUENCE.

080 COMMENTS THE SORT REQUIRES APPROXIMATELY 8K OF STORAGE FOR EFFICIENT OPERATION. HOWEVER, EFFICIENCY VARIES WITH  
 090 THE LOGICAL AND PHYSICAL SIZE OF THE INPUT AND OUTPUT RECORDS. INTERMEDIATE STORAGE REQUIREMENTS ARE  
 100 APPROXIMATELY 2.1 - 2.4 TIMES THE INPUT FILE SIZE.

B3890794 000 AB SIGMA 5-9 RBM COPY PROCESSOR F LC

010 AUTHOR L. ZAYTOON, WRIGHT-PATTERSON AIR FORCE BASE

020 890794-11B00 DESCRIPTION PRINTED

030 890794-44B00 \* COMPRESSED CARDS

040 ABSTRACT THIS PROGRAM ALLOWS USERS TO COPY DATA BETWEEN DEVICES, OP-LABELS, FILES, AND ALL COMBINATIONS THEREOF.  
 050 THE DATA MAY BE MULTI-FILED AND THE USER CAN SPECIFY THE NUMBER OF FILES TO BE MOVED. BINARY FORMS AND  
 060 COMPRESSED DECKS MAY BE RECOGNIZED AND MANIPULATED INDIVIDUALLY UNDER USER COMMAND. THE PROCESSOR ALSO  
 070 ALLOWS THE USER TO MAINTAIN PARTITIONED FILES ON RAD OR DISK AS WELL AS ALLOWING THE USER TO MAINTAIN  
 080 LABEL AND RETRIEVE FILES ON MAGNETIC TAPE. THE FILES ARE IDENTIFIED BY NAME AND USER ACCOUNT NUMBER  
 090 (FROM JOB CARD OR :ACCOUNT COMMAND). DATA KEPT ON DISK IS COMPRESSED WITH MULTIPLE OCCURENCES (3 OR



100 MORE) OF ANY CHARACTER COMPRESSED. LOAD FILES MAY ALSO BE SAVED ON THE PARTITIONED FILE AREA. LOAD  
 110 FILES REALIZE UP TO A 20% SAVINGS ON DISK. EVEN COMPRESSED FILES MOVED TO THE PARTITIONED AREA WILL  
 120 EXPERIENCE FURTHER COMPRESSTON. FILES MUST BE MOVED TO A WORK AREA BEFORE USE OF DECOMPRESSED BY THE  
 130 USER HIMSELF. THE COMPRESSTON IS INSENSITIVE TO ALL CHARACTERS (00-FF).  
 140 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 150 MAIN PROGRAM IS WRITTEN IN AP/METASYMBOL.  
 160 THIS PROGRAM WILL OPERATE ON A MINIMUM RBM CONFIGURATION. NOTE THAT THE NUMBER OF MEMBERS IN THE  
 170 PARTITIONED FILE AND THE SIZE OF THE DATA BUFFER FOR ALL COPIES IS A FUNCTION OF AVAILABLE BACKGROUND  
 180 SPACE.

B3890795 000 AA SIGMA 5-9 XREF-XSYMBOL P UC  
 010 AUTHOR OHIO COLLEGE LIBRARY CENTER , A. LANDGRAF  
 020 890795-11A00 DESCRIPTION PRINTED  
 030 890795-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THIS PROGRAM GENERATES A CROSS REFERENCE DICTIONARY OF DEFINITIONS AND REFERENCES WHICH APPEAR IN A  
 050 SOURCE OR COMPRESSED DECK THAT HAS BEEN PROCESSED BY MACROSYMBOL. THE PROGRAM NOTES UPDATE LINES TO  
 060 COMPRESSED AREA AND WILL PARSE METASYMBOL COMPLEX EXPRESSIONS.  
 070 COMMENTS OPERATES UNDER RBM MINIMUM CONFIGURATION AND UTILIZES DATA ON THE XI AREA ON THE RAD AS IT WAS CREATED  
 080 BY MACROSYMBOL.

B3890796 000 AA SIGMA 5-9 TAPE FILE RETRIEVAL PROGRAM P UC  
 010 AUTHOR XEROX  
 020 890796-11A00 DESCRIPTION PRINTED  
 030 890796-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THIS PROGRAM ALLOWS USERS TO MAINTAIN AND RETRIEVE DATA FILES ON MAGNETIC TAPE BY NAME. TAPES ARE  
 050 LABELED WITH THEIR CREATION DATE.  
 060 COMMENTS THIS PROGRAM WILL EXECUTE ON A MINIMUM RBM CONFIGURATION WITH ONE MAGNETIC TAPE DRIVE. DATA RECORD  
 070 LENGTH IS A FUNCTION OF AVAILABLE BACKGROUND SPACE.

B3890797 000 AA SIGMA 5-9 PAGE BURSTER P UC  
 010 AUTHOR A. LANDGRAF, OHIO COLLEGE LIBRARY CENTER  
 020 890797-11A00 DESCRIPTION PRINTED  
 030 890797-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THIS PROGRAM WILL PRINT A BURST PAGE(S) TO ALLOW THE USER TO IDENTIFY LISTINGS. THE PROGRAM PRINTS  
 050 BLOCK LETTERS ON THREE LINES USING DATA PASSED VIA THE PROCESSOR CONTROL CARD. THE DATA AND TIME, JOB  
 060 NAME, ACCOUNT NUMBER, PROGRAMMER NAME, AND SYSTEM VERSION ARE ALSO PRINTED OUT.  
 070 COMMENTS THIS PROGRAM OPERATES ON A MINIMUM CONFIGURATION RBM. THE ACCOUNTING OPTION DOES NOT HAVE TO BE  
 080 INCLUDED IN RBM, BUT THE DATE AND TIME MUST BE ENTERED.

B3890799 000 AA SIGMA 7 XPL (GORDO) - XPL COMPILER P UC  
 010 AUTHOR LAWRENCE LIVERMORE LABORATORY  
 020 890799-11A00 DESCRIPTION PRINTED  
 030 890799-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890799-86A00 890799-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 050 ABSTRACT A SIGMA 7 COMPILER FOR A SLIGHTLY EXTENDED VERSION OF THE COMPILER/SYSTEMS LANGUAGE XPL DESCRIBED IN THE  
 060 BOOK "A COMPILER GENERATOR" BY MCKEEMAN, HORNING AND WORTMAN. THE COMPILER IS ITSELF WRITTEN IN XPL  
 070 (GORDO) AND IS SELF-COMPILING. OUTPUT MAY BE RUN ON ANY SIGMA 7 WHEN USED WITH A LOCALLY CODED  
 080 SUBMONITOR INTERFACE ROUTINE.  
 090 THE XPL LANGUAGE HAS PROVEN ITSELF USEFUL IN THE CONSTRUCTION OF LANGUAGE TRANSLATORS, GENERAL UTILITY  
 100 PROGRAMS, SYSTEMS MODULES, AND IN OTHER APPLICATIONS WHERE THE PRIMARY NEED IS LOGICAL AND SYMBOLIC  
 110 MANIPULATION OF DATA. THE CODE GENERATED BY XPL IS COMPETITIVE IN EFFICIENCY WITH GOOD ASSEMBLY  
 120 LANGUAGE AND THE READABILITY OF XPL PROGRAMS IS VASTLY ENHANCED BY ITS HIGHER-LEVEL LANGUAGE STRUCTURE.  
 130 COMMENTS THIS PROGRAM WILL RUN UNDER GORDO OPERATING SYSTEM. PROGRAM TYPE IS COMPILER. BASE LANGUAGE MAIN  
 140 PROGRAM IS WRITTEN IN XPL (GORDO).  
 150 THE OBJECT CODE OUTPUT OF THE XPL (GORDO) COMPILER IS A CORE IMAGE FILE. TO ENHANCE PORTABILITY, THAT  
 160 FILE DOES NOT ASSUME THE EXISTENCE OF ANY PARTICULAR OPERATING SYSTEM. IN PARTICULAR, A SMALL  
 170 SYSTEM-INTERFACE ROUTINE (THE "SUBMONITOR") MUST BE SUPPLIED AT EACH INSTALLATION USING XPL (GORDO).

B3890801 000 AB SIGMA 5-9 XPL P UC  
 010 AUTHOR G. LEACH  
 020 890801-11A00 DESCRIPTION PRINTED  
 030 890801-26A01 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890801-36A01 890801-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT XPL IS THE COMPILER GENERATOR AS DESCRIBED BY MCKEEMAN, HORNING, AND WORTMAN. THE SIX MODULES MAKE UP A  
 060 COMPLETE COMPILER WRITING SYSTEM.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER THE RBM OPERATING SYSTEM. THE TYPE OF PROGRAM IS A COMPILER. THE BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN IS MACROSYMBOL.

B3890802 000 AA SIGMA 5-9 XBASIC - P1M VERSION P UC  
 010 AUTHOR S. SLYKHOUS, UNIVERSITY OF CALIFORNIA AT IRVINE  
 020 890802-11A00 DESCRIPTION PRINTED  
 030 890802-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890802-36A00 890802-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890802-76A00 890802-26 LOAD DECK ON TAPE  
 060 890802-86A00 890802-26 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 070 ABSTRACT XBASIC IS AN EXTENDED VERSION OF XEROX BASIC. THE EXTENDED FEATURES INCLUDE STRING HANDLING, BOOLEAN  
 080 VARIABLES AND THE ABILITY TO SAVE AND EDIT PROGRAMS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEMS. PROGRAM TYPE IS LANGUAGE PROCESSOR. BASE

100 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
110 A MODIFIED UTS XEROX BASIC IS INCLUDED ON THE DISTRIBUTED TAPE AND THE FEATURES OF XBASIC AND THE  
120 MODIFIED UTS VERSION ARE DISCUSSED IN THE -11.

B3890804 000 AD SIGMA 6-9 GRAPHER P UC  
010 AUTHOR V. HUBER, XEROX CORPORATION  
020 890804-11E00 DESCRIPTION PRINTED  
030 890804-26E00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890804-36E00 890804-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890804-76E00 890804-26 TEST AND SAMPLE FILES ON TAPE  
060 ABSTRACT GRAPHER ANALYZES UTS ACCOUNTING LOG TO PRODUCE FIVE SETS OF REPORTS: PURST SHEET AND 1-LINE SUMMARY FOR  
070 EACH JOB, GRAPH OF JOBS IN EACH PARTION AND CPU UTILIZATION, SYSTEM PROFILE OF JOB SIZES AND COMPUTE  
080 BOUNDFDNESS CHARACTERISTICS, AND AN ACCOUNTING LOG SUMMARY.  
090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SERVICE ROUTINE.  
100 GRAPHER IS USEFUL FOR SYSTEM TUNING AND SYSTEM SUMMARY, ESPECIALLY BATCH. THE USER IS PROVIDED WITH A  
110 CONCISE AND EXTENSIVE SUMMARY OF JOB AND SYSTEM CHARACTERISTICS AS WELL AS SYSTEM PERFORMANCE.

B3890808 000 AA SIGMA 5-9 FUNCTION TABLE PROCESSOR P UC  
010 AUTHOR J. SAITO, NASA/AMES  
020 890808-11A00 DESCRIPTION PRINTED  
030 890808-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890808-36A00 890808-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890808-76A00 890808-26 TEST FILES ON TAPE  
060 ABSTRACT THE FUNCTION TABLE PROCESSOR IS A SINGLE PASS COMPILER THAT TRANSLATES FUNCTION AND ARGUMENT DESCRIPTION  
070 STATEMENTS AND GENERATES TABLES OF ARBITRARY FUNCTIONS OF ONE, TWO, AND THREE VARIABLES. THE OBJECT  
080 PROGRAM HAS THE CHARACTERISTICS OF A SUBROUTINE WHICH IS LOADED WITH THE USER'S PROGRAM TO BE ACCESSED  
090 BY THE FUNCTION GENERATION SUBROUTINES AT RUN TIME. THE FUNCTION GENERATION SUBROUTINES PERFORM TABLE  
100 LOOKUPS WHEN ENTERED AND RETURN A DATA VALUE FOR A SPECIFIED ARGUMENT.  
110 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE IS COMPILER. BASE LANGUAGE MAIN  
120 PROGRAM IS WRITTEN IN FORTRAN.

B3890810 000 AA SIGMA 5-9 FAST FPURGE RESTORE - BPM P UC  
010 AUTHOR XEROX  
020 890810-11A00 DESCRIPTION PRINTED  
030 890810-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890810-36A00 890810-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890810-46A00 890810-26 COMPRESSED MAG TAPE, 9 CHANNELS  
060 890810-76A00 890810-26 TEST DECK  
070 ABSTRACT FAST FPURGE RESTORE IS A PROCESSOR THAT WILL ALLOW THE USER TO RESTORE FILES TO A SYSTEM FROM FPURGE

080 FORMATTED TAPES. THIS PROCESSOR WILL APPROACH TAPE SPEED DEPENDING UPON THE SATURATION OF THE SYSTEMS  
 090 CURRENT DATA BASE. FAST FPURGE RESTORE SHOULD BE RUN AS THE ONLY USER IN THE SYSTEM..  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
 110 PROGRAM IS WRITTEN IN METASYMBOL.

B3890812 000 AB SIGMA 5-9 RBM METASYMBOL P LC

010 AUTHOR XEROX  
 020 890812-11B00 DESCRIPTION PRINTED  
 030 890812-26B00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890812-36B00 890812-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890812-46B00 890812-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 060 ABSTRACT THIS IS H00 METASYMBOL WHICH HAS BEEN MODIFIED TO USE RBM-32 OR CP-R MODE CALLS, AND  
 070 TO WHICH ROUTINES HAVE BEEN ADDED TO HANDLE PAGE CONTROL AND PUNCHED CARD SEQUENCING.  
 080 THE ASSEMBLER INCLUDES ALL TECHNICAL RULIFITNS THROUGH TR 10. THE MAJOR DIFFERENCES  
 090 BETWEEN THIS AND THE RBM VERSION ARE THAT THE SOURCE UPDATES MUST BE IN SEQUENCE,  
 100 THE ACCOUNT OPTION 'AC' FOLLOWS THE RBM MACROSYMBOL FORMAT, AND THE PD OPTION HAS NOT  
 110 BEEN IMPLEMENTED, SO USE OF STANDARD DEFINITION FILES IS NOT PERMITTED. INCLUDED  
 120 WITH THE ASSEMBLER ARE THE COMPRESSED IMAGES OF THE SYSTEMS RBM, SIGMET, METAMODE,  
 130 AND SIG7EDP. A DUMMY SYSTEM BPM IS ALSO INCLUDED WHICH IS NEEDED TO REASSEMBLE METASYMBOL.  
 140 COMMENTS THE COMPILER IS VERY LARGE AND ANY SYSTEM CALLS BY THE USER WILL QUICKLY USE AVAILABLE  
 150 CORE. THE MINIMUM BACKGROUND AREA REQUIRED IS ABOUT 16K WORDS. THE MAXIMUM BACKGROUND  
 160 AREA IT WILL MAKE USE OF IS 32K WORDS.

B3890813 000 AA SIGMA 6-9 XEROX/COAST CAL/APL P LC

010 AUTHOR XEROX  
 020 890813-11A00 DESCRIPTION PRINTED  
 030 890813-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THE XEROX CAI PACKAGE IS CALLED CAL/APL STANDS FOR COMPUTER ASSISTED INSTRUCTION. THE PACKAGE CONTAINS  
 050 26 ENGLISH-LANGUAGE-LIKE INSTRUCTIONS, SUCH AS READ, SCAN, ETC. WITH THESE 26 INSTRUCTIONS, A  
 060 NON-PROFESSIONAL PROGRAMMER IS ABLE TO ENTER INSTRUCTIONAL MATERIALS INTO COMPUTER FOR STUDENT  
 070 INTERACTION. IT ALSO ALLOWS THE STUDENT TO USE THE TERMINAL AS A DESK CALCULATOR HAVING INSTANT  
 080 FEEDBACK RESULTS. THE 26 INSTRUCTIONS WERE CODED UNDER APL. THERE IS ALSO A DEMO CALLED CALAPLDEMO IN  
 090 THIS TAPE.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER THE UTS OPERATING SYSTEM. PROGRAM TYPE IS CAI APPLICATION. BASE LANGUAGE  
 110 MAIN PROGRAM IS WRITTEN IN APL.

B3890814 000 AA SIGMA 2/3 LEAST-SQUARES W/ ORTHOGONAL POLYNOMIALS P UH

010 AUTHOR C. MCKAY, ROYAL MILITARY COLLEGE OF CANADA  
 020 890814-11A00 DESCRIPTION PRINTED

030 890814-34A00 \* SOURCE CARDS  
 040 890814-74A00 TEST DATA DECK  
 050 ABSTRACT A POLYNOMIAL IS DETERMINED TO FIT A SET OF DATA POINTS ACCORDING TO A WEIGHTED LEAST-SQUARES CRITERION.  
 060 THE FIT IS PRESENTED BOTH AS A SERIES OF ORTHOGONAL POLYNOMIALS AND AS A TRUNCATED POWER SERIES AND IS  
 070 CALCULATED FOR ALL DEGREES UP TO A SPECIFIED MAXIMUM. STATISTICS ARE CALCULATED TO ASSIST THE USER IN  
 080 DECIDING WHICH DEGREE IS MOST SUITABLE FOR HIS PURPOSE AND WHICH COEFFICIENTS ARE SIGNIFICANTLY  
 090 DIFFERENT FROM ZERO. A COMPARISON OF THE ORIGINAL DATA AND THE FIT IS OPTIONALLY AVAILABLE.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
 110 MAIN PROGRAM IS WRITTEN IN FORTRAN. OPERATES UNDER RBM. REQUIRES 1777 WORDS FOR PROGRAM PLUS 6 FORTRAN  
 120 REAL WORDS PER POINT AND THE HIGHEST DEGREE TO FIT PLUS 1 TIMES 4 FORTRAN REAL WORDS. AS SUPPLIED IT IS  
 130 SUITABLE FOR 150 POINTS AND A MAXIMUM OF A 20TH DEGREE FIT.

B3890815 000 AB SIGMA 6-9 PRINT FORMS PROCESSOR P UC  
 010 AUTHOR CARLETON UNIVERSITY  
 020 890815-11A00 DESCRIPTION PRINTED  
 030 890815-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THIS PROCESSOR ALLOWS THE USER TO SUBMIT DISC OR TAPE FILES OF ANY SIZE TO THE OUTPUT SYMBOLIC FOR  
 050 PRINTING, EITHER WITH OR WITHOUT OPERATOR SETUP OF SPECIAL FORMS.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 070 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890816 000 AA SIGMA 6-9 DECLARE TEMPORARY FILES P UC  
 010 AUTHOR CARLETON UNIVERSITY  
 020 890816-11A00 DESCRIPTION PRINTED  
 030 890816-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS PROCESSOR ALLOWS THE USER TO DECLARE DISC FILES AS TEMPORARY SO THAT THEIR FILES WILL BE  
 050 AUTOMATICALLY RELEASED AT THE END OF THE JOB. A FILE CAN BE OPENED AND CLOSED AGAIN WITHOUT BEING  
 060 DELETED (COMPARE REL OPTION ON ASSIGN COMMAND) AND THE FILE WILL BE DELETED WHETHER THE JOB ABORTS OR  
 070 TERMINATES NORMALLY.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 090 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890817 000 AA SIGMA 6-9 FILE DUMP P UC  
 010 AUTHOR CARLETON UNIVERSITY  
 020 890817-11A00 DESCRIPTION PRINTED  
 030 890817-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THIS PROCESSOR DUMPS SELECTED RECORDS FROM LABELLED TAPE OR RAD. THE PARAMETERS ALLOW FILEDUMP TO SKIP  
 050 RECORDS, DUMP A SPECIFIED NUMBER OF RECORDS AND SEARCH FILE FOR SPECIFIED STRING BEFORE DUMP.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE

070 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890818 000 AA SIGMA 6-9 CATALOG PROCEDURES P UC

010 AUTHOR CARLETON UNIVERSITY

020 890818-11A00 DESCRIPTION PRINTED

030 890818-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THE CATALOG PROCEDURES SYSTEM IS COMPRISED OF TWO PROGRAMS: CATALOG AND EXEC. THE PROGRAM CATALOG FORMS

050 DISC FILES OF CONTROL CARD RUN DECKS. THE EXEC PROGRAM SUBMITS THE CATALOGED FILE TO THE BATCH STREAM.

060 THE EXEC PROCESSOR ALSO WILL SUBSTITUTE NAMES IN THE FILE TO BE SUBMITTED TO THE BATCH STREAM.

070 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEMS. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE

080 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890820 000 AA SIGMA 6-9 UTS FORM DATA ENTRY PACKAGE - FORM PAK P UC

010 AUTHOR XEROX

020 890820-11A00 DESCRIPTION PRINTED

030 890820-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS

040 890820-36A00 890820-26 SOURCE MAG TAPE, 9 CHANNELS

050 890820-76A00 890820-26 LOAD DECK ON TAPE

060 ABSTRACT FORMPAK IS A SYSTEM OF PROGRAMS FOR ON-LINE ENTRY OF FORMS FROM A BEEHIVE MODEL IIIA ALPHANUMERIC

070 DISPLAY TERMINAL TO A XEROX SIGMA 6,7, OR 9 COMPUTER OPERATING UNDER THE UTS MONITOR SYSTEM. THE SYSTEM

080 CONSISTS OF TWO PARTS:

090 1.) AN INDEPENDENT PROGRAM (FORMGEN) WHICH ENABLES ON-LINE DEFINITION OF NEW FORMS AND MODIFICATION OF

110 2.) A SET OF FORTRAN-CALLABLE SUBROUTINES (FORMLIB) WHICH ENABLE AN ON-LINE PROGRAM TO EASILY DISPLAY

120 FORMS DEFINED WITH FORMGEN, READ THE FILLED-OUT FORMS, RETRIEVE INDIVIDUAL FIELDS FROM THE FORMS, AND

130 CLEAR THE FORMS FOR REPEATED ENTRY. DATA MAY ALSO BE DISPLAYED IN ANY FIELD ON A FORM, AND ONE-LINE

140 ERROR AND INSTRUCTIONAL MESSAGES MAY BE SENT TO THE TERMINAL WITHOUT DESTROYING THE FORM CURRENTLY

150 DISPLAYED.

160 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLY OR UTILITY. BASE LANGUAGE

170 MAIN PROGRAM IS WRITTEN IN FORTRAN.

180 OPERATES UNDER UTS MINIMUM CONFIGURATION. REQUIRES ONE (OR MORE) BEEHIVE MODEL IIIA TERMINALS.

B3890821 000 AB SIGMA 2/3 TIME-SHARING PROCESSOR P UH

010 AUTHOR R. FANSON & D. MERRIDE, WHIRLPOOL

020 890821-11A00 DESCRIPTION PRINTED

030 890821-36A01 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT A MULTI-ACCESS REMOTE TELETYPE SYSTEM, THE TIME-SHARING PROCESSOR RUNS IN RESIDENT FOREGROUND. IT

050 SCHEDULES PROGRAMS AND HAS ROUTINES FOR TERMINAL I/O AND CONTROL. CORE REQUIREMENTS ARE 1K OF PUBLIC

060 LIBRARY, ABOUT 500 WORDS OF RESIDENT FOREGROUND PLUS CORE FOR THE TERMINAL-SUBMITTED PROGRAMS. FIVE

070 REMOTE TERMINALS ARE SUPPORTED, BUT THIS CAN BE INCREASED.  
080 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS OPERATING SYSTEM. BASE LANGUAGE MAIN  
090 PROGRAM IS WRITTEN IN XSYMBOL.

B3890823 000 AA SIGMA 5-9 SNOBOL4 VERSION 3.7 P UC

010 AUTHOR DR. C. BARKER

020 890823-11A00 DESCRIPTION PRINTED

030 890823-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS

040 890823-46A00 890823-26 COMPRESSED MAG TAPE, 9 CHANNELS

050 890823-76A00 890823-26 TEST PROGRAM

060 ABSTRACT THIS IMPLEMENTATION OF SNOBOL4 IS A PROPER SUBSET OF THE SNOBOL4 LANGUAGE AS DESCRIBED IN GPISWOLD,  
070 POAGE, AND POLONSKY, THE SNOBOL4 PROGRAMMING LANGUAGE, 2ND ED., PRENTICE-HALL. ALL LANGUAGE FEATURES

080 ARE IMPLEMENTED EXCEPT THE PRIMITIVE FUNCTION LOAD. SNOBOL4 WAS DEVELOPED AT BELL TELEPHONE

090 LABORATORIES, INC.. IT CHARACTER-STRING OPERATIONS, RECURSIVE FUNCTIONS, TABLE STRUCTURES, USER-DEFINED

100 DATATYPES AND SEMANTICALLY REDEFINABLE OPERATORS HAVE MADE IT A USEFUL TOOL IN SUCH AREAS AS COMPILATION

110 TECHNIQUES, MACHINE SIMULATIONS, SYMBOLIC MATHEMATICS, TEXT PREPARATION, NATURAL LANGUAGE TRANSLATION,

120 LINGUISTICS, AND MUSIC ANALYSIS.

130 COMMENTS THIS PROGRAM WILL RUN UNDER BPM OPERATING SYSTEM. PROGRAM TYPE IS COMMERCIAL PROCESSOR. BASE LANGUAGE  
140 MAIN PROGRAM IS WRITTEN IN METASYMBOL.

150 (1) THIS IMPLEMENTATION HAS BEEN EXTENSIVELY CHECKED OUT, BUT ONLY ON A 64K SIGMA 7 RUNNING UNDER BPM IN  
160 AN EXCLUSIVELY BATCH ENVIRONMENT. BYTE-STRING AND FLOATING-POINT INSTRUCTIONS ARE FREELY USED.

170 (2) IN ORDER TO EXECUTE SUCCESSFULLY IN FEWER THAN ABOUT 28000 WORDS OF MEMORY, APPROPRIATE OPTIONS MUST  
180 BE USED ON THE PROCESSOR COMMAND CARD.

B3890824 000 AA SIGMA 2/3 AUTODUMP P UH

010 AUTHOR P. ALSOP, UNIVERSITY OF UTAH

020 890824-11A00 DESCRIPTION PRINTED

030 890824-34A00 \* SOURCE CARDS

040 ABSTRACT AUTODUMP IS A PROGRAM DESIGNED TO DUMP THE RESIDENT AND/OR NONRESIDENT PORTIONS OF CORE AUTOMATICALLY AT  
050 REBOOT TIME. THE DUMP IS MADE TO THE LINE PRINTER BEFORE ANY OF THE FOREGROUND PARTITIONS ARE

060 RESTORED. DATE SWITCH ZERO IS SET ON TO OBTAIN THE DUMP, IF SWITCH ZERO IS NOT ON, NO DUMP OCCURS.

070 COMMENTS THIS PROGRAM WILL RUN UNDER THE RBM OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN XSYMBOL.

B3890825 000 AA SIGMA 3 RBM E01 MODIFICATIONS-ASCII TAPE HANDLER P UH

010 AUTHOR XEROX

020 890825-11A00 DESCRIPTION PRINTED

030 890825-26A00 890825-36 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS

040 890825-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

050 890825-86A00 890825-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
060 ABSTRACT RBM (VERSION E01) FOR THE SIGMA 3 HAS BEEN EXPANDED FOR PURPOSES OF PROCESSING ASCII DATA CONTAINED ON  
070 9-TRACK MAGNETIC TAPE OR 8-LEVEL PAPER TAPE. BOTH DEVICE TYPES ARE STILL CAPABLE OF PROCESSING BINARY  
080 OR EBCDIC DATA.  
090 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS OPERATING SYSTEM. BASE LANGUAGE MAIN  
100 PROGRAM IS WRITTEN IN XSYMBOL.

B3890826 000 AB SIGMA 5-9 ROM TAPE FILE UPDATE PROGRAM - ROMUP P UC  
010 AUTHOR C. J. COMBIE, UNIVERSITY OF ALABAMA IN BIRMINGHAM  
020 890826-11B00 DESCRIPTION PRINTED  
030 890826-36B00 \* SOURCE MAG TAPE, 9 CHANNELS  
040 ABSTRACT ROMUP ENABLES ANYONE TO CONVENIENTLY MAINTAIN A TAPE FILE CONTAINING RELOCATABLE OBJECT MODULES (ROMS)  
050 OF FORTRAN SUBROUTINES. ROMUP WILL ALLOW ONE TO RECOMPILE ONLY THE SUBROUTINES WHICH CHANGE, ADD NEW  
060 SUBROUTINES, DELETE OLD SUBROUTINES, AND THEN RELOAD THE ROMS FROM THE OUTPUT TAPE OF THE ROMUP RUN.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
080 IS WRITTEN IN MACROSYMBOL.

B3890827 000 AA SIGMA 2/3 CONTOUR MAP PLOTTING SYSTEM P UH  
010 AUTHOR MINCOMP CORPORATION  
020 890827-11A00 DESCRIPTION PRINTED  
030 890827-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890827-74A00 LOAD AND TEST DECK  
050 ABSTRACT CMPS IS A COMPLETE APPLICATIONS PACKAGE FOR THE GENERATION, STORAGE, MODIFICATIONS AND RETRIEVAL OF  
060 CONTOUR MAPS. SYSTEM CAN ALSO DO AREA AND VOLUME CALCULATIONS AND CAN GENERATE SURFACE FIT EQUATIONS.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
080 MAIN PROGRAM IS WRITTEN IN SYMBOL.  
090 SYSTEM IS AVAILABLE IN ROM FORM ONLY. SYSTEM REQUIRES 24K RBM SYSTEM WITH 7246 DISK STORAGE. SYSTEM  
100 USES SYMPOINT OUTPUT.

B3890828 000 AA SIGMA 5-9 SPLURGE FOR BPM P UC  
010 AUTHDR B. GAY, BUCKNELL UNIVERSITY  
020 890828-11A00 DESCRIPTION PRINTED  
030 890828-44A00 \* COMPRESSED CARDS  
040 ABSTRACT THE FUNCTION OF THE SPLURGE PROCESSOR IS TO PURGE UNWANTED FILES FROM THE SYSTEM'S MASS STORAGE MEDIA.  
050 SPECIFICATIONS OF ACCOUNTS AND FILE NAMES FOR FILES WHICH ARE TO REMAIN ARE INPUT AND THE UNDECLARED  
060 FILES ARE DELETED LEAVING ONLY THE DECLARED FILES.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER THE BPM/BTM OPERATING SYSTEM. THE PROGRAM IS A UTILITY TYPE. THE BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN IS METASYMBOL.



B3890829 000 AA SIGMA 6-9 SPLURGE FOR UTS P UC  
 010 AUTHOR B. GAY, BUCKNELL UNIVERSITY  
 020 890829-11A00 DESCRIPTION PRINTED  
 030 890829-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THE FUNCTION OF THE SPLURGE PROCESSOR IS TO PURGE UNWANTED FILES FROM THE SYSTEM'S MASS STORAGE MEDIA.  
 050 SPECIFICATIONS OF ACCOUNTS AND FILE NAMES ARE INPUT FOR FILES WHICH ARE TO REMAIN, AND THE UNDECLARED  
 060 FILES ARE DELETED LEAVING ONLY THE DECLARED FILES.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER THE UTS OPERATING SYSTEM. THIS PROGRAM IS A UTILITY TYPE. THE BASE  
 080 LANGUAGE MAIN PROGRAM IS WRITTEN IN IS METASYMBOL.

B3890831 000 AA SIGMA 7 IBM-XEROX APL WORKSPACE CONVERTER P UC  
 010 AUTHOR D. SMERESKI  
 020 890831-11A00 DESCRIPTION PRINTED  
 030 890831-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890831-36A00 890831-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890831-46A00 890831-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 060 ABSTRACT THE IBM XEROX APL WORKSPACE CONVERTER IS DESIGNED TO TAKE IBM-APL WORKSPACES FROM A SEL-DUMP TAPE  
 070 (STANDARD BACKUP METHOD AT I.P. SHARP) AND CONVERT THEM TO FILES OF THE SAME NAME ON THE UTS FILE SYSTEM  
 080 IN THE FORMAT OF XEROX-APL WORKSPACES. CONVERT MUST BE ENTERED AS A SHARED PROCESSOR WITH JIT ACCESS  
 090 FOR IT TO WORK.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 110 IS WRITTEN IN METASYMBOL.

B3890832 000 AA SIGMA 6/7/9 IBM-XEROX APL FILE CONVERTER P UC  
 010 AUTHOR J. STANSBURY  
 020 890832-11A00 DESCRIPTION PRINTED  
 030 890832-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890832-46A00 890832-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 050 890832-86A00 890832-26 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 060 ABSTRACT THE APL FILE CONVERTER (FCUN) IS USED TO CONVERT THE APL FILES OF I.P. SHARP AND SCIENTIFIC TIME SHARING  
 070 CORPORATION TO THE FORMAT USED BY XEROX UTS/APL. THE INPUT IS THE FSELDUMP TAPE CREATED BY EITHER OF  
 080 THE ABOVE APL SERVICES. THE OUTPUT IS THE CONVERTED SET OF FILES ON A UTS SYSTEM.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS-000 OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
 100 PROGRAM IS WRITTEN IN METASYMBOL.

B3890833 000 AB SIGMA 5-9 PAPER TAPE READ PROGRAM - TRANSLT P UC  
 010 AUTHOR A. VANHOUSE III, UNIVERSITY OF ALABAMA IN BIRMINGHAM  
 020 890833-11B00 DESCRIPTION PRINTED  
 030 890833-36B00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT TRANSLT READS INFORMATION FROM PAPER TAPE TO MAGNETIC TAPE OR DISC IN THE SPECIFIED FORMAT. PAPER  
 050 TAPES MAY BE ASCII OR EBCDIC CODING AS WELL AS FIXED-LENGTH BINARY RECORDS. THE OUTPUT MAY BE TO THE  
 060 LINE PRINTER ALSO. OPTIONS ARE PROVIDED FOR BLOCKING THE OUTPUT RECORDS AS WELL AS STACKING THE OUTPUT  
 070 FILE ONTO A MULTI-FILE TAPE.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER RRM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 090 IS WRITTEN IN MACROSYMBOL.

B3890834 000 AA SIGMA 6-9 INTERACTIVE CRITICAL PATH P UC  
 010 AUTHOR CARLETON UNIVERSITY  
 020 890834-11A00 DESCRIPTION PRINTED  
 030 890834-26A00 890834-36 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890834-36A00 SOURCE MAG TAPE, 9 CHANNELS  
 050 890834-76A00 890834-36 TEST DECK ON MAG TAPE  
 060 ABSTRACT AN ON-LINE PROGRAM FOR ANALYSIS OF A PROJECT NETWORK. AVAILABLE COMMANDS ALLOW THE USER TO CREATE,  
 070 EDIT, AND SAVE PERMINENT DISC FILES AS WELL AS EXECUTE THE ANALYZING PROGRAM OF THIS DATA AND LISTING  
 080 RESULTS. THE MAXIMUM NUMBER OF ACTIVITIES PERMITTED IS ONE HUNDRED.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER THE UTS OPERATING SYSTEM. PROGRAM TYPE IS APPLICATION. BASE LANGUAGE MAIN  
 100 PROGRAM IS WRITTEN IN FORTRAN.

B3890835 000 AA SIGMA 6-9 POLYNOMIAL CURVE FITTING P UC  
 010 AUTHOR CARLETON UNIVRSITY  
 020 890835-11A00 DESCRIPTION PRINTED  
 030 890835-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890835-36A00 890835-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890835-76A00 890835-26 TEST DECK ON TAPE  
 060 ABSTRACT THE POLYNOMIAL CURVE FITTING PROCESSOR IS AN INTERACTIVE PROGRAM. AFTER UP TO 200 POINTS ON THE X-Y AXIS  
 070 ARE DEFINED, THE POLYNOMIAL CURVE (UP TO THE 15TH DEGREE) IS FITTED TO THE X-Y POINTS.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS MATHEMATICAL APPLICATION. BASE  
 090 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890836 000 AA SIGMA 6-9 INTERACTIVE MULTIPLE LINEAR REGRESSION P UC  
 010 AUTHOR CARLETON UNIVERSITY  
 020 890836-11A00 DESCRIPTION PRINTED  
 030 890836-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890836-36A00 890836-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890836-76A00 890836-26 TEST DECK ON MAG TAPE  
 060 ABSTRACT THIS PROCESSOR, REGRESS, PERFORMS MULTIPLE LINEAR REGRESSIONS IN TWO METHODS: THE ORDINARY LEAST SQUARES  
 070 AND THE STEPWISE METHODS. UP TO 15 VARIABLES WITH EACH HAVING A MAXIMUM OF 200 OBSERVATIONS ARE  
 080 PERMITTED. EDITING, LISTING, TRANSFORMING, AND SAVING THE DATA ARE OTHER OPERATIONS PROVIDED BY REGRESS.

090 COMMENTS THIS PROGRAM WILL RUN UNDER THE UTS OPERATING SYSTEM. THE PROGRAM TYPE IS STATISTICAL APPLICATION.

B3890837 000 AA SIGMA 5-9 DISCRETE SIMULATION PACKAGE - SIMPAC P UC

010 AUTHOR CARLETON UNIVERSITY

020 890837-11A00 DESCRIPTION PRINTED

030 890837-36A01 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT SIMPAC IS A FORTRAN CALLABLE PACKAGE OF 37 SUBPROGRAMS AND FUNCTIONS. THE MAJOR COMPONENTS OF SIMPAC ARE

050 SERVICE ROUTINES FOR INITIALIZING AND DRIVING THE SIMULATION, UTILITY ROUTINES FOR FILE AND QUEUE

060 MAINTENANCE, DATA COLLECTION ROUTINES, AND RANDOM NUMBER GENERATORS.

070 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC SUBROUTINES. BASE

080 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890838 000 AA SIGMA 6-9 INTERACTIVE CONTINUOUS SIMULATION P UC

010 AUTHOR CARLETON UNIVERSITY

020 890838-11A00 DESCRIPTION PRINTED

030 890838-36A00 SOURCE MAG TAPE, 9 CHANNELS

040 890838-76A00 890838-36 LOAD DECK

050 890838-86A00 890838-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

060 ABSTRACT SIMUL8 IS A MODULAR PROGRAM ALLOWING THE USER CONSIDERABLE FLEXIBILITY IN SOLVING SYSTEMS OF

070 DIFFERENTIAL AS WELL AS QUADRATURE EQUATIONS. THE SUBSYSTEMS INCLUDED FEATURE SAVE AND RETRIEVE MODELS,

080 PLOTTING ON USERS TERMINAL AND FACILITIES TO DEFINE AND MODIFY MODELS.

090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE

100 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890839 000 AA SIGMA 6-9 INTERACTIVE ANALYSIS OF VARIANCE P UC

010 AUTHOR CARLETON UNIVERSITY

020 890839-11A00 DESCRIPTION PRINTED

030 890839-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 890839-76A00 890839-36 LOAD DECK ON TAPE

050 890839-86A00 890839-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

060 ABSTRACT A STANDARD ANALYSIS OF VARIANCE FOR GENERAL, COMPLETE DESIGNS WITH AN EQUAL NUMBER OF SCORES PER CELL.

070 KEYWORDS ARE USED IN THE PROCESSOR TO ALLOW THE USER TO DEFINE, LIST, SAVE, AND EDIT THE INPUT TO BE

080 ANALYZED. THE MAXIMUM NUMBER OF SCORES FOR ANYONE ANALYSIS IS 1000.

090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS STATISTICAL APPLICATION. BASE

100 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890840 000 AA SIGMA 6-9 INTERACTIVE PLOTTING PROGRAM P UC

010 AUTHOR CARLETON UNIVERSITY

020 890840-11A00 DESCRIPTION PRINTED

030 890840-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890840-36A00 890840-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890840-76A00 890840-26 LOAD DECK ON TAPE  
 060 ABSTRACT THE PLOTTING PROGRAM PRODUCES TERMINAL-OUTPUT PLOTS. THE USER MAY INPUT UP TO 15 VARIABLES, EACH HAVING  
 070 A MAXIMUM OF 100 VALUES. EACH PLOT MAY HAVE UP TO FOUR VARIABLES PLOTTING AGAINST ANY OTHER VARIABLE.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 090 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890841 000 AA SIGMA 6-9 INTERACTIVE CROSS TABULATION P UC

010 AUTHOR CARLETON UNIVERSITY  
 020 890841-11A00 DESCRIPTION PRINTED  
 030 890841-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890841-36A00 890841-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890841-76A00 890841-26 LOAD DECK ON TAPE  
 060 ABSTRACT AN INTERACTIVE CROSS TABULATION PROGRAM, MINITAB, WHICH IS CAPABLE OF HANDLING FILES INVOLVING AS MANY  
 070 AS 48 VARIABLES. MINITAB HAS FACILITIES TO LIST, EDIT, RECODE, STORE AND RETRIEVE FILES AS WELL AS  
 080 FACILITIES TO PRODUCE TABLES OF BOTH COUNTS AND PERCENTAGES.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS STATISTICAL APPLICATION. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890842 000 AA 9-SERIES SYSGEN 2 - 800 MONARCH P UM

010 AUTHOR XEROX  
 020 890842-11A00 DESCRIPTION PRINTED  
 030 890842-74A00 BINARY SYSGEN DECK  
 040 ABSTRACT THIS MODIFICATION OF SYSGEN 2 PROVIDES THE CAPABILITY OF PUTTING FORTRAN SUBROUTINES INTO THE FORTRAN  
 050 LIBRARY (FORTLIB).  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS OPERATING SYSTEM. BASE LANGUAGE  
 070 MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
 080 THIS CHANGE IS BASED ON THE 800 VERSION OF RAD MONARCH. THE -74 CARD DECK CONTAINS BOTH THE SYSGEN 1  
 090 AND SYSGEN 2 BINARY DECKS AND LABEL CARDS.

B3890843 000 AB SIGMA 5-9 CONTROL CARD FILER P UC

010 AUTHOR XEROX  
 020 890843-11A01 DESCRIPTION PRINTED  
 030 890843-26A01 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890843-36A01 890843-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890843-46A01 890843-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 060 ABSTRACT A PROCESSOR WHICH READS CARDS, INCLUDING MONITOR CONTROL CARDS. OUTPUT CAN BE A FORMATTED PRINTER  
 070 LISTING AND/OR A CONSECUTIVE FILE OF CARD-IMAGES AND/OR A READY-TO-EDIT KEYED FILE. PERFORMS AUTOMATIC

080 LINE-NUMBERING, KEY GENERATION, AND CAN CONVERT ALL OR SELECTED PARTS OF THE INPUT DECK FROM FBCD TO  
090 BCD. CARDS ARE PLACED IN THE READER UPSIDE DOWN AND READ IN THE BINARY MODE.  
100 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM/UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
110 PROGRAM IS WRITTEN IN METASYMBOL.

B3890846 000 AA SIGMA 5-9 ALTRAN RUN-TIME ROUTINES P UC

010 AUTHOR P. SHERROD, VANDERBILT UNIVERSITY  
020 890846-11A00 DESCRIPTION PRINTED  
030 890846-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS

040 ABSTRACT METASYMBOL 'PRIMITIVE' ROUTINES FOR USE WITH THE ALTRAN PROCESSOR WHICH IS AVAILABLE FROM BELL LABS.  
050 ALTRAN IS A SOPHISTICATED LANGUAGE FOR ALGEBRAIC MANIPULATION OF SYMBOLIC POLYNOMIAL EXPRESSIONS.  
060 ALTRAN HAS FEATURES OF ALGOL (E.G., RECURSIVE PROCEDURES) AND FORTRAN AND INCLUDES A DATA TYPE  
070 'ALGEBRAIC'. IT WILL AUTOMATICALLY FACTOR AND SIMPLIFY THE RESULTS OF ALGEBRAIC MANIPULATIONS OF  
080 POLYNOMIALS. ONE COULD, FOR EXAMPLE, EASILY FIND THE INVERSE OF A MATRIX EACH ELEMENT OF WHICH WAS A  
090 POLYNOMIAL.

100 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS SCIENTIFIC PROCESSOR.  
110 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL. THE ALTRAN PROCESSOR MAY BE REQUESTED BY WRITING  
120 TO: W.S. BROWN/ ALTRAN PROJECT/ BELL LABS; 600 MOUNTAIN AVENUE/ MURRAY HILL, NEW JERSEY 07974.

B3890850 000 AA SIGMA 5-9 UCLA BIOMEDICAL STATISTICAL PACKAGE-BMD P UC

010 AUTHOR XEROX CORPORATION  
020 890850-11A00 DESCRIPTION PRINTED  
030 890850-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
040 890850-76A00 890850-36 LOAD AND TEST FILES ON TAPE

050 ABSTRACT THE BMD PACKAGE IS A GROUP OF 63 GENERAL STATISTICAL PROGRAMS. THERE ARE SEVEN CLASSES OF PROGRAMS:  
060 DESCRIPTION AND TABULATION OF DATA, MULTIVARIANT ANALYSIS, REGRESSION ANALYSIS, TIME SERIES ANALYSIS,  
070 VARIANCE ANALYSIS, GUTMAN SCALE ANALYSIS, AND FACTOR ANALYSIS.

080 COMMENTS THIS PROGRAM WILL RUN UNDER ALL OPERATING SYSTEMS. PROGRAM TYPE IS STATISTICAL PROGRAMS. BASE LANGUAGE  
090 MAIN PROGRAM IS WRITTEN IN FORTRAN.  
100 THE PROGRAMS WILL RUN UNDER ALL PRESENT XEROX SYSTEMS AND COMPUTERS, INCLUDING THE 16-BIT COMPUTERS.  
110 THE -11 CONTAINS THE ADDRESS WHERE DOCUMENTATION MAY BE ORDERED FROM UCLA.

B3890858 000 AA SIGMA 6-9 DISPLAY SET DCB'S P UC

010 AUTHOR B. FINEMAN, UNIVERSITY OF VERMONT  
020 890858-11A00 DESCRIPTION PRINTED  
030 890858-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890858-36A00 890858-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890858-76A00 890858-26 LOAD DECK ON TAPE  
060 890858-86A00 890858-26 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

070 ABSTRACT THIS PROCESSOR LISTS THOSE DCB'S WHICH HAVE BEEN MODIFIED BY A SET COMMAND DURING THE PRESENT LOG-ON  
080 SESSION. THE DEVICE OR FILE ASSIGNED TO THE DCB IS LISTED AS WELL AS THE OPTIONS SET.  
090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
100 IS WRITTEN IN METASYMBOL.

B3890865 000 AA SIGMA 6/7/9 INTERACTIVE LEAST SQUARES CURVE FITTING P UC

010 AUTHOR XEROX

020 890865-11A00 DESCRIPTION PRINTED

030 890865-36A00 SOURCE MAG TAPE, 9 CHANNELS

040 890865-86A00 890865-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

050 ABSTRACT CURFTY IS AN INTERACTIVE CURVE-FITTING PROGRAM THAT USES THE LEAST SQUARES TO FIT TO FIT DATA FROM  
060 USER-CREATED FILES TO THE FOLLOWING CURVE TYPES:

070 1.  $Y=A+BX$

080 2.  $Y=AEBX$

090 3.  $Y=AXR$

100 4.  $Y=A+(R/X)$

110 5.  $Y=1/(A+Bx)$

120 6.  $Y=X/(A+Bx)$

130 THE PROGRAM AUTOMATICALLY SORTS THE DATA IN ASCENDING ORDER OF X-VALUES. THE OUTPUT CONSISTS OF A AND B  
140 COEFFICIENTS AND AN INDEX OF DETERMINATION (WHICH APPROACHES UNITY FOR THE BEST FIT). THE USER IS  
150 PROVIDED WITH THE OPTIONS OF SEEING THE FULL DETAILS FOR EVERY DATA POINT OR LOOKING AT JUST THE  
160 HIGHLIGHTS. 200 POINTS MAXIMUM MAY BE FIT.

170 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
180 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890866 000 AA SIGMA 6/7/9 INTERACTIVE MULTIPLE REGRESSION ANALYSIS P UC

010 AUTHOR XEROX

020 890866-11A00 DESCRIPTION PRINTED

030 890866-36A00 SOURCE MAG TAPE, 9 CHANNELS

040 890866-86A00 890866-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

050 ABSTRACT MULFIT INTERACTIVELY PERFORMS A MULTIPLE REGRESSION ANALYSIS FOR AS MANY AS SIX INPUT VARIABLES WITH THE  
060 OPTION THAT THE INPUT VARIABLES CAN BE TRANSFORMED. SIXTEEN RELATIONSHIPS ARE PROVIDED FOR  
070 TRANSFORMATION, ALONG WITH TWO TEMPORARY STORAGE LOCATIONS.

080 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
090 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890867 000 AA SIGMA 6/7/9 INTERACTIVE STEPWISE REGRESSION PROGRAM P UC

010 AUTHOR XEROX

020 890867-11A00 DESCRIPTION PRINTED

030 890867-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890867-86A00 890867-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 050 ABSTRACT STEP IS AN INTERACTIVE PROGRAM THAT PERFORMS STEPWISE REGRESSION ON USER CREATED FILES. USER HAVE THE  
 060 OPTIONS OF SPECIFYING VARIABLES TO BE FORCED INTO THE REGRESSION, DELETING VARIABLES, NAMING ANY  
 070 VARIABLE AS THE DEPENDENT VARIABLE, AND LIMITING THE VARIABLES ENTERING THE REGRESSION. IF  
 080 TRANSGENERATION OF THE DATA IS DESIRED EITHER OF THE PROGRAMS TRAN OR TRANB (CAT.NO. 890868) MAY BE USED  
 090 BEFORE USING STEP.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
 110 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890868 000 AA SIGMA 6/7/9 INTERACTIVE TRANSGENERATION P UC  
 010 AUTHOR XEROX  
 020 890868-11A00 DESCRIPTION PRINTED  
 030 890868-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890868-86A00 890868-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 050 ABSTRACT TRAN AND TRANB ARE TWO INTERACTIVE PROGRAMS THAT PERMIT THE USER TO TRANSFORM DATA STORED IN HIS FILE  
 060 AND STORE THE RESULT IN A FILE THAT MAY NOT HAVE THE SAME NAME AS HIS INPUT FILE. FIFTEEN  
 070 RELATIONSHIPS ARE PROVIDED FOR TRANSFORMATION ALONG WITH TWO TEMPORARY STORAGE LOCATIONS. TRAN IS  
 080 INTENDED FOR SMALL DATA SETS (MAX. OF 6X250) AND TRANB FOR LARGER ONES (MAX. OF 20X500). UP TO  
 090 TRANSFORMATIONS MAY BE MADE WITH EITHER PROGRAM.  
 100 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEMS. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
 110 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890869 000 AA SIGMA 6/7/9 MOMENTS OF INERTIA & RADIUS OF GYRATION P UC  
 010 AUTHOR XEROX  
 020 890869-11A00 DESCRIPTION PRINTED  
 030 890869-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890869-86A00 890869-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 050 ABSTRACT MOMENTS IS AN INTERACTIVE PROGRAM THAT ENABLES THE USER TO CALCULATE CENTER OF GRAVITY, POLAR MOMENT OR  
 060 INERTIA ABOUT THE CENTER OF GRAVITY AS WELL AS ABOUT AXIS OF ROTATION, AND RADIUS OF GYRATION OF BOTH  
 070 THE CENTER OF GRAVITY AND AXIS OF ROTATION OF ANY GIVEN THREE-DIMENSIONAL OBJECT.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS SCIENTIFIC PROCESSOR. BASE LANGUAGE  
 090 MAIN PROGRAM IS WRITTEN IN FORTRAN.

B3890870 000 AA SIGMA 5-9 CLEBSCH-GORDAN SUBROUTINE P UC  
 010 AUTHOR XEROX  
 020 890870-11A00 DESCRIPTION PRINTED  
 030 890870-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS FORTRAN CALLABLE SUBROUTINE CALCULATES THE CLEBSCH-GORDAN COEFFICIENTS AS DEFINED IN "THE THEORY OF

050 ATOMIC SPECTRA", BY E.O. CONDON AND G.H. SHORTLY (P.75, 1967 EDITION).  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM, RBM AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS SCIENTIFIC  
 070 SUBROUTINE. BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
 080 THE CALLING PROGRAM MUST SUPPLY PARAMETERS NJ1, NJ2, M1, M2, NJ, M. SUBROUTINE CLEBSH RETURNS THE  
 090 COEFFICIENTS CGC AND C3J AS DEFINED IN THE REFERENCE ABOVE. CLEBSH USES SUBROUTINE FACT WHICH IS  
 100 INCLUDED IN THE SUPPLIED SOURCE MODULE.

B3890871 000 AA SIGMA 6/7/9 GRAPHICS SUBROUTINES P UC

010 AUTHOR XEROX CORPORATION

020 890871-11A00 DESCRIPTION PRINTED

030 890871-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THIS SET OF FORTRAN-CALLABLE SUBROUTINES SUPPLEMENTS THE STANDARD CALCOMP GRAPHICS SUBROUTINES. THE  
 050 FOLLOWING FUNCTIONS ARE PROVIDED: CONTOUR MAPPING; THREE-DIMENSIONAL SURFACE PROJECTION; LOGARITHMIC  
 060 GRIDS; PROBABILITY AXIS, GRID, AND CURVE PLOTTING; INTEGER AXIS ANNOTATION; DASHED LINE GENERATORS; AND  
 070 A SIMPLIFIED GRAPH PLOTTING PACKAGE.

080 COMMENTS PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

090 THE SUPPLIED PACKAGE CONTAINS TEN SUBROUTINES WHICH CAN BE IMPLEMENTED INDIVIDUALLY OR AS A COMPLETE  
 100 SUPPLEMENTARY GRAPHICS LIBRARY. ALL OF THE SUBROUTINES CALL ONE OR SEVERAL OF THE BASIC CALCOMP  
 110 PROGRAMS WHICH MUST BE ORDERED AND IMPLEMENTED SEPARATELY BECAUSE THEY ARE INSTALLATION DEPENDENT  
 120 (HARDWARE AND OPERATING SYSTEM).

B3890872 000 AA SIGMA 6/7/9 GRAPHIC VECTOR FILE P UC

010 AUTHOR XEROX

020 890872-11A00 DESCRIPTION PRINTED

030 890872-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THE GRAPHIC VECTOR FILE REMOVES DEVICE DEPENDENCY FROM PLOTTING PROGRAM EXECUTION. CALLS TO CALCOMP  
 050 SUBROUTINES ARE STORED IN THE FILE, WHICH MAY SUBSEQUENTLY BE USED ON THE MOST AVAILABLE AND/OR THE MOST  
 060 APPROPRIATE PLOTTING DEVICES.

070 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE LANGUAGE  
 080 MAIN PROGRAM IS WRITTEN IN FORTRAN.

090 THE VECTOR FILE CAN BE SAVED, EDITED, AND REUSED ON DIFFERENT DEVICES BY RUNNING DIFFERENT CONVERSION  
 100 PROGRAMS.

B3890873 000 AA SIGMA 5-9 SIM519 P UC

010 AUTHOR XEROX

020 890873-11A00 DESCRIPTION PRINTED

030 890873-34A00 \* SOURCE CARDS

040 ABSTRACT SIM519, WHICH IS THE 519 SIMULATOR, PROVIDES SIGMA USERS WITH CARD TO CARD FUNCTIONS SIMILAR TO THOSE OF  
 050 AN IBM 519 REPRODUCING PUNCH, I.E., 80-80 REPRODUCE, OFF-SET REPRODUCE, GANG-PUNCH EMIT, AND SETTING OR



060 CLEARING ZONE PUNCHES.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
080 PROGRAM IS WRITTEN IN COBOL.

B3890876 000 AB SIGMA 5 METASYMBOL SOURCE PROGRAM COMPILER P UC  
010 AUTHOR A. GROMMA, STANFORD LINEAR ACCELERATOR CENTER  
020 890876-11B00 DESCRIPTION PRINTED  
030 890876-26B00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890876-46B00 890876-26 COMPRESSED MAG TAPE, 9 CHANNELS  
050 ABSTRACT THIS PROGRAM WILL COMPARE TWO METASYMBOL (OR FORTRAN) SOURCE FILES (PRESUMABLY TWO VERSIONS OF THE SAME  
060 PROGRAM), AND WILL OUTPUT AN UPDATE DECK (IN METASYMBOL UPDATE FORMAT) SUFFICIENT TO TRANSFORM THE FIRST  
070 SOURCE FILE INTO THE SECOND. THE LISTING OF THIS UPDATE DECK CAN OPTIONALLY INCLUDE LINES "DELETED"  
080 FROM THE FIRST SOURCE FILE. THE SOURCE FILES CAN BE EITHER EBCDIC OR COMPRESSED, AND CAN BE EITHER  
090 BLOCKED OR UNBLOCKED.  
100 THE PROGRAM IS INTENDED TO BE HELPFUL IN MAINTAINING SUCCESSIVE RELEASES OF MANUFACTURER-SUPPLIED  
110 SOFTWARE THAT HAS BEEN HEAVILY MODIFIED BY THE USER.  
120 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
130 PROGRAM IS WRITTEN IN METASYMBOL.  
140 THE PROGRAM OCCUPIES 4 PAGES, AND USES M:GP TO GET ALL AVAILABLE PAGES FOR WORKSPACE. THE PROGRAM DOES  
150 NOT USE BYTE STRING INSTRUCTIONS. CODE HAS BEEN ADDED TO THE CURRENT VERSION (B00) TO PRODUCE THE "BEST  
160 POSSIBLE" (I.E., MINIMAL) OUTPUT.

B3890877 000 AA SIGMA 5-9 BROWSE - INTERACTIVE INDEXED TEXT SYSTEM P UC  
010 AUTHOR XEROX  
020 890877-11A00 DESCRIPTION PRINTED  
030 890877-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
040 890877-36A00 890877-26 SOURCE MAG TAPE, 9 CHANNELS  
050 890877-76A00 890877-26 LOAD AND TEST FILES ON TAPE  
060 ABSTRACT BROWSE IS AN INFORMATION STORAGE AND RETRIEVAL SYSTEM FOR PERSONAL OR SMALL GROUP WORK WITH KEYWORD  
070 INDEXED TEXT ITEMS. ITEMS ARE FREE-FORMAT, AND MAY HAVE ANY NUMBER OF KEYWORDS ATTACHED. RETRIEVAL IS  
080 BY KEYWORD OR ITEM NUMBER. THE SYSTEM IS DESIGNED FOR EASY INTERACTIVE USE FROM A TERMINAL; FOR BEING  
090 ABLE TO SCAN QUICKLY THROUGH RELATED MATERIAL. AN ALPHABETICAL DISPLAY OF CURRENT KEYWORDS IS PROVIDED  
100 TO AID IN INDEXING AND RETRIEVAL.  
110 COMMENTS THIS PROGRAM WILL RUN UNDER UTS OPERATING SYSTEM. PROGRAM TYPE IS APPLICATION-ORIENTED PROGRAM. BASE  
120 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL. OPERATES UNDER UTS MINIMUM CONFIGURATION; MAY BE USED  
130 ON-LINE OR IN BATCH. USES KEYED FILES. DATA BASE IS LIMITED TO 9999 ITEMS; KEYWORDS MAY BE FROM 1 TO  
140 19 CHARACTERS IN LENGTH.

B3890878 000 AA SIGMA 5-9 TRISTIMULUS TO MUNSELL COLOR TRANSLATOR P UC

	010	AUTHOR	XEROX		
	020		890878-11A00	DESCRIPTION PRINTED	
	030		890878-34A00 *	SOURCE CARDS	
	040		890878-74A00	DATA DEC	
	050	ABSTRACT	THE TABLES DEFINING THE TRANSFORMATION FROM C.I.E. CHROMATICITY COORDINATES TO MUNSELL HUE AND CHROMA		
	060		ARE SUMMARIZED BY POLYNOMIAL FITTING TECHNIQUES. THE POLYNOMIAL FORM GIVES AN EFFICIENT PROCEDURE FOR A		
	070		TWO-WAY TRANSFORM. THE SMOOTHNESS OF THE POLYNOMIAL APPROXIMATIONS ALLOWS THE JACOBIAN OF THE "FORWARD"		
	080		TRANSFORM (C.I.E. TO MUNSELL) TO BE ESTIMATED.		
	090	COMMENTS	THIS PROGRAM WILL RUN UNDER RPM/BTM/UTS OPERATING SYSTEMS. PROGRAM TYPE IS SCIENTIFIC SUBROUTINE. BASE		
	100		LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.		
B3890879	000	AA	SIGMA 2/3-530	BUFFERIN/BUFFEROUT	P UN
	010	AUTHOR	C. CODLING, XEROX CORPORATION		
	020		890879-11A00	DESCRIPTION PRINTED	
	030		890879-34A00 *	SOURCE CARDS	
	040	ABSTRACT	THESE LIBRARY ROUTINES PROVIDE THE FACILITY TO PERFORM ASYNCHRONOUS I/O ON ANY ARBITRARY FORMAT.		
	050	COMMENTS	THIS PROGRAM WILL RUN UNDER RPM OPERATING SYSTEM. PROGRAM TYPE IS LIBRARY ROUTINE. BASE LANGUAGE MAIN		
	060		PROGRAM IS WRITTEN IN XSYMBOL.		
	070		EOFSET IS INCLUDED TO ALLOW THE USE ENTRY OR CONTROL AT END-OF-FILE TIME. AN ENTRY, ICHECK, IS ALSO		
	080		INCLUDED TO ALLOW USERS TO CHECK STATUS ON ANY DEVICE IN A NO-WAIT MODE.		
B3890881	000	AA	SIGMA 5-9	DEMAND PAGED FORTRAN ARRAYS	P UC
	010	AUTHOR	XEROX		
	020		890881-11A00	DESCRIPTION PRINTED	
	030		890881-26A00	RELOCATABLE BINARY MAG TAPE, 9 CHANNELS	
	040		890881-36A00 890881-26	SOURCE MAG TAPE, 9 CHANNELS	
	050		890881-76A00 890881-26	TEST CASE ON TAPE	
	060	ABSTRACT	PROVIDES A RELATIVELY SIMPLE METHOD FOR FORTRAN PROGRAMMERS TO HANDLE ARRAYS THAT DO NOT FIT IN UTS		
	070		VIRTUAL CORE. A DEMAND PAGING SCHEME ATTEMPTS TO MAINTAIN IN CORE THOSE PAGES THAT ARE USED MOST		
	080		FREQUENTLY WHILE LESS FREQUENTLY USED PAGES ARE MAINTAINED IN A DISC FILE.		
	090	COMMENTS	THIS PROGRAM WILL RUN UNDER BPM/BTM/UTS OPERATING SYSTEM. PROGRAM TYPE IS LIBRARY ROUTINES. BASE		
	100		LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.		
B3890882	000	AA	9300	SAM9300-SELECTIVE AUTO MONITOR PROGRAM	P UN
	010	AUTHOR	G. KOSSUTH, PAPER LABORATORY		
	020		890882-11A00	DESCRIPTION PRINTED	
	030		890882-44A01 *	COMPRESSED CARDS	
	040		890882-74A01 890882-44	LOAD DECK	
	050	ABSTRACT	SELECTED REGIONS OF CORE CAN BE TRACED AND OCTAL CORE DUMPS TAKEN PROVIDING DEBUG INFORMATION TO THE		

060 METASYMBOL USER. TRACE WILL LIST EITHER OCTAL, FIXED POINT FRACTIONAL OR FLOATING POINT FORMAT.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER TAPE MONITOR OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER OR UTILITY. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

83890884 000 AA 9300 CARD READER/PUNCH DIAGNOSTIC PROGRAM P UM

010 AUTHOR C. OGREN, C.S. DRAPER LABORATORY  
020 890884-11A00 DESCRIPTION PRINTED  
030 890884-34A00 \* SOURCE CARDS  
040 890884-44A00 890884-34 COMPRESSED CARDS

050 ABSTRACT THIS PROGRAM PUNCHES A BINARY CARD DECK IN A KNOWN PATTERN (FOUR POSSIBILITIES) WHICH CAN BE READ BACK  
060 AND CHECKED FOR ERRORS. THE ERRORS ON THE READ PASS ARE OUTPUT WHEN THEY OCCUR, INDICATING THE CARD  
070 NUMBER, ROW, COLUMN, AND ERROR TYPE (DROPPED OR PICKED). ADDITIONALLY, THE ERRORS ARE SUMMARIZED AT THE  
080 END OF THE READ PASS INDICATING THE NUMBER OF ERRORS IN EACH ROW AND EACH COLUMN. THE READER AND PUNCH  
090 MAY BE OPERATED IN EITHER A CONTINUOUS OR START/STOP MODE, WITH A 250 MS DELAY BETWEEN I/O OPERATIONS.  
100 COMMENTS THIS PROGRAM WILL RUN UNDER B00 TAPE MONITOR. PROGRAM TYPE IS DIAGNOSTIC. BASE LANGUAGE MAIN PROGRAM  
110 IS WRITTEN IN FORTRAN.

83890885 000 AA 9300 MAGNETIC TAPE TEST PROGRAM P UM

010 AUTHOR C. OGREN & E. HARTNETT, C.S. DRAPER LABORATORY  
020 890885-11A00 DESCRIPTION PRINTED  
030 890885-34A00 \* SOURCE CARDS  
040 890885-44A00 890885-34 COMPRESSED CARDS

050 ABSTRACT THE PROGRAM PROVIDES EASIER MULTI-TESTING OF MAGNETIC TAPES WITH A MORE CONVENIENT USER-COMPUTER  
060 INTERFACE. THE TAPE TEST RESULTS ARE OUTPUT ON THE LINE-PRINTER. THE INFORMATION PROVIDED IS THE NAME  
070 OF THE TAPE, THE DATE TESTED, THE LENGTH OF THE TAPE IN FEET, THE NUMBER OF ERRORS, AND A LIST OF THE  
080 POSITIONS OF THE ERRORS IN FEET. THE PROGRAM HAS THE FACILITY TO TEST UP TO SEVEN TAPES WITH A MINIMUM  
090 OF USER ATTENTION.  
100 COMMENTS THIS PROGRAM WILL RUN UNDER B00 TAPE MONITOR OPERATING SYSTEM. PROGRAM TYPE IS DIAGNOSTIC. BASE  
110 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

83890886 000 AA 9300 16K DGC NOVA SIMULATOR P UM

010 AUTHOR J. GARMIL, A. VIREI, G. KOSSUTH  
020 890886-11A00 DESCRIPTION PRINTED  
030 890886-34A00 \* SOURCE CARDS  
040 890886-44A00 890886-34 COMPRESSED CARDS  
050 890886-74A00 890886-34 TEST PROGRAM

060 ABSTRACT A BIT BY BIT DIGITAL SIMULATION OF A DATA GENERAL NOVA LINE COMPUTER WITH EXTENSIVE DEBUG CAPABILITY HAS  
070 BEEN DEVELOPED FOR PROGRAM CHECKOUT. FEATURES INCLUDE ADDRESS STOP, EFFECTIVE ADDRESS STOP, TRACE AND  
080 MEMORY DUMP WITH 16K SIMULATED MEMORY AND ITI, TIO, PTR, PTP, PTP, RTC, LPT, DEVICES SIMULATED. THE CPU

090 RUNS APPROXIMATELY 100 TIMES SLOWER THAN REAL-TIME.  
100 COMMENTS THIS PROGRAM WILL RUN UNDER TAPE MONITOR OPERATING SYSTEM. PROGRAM TYPE IS SIMULATOR. BASE LANGUAGE  
110 MAIN PROGRAM IS WRITTEN IN FORTRAN AND METASYMBOL.

B3890890 000 AB SIGMA 5-9 UCLA BIOMEDICAL PROG.-REGULAR & X SERIES P UC

010 AUTHOR D. PALMER, VANDERBILT UNIVERSITY

020 890890-11B00 DESCRIPTION PRINTED

030 890890-36B00 \* SOURCE MAG TAPE, 9 CHANNELS

040 890890-46B00 890890-36 COMPRESSED MAG TAPE, 9 CHANNELS

050 ABSTRACT THE UCLA BMD BIOMEDICAL SERIES CONSISTS OF OVER 50 STATISTICAL ANALYSIS PROGRAMS. THESE ROUTINES ARE AS  
060 DESCRIBED IN THE UCLA BMD MANUAL, 3RD EDITION (DATED JANUARY 1, 1973), AS PUBLISHED BY THE UNIVERSITY OF  
070 CALIFORNIA PRESS. AN EFFORT WAS MADE TO RETAIN ALL OF THE FEATURES OF THE UCLA PROGRAMS. AS A RESULT,  
080 SOME METASYMBOL ROUTINES WERE WRITTEN TO HANDLE CHARACTER (BYTE) MANIPULATION, AND THE FORTRAN LIBRARY  
090 ROUTINE 9TEDIT WAS MODIFIED SO AS TO DISTINGUISH ZEROS FROM BLANKS ON INPUT.

100 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/CP-V/UTS OPERATING SYSTEMS. PROGRAM TYPE IS STATISTICAL ANALYSIS

110 PROGRAMS. BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.

120 THIS VERSION REPLACES THE BMD REGULAR AND X-SERIES PROGRAMS AS DESCRIBED IN THE 2ND EDITION OF THE BMD  
130 MANUAL AND THE BMDX MANUAL. THESE PROGRAMS WILL RUN UNDER BPM, UTS, AND CP-V OPERATING SYSTEMS.

B3890894 000 AA SIGMA 5-9 APEXTCLP P UC

010 AUTHOR XEROX

020 890894-11A00 DESCRIPTION PRINTED

030 890894-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS

040 890894-36A00 890894-26 SOURCE MAG TAPE, 9 CHANNELS

050 890894-46A00 890894-26 COMPRESSED MAG TAPE, 9 CHANNELS

060 890894-74A00 DATA AND TEST PROGRAM ON CARDS

070 ABSTRACT APEXTCLP USES AP CONCORDANCE LISTINGS (GENERATED BY THE AP DC OPTION) OF MULTI-MODULE PROGRAMS AS INPUT  
080 AND GENERATES A GLOBAL CONCORDANCE LIST OF ALL EXTERNAL LINKAGES AS INDICATED BY THE DIRECTIVES DEF,  
090 REF, SREF OR DSECT. EVEN THOUGH APEXTCLP ACCEPTS ONLY CONCORDANCE LISTINGS GENERATED BY AP, IT MAY BE  
100 USED TO PRODUCE GLOBAL CONCORDANCE LISTINGS OF MULTI-MODULE PROGRAMS CONSISTING OF ASSEMBLY PROGRAMS, OR  
110 FORTRAN PROGRAMS, OR BOTH. IN CASE OF FORTRAN PROGRAM MODULES THE PROGRAM LOINTOSI RECONSTRUCTS AN AP  
120 PROGRAM FROM THE FORTRAN LO LISTING.

130 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS SERVICE ROUTINE. BASE LANGUAGE MAIN  
140 PROGRAM IS WRITTEN IN XEROX AP.

150 APEXTCLP IS AN EXTREMELY USEFUL DEBUGGING TOOL FOR LARGE MULTI-MODULE PROGRAMS WITH MANY EXTERNAL  
160 LINKAGES.

B3890895 000 AA SIGMA 6/7/9 AUTOMATED PROCUREMENT STATUS (APS) SYS. P UC

010 AUTHOR J. MYCKLEBY

020 890895-02A00 UNPUBLISHED TECHNICAL DOCUMENTATION  
 030 890895-11A00 DESCRIPTION PRINTED  
 040 890895-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 050 890895-74A00 RUN DECK  
 060 ABSTRACT THE AUTOMATED PROCUREMENT STATUS (APS) SYSTEM IS A COLLECTION OF PROGRAMS THAT PROVIDE PRINTED PURCHASE  
 070 ORDERS, CHANGE NOTICES, COMPLETE HISTORICAL DATA, VENDOR AND BUYERS PERFORMANCE RECORDS, AUTOMATED  
 080 EXPEDITING, AND ON-LINE RECEIVING OF MATERIAL.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS COMMERCIAL APPLICATION PROGRAM.  
 100 BASE LANGUAGE MAIN PROGRAM IS WRITTEN IN COBOL.  
 110 OPERATES UNDER CP-V AND IS CURRENTLY BEING CONVERTED TO RUN WITH EDMS FILES. ADDITIONAL DOCUMENTATION  
 120 IS AVAILABLE IN THE FORM OF UNPUBLISHED TECHNICAL DOCUMENTATION. THIS ELEMENT, -02, CAN BE ORDERED  
 130 AFTER VERIFYING THE APPLICABILITY OF THIS SYSTEM.

B3890896 000 AB 900-SERIES 9-SERIES MAG TAPE DIAGNOSTICS P UM  
 010 AUTHOR XEROX  
 020 890896-11A00 DESCRIPTION PRINTED  
 030 890896-85A01 ABSOLUTE BINARY MAG TAPE, 7 CHANNELS  
 040 ABSTRACT A TAPE WHICH CONTAINS ALL EXISTING 9-SERIES DIAGNOSTICS WITH AN EASY-TO-USE INDEXING AND LOADING SCHEME.  
 050 FEATURES INCLUDE, 'W' AND 'Y' CHANNEL UNIVERSAL LOADERS, LISTABLE CATALOG NUMBERS ON LINE PRINTER OR  
 060 TELETYPE, LISTABLE OPERATING INSTRUCTIONS FOR ALL DIAGNOSTICS, AND MANY C.F. ORIENTED SERVICE ROUTINES.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER DCP OPERATING SYSTEM. PROGRAM TYPE IS DIAGNOSTIC. BASE LANGUAGE MAIN  
 080 PROGRAM IS WRITTEN IN METASYMOL.  
 090 OPERATES UNDER MINIMUM CONFIGURATION OF 8K MEMORY FOR 900/9300 SYSTEMS, AND 4K MEMORY FOR 92  
 100 SYSTEMS WITH ONE MAG TAPE UNIT AND TELETYPE. THIS UPDATE IS FOR PROGRAM CORRECTIONS  
 110 AND ADDITIONS. TAPE VERSION IS NOW ADI.

B3890897 000 AA SIGMA 3 DECIPHER SUBROUTINE P UH  
 010 AUTHOR XEROX  
 020 890897-11A00 DESCRIPTION PRINTED  
 030 890897-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS SUBROUTINE ALLOWS A USER TO ENTER OPTIONS ON THE CONTROL CARD; THE PROGRAM SORTS AND RETURNS THESE  
 050 OPTIONS TO THE MAIN PROGRAM ENCODED IN A USER-SUPPLIED ARRAY.  
 060 THESE OPTIONS RETURNED TO THE CALLING PROGRAM MAY THEN BE USED TO CONTROL THE MAIN PROGRAM.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 080 IS WRITTEN IN FORTRAN.  
 090 THE SUBROUTINE IS A FORTRAN PROGRAM WHICH USES IN-LINE ASSEMBLY CODES TO RETURN OPTIONS FROM THE CONTROL  
 100 CARD IMAGE. THE CONTROL CARD IMAGE IS READ FROM THE ADDRESS IN K:CCBUFF GIVEN IN THE MONITOR CONSTANT  
 110 TABLE (I.E. X'F7') AND THE OPTIONS ARE RETURNED IN A USER-SUPPLIED ARRAY THAT IS 80 WORDS LONG. THE  
 120 SUBROUTINE MUST BE CALLED BEFORE ANY CALLS TO BLOCKED FILES, OR RBM WILL DESTROY THE CONTROL CARD IMAGE.

B3890898 000 AA SIGMA 3 SIGMA 3 COC P UH  
 010 AUTHOR XEROX CORPORATION  
 020 890898-11A00 DESCRIPTION PRINTED  
 030 890898-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THIS MULTIPLE ENTRY POINT XSYMBOL PROGRAM GIVES A FORTRAN USER THE CAPABILITY OF READING FROM, WRITING  
 050 TO, CHECKING AND ISSUING A BREAK TO SPECIFIED COC LINE. THESE SUBROUTINES ALLOW FORTRAN PROGRAMS TO  
 060 ACCESS TELETYPE-COMPATIBLE TERMINALS CONNECTED TO COC LINES ON THE SIGMA . THIS PROGRAM PERMITS A  
 070 BACKGROUND JOB TO ACCESS ALL OF THE FUNCTIONS INHERENT IN M:COG.  
 080 COMMENTS THIS PROGRAM CAN BE PUT IN THE USER LIBRARY IN RBM-F01 FOR FORTRAN USE. IN RBM-F01, M:COG IS RESERVED  
 090 FOR FOREGROUND USE ONLY AND COG FORTRAN ALLOWS ACCESS TO ALL OF THE MONITOR SERVICE ROUTINES. THIS  
 100 RE-ENTRY PROGRAM COULD BE PLACED IN THE PUBLIC LIBRARY AND THUS ALLOW A BACKGOUND PROGRAM ACCESS TO  
 110 M:COG FUNCTIONS.

B3890902 000 AA SIGMA 3 BOOLEAN SUBROUTINES P UH  
 010 AUTHOR XEROX  
 020 890902-11A00 DESCRIPTION PRINTED  
 030 890902-34A00 \* SOURCE CARDS  
 040 890902-74A00 DATA AND TEST PROGRAMS  
 050 ABSTRACT THE SEVEN BOOLEAN OPERATIONS ARE IMPLEMENTED BY FORTRAN PROGRAMS WHICH USE IN-LINE ASSEMBLY CODES TO  
 060 PERFORM BIT MANIPULATION ON THE 16-BIT WORDS. THE OPERATIONS ARE INTEGER FUNCTIONS, WHICH CAN BE  
 070 COMPOUNDED.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 090 IS WRITTEN IN FORTRAN. THE SEVEN BOOLEAN OPERATIONS ARE IDENTICAL TO THE SIGMA 7 BOOLEAN OPERATIONS (SEE  
 100 THE FORTRAN IV MANUAL, 900956C, UNDER BOOLEAN) EXCEPT THE WORDS ARE 16-BITS INSTEAD OF 32-BITS, AND SOME  
 110 OF THE SIGMA 7 BOOLEAN OPERATIONS ARE ALLOWED WITH MORE THAN ONE ARGUMENT. THESE SUBROUTINES ARE  
 120 EXCEEDINGLY USEFUL IN DOING GRAPHICS AND OTHER OPERATIONS WHERE BIT MANIPULATIONS ARE REQUIRED.

B3890903 000 AA SIGMA 3 XGP-OUT P UH  
 010 AUTHOR XEROX  
 020 890903-11A00 DESCRIPTION PRINTED  
 030 890903-34A00 \* SOURCE CARDS  
 040 ABSTRACT THIS PROGRAM ALLOWS THE XEROX GRAPHICS PRINTER (XGP) TO BE USED AS A LINE PRINTER UNDER CONTROL OF RBM.  
 050 THE PROGRAM READS EBCDIC DATA A LINE AT A TIME AND FORMATS ON-THE-FLY TO THE XGP. OPTIONS INSERTED ON  
 060 THE CONTROL CARD CAN SELECT FOUR MODES OF OPERATION PLUS AN OUTPUTTING MODE TO ONE OF TWO XGP'S RUNNING  
 070 AT DIFFERENT RATES (I.E., 192 OR 128 BITS PER INCH). THE SOFTWARE CHANGEABLE FONT HAS A SET OF 256  
 080 CHARACTERS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 100 IS WRITTEN IN XSYMBOL.

110 THE PROGRAM IS 606 WORDS BUT REQUIRES 2 BUFFERS AND SPACE FOR THE FONT; FOR THE LOW-DENSITY XGP, THE  
 120 FONT IS 2048 WORDS, AND THE 2 BUFFERS TOGETHER REQUIRE 2048 WORDS. FOR THE HIGH-DENSITY XGP, THE  
 130 CORRESPONDING NUMBERS ARE 8192 AND 6144 WORDS RESPECTIVELY. THE PROGRAM ASSUMES THAT OPLABELS TO THE  
 140 XGP'S ARE INCLUDED AT SYSGEN AND THAT THE XGP'S ARE DECLARED AS XX DEVICES.

B3890909 000 AA SIGMA 3 CHAT P UH

010 AUTHOR XEROX CORPORATION  
 020 890909-11A00 DESCRIPTION PRINTED  
 030 890909-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 ABSTRACT THIS REAL TIME PROGRAM OPERATING UNDER RBM ALLOWS THE SIGMA 3 TO BE LINKED THROUGH CDC HARDWARE TO A  
 050 TIME SHARING COMPUTER (E.G. A SIGMA 7 OR OTHER SYSTEM) IN AN INTERACTIVE MODE IN WHICH THE SIGMA 3  
 060 COMPUTER APPEARS TO BE A TIME SHARING TERMINAL. WORKING FROM A TERMINAL THROUGH THE SIGMA 3, THE  
 070 OPERATOR CAN PERFORM FILE MANIPULATION IN THE SIGMA 3, PRINTING TO AN XGP, PLUS TRANSMIT FILES IN EITHER  
 080 DIRECTION IN FULL DUPLEX BETWEEN THE COMPUTERS. NO CHANGES ARE MADE IN THE OTHER TIME SHARING COMPUTER.  
 100 COMMENTS THE PROGRAM CONTAINS A ROOT, PLUS FIVE SEGMENTS. DEPENDING UPON THE OPERATIONS REQUIRED, NOT ALL OF THE  
 110 SEGMENTS NEED TO BE LOADED. THE ROOT PROGRAM OPERATES AS A SMALL INTERRUPT-DRIVEN FOREGROUND PROGRAM  
 120 WHICH CAN SUMMON, ON OPERATOR COMMAND, ANY OF THE OTHER SEGMENTS, PLUS CHECKPOINT BACKGROUND FOR  
 130 ADDITIONAL SPACE REQUIREMENTS.

B3890910 000 AA SIGMA 6-9/550 XEROX TO CONTROL DATA RJE (XCDRJE) P UC

010 AUTHOR XEROX  
 020 890910-11A00 DESCRIPTION PRINTED  
 030 890910-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890910-36A00 890910-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890910-76A00 890910-26 TEST ON TAPE  
 060 890910-86A00 890910-26 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS

070 ABSTRACT XCDRJE GIVES ANY XEROX COMPUTER RUNNING CP-V/A01 THE ABILITY TO FUNCTION AS A REMOTE JOB ENTRY STATION  
 080 TO CONTROL DATA COMPUTERS. XCDRJE CONSISTS OF THREE MODULES: CDCSEND - TAKES A USER SPECIFIED INPUT  
 090 FILE AND CONVERTS IT TO EXTROD AND BLOCKS THE DATA TO BE SENT TO CDC; CDCCOM - PERFORMS THE ACTUAL  
 100 COMMUNICATIONS LINK BETWEEN THE COMPUTERS, SENDS JOBS AND RECEIVES THE OUTPUT FROM THE JOBS THAT ARE  
 110 EXECUTED AT CDC; CDCRECV - RETRIEVES THE INFORMATION RETURNED FROM CDC, DECOMPRESSES AND CONVERTS IT TO  
 120 BE DIRECTED TO WHERE THE USER SPECIFIES.  
 130 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS COMMUNICATIONS PROCESSOR. BASE  
 140 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
 150 XCDRJE OPERATES UNDER CP-V/A01 CONCURRENT WITH ALL OTHER FUNCTIONS (BATCH, TIME-SHARING, ETC.). A  
 160 HALF-DUPLEX XEROX/7601 DATA SET CONTROLLER IS USED FOR COMMUNICATION.

B3890911 000 AA SIGMA 3-530 STATISTICAL SYSTEM - STATSYS P UH

010 AUTHOR W. GUSTAFSON

020 890911-11A00 DESCRIPTION PRINTED  
 030 890911-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890911-36A00 890911-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 890911-76A00 890911-26 LOAD TEST FILE ON MAG TAPE  
 060 ABSTRACT THE STATISTICAL SYSTEM (STATSYS) IS A PROCESSOR WHICH CONTAINS FOUR MAJOR PROGRAMS. THESE PROGRAMS  
 070 PERFORM STEPWISE LINEAR REGRESSION, FACTOR ANALYSIS, ANALYSIS OF VARIANCE, AND POLYNOMIAL FITTING WITH  
 080 ORTHOGONAL POLYNOMIALS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS APPLICATION-ORIENTED PROGRAM. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN FORTRAN.  
 110 THE SOURCE CODE IS WRITTEN ENTIRELY IN XEROX AHS FORTRAN IV AND OPERATES AS A BACKGROUND PROCESSOR UNDER  
 120 RBM-E02. THE PROCESSOR REQUIRES APPROX. 15K WORDS OF MEMORY. INPUT IS NORMALLY PROVIDED VIA A CARD  
 130 READER AND OUTPUT TO A LINE PRINTER. INTERMEDIATE DATA STORAGE IS NORMALLY IN A BACKGROUND TEMPORARY  
 140 FILE ON A 724X-TYPE DISK FILE, BUT IT MAY BE GENERATED TO A CARD RECORD OUTPUT DEVICE. THE MAXIMUM  
 150 NUMBER OF BYTES OF DISK STORAGE NEEDED FOR ANY ONE ANALYSIS IS 65K.

B3890916 000 AB SIGMA 6/7/9 FRAN P UC

010 AUTHOR D. GERMAN, DIECOMP, INC.  
 020 890916-11B00 DESCRIPTION PRINTED  
 030 890916-26B00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890916-36B00 890916-26 SOURCE MAG TAPE, 9 CHANNELS  
 050 ABSTRACT FRAN, RUNNING AS A GHOST IN BATCH OR ONLINE, LISTS LABELS ON LABEL TAPE (INCLUDING  
 060 FSAVE AND FILL TAPES) OR AHS TAPE TO M:LL DCB WHICH CAN BE ASSIGNED TO A FILE. FILE  
 070 ORGANIZATION, TAPES, RECORDS, AND BYTE SIZE ARE LISTED. OPTIONALLY, READ-WRITE  
 080 ACCOUNTS AND/OR PASSWORDS CAN BE LISTED. FRAN OPENS TAPE AS DEVICE 9I, SCRATCH TAPE.  
 081 IF TAPE IS UNLABELED, THE FIRST THREE AND THE LAST RECORDS ARE DUMPED TO M:DO.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER UTS-D00 OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
 100 PROGRAM IS WRITTEN IN METASYMBOL.

B3890917 000 AA SIGMA 5-9 SIGMA 5/7/9-560 GREFIER P UC

010 AUTHOR XEROX  
 020 890917-11A00 DESCRIPTION PRINTED  
 030 890917-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890917-76A00 890917-36 TEST MAG TAPE  
 050 890917-86A00 890917-36 ABSOLUTE BINARY MAG TAPE, 9 CHANNELS  
 060 ABSTRACT THIS PROGRAM, DESIGNED TO RUN AS AN AUTO-CALL PROCESSOR, RELAYS ADMINISTRATIVE MESSAGES  
 070 AND OTHER INFORMATION TO ON-LINE USERS. IN ADDITION, SEVERAL SPECIAL INITIALIZATION PROCEDURES,  
 080 SUCH AS TAB SETTING, AND RESETTNG RESTRICH TO UPPER CASE BASED ON USER ID, ARE ABAILABLE.  
 090 IF THE FILE :LINES.:SYS.WASH EXISTS, AN ENTRY WILL BE MADE CONTAINING USER ID AND THE TIME.



83890923 000 AC SIGMA 5-9 XPL/S COMPILER P UC  
 010 AUTHOR D. LIPKIE, D. LARSON, UNIV OF WASH/C. CODLING, XEROX  
 020 890923-11C00 DESCRIPTION PRINTED  
 030 890923-26C00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890923-36C00 890923-26 SOURCE MAG TAPE, 9 CHANNELS  
 041 890923-46C00 890923-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 060 ABSTRACT XPL/S IS A SYSTEMS IMPLEMENTATION LANGUAGE FOR THE SIGMA 5-9 SERIES. THE CLASS OF SYSTEMS WHOSE  
 070 IMPLEMENTATION MAY BE EXPEDITED THROUGH THE USE OF XPL/S INCLUDES TABLE-DRIVEN COMPILERS, INTERPRETERS,  
 080 TEXT PROCESSORS, AND FILE MANIPULATION SYSTEMS. FEATURES OF THE LANGUAGE INCLUDE DATA TYPES THAT MAKE  
 090 USE OF THE SIGMA BYTE, HALFWORD, AND STACK ADDRESSING HARDWARE, DIRECT ACCESS TO SHIFT INSTRUCTIONS, A  
 100 GOOD VARIETY OF CONTROL STRUCTURES, INCLUDING CASE, ITERATION, CONDITIONAL, LOOP AND EXIT. EXTERNAL  
 110 PROCEDURES AND DATA MAY BE DEFINED. CHARACTER STRING DATA TYPE AND STRING MANIPULATION FACILITIES ARE  
 120 PROVIDED.  
 130 COMMENTS SEPARATE COMPILATION, CALL-BY-REFERENCE AND OVERLAYS ARE SUPPORTED.  
 140 XPL/S IS RELATED TO XPL, AND IS A DIALECT OF PL/I. THE COMPILER IS, OF COURSE, SELF-  
 150 COMPILING. RE-ENTRANT CODE WITH APPROPRIATE ACCESS TYPE IS PRODUCED. A RUNTIME  
 160 LIBRARY IS REQUIRED AND IS SUPPLIED IN RBM AND CP-V/RPM/RTM VERSIONS.  
 170 THE XPL/S COMPILER AND ALL PROGRAMS WRITTEN IN XPL/S MAY BE RUN AS SHARED PROCESSORS UNDER CP-V.  
 180 THE RUN SUBSYSTEM MUST BE USED WITH HT4.

83890926 000 AA XEROX 530 DEMAND PAGER P UH  
 010 AUTHOR XEROX  
 020 890926-11A00 DESCRIPTION PRINTED  
 030 890926-34A00 \* SOURCE CARDS  
 040 890926-74A00 DATA AND TEST DECK  
 050 ABSTRACT THE XEROX 530 DEMAND PAGER PROVIDES A RELATIVELY EASY METHOD FOR FORTRAN PROGRAMMERS TO MANIPULATE DATA  
 060 ARRAYS WHOSE STORAGE REQUIREMENTS FAR EXCEED PHYSICAL AND EVEN ADDRESSABLE MEMORY. THE ONLY MAJOR  
 070 REPROGRAMMING REQUIRED IS RECODE STORES INTO PAGED ARRAYS. THE PAGER, ALTHOUGH SPECIFICALLY DESIGNED  
 080 FOR FORTRAN PROGRAMS, IS APPLICABLE TO ANY BACKGROUND BATCH PROGRAM UTILIZING FORTRAN FUNCTION CALLING  
 090 CONVENTIONS. FIELD AND FLOATING POINT HARDWARE IS REQUIRED, ALTHOUGH PROGRAMMERS MAY BE ABLE TO  
 100 ELIMINATE THESE REQUIREMENTS WITH SOME RECORDING.  
 110 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS SERVICE ROUTINE. BASE LANGUAGE MAIN  
 120 PROGRAM IS WRITTEN IN EXTENDED SYMBOL.

83890927 000 AA SIGMA 3-530 LSDMF - FORTRAN CALLABLE SORT P UH  
 010 AUTHOR XEROX  
 020 890927-11A00 DESCRIPTION PRINTED  
 030 890927-34A00 \* SOURCE CARDS  
 040 890927-74A00 890927-34 TEST DECK

050 ABSTRACT LSDMF CONSISTS OF A SET OF PROGRAM ROUTINES AND MODIFICATIONS TO THE STANDARD 530 SORT THAT PROVIDE THE  
 060 ABILITY TO CALL THE SORT FROM ANOTHER PROGRAM IN THE SAME MANNER USED TO CALL THE 1130 LSDMF SORT.  
 070 FILES TO BE SORTED MAY BE RANDOM OR PACKED RANDOM. EITHER PORTIONS OF OR ALL RECORDS IN A FILE MAY BE  
 080 SELECTED FOR SORTING IN PLACE.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER RRM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 100 IS WRITTEN IN EXTENDED SYMBOL.  
 110 SPECIAL SYSGEN CONSIDERATIONS, LOADING AND OPERATING PROCEDURE, ARE DETAILED IN THE PROGRAM  
 120 DOCUMENTATION. MODIFICATIONS TO THE SORT APPLY TO THE 800 RELEASE.

B3890928 000 AA SIGMA 6/7/9 BATQXCH - BATCH QUEUE EXCHANGER P UC  
 010 AUTHOR XEROX  
 020 890928-11A00 DESCRIPTION PRINTED  
 030 890928-44A00 \* COMPRESSED CARDS  
 040 890928-51A00 LISTING PRINTED  
 050 ABSTRACT CURRENTLY UTS/CP-V ALLOWS COMPUTE-BOUND USERS TO BE SCHEDULED AS A SINGLE QUEUE OR WITH ON-LINE USERS  
 060 HIGHER IN PRIORITY THAN BATCH USERS. BATQXCH ALLOWS THE SCHEDULING QUEUES TO BE ALTERED SO THAT BATCH  
 070 COMPUTE-BOUND USERS MAY BE HIGHER IN PRIORITY THAN ON-LINE. IT ALSO ALLOWS THE QUEUES TO BE  
 080 SET TO ANY SETTING AND TO BE DISPLAYED.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS SERVICE ROUTINE. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
 110 BATQXCH OPERATES EITHER ON-LINE OR AS A GHOST JOB.

B3890929 000 AB SIGMA 6/7/9 APL LEARNING AID - CLASS, APL COURSE P UC  
 010 AUTHOR XEROX  
 020 890929-11A00 DESCRIPTION PRINTED  
 030 890929-26A01 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THESE APL WORKSPACES ARE USED IN CONJUNCTION WITH THE APL VIDEOTAPE COURSE BY ALLEN ROSE AND THE PRINTED  
 050 VERSION OF THE VIDEOTAPE COURSE ENTITLED APL/360 AN INTERACTIVE APPROACH BY LEONARD GILMAN AND ALLEN  
 060 ROSE.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS APPLICATION PROGRAM. BASE LANGUAGE  
 080 MAIN PROGRAM IS WRITTEN IN APL.  
 090 THESE WORKSPACES WERE OBTAINED FROM XEROX ROCHESTER AND HAVE BEEN CONVERTED TO RUN USING XEROX APL. THE  
 100 USER SHOULD USE A 2741-COMPATIBLE TERMINAL WITH AN APL TYPE BALL.

B3890930 000 AA SIGMA 6/7/9 ERAN P UC  
 010 AUTHOR D. GERMAN, DIECOMP CORPORATION  
 020 890930-11A00 DESCRIPTION PRINTED  
 030 890930-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890930-36A00 890930-26 SOURCE MAG TAPE, 9 CHANNELS

050 ABSTRACT THIS PROGRAM, OPERATING ONLINE OR AS A GHOST, GIVES THE SYSTEM MANAGER DIRECT ACCESS TO ANY DISC  
060 GRANULF. GRAN REQUIRES CO PRIVILEGE SINCE IT GOES INTO MASTER MODE ONLY TO CHECK A GIVEN DISC ADDRESS,  
070 USING CHECKDA, AND TO QUEUE DISC I/O.  
080 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
090 IS WRITTEN IN METASYMBOL.

B3890931 000 AA XEROX SCU DOUBLE PRECISION MULTIPLY P US

010 AUTHOR XEROX  
020 890931-11A00 DESCRIPTION PRINTED  
030 890931-34A00 \* SOURCE CARDS

040 ABSTRACT A FIXED POINT MULTIPLY ROUTINE FOR MULTIPLYING TWO 16-BIT SIGNED NUMBERS AND PRODUCING A 32-BIT SIGNED  
050 PRODUCT. THE CODE CHECKS THE INPUTS FOR MAGNITUDE TO MINIMIZE CALCULATION EXECUTION TIME.

060 COMMENTS THIS PROGRAM WILL RUN UNDER STAND-ALONE OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
070 PROGRAM IS WRITTEN IN METASYMBOL.

B3890932 000 AA XEROX SCU DOUBLE PRECISION DIVIDE P US

010 AUTHOR XEROX  
020 890932-11A00 DESCRIPTION PRINTED  
030 890932-34A00 \* SOURCE CARDS

040 ABSTRACT A FIXED POINT DIVIDE ROUTINE FOR DIVIDING A 32-BIT SIGNED NUMBER BY A 16-BIT SIGNED DIVISOR AND  
050 PRODUCING A 16-BIT SIGNED QUOTIENT AND A 16-BIT REMAINDER.

060 COMMENTS THIS PROGRAM WILL RUN UNDER STAND-ALONE OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
070 PROGRAM IS WRITTEN IN METASYMBOL.

B3890933 000 AA SIGMA 5-9 MSP P UC

010 AUTHOR G. LEACH, UNIVERSITY OF WASHINGTON  
020 890933-11A00 DESCRIPTION PRINTED  
030 890933-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
040 890933-46A00 890933-36 COMPRESSED MAG TAPE, 9 CHANNELS

050 ABSTRACT THIS IS THE PROGRAM DESCRIBED BY MCKEEVAN, HORNING, AND NORTMAN IN THEIR BOOK, A COMPILER GENERATOR,  
060 PRENTICE-HALL, 1970. THE PROGRAM BUILDS TABLES FOR A PARSER THAT OPERATES BY THE MIXED STRATEGY  
070 PRECEDENCE ALGORITHM.

080 COMMENTS THIS PROGRAM IS A USEFUL TOOL IN THE CONSTRUCTION OF TABLE DRIVEN COMPILERS. IT IS NOT REQUIRED IN  
090 CONJUNCTION WITH THE XPL/VS COMPILER UNLESS CHANGES IN THE GRAMMAR ARE CONTEMPLATED.

B3890934 000 AB SIGMA 5-9 XPLSREF P UC

010 AUTHOR G. LEACH, UNIVERSITY OF WASHINGTON  
020 890934-11B00 DESCRIPTION PRINTED  
030 890934-34B00 \* SOURCE CARDS

040 ABSTRACT CROSS REFERENCE OF IDENTIFIERS IN AN XPL/S SOURCE PROGRAM.  
050 COMMENTS REQUIRES 800 VERSION OF XPL/S.

B3890935 000 AB SIGMA 5-9 XPLSFMT P UC  
010 AUTHOR G. LEACH, UNIVERSITY OF WASHINGTON  
020 890935-11B00 DESCRIPTION PRINTED  
030 890935-34B00 \* SOURCE CARDS  
040 ABSTRACT XPLSMT REFORMATS XPL/S SOURCE PROGRAM TEXT, INDENTING TO EXHIBIT  
050 KPROGRAM STRUCTURE, A USEFUL TOOL IN THE DEVELOPMENT AND MAINTENANCE  
060 OF XPL/S SOURCE PROGRAMS. IT ALSO PROVIDES FACILITY FOR CONVERSION OF  
070 800 XPL/S PROGRAMS TO 800.  
080 COMMENTS REQUIRES 800 VERSION OF XPL/S.

B3890936 000 AB SIGMA 5-9 MERGE P UC  
010 AUTHOR G. LEACH, UNIVERSITY OF WASHINGTON  
020 890936-11B00 DESCRIPTION PRINTED  
030 890936-34B00 \* SOURCE CARDS  
050 COMMENTS MERGE IS A PROGRAM THAT PROVIDES A NUMBER OF USE FACILITIES FOR THE MANIPULATION OF CARD-IMAGE FILE ON  
060 BOTH TAPE AND RAD. REQUIRES 800 VERSION OF XPL/S

B3890938 000 AA SIGMA 7/8/9 FLASH - TAPE TO PRINT UTILITY P UC  
010 AUTHOR XEROX CORPORATION  
020 890938-11A00 DESCRIPTION PRINTED  
030 890938-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS  
040 890938-76A00 890938-46 TEST ON MAG TAPE  
050 ABSTRACT FLASH IS A TAPE TO PRINT UTILITY WHICH BYPASSES THE SYMBIONT SYSTEM. AS WELL AS PERMITTING THE PRINTING  
060 OF LARGE REPORTS, FLASH PROVIDES THE USER WITH OPTIMUM LINE PRINTER THROUGHPUT, MINIMAL RESOURCE  
070 REQUIREMENTS, AND AN EASY OPERATOR INTERFACE.  
080 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE  
090 MAIN PROGRAM IS WRITTEN IN METASYMBOL.  
100 FLASH REQUIRES A 5-CARD PATCH TO IQQ FOR PRE CP-V/800 SYSTEMS.

B3890940 000 AA SIGMA 5-9 SOLE: SIGMA OBJECT LANGUAGE EATER P UC  
010 AUTHOR R. LOVESTEDT, UNIVERSITY OF WASHINGTON  
020 890940-11A00 DESCRIPTION PRINTED  
030 890940-44A00 \* COMPRESSED CARDS  
040 ABSTRACT SOLE (SIGMA OBJECT LANGUAGE EATER) IS A BASIC PROCESSOR FOR THE HANDLING OF SIGMA ROM'S. IN IT'S  
050 CURRENT STATE, SOLE ONLY PROVIDES ENGLISH INTERPRETING OF THE LOAD CODE AND BASIC ERROR CHECKING;  
060 HOWEVER, THE PROCESSOR IS STRUCTURED TO ALLOW MODIFICATIONS AND ADDITIONS TO BE EASILY MADE BY THE USER.

070 SUCH EXTENSIONS MIGHT INCLUDE EXTERNAL SYMBOL ITEMIZATION, ROM LOAD ITEM PATCHING, LOADERS, OR LIBRARY  
 080 MAINTENANCE AND HANDLING SYSTEMS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM, RBM AND CP-V OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN XPL/S. THIS PROCESSOR WILL RUN UNDER ANY OPERATING SYSTEM WHICH  
 110 SUPPORTS XPL/S. SOLE WILL PROCESS ONE ENTIRE FILE, WHICH MAY CONSIST OF ANY NUMBER OF ROM'S. XPL/S IS  
 120 CATALOG NUMBER 890923.

B3890941 000 AB SIGMA 6/7/9 SFTRAN P UC  
 010 AUTHOR A. IRVINE/B. NELSON/C. RIGGINS, JET PROPULSION LAB.  
 020 890941-11A00 DESCRIPTION PRINTED  
 021 890941-61A01 UPDATE INSTRUCTIONS PRINTED  
 030 890941-44A01 \* COMPRESSED CARDS  
 040 ABSTRACT A PREPROCESSOR TO THE FORTRAN IV COMPILER WHICH ALLOWS THE FORTRAN PROGRAMMER TO USE ALGOL 60 OR PL/I  
 050 LIKE-STRUCTURED CONSTRUCTS SUCH AS DO WHILE AND IF THEN...ELSE. THESE CONSTRUCTS ARE TRANSLATED INTO  
 060 FORTRAN STATEMENTS FOR LATER PROCESSING BY THE FORTRAN COMPILER.  
 070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 080 IS WRITTEN IN FORTRAN.  
 090 SFTRAN OPERATES UNDER BPM MINIMUM CONFIGURATION. IT IS CODED ENTIRELY IN FORTRAN AND IS RELATIVELY  
 100 MACHINE INDEPENDENT.

B3890942 000 AA SIGMA 5-9 SYMCON (BPM/BTM) P UC  
 010 AUTHOR P. BECKER, MARTIN-MARIETTA CO.-D. LAMPSON, XEROX CORPORATION  
 020 890942-11A00 DESCRIPTION PRINTED  
 030 890942-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT THE SYMBOL CONTROL PROCESSOR (SYMCON) PROVIDES A MEANS OF CONTROLLING THE EXTERNAL SYMBOLS IN A LOAD  
 050 MODULE. ITS PRIMARY FUNCTION IS TO GIVE THE PROGRAMMER A MEANS OF PREVENTING DOUBLE DEFINITIONS OF  
 060 EXTERNAL SYMBOLS. SYMCON (BPM/BTM) IS A CONVERSION OF CP-V SYMCON, AND WILL RUN EITHER IN THE BATCH  
 070 MODE OR ON-LINE UNDER THE RUN SUBSYSTEM.  
 080 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
 090 PROGRAM IS WRITTEN IN METASYMBOL.  
 100 REFERENCES TO INSTRUCTIONS FOR THE USE OF SYMCON SHOULD BE TO THE CP-V BATCH REFERENCE MANUAL (901764).  
 110 THE DELTA COMMANDS BUILD AND DISCARD HAVE BEEN DISABLED AND THEIR USE WILL GIVE THE ILLEGAL OPTION  
 120 MESSAGE.

B3890944 000 AA SIGMA 6/7/9 TIMESHARING SIMULATOR P UC  
 010 AUTHOR XEROX  
 020 890944-11A00 DESCRIPTION PRINTED  
 030 890944-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890944-36A00 890944-26 SOURCE MAG TAPE, 9 CHANNELS

050 890944-46A00 890944-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 060 890944-76A00 890944-26 DATA TEST TAPE  
 070 ABSTRACT THE TIMESHARING SIMULATOR (TSS) WILL ENABLE THE CONTROLLED SIMULATION OF TIMESHARING WITHOUT ADDITIONAL  
 080 HARDWARE OR PEOPLE. ANY NUMBER OF LINES, UP TO 64 FOR CP-V A00/B00, AND ALL TYPES OF INTERACTION CAN BE  
 090 SIMULATED. ALL INTERACTION MUST BE DESCRIBED IN A FILE, AND EACH LINE MUST BE DEFINED. ANY FACILITY  
 100 AVAILABLE TO A TERMINAL USER CAN BE UTILIZED BY TSS.  
 110 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS SIMULATOR. BASE LANGUAGE MAIN  
 120 PROGRAM IS WRITTEN IN METASYMBOL.  
 130 THE HARDWARE CONFIGURATION MUST INCLUDE A 7611. THE USER MUST SYSGEN FOR THE MAXIMUM NUMBER OF USERS  
 140 THAT WILL BE SIMULATED, BUT THE ACTUAL PHYSICAL LINES DO NOT HAVE TO EXIST. THE SIMULATOR ASSUMES A  
 150 STANDARD CLOCK4 AND COC HANDLER. NO 2741 LINES.

B3890953 000 AA SIGMA 6-9 1200 LISTER P UC  
 010 AUTHOR XEROX  
 020 890953-11A00 DESCRIPTION PRINTED  
 030 890953-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT 1200 LISTER TAKES A NON-COMPRESSED PRODIC TAPE OR A UTILIST-FORMAT COMPRESSED TAPE AND PLOCS IT ONTO A  
 050 TAPE FOR USE ON THE XEROX 1200 COMPUTER PRINTING SYSTEM.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 070 IS WRITTEN IN METASYMBOL.  
 080 THE INPUT TAPE MUST BE A CP-V LABELED TAPE. THE OUTPUT TAPE WILL BE AN UNLABELED TAPE.

B3890954 000 AA SIGMA 6-9 AUTO SCHEDULE P UC  
 010 AUTHOR XEROX  
 020 890954-11A00 DESCRIPTION PRINTED  
 030 890954-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS  
 040 890954-76A00 890954-46 TEST ON MAG TAPE  
 050 ABSTRACT THE AUTO SCHEDULE PROGRAM, WHEN ACTIVATED AS A GHOST, ALLOWS JOBS TO BE SCHEDULED UP TO A MONTH AHEAD.  
 060 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 070 IS WRITTEN IN METASYMBOL.  
 080 USE !SYS,LBE AS AN AUTHORIZED ACCOUNT AT CO PRIVILEGE. TAPE ALSO CONTAINS STJOB GENERATOR PROGRAM,  
 090 VALUED FILE SAVE/DELETE PROGRAM, AND SAVE TAPE ANALYZE PROGRAM.

B3890955 000 AA SIGMA 5-9 BLOCKER-FILE BLOCKING/UNBLOCKING ROUTINE P UC  
 010 AUTHOR D. PALMER, VANDERBILT UNIVERSITY  
 020 890955-11A00 DESCRIPTION PRINTED  
 030 890955-44A00 \* COMPRESSED CARDS  
 040 ABSTRACT BLOCKER IS A ROUTINE THAT ENABLES DATA FILES TO BE BLOCKED OR UNBLOCKED ACCORDING TO USER  
 050 SPECIFICATIONS. THIS PROGRAM IS DESIGNED TO BE USED WITH FIXED-LENGTH RECORDS IN FILES WHOSE BLOCKING

060 FACTOR IS (OR WILL BE) SOME INTEGRAL VALUE.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER BPM, CP-V, AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE  
080 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890956 000 AB SIGMA 5-9 SCOMPARE-SOURCE FILE COMPARISON PROGRAM P UC

010 AUTHOR XEROX

020 890956-11A00 DESCRIPTION PRINTED

030 890956-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 890956-76A00 890956-36 TEST DATA TAPE

050 ABSTRACT SCOMPARE COMPARES TWO SOURCE FILES AND PRODUCES A LIST OF THEIR DIFFERENCES. SCOMPARE REALIGNS ITSELF  
060 TO HANDLE MISSING AND ADDED RECORDS AS WELL AS MODIFIED RECORDS.

070 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V/UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN  
080 PROGRAM IS WRITTEN IN BASIC.

090 SCOMPARE IS ESPECIALLY HELPFUL WHEN TRYING TO FIND ALL THE CHANGES FROM ONE VERSION OF A FILE TO THE  
100 NEXT. SPECIAL OPTIONS INCLUDE SELECTING SPECIFIC COLUMNS OF INTEREST, IGNORING BLANKS, AND COMPRESSING  
110 BLANK FIELDS TO A SINGLE BLANK FOR COMPARISON.

B3890958 000 AB SIGMA 5-9 SYSTEM RBM P UC

010 AUTHOR D. TERRY, UNIVERSITY OF WASHINGTON

020 890958-11A01 DESCRIPTION PRINTED

030 890958-34A01 \* SOURCE CARDS

040 ABSTRACT SYSTEM RBM IS A MACRO LIBRARY PROVIDING CALLS AND FETS FOR MOST OF THE RBM MONITOR FUNCTIONS. THE  
050 MACROS PROVIDE BOTH EASIER AND BETTER DOCUMENTATION OF THE RESULTING CODE. MACRO BODY LISTING CONTROL  
060 AND LIST AND EXECUTE FORMS ARE PROVIDED. IN ADDITION, LABELS MAY BE CODED FOR ANY OF THE WORDS IN THE  
070 FET.

080 COMMENTS THE A01 RELEASE INCLUDES MINOR CHANGES FOR COMPATIBILITIES WITH XPL/S VERSION B00, NO  
090 FUNCTIONAL CHANGES WERE MADE TO SYSTEM RBM. MINOR BUGS HAVE BEEN CORRECTED AS WELL.

100 SYSTEM RBM REQUIRES AP VERSION B00, AND IS COMPATIBLE WITH THE PARTIAL SYSTEM RBM PRO-

110 VIDED FOR INTERNAL USE BY AP IF LINES 594 AND 595 ARE DELETED FROM APR00T. SYSTEM

120 RBM IS THE MACRO LIBRARY USED BY XPL/S (890923 B00). COMPATIBILITY WITH BPM WAS

130 ATTEMPTED. THOSE MACROS DEALING SOLELY WITH PCB RELATED FUNCTIONS OR ICEX ARE NOT

140 INCLUDED, BUT COULD BE MODELED AFTER EXISTING MACROS IF NEEDED.

B3890959 000 AB SIGMA 5-9 SYSTEM XPL/S P UC

010 AUTHOR R. LOVESTEDT, UNIVERSITY OF WASHINGTON

020 890959-11B00 DESCRIPTION PRINTED

030 890959-44B00 \* COMPRESSED CARDS

040 ABSTRACT SYSTEM XPL/S IS A MACRO LIBRARY THAT FACILITATES THE WRITING OF XPL/S COMPATIBLE ASSEMBLY LANGUAGE  
050 PROGRAMS. IT IS WRITTEN FOR USE WITH EITHER B00 AP OR H01 METASYMBOL. MACROS ARE PROVIDED TO DEFINE A

060 PROCEDURE, RETURN FROM A PROCEDURE, CALL A PROCEDURE, DEFINE A STRING, AND TO CONCATENATE STRINGS. IN  
 070 ADDITION, A SYMBOL IS PROVIDED FOR THE STANDARD FUNCTION VALUE RETURN REGISTER.  
 080 COMMENTS THE GENERAL SYSTEM IS DOCUMENTED IN THE -11, HOWEVER SOME DIFFERENCES EXIST FOR THE MULTI-OPERATION SYST  
 090 EM VERSION. THE THREE SYMBOLS RBM, BPM, AND CP-V ARE DEFINED TO ALLOW THE DETERMINATION OF OPERATING SYST  
 100 EM ENVIRONMENT. ONE SYMBOL MUST BE SET TO 1, THE OTHERS SET TO 0. SYSTEM XPL/S REQUESTS EITHER SYSTEM PR  
 110 M OR SYSTEM BPM, DEPENDING UPON THE ENVIRONMENT.

B3890961 000 AA SIGMA 3 XGP - VAR P UH  
 010 AUTHOR XEROX  
 020 890961-11A00 DESCRIPTION PRINTED  
 030 890961-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 ABSTRACT THIS PROGRAM ALLOWS THE XEROX GRAPHICS PRINTER (XGP) TO BE USED AS A VARIABLE WIDTH CHARACTER LINE  
 050 PRINTER UNDER CONTROL OF RBM. THE PROGRAM READS EBCDIC DATA A LINE AT A TIME AND FORMATS ON-THE-FLY TO  
 060 THE XGP. OPTIONS INSERTED ON THE CONTROL CARD CAN SELECT FOUR MODES OF OPERATION PLUS AN OUTPUTTING  
 070 MODE TO ONE OF TWO XGP'S RUNNING AT DIFFERENT RATES (192 OR 128 BITS PER INCH). THE SOFTWARE CHANGEABLE  
 080 FONT HAS A 256 CHARACTER SET OF VARIOUS WIDTH CHARACTERS.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 100 IS WRITTEN IN XSYMBOL. THE PROGRAM IS ONLY 725 WORDS BUT REQUIRES 2 BUFFERS AND SPACE FOR THE FONT; EACH  
 110 FONT CONTAINS A CONTROL SECTION OF 540 WORDS, WHICH DESCRIBE THE FONT, AND THE REMAINING FONT RECORDS  
 120 CONTAIN THE ACTUAL FONT BROKEN INTO 5760 BYTE BLOCK SIZES. THE PROGRAM ACCEPTS ANY WIDTH CHARACTERS UP  
 130 TO MAXIMUM DETERMINED BY THE XGP AND ANY HEIGHT BUFFER AS LONG AS THE PROGRAM, FONT, AND BUFFERS WILL  
 140 FIT IN CORE. THE PROGRAMS ASSUME THAT OPLABELS TO THE XGPs WERE INCLUDED AT SYSGEN AND THAT THE XGPs  
 150 WERE DECLARED AS XX DEVICES. THE BASIC CONTROL FUNCTIONS OF THE PROGRAM ARE SIMILAR TO XGP-OUT.

B3890962 000 AA SIGMA 5-9 ROMLIB P UC  
 010 AUTHOR D. TERRY, UNIVERSITY OF WASHINGTON  
 020 890962-11A00 DESCRIPTION PRINTED  
 030 890962-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 ABSTRACT ROMLIB ALLOWS ANY SEQUENTIAL DISK FILE OF OBJECT MODULES TO BE USED AS A LIBRARY, AND PROVIDES A  
 050 COMPLETE SEARCH AND UPDATE CAPABILITY. IT WILL CREATE AND MAINTAIN ANY SEQUENTIAL FILE AS A LIBRARY OF  
 060 OBJECT MODULES, AND ALSO SEARCH AND EXTRACT FROM SUCH FILES THE MODULES REQUIRED TO SATISFY THE  
 070 REFERENCES ON THE GO FILE, THUS PROVIDING AN AUXILIARY LIBRARY FACILITY. ANY SEQUENTIAL DISK FILE OF  
 080 ROMS (CREATED BY ANY PROCESSOR) MAY BE USED AS A LIBRARY. GROUPS OF FILES MAY BE SEARCHED AS A UNIT  
 090 WITH ALL REFS (BOTH FORWARD AND BACKWARD) BEING SATISFIED; THE ROMS NEED NOT BE IN ANY PARTICULAR ORDER.  
 110 COMMENTS THIS PROGRAM WILL RUN UNDER RBM OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN PROGRAM  
 120 IS WRITTEN IN AP AND XPL/S.  
 130 THE PROGRAM IS WRITTEN IN XPL/S (CN890923) AND USES A SMALL AP PROGRAM FOR INTERFACE TO THE OPERATING  
 140 SYSTEM. THE EFFORT TO CONVERT TO OTHER OPERATING SYSTEMS SHOULD BE MINIMAL. SYSTEM XPL/S (CN890959) AND  
 150 THEREFORE SYSTEM RBM (CN890958) ARE REQUIRED FOR THE ASSEMBLY. TABLE SIZES ARE COMPILE-TIME PARAMETERS



	160		AND MAY BE ADJUSTED IF NECESSARY.	
B3890963	000	AA 9-SERIES	MAGTP	P UM
	010	AUTHOR	A. MOFFET-CAL. INST. OF TECH., L. BRENTON-XEROX CORPORATION	
	020		890963-11A00 DESCRIPTION PRINTED	
	030		890963-34A00 * SOURCE CARDS	
	040	ABSTRACT	MAGTP IS A MODIFICATION TO THE MONARCH MAG TAPE ROUTINES WHICH SPEEDS UP MAG TAPE OPERATIONS BY KEEPING	
	050		THE TAPE MOVING DURING ALL MULTI-RECORD TAPE OPERATIONS, IT DOES NOT DISCONNECT THE TAPE UNIT AFTER	
	060		EVERY RECORD. THE TAPE IS KEPT MOVING ON ANY MULTI-RECORD OPERATION WITH A SIGNIFICANT DECREASE IN TIME	
	070		REQUIRED TO COMPLETE THE OPERATION (AS MUCH AS 50% IN THE CASE OF BCD CARD IMAGES ON 800 BPI TAPE).	
	080	COMMENTS	THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN	
	090		PROGRAM IS WRITTEN IN SYMBOL.	
B3890964	000	AA 9-SERIES	MTAPE	P UM
	010	AUTHOR	A. MOFFET-CAL. INST. OF TECH., L. BRENTON-XEROX CORPORATION	
	020		890964-11A00 DESCRIPTION PRINTED	
	030		890964-34A00 * SOURCE CARDS	
	040	ABSTRACT	MTAPE IS A MODIFICATION TO THE MONARCH MAG TAPE ROUTINES WHICH SPEEDS UP MAG TAPE OPERATIONS BY KEEPING	
	050		THE TAPE MOVING DURING ALL MULTI-RECORD TAPE OPERATIONS, IT DOES NOT DISCONNECT THE TAPE UNIT AFTER	
	060		EVERY RECORD. THE TAPE IS KEPT MOVING ON ANY MULTI-RECORD OPERATION WITH A SIGNIFICANT DECREASE IN TIME	
	070		REQUIRED TO COMPLETE THE OPERATION (AS MUCH AS 50% IN THE CASE OF BCD CARD IMAGES ON 800 BPI TAPE).	
	080	COMMENTS	THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS UTILITY. BASE LANGUAGE MAIN	
	090		PROGRAM IS WRITTEN IN SYMBOL.	
B3890965	000	AA 9-SERIES	SYMBOL	P UM
	010	AUTHOR	A. MOFFET-CAL. INST. OF TECH., L. BRENTON-XEROX CORPORATION	
	020		890965-11A00 DESCRIPTION PRINTED	
	030		890965-34A00 * SOURCE CARDS	
	040	ABSTRACT	SYMBOL IS A MODIFICATION THAT IMPROVES THE SYMBOL ASSEMBLER IN MANY WAYS. OPTIONS ADDED INCLUDE A	
	050		SECOND PASS FROM SI DEVICE, LIST-ONLY ERROR LINES, AND MULTIPLE ASSEMBLIES WITHOUT GOING BACK TO	
	060		MONARCH. IMPROVEMENTS INCLUDE EDITING CARRIAGE RETURNS, TABS, AND BACKSPACES OUT OF BCD AND TEXT	
	070		STATEMENTS, SEQUENCE NUMBERS ON CARDS FOR 80, AND FIVE INCHES OF BLANK TAPE ON PAPER TAPE 80.	
	080	COMMENTS	THIS PROGRAM WILL RUN UNDER MONARCH OPERATING SYSTEM. PROGRAM TYPE IS ASSEMBLER. BASE LANGUAGE MAIN	
	090		PROGRAM IS WRITTEN IN SYMBOL.	
B3890966	000	AA SIGMA 5-9/550	GRADPACK	P UC
	010	AUTHOR	R. MCCOLLOCH, UNIVERSITY OF WYOMING	
	020		890966-11A00 DESCRIPTION PRINTED	
	030		890966-34A00 * SOURCE CARDS	

040 ABSTRACT THE SIZE, STORAGE SPACE, AND CORE OVERHEAD REQUIREMENTS OF BASIC PROGRAMS CAN BE REDUCED ABOUT 15 TO 50  
 050 PERCENT BY USING THE MULTIPLE STATEMENT PER SOURCE LINE FORMAT (XEROX BASIC MANUAL 901546F, PAGE 19).  
 060 THE PROGRAM GRADPACK WILL REWRITE EXISTING BASIC PROGRAMS INTO THIS REDUCED SPACE FORMAT. THIS WILL  
 070 HEREAFTER BE REFERRED TO AS PACKING. GRADPACK WILL PACK BASIC PROGRAMS, INCLUDING ITSELF, UNPACK PACKED  
 080 BASIC PROGRAMS, AND UNPACK AND REPACK BASIC PROGRAMS. THE LATTER IS USEFUL FOR ACHIEVING OPTIMAL  
 090 PACKING OF PARTIALLY PACKED BASIC PROGRAMS. GRADPACK ASSUMES PROGRAMS ARE ON DISK STORAGE AND DISK  
 100 STORAGE IS AVAILABLE FOR REFLILING THE PACKED OR UNPACKED PROGRAM VERSIONS.  
 110 COMMENTS THIS PROGRAM WILL RUN UNDER CP-V AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE LANGUAGE  
 120 MAIN PROGRAM IS WRITTEN IN BASIC.

B3890967 000 AA SIGMA 5-9 BLOCKED AND OVERLAPPED I/O PACKAGE P UC  
 010 AUTHOR S. WHITE, GODDARD COMPUTER SCIENCE INSTITUTE  
 020 890967-11A00 DESCRIPTION PRINTED  
 030 890967-36A00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890967-76A00 890967-36 TEST ON MAG TAPE  
 050 ABSTRACT BOIOP IS A ROUTINE THAT PROVIDES FOR AUTOMATIC DOUBLE BUFFERING OF I/O. THE ROUTINE ALSO PROVIDES FOR  
 060 BLOCKING AND DEBLOCKING OF FIXED LENGTH RECORDS. THE ROUTINES CAN BE CALLED FROM METASYMBOL OR FORTRAN.  
 070 ASSEMBLY PARAMETERS CAN BE SET TO MAKE THE ROUTINE RETURN EITHER THE STANDARD SYSTEM I/O COMPLETION  
 080 CODES OR CODES COMPATIBLE WITH BUFFERIN/BUFFEROUT.  
 090 COMMENTS THIS PROGRAM WILL RUN UNDER BPM/BTM, CP-V, AND UTS OPERATING SYSTEMS. PROGRAM TYPE IS UTILITY. BASE  
 100 LANGUAGE MAIN PROGRAM IS WRITTEN IN METASYMBOL.

B3890979 000 AA SIGMA 7 SIMPLE DEBUG ROUTINE P UC  
 010 AUTHOR XEROX  
 020 890979-11A00 DESCRIPTION PRINTED  
 030 890979-34A00 \* SOURCE CARDS  
 040 ABSTRACT AN ON-LINE DEBUGGER WHICH ALLOWS THE USER FULL CONTROL OVER THE EXECUTION OF HIS PROGRAM. IT HAS THE  
 050 ADVANTAGE OF HAVING A SIMPLE AND CONSISTENT COMMAND FORMAT WHICH MAKES IT VERY EASY TO LEARN AND USE.  
 060 COMMENTS SDR IS DESIGNED PRIMARILY FOR DEBUGGING ASSEMBLY LANGUAGE PROGRAMS. BECAUSE IT IS EASY TO MASTER, IT IS  
 070 PARTICULARLY WELL-SUITED FOR BEGINNING ASSEMBLY LANGUAGE STUDENTS. IT ALLOWS EXECUTION TO BE TRACED  
 080 THROUGH FORTRAN LIBRARY SUBROUTINES. SDR OPERATES UNDER THE CP-V OPERATING SYSTEM AND MUST BE BIASED AT  
 090 X'A000'.

B3890982 000 AB SIGMA 5 HP RT EXECUTIVE CROSS ASSEMBLER P UC  
 010 AUTHOR XEROX  
 020 890982-11B00 DESCRIPTION PRINTED  
 030 890982-36B00 \* SOURCE MAG TAPE, 9 CHANNELS  
 040 890982-76B00 890982-36 TEST PROGRAM  
 050 ABSTRACT THE REAL-TIME EXECUTIVE CROSS ASSEMBLER (HPASM) IS A ONE PASS CORE RESIDENT COMPILER THAT ASSEMBLES HEWL

060 ETT PACKARD REAL-TIME 2100 ASSEMBLER PROGRAMS.  
070 COMMENTS THIS PROGRAM WILL RUN UNDER THE BPM/BTM AND CP-V OPERATING SYSTEMS. BASE LANGUAGE MAIN PROGRAM IS WRITT  
080 EN IN METASYMBOL. A RELIABLE TELETYPE THAT PUNCHES ALL 8 BIT CHARACTER VALUES IS REQUIRED TO PRODUCE A  
090 ABSOLUTE BINARY OR RELOCATABLE BINARY PAPERTAPE OF HP ASSEMBLER SOURCE PROGRAMS.

B3890984 000 AA SIGMA 9 SIGMA 9 TUF - A TAPE UNFOILER P UC

010 AUTHOR XEROX  
020 890984-11A00 DESCRIPTION PRINTED  
030 890984-44A00 \* COMPRESSED CARDS

040 ABSTRACT TUF IS DESIGNED TO PROVIDE THE USER WITH THE MEANS OF RETRIEVING FILES OR PARTS OF  
050 FILES FROM A LABELED TAPE THAT CANNOT BE ACCESSED NORMALLY. TAPES THAT HAVE INAD-  
060 VERTENTLY BEEN WRITTEN ON OR DAMAGED MAY BE ACCESSED THROUGH TUF BECAUSE IT IS VIR-  
070 TUALLY INDEPENDENT OF LABELED TAPE CONTROL RECORDS.

080 COMMENTS TUF MAY BE RUN EITHER ONLINE OR BATCH. NOTE THAT TUF MAY NEED UP TO 8192 WORDS OF  
090 DYNAMIC MEMORY IN ORDER TO COPY FILES WITH LARGE RECORDS.

B3890985 000 AA SIGMA 5-9 SLR1 ANALYZER P UC

010 AUTHOR XEROX  
020 890985-11A00 DESCRIPTION PRINTED  
030 890985-34A00 \* SOURCE CARDS

040 ABSTRACT SLR1 IS AN ANALYZER PROGRAM FOR SIMPLE LR(1) GRAMMARS. IT IS A USEFUL TOOL FOR  
050 THE CONSTRUCTION OF LANGUAGE PROCESSORS USING XPL/S. IT IS REQUIRES IF CHANGES  
060 ARE TO BE MADE TO THE XPL/S GRAMMAR, BUT NOT FOR THE NORMAL OPERATION OF THE  
070 COMMENTS XPL/S COMPILER.

080 SLR1 IS WRITTEN IN XPL/S (BOO VERSION). IT IS OTHERWISE STANDARD AND REQUIRES  
090 NO SPECIAL CONSIDERATIONS IN COMPILATION OR OPERATION.

B3890986 000 AA SIGMA 5-9 PLEASE P UC

010 AUTHOR XEROX  
020 890986-02A00 UNPUBLISHED TECH DOCUMENT  
030 890986-11A00 DESCRIPTION PRINTED  
040 890986-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

050 ABSTRACT PLEASE IS A MACHINE-ORIENTED LANGUAGE (MOL) FOR THE SIGMA SERIES AND IS CLOSELY RELATED TO WIRTH'S  
060 PL/360. IT PERMITS FULL USER CONTROL OF REGISTER ALLOCATION AND INSTRUCTION GENERATION, WHILE REMOVING  
070 THE NEED TO WRITE THEM INDIVIDUALLY. IN ADDITION, THE LANGUAGE IS FREE-FORMAT SO THAT INDENTATION AND  
080 OTHER PROGRAM TEXT STRUCTURING CONVENTIONS MAY BE ADOPTED. THERE ARE ALSO A NUMBER OF USEFUL CONTROL  
090 CONSTRUCTS.

100 COMMENTS THE PLEASE COMPILER IS WRITTEN IN XPL/S (BOO VERSION). WHILE RELEASED ONLY IN AN RBM VERSION, IT MAY  
110 EASILY BE ADAPTED TO CP-V, BPM AND BTM BY ADAPTING THE SAME TECHNIQUES USED IN THE XPL/S COMPILER. FULL

120 LANGUAGE DOCUMENTATION IS PROVIDED WITH THE -11.

B3890988 000 AA SIGMA 3 SIGMA 3 TRACE/SNAP CALLABLE BY FORTRAN P UH

010 AUTHOR XEROX

020 890988-11A00 DESCRIPTION PRINTED

030 890988-36A00 \* SOURCE MAG TAPE, 9 CHANNELS

040 890988-76A00 890988-36 TEST MAG TAPE

050 ABSTRACT TRACE/SNAP EXISTS AS A TRACE TASK AND THREE SUBROUTINES WHICH MAY BE CALLED FROM EITHER

060 XSYMBOL OR FORTRAN PROGRAMS. IT CONTAINS THE FOLLOWING FEATURES: (1) THE CAPABILITY TO

070 PRINT (HEX DUMP) ANY AREA OF MEMORY FROM 0 TO 64K; (2) THE CAPABILITY TO TRACE, PRINT

080 THE REGISTER VALUES, AND DECODE THE INSTRUCTIONS WITHIN A SPECIFIED AREA OF CORE;

090 (3) A SPECIAL TRACE-TP-DUMP MEMORY ONLY UPON LEAVING A SUBROUTINE; AND (4) THE CAPA-

100 COMMENTS BILITY TO TERMINATE THE TRACE AND REINVOKE IT AT SOME OTHER POINT IN THE PROGRAM.

110 THE PROGRAM IS WRITTEN IN XSYMBOL, USING EXTENDED PRECISION INSTRUCTIONS, AND RUNS

120 UNDER F01 RMB. IT IS LOADED WITH THE ROUTINE TO BE TRACED AND IS ENTERED THROUGH

130 SUBROUTINE CALLS. IT USES THE FOREGROUND OP LABELS OC AND LP FOR THE OPERATOR'S

140 CONSOLE AND LINE PRINTER.

150 THE PROGRAM WAS WRITTEN FOR THE LARGE AREA CROP INVENTORY EXPERIMENT (LACIE) AT

160 GODDARD SPACE FLIGHT CENTER, GREENBELT, MARYLAND.

B3890993 000 AA SIGMA 5-9/550 CP-R COPY PROCESSOR P UC

010 AUTHOR XEROX CORPORATION

020 890993-11A00 DESCRIPTION PRINTED

030 890993-46A00 \* COMPRESSED MAG TAPE, 9 CHANNELS

040 ABSTRACT THIS PROGRAM ALLOWS USERS TO COPY DATA BETWEEN DEVICES, OP-LABELS, FILES, AND ALL COMBINATIONS THEREOF.

050 THE DATA MAY BE MULTI-FILED AND THE USER CAN SPECIFY THE NUMBER OF FILES TO BE MOVED. BINARY ROMS AND

060 COMPRESSED DECKS MAY BE RECOGNIZED AND MANIPULATED INDIVIDUALLY UNDER USE COMMAND. THE PROCESSOR ALSO

070 ALLOWS THE USER TO MAINTAIN PARTITIONED FILES ON RAD OF DISK AS WELL AS ALLOWING THE USER TO MAINTAIN,

080 LABEL, AND RETRIEVE FILES ON MAGNETIC TAPE.

090 COMMENTS THIS PROGRAM WILL OPERATE AS A SECONDARY OR BACKGROUND PROCESSOR ON A MINIMUM CP-R CONFIGURATION. NOTE

100 THAT THE NUMBER OF MEMBERS IN THE P RTITIONED FILE AND THE SIZE OF THE DATA BUFFER FOR ALL COPIES IS A

110 FUNCTION OF AVAILABLE BACKGROUND SPACE.

B3890997 000 AA SIGMA 6-9 ON LINE DOCU ENTRY AND RETRIEVAL SYS P UC

010 AUTHOR XEROX CORPORATION

020 890997-11A00 DESCRIPTION PRINTED

030 890997-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS

040 890997-36A00 890997-26 SOURCE MAG TAPE, 9 CHANNELS

050 890997-46A00 890997-26 COMPRESSED MAG TAPE, 9 CHANNELS

060 ABSTRACT THIS PROGRAM ALSO RUNS UNDER 560.  
 070 OLDER PROVIDES A SYSTEM OF PUTTING DOCUMENTS (MEMOS, DIRECTIVES, ETC.) ON-LINE, THEREBY PROVIDING  
 080 INSTANT ACCESS TO DOCUMENTS. OVER TWO MILLION DOCUMENTS MAY BE MANAGED BY THE SYSTEM IN EACH CP-V  
 090 ACCOUNT. THREE SETS OF COMMANDS ARE AVAILABLE TO SELECTED USERS: 1. ACCESS COMMANDS - PROVIDE  
 100 FUNCTIONS TO LIST AND DISPLAY DOCUMENTS. 2. UPDATE COMMANDS - PROVIDE CAPABILITY OF ADDING,  
 110 MODIFYING, AND DELETING DOCUMENTS. 3. CONTROL COMMANDS - PROVIDE SYSTEM CONTROL (USERS AND  
 120 DOCUMENTS). THE AVAILABILITY OF EACH SET IS CONTROLLED (ON A USER BASIS) BY THE SYSTEM ADMINISTRATOR.  
 130 THE CONCEPT OF CONTROLLED/NON-CONTROLLED DOCUMENTS PROVIDES ADDITIONAL SECURITY BY RESTRICTING DOCUMENTS  
 140 TO PRE-SELECTED USERS. THUS, DOCUMENTS AND COMMAND SETS CAN BE CONTROLLED ON AN INDIVIDUAL BASIS.  
 150 COMMENTS OLDER PROVIDES FOR EASY LINKAGE TO APPLICATION SUBROUTINES, PROVIDING THE CAPABILITY OF TAILORING THE  
 160 SYSTEM TO MORE SPECIFIC USERS. PROGRAM RUNS IN 6K OF CORE. REFERENCE MATERIAL IS INCLUDED IN -11.

83890998 000 AA SIGMA 6/7/9 SIGMA 6/7/9 RPC P UC  
 010 AUTHOR XEROX CORPORATION  
 020 890998-11A00 DESCRIPTION PRINTED  
 030 890998-26A00 RELOCATABLE BINARY MAG TAPE, 9 CHANNELS  
 040 890998-46A00 890998-26 COMPRESSED MAG TAPE, 9 CHANNELS  
 050 890998-76A00 890998-26 TEST MAG TAPE  
 060 ABSTRACT RPC IS A FILE SAVE/RESTORE/LIST PROGRAM TO PRIVATE PACK. FILES IN THE SYSTEMS PUBLIC DIRECTORIES CAN BE  
 070 COPIED TO PRIVATE PACK OR RESTORED FROM A PREVIOUSLY CREATED PACK CREATED BY RPC. FILES CAN BE  
 080 SAVED/RESTORED/LISTED SELECTIVELY BY ACCOUNT OR BY SPECIFIC NAME, OR ALL FILES IN THE DIRECTORIES CAN BE  
 090 SAVED. A LISTING OF THE ATTRIBUTES OF THE FILES SAVED IS ALWAYS GIVEN. COMMANDS TO THE PROGRAM ARE GIVEN  
 100 BY A SERIES OF CONTROL CARDS READ IN AT THE START OF THE PROGRAM.  
 110 COMMENTS RPC IS WRITTEN ENTIRELY IN META-SYMBOL AND RUNS AS A BATCH, ON-LINE OR GHOST JOB IN 600 TO 601 CPV. IT  
 120 REQUIRES AT LEAST ONE EXCLUSIVE PRIVATE SPINDLE, 22K OF CORE AND A CO PRIVELEGE. CONTROL COMMANDS ARE  
 130 READ FROM THE C DEVICE IN BATCH, FROM THE USERS TERMINAL ON-LINE AND FROM THE OPERATORS CONSOLE IN GHOST  
 140 MODE. IN BATCH AND GHOST MODE, LISTING IS DEFAULTED TO THE LINE PRINTER, ON-LINE LISTING IS DEFAULTED TO  
 150 THE USERS CONSOLE.

83890999 000 AA XEROX 530 PLINES P UN  
 010 AUTHOR M. MARKOVIC  
 020 890999-11A00 DESCRIPTION PRINTED  
 030 890999-34A00 SOURCE CARDS  
 040 ABSTRACT PLINES ALLOWS A COMPLETELY GENERAL PRINT-OUTPUT IN THE FORTRAN LANGUAGE. THE PRINCIPLE OF THE SYSTEM  
 050 PLINES CONSISTS OF 2 POINTS: (1) TO PREPARE THE PRINTING -BUFFER (67 WORDS); (2) TO PRINT THE BUFFER.  
 070 COMMENTS PLINES CONTAINS SIX ASSEMBLER AND FOUR FORTRAN ROUTINES, WHEREBY THE ROUTINES OF THE  
 080 XEROX-MONITOR-SERVICE M:WRITE, M:HEXIN, M:INHEX WERE USED. THE SYSTEM PLINES IS INDEPENDANT OF THE  
 090 COMMERCIAL ROUTINES DECA1, A1DEC, A1A2 AND A2A1. THE MEMORY AMOUNTS TO 300 WORDS IF IT DEALS WITH THE  
 100 PRINTING OF A-FORMAT.