/****	*****	******	*********************	*******/			
/*			Prototype HP15C Calculator	*/			
/* /*			James C. Ullrey	*/ */			
/* /*			INRESCO © 1990				
/* /*			Version 12.97a	*/ */			
/ /*				*/			
/*		Version His	tory:	*/			
/* /*	Friday	08/24/90	Started Project V .89698a	*/ */			
/* /*	Wednesdy	09/05/90	Solved display of fractional part formatting.	*/ */			
/* /*	Thursday	09/06/90	Can now enter three numbers & use two operators	*/ */			
/* /*			to produce result.	*/ */			
/* /*	Tuesday	09/11/90	Started V 1.96988a Abandoned dialog box interface	*/ */			
/ /*			Abanaonea alalog box interface	*/			
/*	Friday	09/14/90	Updates to calculator interface work!	*/			
/* /*	Saturday	01/05/91	Started V 2.96988a	*/ */			
, /*		,,	Reactivated project on fx.	*/			
/*			Debugger does not work!	*/			
*  *  *	Sunday	01/13/91	Debugger works, rollup rolldown works, combinatorial analysis implemented.	*/ */			
*  *  *	Tuesday	02/05/91	Floating point-fixed point display works after a fashion. Random number generator works.	*/ */ */			
/* /*	Wednesdy	02/06/91	Started V 3.96988a	*/ */			
/* /*			Committed to use of State vector and masks.	*/ */			
/*	Sunday	02/10/91	Buggy version runs	*/			
*  *  *	Monday	02/11/91	Discovered that HP15C has 20 registers, not just 10.	*/ */ */			
*  *  *	Wednesdy	02/14/91	Store & Recall with plus, minus, times and divide with those 20 registers are operational.	*/ */ */			
/* /*	Friday	02/15/91	Duplication in numbers of HandleButtonEvent	*/ */			

*  *			reduced by creating function and passing parameters.	*/
*  *  *	Saturday	02/16/91	Started V 4.96988a Programmability subproject started!	*/ */ */
*  *  *	Wednesdy	02/20/91	File I/O implemented! 20 registers and the operand stack are saved across quits.	*/ */ */
*  *  *	Thursday	02/21/91	Linked list data structure implemented for storing flags to be used by the interpreter	*/ */ */
*  *  *  *	Monday	02/25/91	Designated as V 5.96988a Program enunciator displays program count and button position for simple instructions	*/ */ */
*  *  *  *	Friday	03/15/91	Implemented multiple files with the help of Eric Slosser of SciComp Software, publisher of PopUpFuncs.	*/ */ */ */
/* /*			->Buy PopUpFuncs<- To order PopUpFuncs call 1-800-522-5939	*/ */ */
/* /*	Wednesdy	01/01/92	Program enunciator works better	*/
*  *  *  *	Thursday	01/02/92	Added lblWaitFlag so that the LBL functionality can be implemented	*/ */ */
*  *  *  *	Sunday	01/05/92	Designated as V 6.96988a Started work on programmability functionality.	*/ */ */
/* /* /*	Thursday	01/09/92	Designated as V 7.96988a Recognized the need to alter the structure of the pNode by adding another field, pos4.	*/ */
*  *  *  *  *	Sunday	01/19/92	Designated as 8.97a The long awaited reorganization. Breaking the code into smaller segments and adding prototypes. The start of a professional style application.	*/ */ */ */ */
*  *  *	Monday	01/20/92	Prototyping complete, compiled with Think C v 5.0.2. Major runtime errors	*/ */

/*					*/
/*	Monday	01/20/92	Solved the problem of writing to the file in		*/
/*			the system folder with the help of Eric		*/
/* 			Slosser. Buy PopUpFuncs!!		*/
/*			To order PopUpFuncs call 1-800-522-5939	*/	
/* /*		01/22/02	Discovered the CTO A meeting functions, the		*/
/* /*	Wednesdy	01/22/92	Discovered the STO A matrix functions, the	*/	*/
/* /*			STO + A matrix functions, the exchance X with	*/ */	
/*			Registers 0 • • 9, .0 • • .9, and (i) Registers.	17	*/
/*			The gState variable is becoming impacted.		*/
/*			sWaitFlag and rWaitFlag can probably be	*/	/
/*			eliminated, by, instead of clearing stoFlag,	1	*/
/*			and setting sWaitFlag and plus, etc. to		*/
/*			achieve the same result, leave the stoFlag set	*/	'
/*			and set the waitFlag, which is underutilized.	,	*/
/*			This will result in the elimination of these	*/	,
/*			two flags, allowing the bits to be used for	*/	
/*			other functions.		*/
/*			Discovered that the test function of the minus	*/	
*			key needs a wait flag and the waitFlag in	*/	
/*			combination with the minusFlag can probably	*/	
/*			serve that function.		*/
/* 			Such a drastic reorganization of the structure		*/
/*			is best tested on a subsequent version		*/
/* /*			of the program.		*/
/* /*	Tuesday	01/20/02	Added the Index register field and the memory	*/	*/
*	Tuesday	01/28/92	Added the Index register field and the memory status field to the map struct.	*/	
*			status field to the map struct.	1	*/
*	Friday	01/31/92	Designated as 9.97a		*/
*	Thady	01/01/02	Found it necessary to use an array	*/	'
*			for the registers	,	*/
*					*/
*	Monday	02/03/92	It is necessary to dispense with the idea that		*/
*	-		a linked list can be used for the storage of		*/
*			program instructions. This change, however		*/
*			opens up the possibilities for storing programs	*/	
/*			as files, allowing program lifetimes longer	*/	
' <b>*</b>			than a single session.		*/
'* 					*/
/*	Friday	02/07/92	Started dealing with complex numbers.		*/ */
/*					

/* /*	Saturday	02/08/92	Complex multiplication and division work. (really early Sunday morning)	*/ */	*1
/* /* /*	Sunday	02/09/92	Complex square root works(4:47 AM).		*/ */ */
/*	Monday	02/10/92	Created memory manager segment(3 AM)		*/
, * * * * * * * * * * * * * * * * * * *	Monday	02/10/92	Designated as 10.97a Discovered that a matrix descriptor can be stored and recalled from any of the registers including the index register as well as on the stack. This makes things difficult in the framework of the current structure of the program. Methinks that the stack elements can be, instead of doubles, structs, with a flag field, a double field, and a char field. When a matrix descriptor is created as a string, which is only done when the key sequence RCL MATRIX A is pressed, it is done so that it may be displayed in the display window. At this time the string can be stored in the char field of the struct. The flag field of the struct can be set to so indicate that the string is present. Checking this field will allow the deparser to display the matrix descriptor if it is present. Currently, the stack manipulations involve copying the value from one stack variable to another as the stack is scrolled, so to speak, through the display. If the string is carried around in the struct this may cause problems as copying stirngs from one variable to another may involve the necessity of using strcopy or some sort. I think that this is unnecessary and instead of carrying around the string, the struct will just reference the matrix, and the deparser can	*/*/ */*/*/*/ */	,*/*/*/*/*/ */*/*/*/*/*/*/ */ */ */ */*/*/
/* /*			regenerate the string when it is needed from the information in the matdscr struct.		*/ */
/* /*	Wednesdy	02/26/92	Use LJ Courier 12, tabs 2 for printing code.		*/ */
*  *  *	Wednesdy	05/06/92	Resumed writing code after income taxes, transmission repair and moving.		*/ */ */

/* /*	Thursday	06/19/92	Fixed machine dependent timing loop.		*/ */
* 	Friday	06/19/92	The code to allow dimensioning of a matrix exists only for the matrix A. A test of storing values in the matrix elements for matrix A using USER mode resulted in the values being stored in the nth + 1 matrix element instead of the nth matrix element.	*/ */	*/ */ */ */
*  *  *	Monday	06/29/92	Recall of the matrix elements in USER mode now appears to work correctly for martix A.		*/ */ */
/* /* /* /*	Sunday	07/05/92	Code has been changed to allow dimensioning of matrices A, B and C. The preliminary step to allow matrix arithmetic	*/	*/ */ */ */
/*			Enunciators for USER, f, g, C and PRGM work.		*/
/* /* /* /*	Monday	07/06/92	An imaginary last x register needs to be added. Actually, when tested, the imaginary last x exists.	*/	*/ */ */ */
/* /* /* /*	Thursday	07/09/92	Modified File so that Open is disabled when the calculator window is displayed, Close is enabled. Open is enabled when the calculator window is closed, Close is disabled. Thanks to Nicky for the beta test.	*/ */	*/ */ */
/* /* /* /*	Tuesday	07/14/92	Now have a basis for the memory manager, however it is not working yet. 6:00 AM	*/	*/ */ */
/* /* /* /*	Sunday	07/19/92	2:30 AM Storage in the matrices A, B, C and D appear to work transcending heap compaction and expansion		*/ */ */ */
*  *  *  *  *  *  *  *  *	Monday	07/20/92	Greg Dow method for passing array of structs to functions typedef struct m {  	*/ */	*/ */ */ */

/* /*			} m;	*/ */
/* /* /*			typedef m a[5];	*/
/*			a w[5];	*/ */ */
/* /*			void FunctionName(a w); in prototype section	*/
*  *  *  *			To pass a struct to a function, just pass the address of the struct.	*/ */ */
*  *  *  *  *  *	Tuesday	07/21/92	0149 hours: Matrix multiplication has worked in two instances. In the first case a 2 x 2 matrix in A was multiplied by a 2 x 2 matrix in B to give the correct result in C. In the second case a 2 x 3 matrix in A was multiplied by a 3 x 4 matrix in B to give the correct result in C.	*/ */ */ */ */
*  *  *  *  *			2337 hours: fixed the label buttons so that RCL DIM label will put the matrix's #'s of rows in the y register, the #'s of cols in the x register. It was trivial. NOT!!	*/ */ */ */
/*	Wednesdy	07/22/92	0402 hrs: STO and RCL with the stack now works.	*/
/* /* /*	Wednesdy	07/22/92	1427 hours: Designated as version 11.97a	*/ */ */
*  *  *  *	Sunday	07/26/92	Store and recall indirect appear to work with matrix descriptors and numbers. Testing appears to be formidable	*/ */ */
/* /* /* /* /* /*	Tuesday	07/28/92	Finger cursor works. Numeric keypad entry works, as well as f, g, F, G, s or S for sto, r or R for recall, the arrow buttons for roll up, roll down, erase and exchange x and y, +, -, *, /, and enter. 36073 lines of code.	*/ */ */ */ */
*  *  *  *	Wednesdy	07/29/92	STO (RCL) { +, -, *, / } (i) seems to work. 0200hrs. STO (RCL) { +, -, *, / } I seems to work. 0250hrs.	*/ */ */ */
*  *	Monday	08/17/92	Dragging the window in the second monitor	*/ */

*  *  *  *  *  *  *  *	Wednesdy	09/30/92	now works. Thank you Spec Bowers of Bowers Development Fixed obscure bug that caused negative numbers to appear in floating point format. Change was in Deparse()	*/	*/ */ */ */
/* /* /* /*	Thursday	10/22/92	In the EtoXButton there are two statements $gState ^=$ rcl. The first turns the flag off as it should, the second turns it back on. One of these is excess. The first one is the excess one.	*/	*/ */ */
* * * * * * * * *	Saturday	10/24/92	Added a new menu and found out about a gotcha with ResEdit whereby when adding menus, one must not only "Create New Resource" under the RESOURCE menu and change its ID with the Get Info, but also open the resource using "Open Using Template" menu item in the RESOURCE menu and change the ID there as well. Thanks once more to Eric Slosser	*/	*/ */ */ */ */
*  *  *  *  *  *  *  *  *	Sunday	10/25/92	Created window resources for six windows, one each for each of the matrices and one for the registers. Added code to make them appear and disapear when the Windows: menu items are checked or unchecked.	*/	*/ */ */ */
*  *	Monday	10/26/92	When in USER mode or complex mode, the enunciators were not updated after another window was removed from in front of the calculator window. They were also not maintained across quits. This has been fixed.	*/	*/ */ */ */
/* /* /* /* /*			When one of the matrix windows is the front window, it gets closed when the close menu item from the file menu is selected, a use which was not intended.	*/	*/ */ */ */
/* /* /* /*			The matrix, register and calculator windows now appear to work correctly across closing and opening selections of the menu, and the check marks for the items in the window menu work	*/ */	, */ */

/* /*			correctly.		*/ */
/ /* /* /*	Saturday	10/31/92	The map struct had a bug whereby 65 registers were declaired, and then map.reg[65] was used, when actually only the registers 0 thru 64 existed, and when a value was written to	*/ */ */	*/
/ /* /*			map.reg[65] it was written to the next struct that was declared, which happened to be the lastx	,	*/ */
/* /*			struct. map.reg[65] is used in the matrix operations, specifically in multiplication. This	*/	*/
/* /*			bug did not show up until the arithmetic buttons were used. I started using them to expedite the	*/	*/
/* /*			entry of numbers into the matrices, and when I did the lastx register was affected, andthus the value	*/	*/
/* /*			of map.reg[65], which was supposed to hold one of the matrix elements. Without the alteration of the		*/ */
/* /*			lastx register the problem didn't show up and the matrix multiplication worked using the lastx		*/ */
/* /*			memory location. A quick fix was affected by delairing the registers to 66 thus avoiding having		*/ */
/* /*			to fix the addressing modes for the registers.		*/ */
*  *  *  *	Tuesday	11/10/92	The matrix and register windows appear to work correctly Matrix multiplication by scalars works when result is operand.	*/ */	*/ */
/* /* /*	Thursday	11/12/92	When a matrix dimension is expanded, the new matrix elements created contain zeros.	*/	*/ */
/ /* /*	Friday	11/13/92	Addition of two matices works.		/ */ */
*  *  *  *  *  *  *  *	Tuesday	11/17/92	The matrix and register windows seem to work correctly after several extensive debugging sessions in which two serious bugs in the memory manager were discovered and corrected. Now a matrix can be created in any order, its dimension changed, reduced to 0 x 0, recreated, be subjected to alteration by its being the result matrix,	*/	*/ */ */ */ */
/* /* /* /*			participate in arithmetic operations, and the matrix window will display the correct contents, and the register window will also display the correct contents, shifting the values to different	*/ */	*/ */

*  *  *  *			registers as the applications' heap has its */ integrity maintained. The matrix operations work save for matrix inversion.	*/ */ */
/ /* /* /* /* /*	Wednesdy	11/25/92	mStrkPtr = (struct mStrk *)NewPtr(sizeof(mStrk)); mStrkHan = (struct mStrk **)NewHandle(sizeof(mStrk)); A pointer or handle MUST be typecast so the compiler will know how to evaluate an expression "myStrkPtr.number" or "**myStrkHan.number" */	/ */ */ */ */
*  *  *  *	Wednesdy	12/02/92	Designated as 12.97a Started the addition of the help module, using as a model code from Chassis 4.3.1, authored by Charles A. Hoffman, A person who I had known by proxy for 27 years, but only met last June at MacHack.	*/ */ */ */ */
/* /* /* /* /* /*	Sunday	12/06/92	Implemented the Transmogrifier button, the key-click */ combination of the holding down thecommand key and clicking on the HP icon. Selecting this option converts*/ the calculator face to a smaller face, thus */ accomodating smaller screens while using the matrix */ and register windows.	*/
*  *  *  *  *	Wednesdy	12/09/92	Started programmability project Fixed a bug that caused the program enunciator display to be replaced by the stack value after updates */ following the calculator window being obscured by another window. */	*/ */ */ */
/* /* /*	Friday	12/11/92	Added spash screen. The main display is now a bitmap. Now screen refresh is faster. */	*/
/* /* /* /* /* /*	Saturday	12/12/92	Can now transmogrify while entering a string into the */ display with out losing the keystrokes. Fixed a bug whereby when in program mode, selecting g MEM would cause, after display of the memory config, display of the stack value instead of the program step enunciator. */	*/ */ */ */
*  *  *  *  *	Tuesday	12/15/92	The monitor is tested for the presence of color. */ A color splash screen is displayed for color machines, */ a black and white splash screen is displayed for black*/ and white machines. Both the regular and transmogrified	*/ */

		calculator faces are dragable by the HP logo box. The */ transmogrified calculator face is automatically */ positioned in the lower left corner of the screen */ dynamically at run time.	*/ */
Wednesdy	12/16/92	Added Save Program and Load Program items to the file menu.	*/ */
Thursday	12/17/92	GTO CHS nnn goes to line number nnn. GTO I GTO 0 thru 9, .0 thru .9 will branch to location */ established by, in prgm mode f LBL 0 thru 9, .0 thru .9 . similarly for labels A thru E. f 4 (x><) LBL exchanges x with The % & delta % functions now work.	*/ */ */ */ */
			*/ */
Sunday	12/20/92	The new program enunciator seems to work	*/ */
Thursday	12/24/92	General cleanup of the gState vector maintenance in */ progress.	*/ */
Wednesdy	12/30/92	Put code under the clear flag, set flag and test flag functionalities. Put code under the x<=y button(g divide), the x=0 button(g times) and the TEST button(g minus). Programmability seems to work. Extensive testing is necessary.	*/ */ */ */ */
Thursday	12/31/92	Program editing for insertion of instructions in the middle of an existing program works.	*/ */ */
Friday	01/01/93	Program editing for deletion of instructions in the middle of an existing program works.	*/ */ */
Tuesday	01/05/93	Programmability seems to work. Multiple and nested */ GSB (Go to SuBroutine) calls have been tested using both the labels AE and some of the n and .n labels. */	*/ */
Friday	01/08/93	Py,x and Cy,x seem to work.	*/ */
Friday	01/15/93	Branching controlled by GTO works. Conditional */ branching controlled by testing flags works in the case	*/ */
	Thursday Sunday Thursday Wednesdy Thursday Friday Tuesday	Thursday 12/17/92   Sunday 12/20/92   Thursday 12/20/92   Wednesdy 12/30/92   Thursday 12/31/92   Thursday 12/31/92   Thursday 12/31/92   Thursday 12/31/92   Friday 01/01/93   Friday 01/03/93	transmogrified calculator face is automatically positioned in the lower left corner of the screen dynamically at run time.Wednesdy12/16/92Added Save Program and Load Program items to the file menu.Thursday12/17/92GTO CHS nnn goes to line number nnn. GTO I GTO 0 thru 9, .0 thru .9 will branch to location established by, in prgm mode f LBL 0 thru 9, .0 thru 9. co thru 9, will branch to location established by, in prgm mode f LBL 0 thru 9, .0 thru 9. co thru 9, .0 thru .9 will branch to location established by, in prgm mode f LBL 0 thru 9, .0 thru 9. dtru 9. dtru 2.9 will branch to location established by, in prgm mode f LBL 0 thru 9, .0 thru 9. dtru 9. dtru 2.9 will .0 thru 9.9 dtru 2.9 will .0 thru 9.9 dtru 2.9 will .0 tru 2.9 will .0 tru 2.9 dtru 2.9 will .0 tru 2.9 will .0 tru 2.9 will .0 tru 2.9 dtru 2.9

/* /*			of flag 9.	Other flags untested.	*/ */ */
*  *  *  *  *	Saturday	01/16/93	if a STO or when in th the dash fo	TS a mark in the program enunciator whereby RCL { A • • E, (i)} instruction is generated */ e USER mode, a u will be displayed in place of ollowing the line number. */ andbook, p 176	*/ */ */
*  *  *  *  *  *	Wednesday01/20/93		each of the for the fing one can ch entered. Fi	g in the MaintainCursor() routine that had */ e windows responding to each of the rects */ ger cursor. Fixed the Chs_Button so that ange the sign of a number while it is being xed all the number buttons so that testing */ not also affect the gDisplayString	*/ */ */ */
*  *  *  *  *  *  *  *	Wednesda	y01/27/93	f & ) Linear Esti f & Linear Reg Permutatio	mation and correlation coefficient works	*/ */ */ */ */ */
/* /* /*	Thursday	01/28/93	Created co	lor calculator face	*/ */ */
/* /* /*	Saturday	02/06/93	Began proj	ect to add a graphics window	*/ */
<i> *  *  *  *  *  *  *  *  *  *  *  *</i>	Friday	03/26/93	selection. A allows. Coo constrains support 10 A circle and They are so circle and t and a hous with the ar When selec selection re corner. Clic shape of th	window is opened in response to a menu */ Additional windows can be opened as memory de allows 100 windows. Current memory windows to about two. Each window can 00 objects. There are four object types. d a square are two dimensional objects. elected from a palette with five icons. The */ the square, an arrow for selecting, and a cube se object. Clicking on the circle or the square row selects that object. cted, those objects are framed by a grey ectangle with a black square in the lower right cking and draging on that square changes the ne circle and square to an oval or elipse or to a respectively. Clicking on the cube or the house	*/*/*/*/*/*/*/*/*/

<i>****************</i> **			produces a selection rect but the object is not manipulatable in the manner of the circle or the square, as these objects have three dimensional character. The cube and the house are manipulated by clicking buttons in a second window which is called up as a result of a */ menu selecton. Currently this window has six icons, representing the three axes, x,y and z, and a direction, clockwise or counterclockwise. Whichever object is selected rotates according to which button is pressed. If two objects are selected then they both are rotated. 100 objects can be rotated in two seconds. The graphics window has scroll bars. Selected objects can be scrolled off screen and rotated with the buttons. If two windows are open with selected objects, the buttons operate on the objects in the window last selected.	*/*/*******************
<i>``*`*`*</i> `* <u>*</u> ***	Friday	04/02/93	A shareware dialog box has been added which asks for money and has three text edit fields asking for a name, organization and serial number. Three buttons marked "Register", "Tomorrow" and "Pre-Register" are present, and when pressed, dismiss the dialog box. Information typed onto the text edit fields are captured into Str255 string types. Currently, when pressing the Pre-Register button, a pre-registration code is generated, which is */ displayed in a note-alert box. The current */ pre-registration number generator produces characters which are non displayable.	*/ */ */ */ */ */
` <i>`</i>	Sunday	05/02/93	The note-alert box no longer is displayed, as the non */ displayable characters included make it useless and it is otherwise annoying A Wizard's password dialog box appears if the key combination control-option-w is pressed while the cursor is placed over the divide button on the calculator window. If the correct user and password are entered */ the sound Fanfare is played, if not, the sound Bronx is played. Success in entering the Wizard's usercode and password changes the Load Program and Load Data item names in the File Menu to Open Program and Open Data. While in the Wizard mode, File Menu requests to "Save Data", "Save Program", "Close Program", "Open Program", and "Open Data" result in calls to FSWrite, */	*/*/************

*  *  *  *			FSWrite and FSClose, SFGetFile, and SFGetFile, respectively. File Menu requests to "New Program" result in the appearance of an alert box with an "Under Construction" message.	*/ */ */ */
/*	June 18-20	1993 MacH	lack */	-
/* /*			Presented "Help Not!"	*/ */
/* /*	Thursday	11/25/93	Thanksgiving!	*/ */
/* /*			After long layoff	*/ */
*  *  *  *	Saturday	11/27/93	Added the code which allows storage of matrix elements to be programmable. Added code to allow the f MATRIX functions to be programmable. Still no code under them for 2 through 9.	*/ */ */ */
*  *  *  *  *  *  *	Saturday	12/04/93	Found a bug in the AE buttons where attempting to set the result matrix resulted in program code for setting a label. Found a bug that revealed itself when trying to */ program to recall a matrix. RCL MATRIX A became RCL A; CHS	*/ */ */ */
*  *  *  *	Sunday	12/04/93	Found a bug in the run program state whereby once a program had been run once the condition codes were*/ left in an awkward state	*/ */ */
*  *  *  *	Thursday	12/16/93	EEX button works in the case where the key sequence is 2.2 EEX 23 ENTER. Does not yet correctly accept number values.	*/ */ */
*  *  *  *	Sunday	12/26/93	Enabled g 7, g 8, and g 9 for DEG, RAD, and GRAD respectively. The enunciators show up and are cleared properly. Interferes with number input some way. Not yet recognized by trigonometric functions. */	*/ */ */
*  *  *  *	Monday	12/27/93	Changed shareware screen to \$20 from \$14 using Geneva 10. EXX button now correctly accepts number values.	*/ */ */
/* /*	Tuesday	12/28/93	Added stubs to SIN, COS, TAN to process a request for	*/ */

*  *  *  *			hyperbolic functions. Now clears hypFlag and plus or */ minus. Added code to the three buton to convert back and forth from degrees and radians. Need to put in a */ Deparse(); though. Put in the DeParse(). SIN, COS, TAN now recognize a request to calculate values using RADs.	*/ */ */
*  *  *  *	Wednesda	y12/29/93	Conversion of decimal time to hours, minutes & sec now works. That's f ->H.MS. Conversion of hours, minutes & sec now works. That's g ->H.	*/ */ */ */
/* /* /*	Thursday	12/30/93	Rectangular-Polar interconversion now works. */	*/
/* /* /*	Monday	01/03/94	Started project to implement the Program Window, using the List Manager */	
/* /*	Tuesday	01/12/94	Program Window scrolls in jig-saw fashion. Unacceptable.	*/ */
*  *  *  *	Tuesday	01/18/94	Program Window redone with scavenged code from */ AppMaker. Several days to chase down a bug in the */ activate system. Had to create a global to keep track of the window. Window content is generic AppMaker.	*/ */ */
<i>\* \* \* \* \* \* \* \* \* \* \* \* \* \</i>	Thursday	01/20/94	Program Window now displays o's in first column and */ the program's object code in column two. What a motherfucker! I had put the mapstruct map in the Calculators WRefCon using the infoPtr to reference it. */ When the Program Window was created, it got its own infoPtr. The Program Window needed the data in the */ Calculator's infoPtr and it was lost in the process. I took the mapstruct and put it in global space, replacing "cur->map" with "map" and that is when the link errors started. mapstruct was defined in Globals.h with following: extern mapstruct map; this resulted in "undefined map" */ /*extern» mapstruct map; this resulted in */ multiply defined map" */ EXTERN mapstruct map; resulted in "incorrect declaration including from C13 Calculator.h #ifdef DECLAIR	*/ */*/ */ */*/*/ */*/*/*/*/*/

	/* #define EXTERN	*/
	/* #else */	/
	/* #define EXTERN extern */	/
	/* #endif	*/
4	/* allowed EXTERN to be used and reduced the multiply */	/
	/* defined error messages by about half.	*/
4	/* #including "Globals.h" in	*/
4	/* trick.c solved the problem	*/
	/*	*/
	/**************************************	*****/