

TO: Distribution
FROM: Joan Archer Scott
RE: Multics Change Requests
DATE: 3 October 75

Enclosed are Multics Change Requests which were approved from 16 September 75 through 30 September 75.

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TITLE: Fix bug in pool_manager		STATUS	DATE
AUTHOR: J. C. Whitmore		Written	09/03/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/06/75
-Planned for System MR 3.0		Expires	03/10/76
-Fixes Bug Number(s)		DOCUMENTATION CHANGES	
-Documented in MTB		Document	Specify One or More
-User/Operations-visible		MPM (Vol, Sect.)	
Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		PLMS (AN #)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MOSN (Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same		MPAM (Sect.)	
<input type="checkbox"/> Worse		MSAM (Sect.)	
-Replaces MCR		Info Segs	
Objections/Comments:		Other (Name)	
		None (Reason)	no change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary: Change 1 variable reference.

Reasons: The clean_pool entry references and stores into an argument which is undefined for the entry. This may cause the initializer to reference beyond the stack and crash the system.

Implications: This is an emergency fix which is needed for MR 3.0.

TITLE: Change find_word to print line numbers		STATUS	DATE
AUTHOR: Jerry A. Stern		Written	9/4/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	09/16/75
		Expires	02/16/76
		DOCUMENTATION CHANGES	
Category (Check One) <input type="checkbox"/> Lib. Maint. Tools <input type="checkbox"/> Sys. Anal. Tools <input type="checkbox"/> Sys. Prog. Tools <input type="checkbox"/> 355 <input type="checkbox"/> BOS <input type="checkbox"/> Salvager <input type="checkbox"/> Ring Zero <input type="checkbox"/> Ring One <input type="checkbox"/> SysDaemon/Admin. <input type="checkbox"/> Runtime <input checked="" type="checkbox"/> User Cmd/Subr.		Document	Specify One or More
Objections/Comments:		MPM (Vol, Sect.)	
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	<input checked="" type="checkbox"/>
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary: Change the find_word command to print the line number for each occurrence of a word in addition to printing the word in context. Add a new "-brief" ("-bf") control argument to find_word that causes line numbers only to be printed.

Reasons: The purpose of the find_word command (used in conjunction with word_list) is to help a user locate all occurrences of a word within a segment. This is most easily done by printing the line number of each occurrence. The printing of the word in context, i.e., with surrounding punctuation and delimiters, is retained since it is useful in judging the validity of suspicious words without resorting to an editor.

Implications: None

09/04/75

name: find_word, fwd

The find_word command locates all occurrences of a given word within a text segment. It is intended to be used in conjunction with the word_list command. (See word_list) For each occurrence of a given word, the line number is printed along with the word in context, i.e. with surrounding punctuation and delimiters.

Usage

find_word pname word -control_arg-

- 1) pname is the pathname of the text segment to be searched.
- 2) word is the word to be located.
- 3) control_arg can be the following control argument.
-brief, -of causes the printing of the word in context to be omitted.

Notes

The delimiters space, horizontal tab, newline, vertical tab, and form feed are printed as <SP>, <HT>, <NL>, <VT>, and <FF> respectively. The occurrence number precedes the printing of each line number and word.

TITLE: Fix bug in print_request_types and print_devices		STATUS	DATE
AUTHOR: Jerry A. Stern		Written	9/5/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL. -Planned for System MR 3.0 ? -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/10/75
		Expires	03/16/76
		DOCUMENTATION CHANGES	
		Category (Check One)	Document Specify One or More
		<input type="checkbox"/> Lib. Maint. Tools	
		<input type="checkbox"/> Sys. Anal. Tools	
		<input type="checkbox"/> Sys. Prog. Tools	
		<input type="checkbox"/> 355	
		<input type="checkbox"/> BOS	
		<input type="checkbox"/> Salvager	MPM (Vol, Sect.)
		<input type="checkbox"/> Ring Zero	PLMS (AN #)
		<input type="checkbox"/> Ring One	MOSN (Sect.)
		<input type="checkbox"/> SysDaemon/Admin.	MPAM (Sect.)
		<input type="checkbox"/> Runtime	MSAM (Sect.)
		<input checked="" type="checkbox"/> User Cmd/Subr.	
Objections/Comments:		Info Segs	
		Other (Name)	
		None (Reason)	<input checked="" type="checkbox"/>

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary: Fix an erroneous declaration of error_table \$badopt contained in print_request_types and print_devices. (The same error appears in both since the latter was produced by editing the former.)

Reasons: The "external" attribute was omitted from the declaration of error_table \$badopt causing it to be an automatic variable. This can result in an undefined error code being passed to com_err_.

Multics Change Request

TITLE: Fix bug in dprint		STATUS	DATE
AUTHOR: Jerry A. Stern		Written	9/18/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/16/75
-Planned for System MR		Expires	03/16/76
-Fixes Bug Number(s)		DOCUMENTATION CHANGES	
-Documented in MTB		Document	Specify One or More
-User/Operations-visible		MPM (Vol, Sect.)	
Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		PLMS (AN #)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MOSN (Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same		MPAM (Sect.)	
<input type="checkbox"/> Worse		MSAM (Sect.)	
-Replaces MCR		Info Segs	
Objections/Comments:		Other (Name)	
		None (Reason) <input checked="" type="checkbox"/>	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary: Fix a bug recently introduced into the dprint command that prevents a request from being submitted for a segment that does not yet exist.

Reason: The dprint command has in the past accepted such requests and should continue to do so.

Implications: None

Detailed Proposal: The cause of the problem is the new page label feature. The default page label is an access label which requires that dprint determine the access class of each segment. Clearly, this cannot be done for a segment that does not exist. Therefore, in this case, the default page label will be changed to a blank label.

Ver. 3 741022	MULTICS CHANGE REQUEST	MCR 1376
TITLE: Fix linker bug in creating multiple linkage segments. AUTHOR: Steve Webber		STATUS DATE Written 09/05/75 Status A 09/16/75 Expires 03/05/76
Planned for System: MR 3.0 Fixes Bug Number(s): not applicable Documented in MTB: not applicable Incompatible Change: no User/Operations-visible Interface Change: no Coded in: (<input checked="" type="checkbox"/>)PL/I (<input type="checkbox"/>)ALM (<input type="checkbox"/>)other-see below Performance: (<input type="checkbox"/>)better (<input checked="" type="checkbox"/>)same (<input type="checkbox"/>)worse		CATEGORY (check one) (<input type="checkbox"/>)Lib. Maint. Tools (<input type="checkbox"/>)Sys. Anal. Tools (<input type="checkbox"/>)Sys. Prog. Tools (<input type="checkbox"/>)355 (<input type="checkbox"/>)BOS (<input type="checkbox"/>)Salvager (<input type="checkbox"/>)Ring Zero (<input type="checkbox"/>)Ring One (<input type="checkbox"/>)SysDaemon/Admin (<input type="checkbox"/>)Runtime (<input type="checkbox"/>)User Command/Subr (<input checked="" type="checkbox"/>)hardcore
DOCUMENTATION CHANGES (specify one or more)		
MPI (vol,sect)	MPAM (sect)	
MOSN (sect)	MSAM (sect)	
PLMs (AN#)		
Info Slegs		
Other	bug fix only	
None (reason)	bug fix only	
OBJECTIONS/COMMENTS:		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY:

Fix bug in linker when it creates additional combined linkage segments.

REASONS:

Processes that require more than 64K of linkage and which have their LOT in the stack (which is the best place for it) do not work. Fixing this bug will allow them to work.

IMPLICATIONS:

More reliability for certain large users.

TITLE: Fix problem in bootstrap1		STATUS	DATE
AUTHOR: Noel I. Morris		Written	750905
-Coded in: <input type="checkbox"/> PL/I <input checked="" type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/16/75
-Planned for System MR NA		Expires	03/16/76
-Fixes Bug Number(s) _____		DOCUMENTATION CHANGES	
-Documented in MTB _____		Document	Specify One or More
-User/Operations-visible		MPM (Vol, Sect.)	
Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		PLMS (AN #)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MOSN (Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same		MPAM (Sect.)	
<input type="checkbox"/> Worse		MSAM (Sect.)	
-Replaces MCR _____		Info Segs	
		Other (Name)	
		None (Reason)	
Objections/Comments:			

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Reasons:

Readying a tape during bootstrap1 operation can cause absolute location 0 to get clobbered. This does not cause a crash until much later in a Multics bootload.

Proposal:

Add code to bootstrap1 to set up an LPW and DCW for the special status channel. This will prevent special status from being dumped into absolute location 0.

Implications:

It is impossible to completely eliminate the window during which location 0 can get clobbered. This change will make the window extremely small.

TITLE: Remove unneeded code from printer DIM		STATUS	DATE
AUTHOR: Noel I. Morris		Written	750905
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/16/75
-Planned for System MR NA		Expires	03/10/76
-Fixes Bug Number(s) _____		DOCUMENTATION CHANGES	
-Documented in MTB _____		Document	Specify One or More
-User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MPM (Vol, Sect.)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		PLMS (AN #)	
-Performance: <input checked="" type="checkbox"/> Better <input type="checkbox"/> Same <input type="checkbox"/> Worse		MOSN (Sect.)	
-Replaces MCR _____		MPAM (Sect.)	
		MSAM (Sect.)	
Objections/Comments:		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary:

Code was added to the printer DIM to get around a slewing problem on the PRT303 URMPC printer. This code involved much extra mechanism for one special case. It also caused a delay before printing head and tail sheets.

Reasons:

The extra code is complicated and messy. It special-cases around a hardware misdesign on a unit which is not a Honeywell standard product.

Proposal:

Remove the extra code.

Implications:

Certain cases of slewing on the PRT303 will cause a slew error. These cases are rare and can be recovered from by appropriate operator action. CISL is the only site which has a PRT303 printer. Thus, no other sites should be affected by this change. Instead, I/O Daemon operation should improve.

TITLE: Fix bug in disk DIM		STATUS	DATE
AUTHOR: Noel I. Morris		Written	750905
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Category (Check One)	
		Lib. Maint. Tools	
-Planned for System MR NA		Status	A 09/16/75
-Fixes Bug Number(s) _____		Expires	03/16/76
-Documented in MTB _____		DOCUMENTATION CHANGES	
-User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Document	Specify One or More
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MPM (Vol, Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse		PLMS (AN #)	
-Replaces MCR _____		MOSN (Sect.)	
Objections/Comments:		Runtime	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Reasons:

Spuriously generated special interrupts can currently cause a system crash.

Summary:

The disk DIM will be modified to prevent it from taking an out-of-bounds fault during the processing of special interrupts.

Implications:

FED can work on an idle disk unit during Multics operation with no fear of crashing the system.

TITLE: Modify BOS for 2 IOM Operation		STATUS	DATE	
AUTHOR: Noel I. Morris		Written	750905	
-Coded in: <input type="checkbox"/> PL/I <input checked="" type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)		DOCUMENTATION CHANGES Document Specify One or More MPM (Vol, Sect.) PLMS (AN #) MOSN (Sect.) MPAM (Sect.) MSAM (Sect.) Info Segs Other (Name) None (Reason)	
	<input type="checkbox"/> Lib. Maint. Tools	<input type="checkbox"/> Sys. Anal. Tools		Expires <u>03/16/76</u>
	<input type="checkbox"/> Sys. Prog. Tools	<input type="checkbox"/> 355		
	<input checked="" type="checkbox"/> BOS	<input type="checkbox"/> Salvager		
	<input type="checkbox"/> Ring Zero	<input type="checkbox"/> Ring One		
	<input type="checkbox"/> SysDaemon/Admin.	<input type="checkbox"/> Runtime		
	<input type="checkbox"/> User Cmd/Subr.			
Objections/Comments:				

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary:

BOS will be changed to store the IOM number for a channel with the channel number. The BOS IOM manager will be modified to accept such numbers for I/O requests. The BOS IOM manager will also be modified to be capable of running 64 channels on each IOM. This capability will be required when NSA IOM's are placed in operation.

Reasons:

Marketing requirement.

Implications:

The BOS disk and the operator's console will be required to be on the bootload IOM.

TITLE: Make break maps illegal in bound segments		STATUS	DATE
AUTHOR: M. Weaver		Written	09.04.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/16/75
		Expires	03/16/76
		Category (Check One)	
		Lib. Maint. Tools	
		Sys. Anal. Tools	
		Sys. Prog. Tools	
		355	
		BOS	
		Salvager	Document Specify One or More
		Ring Zero	MPM (Vol, Sect.)
		Ring One	PLMS (AN #)
		SysDaemon/Admin.	MOSN (Sect.)
		Runtime	MPAM (Sect.)
		<input checked="" type="checkbox"/> User Cmnd/Subr.	MSAM (Sect.)
Objections/Comments:		Info Segsbinder changes.info	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Change the binder to issue a fatal error when a break map is detected rather than just a warning.

REASONS:

Currently the binder "binds" segments with break maps, but the break maps are not included in the bound segments, so the breaks cannot be executed properly. It is not worth the effort to make break maps bindable.

IMPLICATIONS:

The binder will refuse to bind some segments it binds now.

Add to binder_changes.info:

The binder no longer binds segments containing break maps; these segments were never bound correctly anyway.

TITLE: Create and Maintain a pll_errata info file		STATUS	DATE
AUTHOR: R. A. Barnes		Written	09.05.75
-Coded in: <input type="checkbox"/> PL/I <input type="checkbox"/> ALM <input checked="" type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MFB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	# 09/16/75
		Expires	02/16/76
		DOCUMENTATION CHANGES	
Category (Check One)		Document	Specify One or More
<input type="checkbox"/> Lib. Maint. Tools		MPM (Vol, Sect.)	
<input type="checkbox"/> Sys. Anal. Tools		PLMS (AN #)	
<input type="checkbox"/> Sys. Prog. Tools		MOSN (Sect.)	
<input type="checkbox"/> 355		MPAM (Sect.)	
<input type="checkbox"/> BOS		MSAM (Sect.)	
<input type="checkbox"/> Salvager		Info Segs	pll_errata.info
<input type="checkbox"/> Ring Zero		Other (Name)	
<input type="checkbox"/> Ring One		None (Reason)	
<input type="checkbox"/> SysDaemon/Admin.			
<input type="checkbox"/> Runtime			
<input checked="" type="checkbox"/> User Cmmd/Subr.			
Objections/Comments:			

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

REASONS:

Serious errors are sometimes found in the PL/I Language Manual (AG94) which is revised infrequently. There needs to be a way to rapidly communicate these errors to the user community.

DETAILED PROPOSAL:

Create and maintain pll_errata.info which will contain corrections to serious errors in AG94 that are not diagnosed by the PL/I compiler. An example of such an error is the description of the <do statement> with a <repeat control> on page 12-14.

TITLE: Fix buffer-space bug in MCS		STATUS	DATE	
AUTHOR: R. Coren		Written	09.08.75	
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input checked="" type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR 3.0 -Fixes Bug Number(s) <u>unreported</u> -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)		Status	
	<input type="checkbox"/>	Lib. Maint. Tools	Expires	
	<input type="checkbox"/>	Sys. Anal. Tools	A 09/16/75	
	<input type="checkbox"/>	Sys. Prog. Tools	03/16/76	
	<input checked="" type="checkbox"/>	355	DOCUMENTATION CHANGES	
	<input type="checkbox"/>	BOS	Document	Specify One or More
	<input type="checkbox"/>	Salvager	MPM (Vol, Sect.)	
	<input checked="" type="checkbox"/>	Ring Zero	PLMS (AN #)	
	<input type="checkbox"/>	Ring One	MOSN (Sect.)	
	<input type="checkbox"/>	SysDaemon/Admin.	MPAM (Sect.)	
<input type="checkbox"/>	Runtime	MSAM (Sect.)		
<input type="checkbox"/>	User Cmmnd/Subr.	Info Segs		
Objections/Comments:		Other (Name)		
		None (Reason) bug fix		

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Fix bug whereby large quantities of output for several lines could crash the 355.

REASONS:

This bug caused many crashes at MIT.

IMPLICATIONS:

None.

DETAILED PROPOSAL:

1. Fix 355 code to report amount of available buffer space when sending input or requesting output; 6180 will not send more buffers than 355 can handle.
2. If 355 cannot get buffers for output, make it reschedule the processing of the request instead of crashing.
3. 355 portion coded in 355map.

NOTE: Already installed as an emergency fix.

TITLE: Make tty_dump compatible with new Answering Service
AUTHOR: R. Coren

STATUS	DATE
Written	09.08.75
Status	A 09/16/75
Expires	03/16/76

-Coded in: PL/I ALM other-
explain in DETAILED PROPOSAL
-Planned for System MR
-Fixes Bug Number(s) unreported
-Documented in MTB
-User/Operations-visible
Interface change? yes no
-Incompatible change? yes no
-Performance: Better Same
 Worse
-Replaces MCR

Category (Check One)	
<input type="checkbox"/>	Lib. Maint. Tools
<input checked="" type="checkbox"/>	Sys. Anal. Tools
<input type="checkbox"/>	Sys. Prog. Tools
<input type="checkbox"/>	355
<input type="checkbox"/>	BOS
<input type="checkbox"/>	Salvager
<input type="checkbox"/>	Ring Zero
<input type="checkbox"/>	Ring One
<input type="checkbox"/>	SysDaemon/Admin.
<input type="checkbox"/>	Runtime
<input type="checkbox"/>	User Cmmd/Subr.

DOCUMENTATION CHANGES	
Document	Specify One or More
MPM (Vol, Sect.)	
PLMS (AN #)	
MOSN (Sect.)	
MPAM (Sect.)	
MSAM (Sect.)	

Objections/Comments:

Info Segs
Other (Name)
None (Reason)

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Modify tool tty_dump to get device index from channel definition table instead of answer table.

REASONS:

Answering Service 8.2 moved the device index (among other things) from the answer table to the channel definition table, and tty_dump stopped working.

IMPLICATIONS:

None.

TITLE: Fix bug in compare_ascii		STATUS	DATE
AUTHOR: T. Casey		Written	09.08.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR -Fixes Bug Number(s) <u>unreported</u> -Documented in MTB -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/16/75
		Expires	03/16/76
		DOCUMENTATION CHANGES	
Category (Check One) <input type="checkbox"/> Lib. Maint. Tools <input type="checkbox"/> Sys. Anal. Tools <input type="checkbox"/> Sys. Prog. Tools <input type="checkbox"/> 355 <input type="checkbox"/> BOS <input type="checkbox"/> Salvager <input type="checkbox"/> Ring Zero <input type="checkbox"/> Ring One <input type="checkbox"/> SysDaemon/Admin. <input type="checkbox"/> Runtime <input checked="" type="checkbox"/> User Cmd/Subr.		Document	Specify One or More
Objections/Comments:		MPM (Vol, Sect.)	
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	
		Other (Name)	
		None (Reason)	no interface change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

When a group of lines has been inserted near the end of a segment, and the length of the inserted group is greater than the length of the remainder of the segment after the point of insertion, compare_ascii reports, incorrectly, that the remainder of the segment has been replaced by a large paragraph consisting of the paragraph actually inserted, followed by the remainder of the segment.

This bug will be fixed.

TITLE: Install PL/I compiler that produces the new object map		STATUS	DATE
AUTHOR: R. A. Barnes		Written	09.08.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input checked="" type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/16/75
		Expires	03/16/76
-Planned for System MR 3.1		DOCUMENTATION CHANGES	
-Fixes Bug Number(s) See attached		Document	Specify One or More
-Documented in MTB 187 sheet		MPM (Vol, Sect.)	SWG
-User/Operations-visible		PLMS (AN #)	
Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		MOSN (Sect.)	
-Incompatible change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		MPAM (Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same		MSAM (Sect.)	
<input type="checkbox"/> Worse		Info Segs	p11 new p11
-Replaces MCR		Other (Name)	
Objections/Comments: The -separate_static control argument is not yet fully supported and should not be "advertised" until further notice.		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Install bootstrapped PL/I compiler, I/O package, and tools (initialize_builtin and bound_display_) to produce the new object_map and entry sequence.

DETAILED PROPOSAL:

Besides fixing the starred bugs on the attached sheet, the new compiler will do the following:

1. Produce object segments with the new object map and entry sequence;
2. Remove default initialization of varying strings as described in MCR 1364;
3. Implement "options (constant)" as a way to force allocation of internal static variables in the text section;
4. Accept the -separate_static control argument which causes a separate section to be generated for internal static.

Documentation for separate_static:

-separate_static causes the compiler to place static storage in a separate section from the links. This control argument causes slight degradation of access code efficiency and should only be used in compiling programs for prelinked systems.

-ss

help -pa pli_new
(3 lines follow)

9/25/75 -- new features of the PL/I Compiler

This help file contains information on new PL/I features not documented in the current edition of the PL/I manual AG94. The new features are:

- (1) <environment(stringvalue)>
- (2) <options(constant)>

23 lines titled "<environment(stringvalue)>" follow. more help? yes

Rest of segment has 12 lines titled "<options(constant)>". more help? yes
<options(constant)>:

A variable declared <options(constant)> is allocated in the text section of the object segment. Such a variable must contain the <internal> and <static> attributes and must either contain the <initial> attribute or be a structure all of whose non-structure members contain the <initial> attribute. The variable declared <options(constant)> is treated semantically as a normal internal static variable except for the allocation in the text section. The user is responsible for ensuring that no attempt is made to get the variable outside the <initial> attribute.

(END)

r 1133 0.525 12.124 133

This file contains Version 2 PL/I BUGS, PLANNED IMPROVEMENTS,
PLANNED LANGUAGE FEATURES, UNDIAGNOSED PROBLEMS, and FURTHER INFORMATION.

BUGS marked with * have been fixed in the experimental compiler located in >ldd>ext>o.
BUGS without * will, in general, exist in both the installed compiler and the
experimental compiler.

1415 next free number

1414 75.09.04 rhs PL/I stream input does not complain when its
restriction on token size of 256 chars is exceeded.

1413 75.09.04 rhs ERROR 118 is often confusing regarding in-option of
allocate stmt (mprf 8665).

1412*75.08.29 rhs reverse(substr(varying_str,...)) fails.

1411*75.08.29 rhs precision of 0 not diagnosed (e.g., fixed(0))
(mprf 8680).

1410*75.08.27 rhs dcl 1 st based,2 sub,3 (a fixed,b,c),2 a area(24 refer(sub.a));
gets ERROR 221. Bug in initialization of area members of
structures.

1409*75.08.27 rhs call loa_(char(varying_str)); should pass a nonvarying
string where loa_ is declared options(variable) (mprf 8673).

1408 75.08.26 ... a non-local goto into a stack frame which has been
extended (by a string expr in an arglist) does not
shorten the frame, possibly leading to stack overflow.
(lsn 8689).

1407*75.08.26 rab a(<expression>) format may fail with optimizer.

1406*75.08.26 rhs stream file incorrectly gets the sequential attribute
supplied by default during opening.

1405*75.08.25 rab (ext only) source listings do not get printed.
Caused by bug 1404

1404*75.08.25 rab a = b; j = 4; if a... where a and b are short bit
strings could get bad code for a later reference
to b.

1403*75.08.25 rhs substr(varying...) can get ERROR 313 with stringrange enabled.

1402*75.08.24 rhs get string with copy option gets ERROR 239.

1401 75.08.22 rab extent expressions for members of nonparameter structures with no explicit storage class may be handled incorrectly.

1400*75.08.21 rab descriptors for based vars with expr extents are built in the stack frame in which the vars are declared rather than in the one in which the calls occur. This could cause anomolous behavior in rare circumstances.

1399*75.08.21 rab bit_varying = bin(100,71); fails; bit_varying = bit(bin(100,71)); works (mprf 8654).

1398*75.08.20 rab some cases of mod, trunc, cell, and floor builtins fail with decimal arguments. The bug was caused by a misunderstanding of the truncation indicators.

1397*75.08.20 rhs assignment to string with non-integer length within array fails.

1396 75.08.19 rab statement map entries built incorrectly for those stmts that generate prologue code in programs with only 1 entry point (mprf 8517). Causes probe & debug probs.

1395*75.08.19 rhs subscript references for lsub-defined vars get resolved in wrong block.

1394*75.08.18 rhs aggregate assignment to array with noninteger bounds fails.

1393*75.08.14 rhs "%include foo1; %include foo2;" produces a pl1 error message which cites an incorrect line number and file number.

1392*75.08.12 rhs pl1 listings of very long programs sometimes get extraneous characters appended at end of line.

1391*75.08.08 rab if..then..else..if..then..else..if..then with mixed packed and unpacked ptrs fails with -optimize

option. (MPRF 8605).

1309*75.08.01 rhs dcl(x,y) float dec(59); x=x**fixed(y,17,0); fails.

1388*75.07.22 rab call loa_(foo !! char(fixbin,4)); gets FATAL ERROR 310

1387*75.07.21 rab aproc returns(1,2 ptr,2 ptr);dcl 1 b aligned, 2 (p,q) ptr;
return(a); fails.

1386*75.07.21 rab subscriptrange fails if a subscript becomes double
precision when converted to integer.

1385*75.07.20 rhs substr(based_varying,...) gets ERROR 305 with stringrange
enabled.

1384*75.07.17 rhs verify((substr(varying,...)),...) gets ERROR 315
and bad code. Removing extra parens bypasses the
bug (mprf 8510).

1383*75.07.15 rab put data; loops in a bound segment!

1382 75.07.09 rab get data(a); fails in bound segment because ok_lists
are not properly relocated (mprf 8472).

1381*75.07.08 rhs erf & erfc builtins undefined for complex args. They
should get error messages instead of linkage fault at
runtime (mprf 8429).

1380*75.07.03 rab bit1="1"b; fixbin=binary(bit1,17); if bit1 ... can fail
because load\$for_test doesn't check the offset of bit1 in the aq.

1379*75.07.02 rhs put list(offset); puts it out in ~o format instead
of ~w format.

1378*75.07.01 rhs rewrite with invalid key sometimes raises transmit,
instead of key, condition.

1377*75.06.29 rab I/O with pictures can fail if two pictures with the same
declaration exist in the same program but in different blocks.

1376*75.06.19 rab bad relocation bits for runtime symbol table entry for
pictures. Causes problems in bound segments if debug,
probe, put or get data used.

1375*75.06.19 rab optimizer fails on rare occasions to properly handle
vars whose first, but not only reference, was as arg
to the addr builtin.

1374*75.06.18 rhs fixbin71 = fixbin71 + 84*86400000000; faults or gets
FATAL ERROR.

1373*75.06.18 rab symbol table entry built incorrectly for var based on member of structure (if struc name present). Hurts put data, debug, probe, etc.

1372*75.06.13 rab call a.b; gets FATAL ERROR 310. call a.b(); works.

1371*75.06.13 rab on key() causes parse to fault instead of getting ERROR message (mprf 8347).

1370*75.06.13 rab passing constants or binary unaligned function results as arg to routines expecting unaligned binary may fail. (lcn 8684).

1369*75.06.13 rhs compound put edits fail with optimize (mprf 8381).

1368*75.06.11 rab bad code if the base of defined aligned short string is nonmember array of aligned short strings that is passed as arg or arg to unspec, and optimizer is used.

1367*75.06.10 rab array(*) = scalar_fun() fails.

1366*75.06.10 rab assignment to structure element of array with refer extents can fail.

1365*75.06.10 rhs unaligned temp produced sometimes for multiply operator.

1364*75.06.09 rab fixed(<dec_integer_const>...) produces a binary result. It should produce a decimal result.

1363*75.05.27 rhs write stat gets error condition for file open for update. (lcn 7893).

1362*75.05.20 rhs copy(substr(char_str,8,8),4) gets false WARNING 234 and faults at execution.

1360*75.05.15 rab var_str = var_str || substr(x,i,min(...)); gets bad code if the result of min is double precision (lcn 3403).

1359*75.05.07 rab call foo(array(i)); where foo is options(variable) and array is

1361 75.05)9 eew initialization of single small element of very large static structure causes very large object segment (c53122).

1349*75.04.15 rhs improve code for float_array = 0; (mprf 8194).

1295 75.01.07 rhs onloc() does not recognize quick procedures.

1215 74.08.27 rhs x(i,*) = u(i,*) where x is based produces a temporary of the wrong size, possibly causing FATAL ERROR 308.

1110 74.05.16 rhs %include statement on line 2 causes strange listing (mprf 7190).

1033 74.02.26 rhs If the 2nd or 3rd argument of translate b1f or 2nd argument of search or verify b1f is constant, the allocate bit in the symbol node should be turned off so that the constant is only allocated if it is really needed (mprf 6815).

977 73.12.28 rhs string(char_array(i,*)) gets ERROR 272 (mprf 6367).

964 73.12.26 rab dcl mumble fixed bin; a %include statement; where statement has a complete declaration gets misleading error message in that "a" is not printed (mprf 5883).

959 73.12.18 rab LEX: comments and blank lines should be allowed after logical end of program

946 73.12.05 rhs symbol map listing should include file attributes, e.g., input, output, etc.

862 73.09.02 rhs dcl A(n,m) float bin based(p), B(n,m) float bin based(q);
A(i,*) = B(i,*)
generates assignment to temporary when
A(*,*) = B(*,*)
uses copy words operator directly into A. Furthermore, size of temporary used is wrong! Instead of allocating space for one row (m words), space for entire array (n*m) words is allocated!

587*72.10.06 rab put transfer vectors in listing (mprf 4877)

578 72.10.03 rhs suppress conversion message for refer(struc.bit) when substr provides length

481 72.08.10 rhs (subrg): array = scalar; / can suppress range checking code

428 72.07.10 rhs remove extra, unneeded assignment in subscript exp involving fix bin(71)

420 72.07.03 blw make two entries in profile for "if ... then ..."

322 72.05.18 act validate should set error bit if dcl is incomplete or invalid

277 72.05.11 rhs dcl lv label local static init(...); / no error message

276 72.05.11 rhs improve returning of unaligned items, particularly ptrs

244 73.01.19 rab constant expression involving division or non-integers are not done at compile time

202 72.03.06 rhs name appears on several entry statements / error 213 is confusing

FURTHER INFORMATION

When a problem is discovered, it is given a date and a serial number. An attempt is made to produce a small test case which exhibits the problem. The test cases are named testnnn.pl1 (where nnn is the problem serial number) and are kept in >ldd>ext>s>v2pl1.test.archive on the PCO and MIT systems. If the short description of an item in this file is not sufficient, the test case, if it exists, may provide further information. In addition, the test cases are used (albeit infrequently) to run regression tests on the compiler.

(*) char(*) may get bad code. bug in declare_descriptor.

1358*75.05.06 shw **HARDWARE BUG:** illegal opcode for translate of zero length str.

1357*75.05.05 rab repeated use of unal short bit string member of auto structure can fail if optimizer NOT used.

1356*75.05.05 rhs picvar = picture_fun(i); gets bad code.

1355*75.05.05 rhs use of init attrib with unconnected multidimensional arrays inside structure arrays gets FATAL ERROR 335 (Isn 7043).

1354*75.04.29 rhs dcl a(n) ext controlled; faults in cg if no alloc stmt and there is put data; (declare_descriptor bug) (mprf 8233).

1353*75.04.28 rab a(i+j) = a(i+j) || s; where a is an array of varying strings fails if the optimizer is NOT used.

1352*75.04.28 rhs prec builtin fails if first arg is a constant (an unusual application!) (mprf 8197).

1351*75.04.28 rhs a(*,i1) = b(i1,*); gets erroneous WARNINGS 77, 76, 307 when a and b are based arrays with non-constant dimensions (mprf 8196).

1350*75.04.18 rhs erroneous ERROR 123 if the fixed bit appears as a subscript of an aggregate reference.

1348*75.04.15 rab (size): fixed35 = bit37; does not signal size when it should (mprf 8193).

1347*75.04.14 rhs i = index(substr(k,j,10),"f"); gets FATAL ERROR 335 instead of ERROR 93 when k is fixed bin array and i is fixed bin scalar (Isn 7040).

1346*75.04.14 rhs dcl 1 a,2 b ptr,2 c fixed;dcl 1 d(50,50),2 e ptr,2 f fixed;
a = d(25,g(3)); gets ERROR 313.

1345*75.04.14 rhs reverse(substr(s,i,<constant>)) fails. (check_code 7 should
be fixed and used for copy, reverse, length, and substr.)

1343*75.04.07 rhs the printed symbol map puts unreferenced auto and static vars
in the wrong section if the -table option is used (mprf 8173).

1339 75.04.01 eew trace and trace_stack cannot get the entry descriptors for
entries of the form a\$b: entry(...). This bug will be
fixed with the new object segment format (mprf 8158).

1337*75.03.30 rhs get data(array_with_refer_extents); faults at execution time.
put data; also faults if prog contains abovementioned array.

1313 75.01.21 bsg size condition not raised in decimal assignment when value too
large.

1309 75.01.15 rab get data fails for any based variable whose implicit
qualifier is other than a simple reference to a scalar pointer
variable (c53184). No room in runtime_symbol node to
encode a more complicated qualifier expression.

1301*75.01.09 rab (any_to_any_bug): ".000000000e0b" gets underflow while
being converted to float binary.

1299*75.01.08 rab symbol table entry built incorrectly for var with position
attribute.

1297*75.01.07 rab (any_to_any_): flt_dec3 = "8.23e-127"; gets conversion instead
of underflow.

1186 74.07.23 ... dcl c char(<8) auto|static unal;dcl cb char(<8) unal
based(addr(c)); references to cb are not padded while
references to c are. This is part of a more general
problem which has always existed and will not be
fixed quickly.

1118*74.05.23 rab any_to_any_! bit to char conversion fails for strings longer than 256
(mprf 7221). Same for char to bit.

1006 74.01.29 ... info, from options and string, unspec builtins fail for a
connected array reference whose declaration doesn't have its
own dimensions. This is a rare case. Examples:
dcl 1 st(3), 2 a fixed bin; write from(a); Note that st
has no other members.

9/01
SUGGESTED IMPROVEMENTS

TITLE: Change set_iacl_seg error message		STATUS	DATE	
AUTHOR: S. Herbst		Written	09.09.75	
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)		Status	
		Lib. Maint. Tools	Expires	
		Sys. Anal. Tools	DOCUMENTATION CHANGES	
		Sys. Prog. Tools	Document	Specify One or More
		355		
		BOS	MPM (Vol, Sect.)	
		Salvager	PLMS (AN #)	
		Ring Zero	MOSN (Sect.)	
		Ring One	MPAM (Sect.)	
		SysDaemon/Admin.	MSAM (Sect.)	
	Runtime			
	<input checked="" type="checkbox"/> User Cmd/Subr.			

Objections/Comments:	Info Segs
	Other (Name)
	None (Reason) no change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Change set_iacl_seg and the other initial acl commands to say:

"Unable to list initial acl of dnyen"

instead of:

"Unable to list acl of dnyen"

as they do today when unable to list the initial acl of the directory in question.

TITLE: Fix bug in term_\$single_refname		STATUS	DATE	
AUTHOR: S. Herbst		Written	09.09.75	
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR -Fixes Bug Number(s) -Documented in MTB -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR	Category (Check One)		Status	
	Lib. Maint. Tools		A 09/10/75	
	Sys. Anal. Tools		Expires	03/10/76
	Sys. Prog. Tools		DOCUMENTATION CHANGES	
355		Document	Specify One or More	
BOS		MPM (Vol, Sect.)		
Salvager		PLMS (AN #)		
Ring Zero		MOSN (Sect.)		
Ring One		MPAM (Sect.)		
SysDaemon/Admin.		MSAM (Sect.)		
Runtime		Info Segs		
x User Cmmd/Subr.		Other (Name)		
None (Reason) no change				

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Change term_\$single_refname to zero the LOT entry when it terminates the last name by which a segment is known.

REASONS:

Failure to zero the LOT entry in this case causes a subsequent reference to that (re-used) segment number to use an invalid LOT ptr.

Example: The command processor when finding a command by pathname calls term_\$single_refname to terminate any previous reference to that command name. If the segment containing another version of the command was known and only known by that name, the segment number is re-used and an invalid LOT ptr results in the error message:

Entrypoint <command> not found in segment <command>.

DETAILED PROPOSAL:

If after terminating one name the segment is not known zero the LOT ptr.

TITLE: Obtain access from SDW and KSTE		STATUS	DATE
AUTHOR: E. Stone		Written	09.09.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR 3.1 -Fixes Bug Number(s) _____ -Documented in MTB 104 -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input checked="" type="checkbox"/> Better <input type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/16/75
		Expires	03/16/76
		DOCUMENTATION CHANGES	
		Category (Check One)	Document Specify One or More
		Lib. Maint. Tools	MPM (Vol, Sect.)
		Sys. Anal. Tools	PLMS (AN #) 61
		Sys. Prog. Tools	MOSN (Sect.)
		355	MPAM (Sect.)
		BOS	MSAM (Sect.)
		Salvager	Info Segs
		X Ring Zero	Other (Name)
		Ring One	None (Reason)
		SysDaemon/Admin.	
		Runtime	
		User Cmmnd/Subr.	
Objections/Comments:			

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

PROPOSAL:

This implements some of the ideas presented in MTB-104 with the following changes:

Change the format of the KST entry to include storing extended access, extended ring brackets (directory ring brackets) and dtbm (date-time-branch-modified).

Change procedures which calculate access to look up access in the KSTE (for directories) or in the SDW (for segments) whenever possible. This will eliminate potentially expensive access calculations of interpreting the ACL in the directory branch.

Change procedures which change access information to alter the dtem. This will allow the validity of the access information in the KSTE to be ascertained by comparing the date in the KSTE with the date in the branch.

Change the management of access information in the SDW. Change setfaults to zero the address of the page table rather than the entire SDW - thus preserving access information. Change programs which check whether a segment is connected to perform this check by looking at the address rather than the entire SDW.

Ver. 3 741022	MULTICS CHANGE REQUEST	MCR 1406
TITLE: Fix bugs in file_ IOSIM		STATUS DATE
AUTHOR: Paul Green and Mike Grady		Written 09/16/75
Planned for System: not applicable		Status 10/23/75
Fixes Bug Number(s): MPRF ???		Expires 03/16/76
Documented in MTB: not applicable		CATEGORY (check one)
Incompatible Changes: no		() Lib. Maint. Tools
User/Operations-visible Interface Change: no		() Sys. Anal. Tools
Coded in: (<input checked="" type="checkbox"/>) PL/I () ALM () other-see below		() Sys. Prog. Tools
Performance: () better (<input checked="" type="checkbox"/>) same () worse		() 355
DOCUMENTATION CHANGES (specify one or more)		() 80S
MPM (vol,sect)	MPAM (sect)	() Salvager
MOSN (sect)	MSAM (sect)	() Ring Zero
PLMs (AN#)		() Ring One
Info Segs		() SysDaemon/Admin
Other		() Runtime
None (reason) no change to interface		(<input checked="" type="checkbox"/>) User Command/Subr
OBJECTIONS/COMMENTS:		
file_ is obsolescent and should eventually be phased out.		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY:

Fix several bugs in the file_ IOSIM:

- 1) Unable to attach to a segment with many names.
- 2) Incorrectly validates input arguments to read entry.
- 3) Does not return EOF status when current length equals max length.
- 4) May convert a segment to a multi-segment file while reading.

REASONS:

Bug #1 hampers the intermultics_copy copy command, used to transfer segments over the Network. Bug #2 causes problems for the GCOS simulator. Bug #3 causes problems reading segments in the system libraries, which have max length set equal to current length. Bug #4 is just plain wrong...this should only happen when writing.

IMPLICATIONS:

none.

DETAILED PROPOSAL:

Replace the programs file.pl1 and file_util.pl1

Multics Change Request

TITLE: Fix bug in create/create_dir

AUTHOR: L. Scheffler

STATUS

DATE

Written

9/9/75

Status

P09/23/75

Expires

-Coded in: PL/I ALM other-
explain in DETAILED PROPOSAL

Category (Check One)

Lib. Maint. Tools

-Planned for System MR

Sys. Anal. Tools

-Fixes Bug Number(s)

Sys. Prog. Tools

-Documented in MTB

355

-User/Operations-visible

BOS

Interface change? yes no

Salvager

-Incompatible change? yes no

Ring Zero

-Performance: Better Same
 Worse

Ring One

-Replaces MCR

SysDaemon/Admin.

Runtime

User Cmmnd/Subr.

DOCUMENTATION CHANGES

Document

Specify One or More

MFM (Vol, Sect.)

PLMS (AN #)

MOSN (Sect.)

MPAM (Sect.)

MSAM (Sect.)

Objections/Comments:

Info Segs

JCW to provide details of design approach

Other (Name)

None (Reason) None needed

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY: Make create/create_dir use the access class of the parent directory rather than the process authorization as the default access class for a segment or directory being created.

REASONS: Processes having directory privileges (system administrators fixing inconsistencies) can currently create segments and directories with access classes inconsistent with the access class of the parent directory unintentionally. This change will eliminate this annoyance.

IMPLICATIONS: None

TITLE: New control argument for format_word_list		STATUS	DATE
AUTHOR: Jerry A. Stern		Written	9/11/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL		Status	A 09/23/75
-Planned for System MR		Expires	03/23/76
-Fixes Bug Number(s)		DOCUMENTATION CHANGES	
-Documented in MTB		Document	Specify One or More
-User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		MPM (Vol, Sect.)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		PLMS (AN #)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse		MOSN (Sect.)	
-Replaces MCR		MPAM (Sect.)	
		MSAM (Sect.)	
Objections/Comments:		Info Segs	<input checked="" type="checkbox"/>
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

Summary: Add a new control argument, "-columns" ("-cols"), to format_word_list that allows a user to specify exactly how many columns are wanted.

Reasons: At present a user is forced to accept the default number of columns which is not always appropriate. For example, when segment output is specified, the default number of columns is 6. This is appropriate for standard printer paper, but not for 8 by 11 paper. Similar problems exist with terminal output.

Implications: None

09/10/75

Name: format_word_list, fw1

The format_word_list command arranges a previously generated word list (see word_list) into a multiple column format suitable for either terminal printing or dprinting. By default, output is directed to the switch user_output.

Usage

format_word_list pname -control_args-

- 1) pname is the pathname of the word list segment. If the suffix ".wl" is not present, it is assumed.
- 2) -control_args- may be one or more of the following control arguments.
 - segment, -sm specifies that output is to be directed to a segment in the user's working directory. The name of the output segment is that of the input segment with the suffix changed from ".wl" to ".fwl".
 - replace, -rp specifies that the output is to replace the input, i.e. the output overwrites the input segment. The name of the input (output) segment is changed to have the ".fwl" suffix.
 - columns C, -cols C specifies that the output is to contain C columns where $1 \leq C \leq 6$. (See Notes)

Notes

The -segment and -replace control arguments are mutually exclusive.

If -segment or -replace is specified, the default number of columns is 6. Otherwise, the default number of columns is the maximum number of columns (not exceeding 6) that will fit within the line length defined for the switch user_output. If no line length is defined for user_output (as, for example, when file_output is used), the default number of columns is 3.

Words are arranged into columns 20 character positions wide. However, a word may extend beyond the end of a column up to a maximum of 31 character positions. If a word exceeds 31 character positions, it is truncated to 31 followed by a question mark (?). This implies that the rightmost column is actually 32 characters wide. Therefore, for a line length L, the maximum number of columns that can be accommodated is $((L-32)/20)+1$.

Ver. 3	MULTICS CHANGE REQUEST	MCR 1410
741022		
TITLE: Fix bug in dial facility	STATUS	DATE
AUTHOR: Paul Green	Written	09/15/75
	Status	A 09/23/75
	Expires	03/15/76
Planned for System: not applicable		
Fixes Bug Number(s): unreported	CATEGORY (check one)	
Documented in MT3: not applicable	() Lib. Maint. Tools	
Incompatible Change: no	() Sys. Anal. Tools	
User/Operations-visible Interface Change: no	() Sys. Prog. Tools	
Coded in: <input checked="" type="checkbox"/> PL/I () ALM () other-see below	() 355	
Performance: () better <input checked="" type="checkbox"/> same () worse	() BOS	
	() Salvager	
DOCUMENTATION CHANGES (specify one or more)	() Ring Zero	
MPM (vol,sect) SWG Subr MPAM (sect)	() Ring One	
MOSN (sect) MSAM (sect)	() SysDaemon/Admin	
PLMs (AN#)	() Runtime	
Info Segs	<input checked="" type="checkbox"/> User Command/Subr	
Other		
None (reason) no change to interface		
OBJECTIONS/COMMENTS:		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY:

Make dial facility completely independent of absentee facility.

REASONS:

As a shortcut, the dial facility uses the process_id of the absentee facility, published in the who table. Thus, when the absentee facility is turned off, the dial facility stops working, too. This is a bug.

IMPLICATIONS:

none.

DETAILED PROPOSAL:

Change as_request_ to store its process_id in the whotab, and change system_info_ to return it.

TITLE: Fix hcs_acl primitives bugs		STATUS	DATE
AUTHOR: A. Kobziar		Written	9/9/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/23/75
		Expires	03/23/76
		DOCUMENTATION CHANGES	
		Document	Specify One or More
		MPM (Vol, Sect.)	AG93
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
Objections/Comments:		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

1. Change the delete acl primitives to return the \$user_not_found error code as documented in the MPM.
2. Change the mode checking sequence to check segment/directory type rather than ring brackets first so that a code of \$notadir is returned rather than \$bad_ring_brackets.
3. Change acl listing not to require a zero mode field in the acl structure when getting modes for specific names. No requirement is mentioned in the MPM for having the mode fields zeroed when listing.

REASONS:

Make the acl primitives easier to use and conform more closely to the documentation.

TITLE: Catch empty file map bug via salvager		STATUS	DATE
AUTHOR: A. Kobziar		Written	9/11/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)		Status
	Lib. Maint. Tools		A 09/23/75
	Sys. Anal. Tools		Expires
	Sys. Prog. Tools		03/23/76
	355		DOCUMENTATION CHANGES
BOS		Document	Specify One or More
X Salvager		MPM (Vol, Sect.)	
Ring Zero		PLMS (AN #)	
Ring One		MOSN (Sect.)	
SysDaemon/Admin.		MPAM (Sect.)	
Runtime		MSAM (Sect.)	
User Cmnd/Subr.		Info Segs	
Objections/Comments:		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Several occurrences of the salvager changing the current length of a segment to 0 have been brought to my attention. (In one instance, the segment was the PNT in Phoenix.) In order to gain insight toward preventing the loss of such segments it is proposed that (1) whenever the salvager changes the current length to 0, a message with the segment's pathname be printed on the operator's console; and (2) dump the parent directory if switch 2 is up (this switch presently dumps directories if bad ascii on access names is found).

IMPLICATIONS:

The truncation of a system segment can now be determined from the salvager messages on the operator's console, so that a more informed Multics boot procedure can be given without going through the salvager printout.

TITLE: Fix bug in find_common_acl_names_		STATUS	DATE
AUTHOR: S. Herbst		Written	09/15/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	A 09/23/75
		Expires	03/22/76
		DOCUMENTATION CHANGES	
		355	Document Specify One or More
		BOS	MPM (Vol, Sect.)
		Salvager	PLMS (AN #)
		Ring Zero	MOSN (Sect.)
		Ring One	MPAM (Sect.)
		SysDaemon/Admin.	MSAM (Sect.)
		Runtime	Info Segs
		<input checked="" type="checkbox"/> User Cmnd/Subr.	Other (Name)
Objections/Comments:			None (Reason) no change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Fix find_common_acl_names_ to recognize that "a. b. c" or any name containing blanks is an illegal access name.

REASONS:

The subroutine currently treats the first blank as the end of the name and erroneously converts the above string to "a..* b. c."

TITLE: Fix null command line bug in walk subtree		STATUS	DATE	
AUTHOR: S. Herbst		Written	09.16.75	
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)	Status	A 09/23/75	
		Lib. Maint. Tools	Expires	03/23/76
		Sys. Anal. Tools	DOCUMENTATION CHANGES	
		Sys. Prog. Tools	Document	Specify One or More
	355			
	BOS			
	Salvager		MPM (Vol, Sect.)	
	Ring Zero		PLMS (AN #)	
	Ring One		MOSN (Sect.)	
	SysDaemon/Admin.		MPAM (Sect.)	
	Runtime		MSAM (Sect.)	
	<input checked="" type="checkbox"/> User Cmmnd/Subr.			
Objections/Comments:			Info Segs	
			Other (Name)	
			None (Reason) no change	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Fix walk_subtree to continue after processing a null command line.

REASONS:

A null command line occurs when an expression inside parentheses evaluates to null in a particular directory. For example:

```
ws protected "ssn ([segs*.pll])"
```

currently aborts if there is no match for *.pll in a directory being walked through. This situation is not a fatal error and walk_subtree should go on to the next directory.

TITLE: Enforce standard for command error messages about link targets		STATUS	DATE
AUTHOR: S. Herbst		Written	09.16.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other-explain in DETAILED PROPOSAL		Status	A 09/23/75
-Planned for System MR		Expires	03 23 / 76
-Fixes Bug Number(s) _____		DOCUMENTATION CHANGES	
-Documented in MTB _____		Document	Specify One or More
-User/Operations-visible		MPM (Vol, Sect.)	
Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		PLMS (AN #)	
-Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		MOSN (Sect.)	
-Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same		MPAM (Sect.)	
<input type="checkbox"/> Worse		MSAM (Sect.)	
-Replaces MCR _____		Info Segs	
Objections/Comments:		Other (Name)	
A list of such commands and a plan of implementation required. REASONS? This needs studying.		None (Reason)	no change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Invent rules by which we will change commands that take pathname arguments and chase links to call `hcs_$get_link_target` after `expand_path` so that subsequent error messages contain the pathname of the target rather than the pathname of the link.

Multics Change Request

TITLE: changes to msf_manager_		STATUS	DATE
AUTHOR: S. Herbst		Written	09/12/75
<input checked="" type="checkbox"/> Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL <input type="checkbox"/> Planned for System MR <input type="checkbox"/> Fixes Bug Number(s) _____ <input type="checkbox"/> Documented in MTB _____ <input type="checkbox"/> User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse <input type="checkbox"/> Replaces MCR _____		Status	A 09/23/75
		Expires	03/23/76
		DOCUMENTATION CHANGES	
Category (Check One) <input type="checkbox"/> Lib. Maint. Tools <input type="checkbox"/> Sys. Anal. Tools <input type="checkbox"/> Sys. Prog. Tools <input type="checkbox"/> 355 <input type="checkbox"/> BOS <input type="checkbox"/> Salvager <input type="checkbox"/> Ring Zero <input type="checkbox"/> Ring One <input type="checkbox"/> SysDaemon/Admin. <input type="checkbox"/> Runtime <input checked="" type="checkbox"/> User Cmnd/Subr.		Document	Specify One or More
Objections/Comments:		MPM (Vol, Sect.)	
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	
		Other (Name)	
		None (Reason)	no change

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Change msf_manager_ to:

1. call hcs_\$get_link_target on pathname of MSF when MSF is opened.
2. call hcs_\$create_branch_ instead of hcs_\$append_branchx.
3. store an access class in each MSF file control block (per opening).

REASONS:

1. currently, a link change can prevent all components from being created in the same directory.
2. new entry point will create without link chasing, to prevent daemons from being led to mischief through user links.
3. conversion to hcs_\$create_branch_.

IMPLICATIONS:

Safer use of daemons.

TITLE: Add Command dump_static_and_linkage		STATUS	DATE
AUTHOR: M. Weaver		Written	09.23.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input type="checkbox"/> Same <input checked="" type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)		
	<input type="checkbox"/> Lib. Maint. Tools	DOCUMENTATION CHANGES	
	<input type="checkbox"/> Sys. Anal. Tools	Document	Specify One or More
	<input type="checkbox"/> Sys. Prog. Tools	MPM (Vol, Sect.)	SWG
<input type="checkbox"/> 355	PLMS (AN #)		
<input type="checkbox"/> BOS	MOSN (Sect.)		
<input type="checkbox"/> Salvager	MPAM (Sect.)		
<input type="checkbox"/> Ring Zero	MSAM (Sect.)		
<input type="checkbox"/> Ring One	Info Segs		
<input type="checkbox"/> SysDaemon/Admin.	Other (Name)		
<input type="checkbox"/> Runtime	None (Reason)		
<input checked="" type="checkbox"/> User Cmmnd/Subr.			
Objections/Comments:			

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Add new command, dump_static_and_linkage (dsl), which is a combination of dump_ls and print_linkage_usage.

REASONS:

The two commands are very similar since dump_ls is an extension of print_linkage_usage. There is really no point to maintaining both.

DETAILED PROPOSAL:

See attached MPM writeup. The new name is more descriptive than either dump_ls or print_linkage_usage, considering separate static. For compatibility print_linkage_usage and plu will be entry points ignoring arguments. dump_ls is not installed yet so the name change should not affect users.

dump_static_and_linkage

Name: dump_static_and_linkage, dsl

This command prints information about the current ring's static and linkage sections. The user can control both the number of segments about which information is displayed and the amount of output to be printed. If specific segments are not requested on the command line, the command assumes all active object segments. In this case, the sections are located using the LOT and ISOT and sorted by location with everything else in the containing segment labelled as not being a static or linkage section. The output always includes a summary line for each segment. In addition, a dump of the segments' static and/or links may be requested. The dumps of static, identified by component name for bound segments, are in both octal and ascii and the dumps of links are in octal with the names of the links' targets.

Usage

```
dump_static_and_linkage -refname1 ... -refnamen-  
                        -control args-
```

- 1) refname1 is the reference name of a segment whose static/linkage is to be dumped. Components of bound segments are not treated individually.
- 2) control args may be any of the following control arguments anywhere on the command line.
 - static, -st indicates that the static sections are to be dumped. This applies to both those that are separate and those that are combined with linkage sections.
 - link, -lk indicates that the links are to be dumped. This does not include the entire linkage section.
 - long, -lg indicates that the complete linkage and static sections are to be dumped, including the linkage headers.

Note

If dumps are requested for more than one or two small segments, the user is advised to use the file_output command in conjunction with this command.

Ver. 3 741022	MULTICS CHANGE REQUEST	MCR 1420
TITLE: Add support for multiple FNPs		STATUS : DATE
AUTHOR: Mike Grady		Written: 08/11/75
Planned for System: MR 3.1		Status: 09/30/75
Fixes Bug Number(s): not applicable		Expires: 03/11/76
Documented in MTR: not applicable		CATEGORY (check one)
Incompatible Change: no		() Lib. Maint. Tools
User/Operations-visible Interface Change: yes		() Sys. Anal. Tools
Coded in: (X) PL/I (X) ALM () other-see below		() Sys. Prod. Tools
Performance: () better (X) same () worse		() 355
DOCUMENTATION CHANGES (specify one or more)		() BOS
MPM (vol,sect)	MPAM (sect)	() Salvager
MOSN (sect) 5.3.n	MSAM (sect)	(X) Ring Zero
PLMs (AN#) AN85		() Ring One
Info Segs		() SysDaemon/Admin
Other		() Runtime
		() User Command/Subr
OBJECTIONS/COMMENTS:		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY: Upgrade system to support multiple FNPs. Upgrade tools for loading and dumping.

REASONS: Product requirement.

IMPLICATIONS: There are three implications of this change:

1) Current mailbox address of the 1st FNP will change. All sites must reset the FNP mailbox address switches when going to the new release. The new mailbox addresses are:

FNP TAG	address
A	2400
B	2700
C	3200
D	3500

2) The format of the BOS FDUMP image will be changed to include space for dumping the other FNPs. This will increase the size of the BOS FDUMP image significantly.

3) This first implementation of multiple FNPs will be simple, and if one of the FNPs crashes we will still crash Multics. This will be changed in the future.

DETAILED PROPOSAL:

1) Upgrade the BOS commands ld355, dmp355, blast, and fd355 to work with multiple FNPs.

The commands `ld355`, `dmp355`, and `blast` will all take a new argument, FNP tag, which indicates which FNP the command should work with. The argument may be one of the letters a, b, c, or d, indicating which FNP to use. If this argument is missing the command will operate on all configured FNPs.

`fd355` will always dump all configured FNPs.

- 2) Fix various Multics hardcore routines to recognize multiple FNPs. `bootstrap1` must allocate the new mailbox at 2400 with the correct bound field. The tty DIM must initialize itself for multiple FNP operation. Most other tty DIM routines are prepared for multiple FNP operation.
- 3) Upgrade FDUMP interpretation tools to work with new multiple FNP fdumps. Fix `copy_dump` and `od_355`.

To: MOSN Distribution
From: Mike Grady
Date: 8/29/75
Subject: New BOS Command Interface For FNP Commands

With the addition of support for multiple FNPs, several changes have been made to the BOS commands used for loading and dumping the FNP. Also, the location of the FNP mailbox for FNP A has been changed.

New Mailbox Addresses

Multics can now support up to four FNPs, each of which must have a 300(8) word mailbox in the 6180. These mailbox addresses are as follows:

FNP TAG	address
A	2400
B	2700
C	3200
D	3500

The old mailbox address for FNP A was 600; this must be changed to 2400 with this release. The mailbox address is set in thumbwheel switches on the DIA configuration panel, located on the door of the FNP, and should be changed before the FNP is loaded.

BOS Command Changes

The four BOS FNP commands ld355, dmp355, fd355, and blast have been modified to operate with multiple FNPs. One, fd355, has no interface changes, as it always dumps all configured FNPs. The other commands have been modified to take a new argument, FNP tag, which may be either A, B, C, or D. This argument specifies which FNP the command should operate with, and if not supplied, the command will operate with all configured FNPs.

TITLE: Fix bug in file_ DIM		STATUS	DATE	
AUTHOR: M. Grady		Written	09/10/75	
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) <u>unreported</u> -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)	Status	A 09/30/75	
		Lib. Maint. Tools	Expires	03/30/76
		Sys. Anal. Tools	DOCUMENTATION CHANGES	
		Sys. Prog. Tools	Document	Specify One or More
	355			
	BOS	MPM (Vol, Sect.)		
	Salvager	PLMS (AN #)		
	Ring Zero	MOSN (Sect.)		
	Ring One	MPAM (Sect.)		
	SysDaemon/Admin.	MSAM (Sect.)		
	Runtime			
	User Cmd/Subr.			
	X IOS DIM			
Objections/Comments:		Info Segs		
		Other (Name)		
		None (Reason)		

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Fix a bug in the file_ DIM which caused incorrect error returns to be made when reading a segment which had its max_length set to other than sys_info_\$max_seg_size.

REASONS:

This fix is required to allow GCOS to assemble 355 programs.

Ver. 3	MULTICS CHANGE REQUEST	MCR 1422
741022		
TITLE: Fix bug in decode_descriptor_		STATUS DATE
		Written 09/16/75
AUTHOR: Gary C. Dixon		Status A09/30/75
		Expires 03/16/76
Planned for System: MR 3.1		
Fixes Bug Number(s): unreported bug		CATEGORY (check one)
Documented in MTB: not applicable		() Lib. Maint. Tools
Incompatible Change: no		() Sys. Anal. Tools
User/Operations-visible Interface Change: no		(<input checked="" type="checkbox"/>) Sys. Prog. Tools
Coded in: (<input checked="" type="checkbox"/>) PL/I () ALM () other-see below		() 355
Performance: () better (<input checked="" type="checkbox"/>) same () worse		() BOS
		() Salvager
DOCUMENTATION CHANGES (specify one or more)		() Ring Zero
MPM (vol,sect) MPAM (sect)		() Ring One
MOSN (sect) MSAM (sect)		() SysDaemon/Admin
PLMs (AN#)		() Runtime
Info Segs		() User Command/Subr
None (reason) No interface changes; only 1 bug		
is fixed.		
OBJECTIONS/COMMENTS:		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY:

Change decode_descriptor_ to interpret the length information in a new area descriptor as the declared size of the area, rather than as size and scale values.

REASONS:

The installed version of decode_descriptor_ assumes that the format of a new descriptor for an area contains both a size field and a scale field. This assumption is incorrect; area descriptors contain only a size field. Therefore, decode_descriptor_ should be changed to correct this false assumption.

IMPLICATIONS:

Programs which call decode_descriptor_ to decode argument list descriptors and entry argument descriptors will work correctly.

Ver. 3 741022	MULTICS CHANGE REQUEST	MCR 1423
TITLE: Remove peruse_text from system.		STATUS DATE
AUTHOR: VanVleck, Clingen		Written 09/17/75
Planned for System: not applicable		Status A 09/30/75
Fixes Bug Number(s): not applicable		Expires 03/17/76
Documented in MTB: not applicable		CATEGORY (check one)
Incompatible Changes: no		() Lib. Maint. Tools
User/Operations-visible Interface Changes: no		() Sys. Anal. Tools
Coded in: <input checked="" type="checkbox"/> PL/I () ALM () other-see below		() Sys. Prog. Tools
Performance: () better <input checked="" type="checkbox"/> same () worse		() 355
DOCUMENTATION CHANGES (specify one or more)		() BOS
MPM (vol,sect) pt	MPAM (sect)	() Salvager
MOSN (sect)	MSAM (sect)	() Ring Zero
PLMs (AN#)		() Ring One
Info Segs		() SysDaemon/Admin
Other		() Runtime
OBJECTIONS/COMMENTS:		<input checked="" type="checkbox"/> User Command/Subr

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY: Remove the peruse_text command and all peruse_text segments.

REASONS: The new help command obsoletes peruse_text. Furthermore, the peruse_text data base is incomplete and out of date because it has not been updated for over two years.

IMPLICATIONS: Current users of pt are probably misled. Deleting the command will help them.

Ver. 3 741022	MULTICS CHANGE REQUEST	MCR 1424
TITLE: Fixes and Improvements for help		STATUS DATE
AUTHOR: VanVleck		Written 09/17/75
		Status 09/30/76
		Expires 03/17/76
Planned for System: not applicable		
Fixes Bug Number(s): not applicable		CATEGORY (check one)
Documented in MTB: not applicable		<input type="checkbox"/> Lib. Maint. Tools
Incompatible Changes: no		<input type="checkbox"/> Sys. Anal. Tools
User/Operations-visible Interface Changes: no		<input type="checkbox"/> Sys. Prog. Tools
Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other-see below		<input type="checkbox"/> 355
Performance: <input type="checkbox"/> better <input checked="" type="checkbox"/> same <input type="checkbox"/> worse		<input type="checkbox"/> BOS
		<input type="checkbox"/> Salvager
DOCUMENTATION CHANGES (specify one or more)		<input type="checkbox"/> Ring Zero
MPM (vol,sect) help MPAM (sect)		<input type="checkbox"/> Ring One
MOSN (sect) MSAM (sect)		<input type="checkbox"/> SysDaemon/Admin
PLMs (AN#)		<input type="checkbox"/> Runtime
Info Segs		<input checked="" type="checkbox"/> User Command/Subr
Other		
OBJECTIONS/COMMENTS:		

Headings are: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (optional)

SUMMARY:

Fix bug which causes the first block of old-style info segments to lose two characters from line 2.

Add some error checks so that use of new features on old-style info segments will never print trash or terminate with no message.

Add new feature such that the first message printed will give the total line count in the segment. For example,

```
help news
(20 lines follow; 1422 lines in segment.)
...
```

and also print the total line count when listing heading lines only.

REASONS: The bug fixes are in response to user complaints.

The total line count will allow the user to decide whether to explore the segment, say "rest," or dprint the whole thing.

Multics Change Request

TITLE: Fix bug in edit_proj_		STATUS	DATE
AUTHOR: T. Casey		Written	09/19/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR 3.0 -Fixes Bug Number(s) unreported -Documented in MTB -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	H 09/30/75
		Expires	03/30/76
		DOCUMENTATION CHANGES	
Category (Check One) <input type="checkbox"/> Lib. Maint. Tools <input type="checkbox"/> Sys. Anal. Tools <input type="checkbox"/> Sys. Prog. Tools <input type="checkbox"/> 355 <input type="checkbox"/> BOS <input type="checkbox"/> Salvager <input type="checkbox"/> Ring Zero <input type="checkbox"/> Ring One <input checked="" type="checkbox"/> SysDaemon/Admin. <input type="checkbox"/> Runtime <input type="checkbox"/> User Cmmnd/Subr.		Document	Specify One or More
Objections/Comments:		MPM (Vol, Sect.)	
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

The edit_proj command prints \000's instead of blanks, when used to change the authorized group field of an SAT entry that has never been initialized. Change the edit_proj subroutine to initialize that field to blanks before printing it, if it is all zeros.

REASONS:

Printing \000's is sloppy, and might confuse system administrators.

TITLE: Install new FORTRAN compiler that produces the new object map		STATUS	DATE
AUTHOR: D. S. Levin		Written	09/22/75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR 3.1 -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____		Status	H 09/30/75
		Expires	03/30/74
		DOCUMENTATION CHANGES	
		Document	Specify One or More
		MPM (Vol, Sect.)	SWG
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
Objections/Comments:		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Install a FORTRAN compiler that works with the code generator that produces the new object_map and entry sequence.

REASONS:

Necessary for continued operation of FORTRAN compiler after installation of new PL/I compiler (MCR 1386).

IMPLICATION:

This must be installed with the new PL/1 and shipped to customers (special case because Fortran is unbundled).

TITLE: Binder Update Change for Separate Static		STATUS	DATE
AUTHOR: M. Weaver		Written	09.23.75
<input checked="" type="checkbox"/> Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL <input type="checkbox"/> Planned for System MR <input type="checkbox"/> Fixes Bug Number(s) _____ <input type="checkbox"/> Documented in MTB _____ <input type="checkbox"/> User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Incompatible change? <input type="checkbox"/> yes <input type="checkbox"/> no Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse <input type="checkbox"/> Replaces MCR _____		Status	A 09/30/75
		Expires	03/30/76
		DOCUMENTATION CHANGES	
Category (Check One) <input type="checkbox"/> Lib. Maint. Tools <input type="checkbox"/> Sys. Anal. Tools <input type="checkbox"/> Sys. Prog. Tools <input type="checkbox"/> 355 <input type="checkbox"/> BOS <input type="checkbox"/> Salvager <input type="checkbox"/> Ring Zero <input type="checkbox"/> Ring One <input type="checkbox"/> SysDaemon/Admin. <input type="checkbox"/> Runtime <input checked="" type="checkbox"/> User Cmnd/Subr.		Document	Specify One or More
Objections/Comments:		MFM (Vol, Sect.)	
		PLMS (AN #)	
		MOSN (Sect.)	
		MPAM (Sect.)	
		MSAM (Sect.)	
		Info Segs	
		Other (Name)	
		None (Reason)	

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

Change binder to fill in new static length field in virgin linkage header.

REASONS:

Overlooked in main submission because an uninstalled version of linkdcl.incl.pll is needed.

This new field is supposed to be filled in by translators producing version 2 object maps.

IMPLICATIONS:

Should be installed after 27.2.

TITLE: Correct misleading error message in debug		STATUS	DATE
AUTHOR: S. Barr		Written	09.23.75
-Coded in: <input checked="" type="checkbox"/> PL/I <input type="checkbox"/> ALM <input type="checkbox"/> other- explain in DETAILED PROPOSAL -Planned for System MR _____ -Fixes Bug Number(s) _____ -Documented in MTB _____ -User/Operations-visible Interface change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Incompatible change? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no -Performance: <input type="checkbox"/> Better <input checked="" type="checkbox"/> Same <input type="checkbox"/> Worse -Replaces MCR _____	Category (Check One)	Status	A 09/30/75
	Lib. Maint. Tools	Expires	03/30/74
	Sys. Anal. Tools	DOCUMENTATION CHANGES	
	Sys. Prog. Tools	Document	Specify One or More
	355	MPM (Vol, Sect.)	III Commands
	BOS	PLMS (AN #)	
	Salvager	MOSN (Sect.)	
	Ring Zero	MPAM (Sect.)	
	Ring One	MSAM (Sect.)	
	SysDaemon/Admin.	Info Segs	
Runtime	Other (Name)		
User Cmd/Subr.	None (Reason)		
Objections/Comments:			

Use these headings: Summary of Proposal, Reasons for Proposal, Implications, Detailed Proposal.

SUMMARY:

db_print checks the debug flags about the object segment in the wrong order. It checks the standard symbol table flag first. This flag is not set if there is no symbol table. As a result the message "Version I object segments are not supported by debug" is printed instead of "No symbol table for <program name>".

PROPOSAL:

Change db_print to make sure there is a symbol table before checking the standard flag.