To: MTB Distribution

From: Frank Martinson

Date: April 2, 1979

Subject: Multics System Library Statistics

     Attached are some interesting statistics describing the contents of the Multics System Libraries. It is of particular interest to note that about 85% of the system (in terms of lines of code) is now coded in PL/I. If you apply the standard approximation that 1 line of PL/I is equivalent to about 10 machine instructions, and assume that one line of ALM code is equivalent to 1 instruction, then about 98% of the instructions in the Multics System Libraries are generated from PL/I source.

     Another interesting statistic is that about 1340 modules were recompiled for MR7.0, representing about 35% of the modules in the System Libraries.

Source Line Count, by Language by Library
(Source expanded for includes less comment only and line feed only lines

Library	ALM #segs	ALM #lines	PL/1 #segs	PL/1 #lines	ALM %segs	ALM %lines	PL/1 %segs	PL/1 %lines
bos	40	33,962	0	0	100.0	100.0	0.0	0.0
hard	149	75,587	525	171,605	22.1	30.6	77.9	69.4
lang	45	18,863	337	151,020	11.8	11.1	88.2	88.9
net	21	4,811	114	38,396	15.6	11.1	84.4	88.9
obs	0	0	14	2,016	0.0	0.0	100.0	100.0
sss	41	5,223	479	180,241	7.9	2.8	92.1	97.2
tools	126	26,367	732	277,165	14.7	8.7	85.3	91.3
unb	90	79,937	1,027	526,740	8.1	13.2	91.9	86.8
Total	512	244,750	3,228	1,347,183	13.7	15.4	86.3	84.6

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Library by Date-Compiled

Library	<73	73	74	75	76	77	78	79	MR7.0	OLDEST COMPILED	SEGMENT NAME
bos	0.0	0.0	0.0	0.0	6.3	46.9	31.3	15.6	25.0	13	01/07/75
comm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	ALL 1977	NONE
hard	0.0	0.0	0.0	0.0	17.5	42.0	23.8	16.7	33.4	02/02/76	sc_stat_.alm
lang	1.0	6.0	4.2	20.4	0.8	9.9	56.4	1.3	56.9	05/27/72	pl1_blast_.alm
net	0.0	0.0	0.0	0.0	0.7	80.1	19.1	0.0	19.1	07/27/76	telnet_message_.al
obs	12.5	4.2	0.0	12.5	16.7	12.5	41.7	0.0	0.0	06/02/72	tio_.pl1
sss	1.8	4.1	4.9	10.8	11.0	19.8	15.5	32.2	44.2	07/15/71	com_query_.pl1
tools	2.7	6.2	6.8	15.8	9.1	21.3	12.6	25.5	36.3	09/23/70	io_compiler.pl1
unb	6.5	0.4	2.4	0.7	7.9	46.6	14.7	20.7	29.0	09/24/72	binomff2f_.pl1