Appendix B: Lisp Performance Studies

Code: 386
Computer Type: Compaq 386 (20Mhz 386)
Operating System: 386/IX 5.3 rev level 1.01 (unix)
Lisp: Lucid 2.0
Disk Configuration: 134MB ESDI
Swapping Size: unknown
Memory Configuration: 10MB; 32kB 20ns cache
Display Configuration: terminal
Other Configuration: none
Special Comments: none
Timing Template: elapsed (run)
Date-of-test: Spring 1988

Code: 386T
Computer Type: Compaq 386 portable (Toaster)
Operating System: 386/IX 5.3 rev level 1.01 (unix)
Lisp: Lucid 2.0
Disk Configuration: 40MB
Swapping Size: unknown
Memory Configuration: 10MB; no cache
Display Configuration: tiny LCD
Other Configuration: tiny display
Special Comments: portable version of "386" above
Timing Template: elapsed (run)
Date-of-test: Spring 1988

Code: 4/260
Computer Type: Sun 4/280
Operating System: SunOS 3.2 Gamma
Lisp: Lucid 2.1
Disk Configuration: unknown
Swapping Size: unknown
Memory Configuration: 32MB
Display Configuration: Hi Res color in mono
Other Configuration:
Special Comments: used :EXPAND 130 :GROWTH-RATE 130
Timing Template: elapsed (user-run + system-run)
Date-of-test: Summer 1988
Appendix B: Lisp Performance Studies

Code: 4/280
Computer Type: Sun 4/280
Operating System: SunOS 3.2 Gamma
Lisp: Lucid 2.1 beta
Disk Configuration: 417 (Eagle)
Swapping Size: 60MB
Memory Configuration: 8MB
Display Configuration: Hi Res mono
Other Configuration:
Special Comments:
Timing Template: elapsed (user-run + system-run)
Date-of-test: Winter 1988

Code: DEC-II
Computer Type: DEC MicroVax II/GPX
Operating System: VMS
Lisp: VaxLisp
Disk Configuration: 2 x 159MB
Swapping Size: 3k pg page, 8k pg swap
Memory Configuration: 16MB
Display Configuration: GPX
Other Configuration:
Special Comments:
Timing Template: elapsed - gc-elapsed (run - gc-run)
Date-of-test: Fall 1987

Code: DEC-III
Computer Type: DEC MicroVax III (3500)
Operating System: VMS
Lisp: VaxLisp
Disk Configuration: (RD53)
Swapping Size: unknown
Memory Configuration: 16MB
Display Configuration:
Other Configuration:
Special Comments:
Timing Template: elapsed - gc-elapsed (run - gc-run)
Date-of-test: Fall 1987
Code: **E-3/75**  
Computer Type: **Sun 3/75**  
Operating System: **SunOS 3.1**  
Lisp: **Franz Extended Common Lisp 2.0**  
Disk Configuration: **70MB SCSI**  
Swapping Size: **50MB local**  
Memory Configuration: **28MB**  
Display Configuration: **standard resolution mono**  
Other Configuration: **Files on Sun 3/180 NFS server**  
Special Comments: **Under suntools**  
Timing Template: **elapsed (run + gc)**  
Date-of-test: **Fall 1987**

Code: **EXP1**  
Computer Type: **Texas Instruments Explorer I**  
Operating System: **Explorer Lisp Release 4.1**  
Lisp: **Explorer Lisp Release 4.1**  
Disk Configuration: **2 x 140MB SCSI**  
Swapping Size: **80MB**  
Memory Configuration: **8MB**  
Display Configuration: **1024 x 768 mono**  
Other Configuration:  
Special Comments: **TGC (incremental generation scavenging GC) on**  
Timing Template: **elapsed - paging**  
Date-of-test: **November 1988**

Code: **EXP2**  
Computer Type: **Texas Instruments Explorer II**  
Operating System: **Explorer Lisp Release 4.1**  
Lisp: **Explorer Lisp Release 4.1**  
Disk Configuration: **2 x 140MB SCSI**  
Swapping Size: **80MB**  
Memory Configuration: **16MB**  
Display Configuration: **1024 x 768 mono**  
Other Configuration:  
Special Comments: **TGC (incremental generation scavenging GC)**  
Timing Template: **elapsed - paging**  
Date-of-test: **November 1988**
Code: EXP2+
Computer Type: Texas Instruments Explorer II Plus
Operating System: Explorer Lisp Release 4.1
Lisp: Explorer Lisp Release 4.1
Disk Configuration: 2 x 140MB SCSI
Swapping Size: 80MB
Memory Configuration: 16MB
Display Configuration: 1024 x 768 mono
Other Configuration:
Special Comments: TGC (incremental generation scavenging GC)
Timing Template: elapsed - paging
Date-of-test: November 1988

Code: F-4/280
Computer Type: Sun 4/280
Operating System: SunOS 4.0
Lisp: Franz Allegro Common Lisp 3.0.1 beta
Disk Configuration: 2x900
Swapping Size: 118MB
Memory Configuration: 32MB
Display Configuration: Hi Res mono
Other Configuration: Not running under GnuEmacs; no multi-processing; 4MB initial memory
Special Comments:
Timing Template: elapsed (user-run + system-run)
Date-of-test: Winter 1989

Code: HP
Computer Type: Hewlett Packard 9000/350
Operating System: Unix
Lisp: HP Lisp 1.0
Disk Configuration: 130MB (7958)
Swapping Size: unknown
Memory Configuration: 16MB
Display Configuration: color
Other Configuration: under gnuemacs
Special Comments:
Timing Template: elapsed - run
Date-of-test: Fall 1987
Code: K-3/75  
Computer Type: Sun 3/75  
Operating System: SunOS 3.1  
Lisp: Kyoto Common Lisp "September 16, 1986"  
Disk Configuration: 70MB SCSI  
Swapping Size: 50MB local  
Memory Configuration: 28MB  
Display Configuration: standard resolution mono  
Other Configuration: Files on Sun 3/180 NFS server  
Special Comments: Under suntools  
Timing Template: elapsed - run  
Date-of-test: Fall 1987

Code: L-3/75  
Computer Type: Sun 3/75  
Operating System: SunOS 3.1  
Lisp: Lucid 2.0  
Disk Configuration: 70MB SCSI  
Swapping Size: 50MB local  
Memory Configuration: 28MB  
Display Configuration: standard resolution mono  
Other Configuration: Files on Sun 3/180 NFS server  
Special Comments: used *-AND 90 :GROWTH-RATE 90  
Timing Template: elapsed (user-run + system-run)  
Date-of-test: Fall 1987

Code: Mac2  
Computer Type: Apple Macintosh II  
Operating System: Mac OS 5  
Lisp: Allegro Common Lisp 1.1  
Disk Configuration: 100MB internal  
Swapping Size: n/a  
Memory Configuration: 5MB  
Display Configuration: E-machines Big Picture 17" mono  
Other Configuration:  
Special Comments:  
Timing Template: elapsed - paging  
Date-of-test: Spring 1988
Appendix B: Lisp Performance Studies

Code: **Maci**  
Computer Type: **Symbolics MacIvory**  
Operating System: **Genera 7.3i**  
Lisp: **Genera 7.3i**  
Disk Configuration: 300MB external  
Swapping Size: 25,000kW (122MB)  
Memory Configuration: 2,688kW (13MB); 2MB Mac II  
Display Configuration: **Radius**  
Other Configuration: **Apple EtherTalk**  
Special Comments:  
Timing Template: elapsed - paging  
Date-of-test: **December 1988**

Code: **mX**  
Computer Type: **Texas Instruments microExplorer**  
Operating System: **Explorer Lisp 5.0**  
Lisp: **Explorer Lisp 5.0**  
Disk Configuration: 100MB Rodime  
Swapping Size: **60MB**  
Memory Configuration: 12MB mX processor; 2MB Mac II  
Display Configuration: 24" (1280 x 960) Moniterm Viking II  
Other Configuration: **Apple EtherTalk**  
Special Comments:  
Timing Template: elapsed - paging  
Date-of-test: **December 1988**

Code: **RT**  
Computer Type: **IBM RT/APC**  
Operating System: **AIX 2.1.2 (unix)**  
Lisp: **2.0.5 (Lucid 1.01)**  
Disk Configuration: "Fast" EESDI controller; 3 x 70MB  
Swapping Size: 80k x 512kB blocks (40,960MB)  
Memory Configuration: 16MB of "fast" memory  
Display Configuration: Moniterm 1024 x 768 mono  
Other Configuration: **AFT floating point unit; GSL windows**  
Special Comments:  
**This should be the fastest RT version now available**

Timing Template: elapsed (user-run + system-run)  
Date-of-test: **Spring 1988**
Code: Sym
Computer Type: Symbolics 3645
Operating System: Symbolics Release 6.1
Lisp: Symbolics Release 6.1
Disk Configuration: 368MB
Swapping Size: 200MB
Memory Configuration: 8MB
Display Configuration:
Other Configuration: FPA, no color
Special Comments: EGC on; preliminary indications are that 6.1 performs better in these test than 7.2
Timing Template: elapsed - paging
Date-of-test: Winter 1988

Code: XCL
Computer Type: Xerox 1186
Operating System: Xerox Lisp, Lyric release
Lisp: Xerox Lisp, Lyric release
Disk Configuration: 40MB
Swapping Size: 16MB
Memory Configuration: 3.5MB
Display Configuration: 19" mono
Other Configuration:
Special Comments:
Timing Template: elapsed - gc - paging
Date-of-test: Winter 1988
Appendix B -- Test Procedures

To run a BBl test the following procedure was followed:
1. The .LISP files were copied to the host under test.
2. Lisp was restarted and any necessary configuration, such as disabling end-of-screen processing, was done.
3. If necessary, a (PROCLAIM '(OPTIMIZE (SPEED X) (SAFETY Y))) form was entered.
4. The form (TIME (LOAD "COMPILE-BBl.LISP")) was entered and allowed to complete without interruption, and the resulting information was recorded. A side effect of loading the COMPILE-BBl file is that the source files are compiled and loaded.
5. The form (TIME (BBl::TEST-BBEDIT)) was entered and allowed to complete. The results were recorded.
6. Step 5 was repeated, which usually resulted in a better time.
7. Steps 2 through 6 were done a total of 4 times; once skipping step 3 and then for (X, Y) = (3, 0), (0, 3), and (3, 2).

To run a SOAR test the following procedure was followed:
1. The LISP and .SOAR files were copied to the host under test.
2. Lisp was restarted and any necessary configuration, such as disabling end-of-screen processing, was done.
3. The form (TIME (COMPILE-FILE "SORR.LISP")) was entered and allowed to complete. The results were recorded.
4. Step 2 was repeated.
5. The following forms were entered:
   (LOAD "SOAR")
   (LOAD "DEFAULT.SOAR")
   (LOAD "EIGHT.SOAR")
6. The form (TIME (RUN-TASK)) was entered. "1<Return>3<Return>" was immediately typed ahead as responses to the prompts soon to follow. The timing was allowed to complete and the results recorded for the "A mode" test.
7. The form (INIT-SOAR) was entered.
8. Step 6 was repeated with "1<Return>1<Return>" in place of "1<Return>3<Return>" for the "B mode" test.
9. Steps 7 and 8 were repeated with "3<Return>3<Return>" in place of "1<Return>3<Return>" for the "C mode" test.
10. The following forms were entered:
11. Step 9 was repeated for the "C no trace mode" test.
12. Steps 2 and 5 were repeated to reload SOAR.
13. Steps 7 and 8 were repeated for the "A no trace mode" test.
Appendix C: AIM Management Committee Membership

Following are the current membership lists of the various SUMEX-AIM management committees:

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