

Across the Boards and pcMAINFRAME
Advanced Compression Option
Performance Analysis White Paper
cfSOFTWARE, Inc.

The Advanced Compression Option (ACO) for Across the Boards® and pcMAINFRAME™ can significantly increase the data throughput of the communications links used by Across the Boards' APPX and pcMAINFRAME. Note: pcMAINFRAME internally uses Across the Boards for all communications functions, so all ACO statistics apply to both products.

The Advanced Compression Option is a separately licensed component of Across the Boards and pcMAINFRAME.

By using sophisticated compression algorithms, ACO can significantly reduce the physical amount of data to be sent over the communications link, thus increasing the effective data rate and reducing transfer times.

The attached "Advanced Compression Statistics" report details the performance of ACO with a variety of file types, and on various types of communications links. pcMAINFRAME and (Across the Boards) APPX always perform some basic compression on data, the report shows the increase in performance that ACO provides over basic compression. While the actual performance improvements are data and link dependent, the sample files were compressed between 16 and 80%, corresponding to performance improvements of 20 and 500%, respectively. Most typical files show compression rates in the range of 50-60%, corresponding to a 100-150% performance increase.

The improved performance is achieved without changing the communications link, and with minimal changes on the PC and mainframe. ACO runs transparently on all communications links supported by APPX and pcMAINFRAME.

For pcMAINFRAME, ACO is included in the distribution, and need only be enabled. pcMAINFRAME users will see no changes, except for the improvement in performance.

For an Across the Boards APPX application to use ACO, it must enable ACO (a simple switch setting) and add the ACO modules to the distribution.

The compression algorithms have been carefully designed to minimize CPU utilization on the mainframe. While ACO does use additional CPU resources to perform the compression, by reducing the amount of data physically sent ACO reduces the amount of work done by other mainframe software systems (for example, CICS, VTAM, TCP/IP and TSO). In fact, at moderate compression levels, net mainframe CPU utilization begins to decrease due to the reduced communications traffic and consequently reduced activity in the communications subsystems. In general, ACO's impact on mainframe CPU utilization is minimal.

To license the Advanced Compression Option or for additional information, please contact cfSOFTWARE at 800-366-8756 or:

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Across the Boards – Advanced Compression Statistics

cfSOFTWARE, Inc.

The accompanying spreadsheet analyses the performance of the Across the Boards Advanced Compression Option (ACO) with a variety of real data files and in various environments.

Each page of the spreadsheet shows the performance of ACO on one data file, in a variety of communications environments. Each page is broken into two main sections, the top portion showing statistics gathered in a 3270 “buffer mode” environment (using the ATB/Win32 Personal Communications driver - #126), and the bottom portion showing statistics gathered in a 3270 “structured field” environment (using the ATB/Win32 Personal Communications/SF driver - #127). The buffer-mode data is representative of all buffer mode connections, and the structured-field data is representative of all SF connections, as well as of all “reliable link” connections (LU6.2, APPX/TCP). Summary statistics for each mode of operation are shown after each section. A final summary is at the end of the page.

Each communications device is tested with five different combinations of Safe Character Mode, Text Translate Mode, and Lower Case As Is Mode. The fifth, sixth and seventh columns show which modes are selected. Safe Character Mode is invoked, either explicitly, or automatically by APPX, when the underlying communication device has character set translation problems. When invoked, Safe Character Mode can force up to a 100% increase in the volume of data transmitted on the link, negatively impacting performance. Lower Case As Is Mode can be enabled by the application when certain constraints are met by the host application. When used, Lower Case As Is Mode can significantly reduce the amount of data transmitted on the link, thus increasing performance. Text Translate Mode provides for ultimate control over character set translation, and carries a slight performance overhead (note that use of ACO or a Reliable Link communications device forces the use of Text Translate Mode). Note: only Text Translate Mode #1 (U.S. English) is tested. Note: Safe Character Mode and Lower Case As Is Mode have minimal impact on a Structured Field or Reliable Link connection.

Each test is repeated three times: once without ACO, once using ACO option “A2” and once with option “A4”. ACO option A4 provides better compression at the expense of increased memory overhead at both the PC and mainframe. Percentage improvement numbers are shown for each ACO option relative to the non-ACO test.

For each test data line, two sets of statistics are reported – those gathered while uploading the file to the mainframe, and those gathered while downloading the file. These are typically very similar. For each transmission, the number of data bytes in the file, the number of bytes physically sent on the link, and the time taken by the transmission are reported. For the ACO data lines, percentage improvements are reported.

Note: the elapsed times are shown for illustration only. The elapsed times contain measurement errors due to transmission start-up and shut-down, as well as varying network, CPU and I/O loads. In addition, the elapsed times are meaningful only in the context of the particular emulator used in the test (IBM’s Personal Communications v4.30) and the exact network and host environment being tested. Given adequate CPU and I/O capacity on both the PC and the mainframe, and sufficiently large data sets to reduce startup overhead to a small proportion of the total transmission, the real performance will track the improvement indicated by the reduction in data transmitted.

The final two pages show an overall summary of the test results. The first, identified as “all–raw” is a straight arithmetic sum of the individual test results. The second, “all–weighted”, is an overall summary giving each test file equal weight by adjusting the results in proportion to the relative file sizes, so that each test is “virtually” using the same size test file.

As an example, the first group of three lines on page 3 of the spreadsheet (the “henry4.txt” test), shows that in non-ACO mode, APPX sent 217,306 bytes on the link in order to transmit the 182,428 byte file. With ACO-A2 compression only 130,474 bytes were transmitted (a 39.96% reduction) and with ACO-A4 118,243 bytes were transmitted (a 45.59% reduction). ACO-A2 thus provides a 66.6% increase in performance, and ACO-A4 an 83.8% increase in performance.

The various columns on the reports are defined as follows:

Test File	The name of the test data set
Comp	The type of compression used on the upload test (none, ACO-A2 or A4)
Dcomp	The type of compression used on the download test (none, A2 or A4)
Device	The communications device being used (#126 – IBM Personal Communications in buffer mode or #127 – IBM Personal Communications in structured field mode)
Safe	Safe Character Mode (Yes or No)
TXLT	Text Translate Mode (not used, or #1 – U.S. English)
LCAI	Lower Case As Is Mode (Yes or No)
Xmit-Up	Number of physical bytes transmitted to the host during the upload test
Data-Up	Number of bytes in the test data set sent to the host
%Comp-Up	Percentage improvement in physical transmission size of ACO test relative to non-ACO test
Time-Up	Elapsed time of the upload test (seconds)
%Time-Up	Percentage improvement in elapsed time of ACO test relative to non-ACO test
Xmit-Dn	Number of physical bytes transmitted to the PC during the download test
Data-Dn	Number of bytes in the test data set sent to the PC
%Comp-Dn	Percentage improvement in physical transmission size of ACO test relative to non-ACO test
Time-Dn	Elapsed time of the download test (seconds)
%Time-Dn	Percentage improvement in elapsed time of ACO test relative to non-ACO test

The various test data sets used are as follows:

cfxcnfg.cob	A COBOL program (source code). 18,712 lines of source code, 851,869 bytes. Transmitted mixed-case, 80 byte records.
cust01.dbf	A dBase format data base file of approximately 730 records containing various names, address, phone numbers, contact information, notes, etc. 675,195 bytes. Transmitted binary, 1024 byte records.
henry4.txt	A text file containing the text of the play “Henry IV”, W. Shakespeare. 182428 bytes. Transmitted mixed-case-spool, 80 byte records.
install.ps	An Adobe Postscript document. The “Installation Guide” manual for cfSOFTWARE’s pcMAINFRAME v5.30. 99 printed pages, 3,056,979 bytes. Transmitted binary, 1024 byte records.

librcat	A mainframe report. A catalog of the VSE system libraries using the LIBR utility. 145 pages, 7741 lines, 473,843 bytes. Transmitted text-mode, 80 byte records.
listlog	A mainframe report. A VSE console log printed with the PRINTLOG utility. 554 pages, 29,308 lines, 3,253,981 bytes. Transmitted text-mode, 80 byte records.
pcacost.xls	An Excel spreadsheet with 19 columns and 763 rows of data. 247,296 bytes. Transmitted binary, 1024 byte records.
pcmxxall.1	A fixed format database of 6000 545 byte records. All text data. 3,282,000 bytes. Transmitted mixed-case-spool, 1024 byte records.
pcuser.doc	A Word 97 document. The “Windows PC User’s Guide” manual for cfSOFTWARE’s pcMAINFRAME v5.30. 71 printed pages, 990,208 bytes. Transmitted binary, 1024 byte records.
wtstappx.c	A C sample/test program for Across the Boards. 5736 lines, 194170 bytes. Transmitted mixed-case, 80 byte records.
wtstappx.exe	The compiled Win32 executable for wtstappx.c. 434,912 bytes. Transmitted binary, 1024 byte records
all-raw	Not a real data set. Summary of all other tests (raw data).
all-weighted	Not a real data set. Summary of all other tests (weighted data).

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
cfxcnfg.cob			126	N		N	626,640	851,869		476		590,324	851,869		457	
cfxcnfg.cob	A2	A2	126	N	1	N	289,969	851,869	53.73%	218	54.20%	289,794	851,869	50.91%	228	50.11%
cfxcnfg.cob	A4	A4	126	N	1	N	267,415	851,869	57.33%	202	57.56%	266,885	851,869	54.79%	209	54.27%
cfxcnfg.cob			126	Y		N	626,959	851,869		471		590,645	851,869		450	
cfxcnfg.cob	A2	A2	126	Y	1	N	436,235	851,869	30.42%	326	30.79%	435,826	851,869	26.21%	332	26.22%
cfxcnfg.cob	A4	A4	126	Y	1	N	402,191	851,869	35.85%	301	36.09%	401,359	851,869	32.05%	308	31.56%
cfxcnfg.cob			126	Y		Y	611,455	851,869		458		575,141	851,869		439	
cfxcnfg.cob	A2	A2	126	Y	1	Y	289,969	851,869	52.58%	216	52.84%	289,794	851,869	49.61%	224	48.97%
cfxcnfg.cob	A4	A4	126	Y	1	Y	267,415	851,869	56.27%	199	56.55%	266,885	851,869	53.60%	206	53.08%
cfxcnfg.cob			126	N		Y	611,138	851,869		458		574,820	851,869		437	
cfxcnfg.cob	A2	A2	126	N	1	Y	289,969	851,869	52.55%	217	52.62%	289,794	851,869	49.59%	225	48.51%
cfxcnfg.cob	A4	A4	126	N	1	Y	267,415	851,869	56.24%	200	56.33%	266,885	851,869	53.57%	206	52.86%
cfxcnfg.cob			126	N	1	Y	611,845	851,869		459		575,349	851,869		438	
cfxcnfg.cob	A2	A2	126	N	1	Y	289,969	851,869	52.61%	216	52.94%	289,794	851,869	49.63%	225	48.63%
cfxcnfg.cob	A4	A4	126	N	1	Y	267,415	851,869	56.29%	200	56.43%	266,885	851,869	53.61%	206	52.97%
Overall-126 (cfxcnfg.cob)							3,088,037	4,259,345		2,322		2,906,279	4,259,345		2,221	
	A2	A2					1,596,111	4,259,345	48.31%	1,193	48.62%	1,595,002	4,259,345	45.12%	1,234	44.44%
	A4	A4					1,471,851	4,259,345	52.34%	1,102	52.54%	1,468,899	4,259,345	49.46%	1,135	48.90%
cfxcnfg.cob			127	N		N	627,212	851,869		91		591,030	851,869		92	
cfxcnfg.cob	A2	A2	127	N	1	N	219,649	851,869	64.98%	48	47.25%	219,444	851,869	62.87%	49	46.74%
cfxcnfg.cob	A4	A4	127	N	1	N	202,594	851,869	67.70%	45	50.55%	202,182	851,869	65.79%	46	50.00%
cfxcnfg.cob			127	Y		N	627,535	851,869		91		591,351	851,869		92	
cfxcnfg.cob	A2	A2	127	Y	1	N	219,649	851,869	65.00%	48	47.25%	219,444	851,869	62.89%	49	46.74%
cfxcnfg.cob	A4	A4	127	Y	1	N	202,594	851,869	67.72%	45	50.55%	202,182	851,869	65.81%	47	48.91%
cfxcnfg.cob			127	Y	1	Y	612,019	851,869		90		575,836	851,869		91	
cfxcnfg.cob	A2	A2	127	Y	1	Y	219,649	851,869	64.11%	48	46.67%	219,444	851,869	61.89%	49	46.15%
cfxcnfg.cob	A4	A4	127	Y	1	Y	202,594	851,869	66.90%	46	48.89%	202,182	851,869	64.89%	46	49.45%
cfxcnfg.cob			127	N		Y	611,703	851,869		90		575,517	851,869		91	
cfxcnfg.cob	A2	A2	127	N	1	Y	219,649	851,869	64.09%	48	46.67%	219,444	851,869	61.87%	49	46.15%
cfxcnfg.cob	A4	A4	127	N	1	Y	202,594	851,869	66.88%	46	48.89%	202,182	851,869	64.87%	47	48.35%
cfxcnfg.cob			127	N	1	Y	611,857	851,869		90		575,536	851,869		90	
cfxcnfg.cob	A2	A2	127	N	1	Y	219,649	851,869	64.10%	48	46.67%	219,444	851,869	61.87%	49	45.56%
cfxcnfg.cob	A4	A4	127	N	1	Y	202,594	851,869	66.89%	46	48.89%	202,182	851,869	64.87%	47	47.78%
Overall-127 (cfxcnfg.cob)							3,090,326	4,259,345		452		2,909,270	4,259,345		456	
	A2	A2					1,098,245	4,259,345	64.46%	240	46.90%	1,097,220	4,259,345	62.29%	245	46.27%
	A4	A4					1,012,970	4,259,345	67.22%	228	49.56%	1,010,910	4,259,345	65.25%	233	48.90%
Overall (cfxcnfg.cob)							6,178,363	8,518,690		2,774		5,815,549	8,518,690		2,677	
	A2	A2					2,694,356	8,518,690	56.39%	1,433	48.34%	2,692,222	8,518,690	53.71%	1,479	44.75%
	A4	A4					2,484,821	8,518,690	59.78%	1,330	52.05%	2,479,809	8,518,690	57.36%	1,368	48.90%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
cust01.dbf			126	N		N	428,409	675,195		320		428,447	675,195		326	
cust01.dbf	A2	A2	126	N	1	N	274,803	675,195	35.85%	204	36.25%	274,618	675,195	35.90%	213	34.66%
cust01.dbf	A4	A4	126	N	1	N	240,423	675,195	43.88%	177	44.69%	240,238	675,195	43.93%	187	42.64%
cust01.dbf			126	Y		N	657,340	675,195		493		657,400	675,195		499	
cust01.dbf	A2	A2	126	Y	1	N	413,292	675,195	37.13%	308	37.53%	413,012	675,195	37.17%	314	37.07%
cust01.dbf	A4	A4	126	Y	1	N	361,574	675,195	44.99%	269	45.44%	361,294	675,195	45.04%	276	44.69%
cust01.dbf			126	Y		Y	428,409	675,195		319		428,447	675,195		327	
cust01.dbf	A2	A2	126	Y	1	Y	274,803	675,195	35.85%	204	36.05%	274,618	675,195	35.90%	213	34.86%
cust01.dbf	A4	A4	126	Y	1	Y	240,423	675,195	43.88%	178	44.20%	240,238	675,195	43.93%	187	42.81%
cust01.dbf			126	N		Y	428,409	675,195		320		428,447	675,195		325	
cust01.dbf	A2	A2	126	N	1	Y	274,803	675,195	35.85%	203	36.56%	274,618	675,195	35.90%	213	34.46%
cust01.dbf	A4	A4	126	N	1	Y	240,423	675,195	43.88%	177	44.69%	240,238	675,195	43.93%	187	42.46%
cust01.dbf			126	N	1	Y	428,606	675,195		321		428,461	675,195		325	
cust01.dbf	A2	A2	126	N	1	Y	274,803	675,195	35.88%	204	36.45%	274,618	675,195	35.91%	213	34.46%
cust01.dbf	A4	A4	126	N	1	Y	240,423	675,195	43.91%	178	44.55%	240,238	675,195	43.93%	187	42.46%
Overall-126 (cust01.dbf)							2,371,173	3,375,975		1,773		2,371,202	3,375,975		1,802	
	A2	A2					1,512,504	3,375,975	36.21%	1,123	36.66%	1,511,484	3,375,975	36.26%	1,166	35.29%
	A4	A4					1,323,266	3,375,975	44.19%	979	44.78%	1,322,246	3,375,975	44.24%	1,024	43.17%
cust01.dbf			127	N		N	330,017	675,195		42		330,045	675,195		43	
cust01.dbf	A2	A2	127	N	1	N	207,878	675,195	37.01%	27	35.71%	207,737	675,195	37.06%	30	30.23%
cust01.dbf	A4	A4	127	N	1	N	181,987	675,195	44.86%	23	45.24%	181,846	675,195	44.90%	27	37.21%
cust01.dbf			127	Y		N	330,017	675,195		42		330,045	675,195		43	
cust01.dbf	A2	A2	127	Y	1	N	207,878	675,195	37.01%	27	35.71%	207,737	675,195	37.06%	29	32.56%
cust01.dbf	A4	A4	127	Y	1	N	181,987	675,195	44.86%	24	42.86%	181,846	675,195	44.90%	26	39.53%
cust01.dbf			127	Y		Y	330,017	675,195		41		330,045	675,195		44	
cust01.dbf	A2	A2	127	Y	1	Y	207,878	675,195	37.01%	27	34.15%	207,737	675,195	37.06%	29	34.09%
cust01.dbf	A4	A4	127	Y	1	Y	181,987	675,195	44.86%	24	41.46%	181,846	675,195	44.90%	26	40.91%
cust01.dbf			127	N		Y	330,017	675,195		41		330,045	675,195		44	
cust01.dbf	A2	A2	127	N	1	Y	207,878	675,195	37.01%	27	34.15%	207,737	675,195	37.06%	29	34.09%
cust01.dbf	A4	A4	127	N	1	Y	181,987	675,195	44.86%	24	41.46%	181,846	675,195	44.90%	27	38.64%
cust01.dbf			127	N	1	Y	330,171	675,195		42		330,060	675,195		43	
cust01.dbf	A2	A2	127	N	1	Y	207,878	675,195	37.04%	27	35.71%	207,737	675,195	37.06%	30	30.23%
cust01.dbf	A4	A4	127	N	1	Y	181,987	675,195	44.88%	23	45.24%	181,846	675,195	44.91%	26	39.53%
Overall-127 (cust01.dbf)							1,650,239	3,375,975		208		1,650,240	3,375,975		217	
	A2	A2					1,039,390	3,375,975	37.02%	135	35.10%	1,038,685	3,375,975	37.06%	147	32.26%
	A4	A4					909,935	3,375,975	44.86%	118	43.27%	909,230	3,375,975	44.90%	132	39.17%
Overall (cust01.dbf)							4,021,412	6,751,950		1,981		4,021,442	6,751,950		2,019	
	A2	A2					2,551,894	6,751,950	36.54%	1,258	36.50%	2,550,169	6,751,950	36.59%	1,313	34.97%
	A4	A4					2,233,201	6,751,950	44.47%	1,097	44.62%	2,231,476	6,751,950	44.51%	1,156	42.74%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
henry4.txt			126	N		N	217,306	182,428		162		217,302	182,428		168	
henry4.txt	A2	A2	126	N	1	N	130,474	182,428	39.96%	95	41.36%	129,523	182,428	40.39%	103	38.69%
henry4.txt	A4	A4	126	N	1	N	118,243	182,428	45.59%	87	46.30%	117,575	182,428	45.89%	92	45.24%
henry4.txt			126	Y		N	218,116	182,428		162		218,114	182,428		168	
henry4.txt	A2	A2	126	Y	1	N	196,468	182,428	9.92%	144	11.11%	195,246	182,428	10.48%	151	10.12%
henry4.txt	A4	A4	126	Y	1	N	178,152	182,428	18.32%	130	19.75%	177,140	182,428	18.79%	139	17.26%
henry4.txt			126	Y		Y	195,067	182,428		145		195,071	182,428		152	
henry4.txt	A2	A2	126	Y	1	Y	130,474	182,428	33.11%	95	34.48%	129,523	182,428	33.60%	103	32.24%
henry4.txt	A4	A4	126	Y	1	Y	118,243	182,428	39.38%	86	40.69%	117,575	182,428	39.73%	92	39.47%
henry4.txt			126	N		Y	194,258	182,428		144		194,256	182,428		152	
henry4.txt	A2	A2	126	N	1	Y	130,474	182,428	32.83%	95	34.03%	129,523	182,428	33.32%	102	32.89%
henry4.txt	A4	A4	126	N	1	Y	118,243	182,428	39.13%	86	40.28%	117,575	182,428	39.47%	93	38.82%
henry4.txt			126	N	1	Y	195,673	182,428		145		195,488	182,428		151	
henry4.txt	A2	A2	126	N	1	Y	130,474	182,428	33.32%	95	34.48%	129,523	182,428	33.74%	104	31.13%
henry4.txt	A4	A4	126	N	1	Y	118,243	182,428	39.57%	87	40.00%	117,575	182,428	39.86%	93	38.41%
Overall-126 (henry4.txt)							1,020,420	912,140		758		1,020,231	912,140		791	
	A2	A2					718,364	912,140	29.60%	524	30.87%	713,338	912,140	30.08%	563	28.82%
	A4	A4					651,124	912,140	36.19%	476	37.20%	647,440	912,140	36.54%	509	35.65%
henry4.txt			127	N		N	217,528	182,428		30		217,524	182,428		32	
henry4.txt	A2	A2	127	N	1	N	98,624	182,428	54.66%	16	46.67%	98,012	182,428	54.94%	18	43.75%
henry4.txt	A4	A4	127	N	1	N	89,462	182,428	58.87%	14	53.33%	88,958	182,428	59.10%	18	43.75%
henry4.txt			127	Y		N	218,337	182,428		29		218,331	182,428		33	
henry4.txt	A2	A2	127	Y	1	N	98,624	182,428	54.83%	16	44.83%	98,012	182,428	55.11%	18	45.45%
henry4.txt	A4	A4	127	Y	1	N	89,462	182,428	59.03%	15	48.28%	88,958	182,428	59.26%	17	48.48%
henry4.txt			127	Y		Y	195,268	182,428		27		195,266	182,428		29	
henry4.txt	A2	A2	127	Y	1	Y	98,624	182,428	49.49%	16	40.74%	98,012	182,428	49.81%	17	41.38%
henry4.txt	A4	A4	127	Y	1	Y	89,462	182,428	54.19%	15	44.44%	88,958	182,428	54.44%	17	41.38%
henry4.txt			127	N		Y	194,459	182,428		27		194,457	182,428		29	
henry4.txt	A2	A2	127	N	1	Y	98,624	182,428	49.28%	16	40.74%	98,012	182,428	49.60%	17	41.38%
henry4.txt	A4	A4	127	N	1	Y	89,462	182,428	53.99%	15	44.44%	88,958	182,428	54.25%	17	41.38%
henry4.txt			127	N	1	Y	194,613	182,428		27		194,472	182,428		30	
henry4.txt	A2	A2	127	N	1	Y	98,624	182,428	49.32%	15	44.44%	98,012	182,428	49.60%	18	40.00%
henry4.txt	A4	A4	127	N	1	Y	89,462	182,428	54.03%	15	44.44%	88,958	182,428	54.26%	17	43.33%
Overall-127 (henry4.txt)							1,020,205	912,140		140		1,020,050	912,140		153	
	A2	A2					493,120	912,140	51.66%	79	43.57%	490,060	912,140	51.96%	88	42.48%
	A4	A4					447,310	912,140	56.15%	74	47.14%	444,790	912,140	56.40%	86	43.79%
Overall (henry4.txt)							2,040,625	1,824,280		898		2,040,281	1,824,280		944	
	A2	A2					1,211,484	1,824,280	40.63%	603	32.85%	1,203,398	1,824,280	41.02%	651	31.04%
	A4	A4					1,098,434	1,824,280	46.17%	550	38.75%	1,092,230	1,824,280	46.47%	595	36.97%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
install.ps			126	N		N	3,056,979	2,297,018		2,298		3,056,971	2,297,018		2,298	
install.ps	A2	A2	126	N	1	N	761,346	2,297,018	75.09%	570	75.20%	761,158	2,297,018	75.10%	578	74.85%
install.ps	A4	A4	126	N	1	N	590,877	2,297,018	80.67%	442	80.77%	590,691	2,297,018	80.68%	449	80.46%
install.ps			126	Y		N	4,603,833	2,297,018		3,464		4,603,825	2,297,018		3,460	
install.ps	A2	A2	126	Y	1	N	1,145,302	2,297,018	75.12%	860	75.17%	1,145,021	2,297,018	75.13%	866	74.97%
install.ps	A4	A4	126	Y	1	N	888,215	2,297,018	80.71%	665	80.80%	887,935	2,297,018	80.71%	674	80.52%
install.ps			126	Y		Y	3,056,979	2,297,018		2,296		3,056,971	2,297,018		2,306	
install.ps	A2	A2	126	Y	1	Y	761,346	2,297,018	75.09%	570	75.17%	761,158	2,297,018	75.10%	578	74.93%
install.ps	A4	A4	126	Y	1	Y	590,877	2,297,018	80.67%	441	80.79%	590,691	2,297,018	80.68%	448	80.57%
install.ps			126	N		Y	3,056,979	2,297,018		2,299		3,056,971	2,297,018		2,299	
install.ps	A2	A2	126	N	1	Y	761,346	2,297,018	75.09%	570	75.21%	761,158	2,297,018	75.10%	578	74.86%
install.ps	A4	A4	126	N	1	Y	590,877	2,297,018	80.67%	441	80.82%	590,691	2,297,018	80.68%	449	80.47%
install.ps			126	N	1	Y	3,057,176	2,297,018		2,297		3,056,985	2,297,018		2,305	
install.ps	A2	A2	126	N	1	Y	761,346	2,297,018	75.10%	572	75.10%	761,158	2,297,018	75.10%	577	74.97%
install.ps	A4	A4	126	N	1	Y	590,877	2,297,018	80.67%	442	80.76%	590,691	2,297,018	80.68%	449	80.52%
Overall-126 (install.ps)							16,831,946	11,485,090		12,654		16,831,723	11,485,090		12,668	
	A2	A2					4,190,686	11,485,090	75.10%	3,142	75.17%	4,189,653	11,485,090	75.11%	3,177	74.92%
	A4	A4					3,251,723	11,485,090	80.68%	2,431	80.79%	3,250,699	11,485,090	80.69%	2,469	80.51%
install.ps			127	N		N	2,307,673	2,297,018		290		2,307,669	2,297,018		291	
install.ps	A2	A2	127	N	1	N	576,648	2,297,018	75.01%	78	73.10%	576,507	2,297,018	75.02%	82	71.82%
install.ps	A4	A4	127	N	1	N	447,964	2,297,018	80.59%	61	78.97%	447,823	2,297,018	80.59%	68	76.63%
install.ps			127	Y		N	2,307,673	2,297,018		290		2,307,669	2,297,018		291	
install.ps	A2	A2	127	Y	1	N	576,648	2,297,018	75.01%	77	73.45%	576,507	2,297,018	75.02%	82	71.82%
install.ps	A4	A4	127	Y	1	N	447,964	2,297,018	80.59%	62	78.62%	447,823	2,297,018	80.59%	68	76.63%
install.ps			127	Y	1	Y	2,307,673	2,297,018		289		2,307,669	2,297,018		292	
install.ps	A2	A2	127	Y	1	Y	576,648	2,297,018	75.01%	77	73.36%	576,507	2,297,018	75.02%	82	71.92%
install.ps	A4	A4	127	Y	1	Y	447,964	2,297,018	80.59%	62	78.55%	447,823	2,297,018	80.59%	68	76.71%
install.ps			127	N	1	Y	2,307,673	2,297,018		289		2,307,669	2,297,018		292	
install.ps	A2	A2	127	N	1	Y	576,648	2,297,018	75.01%	78	73.01%	576,507	2,297,018	75.02%	82	71.92%
install.ps	A4	A4	127	N	1	Y	447,964	2,297,018	80.59%	62	78.55%	447,823	2,297,018	80.59%	67	77.05%
install.ps			127	N	1	Y	2,307,827	2,297,018		289		2,307,684	2,297,018		292	
install.ps	A2	A2	127	N	1	Y	576,648	2,297,018	75.01%	77	73.36%	576,507	2,297,018	75.02%	82	71.92%
install.ps	A4	A4	127	N	1	Y	447,964	2,297,018	80.59%	62	78.55%	447,823	2,297,018	80.59%	68	76.71%
Overall-127 (install.ps)							11,538,519	11,485,090		1,447		11,538,360	11,485,090		1,458	
	A2	A2					2,883,240	11,485,090	75.01%	387	73.26%	2,882,535	11,485,090	75.02%	410	71.88%
	A4	A4					2,239,820	11,485,090	80.59%	309	78.65%	2,239,115	11,485,090	80.59%	339	76.75%
Overall (install.ps)							28,370,465	22,970,180		14,101		28,370,083	22,970,180		14,126	
	A2	A2					7,073,926	22,970,180	75.07%	3,529	74.97%	7,072,188	22,970,180	75.07%	3,587	74.61%
	A4	A4					5,491,543	22,970,180	80.64%	2,740	80.57%	5,489,814	22,970,180	80.65%	2,808	80.12%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
librcat			126	N		N	473,843	549,224		354		473,321	549,224		361	
librcat	A2	A2	126	N	1	N	150,869	549,224	68.16%	111	68.64%	150,572	549,224	68.19%	119	67.04%
librcat	A4	A4	126	N	1	N	134,583	549,224	71.60%	99	72.03%	134,033	549,224	71.68%	106	70.64%
librcat			126	Y		N	474,513	549,224		356		473,984	549,224		361	
librcat	A2	A2	126	Y	1	N	226,645	549,224	52.24%	168	52.81%	226,202	549,224	52.28%	174	51.80%
librcat	A4	A4	126	Y	1	N	202,260	549,224	57.38%	150	57.87%	201,287	549,224	57.53%	157	56.51%
librcat			126	Y		Y	474,513	549,224		356		473,984	549,224		360	
librcat	A2	A2	126	Y	1	Y	150,869	549,224	68.21%	111	68.82%	150,572	549,224	68.23%	119	66.94%
librcat	A4	A4	126	Y	1	Y	134,583	549,224	71.64%	99	72.19%	134,033	549,224	71.72%	106	70.56%
librcat			126	N		Y	473,843	549,224		354		473,321	549,224		360	
librcat	A2	A2	126	N	1	Y	150,869	549,224	68.16%	110	68.93%	150,572	549,224	68.19%	120	66.67%
librcat	A4	A4	126	N	1	Y	134,583	549,224	71.60%	99	72.03%	134,033	549,224	71.68%	106	70.56%
librcat			126	N	1	Y	475,044	549,224		355		474,338	549,224		363	
librcat	A2	A2	126	N	1	Y	150,869	549,224	68.24%	111	68.73%	150,572	549,224	68.26%	120	66.94%
librcat	A4	A4	126	N	1	Y	134,583	549,224	71.67%	99	72.11%	134,033	549,224	71.74%	106	70.80%
Overall-126 (librcat)							2,371,756	2,746,120		1,775		2,368,948	2,746,120		1,805	
	A2	A2					830,121	2,746,120	65.00%	611	65.58%	828,490	2,746,120	65.03%	652	63.88%
	A4	A4					740,592	2,746,120	68.77%	546	69.24%	737,419	2,746,120	68.87%	581	67.81%
librcat			127	N		N	474,338	549,224		66		473,818	549,224		69	
librcat	A2	A2	127	N	1	N	114,279	549,224	75.91%	27	59.09%	114,056	549,224	75.93%	29	57.97%
librcat	A4	A4	127	N	1	N	102,075	549,224	78.48%	26	60.61%	101,591	549,224	78.56%	27	60.87%
librcat			127	Y		N	475,002	549,224		67		474,479	549,224		68	
librcat	A2	A2	127	Y	1	N	114,279	549,224	75.94%	27	59.70%	114,056	549,224	75.96%	29	57.35%
librcat	A4	A4	127	Y	1	N	102,075	549,224	78.51%	26	61.19%	101,591	549,224	78.59%	28	58.82%
librcat			127	Y	1	Y	475,002	549,224		67		474,479	549,224		69	
librcat	A2	A2	127	Y	1	Y	114,279	549,224	75.94%	27	59.70%	114,056	549,224	75.96%	29	57.97%
librcat	A4	A4	127	Y	1	Y	102,075	549,224	78.51%	26	61.19%	101,591	549,224	78.59%	28	59.42%
librcat			127	N		Y	474,338	549,224		66		473,818	549,224		69	
librcat	A2	A2	127	N	1	Y	114,279	549,224	75.91%	27	59.09%	114,056	549,224	75.93%	29	57.97%
librcat	A4	A4	127	N	1	Y	102,075	549,224	78.48%	26	60.61%	101,591	549,224	78.56%	27	60.87%
librcat			127	N	1	Y	474,492	549,224		67		473,833	549,224		68	
librcat	A2	A2	127	N	1	Y	114,279	549,224	75.92%	27	59.70%	114,056	549,224	75.93%	29	57.35%
librcat	A4	A4	127	N	1	Y	102,075	549,224	78.49%	26	61.19%	101,591	549,224	78.56%	27	60.29%
Overall-127 (librcat)							2,373,172	2,746,120		333		2,370,427	2,746,120		343	
	A2	A2					571,395	2,746,120	75.92%	135	59.46%	570,280	2,746,120	75.94%	145	57.73%
	A4	A4					510,375	2,746,120	78.49%	130	60.96%	507,955	2,746,120	78.57%	137	60.06%
Overall (librcat)							4,744,928	5,492,240		2,108		4,739,375	5,492,240		2,148	
	A2	A2					1,401,516	5,492,240	70.46%	746	64.61%	1,398,770	5,492,240	70.49%	797	62.90%
	A4	A4					1,250,967	5,492,240	73.64%	676	67.93%	1,245,374	5,492,240	73.72%	718	66.57%

Test File	Comp	Dcomp	Device	Safe	TXLT	LCAI	Xmit-Up	Data-Up	%Comp-Up	Time-Up	%Time-Up	Xmit-Dn	Data-Dn	%Comp-Dn	Time-Dn	%Time-Dn
listlog			126	N		N	2,400,153	3,253,981		1,809		2,362,738	3,253,981		1,782	
listlog	A2	A2	126	N	1	N	1,095,922	3,253,981	54.34%	823	54.51%	1,095,752	3,253,981	53.62%	829	53.48%
listlog	A4	A4	126	N	1	N	976,450	3,253,981	59.32%	732	59.54%	975,633	3,253,981	58.71%	737	58.64%
listlog			126	Y		N	2,400,664	3,253,981		1,804		2,363,273	3,253,981		1,780	
listlog	A2	A2	126	Y	1	N	1,649,024	3,253,981	31.31%	1,239	31.32%	1,648,266	3,253,981	30.25%	1,320	25.84%
listlog	A4	A4	126	Y	1	N	1,469,004	3,253,981	38.81%	1,111	38.41%	1,467,433	3,253,981	37.91%	1,132	36.40%
listlog			126	Y		Y	2,400,664	3,253,981		1,868		2,363,273	3,253,981		1,851	
listlog	A2	A2	126	Y	1	Y	1,095,922	3,253,981	54.35%	859	54.01%	1,095,752	3,253,981	53.63%	832	55.05%
listlog	A4	A4	126	Y	1	Y	976,450	3,253,981	59.33%	734	60.71%	975,633	3,253,981	58.72%	739	60.08%
listlog			126	N		Y	2,400,153	3,253,981		1,825		2,362,738	3,253,981		1,787	
listlog	A2	A2	126	N	1	Y	1,095,922	3,253,981	54.34%	827	54.68%	1,095,752	3,253,981	53.62%	833	53.39%
listlog	A4	A4	126	N	1	Y	976,450	3,253,981	59.32%	737	59.62%	975,633	3,253,981	58.71%	746	58.25%
listlog			126	N	1	Y	2,401,095	3,253,981		1,812		2,363,530	3,253,981		1,802	
listlog	A2	A2	126	N	1	Y	1,095,922	3,253,981	54.36%	826	54.42%	1,095,752	3,253,981	53.64%	832	53.83%
listlog	A4	A4	126	N	1	Y	976,450	3,253,981	59.33%	735	59.44%	975,633	3,253,981	58.72%	742	58.82%
Overall-126 (listlog)							12,002,729	16,269,905		9,118		11,815,552	16,269,905		9,002	
	A2	A2					6,032,712	16,269,905	49.74%	4,574	49.84%	6,031,274	16,269,905	48.95%	4,646	48.39%
	A4	A4					5,374,804	16,269,905	55.22%	4,049	55.59%	5,369,965	16,269,905	54.55%	4,096	54.50%
listlog			127	N		N	2,402,558	3,253,981		351		2,365,309	3,253,981		352	
listlog	A2	A2	127	N	1	N	830,283	3,253,981	65.44%	181	48.43%	829,904	3,253,981	64.91%	180	48.86%
listlog	A4	A4	127	N	1	N	740,178	3,253,981	69.19%	171	51.28%	739,394	3,253,981	68.74%	171	51.42%
listlog			127	Y		N	2,403,081	3,253,981		352		2,365,805	3,253,981		354	
listlog	A2	A2	127	Y	1	N	830,283	3,253,981	65.45%	182	48.30%	829,904	3,253,981	64.92%	180	49.15%
listlog	A4	A4	127	Y	1	N	740,178	3,253,981	69.20%	172	51.14%	739,394	3,253,981	68.75%	169	52.26%
listlog			127	Y	1	Y	2,403,081	3,253,981		352		2,365,805	3,253,981		354	
listlog	A2	A2	127	Y	1	Y	830,283	3,253,981	65.45%	182	48.30%	829,904	3,253,981	64.92%	180	49.15%
listlog	A4	A4	127	Y	1	Y	740,178	3,253,981	69.20%	171	51.42%	739,394	3,253,981	68.75%	170	51.98%
listlog			127	N	1	Y	2,402,558	3,253,981		354		2,365,309	3,253,981		354	
listlog	A2	A2	127	N	1	Y	830,283	3,253,981	65.44%	181	48.87%	829,904	3,253,981	64.91%	181	48.87%
listlog	A4	A4	127	N	1	Y	740,178	3,253,981	69.19%	172	51.41%	739,394	3,253,981	68.74%	170	51.98%
listlog			127	N	1	Y	2,402,712	3,253,981		352		2,365,324	3,253,981		355	
listlog	A2	A2	127	N	1	Y	830,283	3,253,981	65.44%	182	48.30%	829,904	3,253,981	64.91%	181	49.01%
listlog	A4	A4	127	N	1	Y	740,178	3,253,981	69.19%	171	51.42%	739,394	3,253,981	68.74%	170	52.11%
Overall-127 (listlog)							12,013,990	16,269,905		1,761		11,827,552	16,269,905		1,769	
	A2	A2					4,151,415	16,269,905	65.45%	908	48.44%	4,149,520	16,269,905	64.92%	902	49.01%
	A4	A4					3,700,890	16,269,905	69.20%	857	51.33%	3,696,970	16,269,905	68.74%	850	51.95%
Overall (listlog)							24,016,719	32,539,810		10,879		23,643,104	32,539,810		10,771	
	A2	A2					10,184,127	32,539,810	57.60%	5,482	49.61%	10,180,794	32,539,810	56.94%	5,548	48.49%
	A4	A4					9,075,694	32,539,810	62.21%	4,906	54.90%	9,066,935	32,539,810	61.65%	4,946	54.08%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
pcacost.xls			126	N		N	317,634	247,296		236		317,632	247,296		243	
pcacost.xls	A2	A2	126	N	1	N	152,384	247,296	52.03%	112	52.54%	152,199	247,296	52.08%	119	51.03%
pcacost.xls	A4	A4	126	N	1	N	153,365	247,296	51.72%	114	51.69%	153,180	247,296	51.77%	120	50.62%
pcacost.xls			126	Y		N	476,734	247,296		357		476,732	247,296		363	
pcacost.xls	A2	A2	126	Y	1	N	229,424	247,296	51.88%	171	52.10%	229,144	247,296	51.93%	178	50.96%
pcacost.xls	A4	A4	126	Y	1	N	231,105	247,296	51.52%	171	52.10%	230,825	247,296	51.58%	180	50.41%
pcacost.xls			126	Y		Y	317,634	247,296		236		317,632	247,296		243	
pcacost.xls	A2	A2	126	Y	1	Y	152,384	247,296	52.03%	112	52.54%	152,199	247,296	52.08%	118	51.44%
pcacost.xls	A4	A4	126	Y	1	Y	153,365	247,296	51.72%	114	51.69%	153,180	247,296	51.77%	120	50.62%
pcacost.xls			126	N		Y	317,634	247,296		237		317,632	247,296		243	
pcacost.xls	A2	A2	126	N	1	Y	152,384	247,296	52.03%	112	52.74%	152,199	247,296	52.08%	119	51.03%
pcacost.xls	A4	A4	126	N	1	Y	153,365	247,296	51.72%	113	52.32%	153,180	247,296	51.77%	120	50.62%
pcacost.xls			126	N	1	Y	317,831	247,296		237		317,646	247,296		243	
pcacost.xls	A2	A2	126	N	1	Y	152,384	247,296	52.06%	112	52.74%	152,199	247,296	52.09%	119	51.03%
pcacost.xls	A4	A4	126	N	1	Y	153,365	247,296	51.75%	113	52.32%	153,180	247,296	51.78%	120	50.62%
Overall-126 (pcacost.xls)							1,747,467	1,236,480		1,303		1,747,274	1,236,480		1,335	
	A2	A2					838,960	1,236,480	51.99%	619	52.49%	837,940	1,236,480	52.04%	653	51.09%
	A4	A4					844,565	1,236,480	51.67%	625	52.03%	843,545	1,236,480	51.72%	660	50.56%
pcacost.xls			127	N		N	238,986	247,296		30		238,984	247,296		32	
pcacost.xls	A2	A2	127	N	1	N	115,219	247,296	51.79%	15	50.00%	115,078	247,296	51.85%	17	46.88%
pcacost.xls	A4	A4	127	N	1	N	116,055	247,296	51.44%	15	50.00%	115,914	247,296	51.50%	17	46.88%
pcacost.xls			127	Y		N	238,986	247,296		29		238,984	247,296		32	
pcacost.xls	A2	A2	127	Y	1	N	115,219	247,296	51.79%	14	51.72%	115,078	247,296	51.85%	17	46.88%
pcacost.xls	A4	A4	127	Y	1	N	116,055	247,296	51.44%	15	48.28%	115,914	247,296	51.50%	17	46.88%
pcacost.xls			127	Y		Y	238,986	247,296		30		238,984	247,296		32	
pcacost.xls	A2	A2	127	Y	1	Y	115,219	247,296	51.79%	14	53.33%	115,078	247,296	51.85%	17	46.88%
pcacost.xls	A4	A4	127	Y	1	Y	116,055	247,296	51.44%	15	50.00%	115,914	247,296	51.50%	17	46.88%
pcacost.xls			127	N		Y	238,986	247,296		30		238,984	247,296		32	
pcacost.xls	A2	A2	127	N	1	Y	115,219	247,296	51.79%	14	53.33%	115,078	247,296	51.85%	17	46.88%
pcacost.xls	A4	A4	127	N	1	Y	116,055	247,296	51.44%	14	53.33%	115,914	247,296	51.50%	18	43.75%
pcacost.xls			127	N	1	Y	239,140	247,296		29		238,999	247,296		32	
pcacost.xls	A2	A2	127	N	1	Y	115,219	247,296	51.82%	14	51.72%	115,078	247,296	51.85%	17	46.88%
pcacost.xls	A4	A4	127	N	1	Y	116,055	247,296	51.47%	15	48.28%	115,914	247,296	51.50%	18	43.75%
Overall-127 (pcacost.xls)							1,195,084	1,236,480		148		1,194,935	1,236,480		160	
	A2	A2					576,095	1,236,480	51.79%	71	52.03%	575,390	1,236,480	51.85%	85	46.88%
	A4	A4					580,275	1,236,480	51.44%	74	50.00%	579,570	1,236,480	51.50%	87	45.63%
Overall (pcacost.xls)							2,942,551	2,472,960		1,451		2,942,209	2,472,960		1,495	
	A2	A2					1,415,055	2,472,960	51.91%	690	52.45%	1,413,330	2,472,960	51.96%	738	50.64%
	A4	A4					1,424,840	2,472,960	51.58%	699	51.83%	1,423,115	2,472,960	51.63%	747	50.03%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
pcmxall.1			126	N		N	2,214,750	3,282,000		1,665		2,214,748	3,282,000		1,668	
pcmxall.1	A2	A2	126	N	1	N	950,077	3,282,000	57.10%	712	57.24%	949,973	3,282,000	57.11%	719	56.89%
pcmxall.1	A4	A4	126	N	1	N	895,120	3,282,000	59.58%	671	59.70%	894,977	3,282,000	59.59%	677	59.41%
pcmxall.1			126	Y		N	2,238,837	3,282,000		1,684		2,238,835	3,282,000		1,687	
pcmxall.1	A2	A2	126	Y	1	N	1,429,101	3,282,000	36.17%	1,071	36.40%	1,428,679	3,282,000	36.19%	1,080	35.98%
pcmxall.1	A4	A4	126	Y	1	N	1,346,275	3,282,000	39.87%	1,011	39.96%	1,346,169	3,282,000	39.87%	1,015	39.83%
pcmxall.1			126	Y		Y	2,170,469	3,282,000		1,634		2,170,467	3,282,000		1,646	
pcmxall.1	A2	A2	126	Y	1	Y	950,077	3,282,000	56.23%	717	56.12%	949,973	3,282,000	56.23%	719	56.32%
pcmxall.1	A4	A4	126	Y	1	Y	895,120	3,282,000	58.76%	674	58.75%	894,977	3,282,000	58.77%	688	58.20%
pcmxall.1			126	N		Y	2,146,379	3,282,000		1,620		2,146,379	3,282,000		1,638	
pcmxall.1	A2	A2	126	N	1	Y	950,077	3,282,000	55.74%	712	56.05%	949,973	3,282,000	55.74%	720	56.04%
pcmxall.1	A4	A4	126	N	1	Y	895,120	3,282,000	58.30%	671	58.58%	894,977	3,282,000	58.30%	677	58.67%
pcmxall.1			126	N	1	Y	2,182,711	3,282,000		1,659		2,182,526	3,282,000		1,676	
pcmxall.1	A2	A2	126	N	1	Y	950,077	3,282,000	56.47%	736	55.64%	949,973	3,282,000	56.47%	744	55.61%
pcmxall.1	A4	A4	126	N	1	Y	895,120	3,282,000	58.99%	673	59.43%	894,977	3,282,000	58.99%	682	59.31%
Overall-126 (pcmxall.1)							10,953,146	16,410,000		8,262		10,952,955	16,410,000		8,315	
	A2	A2					5,229,409	16,410,000	52.26%	3,948	52.21%	5,228,571	16,410,000	52.26%	3,982	52.11%
	A4	A4					4,926,755	16,410,000	55.02%	3,700	55.22%	4,926,077	16,410,000	55.03%	3,739	55.03%
pcmxall.1			127	N		N	2,217,030	3,282,000		278		2,217,028	3,282,000		280	
pcmxall.1	A2	A2	127	N	1	N	720,142	3,282,000	67.52%	100	64.03%	719,929	3,282,000	67.53%	105	62.50%
pcmxall.1	A4	A4	127	N	1	N	678,699	3,282,000	69.39%	96	65.47%	678,648	3,282,000	69.39%	102	63.57%
pcmxall.1			127	Y		N	2,241,144	3,282,000		437		2,241,143	3,282,000		292	
pcmxall.1	A2	A2	127	Y	1	N	720,142	3,282,000	67.87%	101	76.89%	719,929	3,282,000	67.88%	105	64.04%
pcmxall.1	A4	A4	127	Y	1	N	678,699	3,282,000	69.72%	96	78.03%	678,648	3,282,000	69.72%	102	65.07%
pcmxall.1			127	Y		Y	2,172,697	3,282,000		274		2,172,695	3,282,000		276	
pcmxall.1	A2	A2	127	Y	1	Y	720,142	3,282,000	66.85%	100	63.50%	719,929	3,282,000	66.86%	105	61.96%
pcmxall.1	A4	A4	127	Y	1	Y	678,699	3,282,000	68.76%	98	64.23%	678,648	3,282,000	68.76%	104	62.32%
pcmxall.1			127	N		Y	2,148,591	3,282,000		270		2,148,589	3,282,000		272	
pcmxall.1	A2	A2	127	N	1	Y	720,142	3,282,000	66.48%	100	62.96%	719,929	3,282,000	66.49%	105	61.40%
pcmxall.1	A4	A4	127	N	1	Y	678,699	3,282,000	68.41%	96	64.44%	678,648	3,282,000	68.41%	100	63.24%
pcmxall.1			127	N	1	Y	2,148,745	3,282,000		270		2,148,604	3,282,000		271	
pcmxall.1	A2	A2	127	N	1	Y	720,142	3,282,000	66.49%	102	62.22%	719,929	3,282,000	66.49%	113	58.30%
pcmxall.1	A4	A4	127	N	1	Y	678,699	3,282,000	68.41%	106	60.74%	678,648	3,282,000	68.41%	102	62.36%
Overall-127 (pcmxall.1)							10,928,207	16,410,000		1,529		10,928,059	16,410,000		1,391	
	A2	A2					3,600,710	16,410,000	67.05%	503	67.10%	3,599,645	16,410,000	67.06%	533	61.68%
	A4	A4					3,393,495	16,410,000	68.95%	492	67.82%	3,393,240	16,410,000	68.95%	510	63.34%
Overall (pcmxall.1)							21,881,353	32,820,000		9,791		21,881,014	32,820,000		9,706	
	A2	A2					8,830,119	32,820,000	59.65%	4,451	54.54%	8,828,216	32,820,000	59.65%	4,515	53.48%
	A4	A4					8,320,250	32,820,000	61.98%	4,192	57.19%	8,319,317	32,820,000	61.98%	4,249	56.22%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
pcuser.doc			126	N		N	758,110	990,208		567		758,085	990,208		574	
pcuser.doc	A2	A2	126	N	1	N	637,097	990,208	15.96%	478	15.70%	636,912	990,208	15.98%	483	15.85%
pcuser.doc	A4	A4	126	N	1	N	646,074	990,208	14.78%	483	14.81%	645,889	990,208	14.80%	490	14.63%
pcuser.doc			126	Y		N	1,148,764	990,208		863		1,148,733	990,208		867	
pcuser.doc	A2	A2	126	Y	1	N	958,736	990,208	16.54%	720	16.57%	958,456	990,208	16.56%	725	16.38%
pcuser.doc	A4	A4	126	Y	1	N	972,325	990,208	15.36%	729	15.53%	972,045	990,208	15.38%	735	15.22%
pcuser.doc			126	Y		Y	758,110	990,208		567		758,085	990,208		575	
pcuser.doc	A2	A2	126	Y	1	Y	637,097	990,208	15.96%	478	15.70%	636,912	990,208	15.98%	483	16.00%
pcuser.doc	A4	A4	126	Y	1	Y	646,074	990,208	14.78%	483	14.81%	645,889	990,208	14.80%	489	14.96%
pcuser.doc			126	N		Y	758,110	990,208		567		758,085	990,208		578	
pcuser.doc	A2	A2	126	N	1	Y	637,097	990,208	15.96%	477	15.87%	636,912	990,208	15.98%	484	16.26%
pcuser.doc	A4	A4	126	N	1	Y	646,074	990,208	14.78%	491	13.40%	645,889	990,208	14.80%	489	15.40%
pcuser.doc			126	N	1	Y	758,307	990,208		571		758,099	990,208		573	
pcuser.doc	A2	A2	126	N	1	Y	637,097	990,208	15.98%	478	16.29%	636,912	990,208	15.99%	483	15.71%
pcuser.doc	A4	A4	126	N	1	Y	646,074	990,208	14.80%	484	15.24%	645,889	990,208	14.80%	488	14.83%
Overall-126 (pcuser.doc)							4,181,401	4,951,040		3,135		4,181,087	4,951,040		3,167	
	A2	A2					3,507,124	4,951,040	16.13%	2,631	16.08%	3,506,104	4,951,040	16.14%	2,658	16.07%
	A4	A4					3,556,621	4,951,040	14.94%	2,670	14.83%	3,555,601	4,951,040	14.96%	2,691	15.03%
pcuser.doc			127	N		N	576,436	990,208		72		576,422	990,208		75	
pcuser.doc	A2	A2	127	N	1	N	481,335	990,208	16.50%	62	13.89%	481,194	990,208	16.52%	67	10.67%
pcuser.doc	A4	A4	127	N	1	N	488,142	990,208	15.32%	63	12.50%	488,001	990,208	15.34%	67	10.67%
pcuser.doc			127	Y		N	576,436	990,208		73		576,422	990,208		74	
pcuser.doc	A2	A2	127	Y	1	N	481,335	990,208	16.50%	63	13.70%	481,194	990,208	16.52%	66	10.81%
pcuser.doc	A4	A4	127	Y	1	N	488,142	990,208	15.32%	63	13.70%	488,001	990,208	15.34%	67	9.46%
pcuser.doc			127	Y		Y	576,436	990,208		73		576,422	990,208		75	
pcuser.doc	A2	A2	127	Y	1	Y	481,335	990,208	16.50%	63	13.70%	481,194	990,208	16.52%	66	12.00%
pcuser.doc	A4	A4	127	Y	1	Y	488,142	990,208	15.32%	63	13.70%	488,001	990,208	15.34%	66	12.00%
pcuser.doc			127	N		Y	576,436	990,208		73		576,422	990,208		75	
pcuser.doc	A2	A2	127	N	1	Y	481,335	990,208	16.50%	63	13.70%	481,194	990,208	16.52%	66	12.00%
pcuser.doc	A4	A4	127	N	1	Y	488,142	990,208	15.32%	63	13.70%	488,001	990,208	15.34%	66	12.00%
pcuser.doc			127	N	1	Y	576,590	990,208		73		576,437	990,208		75	
pcuser.doc	A2	A2	127	N	1	Y	481,335	990,208	16.52%	63	13.70%	481,194	990,208	16.52%	65	13.33%
pcuser.doc	A4	A4	127	N	1	Y	488,142	990,208	15.34%	63	13.70%	488,001	990,208	15.34%	67	10.67%
Overall-127 (pcuser.doc)							2,882,334	4,951,040		364		2,882,125	4,951,040		374	
	A2	A2					2,406,675	4,951,040	16.50%	314	13.74%	2,405,970	4,951,040	16.52%	330	11.76%
	A4	A4					2,440,710	4,951,040	15.32%	315	13.46%	2,440,005	4,951,040	15.34%	333	10.96%
Overall (pcuser.doc)							7,063,735	9,902,080		3,499		7,063,212	9,902,080		3,541	
	A2	A2					5,913,799	9,902,080	16.28%	2,945	15.83%	5,912,074	9,902,080	16.30%	2,988	15.62%
	A4	A4					5,997,331	9,902,080	15.10%	2,985	14.69%	5,995,606	9,902,080	15.12%	3,024	14.60%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
wtstappx.c			126	N		N	184,466	194,170		137		175,945	194,170		137	
wtstappx.c	A2	A2	126	N	1	N	100,336	194,170	45.61%	74	45.99%	100,081	194,170	43.12%	80	41.61%
wtstappx.c	A4	A4	126	N	1	N	91,699	194,170	50.29%	66	51.82%	91,465	194,170	48.02%	74	45.99%
wtstappx.c			126	Y		N	188,275	194,170		140		179,754	194,170		139	
wtstappx.c	A2	A2	126	Y	1	N	151,103	194,170	19.74%	111	20.71%	150,746	194,170	16.14%	119	14.39%
wtstappx.c	A4	A4	126	Y	1	N	138,061	194,170	26.67%	102	27.14%	137,672	194,170	23.41%	109	21.58%
wtstappx.c			126	Y		Y	161,569	194,170		120		153,050	194,170		120	
wtstappx.c	A2	A2	126	Y	1	Y	100,336	194,170	37.90%	73	39.17%	100,081	194,170	34.61%	80	33.33%
wtstappx.c	A4	A4	126	Y	1	Y	91,699	194,170	43.24%	66	45.00%	91,465	194,170	40.24%	74	38.33%
wtstappx.c			126	N		Y	157,755	194,170		116		149,233	194,170		117	
wtstappx.c	A2	A2	126	N	1	Y	100,336	194,170	36.40%	73	37.07%	100,081	194,170	32.94%	80	31.62%
wtstappx.c	A4	A4	126	N	1	Y	91,699	194,170	41.87%	66	43.10%	91,465	194,170	38.71%	74	36.75%
wtstappx.c			126	N	1	Y	163,673	194,170		121		154,970	194,170		121	
wtstappx.c	A2	A2	126	N	1	Y	100,336	194,170	38.70%	73	39.67%	100,081	194,170	35.42%	80	33.88%
wtstappx.c	A4	A4	126	N	1	Y	91,699	194,170	43.97%	67	44.63%	91,465	194,170	40.98%	74	38.84%
Overall-126 (wtstappx.c)							855,738	970,850		634		812,952	970,850		634	
	A2	A2					552,447	970,850	35.44%	404	36.28%	551,070	970,850	32.21%	439	30.76%
	A4	A4					504,857	970,850	41.00%	367	42.11%	503,532	970,850	38.06%	405	36.12%
wtstappx.c			127	N		N	184,644	194,170		26		176,148	194,170		26	
wtstappx.c	A2	A2	127	N	1	N	75,932	194,170	58.88%	14	46.15%	75,752	194,170	57.00%	15	42.31%
wtstappx.c	A4	A4	127	N	1	N	69,418	194,170	62.40%	13	50.00%	69,222	194,170	60.70%	15	42.31%
wtstappx.c			127	Y		N	188,461	194,170		27		179,969	194,170		27	
wtstappx.c	A2	A2	127	Y	1	N	75,932	194,170	59.71%	13	51.85%	75,752	194,170	57.91%	16	40.74%
wtstappx.c	A4	A4	127	Y	1	N	69,418	194,170	63.17%	13	51.85%	69,222	194,170	61.54%	15	44.44%
wtstappx.c			127	Y		Y	161,723	194,170		23		153,231	194,170		24	
wtstappx.c	A2	A2	127	Y	1	Y	75,932	194,170	53.05%	13	43.48%	75,752	194,170	50.56%	16	33.33%
wtstappx.c	A4	A4	127	Y	1	Y	69,418	194,170	57.08%	13	43.48%	69,222	194,170	54.83%	15	37.50%
wtstappx.c			127	N		Y	157,902	194,170		23		149,412	194,170		23	
wtstappx.c	A2	A2	127	N	1	Y	75,932	194,170	51.91%	13	43.48%	75,752	194,170	49.30%	16	30.43%
wtstappx.c	A4	A4	127	N	1	Y	69,418	194,170	56.04%	13	43.48%	69,222	194,170	53.67%	15	34.78%
wtstappx.c			127	N	1	Y	158,056	194,170		23		149,427	194,170		23	
wtstappx.c	A2	A2	127	N	1	Y	75,932	194,170	51.96%	13	43.48%	75,752	194,170	49.31%	16	30.43%
wtstappx.c	A4	A4	127	N	1	Y	69,418	194,170	56.08%	13	43.48%	69,222	194,170	53.68%	15	34.78%
Overall-127 (wtstappx.c)							850,786	970,850		122		808,187	970,850		123	
	A2	A2					379,660	970,850	55.38%	66	45.90%	378,760	970,850	53.13%	79	35.77%
	A4	A4					347,090	970,850	59.20%	65	46.72%	346,110	970,850	57.17%	75	39.02%
Overall (wtstappx.c)							1,706,524	1,941,700		756		1,621,139	1,941,700		757	
	A2	A2					932,107	1,941,700	45.38%	470	37.83%	929,830	1,941,700	42.64%	518	31.57%
	A4	A4					851,947	1,941,700	50.08%	432	42.86%	849,642	1,941,700	47.59%	480	36.59%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
wtstappx.exe			126	N		N	502,459	434,912		375		502,457	434,912		382	
wtstappx.exe	A2	A2	126	N	1	N	318,920	434,912	36.53%	238	36.53%	318,735	434,912	36.56%	245	35.86%
wtstappx.exe	A4	A4	126	N	1	N	326,876	434,912	34.94%	244	34.93%	326,691	434,912	34.98%	250	34.55%
wtstappx.exe			126	Y		N	759,279	434,912		568		759,277	434,912		573	
wtstappx.exe	A2	A2	126	Y	1	N	480,153	434,912	36.76%	358	36.97%	479,873	434,912	36.80%	365	36.30%
wtstappx.exe	A4	A4	126	Y	1	N	492,434	434,912	35.14%	368	35.21%	492,154	434,912	35.18%	374	34.73%
wtstappx.exe			126	Y		Y	502,459	434,912		376		502,457	434,912		382	
wtstappx.exe	A2	A2	126	Y	1	Y	318,920	434,912	36.53%	238	36.70%	318,735	434,912	36.56%	244	36.13%
wtstappx.exe	A4	A4	126	Y	1	Y	326,876	434,912	34.94%	243	35.37%	326,691	434,912	34.98%	250	34.55%
wtstappx.exe			126	N		Y	502,459	434,912		376		502,457	434,912		382	
wtstappx.exe	A2	A2	126	N	1	Y	318,920	434,912	36.53%	238	36.70%	318,735	434,912	36.56%	245	35.86%
wtstappx.exe	A4	A4	126	N	1	Y	326,876	434,912	34.94%	244	35.11%	326,691	434,912	34.98%	250	34.55%
wtstappx.exe			126	N	1	Y	502,656	434,912		375		502,471	434,912		381	
wtstappx.exe	A2	A2	126	N	1	Y	318,920	434,912	36.55%	238	36.53%	318,735	434,912	36.57%	244	35.96%
wtstappx.exe	A4	A4	126	N	1	Y	326,876	434,912	34.97%	244	34.93%	326,691	434,912	34.98%	249	34.65%
Overall-126 (wtstappx.exe)							2,769,312	2,174,560		2,070		2,769,119	2,174,560		2,100	
	A2	A2					1,755,833	2,174,560	36.60%	1,310	36.71%	1,754,813	2,174,560	36.63%	1,343	36.05%
	A4	A4					1,799,938	2,174,560	35.00%	1,343	35.12%	1,798,918	2,174,560	35.04%	1,373	34.62%
wtstappx.exe			127	N		N	380,682	434,912		48		380,680	434,912		49	
wtstappx.exe	A2	A2	127	N	1	N	240,977	434,912	36.70%	31	35.42%	240,836	434,912	36.74%	32	34.69%
wtstappx.exe	A4	A4	127	N	1	N	247,129	434,912	35.08%	32	33.33%	246,988	434,912	35.12%	33	32.65%
wtstappx.exe			127	Y		N	380,682	434,912		48		380,680	434,912		49	
wtstappx.exe	A2	A2	127	Y	1	N	240,977	434,912	36.70%	30	37.50%	240,836	434,912	36.74%	33	32.65%
wtstappx.exe	A4	A4	127	Y	1	N	247,129	434,912	35.08%	32	33.33%	246,988	434,912	35.12%	33	32.65%
wtstappx.exe			127	Y		Y	380,682	434,912		48		380,680	434,912		50	
wtstappx.exe	A2	A2	127	Y	1	Y	240,977	434,912	36.70%	31	35.42%	240,836	434,912	36.74%	33	34.00%
wtstappx.exe	A4	A4	127	Y	1	Y	247,129	434,912	35.08%	32	33.33%	246,988	434,912	35.12%	33	34.00%
wtstappx.exe			127	N		Y	380,682	434,912		47		380,680	434,912		50	
wtstappx.exe	A2	A2	127	N	1	Y	240,977	434,912	36.70%	30	36.17%	240,836	434,912	36.74%	33	34.00%
wtstappx.exe	A4	A4	127	N	1	Y	247,129	434,912	35.08%	31	34.04%	246,988	434,912	35.12%	34	32.00%
wtstappx.exe			127	N	1	Y	380,836	434,912		48		380,695	434,912		49	
wtstappx.exe	A2	A2	127	N	1	Y	240,977	434,912	36.72%	31	35.42%	240,836	434,912	36.74%	33	32.65%
wtstappx.exe	A4	A4	127	N	1	Y	247,129	434,912	35.11%	32	33.33%	246,988	434,912	35.12%	33	32.65%
Overall-127 (wtstappx.exe)							1,903,564	2,174,560		239		1,903,415	2,174,560		247	
	A2	A2					1,204,885	2,174,560	36.70%	153	35.98%	1,204,180	2,174,560	36.74%	164	33.60%
	A4	A4					1,235,645	2,174,560	35.09%	159	33.47%	1,234,940	2,174,560	35.12%	166	32.79%
Overall (wtstappx.exe)							4,672,876	4,349,120		2,309		4,672,534	4,349,120		2,347	
	A2	A2					2,960,718	4,349,120	36.64%	1,463	36.64%	2,958,993	4,349,120	36.67%	1,507	35.79%
	A4	A4					3,035,583	4,349,120	35.04%	1,502	34.95%	3,033,858	4,349,120	35.07%	1,539	34.43%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
all - raw			126	N		N	11,180,749	12,958,301		8,399		11,097,970	12,958,301		8,396	
all - raw	A2	A2	126	N	1	N	4,862,197	12,958,301	56.51%	3,635	56.72%	4,859,317	12,958,301	56.21%	3,716	55.74%
all - raw	A4	A4	126	N	1	N	4,441,125	12,958,301	60.28%	3,317	60.51%	4,437,257	12,958,301	60.02%	3,391	59.61%
all - raw			126	Y		N	13,793,314	12,958,301		10,362		13,710,572	12,958,301		10,347	
all - raw	A2	A2	126	Y	1	N	7,315,483	12,958,301	46.96%	5,476	47.15%	7,310,471	12,958,301	46.68%	5,624	45.65%
all - raw	A4	A4	126	Y	1	N	6,681,596	12,958,301	51.56%	5,007	51.68%	6,675,313	12,958,301	51.31%	5,099	50.72%
all - raw			126	Y		Y	11,077,328	12,958,301		8,375		10,994,578	12,958,301		8,401	
all - raw	A2	A2	126	Y	1	Y	4,862,197	12,958,301	56.11%	3,673	56.14%	4,859,317	12,958,301	55.80%	3,713	55.80%
all - raw	A4	A4	126	Y	1	Y	4,441,125	12,958,301	59.91%	3,317	60.39%	4,437,257	12,958,301	59.64%	3,399	59.54%
all - raw			126	N		Y	11,047,117	12,958,301		8,316		10,964,339	12,958,301		8,318	
all - raw	A2	A2	126	N	1	Y	4,862,197	12,958,301	55.99%	3,634	56.30%	4,859,317	12,958,301	55.68%	3,719	55.29%
all - raw	A4	A4	126	N	1	Y	4,441,125	12,958,301	59.80%	3,325	60.02%	4,437,257	12,958,301	59.53%	3,397	59.16%
all - raw			126	N	1	Y	11,094,617	12,958,301		8,352		11,009,863	12,958,301		8,378	
all - raw	A2	A2	126	N	1	Y	4,862,197	12,958,301	56.18%	3,661	56.17%	4,859,317	12,958,301	55.86%	3,741	55.35%
all - raw	A4	A4	126	N	1	Y	4,441,125	12,958,301	59.97%	3,322	60.23%	4,437,257	12,958,301	59.70%	3,396	59.47%
Overall-126 (all - raw)							58,193,125	64,791,505		43,804		57,777,322	64,791,505		43,840	
	A2	A2					26,764,271	64,791,505	54.01%	20,079	54.16%	26,747,739	64,791,505	53.71%	20,513	53.21%
	A4	A4					24,446,096	64,791,505	57.99%	18,288	58.25%	24,424,341	64,791,505	57.73%	18,682	57.39%
all - raw			127	N		N	9,957,104	12,958,301		1,324		9,874,657	12,958,301		1,341	
all - raw	A2	A2	127	N	1	N	3,680,966	12,958,301	63.03%	599	54.76%	3,678,449	12,958,301	62.75%	624	53.47%
all - raw	A4	A4	127	N	1	N	3,363,703	12,958,301	66.22%	559	57.78%	3,360,567	12,958,301	65.97%	591	55.93%
all - raw			127	Y		N	9,987,354	12,958,301		1,485		9,904,878	12,958,301		1,355	
all - raw	A2	A2	127	Y	1	N	3,680,966	12,958,301	63.14%	598	59.73%	3,678,449	12,958,301	62.86%	624	53.95%
all - raw	A4	A4	127	Y	1	N	3,363,703	12,958,301	66.32%	563	62.09%	3,360,567	12,958,301	66.07%	589	56.53%
all - raw			127	Y	1	Y	9,853,584	12,958,301		1,314		9,771,112	12,958,301		1,336	
all - raw	A2	A2	127	Y	1	Y	3,680,966	12,958,301	62.64%	598	54.49%	3,678,449	12,958,301	62.35%	623	53.37%
all - raw	A4	A4	127	Y	1	Y	3,363,703	12,958,301	65.86%	565	57.00%	3,360,567	12,958,301	65.61%	590	55.84%
all - raw			127	N		Y	9,823,345	12,958,301		1,310		9,740,902	12,958,301		1,331	
all - raw	A2	A2	127	N	1	Y	3,680,966	12,958,301	62.53%	597	54.43%	3,678,449	12,958,301	62.24%	624	53.12%
all - raw	A4	A4	127	N	1	Y	3,363,703	12,958,301	65.76%	562	57.10%	3,360,567	12,958,301	65.50%	588	55.82%
all - raw			127	N	1	Y	9,825,039	12,958,301		1,310		9,741,071	12,958,301		1,328	
all - raw	A2	A2	127	N	1	Y	3,680,966	12,958,301	62.53%	599	54.27%	3,678,449	12,958,301	62.24%	633	52.33%
all - raw	A4	A4	127	N	1	Y	3,363,703	12,958,301	65.76%	572	56.34%	3,360,567	12,958,301	65.50%	590	55.57%
Overall-127 (all - raw)							49,446,426	64,791,505		6,743		49,032,620	64,791,505		6,691	
	A2	A2					18,404,830	64,791,505	62.78%	2,991	55.64%	18,392,245	64,791,505	62.49%	3,128	53.25%
	A4	A4					16,818,515	64,791,505	65.99%	2,821	58.16%	16,802,835	64,791,505	65.73%	2,948	55.94%
Overall (all - raw)							107,639,551	129,583,010		50,547		106,809,942	129,583,010		50,531	
	A2	A2					45,169,101	129,583,010	58.04%	23,070	54.36%	45,139,984	129,583,010	57.74%	23,641	53.21%
	A4	A4					41,264,611	129,583,010	61.66%	21,109	58.24%	41,227,176	129,583,010	61.40%	21,630	57.19%

<u>Test File</u>	<u>Comp</u>	<u>Dcomp</u>	<u>Device</u>	<u>Safe</u>	<u>TXLT</u>	<u>LCAI</u>	<u>Xmit-Up</u>	<u>Data-Up</u>	<u>%Comp-Up</u>	<u>Time-Up</u>	<u>%Time-Up</u>	<u>Xmit-Dn</u>	<u>Data-Dn</u>	<u>%Comp-Dn</u>	<u>Time-Dn</u>	<u>%Time-Dn</u>
all - weighted			126	N		N	12,160,399	12,958,301		9,099		12,043,808	12,958,301		9,189	
all - weighted	A2	A2	126	N	1	N	6,131,228	12,958,301	49.58%	4,551	49.99%	6,120,540	12,958,301	49.18%	4,752	48.28%
all - weighted	A4	A4	126	N	1	N	5,760,241	12,958,301	52.63%	4,274	53.03%	5,750,227	12,958,301	52.26%	4,458	51.49%
all - weighted			126	Y		N	15,310,457	12,958,301		11,470		15,193,907	12,958,301		11,532	
all - weighted	A2	A2	126	Y	1	N	9,227,260	12,958,301	39.73%	6,867	40.14%	9,212,203	12,958,301	39.37%	7,086	38.56%
all - weighted	A4	A4	126	Y	1	N	8,670,934	12,958,301	43.37%	6,450	43.77%	8,655,138	12,958,301	43.04%	6,668	42.18%
all - weighted			126	Y		Y	11,842,604	12,958,301		8,875		11,726,073	12,958,301		8,979	
all - weighted	A2	A2	126	Y	1	Y	6,131,228	12,958,301	48.23%	4,557	48.66%	6,120,540	12,958,301	47.80%	4,740	47.21%
all - weighted	A4	A4	126	Y	1	Y	5,760,241	12,958,301	51.36%	4,264	51.96%	5,750,227	12,958,301	50.96%	4,456	50.37%
all - weighted			126	N		Y	11,803,534	12,958,301		8,828		11,686,947	12,958,301		8,929	
all - weighted	A2	A2	126	N	1	Y	6,131,228	12,958,301	48.06%	4,539	48.58%	6,120,540	12,958,301	47.63%	4,747	46.84%
all - weighted	A4	A4	126	N	1	Y	5,760,241	12,958,301	51.20%	4,271	51.62%	5,750,227	12,958,301	50.80%	4,462	50.03%
all - weighted			126	N	1	Y	11,867,662	12,958,301		8,880		11,746,036	12,958,301		8,968	
all - weighted	A2	A2	126	N	1	Y	6,131,228	12,958,301	48.34%	4,552	48.73%	6,120,540	12,958,301	47.89%	4,764	46.88%
all - weighted	A4	A4	126	N	1	Y	5,760,241	12,958,301	51.46%	4,277	51.84%	5,750,227	12,958,301	51.05%	4,458	50.29%
Overall-126 (all - weighted)							62,984,657	64,791,505		47,153		62,396,772	64,791,505		47,597	
	A2	A2					33,752,171	64,791,505	46.41%	25,066	46.84%	33,694,363	64,791,505	46.00%	26,089	45.19%
	A4	A4					31,711,897	64,791,505	49.65%	23,536	50.09%	31,656,045	64,791,505	49.27%	24,502	48.52%
all - weighted			127	N		N	10,689,870	12,958,301		1,426		10,573,678	12,958,301		1,466	
all - weighted	A2	A2	127	N	1	N	4,638,116	12,958,301	56.61%	730	48.80%	4,630,557	12,958,301	56.21%	782	46.68%
all - weighted	A4	A4	127	N	1	N	4,359,751	12,958,301	59.22%	688	51.75%	4,351,858	12,958,301	58.84%	759	48.21%
all - weighted			127	Y		N	10,728,968	12,958,301		1,482		10,612,768	12,958,301		1,480	
all - weighted	A2	A2	127	Y	1	N	4,638,116	12,958,301	56.77%	718	51.54%	4,630,557	12,958,301	56.37%	788	46.79%
all - weighted	A4	A4	127	Y	1	N	4,359,751	12,958,301	59.36%	697	52.95%	4,351,858	12,958,301	58.99%	754	49.07%
all - weighted			127	Y	1	Y	10,371,756	12,958,301		1,387		10,255,583	12,958,301		1,438	
all - weighted	A2	A2	127	Y	1	Y	4,638,116	12,958,301	55.28%	720	48.07%	4,630,557	12,958,301	54.85%	781	45.66%
all - weighted	A4	A4	127	Y	1	Y	4,359,751	12,958,301	57.97%	699	49.62%	4,351,858	12,958,301	57.57%	752	47.66%
all - weighted			127	N	1	Y	10,332,647	12,958,301		1,382		10,216,498	12,958,301		1,430	
all - weighted	A2	A2	127	N	1	Y	4,638,116	12,958,301	55.11%	718	48.05%	4,630,557	12,958,301	54.68%	782	45.35%
all - weighted	A4	A4	127	N	1	Y	4,359,751	12,958,301	57.81%	691	49.98%	4,351,858	12,958,301	57.40%	759	46.93%
all - weighted			127	N	1	Y	10,336,911	12,958,301		1,383		10,216,919	12,958,301		1,429	
all - weighted	A2	A2	127	N	1	Y	4,638,116	12,958,301	55.13%	715	48.32%	4,630,557	12,958,301	54.68%	791	44.60%
all - weighted	A4	A4	127	N	1	Y	4,359,751	12,958,301	57.82%	700	49.38%	4,351,858	12,958,301	57.41%	757	47.01%
Overall-127 (all - weighted)							52,460,151	64,791,505		7,060		51,875,447	64,791,505		7,243	
	A2	A2					23,190,582	64,791,505	55.79%	3,601	48.99%	23,152,786	64,791,505	55.37%	3,924	45.83%
	A4	A4					21,798,757	64,791,505	58.45%	3,475	50.77%	21,759,290	64,791,505	58.05%	3,782	47.79%
Overall (all - weighted)							115,444,808	129,583,010		54,213		114,272,219	129,583,010		54,840	
	A2	A2					56,942,753	129,583,010	50.68%	28,667	47.12%	56,847,150	129,583,010	50.25%	30,013	45.27%
	A4	A4					53,510,654	129,583,010	53.65%	27,011	50.18%	53,415,336	129,583,010	53.26%	28,283	48.43%