

APEX/SAC  
Performance  
Operton 165  
BENCHMARK

Bug#	#15633	#15633	Vs Dyalog APL Relative speedup	Vs old SAC Relative speedup
	2007-10-18	2007-10-18	<100% is bad	red is BAD
CPU (msec)	PAPI_TOT_INS			
Buildv	8010	18759730948	88.5%	-0.1%
Buildv2	105	????	1042.9%	100.0%
Buildvf	11435		124.3%	100.0%
Compiota	6195	17401228400	4.6%	-748.3%
Compiotad	6442.5		11.9%	100.0%
crc	56147.5	194987689007	32.9%	-6760.0%
crc2	7015		1102.5%	100.0%
Csbench	1077.5	3086488736	56.2%	-467.3%
downgradePV	1245	3550486968	1221.5%	11.2%
dtb	1245		88.5%	100.0%
dtb2			#DIV/0!	100.0%
fd	487.5		359.8%	100.0%
format	0	0	#DIV/0!	100.0%
gaussran	0		#DIV/0!	100.0%
Histgrade	3547.5	8259025236	51.4%	4.3%
Histlp	687.5		6813.2%	100.0%
histop	2522.5	6516267510	66.9%	-19.3%
Histopf	1560	4717866077	284.1%	-0.0%
lotan	80	300275678	382.2%	-20.1%
lpape	2260	8122895400	402.9%	-0.0%
lpbb	425	1104315251	14.8%	95.5%
lpbd	1532.5		316.8%	100.0%
lpdd	562.5		825.3%	100.0%
lpopne	2267.5	9584719548	395.0%	-0.0%
ipplusand	7580	8588356674	34.9%	95.6%
jgwbench	0	0	#DIV/0!	100.0%
lltop	1045	1960408169	33722.7%	31.9%
Logd	575		643.7%	100.0%
Logd2	432.5		666.0%	100.0%
logd3	427.5		841.2%	100.0%
logd4	795		333.8%	100.0%

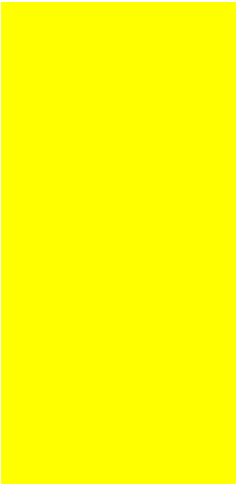
APL2007

Loopfs	OK	47.5		54127.4%	100.0%
Loopfv	OK	45		57032.8%	100.0%
Loopis	OK	57.5	168301896	108580.4%	-0.1%
lzwc	Later (GOTO)	0	0	#DIV/0!	100.0%
Matiota	SAC2C crash(Constants)	0	0	#DIV/0!	100.0%
mconv	OK	1012.5		505.2%	100.0%
mconvout	OK	1030		226.4%	100.0%
mconvre2	APEX Synt Bug	0	0	#DIV/0!	100.0%
mconvred	APEX Code gen Bug	0	0	#DIV/0!	100.0%
mdiv	DFA bug	0	0	#DIV/0!	100.0%
Mdiv2	SLOW	110712.5	0	4.3%	100.0%
mdivr	probably stupid syntax bug	0	0	#DIV/0!	100.0%
metaph2	needs epsilon-bar	0	0	#DIV/0!	100.0%
metaphon	needs epsilon-bar	0	0	#DIV/0!	100.0%
Nasmg	No source code	0	0	#DIV/0!	100.0%
NASMGRotate	No source code	0	0	#DIV/0!	100.0%
nmo	DFA bug	0	0	#DIV/0!	100.0%
nmo2	DFA bug	0	0	#DIV/0!	100.0%
nmo2r	DFA bug	0	0	#DIV/0!	100.0%
Nsv	SEGFault	0	0	#DIV/0!	100.0%
Nthone	SLOW	3185	9031651448	19.1%	-446.9%
Prd	OK	15		833.3%	100.0%
primes	SLOW	1367.5	1127893314	66.8%	-0.2%
primes2	SLOW	917.5		99.6%	100.0%
primes3	SLOW	840	927739857	108.8%	-0.3%
Rle	SLOW	19147.5	43947215920	29.5%	-357.0%
rle2	SLOW	19927.5	44632227984	36.6%	-342.4%
rle3	SLOW	9402.5	20770985319	60.6%	-354.5%
rle4	SLOW	8790	20724615240	64.9%	-404.9%
schedr	SLOW	3592.5	9520384237	47.8%	-313.9%
scs	Index error	0	0	#DIV/0!	100.0%
sdyn4	Index error	0	0	#DIV/0!	100.0%
Testfor	OK	120	339817326	3496.9%	95.7%
testif	Needs :IF	0	0	#DIV/0!	100.0%
testindx	OK	15	33298341	66590.0%	41.6%
testlcv	OK	12	14297192	63795.8%	-1.8%
tjck	OK	4287.5	12752835545	175.2%	-44.6%

## APL2007

tjck2	OK	3780	11071231339	107.3%	-61.7%
tjckrbe	OK	2722.5	0	268.9%	100.0%
tjkc	SLOW	6247.5	16649250954	90.9%	-32.6%
tjckrbe	OK	4460	11766455361	127.3%	-91.2%
tjv21	sac2c crash	0	0	#DIV/0!	100.0%
tjv21rbe	sac2c crash	0	0	#DIV/0!	100.0%
tjv22	SCCF crash	0	0	#DIV/0!	100.0%
tjv22rbe	sac2c crash	0	0	#DIV/0!	100.0%
tomcatv	APEX DFA bug	0	0	#DIV/0!	100.0%
tomcatv2	APEX DFA bug	0	0	#DIV/0!	100.0%
unirand	OK	510		4807.7%	100.0%
unirand2	APEX SNTX bug	0	0	#DIV/0!	100.0%
unirand3	OK	10347.5	9793532278	247.4%	-2.4%
UpgradeBool	OK	172.5	430467950	213.9%	-0.1%
UpgradeChar	OK	835	2247256831	350.2%	100.0%
UpgradeIntVec	SLOW	4060	8060786712	34.2%	2.4%
UpgradeHIM	SLOW	14770	16082902787	21.5%	100.0%
upgradePV	OK	1110		1159.3%	100.0%
UTBaseValue				#DIV/0!	100.0%
UTCatenate				#DIV/0!	100.0%
UTCompress				#DIV/0!	100.0%
UTDconj				#DIV/0!	100.0%
UTDScalarB				#DIV/0!	100.0%
UTDScalarI				#DIV/0!	100.0%
UTEpio				#DIV/0!	100.0%
UTExpand				#DIV/0!	100.0%
UTGrade				#DIV/0!	100.0%
UTIndexRef				#DIV/0!	100.0%
UTIndexSet				#DIV/0!	100.0%
UTIndexVV				#DIV/0!	100.0%
UTJotDot				#DIV/0!	100.0%
UTMScalarI				#DIV/0!	100.0%
UTQuadFI				#DIV/0!	100.0%
UTQuery				#DIV/0!	100.0%
UTQuoteQuad				#DIV/0!	100.0%
UTRank				#DIV/0!	100.0%
UTReduce				#DIV/0!	100.0%

UTReplicate			#DIV/0!	100.0%
UTReshape			#DIV/0!	100.0%
UTReverse			#DIV/0!	100.0%
UTRotate01			#DIV/0!	100.0%
UTRotate234			#DIV/0!	100.0%
UTScan			#DIV/0!	100.0%
UTSemiGlob			#DIV/0!	100.0%
UTSGMain			#DIV/0!	100.0%
UTSyntax			#DIV/0!	100.0%
UTTakeDrop			#DIV/0!	100.0%
UTThornBoolean			#DIV/0!	100.0%
UTThornInt			#DIV/0!	100.0%
UTThornReal			#DIV/0!	100.0%
UTTranspose			#DIV/0!	100.0%
waver	OK	1062.5	1090.9%	100.0%
UTFormat			#DIV/0!	100.0%
UTRollDeal			#DIV/0!	100.0%
logdAKD			#DIV/0!	#DIV/0!
UTRepresentation			#DIV/0!	#DIV/0!
UTCf			#DIV/0!	#DIV/0!
UTliveo			#DIV/0!	#DIV/0!
UTiveor3			#DIV/0!	#DIV/0!
UTShapeCI			#DIV/0!	#DIV/0!
UTCclone			#DIV/0!	100.0%
UTClock			#DIV/0!	100.0%
UTMatch			#DIV/0!	#DIV/0!
UTInnerProduct			#DIV/0!	#DIV/0!
Ackermann	Needs :IF		#DIV/0!	#DIV/0!
Permutations	Needs :IF		#DIV/0!	#DIV/0!
Pdet	Needs :IF		#DIV/0!	#DIV/0!
Ulam	Probably APEX DFA bug		#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!
			#DIV/0!	#DIV/0!



#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!
	#DIV/0!

APL2007

no time means sac2c died!

#15138	#15222	#15230	#15266	new Fn cloning SPECCASE		Dyalog APL APEX TirAPEX Speed		
				#15295	#15297	CPU msec	CPU msec	
2007-01-04	2007-02-14	2007-02-27		2007-05-01	2007-05-07		#15297	
18737567455	25397725488	25397725210	18759556952	18756592109	18756595091	7091	7882.5	0.66
1134557397	9877703153	9877702211	1259516001	1024761528	1024761519	1095	335	0.33
18738794409	25398965114	25398965341	18762071726	18765316536	18765317139	14214	11319	1.04
2051384294	1947009438	1947009612	2249705492	2249705723	2249705508	285	823	0.26
2051384308	1947009416	1947009541	2249705769	2370061425	2370060650	768	1030	0.57
2842396087	1	1	2274343294	2264730109	2264730040	18487	734	3.85
8575780925	1	1	6999444311	7021840033	7021838775	77341	7057	#DIV/0!
544111744	1	1	564120969	569120901	569120962	606	202	1.74
4000235777	3800236110	3800235813	3950235876	4050235886	4050236590	15208	1706	11.66
3105518085	1	1	1			1102		0.36
1	1	1	1			7959		#DIV/0!
2010104493	12720106302	12720106352	3030164607	3000165340	3000164905	1754	1664	0.37
1	1	1	1			1		#DIV/0!
1	1	1	1			1		#DIV/0!
8631341263	8593841104	8593840411	8243641413	8248219784	8248219347	1824	3601	0.47
370114307	3965115418	3965114499	370126985	220128011	220128007	46841	95	66.16
5463444230			6516101655	6516011104	6516010703	1688	2669	0.65
4717393656			4717613635	4717613785	4717613482	4432	1596	2.77
250042982	250042949	250043027	250042926		300042960	306	85	3.51
8122641452	0	0	8122641995	80118613144	8122641482	9107	1896	0.34
24585449289	1	1	1095305389	1095305410	474800010	63	135	0.15
47466140866	1	1	1589343938	1589343264	1589343890	4855	1634	2.83
1131053948	1	1	1130804081	1130803778	1130803970	4643	603	7.69
9584466906	1	1	9584467070	88118616244	9584467197	8956	2311	0.44
195560471403	1	1	8563593841	8563600398	8563599869	2646	7289	0.36
1	1	1	1					0.00
2880157821	2440157245	2440156357	2880157646	1960157241	1920156913	352402	1081	318.63
1140086305			1140086263	1140085977	1140086308	3701	661	6.27
600046528			600046464	540046649	540046496	2880	441	6.53
190056549	190056552	190056650	190056566			3596		7.90
1320126177	1320125660	1320126549	1320126040	1320125716		2654		3.26

## APL2007

70048337	70048308	70048412	70048307	70048326	70048328	25711	32	514.21
1900048866	1900049064	1900048972	1900048847	1900048909	1900049019	25665	639	38.71
168050127	168050096	168050193	168050089	168050107	168050106	62434	53	975.53
1	1	1	1					0.00
1	1	1	1			1918		1918.00
1784136562	1	1	1784137245	1784136851	1784137431	5115	1138	7.28
1612287839	1	1	1612287301	1612287606	1612287177	2332	1040	3.70
1	1	1	1			2332		2332.25
1	1	1	1			2332		2332.25
11243871961	1	1	8601029752			4808		4808.25
327061690696	1	1	314452929997			4753		4753.25
1	1	1	1					0.00
1	1	1	1			1405		1405.00
1	1	1	1			562		562.00
1	1	1	1					0.00
1	1	1	1					0.00
5479037302	1	1	5473666221			3003		3003.00
1	1	1	1			703		703.25
1	1	1	1			703		703.25
61857058623	1	1	60871298180	61480829758	61480829758	2091	24206	2091.00
1651520500	1	1722319924	1609120961	1628721405	1628721275	609	654	0.85
50043004	50042972	50043089	50042974	60043000	60042988	125	18	6.58
1125295932	1	1	1125324799	1125324502	1125324740	914	1360	0.66
1200242202	1	1	1200260579	1200260575	1200260839	914	943	0.98
925167054	1	1	925185875	925185668	925186197	914	813	1.08
9617355402	1	2300128706	9247583759		9325578145	5651	6211	5650.50
10087624518	1	1	9392055885		9428825339	7299	6745	7298.50
4570446646	1	1	4427328815		4437328871	5703	3076	0.57
4104307145	1	1	3835407702		3911408696	5703	2327	5702.50
2300127228	1	1	2300128706	2300129181	2300129040	1718	940	1.81
706618517	1	1	638684777	400615818	400615712	75261	673	19.94
5834906273	1	1	7055154284	7055169260	7055169251	21573	2909	21573.25
7892705560	1	1	14079945351			4196	4860.5	0.65
1	1	1	1			36		36.00
57045929	51045914	57045349	55045948	33045933	33045932	9988.5	15	587.56
14044451	14044440	14044536	14044440	14044460	14044460	7656	5	2551.83
8817530882	1	1	12545510098	12547039656	12547040175	7514	4225	7513.50

## APL2007

6845752910	1	1	7739861661	7743622734	7743622230	4054	2541	0.78
3001764223	1	1	6993980792			7322		2.67
12556239032	1	1	16392774501	16392772534		5678		5678.25
6153784962	1	1	11691200189	11704727267		5678		5678.25
11813007910	1	1	10645863466			4587		4587.25
5577371110	1	1	6057529028			4587		4587.25
1	1	1	1			4769		4768.50
5698590819	1	1	6300353127			4769		4768.50
1	1	1	1			16320		16320.00
1	1	1	1			13636		13635.75
3801051259	1	1	2673051753	378051377	378051449	24520	491	48.17
378050825	1	378051398	378051435	378051372	378051452	53826	531	103.91
9567512550	1	1	7224631123	7209630659	7218632658	25595	9402	1.49
430213609	430213615	430213673	430214270	430214235	430214243	369	163	1.92
1.00E+100			1	3370400654	3868622870	2924	1258	2.43
8255755981	8255754732	8255754823	8070536284	8176500804	8161499778	1390	3958	0.35
1.00E+100			1	21968991019	23037066032	3169	19364	3169.25
3400186795	3250186225	3400186588	3400186440	3450186928	3400186934	12868	1230	11.59
1.00E+100	1	1	1	223566		1		1.00
1	1	1	1			1	1	1.00
107402	1	1	102525			1		1.00
1	1	1	1					0.00
1	1	1	1			1		1.00
1	1	1	1					0.00
124345	1	1	118750			1		1.00
84944	1	1	90520		87720	1	1	1.00
1	1	1	1		5165303	1	1	1.00
322623	1	1	334654		332694	1	1	1.00
1	1	1	1			1		1.00
46004	1	1	45981	43639	43625	1	1	1.00
1	1	1	1		61636	1	1	1.00
58252	1	58245	58854			1		1.00
101715	1	111086	168988			1		1.00
1	1	1	1			1		1.00
52840	1	1	53728	53749	53752	1	1	1.00
1	1	1	1					0.00
1	1	1	1		122297	1	1	1.00



## APL2007

1	1	1	1	1	1	1	1.00
49560	1	1	49108	48714	49340	1	1.00
1	1	1	1			1	1.00
1	1	1	1		66355	1	1.00
1	1	1	1			1	1.00
1	1	1	1			0	0.00
52863	52843	52933	52847			1	1.00
42803	42779	42884	42785			1	1.00
42452	42434	42537	42431	42453	42448	1	1.00
1			1		57922	1	1.00
1.00E+100			1	162646		1	1.00
1.00E+100			1			1	1.00
1.00E+100			1			1	1.00
1			1			1	1.00
5789130435			5627850193	1486405285	1486405948	11591	10.55
1770463			2114464				0.00
50711			50711	51111	51468	1	1.00
			4460307320				0.00
			1			1	1.00
			97679				0.00
			53032				0.00
			748689				0.00
			38223				0.00
38743	38743	38743	38743	38645	0		0.00
122241	1	1	1		0	1	1.00
						1	0.00
							0.00
							0.00
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!
							#DIV/0!

APL2007

#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!  
#DIV/0!

Catlam fixes	-doswlf		
PAPI INS	APEX Timings	APEX Timings	APEX Timings
#15324	CPU msec	CPU msec	PAPI INS
#15324	#15324	#15445	#15445
2007-05-25	2007-05-25	2007-07-05	2007-07-05
26753703018	10824		18757392515
9972992307	3352		
26754134107	13643		
2745331396	1104		17360801755
2865687703	1338		
13814910892	4798		
904161481	349		
3550234365	1304		3550236343
3105518085	3065		
13620197485	4694		
8394994761	3853		8374980765
1995129251	708		2030130364
6516011290	2601		4717615773
4717614538	1602		
300045234	87		300044501
114917927798	27145.5		8122642776
1095371380	433		1095372318
1589401960	1715		
1131056486	604		
114917927250	20498.25		9584468759
8566541696	7307		8566541934
1	1		
1960155439	1106		1960158241
920088156	590		
540048390	441		
600048426	455		
1260127855	813.75		

APL2007

	80054292	50
	1925055313	663
	168048639	64
	1	1
apex quadav		1
	1019042362	703
	986142856	630
	1	1
	1	1
	1	1
	1	1
	1	1
	1	1
	1	1
	1	1
	1	1
syntax broken qua		1
syntax broken qua		1
syntax broken qua		1
	1	1
	1760355772	717
	60044939	19
	1125574086	1387
	1200515504	936
	925430828	843
	1	1
	1	1
	24961874150	10061
	1	1
	2300131732	951
	10389928173	3774
	1	1
	18056110566	6436
	1	1
	33048214	17
	14045963	3
	1	1

168050820

15768489973	5201
7356135992	2743
1	1
1	1
1	1
1	1
1	1
1	1
1	1
1	1
378049603	509
378050285	518
29163859746	17183
430216631	192
3554402669	1205
8074767429	4023
21944442158	1
3050184964	1110
318496	1
131945	1
1	1
1	1
1	1
1	1
1	1
94108	1
1	1
260781	1
1	1
39452	1
65688	1
1	1
1	1
1	1
52760	1
1	1
170482	1

APL2007

295397	1
51548	1
1	1
76338	1
1	1
1	1
1	1
1	1
42512	1
63720	1
244121	1
1	1
1	1
1	1
1486406933	1099
	1
52473	1
	1
	1
	1
	1
	1
	1
	1
35451	1
122636	1
	1
	1
	1



APL2007

2006-02-24

0 0 0 0 0





APL2007



APL2007



APL2007

APL2007