









• Elec • Ir • R	stronics technology evolu acreased capacity and perforn educed cost	ition hance
Year	Technology	Relative performance/cost
Year 1951	Technology Vacuum tube	Relative performance/cost
Year 1951 1965	Technology Vacuum tube Transistor	Relative performance/cost 1 35
Year 1951 1965 1975	Technology Vacuum tube Transistor Integrated circuit (IC)	Relative performance/cost 1 35 900
Year 1951 1965 1975 1995	Technology Vacuum tube Transistor Integrated circuit (IC) Very large scale IC (VLSI)	Relative performance/cost   1   35   900   2,400,000

































































CINT2006 for Intel Core i7 920									
Description	Name	Instruction Count x 10 <sup>9</sup>	СРІ	Clock cycle time (seconds x 10 <sup>-9</sup> )	Execution Time (seconds)	Reference Time (seconds)	SPECratio		
Interpreted string processing	perl	2252	0.60	0.376	508	9770	19.2		
Block-sorting compression	bzip2	2390	0.70	0.376	629	9650	15.4		
GNU C compiler	gcc	794	1.20	0.376	358	8050	22.5		
Combinatorial optimization	mcf	221	2.66	0.376	221	9120	41.2		
Go game (Al)	go	1274	1.10	0.376	527	10490	19.9		
Search gene sequence	hmmer	2616	0.60	0.376	590	9330	15.8		
Chess game (AI)	sjeng	1948	0.80	0.376	586	12100	20.7		
Quantum computer simulation	libquantum	659	0.44	0.376	109	20720	190.0		
/ideo compression	h264avc	3793	0.50	0.376	713	22130	31.0		
Discrete event simulation library	omnetpp	367	2.10	0.376	290	6250	21.5		
Games/path finding	astar	1250	1.00	0.376	470	7020	14.9		
(ML parsing	xalancbmk	1045	0.70	0.376	275	6900	25.1		
Geometric mean	-	-	-	-	-	-	25.7		





