Tech Info Library

Centris: Performance Questions (5/93)

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Revised:        5/17/93
Security:       Everyone
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Article Created: 12 May 1993

TOPIC ---

Is there any known or measured performance difference in using Excel or
other math intensive applications on a Macintosh IIci and on a Centris
610? Is there any compatibility issues with the Centris 610, since it
does not have a floating point unit (FPU)?

Can you provide me with some sort of a benchmark or comparison chart that
compares the Macintosh IIci, Macintosh Centris 610 & 650, and Quadra 700
& 800?   The product introduction materials only show overall system
performance.

DISCUSSION --

Product Marketing sent me with the following information. The testing for
these comparisons was done as "application-level benchmarks":

    Centris 610 is up to 2 times faster than a Macintosh IIvx/IIci
    Centris 650 is up to 3 times faster than a Macintosh IIvx/IIci
    Centris 650 is 30% faster than a Centris 610
    Quadra 800 is 25% faster than a Centris 650

When asked specifically about the possibility of upgrading the 68LC040 (no
FPU) to a 68RC040 (includes FPU), they responded that, "This is neither
endorsed nor recommended by Apple, and will not be an Apple offering."
They speculate that some enterprising third party might offer such an
upgrade kit in the future, but they do not know of one now.

Since it has no FPU, the Centris 610 would require applications that are
not dependent on the presence of an FPU for compatibility reasons.

While performance could be expected to be slow on the Centris 610 for a

very math intensive application it is expected that the Centris 610 would
still be somewhat faster than the Macintosh IIci.

If your customer wants specifics about performance, Speedometer is a
public domain tool which provides performance comparisons. On America
OnLine is an article that gives a detailed comparison of a number of CPUs
including the Centris 610/650 and Quadra 700/800/950. That comparison
table is included here in the hope that it will answer your customer's
need.

--------------------- Article from America OnLine ---------------------

Here are Speedometer 3.11 numbers for some new machines. Also included
are performance numbers for the Macintosh IIvx, Quadra 700 & 950 for
comparison purposes. The Apple 1 gigabyte hard disk was used for all
machines. The LC III had an FPU installed, the Centris 650 had a 68040,
not a 68LC040 (that is, it had a hardware FPU), and the Centris 610 used
a 68LC040 (in other words, no FPU). An Apple 14-inch color display was
used on all machines. The disk cache was set to 256K on all machines.

Test	LC III	IIvx	C610	C650	Q700	Q800	Q950
CPU	6.89	7.03	13.01	16.32	16.17	21.62	21.62
Graf	7.91	8.31	17.08	21.26	20.19	27.38	25.62
Disk	3.40	2.93	4.94	4.99	5.14	5.09	5.24
Math	23.87	23.52	24.58	95.95	95.87	128.07	127.97
P.R.	8.20	8.24	13.77	23.50	23.14	30.69	30.18
KWhet	47.51	46.70	31.73	195.69	155.08	256.85	205.48
Dhry	5.85	5.72	15.71	19.74	19.74	26.32	26.32
Towers	5.83	5.29	15.22	18.91	18.91	26.00	24.96
QuickSrt	6.52	7.15	14.31	17.76	17.76	23.41	23.41
Bub. Srt	7.71	8.18	14.46	18.00	18.00	24.55	24.55
Queens	7.90	7.39	14.77	19.08	19.08	24.10	25.44
Puzzle	8.95	10.27	17.91	22.46	22.84	30.11	30.11
Permute	6.92	5.13	16.38	20.25	20.63	27.85	27.17
FFT	25.86	24.82	21.35	123.59	123.59	163.07	165.37
F.P. Mtrx	25.54	25.24	22.68	124.75	122.40	170.71	166.33
Int Mtrx	7.36	8.73	19.25	23.53	24.20	32.58	31.37
Sieve	8.61	8.06	16.69	20.54	19.07	27.09	25.26
Bench Ave.	13.71	13.56	18.37	52.03	48.44	69.39	64.65
FPU FFT	1.95	2.00	N/A	5.60	5.60	7.64	7.64
FPU KWhet	2.10	2.69	N/A	11.31	11.02	15.36	14.83
FPU Matrix	2.12	2.73	N/A	11.50	10.73	14.64	13.42
FPU Ave.	2.06	2.47	N/A	9.47	9.12	12.54	11.96
Color Graphics							
Mono	2.03	2.14	4.16	5.08	4.83	6.46	6.08
2 Bit	2.17	2.24	4.43	5.42	5.17	6.91	6.53

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4 Bit         2.31    2.28    4.58    5.60    5.26    7.16    6.69
8 Bit         2.33    2.17    4.64    5.72    5.36    7.33    6.79
Color Ave.    2.21    2.21    4.45    5.45    5.15    6.97    6.52
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Tech Info Library Article Number:11654