

from the Editor's Desktop

Announcements, Editorials, and Other Issues

Power Macintosh: Now and the Future

The three questions I get asked most all the time are: 1) When is so and so game shipping (usually a question about when Marathon, X-Wing, A-10 Attack, or F/A-18 Hornet 2.0 is coming out), 2) when do I get my next issue, and 3) should I get a Power Mac now or wait? All pretty tough questions, but I thought I'd tackle the third one in this column.

The day I decided to upgrade to a PowerMac was when my Quadra 840av decided to consistently crash on me using one of my favorite tools, Photoshop. Mind you, the 840av worked fine most of the time but there were just too many quirks in it. Crashes were a way of life on the 840av—saving often was crucial. Well, enough was enough. So I got PowerMac 6100 to see what all the hoopla was about. One of the first things I did was install a clock chip accelerator that brought the speed up to 80Mhz and added a cache card for another boost of speed.

The first thing you'll notice about the new PowerMacs is that they are identical to the previous Macs (except they now have a blazing chip inside). Everything looks the same under the hood and about the only thing you'll notice different rather dull and boring star-up sound and the speed. I was overall very impressed with how well everything ran in emulation at acceptable speeds. Sure, Microsoft Word took about a 1/2 hour to open but overall I was most pleased with the speed (more on Word later).

But of course the most impressive feature in the PowerMacs is the speed with native programs. So instead of loading native programs like Photoshop 3.0 I decided to first give the PowerMac a real test: games that run in native mode and emulation. For this I tried pre-release versions of Marathon and the new F/A-18 Hornet 2.0 with full detail on both games. I was amazed at how both games ran without any slowdown at more than 20+ frames per second. Emulation is another story though. Although most games run pretty well in emulation, some games like F/A-18 Hornet 1.1.3 and Rebel Assault, which need a lot of horsepower do not (F/A-18 Hornet 2.0 will run in native mode when released as does Rebel Assault 1.05, which you can find on this CD-ROM).

Other typical programs like FileMaker Pro, AOL, Quicken, etc ran fine under emulation, but Word 6.0 ran like a with a leach tied around his legs. I immediately decided to can Word for good and switched over to WordPerfect 3.1 (a program that has been native PPC since the PowerMacs were introduced).

[Speed is King](#). So we know that the PowerMac has speed to burn, but what can we expect in the future in terms of games? I decided to ask a few experts in the industry about how their current games take advantage of the PowerMac's speed and what we might see in terms of PowerMac games in the future.

Jason Jones of Bungie Software, "The PowerPC offers blazing speed. Our PowerPC C code tends to run two to three times faster on a 6100/60 than our 68K assembly code on an 840av. A fast turd is still a turd, however, so the PowerMacs are only what you make of them. We've tried to use this speed to provide real gains for our players: real-time sound during network games, for example, or 16-bit high resolution graphics. Spurting blood at thirty frames per second—now that's user experience.

However, we can't abandon the 68K yet (as much as we'd like to) because the Power Macs have such a small installed base in comparison. This means we've got to hold ourselves back when we code new features into the engine, knowing that it's going to have to run on 68K machines.

We've already got some cool 16-bit rendering code which has no prayer of ever running over 4 fps on an '040 68K machine and that will probably provide the base for our next product after Marathon (uh? does that mean PowerPC only? hmmm). Remember that all PowerMacs ship with 16-bit graphics and 8MB RAM. Look for real-time lighting models, texture mapping with six-degrees of freedom, 16-bit graphics, real-time video and sound in PowerMac only games in the distant future."

Mark Adams (who's done ports of PGA Tour II, Chuck Yeager's Air Combat, and Links Pro), "I think for at least the next year or two games will mostly come out with 'fat' PowerMac & 680x0 versions bundled together. The PowerMac versions will give faster animation & better overall performance, but I don't see a lot of PowerPC specific features, they'll basically be just like the 680x0 versions. Eventually the "mid-range' Mac system games aim at will move up to a 33-40 MHz 68040 or 60-66mhz 601, but it will take quite a while before mainstream games come out only for the PowerPC.

There really isn't any technical reason a game that runs well on a 6100/60 shouldn't also support mid to high end 68040's (33+mhz). Detail or screen size might have to be cut down a little, but that's always been the case (an LC can play many of the same games as a Quadra, just with less detail or smaller screen size).

Some companies may decide to do only a PowerMac version of their game for marketing reasons (ie. "This game is so cool only a PowerPC can handle it!"), but until you have a game that requires an 80+mhz 601 or 604 I don't think you'll see anything that wouldn't also run on a fast 68040. Even if you do a game that can run on only 10% of the 680x0 machines, that's still around a million Macs. With a million PowerMacs estimated sold in the next year, doubling your market with a 680x0 version is a pretty easy choice.

Eventually some games with complex 3D graphics(with shading & texturing) will push the envelope to the point where it will make sense to do PowerMac only versions."

Trey Smith of Graphic Simulations, "The greatly increased performance (of the PowerPC) lets us

significantly increase the detail of our 3D graphics. We have at least twice the polygon count of F/A-18 Hornet 1.x in Hornet 2.0. We're seeing about double the frame rate on a 6100/60 over a Quadra 840AV.

I think we'll see more and better 3D graphics used on all Macintosh games with the PowerPC. I also think we'll see more high-end DOS games ported to Macintosh."

What's In It For Me? All this great news about the PowerMac's speed has not gone unnoticed by PC game companies. Companies like Origin, LucasArts, and a few others have seen the light and are beginning to develop PowerPC games (see next month's Rumor Mill column for the lowdown on which ones). The PowerPC not only represents better and faster game software from Macintosh game companies, but it will also bring in PC game companies who in the past did not develop for the Macintosh because of its lack of speed.

So what's in it for you? More great Macintosh games, of course. In the not so distant future you can expect games with not only great graphics, but games that offer complex artificial intelligence, multi-player and multi-machine capabilities, all in a real-time virtual environment.

The Ultimate Question. Many of you have probably upgraded to a PowerMac but many are still undecided as to when you should upgrade. The current line-up of PowerMacs are quite powerful but the best is yet to come. Next spring Apple plans on introducing new PowerMacs with 120 Mhz - 150+Mhz PowerPC 601 chips with PCI bus. And late next year or early 1995, expect PowerMacs with 604 chips. These 604 PowerMacs promise to deliver up to 3-4 times the performance of current PowerMacs.

So when do you upgrade? Your upgrade decision should be based on your needs. If you have a llcx and have been thinking about getting a PowerMac, now is the perfect time. But if you have an 040 machine and it meets your current needs, you might want to hold off on a PowerMac purchase until the new ones come out next spring. For power users and avid gamers, upgrading is probably a wise decision.

The Power To Have An Attitude. The PowerMac is without a doubt a step in the right direction. Many have called it Apple's saviour. And by all accounts, this seems to be true. Recent Apple earnings have showed increased profits thanks to the PowerMac. Other things like the licensing of the Macintosh OS, clones, and other innovations Apple is known for spell good times for the Macintosh in the years ahead. All the doom and gloom we've been hearing about Apple recently in the media seem to have disappeared

About the only thing Apple is STILL falling behind in is their rather weak advertising, which, in this writer's opinion, lacks serious attitude. Why not change the slogan to read, "The Power to Blow You Away" or "The Power to Kick Some A__!" or "The Power to....."

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