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The Next Big Thing: On the Desktop

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Question

What is the next big thing in desktop technology?

Answer

PC manufacturers have discovered industrial design as a differentiator. As performance has become less important, desktop real estate more dear and **Apple** more visible, the move to differentiation through design is even moving to companies like **Dell** and **Gateway**. **IBM**'s prototype Meta Pad, the Tablet PC and emerging companies like **ClearCube** have all helped fuel the market to begin to look beyond the Ugly White Box (UWB). More traditional laptop designs are also going through a transformation as they anticipate the availability of always-on wireless networks, increased power efficiency and the need for a higher degree of portability. Expect to see laptops with wide aspect ratio 15-inch screens (similar to what Apple has in its Titanium laptop), small displays that can function as e-mail/IM notification windows and system status displays, and built-in personal digital assistant (PDA) functionality. Also expect that the class of convertible laptop systems will expand. These are machines with removable mice and/or keyboards that are designed to move from station to station and work primarily while connected to power and provide no-compromises functionality.

The key benefits will include sound reduction and an increase in reliability as the product is moved off the floor (where it can collect dust and debris and is difficult to set up and service). It will also fit better into a world that is moving away from CRTs and toward flat-panel displays.

It could put tremendous pressure on the white box vendors since these vendors, much like the small-volume automotive vendors as that market matured, will have great difficulty responding to this trend. This difficulty is directly related to the costs associated with developing and maintaining unique form factors while keeping costs competitive. It really requires relatively high volumes to do this correctly.

This trend has already begun but won't have full impact until the hardware changes expected in the next 18 months have stabilized and the need for market consolidation declines. However, **Intel** is clearly serious, and at its recent developer's forum, it demonstrated compelling new laptop designs and desktop hardware designs that the new hardware standards will enable. The most compelling of these is 3GIO, which will form the core of the most massive change in desktop hardware we have ever seen in an 18-month period of time. This change will impact video, storage, memory, security and the thermal envelope for the PC and fuel the move into a brand new world of hardware design.

This change could force Intel to swap current development methodology to drive the mobile technology it has to the mainstream desktop. It could also benefit **AMD** and **Transmeta** if they can better respond to the changing needs.

Current designs and prototypes that forecast the future are:

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- IBM Meta Pad, www.research.ibm.com/resources/news/20020206_metapad.shtml
- Compaq Ultra-Slim EVO 500, www.compaq.com/products/desktops/d500usd/subfamily.html
- Fujitsu/Siemens Mobile H Hybrid, www.fujitsu-siemens.com/rl/products/workstations/mobile/celsiusmobile/celsiusmobile_h.html
- ClearCube Desktop Blades, www.clearcube.com/overview/
- Apple PowerBook G4 Titanium, www.apple.com/powerbook/
- Tablet PC Prototype, www.pcworld.com/news/article/0,aid,70524,00.asp

The following photos show the Intel Prototype Laptop in pad, laptop and always-on configurations:

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