

## Apple's P.A. Semi Deal Won't Change Plans for iPhone Yet

Martin Reynolds

Apple will gain a 64-bit PowerPC core and system-on-chip architecture in its deal for P.A. Semi. But its plans for the technology remain unclear, as Apple is likely to stick with Intel's x86 architecture for several years.

## NEWS ANALYSIS

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### Event

On 22 April 2008, an Apple spokesperson confirmed that the consumer electronics firm had agreed to purchase P.A. Semi, a Santa Clara, California-based chip designer that employs 150 people.

### Analysis

P.A. Semi is a chip company that offers a 64-bit PowerPC core and a system-on-chip (SoC) architecture optimized for embedded designs. The company's integrated processor core and high-performance memory and input/output (I/O) controllers are ideal for networking and storage controllers because they provide high throughput with relatively low power consumption.

Apple will become a merchant semiconductor supplier because of this deal. How long that will last is an open question. However, the question of Apple's long-term strategy is more important. P.A. Semi's products are unsuited to Apple's current market needs, because they are not optimized for Internet applications. Apple will need to rearchitect these products by rebalancing the I/O and adding a graphics controller, creating low-cost, low-power chips that enable new features and price points for wireless devices.

Apple could easily implement the PowerPC architecture in future products, but it will probably take several years to introduce the appropriate SoC designs. Furthermore, SoC designs tend to reduce absolute performance in favor of features, form factor and cost. Therefore, Gartner expects Apple to stick with the x86 architecture for its mainstream notebook and desktop products in the near future. It is possible that Apple will move its iPhone to Intel's Atom processor first, and then move it to an Apple processor with a PowerPC core. The company could do this because its careful control of the iPhone platform makes architecture switches manageable.

This acquisition underscores the future proliferation of Internet-connected devices beyond the PC. Gartner sees these possible segments in which Apple could use P.A. Semi's technologies: small and very-low-cost notebooks, iPhones and other media devices. We note that these segments align with Intel's Atom strategy. Gartner believes that Apple is sending a signal to Intel: Beat Apple's internal designs, or lose the business.

### RECOMMENDATIONS

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**Application developers:** Use the iPhone as a proxy for Internet-connected devices, and ensure that your Web-based applications can work on this platform, where appropriate. This approach will establish use cases and business models that you can extend to a broad range of future devices.

### RECOMMENDED READING

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- "Why Apple's Business Model Works and Why Media and CE Companies Need to Pay Attention" — Apple's focus on core products and content experience is defining the sweet spot for consumer expectations of access, acquisition and playback for the digital media era. **By Van Baker and Mike McGuire**

- "Intel's Atom Processor Targets New Markets" — Intel's Atom processor line is targeted at new, low-cost and low-power applications outside the traditional PC market. **By Stephen Kleynhans and Martin Reynolds**

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