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News Release

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HAVE AMD, MICROSOFT AND SONY KILLED POWER ARCHITECTURE?

London, England; July 16, 2013; According to findings from the 2013 edition of Semicast's Embedded Processing Service, the outlook for Power Architecture in embedded processing looks limited, with its long term future now almost entirely dependent on Freescale.

The market for Power Architecture-based embedded processors is judged to have peaked in 2007 at just under \$4 billion. Power Architecture had benefitted from a clean sweep in games consoles, with design-wins in the Microsoft Xbox 360, Nintendo Wii and Sony PlayStation 3 and revenues grew strongly in 2007 as production of the new consoles ramped up. However then followed the economic downturn of 2008 and 2009, and as production growth slowed but the year-on-year price erosion of the processors continued, so revenues for Power Architecture in games consoles steadily declined.

The processor selection for the forthcoming generation of games consoles would suggest that the best days for Power Architecture in embedded processing are in the past. Console specifications show that Microsoft and Sony have changed to x86-based processors with integrated graphics processing unit (GPU) in the Xbox One and PlayStation 4 respectively, with each using broadly the same technology from AMD. In effect both companies have adopted a "PC-lite" architecture for their new consoles, combining a step up the performance curve with significantly reduced development timescales and costs for games developers, who historically have had to support both PCs and consoles. This leaves Nintendo's Wii U as the only console in the new generation not based on the x86 architecture, and splits the gaming market in two; PC, Xbox One and PlayStation 4 in the x86 camp; Wii U alone with Power Architecture.

When Nintendo introduced the original Wii in 2006, its fun games and motion sensitive controllers were a significant departure from gaming convention at the time and sales of the Wii soared as a result. However since then, many of these features have been supported by games on tablets. Semicast's opinion is that Nintendo is not just architecturally isolated (increasing the possibility of some game developers not supporting Wii U at all), but also exposed to the rising complexity of games on tablets and smartphones, where game prices are closer to 49 cents than 49 dollars. At the extreme, Nintendo could even be at risk of going the way of Sega.

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Freescale remains the largest supplier of Power Architecture-based microcontrollers and embedded microprocessors, primarily supporting applications in the automotive, communications and industrial markets. However Freescale is steadily embracing the ARM architecture in all three of these markets, and it is surely only a matter of time before Freescale succumbs to market forces and slows development of its Power Architecture lines. Colin Barnden, Principal Analyst at Semicast Research and study author, commented “ARM is already the leading processor architecture in both the automotive and industrial markets, while availability of processors based on the 64-bit Cortex A53 and A57 cores is forecast to establish ARM in the communications infrastructure market, in competition with Power Architecture, MIPS and x86”.

Semicast forecasts the market for Power Architecture-based embedded processors will fall to less than \$2 billion in 2018, with ARM and x86 the main beneficiaries of Power Architecture’s decline.

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Notes for Editors

1. Semicast has a strategic focus on embedded processing and provides on-going research services to the global industry. Its Embedded Processing Service has been developed specifically for semiconductor and software suppliers to understand detailed trends in 23 key application areas across the five main end-use sectors. The service has a particular focus on trends for the ARM, MIPS, Power Architecture and x86 product families in embedded processing.
2. Semicast is always willing to work with journalists to provide quotations, opinions and market information for articles. If you require further information, please contact us at [press\[at\]semicast.net](mailto:press[at]semicast.net)
3. Semicast is a respected provider of independent market research on the semiconductor and electronics industry. It specializes in coverage of industrial and medical semiconductors, automotive electronics, telematics/infotainment, automotive semiconductors and embedded processing.