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## Future processors: What is on the horizon for HEP farms?

*Tuesday 28 September 2004 10:00 (1 minute)*

In 1995 I predicted that the dual-processor PC would start invading HEP computing and a couple of years later the x86-based PC was omnipresent in our computing facilities. Today, we cannot imagine HEP computing without thousands of PCs at the heart. This talk will look at some of the reasons why we may one day be forced to leave this sweet-spot. This would be not because we (the HEP community) want to, but rather because other market forces may pull in different directions. Amongst such forces, I will review the new generation of powerful game consoles where IBM's Power processor is currently making strong inroads. Then I will look at the huge mobile market where low-powered processing rules rather than power-hungry DP Xeon/Xeon-like processors, and thirdly I will explore in my talk the promise of enterprise servers with a large number of processors on each die (so-called Core Multi-Processors). For all the scenarios, we must, of course, keep in mind that HEP can only move when the price-performance ratio is right.

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