

Harmonic Software Systems releases open source tool to unlock the power of the PLAYSTATION 3

Date: 01-14-2009 02:03 PM CET

Category: [IT, New Media & Software](#)

Press release from: [Nothelle](#)



Harmonic Software Systems has released the Cell/BE Execution Framework (CEF) to the open source community, allowing industry and academia to unlock the massive computing power, which is within the PLAYSTATION 3's Cell processor.

Crawley, UK. January 13, 2009. Harmonic Software Systems announced today the availability of the Cell Execution Framework (CEF), as a free download under the BSD open source license. The CEF has been designed to unlock the power of the Cell Broadband Engine™ (Cell), so that software engineers can start to use the power of the Cell straightaway.

The Cell Processor is the results of a \$400M collaboration between IBM, Sony and Toshiba, and offers a massive 218 GFLOPS of raw computing power. However, with its 64-bit PowerPC architecture and nine CPU cores, it can be difficult to leverage the power of the chip.

The CEF provides the following benefits to ease the development of applications for the Cell:

- * An easy to use command line tool to execute user algorithms on the Cell Simulator, PS3, IBM Blade or PCI Express processor board.
- * File I/O and Socket I/O to the Cell
- * Parameter passing down to the algorithm
- * Double buffered DMA support for maximum data throughput
- * An easy to use build environment, just type 'make'
- * Automatic parallelisation of the user's algorithm onto a specified number of processors (SPEs)
- * Example code for FFT and image rotation

“The CEF allows an engineer to concentrate solely on the algorithm that is under development. All the rest of the code to read and write data from a file or a socket, to partition that data and to DMA the data to and from the processor cores is done by the CEF”, explains Ed Liversidge, Director and founder of Harmonic Software Systems.

“We are hoping that someone from academia will be able to take the CEF and use it to perform some seriously cheap number crunching. In addition, the power of the Cell can easily be applied to applications in the fields of financial, medical, security and encryption, video coding and decoding, radar and sonar signal processing, as well as scientific computation”, continues Ed Liversidge.

The CEF is available to download from www.harmonicss.co.uk, or on sourceforge.net.

Harmonic Software Systems has been developing bespoke real time systems and DSP solutions of the highest possible quality since 1999. Backed by a wealth of experience in real time operating systems, embedded software development and digital signal processing, we provide consultancy and engineering services to guarantee a well documented, well tested software system that exceeds all expectations. Visit www.harmonicss.co.uk for further information.

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