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RF Engines extends its relationship with the French CEA with studies into advanced measurement techniques

“Multi-resolution filter bank solutions for complex signal environments”

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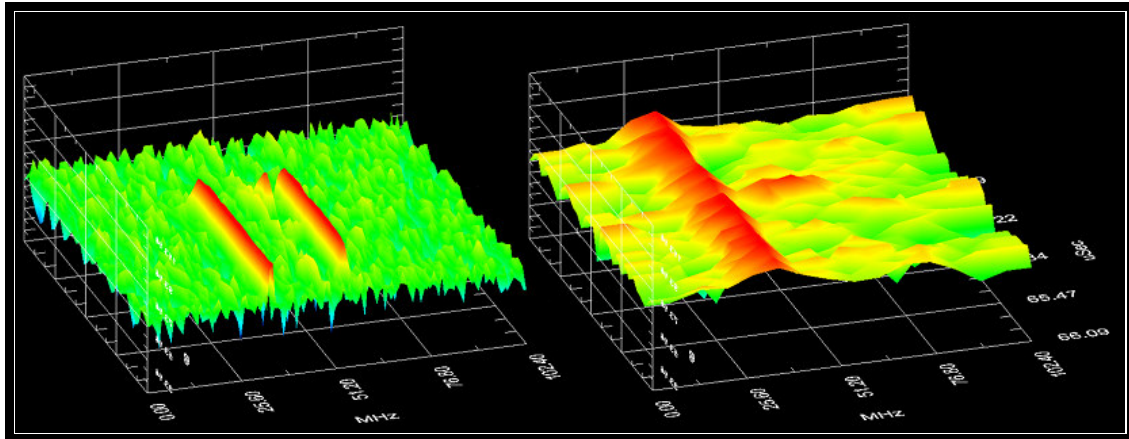
RF Engines Limited (RFEL), the provider of high performance signal processing solutions for FPGA, today announced that they have completed a groundbreaking study for the French Atomic Energy Commission (CEA) Laboratories and also signed a major new contract to implement a laboratory demonstration system that will incorporate the results.

The system provides a flexible and efficient digital receiver architecture, capable of detecting and characterising signals with a broad range of different modulation schemes and durations. This work follows on from an earlier evaluation of RF Engines Pipelined Frequency Transform (PFT) demonstration system by the CEA. The system is due for delivery in 2006, and will be used by the CEA to investigate complex signals.

Traditional receiver architectures tend to be optimised for receiving one particular signal type, and therefore do not perform efficiently when there are a multitude of different signal types which are of interest. The PFT architecture, patented by RFEL, has an inherent multi-resolution capability, which allows the input spectrum to be processed through a range of different filter bandwidths simultaneously. This means that there is **always** a filter available that is close to the optimal type required for every signal type, thereby maximising the likelihood of detection and enhancing the quality of the analysis.

In addition to the filter bank part of the design, RFEL has also investigated a range of techniques for determining the precise frequency of each received signal, and for characterising the modulation. Each of the techniques was simulated in the PC environment in order to characterise performance over a range of signal types.

John Summers, RF Engines' CEO said, “We are delighted to be building on our existing relationship with CEA. Once again, we have been able to demonstrate how RF Engines' unique signal processing architectures provide solutions to some of the most difficult problems in the design of complex digital receivers.”



Multi-resolution filter banks allow signals to be viewed in different ways, and ensure optimal detection and analysis performance.

RF Engines

RF Engines Limited (RFEL) is a UK based designer, providing high specification signal processing cores, system on chip designs, and FPGA based board solutions for applications in the defence, communications and instrumentation markets. These applications include base stations, wireless and wireline broadband communications systems, satellite communications systems, test and measurement instrumentation, as well as defence systems. More specifically, RFEL is a solutions provider for projects requiring complex front end, real time, wide and narrow band, flexible channelisation. RFEL provides a range of standard cores covering multiple FFT and unique PFT techniques, as well as system design services for specialist applications.

For further information, please see the website at www.rfel.com or contact RF Engines at Innovation Centre, St Cross Business Park, Newport, Isle of Wight, PO30 5WB, Great Britain. Tel +44 (0) 1983 550330. E-mail info@rfel.com

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