



**Press release**

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## **Vector Fabrics cloud tools to automate sequential C code analysis for multi-threading**

*Eindhoven, The Netherlands, May 4<sup>th</sup>, 2010* – Vector Fabrics announces vfAnalyst, a cloud-based tool for parallelizing sequential C code. The first in a planned family of cloud computing tools, vfAnalyst enables software engineers to easily identify the most promising parallelization opportunities so that they can create an effective multicore implementation much more quickly than is possible today. vfAnalyst is hosted on the Amazon Elastic Compute Cloud (EC2) - a well-proven, secure server facility accessed through a standard web browser. The tool is paid for on a pay-as-you-go basis - a business model that minimizes up-front costs and eliminates software and hardware maintenance issues for customers.

Developing a multi-threaded program from sequential code is a time-consuming and expensive process to manage manually, particularly when multi-threading has not been explicitly planned ahead of time. vfAnalyst's unique graphic interface makes it easy to identify which portions of the program can be run in parallel and what kinds of data communications are needed in order to ensure that the multi-threaded code will operate identically to – but faster than – the sequential code. In

addition, vfAnalyst is intended to help engineers who are tasked with parallelizing legacy sequential code: engineers can do the project without having to know in detail how the code works.

Mike Beunder, CEO of Vector Fabrics, said, “This is the only tool of its kind. It’s not simply a matter of code profiling; it’s like a satellite navigator for parallelization, showing users things about their program that they may not even know. For example, where a series of data elements are written in one part of the program and read in the same order in another part, this is identified as data communications that could be implemented through a streaming channel. This kind of information is typically not obvious by inspection, and isn’t obtainable any other way. As a result, we can dramatically reduce time-to-market and improve code quality for our customers.”

Through its easy-to-use browser-based interface, the exploration of parallelization options can be simplified to three steps: identifying those portions of the code that would benefit from parallelism; of those, having vfAnalyst show the best candidates for partitioning; and of those, picking the ones that have the lowest cost. The analysis is done irrespective of target platform, allowing analysis of code destined for servers or embedded systems.

vfSoftware, which will be launched later this year, will be the second product in the tool family. vfSoftware starts with the kind of analysis that vfAnalyst provides, but then combines that with specific system knowledge to create multi-threaded code for multicore x86-based systems. Software engineers will be able to fully explore

alternative partitions, mapping options, and libraries and select a solution from a cost-benefit curve. The tool can then either automatically implement that solution in a fraction of the time it would take to do manually or, if the user prefers, give specific instructions on how to implement the solution manually. vfSoftware can also be used to improve the performance of existing multi-threaded code.

Like vfAnalyst, vfSoftware also makes use of the cloud, which will allow more thorough design exploration than would be possible on all but the largest private computer farms. Adds Beunder, “The cloud computing model reduces capital costs for users, enables designers to work wherever there is web access, and facilitates cooperation across design teams, wherever they’re based. It is particularly attractive to small- and medium-sized companies.”

Mike Beunder, Martijn Rutten, Paul Stravers and Jos van Eindhoven founded Vector Fabrics in 2007 with the goal of finding ways of making multicore programming easier for non-specialists across a wide range of applications. vfAnalyst and vfSoftware are the first of a series online tools for multicore processor code development that will bring increasing levels of functionality and automation. Vector Fabrics, based in Eindhoven, The Netherlands, is backed by Point One Innovations and the Technostarters Fund, both based in Eindhoven.

vfAnalyst is available now at [www.vectorfabrics.com](http://www.vectorfabrics.com) for an introductory subscription fee of €85 per month. vfSoftware will be available later in 2010; its pricing has not yet been announced

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