

Organization Profile

Composite is a Danish software house specializing in the development of the modular .NET-based C1 CMS system used by a wide range of public bodies and corporate. Composite is a Microsoft Gold Partner and takes part in the work of the Technical Adaption Program aimed at providing technically-based feedback on functionality and instruction sets for the forthcoming .NET 4.0 and Visual Studio 2010.

Business Situation

Composite needed to change its development platform in connection with the development of a brand-new version of its CMS product. The platform had to enable the integrated ability to switch between different data formats on its customer systems.

Solution

Composite decided to go for NET 3.0 and subsequently NET 4.0 as the framework for developing C1. It is currently assisting Microsoft by testing the possibilities and operational benefits of the forthcoming NET 4.0.

Benefits

- LINQ facilitates development efforts and enhances performance by eliminating the need for manually constructed data conversion layers and parallel development processes.
- Workflow Foundation facilitates the development of wizards and helps to provide websites with consistent high-quality code.
- Task Parallel Library (TPL) and Parallel LINQ (PLINQ) in the forthcoming .NET 4.0 enable the development of applications that use multi-core processors.

Software and services

Microsoft .NET 3.5 and – as TAP participant – 4.0 beta
Microsoft Visual Studio 2008 and – as TAP participant – 2010

Latest .NET generation behind leading CMS System

Composite from Denmark is in the driving seat when it comes to application development via .NET and Visual Studio – the company is assisting the Microsoft developers to test .NET 4.0 support for multi-core CPUs – a possibility that should improve performance and hardware utilization dramatically in future

Ever since it was set up in 1999 Composite has enjoyed success with its CMS tools, which it supplies to major private and public clients as well as smaller companies. These days it uses .NET for its development platform: indeed, Composite has succeeded in using it in such innovative fashion that the company's efforts have drawn attention deep inside the central .NET developer group at Microsoft headquarters in Redmond, Seattle.

In the second half of 2008 the CMS house was therefore included in the Technology Adoption Program (TAP) for the future release of .NET 4.0 and Visual Studio 2010, the development tool that goes with it.

.NET 4.0 MANAGES THE CORES BY ITSELF

"As TAP members we were given direct contacts with the developer group – whom we've met several times – and were given some of the first opportunities to test the technologies and functions of .NET 4.0 and Visual Studio 2010. This has given us huge technical insight and a clear lead, because we don't miss out on anything", says Marcus Wendt, product manager and co-founder of Composite.

He is particularly impressed by the Task Parallel Library (TPL) and Parallel LINQ (PLINQ). For the first time the instruction sets make it feasible to develop and maintain applications that benefit from multi-core processors.

"Parallels are incredibly neat in the sense that they figure out by themselves how to distribute the load via the cores that happen to be available. This means you can distribute data flow and calculations via several cores at a time, potentially enhancing performance and hardware utilization dramatically. And this is all done without the developer having to know a thing about the processor architecture his application is going to run on", says Marcus Wendt.

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Oskar Lauritzen, CEO, Composite

This way the forthcoming functions in .NET 4.0 and Visual Studio 10 accord nicely with the Composite vision of providing a CMS system that is easy to use by web editors with no prior technical background and by trained programmers alike.

"The effort we put into becoming familiar with .NET 4.0 mesh with our original ambition to apply the existing versions of framework and development work in new ways. It was an effort our clients really appreciate today, and I know that our current dedication to getting to know .NET 4.0 inside out will give us a huge competitive edge", says Oskar Lauritzen, CEO, Composite.

REACHING THE TOP OF THE .NET WORLD IN LESS THAN THREE YEARS

Composite is thus closer to one of the most vital development groups in the world than even the most ambitious partner companies would usually even dream of, which is pretty good going considering Composite has been working with .NET and Visual Studio for barely three years.

The change came in 2007 when Composite realized that there was less and less sense in continuing to use the aging code from the first generation of Composite products.

"Our product had become too inflexible and we couldn't make progress in ways that set us apart from the competition. The only option was to start from scratch on a new platform", says Oskar Lauritzen.

One fundamental requirement of the new development platform was that it must enable the development of a CMS that would work either on flat XML files or well-structured tables in Microsoft SQL Server.

"Very roughly, CMS systems for smaller companies work with flat XML files, while larger CMS systems communicate directly with SQL Servers. To make CMS systems to do both, developing or correcting anything means doing the work twice over", says Marcus Wendt.

"We wanted to serve both sides, but without the dual workload", he says.

LINQ SAVES YOU FROM DOING THE SAME JOB TWICE

As they looked around the Composite developers soon became fascinated by .NET, and especially by the possibilities some of the framework components provided.

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“LINQ was particularly smart because it enabled the creation of a generic intermediate level that translates LONQ object queries to XML or SQL queries more quickly and simply than if we’d had to integrate a one-to-one data conversion the traditional way”, says Marcus Wendt.

“The entire functionality is in the language, which made our development work much easier. Similarly it ensures that the final application makes considerably better use of the available resources.” This is how he explains why Composite threw out all its old code in 2007 and chose .NET as its development platform for the future so unequivocally.

LINQ was not the only advantage offered by .NET, though. Oskar Lauritzen also emphasizes Workflow Foundation as an important element in the development of what proved to be C1, Composite’s latest CMS system, which was launched in 2008.

SMOOTH-WORKING WIZARDS ARE EASY TO PRODUCE

“Workflow Foundation is usually seen as an element that enables the user to manage processes in SharePoint, for example. But you can also use it for development: basically it is nothing but a function that allows you to execute code in short sprints and then to wait for external stimuli before the application carries on working. This makes Workflow Foundation extremely useful if you want to create smooth-working wizards to guide users through various functions in your CMS system”, says Oskar Lauritzen.

Composite also use Workflow Foundation to “sketch” processes during the development phase, which makes it easier to gain an overview of the consequences of different user actions.

“This overview helps to ensure that the code that emerges as the final product of a random user action is 100% tight and coherent. The result is that programmers can look at the code, understand it, and work on it without having to spend time making head or tail of the context. This facilitates development and debugging – also among the technically well-grounded corporate that use C1, Markus Wendt explains.

“We feel pretty good about being among the first to use Workflow Foundation so offensively in a development process. I suppose that was why they were so astonished at Microsoft that it had occurred to anybody in the first place”, Oskar Lauritzen concludes.