



Curriculum Vitae

Frederick Michielssen

*Senior Java software architect, analyst, developer
Pharmaceutical & biomedical software specialist
Eclipse RCP (Rich Client Platform) specialist*

Profile

Frederick is a talented software analyst, architect and developer, placing a heavy focus on quality. To him, software development is about exceeding expectations. He is not satisfied with just delivering what's asked for: instead he aims to provide real added value by delivering better quality, design that can cope with change, consultancy that is marked by flexibility, and solutions that really work.

Over the past years, Frederick has been active on diverse projects, most of these in a large pharmaceutical environment. There, he quickly learned that the IT services offered to the core scientific departments can do more than just support them: they can stimulate the business' creativity, remove obstacles, and improve the efficiency of those consuming the services.

During these years, Frederick also discovered the value of open-source software. Especially in the Java world, these projects have drivers that give them unique advantages compared to closed-source software: a community driven by interest, a large testing and feedback audience, peer-review, a synergy resulting in software that is greater than the sum of its components.

In his spare time, Frederick regularly visits the gym, trying to maintain a healthy balance between body and mind. He also enjoys reading fantasy literature, and is sometimes heard attempting to emulate Mark Knopfler on his guitar.

Motivation

Working with computers came very naturally (and early) for Frederick: at the age of ten, his grandfather introduced him to a 80286 computer and the QuickBasic programming language.

Since that day, he developed a keen interest in software programming. It came as no surprise that he decided to study Information Technology after graduating from high school. That is where he discovered the Java programming language. It did not take long for him to decide that this environment was a good investment for any software engineer: the robustness and flexibility of the platform, the wealth of libraries and communities surrounding it, all hidden behind a surprisingly shallow learning curve.

He spent off hours diving into new Java technologies, applying them to hobby projects. The Java platform turned out to be a great team player: crossing the borders to - and integrating with - web technologies, native libraries, or even mathematical and statistical environments proved easier than expected.

In the first years of his professional IT career, Frederick witnessed the numerous problems, frustrations and productivity losses that can stem from misaligned or inadequate IT services. He was determined to avoid those situations, and instead create software applications that go beyond expectations. Going that extra mile is what turns average software into great software. Especially in the healthcare industry, where he is most active, Frederick feels a strong motivation to aim for this goal, and nothing less.

Reference Projects

<i>Name</i>	<i>Role</i>	<i>Period</i>
PHAEDRA <i>Plate-based High-Content Analysis, Evaluation and Dynamic Reliability Assurance</i>	Java architect, Java developer	10/2008 - present
E-Archiving Solution	Adobe Livecycle specialist	6/2010 - 10/2010
FEDS <i>Framework for Experimental Data Storage</i>	Java architect, Java developer	8/2007 - 9/2008
e-Globe Application Team	Java developer, Web developer	2/2007 - 8/2007
ICE <i>Image Collaboration Environment</i>	Java developer	9/2006 - 2/2007

About

Gender: Male

Birth date: 15/04/1983

Residence: Essen (Antwerp)

Diploma

<i>Name</i>	<i>Institute</i>	<i>Graduation Year</i>
Applied Computer Sciences	Katholieke Hogeschool Rega	2006
Latin & mathematics	College v.h. Eucharistisch Hart	2001

Certificates & Trainings

<i>Name</i>	<i>Institute</i>	<i>Period</i>
Alfresco Developer Course	On-Site	2007
Adobe Livecycle Designer Course	Adobe Belgium	2010
MOSS Introduction Course	On-Site	2007
Eclipse RCP Training	On-Site	2008
Eclipse EMF & GMF Specialist Course	On-Site	2010

Information Technology Skills

<i>Technology</i>	<i>Expertise (years)</i>
Ajax	4
Alfresco	5
AOP	2
Apache Tomcat	7
Apache Ant	6
Apache HTTP Server (httpd)	4
ATG Dynamo	2
AWT & Swing	7
BIRT Reporting	3
C (ANSI) & GNU C++	4
Eclipse IDE	7
Eclipse RCP	7
EJB 2.1 & 3.0	3
Hibernate	4
HTTP	6
Hudson / Jenkins	4
JasperReports	2
Java SE & EE 1.5-1.6-1.7	7
JavaScript (ECMA Script)	5
JBoss	4
JDBC	5
JIRA	4
JMX	2
JSF	3
JUnit	3
Log4J	5
Matlab	5
MySQL	5
Oracle / BEA Weblogic	4
PostgreSQL	4
Python	3
R (Statistical Computing)	4
RMI	3
Servlets / JSP	7
Spring	3
Subversion	6
TCP/IP	6
Unix & Linux	5
Unix/Linux Bash	4
Web Services, WSDL, SOAP	4
XML, XSD, DTD, SAX, DOM	6

Language Skills

<i>Language</i>	<i>Written</i>	<i>Spoken</i>
Dutch	Native	Native
English	Fluent	Fluent
French	Intermediate	Intermediate

Experience

<i>Project Name</i>	PHAEDRA (Plate-based High-Content Analysis, Evaluation and Dynamic Reliability Assurance)
<i>Customer</i>	Janssen Pharmaceutica R&D (J&J)
<i>Period</i>	10/2008 - present
<i>Project Nature</i>	<p>The PHAEDRA application is used for analyzing and managing screening data, such as microscopy images, flow-cytometry data, high-throughput screening data, etc.</p> <p>Some data is provided directly from the acquisition device, other data is the result of processing by other analysis software. Both image data and aggregated data are retained - on a file server and in a database respectively. Statistical and visual tools are provided to aid in the analysis and validation of the information. For many functionalities, open-source libraries are used as a cost-effective basis to build on.</p>
<i>Roles</i>	<p>Co-design and architect the application.</p> <p>Implement the application, working with a small team of 2-5 developers and students. Manage the build and release cycle.</p> <p>Author an application manual. Publish patches and new releases.</p>
<i>Results</i>	<p>The PHAEDRA application was rolled out successfully within the target timeframe and on a limited budget. It received an innovation award soon after. Usage is still increasing and new releases are planned throughout the years.</p> <p>The application is considered a key asset in the company's R&D IT portfolio, and interest is shown from outside companies as well.</p>
<i>Key Skills</i>	Java 1.6, Eclipse RCP, various Eclipse sub-projects, R, Matlab

<i>Project Name</i>	E-Archiving Solution
<i>Customer</i>	Nike
<i>Period</i>	6/2010 - 10/2010
<i>Project Nature</i>	The E-Archive platform stores invoice and export documents using a legacy document management system called Daisy. Due to the limitations and age of this system, a new document storage backend must be implemented. The technology selected for this backend was Adobe Livecycle. The CIMS client application, which interacts with the document store, must be adapted to be able to use the Livecycle backend. It should be flexible enough to allow easy switching between the backends if needed. All the documents that currently reside in the Daisy solution, have to be migrated to the new Livecycle solution, without impacting users.
<i>Roles</i>	Install and configure a clustered Livecycle environment, including load balancing and AD integration. Customize the API of the CIMS client application to interact with this new backend. Migrate all the existing documents (~2,5 million) to the new backend without operational downtime.
<i>Results</i>	The Livecycle solution was rolled out successfully and now completely replaces the Daisy system. The CIMS client application has been adapted and rolled out successfully.
<i>Key Skills</i>	Java 1.5, Adobe Livecycle, Alfresco

<i>Project Name</i>	FEDS (Framework for Experimental Data Storage)
<i>Customer</i>	J&J Technology Office
<i>Period</i>	8/2007 - 9/2008
<i>Project Nature</i>	FEDS was created to address the issue of ever increasing amounts of raw data generated by digital microscopy and data acquisition infrastructure. Previously, terabytes of data were stored on network drives, external drives, and other insecure locations with no classification or structure. FEDS is a content management system focused on raw binary and image data. It secures the data logically using access control, and physically using data replication and integrity checking. Storage costs are greatly reduced by using the revolutionary image compression technology JPEG2000, combined with the universal PDF document format.
<i>Roles</i>	Analyze the requirements, architect a solution and implement it. Compare available content management systems and select the most appropriate one to serve as the basis for FEDS. Document and support the application until knowledge transfer to an offshore support desk is complete.
<i>Results</i>	FEDS was rolled out successfully and is still in use today. It houses multiple terabytes of data from diverse departments and maintains a high query and upload performance.
<i>Key Skills</i>	Java 1.5, Alfresco, JSF, JSP, various web technologies

<i>Project Name</i>	e-Globe Application Team
<i>Customer</i>	Janssen Pharmaceutica (J&J)
<i>Period</i>	2/2007 - 8/2007
<i>Project Nature</i>	<p>The e-Globe team manages a number of intranet web applications and websites in the J&J group of companies. In addition to the implementation of these web apps, e-Globe also supports them with a dedicated service desk.</p> <p>The web applications have varying purposes, ranging from newsletter and content management to administrative tools and validated (mission-critical) production tracking applications.</p>
<i>Roles</i>	<p>Develop both J2EE and servlet web applications, assist the service desk in a team that works closely together.</p> <p>Communicate with business users to interpret and discuss requirements and specifications.</p>
<i>Results</i>	The many applications managed by e-Globe are still an integral part of the J&J intranet. Some of these are mission-critical, and have supported the business for many years, ranging back to the days of the ATG Dynamo application server.
<i>Key Skills</i>	Java 1.4, Web design, J2EE development

<i>Project Name</i>	ICE (Image Collaboration Environment)
<i>Customer</i>	J&J Technology Office
<i>Period</i>	9/2006 - 2/2007
<i>Project Nature</i>	<p>As a followup on his internship at the company, Frederick was asked to implement a proof-of-concept of ICE. The goal of this web-based application is to allow scientists to upload high precision image data and manage it using a web interface. Various image tooling and communication functionality is provided to aid the users in their work. The image data itself is compressed in a very efficient manner using JPEG2000 technology, allowing large amounts of data to be stored on the file server without sacrificing quality.</p>
<i>Roles</i>	<p>Study and compare available content management systems. Select an appropriate candidate to start from, and implement ICE on top of it.</p> <p>Integrate open-source imaging libraries where appropriate.</p> <p>Implement a fat client based on Eclipse RCP to aid in the uploading of images.</p>
<i>Results</i>	The ICE proof-of-concept was considered a succes, and served as a trigger to initiate the FEDS project.
<i>Key Skills</i>	Alfresco, Java 1.4, Web design, JSF, J2EE development, Eclipse RCP