

# Rasmus Borgsmidt

***Independent Software Consultant, BCS from University of Copenhagen (DIKU)***

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## About me

Currently working as a software consultant on customer projects.

Nearly 20 years of experience as a software professional, for the most part building financial planning software for the enterprise. Lead developer and maintainer for many years of the J Calculation Engine, a component central to most operations in **IBM Cognos Planning**. Also co-invented several key features of this product.

Bachelor of Computer Science from University of Copenhagen (1994–1997, 2010–2014). A bachelor's thesis was submitted in June 2013 and was graded 12 (top mark). The thesis titled *Functional Array Programming Compiled to a Virtual Machine*, may be downloaded from [http://borgsmidt.dk/public/functional\\_array\\_programming.pdf](http://borgsmidt.dk/public/functional_array_programming.pdf).

Named inventor and co-inventor on several issued patents.

Experience with a broad suite of technologies and methodologies, including Java 8, C#, JavaScript, Erlang, Ruby, APL/J, functional programming languages, as well as runtime code generation of MSIL, JBC and x86 machine code.

Enjoys tinkering with JavaScript, Erlang and Ruby — and AngularJS, which has brought a clean and healthy sense of modularity and code separation to the world of clientside JavaScript.

Avid practitioner of test-driven development and similar outside-in modes of thought.

Experience as Team Captain and Scrum Master of a highly distributed development group with members across four time zones.

Lived five years abroad in the UK and Luxembourg.

Specialties: Enterprise software development, calc/modeling engines, object model design, API design, financial planning software, collaboration, object-oriented analysis and design, test-driven development, dynamic code generation, structured refactoring and performance optimization.

## Contact

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*References available upon request*

## Experience

### **Lead Developer (Consultant), KMD, 2015–Present**

In this role, I split my time between software development and enabling a Polish team of developers to

deliver the required functionality. The task is to deliver a set of SOAP web services for KOMBIT Støttesystemer (STS).

**Technologies:** OIO standards, SOAP web services, XML, XSD, XSLT 2, Java 8, Hibernate/ORM, WildFly, Liquibase, FreeMarker, IntelliJ, Eclipse, Jira, Git, Stash, Gradle, Bamboo, SoapUI, YourKit Profiler, LogPoint

### **Owner, Independent Software Engineer, Code Matters, 2014–Present**

As an independent software engineer, I work as a consultant on customer projects and spend my spare time building up my own software projects.

### **Sr Software Engineer, IBM, 2009–2015**

In this role, my primary responsibility was refining and maintaining the calc engine at the heart of the **IBM Cognos Planning** enterprise software solution. I also contributed to the development of other related products and occasionally went on-site for beta testing and the like.

**Technologies:** Java, C#, J/APL, JavaScript, Python, Eclipse, Visual Studio, Rational Team Concert, Rational Clear Quest

### **Scrum Master for Distributed Team, IBM, 2009–2012**

In addition to my development responsibilities, I served as *Scrum Master/Team Captain* of a distributed scrum team with members across four time zones.

**Technologies:** Rational Team Concert, Rational Clear Quest

### **Sr Software Engineer, Cognos, 2003–2008**

In this role, my primary responsibility was building and maintaining core server components of the **Cognos Enterprise Planning** enterprise software solution. In addition to this, I was heavily involved in research projects that later resulted in a series of patents.

**Technologies:** Java, C#, J/APL, Python, Eclipse, Visual Studio, Perforce, x86 machine code, Java Bytecode, MSIL (.NET Bytecode), XSLT

### **QA Technician / Software Engineer, Adaytum, 1997–2002**

In my initial role at Adaytum, I worked in 3rd-level support and with test bed development. Then my responsibilities shifted and I started contributing directly to the **Adaytum Planning** software product, most notably the introduction and development of **Adaytum e.Planning/Contributor**.

**Technologies:** J/APL, Visual Basic, Visual Studio, x86 machine code

## **Education**

### **Bachelor of Computer Science, University of Copenhagen, 2010–2014**

A bachelor's thesis was submitted June 2013 and was graded 12 (top mark). The thesis titled *Functional Array Programming Compiled to a Virtual Machine* is available upon request. GPA 11.05 of 12.

### **Bachelor of Computer Science and Maths, University of Copenhagen, 1994–1998**

This education was cut short after being hired into Adaytum.

# Skills

## Programming

Experience with a host of languages, such as Java, Ruby, C#, JavaScript, Haskell, SML, Erlang, C, Python, J/APL, MSIL, Java Bytecode, assembly language, binary machine code—the list goes on.

## Methodology

Keen proponent of *outside-in* design principles, such as *test-driven development*, and the importance of small teams, incremental delivery and iterative processes in general. Respects the art and craft of software engineering, and takes pride in continuous integration and refactoring.

## Languages

Speaks and writes Danish and English with native proficiency, German with elementary proficiency.

# Personality

## Character

Always curious, generally well-liked, can have a meaningful conversation with people from all walks of life. Handles pressure well and makes a point of doing things the right way.

- *team player*
- *thorough*
- *creative*
- *analytic*
- *leads by example*
- *professional*

## Interests

- Object models and REST
- *Concurrent* programming (Erlang/OTP)
- Dynamic and functional languages
- Building grammars and DSLs
- Cloud technologies
- Raspberry Pi
- Network security and anonymity
- Photography
- Classic computer emulation
- Go (ancient strategic boardgame)

# Patents

***Scalable mechanism for resolving cell-level access from sets of dimensional access***

***rules, 2013, uspatno. 8,538,990***

Techniques for resolving cell-level access in a multi-dimensional data structure based on one or more

sets of dimensional access rules.

**Rasmus Borgsmidt, David Bowen, Kirk Bates**

***Automatically moving annotations associated with multi-dimensional data between live data cubes, 2013, uspatno. 8,347,207***

Techniques for sharing multi-dimensional data and associated annotations between software systems.

**Rasmus Borgsmidt, Finuala Barnes, Bindhu Cherian**

***Enterprise planning and performance management system providing type-safe retrieval of multi-dimensional data, 2011, uspatno. 7,895,150***

Techniques for ensuring type safety at compile time of multi-dimensional data retrieval.

**Rasmus Borgsmidt, Michael Gould**

***Job scheduling for automatic movement of multi-dimensional data between live data cubes, 2011, uspatno. 7,877,355***

Techniques for sharing multi-dimensional data between software systems.

**Rasmus Borgsmidt, David Bowen**

***Virtual multi-dimensional datasets for enterprise software systems, 2010, uspatno. 7,747,562***

Techniques for specifying virtual datasets within an enterprise software system.

**Rasmus Borgsmidt, Michael Gould**

***Multi-dimensional data cube validation, 2009, uspatno. 7,610,294***

Techniques for validating data that a user enters into a multi-dimensional data cube within an enterprise software system.

**Rasmus Borgsmidt**