Curricilum Vitae

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Education

Cand.scient. (1999—2002): *University of Bergen, computer science.* Includes *L-systems, Twining Plants, Lisp*, an extensive thesis on L-systems (Lindenmayer systems), with focus on graphical applications and simulations of plant development. The thesis includes simulating twining plants and a framework for L-systems in Common Lisp. As a result of the thesis I was nominated for the magzine *Elektonikk*'s reward for young scientists and invited to the conference *Studiemøtet 2002*.

Cand.mag. (1994—1998): *University of Bergen, computer science.*

Work experience

2001—2002: *Core convergence AS*: System developer. Research and development of a cross-platform GUI framework for web and desktop applications, and a high-level language for software agents.

1998—2000: *The University of Bergen*: Teaching assistant. Assisted the algorithms course for two semesters.

Major projects

The Turban Project (2002): *Core Convergence AS.* A specialized Scrooge client to be used by JHC (Jacob Hatteland Computer AS) as a new front-end to their legacy database system (the RamBase). My main responsibilities were implementing Scrooge (see below) and extending it with JHC-specific components and functionality, and achieving strict speed requirements through caching and other optimizations.

The Marilyn Project (2002): *Core Convergence AS.* A prototype for the "Smarties" multi-agent system with emphasis on resource allocation for telecom systems. Implemented the Smarties domain language as an extension to Nifty, and worked on integration with the JADE (Java Agent DEvelopment) framework.

The Scrooge project (2001–2002): *Core Convergence AS.* Continued development of the GUI part of the Mir project (see below), with emphasis on a component-based design, platform-independence, web applications, separating layout from logic, and efficiency. Advanced use of JFC/Swing and serialization of GUIs is an important part of the project.

The Mir Project (2001): *Core Convergence AS.* A proof-of-concept for a high-level language (Nifty) and a cross-platform GUI framework (Scrooge). Developed the web part of the GUI framework, and integration with Nifty. The development included writing Java servlets, Enterprise Java Beans, XSLT transformations and generating XML documents from Scheme.

L-Lisp (1999—2001): *The University of Bergen.* A framework for Lindenmayer systems (fractal generation and plant simulation) in Common Lisp. This one-man project is part of my *cand.scient* thesis, and includes many L-system features and extensions such as parallel rewriting, homomorphism and decomposition rewriting, turtle interpretation, stochastic, context-sensitive and environmentally sensitive L-systems, a spline editor and generating output for the POV-Ray raytracer. OpenGL bindings for CMU Common Lisp were created as a part of this project.

Techincal competence

Object-oriented analysis, design and implementation.

Imperative and functional programming.

Development for Linux and Solaris.

Programming languages: Common Lisp, Java, Scheme, C, Pascal, Simula, Python.

Design and analysis of algorithms.

OpenGL and 3D geometry.

XML and XSLT (XML transformations).