R E S U M E

Daniel Adler

Personal Data

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Graduate	Diplom Wirtschaftsinformatik
	(computer science & economics)
Birthday	23rd June 1975
Nationality	german

Personal record

since 12.2006	Assistance at the Institute for Statistics and Econometrics, University of Göttingen
since 1.2005	Ph.D. Student, Faculty of Economics, University of Göttingen
10.2003-11.2004	Business: Java Swing GUI / C++ Software Developer , B&N Software AG
2003	Award : John Chambers Software Award 2003
2003	Diplom : Wirtschaftsinformatik, University of Göttingen
2002	Mini-Thesis: Interactive visualization of multi-dimensional data in R using OpenGL
2002-2006	Student Assistance at the Institute for Statistics and Econometrics, University of Göttingen
2001-2002	Part-time work: Installations Windows NT, MBS GmbH Göttingen
2000	Business: C++ Component development, VariaMedia GmbH Hamburg
1998-2000	Student Assistant/Webmaster at Institute for Marketing and Merchandise, University of Göttingen
1998	Business: 3D Animation and Development of Web-Services, Bauhaus für Kommunikation Göttingen
1996-2003	Study of Wirtschaftsinformatik, University of Göttingen
1995	Business: 3D Animation, Silverstyle Entertainment Berlin
1994-1995	Civil Service: University Hospital Göttingen
1994	Abitur Otto-Hahn Gymnasium, Göttingen

Awards

John M. Chambers Statistical Software Award 2003
Award given for "rgl" at Join Statistical Meetings 2003, San Francisco.

Presentations

Elate OS and the virtual processor
Informatics Workshop, Mathematics Institute, University of Göttingen.

A Framework for an R to OpenGL Interface for 3D graphics
Visualization Session, DSC 2003, Vienna.

Interactive visualization of multi-dimensional data in R using Open GL
Statistik Workshop, University of Göttingen.

Publications

Nenadic, O., Zucchini, W., Adler, D., Kratz, G.: Computational Issues in Creating an Online Atlas
Poster presented at the Compstat 2004: 16th Symposium of the IASC, Prag.

Nenadic, O., Adler, D., Zucchini, W.: Visualizing Three-Dimensional Maps in Correspondence Analysis
CARME 2003: International Conference on Correspondence Analysis and Related Methods, Barcelona.

Nenadic, O., Adler, D.: Interactive 3D-visualization in R
Poster presented at the ISI 2003, Berlin.

Adler, D., Nenadic, O.:A Framework for an R to OpenGL Interface for 3D graphics
Internal Report, draft working paper, submitted to DSC 2003, Vienna.

Nenadic, O., Adler, D., Zucchini, W.: RGL: A R-library for 3D visualization with OpenGL
Internal Report, submitted to Interface 2003, Salt Lake City.

Projects

RGL This project was part of my *Diplomarbeit* (mini thesis). The free statistics software R was extended by a 3D visualization device system using OpenGL as the real-time rendering backend. The implementation was done in an object-oriented way using C++ and Design Patterns. The software is highly portable due to a platform abstraction layer.

Dash Mesh 3D Application Launcher for Windows 2000/XP that integrates seemless into the Desktop.

f4k A *forth* compiler designed for generating tiny executables using decrunching algorithm. Ported to two hosts (win32, linux). The library contains bindings to DirectX, OpenGL, Vector/Matrix calculus and Sound Output. Designed specific for 4k intros.

Win4k Forth Engine written in ansi c. Embedded in a 3D OpenGL Environment. OpenGL Text Console Layer allows to code interactive.

GTK+ Magic The GTK+ GUI Toolkit was extended by a distributed real-time database for property management. A GUI configuration tool allows for manipulating widget properties in real-time on a user-, group- or application base. Applications using GTK+ will reflect the changes in real-time through notification on IPC level.

Euro Experten Chat Chat Server und Web-Client implemented in Perl for *DG Bank* Frankfurt.

Dialogs Query An online-survey web tool, that parses HTML forms and compiles SQL database tables. The system takes control over survey path through a set of HTML pages and inserts data into the database. An additional web front-end allows for configuration.

Text Layout Class C++ Component using FreeType library on Win32. Customer: VariaMedia GmbH, Hamburg

4K Linux Intro Competition: Run-time executable multimedia demonstration using 4096 bytes maximum. A modified ELF Linker tool was developed for this purpose. The demo contains a 3D software shader that renders directly on the Linux framebuffer device, a 3D transformation- and effect-sequencer using Microcode techniques and a sound sequencer-and-synthese engine.

Zoom-Rotator Multimedia effect in VP assembler on Elate OS.

Amiga Demos Multimedia effects in MC68000 assembler.

3D Animations Experiences with Maxon Cinema 4D and Lightwave3D. Game-Title Animation *Der Produzent - Die Welt des Films* for customer Silverstyle Entertainment.

Webpage Design Novartis Optifast Website (1998), Institut für Marketing & Handel Universität Göttingen (1998, awarded)

The Factory BBS during 1991-1993 on DOS. Experience with Mailbox software: SuperBBS, CNet, PCExpress, PCBoard, Telix/Salt. Additional Tools written in Turbo Pascal.

Skills

Hardware programming

Assembler MC68000, Arm3, Intel IA32, PowerPC G4

Architecture PC BIOS, Amiga, Acorn, Open Firmware

SIMD Optimizing MMX, SSE, AltiVec

Virtual Machines Java VM, VP code/ElateOS, Forth

System programming

Operating Systems Mac OS X, Linux, Win2K/XP, QNX, ElateOS, RiscOS, BeOS, Amiga

System APIs ANSI C, Posix, Win32, Carbon, Cocoa, STL, Boost, Linux Kernel & Syscall layer

Paradigm Multi-threading & Message-Passing Paradigma

Techniques

Languages C, C++, Python, Forth, Java, Pascal, R, Shell, Scripting languages

Compilers GCC, Intel C Compiler, Visual C++

Methods UML, Design Patterns, XP, Meta-Programming, Parser Generators

Tools Visual Age for Java, Rational Rose, lex/yacc, antlr, boost/spirit

Frameworks Mozilla, Eclipse, Swing

Data management SQL, XML

Middleware COM, CORBA, Mozilla XPCOM

Special Linker Development, Self-modified Code, Code generators

Computer Graphics

Display Systems X Protocol & X Window System, GDI/Win32, Quartz/OS X

GUI APIs GTK+, Qt, Win32, Swing

3D APIs OpenGL, DirectX

Shading Languages GLSL, Cg, DirectX HLSL

Programming Real-time rendering techniques, Software Shaders

Network

Programming TCP/IP, BSD Sockets, WinSock2

Administration Linux, Windows, Apache, mod_python, SendMail

Configuration Linux WAN/LAN NAT Firewall Router

Profile

Programming Languages

Assembler		
MC68000	Very good	1988-1994
IA32	Very good	since 1991
ARM3	Good	1993
PPC G4	Experiences	since 2004
SIMD MMX,SSE,Altivec	Good	since 2000
C	Expert	since 1989
C++	Expert	since 1998
Forth	Expert	since 2002
Java	Expert	since 1998
Lisp	Experiences	since 2007
R	Good	since 2002
Perl	Good	since 1998
Python	Good	since 2006

Operating Systems

AmigaOS	Good	1987
BeOS	Good	1999-2000
DOS	Good	1991
ElateOS	Experiences	2000-2001
Linux	Very good	since 1996
Mac OS X	Experiences	since 2004
QNX	Experiences	1998
RiscOS	Good	1993
Windows	Good	since 1997

APIs

ANSI C	Very good	since 1989
C++ STL	Good	since 2001
C++ Boost	Good	since 2004
DirectX	Experiences	since 2002
FreeType Lib	Good	since 2000
GTK+ Toolkit	Very good	since 1997
Java2	Experiences	since 1997
Linux Syscall	Very good	since 2001
OpenGL	Very good	since 1999
Posix	Very good	since 1997
Win32 API	Good	since 2000
X11	Very good	since 1997

Know-How

Compiler-Construction	Experienced	since 2002
Virtual Machines	Experienced	since 2002
Design Patterns	Good	since 1998