

# Curriculum vitae of Michael Rausch

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## Personal

Michael Rausch  
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year of birth: 1970  
nationality: german  
languages:  
english (fluent),  
french (basic knowledge),  
german (native speaker)

## Education

**1991 to 1996** **Universität Koblenz-Landau, Koblenz**

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- Computer science, specializing in business information systems

**until 1990** **Dreikönigsgymnasium, Köln**

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- Abitur, majors in mathematics and physics

## Focus

### Competencies

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- Trading applications, financial markets, front-to-back office
- Infrastructure for mission-critical applications
- Campus and enterprise networks, storage area networks

### Orientation

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- Business analysis, Technical analysis, Consulting, Implementation
- Application support and development
- Technical project lead / sub project lead

### Sectors

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- Banking: investment banking, trading, commercial&retail banking
- IT and telcos: IT service providers, ISPs, carriers

## Knowledge

### Murex

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- Cross functional analysis (FO, risk/middle office, BO)
- Optimization
- Reporting (Mreport and Datamart), Risk matrices
- Data model
- MDCS, RTI, MDRS, market data import/export
- Simulation, P&L analysis, simulation viewer

- e-Tradepad (notepads and strategies)
- OLK, rtimport
- MxML (import/export interfaces and workflows, data dictionary, templates, post-trade workflows)
- Confirmations (via MxML and tickets in the dealing sheet decision tree)
- STP, validation templates
- UDFs; consistency, shell, fee rules
- Payments
- Accounting
- Auditing (esp. those not covered by standard audit means)
- Housekeeping (netting, purges)
- Master data (audit, maintenance, interfaces) for instruments, generators, counterparts, SI
- System architecture, environment management (MxG2000, MX.3)
- EoD control (processing scripts, report batches, scheduling)
- Automation of the system
- Performance tuning for reports/datamart feeders, database server and tables/indices, OS
- Migrations and releases (2.9 to 2.10, 2.10 to 2.11, 3.1.x)
- Merger of Murex installations
- Structured Trade Builder STB / patterns / layouts / typologies, STB indexation
- LiveBook (Simulation server)
- VaR Value-at-risk module
- Basic knowledge:
  - Murex limit controller MLC
  - Pretrade workflows, STP rights templates, One stop processing OSP
  - RTBS
  - Custom MACS/Python model development

### **Financial products**

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- Money market: repo, lending, call money, interest rate futures/options, loan/deposit, risky loans
- FX: spot/forward, outright, currency swaps
- FXO: options up to 1<sup>st</sup> generation exotic options
- Capital market: bonds, SSD, ABS, CDOs and CLNs, structured bonds, bond futures and options
- Interest rate derivatives: swaps (plain vanilla and exotic), asset swaps, CMS, spreads, FRAs, cap/floors, structures
- Credit derivatives: default swaps, first/nth default baskets, total return swaps
- Equities: shares, indices, convertibles, futures, options (listed and OTC)
- Basic knowledge: 2<sup>nd</sup> generation exotics, commodities (base metals, PM and energy), commodity derivatives (PMO, energy futures/options/swaps), inflation swaps/bonds

### **Exchange connectivity/trading systems/market data systems**

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- Murex MxG2000 and MX.3
- Xetra, Eurex, Xontro Order
- RTD, Front Arena, Swiskey
- Reuters (Triarch), Bloomberg, FAME
- Markitwire
- Proprietary trading systems (in-house developments)

### **Databases/middleware/web servers/grid/misc.**

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- Sybase ASE, Sybase Replication Server, Oracle, MS SQL-Server, proprietary DBMS
- MQ Series, Connect Direct
- Websphere (Advanced Server), JBoss, ColdFusion
- Apache
- Tivoli Workload Scheduler/Maestro
- UC4
- Platform Symphony

### **Programming/scripting languages**

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- Perl
- SQL (ANSI, T-SQL, PL/SQL)
- Shell (sh,csh,bash,ksh)
- XSLT, XPath
- C/C++
- Java (basic knowledge), Javascript (incl. DOM/DHTML/CSS)
- Lisp, Pascal, misc. assembly languages

### **Operating systems/OS add-ons**

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- Solaris (up to Solaris 10, SunOS since 4.0.2 :), Linux, AIX, other Unix flavors
- Windows NT 4.0, 2000, XP, 2003
- Netware, Veritas Cluster Server, Veritas Volume Manager, Veritas Filesystem

### **Storage**

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- SAN/DAS/NAS; Fibre Channel, SCSI, ESCON, iSCSI, NFS, CIFS, SRDF, PPRC
- EMC, IBM, Sun, Brocade, Qlogic, Gadzoox, Cisco, Auspex, Storagetek, Veritas

### **Network**

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- Routers, Switches, Firewalls, WDM, Frame Relay, ATM, Load balancers
- Cisco, Checkpoint, Netscreen, Watchguard, Newbridge, HP

### **Server hardware**

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- Sun, Compaq, HP, Fujitsu-Siemens, misc. others

## Projects

### **November 2010 to June 2012**      **Cooperative bank, Frankfurt**

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- Project:      Concept and implementation of use cases for the Murex LiveBook; Support of credit model development and introduction of multi-curve capabilities
- Scope:
  - Concept and implementation of further use cases for the LiveBook service from the bond/repo trading, cash management/treasury and financial engineering business lines
  - Extension of the LiveBook service infrastructure
  - Support of the development of credit models (single/multi callable risky loans, credit options), pricing/revaluation of credit structures
  - Implementation of automatic model validation for multi curve capabilities on interest rate derivatives
  - Extension of proprietary Flex libraries
  - Automatic stress scenario analysis for the financial engineering desk
  - misc. tasks
- Systems:      Applications: Murex MxG2000 (2.11.43; e-Tradepad/STB, LiveBook, VaR)

### **October 2010 to October 2011**      **Cooperative bank, Frankfurt**

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- Project:      Introduction of new Murex release 2.11.43, Structuring of FX/FXO/IRD hybrid products, Introduction of Markov functional models
- Scope:
  - Introduction of Markov functional models for IRD (Flex)
  - Front office regression tests and analysis (P&L, sensitivities) for the introduction of MxG2000 2.11.43; focus on FX/FXO, MM, CRD, structured bonds and foreign branches (all asset classes)
  - New implementation of total return swap on ABS
  - Building of credit and holding structures using STB indexation
  - Building of structured FX products using STB (strategies, patterns)
  - Support of the new product process NPP (implementation and models)
  - Support with the development and integration of FX flex models
  - Customization of new functionality „light simulation“
  - Planning and implementation of LiveBook (simulation server), customizing and implementation of use cases; development and integration of GUI via API
  - Unification and cleanup of used simulation views (delta ladders, etc.)
  - Misc. reporting tasks
  - Performance tuning for LCH Swapclear DMP firedrill (7h total runtime) and MarkitWire interface
- Systems:      Applications: Murex MxG2000 (2.11.43; E-Tradepad/STB, Simulation server)

### **January 2010 to September 2010**      **Cooperative bank, Vienna**

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- Project:      Introduction of Murex as front-to-back system for complex derivatives
- Scope:
  - Products: FXO, IRD, structured bonds, CRD, EQD, COM, commodity derivatives, cross asset structures; plain vanilla, exotics, 2nd generation exotics
  - Bridging the gap between infrastructure/technical and business
  - Introduction MACS models and Python in MxGrid
  - Support of the introduction of CPPI models (via Flex API) in the grid
  - Market data maintenance/housekeeping
  - Migrations (3.1.18, 3.1.19, 3.1.20)
  - Environment management
  - Optimizing database performance and import/export
  - Build up and transfer know-how in the engineering/solutions and technical application management team
  - Architecture and QA for infrastructure and engineering
- Systems:      Applikationen: Murex MX.3 (3.1.18 - 3.1.20), MLC (1.5.4)  
MACS/Python, MxGrid, Platform Symphony

Database: Oracle 10g  
Others: UC4, Webmethods, DataStage TX

**January 2010 to December 2010 (p/t) Cooperative bank, Frankfurt/New York/Singapore**

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- Project: Introduction of Murex as the backoffice system for the bank's foreign branches
- Scope:
  - Continuation of the below mentioned project
  - Accounting interfaces to SAP FI and SAP BCA, local regulatory reporting (Abacus, Lombard Risk STB)
  - German HBG amendments (BilMoG)
  - On-site support during go-live in New York and Singapore
- Systems: Applikations: Murex MxG2000 (Accounting module, MxML exchange, Mreport, Datamart)

**December 2009 to March 2010 (p/t) Cooperative bank, Frankfurt**

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- Project: Amendments in regulatory reporting for interest and balance statistics of (structured) bearer bonds and CBOs
- Scope:
  - Amendment of Abacus delivery from Murex
  - Products: Structured bearer bonds (multi callable, range accruals, memo/ratchets, zero coupon, SPV/CBO)
- Systems: Application: Murex MxG2000 (Mreport)

**July 2008 to December 2009 Cooperative bank, Frankfurt/London/Hong Kong**

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- Project: Introduction of Murex as the backoffice system for foreign branches
- Scope:
  - Sub-project: Accounting and financial/legal reporting
  - Products: Bonds, CD/CP, FX/MM, FXO, IR futures, swaps, swaptions, caps/floors/collars, credit derivatives, repo/lending, SSD
  - Assistance with the preparation for business specification and data processing concepts for the Murex accounting module
  - Account mapping and implementation of accounting rules in Murex
  - Functional and integration tests of the accounting module and the implemented rules
  - Support during the testing and go-live phase
  - Assistance with the preparation for business specification and dp concepts for interfaces to downstream systems (SAP FI, SAP BCA, ADD, Abacus, STB)
  - Revaluation reports, balance sheet annotations, general ledger/sub ledger reconciliation
  - Amendment/creation of interfaces
  - Functional and integration tests for these interfaces
  - Other assistance in the representation of the deal lifecycle in Murex
  - End user trainings
  - On-site support during go-live phase in London and Hong Kong
- Systems: Applications: Murex MxG2000 (accounting module, MxML exchange, Mreport, Datamart)  
Others: Jira, Clearcase

**February 2008 to July 2008 Bank, Berlin**

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- Project: Murex housekeeping
- Scope:
  - Products: EQ/EQD, FX/MM, IR/IRD
  - Concept, test and implementation of the first deal purge in the system
  - Market data purge
  - Further performance optimizations
  - Preparations for the introduction of the VaR module
- Systems: Applications: Murex MxG2000 (2.11.30)

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**January 2008 to July 2008 (p/t) Cooperative bank, Frankfurt**

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- Project: Migration to MxG2000 2.11.35
- Scope:
  - Regression tests for interfaces
  - Amendments in reports for new release
  - Misc. changes in reports
- Systems: Applications: Murex MxG2000 (2.11.32, 2.11.35), Mreport

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**December 2006 to December 2007 Cooperative bank, Frankfurt**

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- Project: Migration to MxG2000 2.11.32
- Scope:
  - Products: IRD, FX/MM, Credit derivatives
  - Focus: new repo module and SSD netting at settlement date
  - Regression tests for interfaces
  - Amendments for data model changes and new repo module
  - Technical and functional unit tests
  - Case tracking with software vendor
  - Report stabilization and optimization
  - Automation of integration and patch tests
  - Training for the accounting module
  - etc.
- Systems: Applications: Murex MxG2000 (2.11.21, 2.11.32), Mreport, Datamart  
Others: Clearcase

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**August 2004 to December 2006 State bank, Offenbach**

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- Project: Application support Murex, Technical analyst
- Scope:
  - Products: IRD, FX/MM, Equities, Credit derivatives
  - Modules: FO, BO (Accounting, Payments), MxML exchange, Reporting
  - Operation and maintenance of all Murex environments (production, test/development, integration)
  - 2nd & 3rd level support of FO, BO, risk control and accounting users
  - Support, extension and documentation of the end-of-day processes
  - Amendments and development of reports (Mreport) and dynamic creations
  - Performance optimization and load-balancing
  - Restructuring and creation of new interfaces to and from Murex, report writing
  - Cleanups & purges (OLK, trades, accounting entries), housekeeping in general
  - Migration from MxG2000 2.10 to 2.11 (technical project lead, responsible for the development of the migration procedure)
  - Merger of two Murex installations (trades/positions, stored P&L, market data, reports/batches/filters)
  - Special tasks in projects:
    - Detailed static data auditing
    - Interface for AVP based bookings to Midas
    - Addition of other real time data sources (Sonaris)
    - Static data maintenance (counterparties, portfolios, bond instruments)
    - Automated documentation of Mreport extractions und reports, preparations for Actuate, Datamart feeders
    - Restructuring and optimizing of report batches for the EoD
    - Creation of deal confirmations via MxML
    - Interfaces to Murex (OLK and MxML trade import)
    - etc.
- Systems: SunFire 6800, V880, Storedge 6320, A5200  
Databases: Sybase ASE 12.0 & 12.5, 64 bit  
Application: Murex MxG2000 (2.10 and 2.11), MxML, OLK  
Others: Veritas Cluster Server, Tivoli Workload Scheduler

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**November 2003 to August 2004      State bank and local savings bank, Frankfurt**

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- Project:      Unix/Sybase operations, technical support for the application support
- Scope:
  - Build-up of a new production environment for Murex MxG2000 (hardware: 2\*SF6800, 2\*SE6320, Veritas cluster server) with separated data centers 10km apart
  - Migration of an existing environment from London to Frankfurt
  - Build-up of development, test and integration/UAT environments (4\*V880, 3\*E3000)
  - Migration of Murex G2000 2.2.9 to 2.2.10
  - Database reorgs and purges
  - Cleanup of a steadily grown Murex environment (scripte, interfaces, reports)
  - Optimizing of database servers (caches, pools, device layout, general performance tuning)
  - Planning and implementing of an operation platform for Murex
  - Planning and implementing of an documentation platform based on Twiki
  - Planning and implementing of an system management platform based on Nagios
  - Securing the Murex environment (hardening, logging/auditing)
  - Planning and implementing of a system for ensuring data integrity (automatic version control and historization as well as policy enforcement and change management)
  - Automation and monitoring of interfaces and EoD by controlling it via TWS
  - Daily business Unix: operations of servers (Solaris 8 und VCS) and storage
  - Daily business Sybase DBA: support of several databases (9 data server, >60 databases)
  - Daily business Murex: Maintenance of the environments, support with the interfaces, operations of the realtime feeds
  - Backup support role with a second Murex environment
- Systems:      SunFire 6800, V880, Storedge 6320, A5200  
Databases: Sybase ASE 12.0 & 12.5, 64 bit  
Application: Murex G2000 (2.2.10), interfaces via MxML, OLK, ODBC and extracts/reports  
Others: Veritas Cluster Server, Tivoli Workload Scheduler

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**March 2003 to November 2003      IT service provider bank/insurance, Frankfurt**

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- Project:      network documentation and knowledge management

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**October 2000 bis December 2002      Bank (Commercial Banking), Frankfurt**

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- Project:      Support of a Unix infrastructure team, misc. projects within the line organisation:
- Scope:
  - Setup and support of a Xetra/Xontro-Order order routing system
  - Production support for Eurex order routing
  - Planning, setup and support of RTD and Front Arena
  - Market data/master data maintenance
  - Design of a Websphere operations architecture
  - Process definition for central storage management
  - Implementation and support of a campus-wide SAN
  - Planning and implementation of a SAN extension
  - Migration of storage systems
  - Planning, implementation and support of a tape backup solution
  - later consolidation of the backup environment
  - Planning and realisations of moves for server and data center consolidations
  - Evaluation of monitoring and management systems
  - Consulting, setup and support of systems and applications
  - Planning and extension of Veritas clusters
  - Operations (daily business)

<b>April 2001</b>	<b>Business consulting/bank, Frankfurt</b>
• Project:	testbed for a private banking portal
<b>June 2000 to September 2000</b>	<b>Carrier/telco, Frankfurt</b>
• Project:	network support (3rd level), system engineering
<b>Februar 1998 to April 2000</b>	<b>Investment bank, Frankfurt</b>
• Project:	Consulting to the infrastructure planning team, production support (network planning and operations), network as the key integration factor
<b>Januar 1998</b>	<b>Industry association, Frankfurt</b>
• Project:	Planning and reference implementation of a VPN
<b>Dezember 1997 to Januar 1998</b>	<b>Retail bank, Frankfurt</b>
• Project:	Network support
<b>July 1997 to August 1997</b>	<b>Advertising agency, Düsseldorf</b>
• Project:	Migration and expansion of the existing network and server infrastructure
<b>June 1997 to July 1997</b>	<b>Advertising agency, Düsseldorf</b>
• Project:	IT support
<b>February 1997 to April 1997</b>	<b>Service provider/computer manufacturer, Bonn</b>
• Project:	rollout of 67 "Schulen ans Netz" systems in northern germany
<b>October 1996 to February 1998</b>	<b>several clients in the Mittelrhein and Rhein/Main area</b>
• Project:	networks (LAN, internet)
<b>February 1996 to October 1996</b>	<b>Publishing house, Weilburg (permanent)</b>
• Project:	planning, installation and support of an internet service and content provider
<b>1991 to 1995</b>	<b>University of Koblenz, plastics industry, consulting engineers</b>
• Project:	misc. jobs during the university studies
<b>until 1991</b>	
	<ul style="list-style-type: none"> <li>▪ Programming and development lead of a computer game</li> <li>▪ Program development and porting of software for boat propeller modelling</li> <li>▪ Initial spark for the start of a software department within a manufacturing company</li> <li>▪ Meta programming of four- and six-axis CNC carving machines</li> </ul>