



## Sven Panko

Am Wildpark 16  
D-40629 Düsseldorf

phone: +49 211 94216963 mobile: +49 176 20081424 mail: [sp@intuitiveminds.de](mailto:sp@intuitiveminds.de)  
<https://www.intuitiveminds.de>



### PROFILE

Consultant – Software Architect – Agile and Mindfulness Coach

Provides high-quality solutions to challenging technical and business problems. Extensive experience in software design (APIs and frameworks) and development, technology assessment and proof-of-concept work. Initiated and lead multiple large-scale projects as technical project manager. Has experience as team-lead and serves as mentor and counsellor for team members and department leaders. Has a focus on short- and long-term business demands and provides initiative and ideas to achieve project goals. Extensive experience with mission-critical projects and how to get them back on track in case of delays. Follows a solution-oriented approach in daily work and provides concise and well-structured advice.



### AREAS OF EXPERTISE

- Software Development (Fullstack)
- Agile Coaching / Scrum
- Technical Concepts for Pitches
- Software Craftsmanship
- Technology Evaluation
- DevOps / Cloud
- Legacy Integration
- Code Reviews / Debugging
- Software Architecture
- API and Framework Design
- Requirements Engineering
- Prototyping

### TECHNOLOGIES (EXCERPT)

- Java (all editions and versions)
- Persistence (e.g. Hibernate, JPA)
- Microservices
- TypeScript
- PostgreSQL, Oracle, MySQL
- OSGi
- Clustering (e.g. Hazelcast)
- Security (e.g. OpenID, OAuth, Keycloak)
- Maven, Gradle
- NoSQL (e.g. CouchDB, Couchbase)
- Spring
- Messaging (e.g. Kafka, JMS)
- Frontend (e.g. Angular, Vue.js)
- Wildfly, Tomcat, Netty
- Docker

### TRAININGS

<b>Training</b>	Education as Teacher for “Leben braucht Bewegung”	2008 – 2019
	<ul style="list-style-type: none"> <li>• Anti-Burnout/Anti-Stress Training for Teams</li> <li>• Conscious Communication</li> <li>• Responsible Leadership</li> <li>• Emotional Intelligence in Teams</li> <li>• Maintaining Functionality</li> <li>• Crisis and Conflict Management</li> </ul>	
<b>Certification</b>	Professional Scrum Master (PSM II)	2018
<b>Training</b>	Free Speech and Negotiation	2007
<b>Training</b>	Presentation Skills	2006
<b>Training</b>	Conflict Management	2006

### EDUCATION

<b>Certificate</b>	Sun Certified Programmer for Java	2005
<b>Diploma</b>	Computer and Economic Sciences (Wirtschaftsinformatik). University of Duisburg-Essen Overall Grade: 1,5 Educational Focus: <ul style="list-style-type: none"> <li>• Networking Technologies (Wide Area Networks, Internet Protocols, High-Speed Networks)</li> <li>• Component Technologies (RPC, Java RMI, Web Services)</li> <li>• Artificial Intelligence (Genetic Algorithms, Cellular Automata)</li> <li>• Network Security and securing systems (Cryptography)</li> <li>• Risk and Investment Management</li> </ul>	2004
<b>Languages</b>	German (native speaker), English (fluent in speaking and writing)	
<b>Interests</b>	Photography, Sports, Entrepreneurship	



## PROFESSIONAL EXPERIENCE AND SIGNIFICANT ACHIEVEMENTS

### Freelance Consultant, Developer and Coach

September 2013 – present

Am Wildpark 16, 40629 Düsseldorf, <https://www.intuitiveminds.de>

#### Main Areas

Supporting multiple clients in various Java-based projects. Strong focus on fullstack development, API design for integration (REST, GraphQL) and developing hybrid apps (Android and iOS).

- Projects involved in:
  - Performance optimization for a transaction-based payment system
  - Coaching developers in advanced unit testing techniques
  - Creating multiple Android Apps for inhouse use. Technologies involved include wearables (Pebble Smartwatch, Epson Moverio), Arduino, Augmented Reality and in-door navigation
  - Multiple Apps and responsive web apps with OAuth/OpenID based authentication, Spring Boot architecture and Angular/Ionic frontends
  - Debugging, memory and performance optimization using reactive programming, profiling etc.
  - Agile Coaching and Scrum Master for Agile teams
  - System architect for a realtime warehouse system for a large logistics company (2014-2019), including DevOps with Docker & Jenkins, Microservice architecture and Angular frontend

### Head of Software Architecture

January 2012 – August 2013

net mobile AG, Fritz-Vomfelde-Str. 26-30, 40547 Düsseldorf

#### Responsibilities

Supporting all development teams in terms of knowledge and resources during all phases of software projects. Prototyping and evaluating new ideas, counselling the CTO and other board members regarding upcoming trends in the mobile sector and how to enable the company to be a key player in the market technology-wise. Still staying in touch with technology by continuously developing prototypes and performing complex analysis of post-mortem data like heap dumps. Tuning of all applications along the Java stack (GC tuning, JVM optimization, etc.). Writing and presenting technical concepts for project acquisition.

- Exemplary list of projects involved in:
  - Designing and building a new unified, decentralized content database that is capable of supporting our portal-based business world-wide. This included synchronization mechanisms, conflict resolution of concurrent updates and safely handling huge loads of requests
  - Analysing and prototyping with Firefox OS to integrate net-m's payment solutions (project pitch for the Mozilla Organisation)
  - Video-on-Demand and Mobile TV in mobile data networks
  - Performance optimization for payment operations in the Google Play Store (net mobile is the leading vendor for carrier payment integration into Google's Android platform)

### Software Architect

August 2007 – December 2011

net mobile AG, Zollhof 17, 40221 Düsseldorf



## Responsibilities

Unifying the company's software landscape, designing new applications on top of existing platforms, enhancing existing platforms, improving development processes and quality of product solutions, exploring new technologies, proof-of-concept work, prototyping. Autonomously manage projects, identify areas for improvement and initiate projects addressing these issues. Counselling and consulting for the head of platform development.

- Technical project management (incl. interim project management of product development), team leading and lead development for net mobile's next generation service platform (PLANET). PLANET aims to provide a unified, homogeneous set of APIs to expose net mobile's large amount of services, distributed across multiple data centers and written in different languages (mostly due to M&A). The platform is built from the ground up to support the addition of new APIs and features in a rapid and documented way and to allow net mobile to provide high quality services with state-of-the-art interface technologies (e.g. REST interface using XML/JSON, Spring Remoting, SOAP):
  - Requirements Analysis (company-wide) to determine possible use-cases and services to expose or create
  - Architectural design and technology evaluation:
    - large-scale distributed system, deployable world-wide in any data centre
    - intra-server communication using HTTP(S) protocol only due to firewall restrictions
    - stateless services to allow maximum scalability (e.g. to scale out to Amazon EC2 in case of high load)
    - small and loosely coupled platform modules to simplify software lifecycle management
    - technologies that have been selected (excerpt): Eclipse RT Virgo (OSGi runtime), Apache Tomcat 7, Spring Framework, EclipseLink (via JPA 2), Hazelcast, Apache Jackrabbit (Java Content Repository), JBoss Netty 3
  - selecting and managing external developers in near-shore mode
  - roadmap and project planning, assisted in coordinating more than 4 departments
  - development lead and implementor of nearly 40% of the whole codebase (ca. 400k LOC)
  - benefit for net mobile: solid and extensible platform, ready to incorporate new services either developed in-house or acquired externally, time-to-market for new projects is lowered due to a standardized set of APIs that can be used in-house and externally. Platform performance much higher than previous solution results in increased customer satisfaction.
- Performance optimization of a high-traffic, high-volume WAP portal for Vodafone Germany
  - Identifying performance bottlenecks in a previously unknown software platform (which was part of net-mobile's platform due to M&A of another company by that time)
  - Ad-hoc development of an aspect-oriented component that hooked into the JVM's classloading mechanism and modified all classes, so that detailed execution traces and method calls could be tracked across the whole system
  - Ad-hoc development of a crawler software that was able to parse PML (Partner Markup Language, a site description format used by Vodafone) pages and to simulate multiple simultaneous user accesses to evaluate software performance. Cross-linking of user requests to log files of multiple application servers lead to detailed analysis capabilities of long-running requests. Existing crawling solutions (e.g. JMeter) were unable to provide the flexibility needed to simulate multiple users with multiple user agents (and a PML parser was also not available elsewhere). This crawler software is nowadays in use by the Q&A department
  - Result of efforts: a lot of performance bottlenecks have been found and eliminated, performance increased measurably, and contract SLAs were eventually met. Additionally, platform stability improved
- Technical project management and team leading for the development of the sunrise Music Web Shop (see <http://joylife.sunrise.ch>)



- evaluating new ways to speed up development for the team members, resulting in improved development processes using Eclipse tools to remotely edit and develop templates (instead of using handwritten, browser-based development tools)
- organizing and coordinating tasks across the development team
- Designing and implementing solutions to aid portal developers in rapid project developments
  - conceptualized and implemented a dynamically reloadable controller framework that allows backend and frontend developers to separate business logic from presentation code while at the same time removing the need to redeploy the frontend application
  - the dynamic controllers can be written in Java with full IDE support, Maven integration and on-the-fly-compilation by embedding the Eclipse Compiler into the portal server software
  - development speedup as well as maintainability increased, since frequent redeployments are no longer necessary
- Designing and developing a distributed and secure storage solution for sensitive information that is PCI-DSS compliant
  - created the initial concept and implemented the system using open source technologies (Spring Framework, PostgreSQL RDBMS, Tomcat AS)
  - made extensive tests to reduce latency between the various components and improved throughput using parallelization (increasing performance by factor 4)
  - design and implement a client API to access the secure storage from within Java application code (including documentation of the code)
- Designing and implementing a monitoring system that was able to predict application server failure due to imminent shortage of memory or excessive CPU consumption
  - designed a monitoring algorithm that kept track of garbage collection cycles in the JVM and performed statistical analysis of this activity. Based on this information, the monitor application was able to identify servers that spent too much time in GC, which might eventually lead to a failure of the server
  - a lot of tuning parameters for the algorithm were externally accessible and fine-tuning lead to a monitoring that detected imminent failures with a probability rate of more than 90%
- Consulting during the design of a new message routing system for short message transport from multiple international operators through the companies messaging platform
  - evaluating business process engines to simplify workflow handling (resulting in less hard-coded control logic and visual manipulation capabilities)
  - unifying and centralizing configuration management (to allow the message router to be load-balanced)
  - supporting the implementing developers in questions of design; performing code reviews
- Designing a content import system for multimedia content files
  - analysing the previously used approach, determining requirements for an improved system (driving forces: enhance time-to-market for adding new content providers, improve reliability and reporting)
  - designed and implemented infrastructure of content import system using OSGi component technology and JMS-based SEDA to be able to dynamically add new content providers and update those currently running
  - Optimizing reliability using distributed transactions (JTA) and by developing a custom message broker (because the evaluated open source brokers – ActiveMQ and JBoss Messaging – proved to be error-prone and resource-exhaustive)
  - Result of efforts: lowered time to add new content providers, no more stability and reliability problems since roll-out



- Refactoring of the multimedia content platform
  - creating a coherent and reliable build process for the content platform (using Apache Maven 2)
  - splitting the platform into multiple projects (resulting in smaller projects that are easier to maintain)
  - perform code reviews and analysis (using code coverage and static analysis tools like Cobertura and FindBugs)
  - Result of efforts: easier deployment of new platform instances (using one central build server instead of multiple ones), decreased coupling between components which improved code quality (time to spot and fix bugs was reduced)
- Implemented a company-wide software development process
  - evaluated and set up a company repository for development artifacts (using Apache Maven and Sonatype Nexus), resulting in enhanced sharing of development efforts, less code duplication and improved development experience
  - created coding and development guidelines
  - started a best-practices section in the company intranet and a blog outlining interesting topics and ideas related to software development
  - set up a CI server (Jenkins) to monitor SCM changes
  - set up Sonar, a tool to continuously monitor code quality metrics and trained other developers to use it as part of their daily routines
  - Result of efforts: previously independent departments started to share development artifacts and development knowledge, since all developers had a common platform and a common build process at hand. Code quality improved due to immediate feedback from Sonar.
- (private project) Developed an open source plugin for Atlassian Confluence to index Open Office documents in order to encourage the use of an open source office suite (see <http://confluence.atlassian.com/display/CONFEXT/OpenOffice+Extractor+Plugin>)

### Senior Java Engineer

March 2005 – July 2007

Proximity Technology GmbH, Grünstraße 15, 40212 Düsseldorf

### Responsibilities

Create Java-based applications for use in government agencies, conceptual work during project acquisition phase, presenting solutions in front of clients and management executives, technical project management.

- Lead the development of a decentralized management client-server application for the German Green Party
  - design of the application using open source technologies (Spring, Hibernate, Eclipse RCP, Apache MINA, PostgreSQL, Apache Lucene)
  - target platforms: Windows, Linux, Mac OS X (client application) - Linux (64 bit) (server application)
  - performance optimization of the application during beta phase (transaction optimization, extensive multithreading), which reduced the server load and decreased memory consumption from 2GB+ during alpha phase to 512MB in beta phase
  - optimizing server application during peak situations using in-memory caches to avoid expensive database access and calculations



- designing and implementing a flexible and modular security system to protect sensitive data using various access levels and granularity management
- extensive requirements engineering involving regular contact with the external client
- acting as lead developer and technical project manager
- Redesign of BBDO's corporate website using Communicate Day CMS (see <http://www.bbdo.de>)
  - optimizing application design to reduce unnecessary resource consumption
  - performing requirements engineering and performance and stability optimization, resulting in reduced time to implement new features

### Software Developer

net mobile AG, Zollhof 17, 40221 Düsseldorf

January 2002 – February 2005

### Responsibilities

Implementing mobile applications using Java (J2ME) technology, developing Tomcat AS-based web applications, porting games for mobile phones to various handsets.

- Development of an automated build process using Apache Ant to reduce time-to-market of mobile applications for a wide range of devices
  - extracting generic application logic and algorithms to combine them with device specific code which is independent of the actual application to reduce the need to keep various branches of the same application for different mobile devices. This effort reduced the number of code bases to keep for one application from  $n$  (the number of devices targeted) to 1
  - reduce software errors that are caused due to inconsistent code bases for the same application
- Optimizing various J2ME/DoJa mobile games to scale to limited resources concerning memory and processing power on different devices
- Developing a mobile application for a dating community as a client to a server application using XML technology

### Early Career Summary

<b>Assisting Teacher for Java Courses</b>	University of Duisburg-Essen	October 2001 – February 2002
<b>Software Developer (Student)</b>	Vodafone TeleCommerce GmbH, Düsseldorf	May 2000 – October 2000
<b>Software Developer (Student)</b>	Mannesmann Demag AG, Duisburg	During school holidays 1997 and 1998