

Curriculum Vitae

Overview

Name	Jürgen Simon
Education	Diploma in Physics (Major in Atmospheric Physics, Minor in Applied Geophysics and Theoretical Physics), University of Bonn. Ongoing PhD (Meteorology) Nursing (Diploma), Psychiatry, Intensive Care and Oncology.
Languages	German (native) and English (very good), Portuguese (Beginner)
Focus IT	Lately mainly web applications (full stack) in Java/Javascript, design and implementation of micro service architecture, leading of small to medium sized teams and project management. Would love more scientific software development and more management / project leading in international remote teams. I've been working remotely for more than 10 years now.
Contact (PT)	Rua Joaquim Martins Bispo Jr. 113 6000-037 Castelo Branco, Portugal F: +351 272 337 419 M: +351 965 290 341
Contact (DE)	Quirinusstrasse 13 52353 Düren, Germany.
Email	iontichy@protonmail.ch
References	Jorg von der Ham, iambnb (jorg@iambnb.nl) Ben Gillingham, Ag-Space (ben.gillingham@ag-space.com) Peter Folle, Triginta Capital (pfolle@triginta-capital.com) Martin Fehlhaber, GFT (Martin.Fehlhaber@gft.com) Mark Sandrock, WDR (Marc.Sandrock@wdr-mediagroup.com) Prof. Clemens Simmer, MIUB (csimmer@uni-bonn.de)

Skillset

Planning and design	Project management, requirement management, high-level design and documentation, architecture, everything involved in the technical side of planning and implementing complex projects, rapid prototyping.
Project leading	Agile project management with SCRUM and Kanban. Lead-programming and code revisions. Quality control. Documentation management for code- and project documentation. Atlassian (JIRA/Confluence etc.), TRAC, Redmine.
Programming languages	Java, C/C++, Objective-C, Python, Javascript, FORTRAN, Tcl/Tk, Pearl, Ruby, Shellscripting. Whatever does the job.
OOA/OOD	Design patterns (GoF etc.), UML, CASE Tools (Rational Rose, ArgoUML, Together)

IDEs	Borland Suite, Eclipse, XCode, JBuilder, Netbeans, IntelliJ, PyCharm, CLion and others.
Deployment/CI	Heroku, Github, Bitbucket, CircleCI, TravisCI, Papertrail, Slack, Hudson/Jenkins, Teamcity
Cloud Services	AWS Services (S3, ES, IAM etc.), RabbitMQ
Revision Control	GIT, Mercurial, Subversion, CVS, Perforce
SQL Databases	PostgreSQL / PostGIS, MySQL, Oracle, H2, Derby, others.
NoSQL Databases	Couchbase (including mobile), MongoDB
Mobil	iPhone / iPad (~10 apps), Android (2 apps)
Web	HTML5, CSS3, XML, JSON, Ajax
Javascript Frameworks	Node.js, Angular, Bootstrap, React, Express, Strongloop, JQuery, Sencha, Treesaver, Google Maps, Bing Maps, D3J and more.
J2EE Stack	JSF, Primefaces, myBatis, JDBC, Spring, Hibernate
Java Application-Servers	Apple WebObjects, Apache/Tomcat, JBoss
BI Frameworks	Jasper Reports, Crystal Reports
EAI	XML-RPC, SOAP, CORBA, RMI, JMS
WebServices	SOA, REST, JAX-WS / JSR244
XML	DTD, XSD, XSLT, Xpath, SAX- and DOM parsers, JAXB etc.
Protocols	TCP/IP, HTTP/HTTPS, proprietary protocols (ASN.1)
OSX Programming	Cocoa / Foundation, AVFoundation, Quartz
Administration	Linux / Unix / OSX / Debian / Raspbian
Miscellaneous	SugarCRM, Lucene / SolR, OpenVPN, Java Swing, Raspberry Pi

Commercial project experience

(IamBNB Amsterdam, 2016 to date) [remote] {hospitality}

I'm lead developer in an Amsterdam startup (top ten start-up in the Netherlands in 2015) where I perform the technical lead of an international remote team, reporting to the CTO. I work closely with the product owner to advise on the technical aspects of planned features, perform create and maintain the architecture and hold regular code reviews to maintain and improve the quality and cohesion of the code base, which is mainly Node.js and Angular.

Our work consists largely of design and implementation of a modern microservices architecture including B2B integrations with external API such as Airbnb (inofficial), booking.com and others. An Angular front-end provides the people working with customers with a reactive UI designed to help them meet the needs of the customers and smoothly organise all the aspects around making their stay in Amsterdam or Paris as pleasant as

possible. By logging to Elasticsearch and analyse logs in Kibana, I am capable of delivering a good prioritisation of bugs and other problems and monitor the status of the integration quality with external API (booking.com/Airbnb) in an efficient and easily communicable manner. I'm also performing many dev-ops tasks, maintaining the application on Heroku and many of the AWS services we are using.

To facilitate the development process I automate many of the processes in development (developer setup, regular development data updates from production data and so on as well as deployment (automated deployment and repository maintenance) using bash scripts and docker.

I also perform extensive load and other behavioral tests on internal and external services using experimental protocols and Jmeter scripts, design test protocols and documentation for user acceptance testing and help conducting those. Getting solid data to base your decisions on can be time consuming, but only by developing quantifiable criteria can one truly gauge one's progress.

Besides the technical tasks, I mentor/tutor younger and/or more inexperienced members of the team in coding, patterns and methodology, organise the JIRA based Kanban workflow and help the CTO with his decision making process.

(Javascript ECMA5+6, Node.js, Angular, Grunt, Bower, Loopback, Mocha, Karma, Protractor (Selenium), Postgre, Github, JIRA, CircleCI, Heroku, Slack, Elasticsearch/Logstash/Kibana (ELK), RabbitMQ/AMQP, AWS-S3, newrelic, Jmeter, Docker, D3 for the visualisation of business metrics).

(AgSpace Precision Farming, Swindon, 2014 - 2015) [remote] {agriculture}

I remotely developed software on all levels of the stack of the precision farming software provided by AgSpace, more intensively on the web services backend and Swing UI client. I created data structures and import routines for information from regulatory bodies concerning insecticides and pesticides, provided an interface for planning and applying spray mixes. I enjoyed the geoinformational applications, working with satellite imagery in python. I also created webservices for applying external rulesets (by seed companies for example) to plans made by farmers. My favourite piece of work was the classification of crop diseases and pests using a multinomial multivariate Naïve Bayes classifier. Another part of my duties was refactoring a mapping framework from Bing Maps to Google Maps.

(Java, Python, Javascript, Spring, Hibernate, Swing, Google Maps, Bing Maps, Apache Mahout, QGis, various GIS tools, Mercurial, Bitbucket, JIRA).

(WDR Media Group, Cologne, 2013 - 2014) [mostly on site, some remote] {media}

I performed a vast refactoring and extension of a real-time news system for sports news for the biggest German sports news provider sportschau.de. I was responsible for the design and implementation of the REST webservices backend (JSR244) and the JSF front-end components. The work entailed connections to Push Services (like APNS and GCM) as well as Twitter and backend API for Sportschau's mobile Apps. The project is going live for the Bundesliga 2014.

(Java, J2EE, iBatis, JAX-RS, XML, HTTP, JSF, Primefaces)

Before that, I developed a news archiving solution in the context of CMS change at the WDR. A transformation of news articles from a customary XML was required, I designed a system indexing the transformed legacy data using SOLR. HTML/Javascript front-end for archive searches with JQuery. The system was important for journalists to have access to past articles of this broadcasting station.

(Java, J2EE, XML, XSLT, SolR, Javascript, JQuery, HTML5/CSS3)

I also updated a webservice for an acronym database @ WDR

(Java, J2EE, myBatis)

(Gerolsteiner Brunnen GmbH, Gerolstein, 2011 - 2014) [remote] {food }

The iPhone App 'TrinkCheck' allows users to log their water consumption and compare it to guidelines layed out by the German society for nutrition (www.dge.de). The app allows the user to get recommendations based on a number of daily varying factors as well as age and weight. It contains a graphical and tabular history, static and dynamic reminder functions and a mineral calculator. The app is localized in English and German and available in AppStore. The idea, concept and implementation was done by myself, I then sold the app to Gerolsteiner for branding and a few extensions were commissioned.

(iPhone SDK 3.x – 7.x, Objective-C, SVN, Mingle, Trac)

I also supervised, code-reviewed and bugfixed an Android version of the TrinkCheck-App. The bulk of the development was performed by contractors (due to time constraints) and I mainly managed the project. The app is also available in Google PlayStore.

(AndroidSDK 2.3 - 4.x. Java. SVN/Git, Trac)

(Ambassadors Associated International Networking, Bonn, 2012) [remote] {politics}

As a favor to a friend I helped setting up a company web presence at <http://www.aain.biz> This mainly required management, negotiations and service configuration. The actual web design was done by a contractor from Berlin.

(Project management, operational setup)

(GFT, Bonn, 2011 - 2012) [on-site] {media}

I supported the conceptualisation, prototyping and implementation, mainly of the client-side components of the www.contentconverter.de - Plattform of the Deutsche Post AG (via GFT). Using Javascript with Treesaver for rendering news and magazine content through templates and styles completely on the client in HTML5/CSS3 proved a challenging job. The tool is mainly targeted at iOS and Android smartphones. I developed the native application components in iOS and mentored the development on Android. Content providing and exchange using CouchDB and MobileCouchbase was a new concept at the time. I enjoyed the technical lead role in a small team of 5 developers tremendously and made a name for creative solutions with an eye for the feasible.

(HTML5, ExtJS / Sencha-Touch, WebKit, Treesaver, iOS, Android. CouchDB, Mobile Couchbase, Objective-C, C++, Java, Javascript, Python.)

(YOC-AG, Cologne, 2010 - 2011) [partially remote] {media}

Developed a suite of apps covering various areas of content provided by the established German publishing house DuMont. Modular Application-Development, Apps are fully configurable from modules through JSON files. Release of the first 6 Applications is planned for August 2010.

(iPhone SDK 4.0, Objective-C, JSON over HTTP, In-App – Purchase, Subversion.)

Recipe application for the german food producer Knorr. Voluminous app with unusual navigation elements and Core-Data backend. Search functions. Responds to orientation to provide a different look on recipe details. Complicated CI integration.

(iPhone SDK 4.0, Objective-C, CoreGraphics, CoreData, JSON, Subversion)

Jacobs Photo-Freezer. Application for image manipulation (icing over by blowing into the microphone and rubbing off with the fingers) for a marketing campaign. Released to AppStore.

(iPhone SDK 3.2, Objective-C, CoreGraphics, Facebook-Integration, Subversion.)

(Violet Enterprise Solutions, Singapore, 2009 - 2011) [remote] {hospitality}

iPhone Application for in-house deployment at VES. Multiple table views with reloading images, detail views, image views, web views, etc. Link-up with backend via XML.

(iPhone SDK 3.1, Objective-C, XML, Subversion, Trac.)

(Flow By Access, Bonn, 2009 – 2012) [remote] {media}

Code responsibility for all applications marketed by Flow By Access. (GigGuide, numerous radio-clients). Development of the new features for the GigGuide version 1.2, which is available in the AppStore now.

(iPhone SDK 3.0 – 3.1, XML, Objective-C, SVN, Trac.)

(FOC World AG, Zurich, 2010) [remote] {fashion}

Integration of a SolR/Lucene framework into the website www.brands-paradise.com

(SolR, Java, Apache Tomcat, OpenBIZ)

(Kontrast Communication Services, Düsseldorf, 2008 – 2010) [remote] {media, education}

Application for the management of nation-wide advertisement campaigns for a big german mobile phone carrier. Campaigns are supported at all stages from conception (including web-based sketch tools) to content management (image database, text databases, corporate identity guidelines, etc) to communication between advertisement partners, printers, radio stations and newspapers. Highly complex application landscape with web services, indexing servers, Adobe Flash, Web2.0 features and WebObjects applications.

(Apple WebObjects, Webservices, XML, SolR und Lucene Indexing, Java, Javascript, Java Applets, Ajax, FTP, Subversion und Trac)

Large scale refactoring and extension of WebObjects applications in an E-Training context. Migration of a complex live Oracle database to MySQL.

(Apple WebObjects, Single-Sign-On. Oracle, MySQL, Java, Subversion, Trac.)

(Triginta Capital, Düsseldorf, 2005 – 2008) [remote] {finance}

Management Information System (MIS) for one of the leading German private equity providers at that time. Complex business logic for observing markets and information gathering from various sources, including legacy (such as MS-Access databases) and external sources. Data Mining. Controlling Modules. Fund management. Reporting tools for

aiding with the reporting to the companies investors, including automated document generation, integration of Microsoft Office products and investor specific web applications. Extensive use of Direct2Web (D2W, WebObject's rule engine) for website and report generation.

(Agile Development. Project documentation with Wiki. WebObjects, OpenBase, MS Access + Excel, MySQL, Java, XML, Subversion, POI, Jasper Reporting, Business Objects (Crystal Reports))

(Meteorological Institute Bonn, 2007 to date) [mostly remote] {science}

Refactoring of a set of applications and loose source codes for processing of meteorological precipitation radars into a coherent library and set of applications. Extension of the library by routines for reading newer formats, like HDF5 and Radolan (DWD) files. Integration into the operational procedures. The C++ library libradolan is available on GitHub and still in use.

(C, C++, Eclipse CDT, Proj4, GeoTIFF, Subversion)

(Debitel, Stuttgart, 2006) [remote] {telco}

Troubleshooting problems with webservices in an SOA context for an mCommerce application. Special help with SOAP protocol and Apache Axis.

(Java, Apache Axis, SOAP, SOA)

(webtecc, 2005 to 2015) [own offices] {misc}

iPhone Application 'TrinkCheck' allows people to track their water intake and makes recommendations based on changing daily conditions. Localized in German and English language. The applications was created by us and later sold to Gerolsteiner.

(iPhone SDK 3.0 – 3.1, Objective-C, SVN, Mingle, Trac)

iPhone Application "Bellyaches" designed to help people to link symptoms to ingested food. Aimed to assist people suffering from food tolerance issues (like lactose- or fructose malabsorption , gluten allergy, chronic colitis etc.), helping them in finding out which type of food they tolerate and which not. Released January 2010.

(iPhone SDK 3.0 – 3.1, Objective-C, SVN, Trac)

Conceptual planning and implementation of a set of applications on different platforms. The Goal is assimilation and display of weather radar information by the European Radar Association. Cross-platform development in parallel for Java and C based Clients. Functionality encapsulated in Libraries for each language. Visualization of raw radar information in GIS contexts using OpenGIS Mapservers and OpenCV graphics library. Implementation of the customer internet portal in Java WebObjects. REST server for customer profile information. Implementation of the C-Library. Implementation of the iPhone Application, including CoreLocation features and Push Messages. Backend Connection using REST. Further clients are planned for RIM, JavaFX and Android

(iPhone SDK 2.0 – 3.1, Objective-C, C, C++, CMake, Xcode, Java, Eclipse, PostGIS, OpenGIS, OpenCV, uDig, Mingle, XML, REST, WebObjects)

(Phenomic Game Development (now EA Studios), Ingelheim 2004) [remote] {gaming}

Design and Implementation of an online platform for Spellforce2. Web application for player registration, stats, game infos, Forums etc. Connection of game clients using webservices

and tcp/ip for game matchmaking and in-game chat. Backend application with JMS and C++ tcp/ip server.

(Java, Visual C++, MySQL, WebObjects, Axis, JBoss and JBossMQ, gSoap, OpenSSL, Perforce, Doxygen, Wiki)

(T-Mobile, Bonn, 1999 - 2004) [on site] {telco}

Design and implementation of a TCP/IP server in Java for provisioning of mobile phones in connection with T-Mobile's SAT-Server project. High availability integration. High performance design using .nio classes.

(Java, TCP/IP, CORBA, Oracle, SunCluster 2.0)

Proposal, installation and administration of a Wiki for improving communication between the development team, test department and the live system administration team.

(Twiki, Apache)

Development of the B2B interface for T-Mobile's SAT – Server. Web services. High availability cluster integration.

(C++, Java, SOAP, RMI, CORBA, SunCluster 2.0, Apache Tomcat)

Design and development of a tool for managing Oracle PL/SQL database triggers with associated java code running in the database. Graphical user interface. Dynamic code generation from templates. Integration with unix processes.

(Oracle, Java, PL/SQL, Java Stored Procedures, Swing)

WebObjects prototype of a customer application for managing dynamically allocated MSISDN numbers. Configuration of time schedules, user groups, availability etc.

(Java, WebObjects, Oracle, Solaris)

Development of C++ modules for T-Mobile's SAT server. Configuration, Core-Engine, SMS encoding. Performance and stability tests. Deployment procedures. Help with the refactoring of the core engine in design and implementation. Connectivity with SMSC. CORBA interface for third party access. High availability integration.

(C++, Oracle, RogueWave, XML, yacc/lex. EMI - Protokoll (SMSC), CORBA, SunCluster 2.0)

B2B integration for the third party interface (http) to T-Mobile's SAT server. Graphical test applications (desktop and applet).

(HTTP, OTA, AIO, Java, Swing/AWT)

Design and implementation of a strategy game for the WAP market. WebObjects application for customer access and WAP generation (WapObjects).

(WebObjects, Java, WAP/WML. Oracle)

Test of WAP enabled mobile devices of various vendors with regard to usability, standard-compatibility and security. Evaluation under aspects of a planned set of mCommerce applications.

(WAP/WML, Testing)

Development of a WAP application prototype (mCommerce). Presented with great success at Cebit 1999.

(WML, Ericsson's Jaffa Framework, RMI, Java, Oracle)

Evaluation of several different CORBA orbs on Solaris 8. Aspects of interoperability, performance and integration.

(Oracle. RogueWave DBTools+, Visibroker, TAO, Mico, Omniorb. Java and C++)

Conception and development of an installation manager for distributed systems on high availability clusters on Solaris. Installation of software packages and provisioning of databases.

(Tcl/TK, Shellsript, Package-Manager and Oracle)

Development of an internal project management tool.

(MS-Access and Visual Basic)

(ProSolutions, Bonn, 2000) [remote] {telco}

Development of a complex WebObjects component for imaging slices of data cubes as pie charts, bar- or line diagrams to be used in an MIS for T-Mobile.

(Java, WebObjects, Visualisation)

(Tegaron Telematics, Bonn, 1998-1999) [on site] {telco}

Test of telematic devices in a test laboratory. Implementation and operation of automatic and manual test routines and reporting of results

(Testing).

Scientific experience

(Hans-Ertel Zentrum für Wetterforschung und MIUB Bonn, 2011 - 2014)

PhD (ongoing): Until middle of 2013 I was working as scientist for the Hans-Ertel – Zentrum für Wetterforschung in the OASE project (Theme section 1 – atmospherical dynamics and predictability), where I developed more computer vision algorithms for tracking multivariate events in high resolution 3D composites of radar-, satellite- and lightning data for lifecycle studies in highly dangerous weather events (storm research). Besides the research I introduced software management tools at the meteorological institute and taught GIT/Redmine basics to the scientific community there.

Presentations: Hans-Ertel-Zentrum (DWD), EGU Wien, X-Band Workshop Delft, ESSL Helsinki, HDCP2 Meetings, Workgroup Meetings

(Polarimetric radar-, satellite- und lightning data, C++, Templates, NetCDF, HDF5, TBB, Boost, FLANN, Visualisierung, GIT, Redmine)

(University of Bonn, Meteorology, 1996 - 2005)

Diploma Thesis: development of an algorithm for tracking precipitation in meteorological radar. Implementation into an operational routine and porting to straight C/C++ and Java libraries and applications for the meteorological institute. Scientific software development. Radar meteorology (X-Band, C-Band, Composites). Satellite data (formats and applications). Tracking and computer vision applications. Statistical analysis. Statistical classification problems. Meteorological know-how.

(WebObjects, Objective-C, MySQL, Cocoa, GNUstep, Mac OSX Linux)

Numerous projects and workshops during my studies on the subjects of numerical simulations of flow patterns, mechanics and statistics of earthquakes, data assimilation routines and more.

(Data Assimilation, Simulation)