



Just van den Broecke
Open Source Geospatial Professional

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Summary

All-round geospatial professional specialized in Open Geo-ICT. Experienced (25+ years) consultant/architect/developer/trainer with a strong background in software development, always on the forefront of new and emerging technologies. Since 2004 specialized in Free and Open Source for [Geospatial](#) (FOSS4G a.k.a. Open GIS/Open Geo-ICT). [Charter Member at OSGeo.org](#). Trailblazer and now Chairman of the Board of the [OSGeo Dutch Language Chapter: OSGeo.nl](#).

Skills

methods: Booch, OMT, Extreme Programming, Agile methods, Scrum

languages: Java, C, C++, Python, PHP, HTML[5], CSS, JavaScript, XML, XSLT

internet: TCP, UDP, Web Services (REST, SOAP, WSDL, UDDI), IP-Multicast, HTTP, SMTP

telecom: POTS, ISDN, B-ISDN, ATM, T.120, X.700, TMN/Q3, TINA, GPRS, UMTS

multimedia: A/V standards (MIDI, PCM, JPEG, MPEG), networked multimedia applications

domains: geospatial/GIS, formerly: finance/banking, telecom, multimedia, industrial automation, gaming,

technologies:

GeoSpatial: WMS/WFS/WCS/SOS/SLD/CSW/GML/OpenLS (OGC standards), GPS, PostGIS, UMN MapServer, GeoServer, deegree, MapProxy, GeoWebCache, GeoNetwork, GeoTools, OpenLayers, GeoExt, Heron MC, GDAL/OGR, GML, INSPIRE, Google Maps, OpenStreetMap (OSM), NLEExtract, Dutch Key Registrations (BAG, Top10NL, BGT etc), Stetl, 3D-technologies

Java: J2SE, J2EE (EJB, servlets, JSP etc), J2ME, JMS, JTS, JNI, Spring, Hibernate, REST-frameworks (too many to sum up)...

Mobile: J2ME, Android, HTML5, PhoneGap/Cordova

CORBA: Iona Orbix/OrbixWeb, Visigenic VisiBroker

ODBMS: ODI ObjectStore for C++/Java

RDBMS: MySQL, PostgreSQL/PostGIS, Oracle, HSQLDB, Cloudscape, SQLite, Spatialite

libraries: ILOG, Rogue Wave, ObjectSpace, JQuery, ExtJS/Sencha

CASE tools: Rational Rose, CayenneSoft ObjecTeam, OI TogetherJ

IDEs: MS Visual C++/J++/studio, Symantec Visual Cafe, Borland JBuilder, IBM VisualAge, Kawa, IntelliJ, Eclipse

Web/Application Servers: Apache, BEA WebLogic, IBM WebSphere, JBoss, Tomcat, Jetty, Resin

SCM: SCCS, RCS, CVS, Subversion, Perforce, MS SourceSafe, Git/GitHub

OSs: UNIX®-es (Solaris, SystemV, BSD), Linux (Debian, Ubuntu, CentOS etc), MS Windows (95/98/NT/XP), Mac OS X

misc: Ant, Maven, various XML/XSL tools, Cloud technologies, virtualization (Vagrant, QEMU/KVM, etc), Google technologies (Code, Sites, Groups, Docs etc), Docker

speaking: English (++), German (+), French (+-)

trainer: excellent evaluations as an IT trainer

personal: teamplayer, technical leadership, initiator, visionary, communicative, alert

Education

- 1976 gymnasium-B, Scholengemeenschap 'Casimir', Amstelveen
- 1985 chemistry with computing science (cum laude), University of Amsterdam
- 1989 post HTO telematics, Stichting Post Tertiair Onderwijs, Utrecht
- 1985+ ongoing education in many areas of computing science (design, languages, technologies, products), GIS and management (presentation techniques, meeting techniques, working with groups, project management, business management).

Career

1997+ Just Objects B.V. (self-employed, contracting)

Since november 1, 1997 operating as an independent consultant (ZZP) through own company, Just Objects B.V., providing consultancy, training and development services for a great variety of customers. Most projects have in common that they involve Object Orientation, Java and Web technologies. Since 2004, focus is mainly on Free and Open Source [geospatial technology](#) ("Open GIS"). In addition I have initiated several [Open Source projects](#). More details on Just Objects B.V. can be found at justobjects.nl. Postings on projects on justobjects.nl/writings.

Projects:

- 1997 - [KPN Research \(now part of TNO\)](#) - architecture and development in TINA-C project. Technologies: C++/STL, CORBA (Orbix).
- 1997 - [Atos Origin](#) - provided training in Java programming and Java Enterprise Architectures
- 1997/1998 - [Orion Telematica TBI](#) - architecture and development of distributed Java framework for Intranet applications
- 1997+ - [Waag Society](#) - architecture and development of networked multimedia tools for the audio-visual arts (KeyStroke). See also www.keyworx.org
- 1999/2001 - [MeesPierson N.V. \(now Fortis Bank\)](#) - consultancy and development for technical framework with Java, CORBA (VisiBroker) and an ODBMS (ODI ObjectStore) for the Foreign Exchange Information System (FEIS).
- 1998 - [Sun NL](#) - acquired certification for "Sun Certified Java Programmer" and Sun Java trainer.
- 1999 - [Ericsson](#) (through [Datasim Education B.V.](#)) - provided training in Java programming and design patterns in Java.
- 1999 - [Datasim Education B.V.](#) - provided training on Design Patterns in Java.
- 1999 - [Virgil B.V.](#) - XML/XSL consultancy and EJB development with BEA WebLogic.
- 1999+ - [Cowcatcher](#) - building an Open Source repository of Java training/teaching materials.
 - Development of the HolyCow! course content development, management and presentation framework. Technologies: XML, DHTML, Java (JSP, Servlets).
 - Development of course content for Standard and Advanced Java training and training in J2EE technologies (JSP, Servlets, EJB).

More news on the unique Cowcatcher approach to Java training is on the [Cowcatcher website](#).

- 1999+ - Provided Java training (both content and as a trainer) for customers including [Bibit](#) and [XPuntX](#), [Proface](#), [Nibble](#), [Bright Alley](#) and [Yokogawa](#).
- 1999 - [ABN AMRO](#) - (through [MPHASIS](#)) Multi-Channel Platform (MCP) project: Architecture and development of a universal platform for all of ABN AMRO's client channels (branch, IVR, Web, home banking). Technologies: UML, Servlets, JSP, EJB, IBM WebSphere.
- 1999+ - [Pushlets](#) - a personal Open Source project. Pushlets enable any servlet-based server to push dynamic content into DHTML-based browsers. See the examples. Technologies: Servlets, JSP, JavaScript, Dynamic HTML.
- 2001 - [First Result B.V.](#) EJB Architecture Consultancy
- 2001 - [European Patent Office](#) (through [MPHASIS](#)) EJB Architecture Consultancy
- 1999/2001 - [Rabo Bank Treasury](#) (through [Virgil B.V.](#)) Development of live streaming of currency rates and news to web-browsers using [pushlet-technology](#). Result: www.rabotreasuryweb.com

- 2002 - [Environmental Emission Exchange \(through Virgil B.V.\)](#) Architecture and development of a real-time person-to-person trading platform for NOx emission rights.
- 2002 - [Virgil B.V.](#) Architecture and development of the [Virgil Market Data Distributor](#), a financial data distribution toolkit.
- 2003/2004 - [Yokogawa](#) Development of a Java front-end for the [FAST/TOOLS process control \(SCADA\) system](#). Provided Java training (basic, advanced).
- 2004 - [Waag Society](#) (sponsored by KPN). Development of [Frequentie 1550, a mobile game using UMTS, GPS and J2ME](#). See the [KPN press release](#). This application is developed on the [KeyWorx Platform](#).
- 2004 - [Waag Society](#) (with Jeff Mann and [Michelle Teran](#)) Developed real-time data exchange component to connect social spaces within the [Lifeform Telekinetics](#) project.
- 2005 - [1100CC](#) Java development consultancy.
- 2005 - [GeoSkating](#). Creating annotated/multimedial skate-maps and rea-time tracking through a mobile phone with attached GPS.
- 2005 - [GeoSailing](#). Creating annotated/multimedial sailing routes through a mobile phone with attached GPS.
- 2005+ - [GeoTracing](#). Generic platform for remote tracklogging, real-time tracing and multimedial annotation through a mobile phone with attached GPS.
- 2005 - [Waag Society](#). Creation of a GeoDrawing game during the Amsterdam MuseumNight 2005. See [www.n8spel.nl](#)
- 2005 - [DTS B.V.](#) provided advanced Java and OO/Design Patterns training.
- 2005 - [Waag Society](#). Multimedial project See [www.multimedial.nl](#)
- 2005 - [Stichting Otterstation Nederland \(SON\)](#). GPS-based field observations for otters (OtterTracing) See [www.geotracing.com/otter](#), powered by [GeoTracing](#)
- 2006 - [Dutch Ministry of Transport \(Rijkswaterstaat\)](#) - "[Adviesdienst Geo-informatie en ICT \(AGI now DID\)](#)". Integration of [IONIC \(now ERDAS\)](#) Red Spider geospatial products into AGI spatial data infrastructure.
- 2006 - [CityWorks](#). Sense of the City community mapping project See [www.senseofthecity.nl](#), powered by [GeoTracing](#)
- 2006 - [CityWorks](#). Sense of Brainport community mapping project See [www.senseofbrainport.nl](#), powered by [GeoTracing](#)
- 2006 - [Bliin](#). Navigating experiences See [bliin.com](#), powered by [GeoTracing](#)
- 2007 - [CityWorks](#). Jeugd GePoSitioneerd (JGPS) project See <http://www.jeugdgepositioneerd.be>, powered by [GeoTracing](#)
- 2007 - [Waag Society](#) - [Mobile Learning GameKit \(MLGK\) project](#), powered by [GeoTracing](#)
- 2007 - [Waag Society](#) (with Alterra/WUR). [Digitale Wichelroede \(DIWI\) project](#), powered by [GeoTracing](#)
- 2007 - Live tracking of [Schuttevaer Sailing Race 2007](#) with [GeoSailing](#) See [www.geosailing.com/svr](#), powered by [GeoTracing](#)
- 2007 - [Waag Society](#). WalkAndPlay workshop at [Picnic 2007](#) See [walkandplay.com](#), powered by [GeoTracing](#)
- 2007+ - owner/shareholder of [7scenes B.V.](#), a mobile locative storytelling platform. Architect/developer in various projects such as [GamesAtelier](#) and [Land van Leeghwater](#).
- 2008 - Live tracking of [Schuttevaer Sailing Race 2008](#) with [GeoSports](#) See [www.geosailing.com/svr2008](#), powered by [the 7scenes platform](#)
- 2008 - Live tracking of [Frisian Solar Challenge 2008](#) with [GeoSports](#) See [www.geosailing.com/fsc08/](#), powered by [the 7scenes platform](#)
- 2009 - [GeoCat B.V.](#) and [CampToCamp](#) - [GIS metadata catalogue for Swiss Topo](#). SVN committer for [GeoNetwork Open Source project](#)

- 2009/2010 - [Dutch Land Registry and Mapping Agency \(the Dutch Kadaster\)](#) - GEORZ Lab and Research - Consultant/developer for Open Source Geo-solutions, mainly using the [OpenGeo architecture](#).
- 2009/2010 - [Dutch Land Registry and Mapping Agency \(the Dutch Kadaster\)](#) - ICT Dept - Consultant within several projects such as Cadastral parcel splitting ("Voorlopige Grenzen") and TOP10NL (Dutch Topo Map) visualization with GeoServer/SLD.
- 2010 - [Dutch Land Registry and Mapping Agency \(the Dutch Kadaster\)](#) - GEORZ Lab and Research (with [Geodan](#))- Developer proof of concept for mobile access to [KLIC Online](#) (national cables and pipelines information online).
- 2009+ - [Dutch Land Registry and Mapping Agency \(the Dutch Kadaster\)](#) - GEORZ Lab and Research - Architect/developer for [INSPIRE](#) data transformation and download/view services using Dutch geo data (BAG, Top10NL, BRK). Developed [working prototype](#) with Deegree, GeoServer, PostGIS and GeoExt within the context of [ESDIN](#) and [EURADIN](#). See also [this published article](#).
- 2011 - [Rijksvastgoed- en ontwikkelingsbedrijf \(RVOB\)](#) - through [OpenGeoGroep](#)- Developer for a web-based GIS viewer based on the FOSS [Heron Mapping Client](#)
- 2011-2013 [Publieke Dienstverlening op de Kaart \(PDOK\)](#) - Developer/architect for the Dutch central National Spatial Data Infrastructure (NSDI).
- 2011+ - [OSGeo.nl - Dutch Language Chapter for OSGeo.org](#) - Secretary of the OSGeo.nl Foundation (Stichting OSGeo.nl).
- 2011+ - [NLEExtract - ETL and Visualization for Dutch open geo-data](#) - Lead developer.
- 2013+ - [Stetl - Streaming ETL framework](#) - Open Source Python framework for Spatial ETL. Lead developer.
- 2013 - [KadViewer](#) - Prototype [Heron](#) Viewer for Dutch Kadaster (PPI). Sole developer.
- 2013 - N.V. Nederlandse Gasunie - provided workshop [Heron web mapping client](#) and Open Source Geo.
- 2013/2014 - [Warwickshire City Council \(WCC\)](#) via [OpenGeoGroep](#). Advanced components for the [Heron web mapping client](#).
- 2014 - [Warwickshire City Council \(WCC\)](#) via [OpenGeoGroep](#). Advanced components for the [Heron web mapping client](#).
- 2014 - [Dutch Kadaster \(PPI\)](#) - developed private cloud (Ubuntu/QEMU/KVM with open geo-stacks) for the [Kademo Lab](#).
- 2014 - [Publieke Dienstverlening op de Kaart \(PDOK\)](#) via [Geodan](#) - Consultancy [Heron web mapping client](#) for [PDOK Viewer](#).
- 2014 - [Geonovum](#) - Implementation of [Sensorweb/SOS for RIVM and EU Air Quality Data](#).
- 2014 - [Geonovum](#) (via [OpenGeoGroep](#))- Migration of IMWE2008 to IMWE2014: github.com/Geonovum/imwe2014.
- 2015 - [OpenTopo.nl](#) - Developed ETL, WMS and tiling services and [apps](#) for [OpenTopo.nl](#) raster data.
- 2014-2016 - [Rijksvastgoedbedrijf \(RVB vh Domeinen\)](#) via [IT-Staffing](#) - Architected and implemented migration (to [Dutch national SSC](#)) and (Debian packaging) deployment strategy for the RVB OpenGIS services infrastructure.
- 2015 - [W/E Adviseurs - Utrecht](#) - Architected Open Source Geospatial (GIS) services infrastructure.
- 2015 - [Gasunie](#) - Open Source GIS architecture, advise and consultancy.
- 2015/2016 - [Geonovum](#) - Architecture and implementation of the [multiple award winning Smart Emission Nijmegen SensorWeb project](#).
- 2015+ - [map5.nl](#) - providing commercial map-services based on [OpenTopo.nl](#) and other free Dutch geo-datasets.
- 2016+ - [Municipality of Nijmegen](#) - Development and maintenance for the [multiple award winning Smart Emission Platform](#).

- 2016+ - [GeoHealthCheck](#) - Joined this Open Source project - now key developer. GeoHealthCheck is a Python application to support monitoring OGC Web Services uptime and availability.
- 2017+ - [Intemo - Helmond](#) - Extending the [Smart Emission Platform](#) for the [Dutch National Smart City Living Lab](#).
- 2017+ - [Joint Research Centre \(JRC\) of the European Commission \(EU\)](#) - Deploying [EU-JRC Open Source/Hardware AirSensEUR Air Quality stations](#) within The Netherlands and connecting these to the [Smart Emission Platform](#) in cooperation with [RIVM \(Health Council of the Netherlands\)](#).

1997 Objective Alliance, Amsterdam

Position

Senior Consultant

Activities

Sales support

Pre-sales (customer presentations, technical evangelist) for leading (distributed) object technology products such as Iona Orbix, ODI ObjectStore, ObjectSpace and ILOG products.

Training

Trainer for Objective Alliance/[Valtech](#). Provided several runs of the courses:

"OO Programming with Java", "Java Enterprise Architectures", "CORBA Overview", "CORBA Enterprise Architectures"

Consultancy

Advice, architecture and design in several projects for companies in the telecom/internet sector. The technologies involved are Intra/internet, CORBA, TINA-C, Java, C++ and ODBMSs.

Development

C++/Java programming with CORBA, ObjectStore, ObjectSpace and ILOG products.

1985-1996: Lucent Technologies (formerly AT&T), The Netherlands

Last Position

Member of Technical Staff - Chief Architect - Bell Laboratories

Projects

1985-1994: software development for the AT&T 5ESS½ public switching system:

- signalling (a.o. N-ISDN)
- call control and services (calling number display, three-party service,
- network management: OSI (Session, Presentation, FTAM), TMN/Q3, Billing

1994-1996: [PLATINUM](#) and [MESH](#) projects (ATM/multimedia pilots):

- ATM signalling (ITU Q.2931) platform
- object-oriented middleware ([CORBA](#)) framework for distributed multimedia applications
- multimedia applications (Video-On-Demand, tele-conferencing)

Activities within these projects ranged from initial contacts with customers through specification, architecture, design, programming and management of software teams. All projects involved international cooperation, such as with AT&T Bell Labs, US.

Other

Standards participation in ISO (OSI FTAM), ETSI (TMN-related) and [EWOS](#) (OSI FTAM, OSI Network Management). Lectures on OSI, TMN and object technology.

Publications

More publications, presentations and articles can be found [on my website](#).

Michel Grothe (Geonovum), Just van den Broecke (Geonovum), Linda Carton (Radboud University), Hester Volten (RIVM), Robert Kieboom (CityGIS); *"Smart Emission - Building a Spatial Data Infrastructure for an Environmental Citizen Sensor Network"* [52 North - Geospatial Sensor Webs Conference 2016, Muenster, Germany](#) [PDF Download]

Just van den Broecke; *"NLExtract pakt de basisregistraties uit - BAG en BRT ontsloten met Open Source software"* [Geo-Info](#), 2013-8/9; Edward Mac Gillavry (ed.) [PDF Download]

Ebrahim Hemmatnia, Just van den Broecke, Ko van Raamsdonk, *Harmonising Dutch National Geodata Conform To INSPIRE Using Combined Transformation*; **International Journal of Spatial Data Infrastructures Research**; Vol 5 (2010) [Reference](#)

Linda Rising (ed.) *Design Patterns in Communications Software (includes my article written with Jim Coplien)*; **Cambridge University Press** June 2001; [Reference](#)

J.A. van den Broecke; *Pushlets, Part 1: Send events from servlets to DHTML client browsers*; **JavaWorld** March 2000; [Online Version](#)

J.A. van den Broecke, J.O. Coplien; *"Using Design Patterns to Develop a Framework for Multimedia Networking"*; **Bell Labs Technical Journal**; Volume 2, Number 1, Winter 1997, pp 166-187

H. Ouibrahim, J.A. van den Broecke; *"Multiparty/Multimedia Services to Native ATM Desktops"*; **5th IEEE Symposium on High-Performance Distributed Computing**; USA, Aug. 1996, pp 203-208

Associations

Just is a member of the following associations



[JavaKnights NL \(founder\)](#)



Spare Time

Music making (guitar, MIDI, sampling)

Sports ([field hockey](#), [GPS hiking](#), speed skating, [inline speed skating](#), running, [soccer](#), [Ajax](#))

Keeping up with new developments in my profession