

Florent Georges

Help you define your data strategy

Specialties

- **Management** — Tech lead, teaching, process coaching
- **NoSQL and Data** — Documents, Graphs, MarkLogic, eXist
- **Semantics** — RDF, RDFS, OWL, SPARQL, Triplestores
- **XML** — XQuery, XPath, XSLT, XML Schema
- **Web Services and SOA** — WSDL, SOAP, WS-*, BPMN, BPEL

Summary

Since Florent discovered IT back in the 90's, he has always been fascinated by how data are stored and represented. He naturally came to XML, and contributed many open-source projects in that field.

Florent discovered Web services, and later SOA, in the 2000's. He had the intuition that Web services and SOA are good interoperability tools, but make it difficult to query and investigate the entire enterprise data set as a whole. During the 2010's, he was then pleased to be part of the NoSQL movement, enabling central data hubs in the enterprise, and providing ground for data technologies and data science.

In his pursuit of data flexibility, Florent has been exposed to the Semantic Technologies since the late 90's. But it is only with the advent of NoSQL technologies and transactional triplestores that Florent started to consider using Semantics and the flexibility of its data model in commercial projects.

Florent is an invited expert in the XSLT & XQuery working groups at W3C since 2009, where he works on the new versions of XSLT, XQuery and XPath. Florent is the chair of the EXPath community group at W3C, and the maintainer of XSpec. Florent and H2O are members of the XML Guild, a consortium of some of the best independent XML consultants in the world.

Florent collaborated to several books. He is a certified SOA Architect (by SOA School), and has given multiple talks in several conferences. He has been working two years for MarkLogic, the "Enterprise NoSQL Database", helping many of their clients with their data projects and challenges.

"Florent is an IT consultant in Brussels who has been involved in the XML world for more than 11 years and is a recognized expert within the XSLT and XQuery communities. Soon after discovering Web services, he had the opportunity to work with them for several years with major European institutions and companies in the financial and IT consultancy sectors in Brussels and London. [...] As a result, Florent received his SOA Architect certification with the special « Top Gun » designation."

In [SOA Design Patterns](#) by Thomas Erl et al., Prentice Hall 2009, ISBN 0136135161

Technical skills

Semantics

- **RDF**, data model, concepts and syntaxes
- Modeling: **RDFS**, RDFS+, **OWL**
- Querying: **SPARQL**
- Storing: **MarkLogic**, Jena
- Modeling tools: protégé, Smartlogic
- Open data, linked data

NoSQL

- **MarkLogic**, the Enterprise NoSQL database (member of official group of experts, [SuperNodes](#))
- **eXist**, a NoSQL Document Database and Application Platform (developer on the eXist project)
- EMC xDB database

XML

- **XQuery**, **XSLT** and **XPath** (member of the XML Query and XSL Working Groups at W3C)
- XML **Schemas**, XSD, Relax NG and Schematron
- **Saxon**, BaseX, EMC xDB, Qizx, Zorba
- **XProc**, **XSL-FO**, DITA, DocBook, HTML and XHTML
- **XForms** and Orbeon Forms Server
- DSDL, UBL, **XBRL**, FpML and **ISO/IEC 20022**

Web

- **Node.js**
- **JavaScript**, client- and server-side
- **HTTP** (implemented Servlex, a web application server)
- **HTML5**, basic CSS
- Java containers: Tomcat, GlassFish, WebLogic and JBoss

Web services & SOA

- **WSDL**, **SOAP** and the **WS-*** stack
- The **SOA** principles and patterns (Certified SOA Architect, collaborator to various SOA books)
- **Business Processes** analysis and design: **BPMN** and **BPEL**

Methodology

- **Agile** methodology
- **Design patterns** (object-oriented patterns, SOA patterns, and xUnit test patterns)
- **Test-driven** development
- Service-Oriented Architecture and Business Process modeling

Professional experience

Semantic Data Architect

BNP Paribas

February 2016 - Present | Paris



Florent is in charge of the technological aspects and development of the Data Platform of innovative projects at BNP Paribas, in Paris.

- All data is stored and queried as triples, using Semantic Technologies
- Use a transactional NoSQL triplestore at the core of the Data Platform
- Inference is at the heart of the project, using RDFS, OWL and custom rule sets
- Another keystone on the project is its scale, and its scalability needs

Florent is leading the technical teams on this project. He is collaborating directly with the business to help them identify their needs, as well as helping them unleash the power of their data, and open new business potentials. Florent defines the technical architecture implementing the data strategy of the company.

Keywords: *NoSQL, JSON, MarkLogic, Semantics, SPARQL, RDF(S), OWL, Inference, Time-travel*

Faculty

XML Summer School

September 2012 - Present | Oxford



Florent taught two classes in Oxford, at the XML Summer School, given his insight from the XQuery and XSLT working Groups at W3C. **Trends in XSLT and XQuery** introduced new features in XPath 3.0, XSLT 3.0 and XQuery 3.0. **Introduction to XProc**: covered XProc, the W3C XML Pipeline language for describing operations to be performed on XML documents.

Keywords: *XPath, XQuery, XSLT, XProc*

Principal Consultant

MarkLogic

April 2015 - April 2016 | London



As a Principal Consultant, Florent worked on projects for the following clients of MarkLogic:

- Aetna — United States — 700-people project, part of the Center of Excellence
<http://marklogic.com/resources/aetna/>
- BSI — British Standards Institution — London, UK
<http://marklogic.com/customers/bsi-group/>
- DCLG — the British Department for Communities and Local Government — London, UK
<http://marklogic.com/blog/2016-customer/>
- OECD — the Organization for Economic Cooperation and Development — Paris, France
<http://marklogic.com/customers/oecd-publishing/>
- Standard Norway — Oslo, Norway
<http://konsulter.net/newsroom/article/31/107/>

The projects include central Data Hubs, Data Lakes, complete end-to-end web-based solutions, data systems part of larger solutions, and searchable data and document libraries.

Keywords: *XQuery, MarkLogic, NoSQL, Big data, Semantics, Search*

Solution Architect

MarkLogic

April 2014 - April 2015 | London



As a Solution Architect, Florent helped many clients and partners of MarkLogic with their architecture and use of MarkLogic Server. All clients cannot be disclosed, but among others, Florent worked with the following companies and organisations: Argus, Bayard, BBC, OECD, ICIS (a company of RBI, Reed Business Information), Standard Norway, Swedish Library, and VTV.

Florent also took part in several pre-sales activities, mainly in Europe, in too many countries to be listed comprehensively (geographically between Norway and Israel, alphabetically between Belgium and UK).

In addition to its XML stack (including XQuery, XSLT and XML Schemas) and the NoSQL and Big Data natures of MarkLogic, Florent has been using the new Semantics Technologies stack (namely RDF, RDFS, SPARQL, and OWL).

Keywords: *XQuery, Javascript, Search, MarkLogic, NoSQL, Big data, JSON, Semantics, SPARQL, OWL*

Data Architect

RBI / ICIS

June 2012 - April 2014 | London



ICIS, part of Reed Business Information, is the leading company providing chemical industry news & chemical market intelligence to its clients, in order to help them making the best deals when buying and selling on the very specific markets of chemical products and energy. A new internal project was started to centralize all information in the company and all its departments and to deliver it to other projects, in order to ease consolidating the existing data, developing new products, and integrating recent and foreseen acquisitions.

Florent analyzed the (highly) heterogeneous data in the company and designed the core Data Model. The Data Model is the corner stone of the whole project, and has been designed to be flexible and to cope with unknown evolutions that will arise in the mid-term future. Florent helped designing the REST layer, several services, and how REST principles were applied in the project. Florent also designed and developed several core XQuery libraries on the project, which uses MarkLogic as its XML database and as its middleware and replication system.

Keywords: *XQuery, MarkLogic, XML Schema (XSD), Data Modeling, REST, NoSQL, Big data, XForms*

Faculty

University Versailles/Saint-Quentin

March - April 2012 | Paris



Florent has been selected to give the class about XML technologies to the students in last year of the Master in Information Technologies (both the theoretical class and the exercises). The subjects included XML basics, Java parsers, XPath and the XPath data model (XDM), XSLT, XQuery, XML Schemas (XSD), Web services, various XML dialects, XML databases, and XProc.

Keywords: *Teaching, XML, XSLT, XQuery, XML Schema*

SOA & BPM Analyst

European Commission – Directorate General Research & Innovation

September 2011 - March 2012 | Brussels



Florent joined a business process project at RTD (taking care of all the research contract payments and financial aspects) in order to help analysing the requirements and designing the Web services and the SOA solution, as well as the business processes themselves.

Keywords: *SOA, BPM, Oracle SOA Suite, Oracle BPM Suite*

SOA Auditor

European Commission – Directorate General Research & Innovation
June - August 2011 | Brussels



Florent conducted an audit of the Common Data Model, developed by a joint working group between DIGIT, RTD and INFSO. The CDM is the central piece of the SOA initiatives in the several Research DGs at the European Commission, providing a standardized data model in XML Schema and a series of common Web services. The audit aimed at advising the working group on technical aspects (mainly XSD and WSDL), overall SOA orientation, and potential SOA governance issues (like versioning, releases, discoverability, SOA goals & concepts, and documentation).

Keywords: *SOA, Audit, Web services, SOA Governance, WSDL, WS-*, XML Schema*

XProc Trainer

Organisation for Economic Co-operation and Development
May 2011 | Paris



The Organisation for Economic Co-operation and Development (also known as OECD, or OCDE in French) is an international economic organization of 34 countries, based in Paris. A large part of their objectives is publishing documents and statistics. They naturally use more and more XML to represent their content, and wanted to start a first project using XProc to leverage its integration of several core XML technologies in order to represent their XML processing pipelines. Florent wrote and gave a training on XProc, from the very basis to setting up the architecture of the project.

Keywords: *XProc, Training, OECD*

XML & XQuery Expert

EMC²

Final client: Credit Agricole Group - CEDICAM
December 2010 - May 2011 | Paris



CEDICAM is the « Cards & Payments » entity of the Credit Agricole Group, and as such has to implement the new European Directives relative to financial transactions and payments in the SEPA zone. This represents a huge volume of heterogeneous data, received and stored in an EMC native XML database (also known as XDB), and accessed and modified using XQuery. Florent worked on the XQuery layer (principally designing the query generation, and the optimization of queries on large data streams), and its integration within the Web services layer used as part of a SOA approach.

Keywords: *XQuery, XDB, SOA, Java*

XQuery & XSLT Expert

John Wiley & Sons

February 2010 - December 2010 | London



Wiley is one of the largest publishing companies in science and academics. Wiley Online Library is its subscription-based, multidisciplinary digital library. According to Wikipedia, « *Wiley Online Library delivers integrated access to over 4 million articles from 1500 journals, 9000 books, and hundreds of reference works, laboratory protocols and database* ». All the publications are stored in a MarkLogic native XML database. Florent worked on the XQuery and XSLT layers, especially on the query optimization on large documents volumes and sizes, as well as on its integration within the Java EE web application environment.

Keywords: *XQuery, MarkLogic, Optimization, XSLT, Java, Tomcat*

Business Analyst and Architect

European Commission – Directorate General Research & Innovation
July – December 2009 | Brussels



The Directorate General Research & Innovation (abbreviated RTD) is responsible for the founding of research in Europe. It has one of the largest budgets of the European Commission, and handles tens of thousands of new contracts a year, with Universities, Consortia, SMEs, and individuals. The processes involved are complex, and sometimes participants want to submit requests for redress.

The handling of such requests for redress used to be manual. This project was aimed at developing a new web application accessible to the participants (front-office application accessible from the outside world). Florent was the Business Analyst from the very beginning and the Java EE Architect. The technologies used were Java EE 5 on Oracle WebLogic, using Oracle database through Hibernate, with JSF for the front-end and Spring for the bean container. Integration with the participant portal was achieved through Web services.

Keywords: *Business Analysis, Technical Architecture, Java EE, WebLogic, Web services*

Project Manager and XSLT/XSL-FO Expert

European Commission – Directorate General Research & Innovation
January - June 2009 | Brussels



The RTD has to evaluate all requests for founding through committees of experts (the domains of the proposals is broad and can be as complex as nuclear research). Those evaluations last from a few hours to several weeks or months; they can involve a few experts to hundreds of them. This project provided a distributed application to help the executives to manage the evaluations, the experts, the buildings and the rooms where they take place, and the facilities they provide. PDF plans and tables are generated through XSLT and XSL-FO using a homemade SQL-to-XML bridge.

Keywords: *XSLT, XSL-FO, SQL-to-XML*

Business Analyst and XSLT/XSL-FO Expert

European Commission – Directorate General Research & Innovation
October - December 2008 | Brussels



A new application was created at RTD in order to allow participants to fill in several forms online. Florent analysed the original forms with the business, helped the business to rationalize them and factorize them out, and wrote a set of XSLT stylesheets to generate them back in PDF, using XSL-FO.

Keywords: *Document Analysis, XSLT, XSL-FO*

XML Expert

European Commission – Directorate General Research & Innovation
April - September 2008 | Brussels



A new system was developed to handle the negotiations between RTD and participants in order to define the exact terms of the contracts. The system used Orbeon Server (providing XForms) for the front-end, eXist for the database, XPL for the XML pipeline language, and used intensively XSLT and XQuery to access and transform data.

Keywords: *XForms, XQuery, XSLT, XPL, XML Pipelines, Orbeon, eXist*

SOA Designer

Acheron Capital

December 2007 – April 2008 | London

Acheron Capital is an investment fund in London. Due to a very fast growth, the IT was not able to cope with the changes in the company. The project aimed to analyse, design and implement an entirely integrated custom back-office, based on SOA principles in order to enable the IT to rapidly adapt to futures changes (other companies were being seen as potential acquisitions).

Florent worked directly at client's premises to analyse their requirements, to design the SOA solution together, and to coordinate the development team in Belgium. The overall SOA solution was architected over a common data model and was comprised in a first time of services wrapping legacy systems, to be replaced in a subsequent phase of the project.

Keywords: *Business Analysis, Project Management, SOA, System Design, Web services*

SOA Specialist

Atos Origin Belgium

Final client: Mobistar

March – November 2007 | Brussels



The ability for a customer to look at his/her consumption in real time on the Mobistar portal was the opportunity for Mobistar to have a first shot at the SOA technologies and principles. While they had already a range of Web services, they were used principally as a mean of integration. Mobistar was interested in particular in the various WS-* specs and the concept of an ESB to provide a standardized communication and integration facility across the whole enterprise. Florent designed the contract of several independent Web services and implemented them using Java EE, and he took part in the design of the whole SOA solution and of the ESB implementation.

Keywords: *SOA, Architecture, Web services, WS-*, ESB, Java EE*

XSLT and XSL-FO Expert, and SOA Designer

ING Lease Belgium

July 2005 – February 2007 | Brussels



Result of several merges and acquisitions, ING Lease Belgium decided to build a new back-office system. In order to leverage legacy systems, SOA was the natural approach. It was also the opportunity to rework all the documents (from quotes and invoices to contracts and reminder letters). Florent analysed those documents, coming from several different entities, in close relationship with the business, factorized them out, modelled them and implemented them, from generating an abstract XML representation out of the database, transforming it using XSLT to XSL-FO, to finally generate PDFs.

Florent analysed requirements directly with the business, and helped designing parts of the overall SOA solution, especially the common data model and the core services.

Keywords: *Document Analysis, Business Analysis, XSLT, XSL-FO, Web services, SOA*

Developer

European Organization for Nuclear Research

February – May 2005 | Geneva



The CERN is the biggest nuclear physics research centre. Its major tool is the LHC. The AT/MTM group was responsible to test every single magnet built to compose the LHC. The group used a custom application to present figures to physicists and let them make computations on them.

The application was build using OOC (Object-Oriented C), a homemade layer on top of standard ISO C to provide the developer with object-oriented facilities. The role of Florent was to design the data-access library for OOC (a JDBC-like library), and to implement it for Oracle (using OCI).

Keywords: *Object-Oriented, Technical Analysis, C, C++, OCI, SQL, Oracle database*

Organizations

MarkLogic SuperNodes

June 2011 – Present



Member of the official group of **MarkLogic** experts, **SuperNodes**.

From the MarkLogic website: « *Members of this select group are among the most experienced and knowledgeable developers in our community. The purposes of the program are: - To provide a direct connection between MarkLogic and power-users in our community. - To provide recognition and status to strong, active community members.* »

eXist XML Database

December 2010 - Present



Florent is a developer on the **eXist XML database** since the end of 2010. He wrote principally several EXPath extensions and the Packaging System implementation, and continue to maintain them.

XML Guild

April 2010 - Present



Both **Florent** and **H2O Consulting** are members of the **XML Guild**.

From the Guild website: « *The XML Guild is a consortium of some of the best independent XML consultants in the world. Our members have extensive experience in XML and markup technologies. We are involved in the establishment of standards and best practices. We are authors of numerous books, articles and papers, and are well-known presenters and speakers.* »

XSpec

January 2010 - Present

Owner (with **Jeni Tennison**) of the **XSpec** project, a **Unit Tests** framework for XML technologies (XSLT, XQuery and XProc).

W3C XSLT and XQuery Working Group

November 2009 - Present



Invited Expert at the **W3C**, both in the XSLT Working Group and the XQuery Working Group. With those groups, we are defining next versions of XPath, XQuery, XSLT, and XSL-FO.

W3C EXPath Community Group

March 2009 - Present



Florent founded and is the chair of **EXPath**, a Community Group at **W3C**, aimed at defining extensions for XPath, XQuery, XSLT, XProc and XML technologies in general. The tagline on the EXPath website says: « *Collaboratively Defining Open Standards for Portable XPath Extensions.* »

Based on EXPath, **CXAN** is a website created by Florent. CXAN collects each and every known package based on the EXPath Packaging System, and organize them within a browsable collection.

In the context of EXPath, Florent has created several community open-source projects to implement some of the EXPath modules for several processors. The main target processors are **Saxon**, **eXist** and **Qizx**.

Yet another project founded by Florent within the scope of EXPath is **Servlex**. Servlex is an implementation of the EXPath Webapps framework. This is a web application container based on Java EE technologies and HTTP, aimed at hosting server-side, web, XML applications.

Certifications

October 2008

Certified SOA Architect, by SOASchool.com™ (with *honours*).

February 2007

Sun Certified Java Programmer, by Sun Microsystems (now Oracle).

Publications and conferences

March 2011

XML Prague conferences: *CXAN: a case-study for Servlex, an XML web framework*.

October - December 2010

Reviewer of ***SOA with REST*** by Cesare Pautasso et al., Prentice Hall 2010.

August 2010

Balisage: The Markup Conference 2010: *A packaging system for EXPath*.

March 2010

XML Prague conferences: *EXPath: Packaging, and Web applications*.

August 2009

Balisage: The Markup Conference 2009: *A practical introduction to EXPath: Collaboratively Defining Open Standards for Portable XPath Extensions*.

March 2009

XML Prague conferences: *A practical introduction to EXSLT 2.0*.

July - October 2008

Contributor to ***SOA Design Patterns*** by Thomas Erl et al., Prentice Hall 2009, ISBN 0136135161.

The quote on the front cover of this resume is an excerpt of this book.

February - June 2008

Main technical reviewer of ***Web Service Contract Design and Versioning for SOA*** by Thomas Erl et al., Prentice Hall 2008, ISBN 013613517X.

Academics

September 2012 - Present

Florent teaches the class **Trends in XSLT and XQuery** in **Oxford**, introducing new features in XPath 3.0, XSLT 3.0 and XQuery 3.0.

September 2012 - September 2014

Florent taught the class **Introduction to XProc** in **Oxford**.

March - April 2012

Taught the **XML class** at the **University Versailles/Saint-Quentin** (Paris), to the students in the last year of the Master in Information Technologies.

May 2011

Gave a **training on XProc** at the **OECD** in Paris.

October 2008

Followed the **SOA Architect** classes given by Thomas Erl, for SOASchools.com: « Fundamental SOA & Service-Oriented Computing », « SOA Technology Concepts », « SOA Design & Architecture », « Advanced SOA Design & Architecture », and « SOA Design & Architecture Lab ».

January 2007

Followed the training *Developing Applications for the **Java EE** Platform* at Sun (now Oracle).

September 2005

Institut Paul Lamin, Haute École Léonard de Vinci (aka. IPL). Graduated in Computer Science, specialization in Artificial Intelligence, with *honours*.

August 2005

Thesis: « *Analysis and design of the Relational DBMS-access module for Object-Oriented C, and implementation for Oracle.* »

Contact

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Languages

French: mother tongue - English: fluent

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Media

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